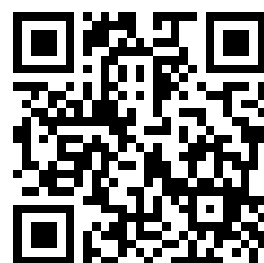

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CAPE OF GOOD HOPE.

(COLONIAL SECRETARY'S MINISTERIAL DIVISION.)

REPORT

OF THE

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UNIVERSITY OF ILLINOIS

SOUTH AFRICAN MUSEUM

FOR THE

YEAR ENDING 31ST DECEMBER, 1903.

Presented to both Houses of Parliament by Command of His Excellency the Governor

1904.

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TRUSTEES OF THE SOUTH AFRICAN MUSEUM.

The Hon. JOHN XAVIER MERRIMAN, M.L.A.

Sir DAVID GILL, K.C.B., LL.D., F.R.S., Hon. F.R.S.E.,
His Majesty's Astronomer at the Cape.

THOMAS MUIR, C.M.G., M.A., LL.D., F.R.S., F.R.S.E.,
Superintendent-General of Education.

STAFF OF THE MUSEUM.

Director : WILLIAM LUTLEY SCLATER, M.A.

Assistant Director : LOUIS ALBERT PERINGUEY.

First Assistant : WILLIAM FREDERICK PURCELL, B.A., Ph.D.

Keeper of Marine Invertebrates : JOHN DOW FISHER GILCHRIST,
M.A., Ph.D., B.Sc.

Hon. Keeper of the Geological Department : ARTHUR WILLIAM
ROGERS, M.A.

Assistant in the Geological Department : Miss M. WILMAN.

CAPE OF GOOD HOPE.

COLONIAL SECRETARY'S MINISTERIAL DIVISION.

Report of the South African Museum for the Year 1903.

Presented to both Houses of Parliament by Command of His Excellency the Governor.
1904.

REPORT OF THE TRUSTEES.

During the past year the Trustees have devoted considerable attention to the future needs of the Museum as regards the extension of the building. With the help of the Department of Public Works a very comprehensive scheme has been drawn up for a number of additions to the present Museum buildings, arranged so that each portion can be completed by itself during any one period and a harmonious whole finally developed.

The first of the proposed additions is a wing corresponding in size and position to the present Art Gallery; and a sum of money to start this building was placed on the estimates for the current year. Owing, however, to the fact that the estimates were not finally passed by the last Parliament it has not been possible to commence operations during the year. A further sum of money was placed on the estimates for the building of a new Art Gallery in order that the present building might be made available for Museum purposes. The further prosecution of this scheme has unfortunately been prevented by the same cause.

During the year a one storied building somewhat similar in design to the new Herbarium has been erected in the Museum grounds for the accommodation of the Marine Biologist, Dr. Gilchrist; the room formerly occupied by him in the Museum building proper as an office has been vacated. This is now available for exhibition purposes and it is proposed to instal there the collection of insects. Hitherto, however, owing to lack of funds for the purchase of suitable cases and furniture it has been impossible to open the room to the public.

The number of visitors during the year was 86,516, a slight falling off from the previous year, when the numbers were the highest ever attained, namely 89,801.

There have been no changes during the year in the scientific Staff.

The Trustees have carefully considered the question of the desirability of the opening of the Museum on Sunday and they are all agreed that such a course is highly desirable and would greatly increase the usefulness and popularity of the Institution; they hope that it may be possible to make the necessary arrangements during the coming year.

During the year no less than seven parts of the *Annals* have been issued. The arrangement mentioned in the Report for last year has been carried out and the results of the investigation of Palæontological material collected by the members of the Geological Survey is being published in a special volume of the *Museum Annals*; two parts of this series of memoirs have been completed during the year.

It is still a source of great regret to the Trustees to observe the deplorable lack of interest among the wealthy people of South Africa in the matter of the Museum. It is hardly necessary to state that South Africa exhibits a great contrast to the United States or Australia in this respect. The New York Museum has on its rolls no less than 109 Patrons, all of whom have subscribed \$1,000 to the funds of the Institution, besides numerous Fellows, Life Members and Members. Moreover the Museum possesses a permanent endowment fund of no less than \$433,000 (over £84,000) entirely derived from the contributions of private individuals. But it is not alone in wealthy and advanced countries like the United States that private benefactions to Museums and educational Institutions exist on so large a scale; in Siberia which has hardly the reputation among English people for a completely organised civilisation, Museums are to be found in every town of any size chiefly supported and endowed by the contributions of the wealthy merchants and business men who have made their fortunes there.

During the last twenty years two bequests and one donation have been made to the Trustees for the benefit of the South African Museum. In 1877 they received a legacy of £95 from the late Mrs. Farmer and in 1880 one of £100 from Mr. William Porter, both of which sums were expended in the purchase of Zoological works. The third contribution was mentioned in last year's report and consisted of a sum of £100 given by an Indian gentleman, Hadji Sulciman Shah Mohammed, which, in accordance with the wishes of the donor has been invested, and the interest accruing therefrom is to be devoted to the purchase of coins.

The accounts show a credit balance at the end of the year of £464, against a similar balance of £414 at the commencement of the year; this satisfactory position of affairs, however, has only been brought about by the exercise of a rigid economy. It will therefore be readily understood that the funds at the disposal of the Trustees are only just sufficient to carry on the ordinary routine work of the Museum, and that when any new scheme or special addition to the Institution has to be undertaken it is necessary to approach the Government for special funds for this purpose.

JOHN X. MERRIMAN,
Chairman of Trustees,

REPORT OF THE DIRECTOR.

The Trustees of the South African Museum.

SIRS,—I have the honour to lay before you a Report on the general organization and development of the Museum during the past year.

1. *State of the Collections.*

The general state of the collections continues to be satisfactory; little or no trouble has arisen during the year from the depredations of insects or other pests.

2. *Additions to the Collections.*

An account of the principal accessions to the Collections is given in the Reports of the officers in charge of each Department and a complete list will be found in the Appendices.

The number in each class together with the corresponding ones for the year previous are given in the following tables :

	Species new to the Museum.		Specimens.	
	1902.	1903.	1902.	1903.
Mammals	5	6	383	166
Birds	20	17	672	471
Birds Eggs	2	9	28	126
Reptiles and Amphibia	5	2	93	92
Fishes	0	1	0	18
Mollusca	45	3	1,043	663
Insecta	474	274	7,092	6,654
Arachnida	153	119	3,720	2,010
Peripatus	0	0	1	13
Myriapoda	0	0	724	150
Crustacea	2	1	243	74
Vermes	0	2	0	9
Geological specimens	0	0	18	32
Anthropology and Antiquities	0	0	179	415
	<hr/>	<hr/>	<hr/>	<hr/>
	706	434	14,196	10,893

3. *Visitors.*

The total number of visitors during the year was 86,516, a slight decrease on the number of the previous year. The Museum was open on 311 days in the year so that the daily average number is 278. The highest number on one single day was 1,342 on December 26th, the lowest 90 on April, 23rd.

The following table shows the number of visitors during the last seven years :—

1897	1898	1899	1900	1901	1902	1903
56,723.	81,480.	88,571.	69,169.	59,901.	89,801.	86,516.

4. *The Museum Staff.*

There have been no changes in the Museum Staff during the year. It has however been found possible to reduce the number of attendants to three instead of four and thus effect a slight saving on the salaries account. I was granted five months leave without

pay at the commencement of the year to go to England on urgent private affairs and I returned at the beginning of June ; during my absence the Assistant Director, Mr. Peringuey was in charge. The taxidermist, Mr. Drury, also returned from Europe in February and has been at work since that date. The list of the Correspondents of the Museum remains the same as it was during the previous year.

5. *Annals of the Museum.*

Seven parts of the Annals containing 305 pages and illustrated by 27 plates have been published and distributed during the year. The following are the contents :—

Vol. II., Part 12.—Index and Title page to Volume II.

Vol. III., Part 1.—Descriptions of New Genera and Species of South African Solpugidæ with eight text figures ; and New Arachnida, collected by Mr. S. C. Cronwright-Schreiner at Hanover, Cape Colony, with one plate. By W. F. Purcell, Ph.D.

Vol. III., Part 2.—Rhynchotal Miscellanæ (2nd series). By W. L. Distant.

Vol. III., Part 3.—Description of Six New Perciform Fishes from the Coast of Natal, with six plates. By G. A. Boulenger, F.R.S.

Vol. III., Part 4.—New South African Spiders of the Families Migidæ, Ctenizidæ, Barychelidæ and Lycosidæ. By W. F. Purcell, Ph.D.

Vol. IV., Part 1.—Fossil Floras of Cape Colony, with fourteen plates and eight text figures. By A. C. Seward, F.R.S., University Lecturer in Botany and Fellow of Emmanuel College, Cambridge.

Vol. IV., Part 2.—On an almost perfect skeleton of *Pareiasaurus serridens* Owen ; On the structure of the Shoulder Girdle in *Lystrosaurus* ; On the Evidence of a New Species of *Titanosuchus* ; On the Presence of a pair of distinct Prevomeres in *Titanosuchus* ; On Some New Primitive Theriodonts in the South African Museum ; On a New Reptile (*Proterosuchus fergusi*) from the Karoo Beds of Tarkastad, South Africa. All by R. Broom, M.D., B.Sc., C.M.Z.S.

6. *The Library.*

The Library continues to increase and it will very soon be necessary to overflow into another room, as there is very little more space for additional shelving in the present rather restricted quarters.

As will be seen by the table, the number of additions, especially from exchanges, increases year by year, and the question of binding will soon become acute.

A few additional institutions have been placed on our exchange list this year, including the Royal Spanish Society of Natural History, the Vienna Entomological Journal, the Geological Survey of India, the Rhodesia Museum, the New York Zoological Park and the California Academy of Science, while, on the other hand, a few of the names in our list have been cut off, as they have never sent us their publications in exchange.

The following table gives a summary of the additions to the Library during the last year, together with the corresponding figures for the previous year. A complete list of these will be found in the Appendix No. 8, p. 23.

	Purchased.		Presented or received in exchange.		Total.	
	1902.	1903.	1902.	1903.	1902,	1903.
Separate Volumes...	14	29	25	28	39	57
Pamphlets ...	59	37	53	79	112	116
Serials (in parts) ...	153	147	314	356	467	503
	<u>226</u>	<u>213</u>	<u>392</u>	<u>463</u>	<u>618</u>	<u>676</u>

7. Formation of a type Collection.

In order to give the intelligent visitor or the pupil in the course of instruction a succinct idea of the various forms of animal life, I have had a special case made after my own design and erected along a wall in the Invertebrate room. Here it is proposed to exhibit a series of preparations, models and drawings of two or three examples of each of the great phyla of the animal kingdom beginning with the lowest and ending with the most highly developed forms. A beginning has been made with the Protozoa, which, however, owing to their microscopic dimensions can only be represented by diagrams and sketches. Some time must necessarily elapse before the series can be completed but it is hoped that it will be eventually found to be of special educational advantage

8. Informal lectures to School Children.

A series of informal lectures or demonstrations to school children was started towards the end of the year. Through the kindness of Dr. Muir a notice was inserted in the "Educational Gazette" that the Director of the Museum would be glad to conduct parties of children accompanied by their teachers round the Museum and explain some of the most noticeable exhibits. A good many applications were received from the local schools, and parties from the St. George's Cathedral Grammar School, the South African College Junior School, St. Cyprian's and the Good Hope Seminary were duly conducted round the Museum.

W. L. SCLATER,
Director.

DEPARTMENTAL REPORTS.

1. REPORT ON THE DEPARTMENT OF VERTEBRATES.

The Trustees of the South African Museum.

SIRS,—I have the honour to report on the work on which I have been engaged during the year in connection with the development of this department.

The South African collections of Vertebrates consist of two series, an exhibited and a study set of specimens; during the past

year I have made great efforts to renovate our exhibited series of Birds. A very large number of old and faded specimens have been removed and replaced by newer examples mounted either from the flesh or from skins in the study collection series; while others of the old exhibited specimens have been renovated and remounted on natural twigs or branches fixed on brown round stands and the old white perches and stands are gradually being got rid of. This work will take a considerable time to complete, but the result, I hope, will be a very great improvement in the appearance of the Bird Gallery.

The number of Birds described in the first three volumes of Stark's Birds of South Africa is 563, while approximately 242 species have still to be dealt with, in the fourth and concluding volume; this makes the total number 805. The Museum collections contain representatives of about 725 out of the 805 so that there are still some gaps to be filled up. Considerable progress has been made during the last few years in making our collections more perfect, but I think we may at any rate congratulate ourselves on having a far more complete series than any other Museum in South Africa.

During the past year I have also endeavoured to add to our hitherto very meagre collection of exhibited Fishes; a large number of examples of the common species have been purchased in the Fish Market and have been carefully mounted and coloured from the fresh specimens, and it is to be hoped that when a further extension of our building is made it will be possible to devote a whole room to the display of this very interesting but hitherto rather neglected portion of our Fauna.

The total number of accessions to the Museum in this department are 873, a falling off from the previous year when the number was 1,176, but of these the number of specimens new to the Museum was 35 against 32.

In consequence of my absence in England without salary during the first five months of the year, it has been possible, with the saving so effected, to continue to employ a collector during a considerable portion of the year. Mr. Shortridge who had been employed in a similar respect previously, spent some two months at Hanover in the Colony and later on a month or so at Irene in the Transvaal; his collections comprise 105 Mammals skins and 229 Bird skins and although few actual novelties were obtained many rare species previously represented by one single and often old specimens were in this way added to the Museum Collections.

The special thanks of the Museum Trustees must be accorded to the following donors for their contributions during the year:—

Mr. G. French, for a rare Snake (*Lamprophis inornata*) new to our collection and only represented in the British Museum by a single example, and for two rare Lizards, all found near Cape Town.

Captain Barrett-Hamilton for 15 Bird skins in addition to the large numbers presented the previous year.

- Mr. H. Van der Byl, of Van der Byl's Kraal, for an old skull of a Lion said to have been found in a bushman's cave at Bergplaats. Rooi Hoogte, Beaufort West Division; this specimen is specially interesting as it has embedded in it what is obviously the iron tip of a bushmen arrow by means of which it probably was killed.
- Mr. L. McLean for the first example of a trout caught since the opening of the South African rivers for fly fishing during the present year. The specimen was obtained on the 2nd of October in the Hex River, it weighed 2½ lbs. and was about 20 inches long.
- Mr. A. D. Millar for a number of Bird skins from Natal and the neighbourhood of Beira, two of which are new to our collection.
- Mr. Austen Roberts for a Vulture (*Gyps africanus*) new to the collection, and for a number of Birds eggs, those of four species being new to us, including that of the Vulture above mentioned.
- Major Sparrow, of the 7th Dragoon Guards, for 63 Birds eggs from Natal, including several species new to us.
- Dr. F. O. Stoehr, of the Geodetic Survey, North-Eastern Rhodesia, for a valuable collection of Birds made by him chiefly along the banks of the Zambesi, and including seven species new to the Museum. As we have not hitherto received any Birds collections from the Zambesi Valley these form a most welcome addition and add greatly to our series.
- Captain Turbyne, of the Government Trawler, the S.S. *Pieter Faure*, for a number of Sea Birds shot during the intervals of fishing, two species of which are new to our collection.
- Mr. F. G. Watermeyer for the carcass of a fine old male Leopard trapped by him on his farm at Jonkers Hock in the upper Valley of the Eerste River, above Stellenbosch. This specimen has been very carefully modelled and mounted.
- Other donors are Messrs. R. Lightfoot, J. Paynter, T. D. Butler, Dr. Kolbe, Dr. and Mrs. Purcell and Mr. Weisbecker, whose respective contributions are duly specified as in the Appendix (p. 15).

Mr. J. Drury, the taxidermist appointed to succeed Mr. Griffin, returned early in the year from England, and has been hard at work ever since. I am very satisfied with his ability and industry. He has had during the year some temporary assistance, especially from Signor Buonomi, an Italian collector, who was temporarily employed during the latter part of the year.

Mr. Drury reports that he has set up for exhibition eleven Mammals; among them a Leopard, a Drill, a Red Cat, an Opossum and three Hares; he has mounted 198 Birds for exhibition and has renovated, remounted and repaired 49 old specimens, besides making a good many skins of Birds brought to the Museum in the flesh. He has also mounted 28 Fishes.

During the past year the 3rd volume of the Birds of South Africa has been published, while the 4th and last is being pushed on, and will, I hope, be issued during the present year. I have made two short excursions to Saldanha Bay and to Dyers Island, off the

coast of Caledon, for the purpose of observing the nests and habits of some of the Sea Gulls and other aquatic Birds and of obtaining specimens of their nests and eggs. A short account of the former trip appeared in the January number of the *Ibis* for 1904.

W. L. SCLATER,
Director.

2. REPORT ON THE DEPARTMENT OF ENTOMOLOGY.

SIR,—I have the honour to submit the Report of my Department for the year 1903.

The number of accessions, mostly by donation, but also by purchase is of 7,654 mounted examples representing 1,881 species, 274 of which are new to the Collection. The number of novelties is therefore less by 200 than last year, and more by 26 than in 1901.

The *Coleoptera* predominate, the number of novelties being 173, that of the *Lepidoptera* 84; of *Hemiptera* 7; of *Hymenoptera* 6; of *Diptera* 3 and of *Neuroptera* 1.

While the number of accessions in *Coleoptera* remains about normal, that of the *Lepidoptera* is not unsatisfactory; all the novelties but one, are moths, the great majority of which have been obtained by purchase.

The re-arrangement of the *Lepidoptera* collection is proceeding; a preliminary arrangement of the *Bombycidae* and *Sphingidae* has already been completed by Mr. M. R. Lightfoot, who has also arranged the African diurnal *Lepidoptera* from beyond the South African limit into a new cabinet of 30 drawers. I have incorporated a fairly large number of insects of other orders into the South African Collection, and I propose to begin next year the arrangement into a new cabinet of the *Hemiptera-Homoptera* of which we have a fair number distributed unfortunately at random in many boxes, and therefore unavailable to the student.

I have completed that part of the M.S. of the descriptive Catalogue of the South African *Coleoptera*, dealing with the Sub-Families of *Scarabideous Coleoptera*, *Sericinae* and *Melolonthinae*, numbering 335 species, of which 204 are now described for the first time. If, as I hope to do, I can complete the description of the remaining Sub-Family *Cetoniinae* in the course of the incoming year; the family *Scarabaeidae* will be found to be represented in South Africa by the extraordinarily large number of near 1,900 species; 1,865, to be quite correct.

I have also been working for some time at the description of some of the new species of *Coleoptera* contained in the collection; this contribution will contain some 200 species, and will be published during the incoming year.

A good part of my time has been devoted to the identification of specimens for contributors and others.

There has been no discovery of importance in the domain of Entomology this year, but the Museum received for the first time a small collection of *Coleoptera* and *Lepidoptera* from Beira which helps considerably in localising the Coleopterous Fauna of South Africa, and which goes far to show that the low lands of Mozam-

bique must be excluded from it. Most of the species in this Collection belong to the Central and East African Fauna, a branch or sub-division of the Ethiopian Region.

The thanks of the Museum Trustees must be accorded to the following Donors for their contributions during the year :

Mr. A. Bodong, for a considerable number of Insects of different orders, rare, new, and all very interesting. This gentleman has even presented to the Museum some unique examples of his own collection which were either new to science or not represented in our Cabinets.

Mr. Delancey Dod, for numerous *Coleoptera* collected by him in Southern Rhodesia and containing numerous species new to the Collection or poorly represented. He has also allowed me to pick from his own Collection several species which were not represented in ours.

Mr. A. J. T. Janse, for some *Coleoptera* collected in a part of the Transvaal, very little known entomologically.

Mr. W. E. Jones, for a good number of *Lepidoptera* collected in Zululand, and some of which, moths especially, were very acceptable.

The Rev. H. Junod, for some examples of *Coleoptera* collected by him in the Zoutpansoerg District of the Transvaal.

Dr. H. Martin, for the donation of interesting *Coleoptera* collected by him in Natal and Zululand.

Mr. G. A. K. Marshall, for some examples of *Coleoptera*.

Rev. J. A. O'Neil, for some *Coleoptera*, *Diptera* and *Hemiptera* from the neighbourhood of the Sundays River in the Cape Colony.

Mr. P. A. Sheppard, for an extremely interesting Collection of *Coleoptera* and also of *Lepidoptera*.

Mr. R. M. Lightfoot, for some apparently new species of *Coleoptera* and *Lepidoptera* captured by him, and also for the donation of his Collection of *Tenebrionidae*, many examples of which will go to complete the regulation number in the Cabinets.

Mrs. Marchand, for an interesting lot of *Lepidoptera*, chiefly moths, collected at Clanwilliam, C.C.

L. PERINGUEY.

3. REPORT ON THE DEPARTMENT OF LAND AND FRESH WATER INVERTEBRATES (EXCLUSIVE OF INSECTS AND MOLLUSCS).

To the Director of the South African Museum.

SIR,—I have the honour to present to you my report on the work done in my Department during the year 1903.

The new Spiders of the families *Migidae*, *Ctenizidae*, *Barychelidae*, *Dipluridae* and *Lycosidae*, still in the Collection, have been described and the descriptions published in a current part of the Annals of the Museum, while a number of other families are still under investigation.

The curious termitophilous Crustacean (*Phylloniscus braunsi*, Purc.) first found by Dr. Brauns at Willowmore, has also been described.

The additions of South African Arachnida (Scorpions, Spiders, etc.) shew a great falling off, being little more than half the number contributed during each of the two preceding years. This is due to the fact that no very large donations from single contributors were received. The number of species new to the Collection is, however, relatively much higher, being only about 20 per cent less than last year.

An exchange of foreign Scorpions for South African forms has been effected with the Museums of St. Petersburg and Turin, whereby some 13 new kinds were added to the Collection.

The most important contribution during the year was received from Mr. H. Junod, consisting of Myriapods and Arachnids from Shilouwane, near Leydsdorp in the Transvaal. Two new *Solpuga* and a new Trap-door Spider in this collection have been described in the "Novitates Zoologicae" of the Tring Museum at the request of the donor.

Many smaller donations containing forms of interest, were received from Mr. H. P. Abernethy (Kentani), Mr. G. E. Beare (Kuruman), Dr. H. Brauns (Willowmore and Bothaville), Dr. R. Broom (Pearston), Mr. R. Colson (Lydenburg), Prof. A. Dendy (Cape Peninsula), Mr. C. J. de Smidt (Vredenburg), Mr. I. L. Drège (Pt. Elizabeth), Mr. G. French and his son C. French (Cape Peninsula, Calvinia, Wellington, &c.), Mr. H. A. Fry (Natal and Johannesburg), Mr. J. E. C. Goold (St. Helena Bay), Mr. J. H. C. Krapohl (Namaqualand), Mr. J. Meiring Dr. E. Nobbs (Kalahari), Mr. T. O'Connor (Ashton), Miss Alice Pegler (Kentani), Mr. F. A. Pym, Mr. S. C. Cronwright-Schreiner (Hanover and Bloemfontein), Dr. Schönland, Dr. E. H. L. Schwarz (Willowmore), Mr. G. Watermeyer (Jonkershoek), Mr. A. S. Weisbecker (Transkei and Pondoland), Mr. Merwyn G. Williams (Lake Ngami), Mr. J. Williamson (Pretoria), &c., as enumerated in the Appendix.

W. F. PURCELL.

4. REPORT ON MARINE INVERTEBRATES AND FISHES.

To the Director of the South African Museum.

SIR,—I have the honour to submit the following Report on the Department under my charge.

The collection of Marine animals has been enriched during the course of the year, chiefly by valuable additions from deep water off Cape Point. Several new invertebrates and many fishes of new genera and species have been procured. Most of these as well as others previously collected are in the hands of specialists for description.

A third report on the collection of sponges has been prepared by R. Kirkpatrick, F.Z.S., and several new genera and species are described with notes on species already known. These are as follows:—

- Latrunculia natalensis*, sp. n.
- Kalastrella vasiformis*, gen. et sp. n.
- Kalastrella vasiformis*, var. *minor*, var. nov.
- Coppatias baculifer*, sp. n.
- Tethya magna*, sp. n.

Trachya nuda, sp. n.
Hymeniacidon caliculatum, sp. n.
Hymeniacidon caliculatum, var. *osculatum*, var. nov.
Phakellia microxephora, sp. n.
Tragosia infundibuliformis (Johnston), var. *natalensis*, var. nov.
Axinella, sp.
Axinella, sp.
Syringella gorgonioides, sp. n.
Axinyssa tethyoides, sp. n.
Sigmaxinella arborea, sp. n.
Sigmaxinella incrustans, sp. n.
Higginsia bidentifera (Ridley and Dendy).
Sollasella hystrix (Topsent).
Bubaris reptans, sp. n.
Clathria typica (Carter).
Clathria mollis, sp. n.
Stylostichon involutum, sp. n.
Histoderma natalense, sp. n.
Dendoryx incrustans (Esper).
Desmacidon ramosum (Ridley and Dendy).
Desmacidon grande (Ridley and Dendy).
Hamacantha esperioides (Ridley and Dendy).
Phlæodictyon eumitum, sp. n.
Reniera, sp.
Halichondria pachastrelloides (Topsent).
Stelospongia, sp.
Hircinia arenosa (Lendenfeld).
Hircinia arbuscula (Lendenfeld).
Psammopemma inordinatum, sp. n.

In the Molluscan collection the following new species have been described by G. B. Sowerby, F.L.S. :—

Pleurotoma (*Surcula*) *lobata*.
 „ (*Drilla*) *fossata*.
 „ „ *scitecostata*.
 „ (*Clarila*) *tuniplana*.
 „ (*Clavus*) *lignaria*.
 „ (*Senotic*) *belaeformis*.
Mangilia (*Eucythara*) *Africana*.
Conus eucoronatus.
 „ *Gilchristi*.
Cypraea fultoni.
Nassa desmulioides.
 „ *analogica*.
Cancellaria producta.
Epidromus crebriliratus.
Scala tenebrosa.
Astrarium (*Cyclocantha*) *Gilchristi*.
Calliostoma perfragile.
 „ (*Lischkeia*) *granoliratum*.
 „ (*Astela*) *iridiscens*.
Solariella persculpta.
Minolia (*Nachacroplax*) *congener*.
Dentalium inflexum.
 „ *africanum*.
 „ *exasperatum*.
Chiton (*Hanleya*) *sykesi*.

In addition to these, notes are made on several species inadequately described or hitherto unfigured.

Mr. Sowerby has also now completed an examination of the collection of Lamellibranchs mentioned in my last Report.

A list of Mollusca acquired from different sources during the year is given on page 21.

The following new fishes have been described by myself:—

- Trachichthodes spinosus, gen. et sp. n.
- Plectromus macrophthalmus, sp. n.
- Apogon queketti, sp. n.
- Melanocetus rotundatus, sp. n.
- Laemonemodes compressicauda, gen. et sp. n.
- Selachophidium guentheri, gen. et sp. n.
- Aphoristia variegata, sp. n.

In addition to these new genera and species, many other specimens not hitherto represented in the collection have been obtained, and a complete list will be drawn up after examination of all the material.

J. D. F. GILCHRIST.

5. REPORT ON THE DEPARTMENT OF GEOLOGY AND MINERALOGY.

To the Director of the South African Museum.

SIR,—I have the honour to submit my Report upon the progress of the Geological Department during the past year.

The South African rock and mineral collections have received additions by the Cape Copper Company's gift of numerous specimens of copper ores and the rocks that accompany them in Namaqualand, and by the donations of blue ground and minerals from it sent by Mr. A. F. Williams and Mr. Debel, from Kimberley and Jagersfontein respectively.

The only noteworthy additions to the Bokkeveld fossils were made by Mr. J. H. Paynter, who collected some very fine specimens at De Doorns.

From the Karroo formation come some good fossils, especially the nearly complete skeleton of *Endothiodon bathystoma*, presented by Mr. C. J. de Villiers, and two type specimens (skulls) of *Proterosuchus fergusi* and *Oudenodon gracilis*, presented by Dr. John Fergus and Dr. R. Broom respectively. Other Karroo fossils have been given to the Museum by Mr. J. M. Bain; they form part of the collection made by his father, the late Mr. T. Bain.

Some interesting fossils from the Uitenhage beds, including at least one new species, were obtained through Miss Wilman from Mrs. J. Lewis and Mr. Bright, of Addo.

The meteorite collection has been enriched by the St. Mark's meteorite, which fell in the St. Mark's Mission ground on January 3rd, 1903. It will shortly be described in the Annals of the Museum.

Some important additions have been made to the collections exhibited by the Geological Commission. These include an articu-

lated skeleton of *Pareiasaurus serridens*, plants from the Uitenhago series, volcanic rocks from the Stormberg series, and specimens illustrating the Pre-Cape igneous rocks.

There is insufficient accommodation for the specimens illustrating South African Geology. The present exhibits by no means represent our knowledge of the country, and the specimens that might be used for the purpose have to remain in their drawers.

An attempt is being made to illustrate the Geology of the Colony by means of photographs taken by the Geological survey; each photograph has a descriptive label placed below it.

Some geological maps of historical and present interest have been added to those that were formerly hung upon the wall.

It may be well to draw attention to the map of the Colony hanging in the large room; upon it the results of the mapping done by the Geological survey are filled in at intervals as the work progresses. The scale of the map, about $12\frac{1}{2}$ miles to the inch, necessitates a considerable reduction from the field maps and a consequent loss of detail, but as the survey maps can only be published at long intervals, this form of summarising the results is not without its advantages to the public.

The Palæontological volume of the "Annals," published conjointly by the Museum Trustees and the Geological Commission, is progressing. Part I, containing a description of the fossil plants of the Colony by Mr. A. C. Seward, and Part II, descriptions of reptiles by Dr. Broom, appeared before the end of the year.

During the past year Dr. Broom has devoted much time to the examination and preparation of the reptilian fossils in the Museum. The thanks of the Trustees and of all who are interested in this important group of fossils from the Karroo formation are due to Dr. Broom for his work.

ARTHUR W. ROGERS.

6. REPORT ON THE DEPARTMENT OF ANTHROPOLOGY AND ANTIQUITIES.

The accessions to this Department have been specially numerous and interesting during the past year; in addition to a considerable number of stone implements and other relics of the primitive races of South Africa, a special report on which has been drawn up by the Assistant Director, a number of interesting Colonial antiquities have been acquired. Among them is an old "Slave bell" which has formerly hung in the outbuildings of the farm "Orangezicht," behind the Gardens, Cape Town; it is dated 1775, and was presented by Mr. M. van Breda. Another interesting relic of the past is an old Iron Strongbox formerly in the Customs Department, and used, I understand, till comparatively lately for storing the Customs Dues of the Colony; this was presented by the Colonial Government. When the old Chamber of Commerce, which occupied part of the site where the Post Office now stands, was pulled down in 1893, a box of coins, built up in its foundations, was discovered, which had doubtless been placed there when the foundation stone of the building had been laid early in the century. These coins, gold,

silver and copper, both English and Dutch, have now been presented to the Museum by the Chamber of Commerce, and are mounted and exhibited with a suitable explanation. Judging from the date of the coins the old Commercial Exchange must have been built in 1817. Of special interest to Philatelists are the original dies and stereotypes of the celebrated so-called woodblock triangular stamps of the Colony, of the issue of 1861. These have been presented to the Museum by the Treasury, and are now exhibited together with examples of reprints of the two values.

The following report on the stone implements added to the Museum during the year is drawn up by Mr. Peringuey:—

“Mr. Langham Dale has presented a collection made originally on the Cape Flats partly by his father, the late Sir Langham Dale, who was the first discoverer of these relics of ancient times in South Africa, partly by himself. These specimens which are of the so-called “Cape Flats” type, included fragments of the laurel-leaf-like spear-heads beautifully worked on both sides. The workmanship of these implements is so infinitely superior to that of the others found in the same locality, but chipped on one side only, that it is difficult to believe that they have been made by people belonging to the same race. I was always sceptical as to the origin of these implements, especially as they have been met with as yet only on the Cape Flats, and only in a very small number, but the fragmentary state of these weapons, which have evidently been disrupted by use, seems now to me to do away with the possibility of their having been “planted” there, and they may therefore be accepted as the work of aborigines at a distant period.

“Mr. J. M. Bain has presented an important collection of stone implements, including axes, arrow-heads, scrapers, pounders, etc., from various districts of the Colony; among these are also found specimens of the beautiful weapons mentioned above and coming from the Cape Flats. This collection contains also some large palaeolithic quartzite implements of what I prefer to call the Stellenbosch-Paarl type, but found in the Olifants River Valley and in the Knysna, in the Cape Colony. Bushmen pots, entire and fragmentary, some from Bushmanland, but similar in shape to those found in or near the Kitchenmiddens of the sea-coast, are peculiarly interesting. This collection was brought together by Mr. Bain and his father the late Mr. Thomas C. Bain.

“Interesting also in connection with the weapons of this palaeolithic type is the donation by Mr. H. Seton-Kerr, of 12 implements from the Madras Presidency (India), which although very much less finished than our Stellenbosch or Paarl examples, might be mistaken for South African ones.

“An interesting specimen has been presented through the members of the Geological Survey, by Mr. van der Byl, of Van der Byl's Kraal, in the shape of an old skull of a lion said to have been found in a bushman's cave at Bergplaats, Rooihoogte, Beaufort West Division, and into the premaxillary bone of which is embedded so deeply that it cannot be extracted, the triangular iron tip of a bushman's long arrow, delivered with a great force indeed and probably at very close quarter, through the narial aperture or nasal cavities.”

W. L. SCLATER.

APPENDICES.

1.—LIST OF THE TRUSTEES, STAFF AND CORRESPONDENTS OF THE MUSEUM.

TRUSTEES OF THE MUSEUM.

Appointed by Proclamation of His Excellency the Governor under Section V. of Act No. 17 of 1857.

The Hon. John Xavier Merriman, M.L.A.	30th Aug., 1875.
Sir David Gill, K.C.B., LL.D., F.R.S., Hon. F.R.S.E., His Majesty's Astronomer at the Cape	15th March, 1880.
Thomas Muir, C.M.G., M.A., F.R.S., LL.D., F.R.S.E., Superintendent- General of Education	30th September, 1893.

STAFF OF THE MUSEUM.

1. Director	William Lutley Selater, M.A. ...	January 9th, 1896.
2. Assistant Director and Keeper of the Entomological Cabinets ...	Louis Albert Peringuey ...	November 20th, 1884.
3. First Assistant and Keeper of the Land Invertebrates Collection (except Insects)	William Frederick Purcell, B.A., Ph.D., B.Sc.	July 1st, 1896.
4. Keeper of Marine Invertebrates	John Dow Fisher Gilchrist, M.A., Ph.D., B.Sc.	September 17th, 1896.
5. Hon. Keeper of the Geological Department	Arthur William Rogers, M.A. ...	October 21st, 1902.
6. Clerk (in charge of Mollusca) ...	Robert Mark Lightfoot ...	April 1st, 1888.
7. Assistant in the Geological Department	Miss M. Wilman	May 9th, 1902.
8. Taxidermist	James Drury	July, 1902.
9. Head Attendant	James Henry Paynter	July 1st, 1894.
10. Second Attendant	Thomas Daniel Butler	January 11th, 1899.
11. Third Attendant	David Lewsley	April 1st, 1902.
12. Messenger	Henry Miller	April 15th, 1903.

LIST OF THE CORRESPONDENTS OF THE MUSEUM.

G. A. K. Marshall.	The Rev. J. A. O'Neil.	The Rev. F. C. Kolbe, D.D.
C. N. Barker.	Dr. R. N. Howard.	A. D. Millar.
G. Alston.	John Wood.	C. W. Mally.
	M. A. Raffray.	

2.—LIST OF VERTEBRATE ANIMALS ACQUIRED DURING THE YEAR.

NOTE.—Names printed in *Italics* signify species new to the Museum collections.

E. G. Alston	1 Reptile, 1 <i>Pachydactylus capensis</i> .
F. Andrews	1 Bird's egg—1 <i>Sterna bergi</i> .
Dr. R. Broom	1 Reptile, <i>Chameleon ventralis</i> .
T. D. Butler	10 Bird skins—1 <i>Stephanibyx coronatus</i> , 1 <i>Dilophus caruncu-</i> <i>latus</i> , 2 <i>Estrilda astrilda</i> , 1 <i>Tephrocorys cinerea</i> , 1 <i>Anthus</i> <i>rufulus</i> , 1 <i>Cisticola tinniens</i> , 1 <i>Saxicola pileata</i> , 1 <i>Cotile</i> <i>fuligula</i> , 1 <i>Geocolaptes olivaceus</i> .
P. van der Byl	Old Skull of Lion (<i>Felis leo</i>) from cave in Beaufort West div.
F. Cairncross	2 Mammals:—1. <i>Eptesicus capensis</i> , 1. <i>Bathyurgus maritimus</i> .
J. Chaldwin	2 Bird skins— <i>Ardea cinerea</i> , <i>Ceryle maxima</i> .
H. Egersdorfer	1 Bird skin— <i>Carduelis elegans</i> .
G. French	5 Reptiles—1 <i>Lamprophis inornatus</i> , 2 <i>Mabuia homolocephala</i> , 2 <i>Tropidosaura montana</i> .
Capt. Barrett Hamilton	15 Bird skins—2 <i>Amadina erythrocephala</i> , 2 <i>Spizocorys</i> <i>conirostris</i> , 1 <i>Certhilauda rufula</i> , 1 <i>Anthus linei</i> <i>ventris</i> , 1 <i>Nilaus brubru</i> , 1 <i>Pycnonotus nigricans</i> , 1 <i>Cisticola subruficapilla</i> , 1 <i>Cisticola terrestris</i> , 1 <i>Saxicola</i> <i>monticola</i> , 1 <i>Emerginata sinuata</i> , 1 <i>Thamnolaea cinnamo-</i> <i>meiventris</i> , 1 <i>Pterocles bicinctus</i> , 1 <i>Francolinus gari-</i> <i>pensis</i> .
Capt. Jackson	1 Bird skin—1 <i>Porphyrio madagascarensis</i> .
C. W. H. Kohler	2 Fishes— <i>Barbus capensis</i> , <i>Spirobranchus capensis</i> .
Dr. F. C. Kolbe	4 Reptiles—4 <i>Glauconia nigricans</i> .
A. G. H. Kotze	1 Bird skin— <i>Cesarca cana</i> .
R. M. Lightfoot	1 Mammal— <i>Georchus hottentotus</i> . 1 Bird skin— <i>Saxicola familiaris</i> . 10 Reptiles—2 <i>Pachydactylus bibroni</i> , 2 <i>Mabuia sulcata</i> , 2 <i>Eremias pulchella</i> , 2 <i>Scapteira knoxi</i> , 1 <i>Mabuia varia</i> , 1 <i>Prosymna sundevalli</i> . 1 Amphibian— <i>Rana grayi</i> .

[G. 58—1904.]

C

L. McLean	...	...	1 Fish.— <i>Salmo fario</i>
Dr. G. J. M. Melle	...	...	2 Reptiles.— <i>Gerrhosaurus flavigularis</i> , <i>Mabuia varia</i> .
A. D. Millar	...	...	18 Bird skins.—2 <i>Francolinus africanus</i> , 1 <i>F. levaillanti</i> , 2 <i>F. shelleyi</i> , 2 <i>F. natalensis</i> , 1 <i>Francolinus sp.</i> , 1 <i>Pternistes nudicollis</i> , 1 <i>Coturnix africana</i> , 1 <i>Coturnix delagorguei</i> , 1 <i>Prodotiscus regulus</i> , 2 <i>Platysteira peltata</i> , 1 <i>Bias musicus</i> , 1 <i>Lagonosticta niveiguttata</i> , 1 <i>Pytelia melba</i> , 1 <i>Xiphidiopterus albiceps</i> .
J. Mitchell, Jun.	...	...	1 Bird skin.— <i>Colopsittacus novae-hollandiae</i> .
The Rev. J. O'Neil	...	...	2 Reptiles.—2 <i>Acontias lineatus</i> .
J. Paynter	...	...	11 Mammals.— <i>Herpestes pulverulentus</i> , 2 <i>Georchus capensis</i> , 3 <i>Georchus hottentotus</i> , 3 <i>Arvicanthus pumilio</i> , 1 <i>Mus verreauxi</i> , 1 <i>Mus musculus</i> .
			7 Reptiles.—1 <i>Psammophis sibilans</i> , 2 <i>Trimerorhinus rhombeatus</i> , <i>Typhlops delalandii</i> , 1 <i>Nucras tessellata</i> , 1 <i>Homodelaps lacteus</i> .
			2 Amphibia.—2 <i>Bufo angusticeps</i> .
L. Peringuey	...	...	5 Mammals.—4 <i>Lepus capensis</i> , 1 <i>Bathyergus maritimus</i> .
			1 Bird skin.—1 <i>Francolinus capensis</i> .
H. Pfefferly	...	...	1 Bird skin.— <i>Melopsittacus undulatus</i> .
Mrs. Purcell	...	...	6 Reptiles.—1 <i>Agama atra</i> , <i>Pachydactylus bibroni</i> , 2 <i>Pachydactylus mariquensis</i> , <i>Pachydactylus capensis</i> , 1 <i>Glauconia nigricans</i> .
W. F. Purcell	...	...	7 Reptiles.— <i>Pachydactylus mariquensis</i> , <i>Pachydactylus capensis</i> , <i>Agama brachyura</i> , <i>Mabuia varia</i> , <i>Eremias pulchella</i> , <i>Pachydactylus bibroni</i> , <i>Nucras tessellata</i> .
			7 Amphibia.—2 <i>Bufo angusticeps</i> , 4 <i>Bufo granti</i> , 1 <i>Arthroleptis boettgeri</i> .
Austen Roberts	...	...	2 Bird skins.—1 <i>Gyps africanus</i> , 1 <i>Alaemon semitorquata</i> .
			25 Birds eggs.—1 <i>Gyps africanus</i> , 2 <i>Ploceipasser mahali</i> , 2 <i>Tephrocorys cinerea</i> , 3 <i>Alaemon semitorquata</i> , 3 <i>Pycnonotus nigricans</i> , 6 <i>Prinia flavicans</i> , 3 <i>Geocichla litsipsirupa</i> , 2 <i>Coccyzus jacobinus</i> , 2 <i>Chettusia coronata</i> , 1 <i>Ardea goliath</i> .
S. C. Cronwright-Schreiner	...	...	1 Reptile.— <i>Chamaesaura didactyla</i> .
W. L. Selater	...	...	10 Bird skins.—2 <i>Phalacrocorax neglectus</i> , 2 <i>Phalacrocorax africanus</i> , 1 <i>Larus hartlaubi</i> , 1 <i>Sterna vittata</i> , 1 <i>Arenaria interpres</i> , 2 <i>Tringa subarquata</i> , 1 <i>Sterna caspia</i> .
			35 Birds eggs.—6 <i>Phalacrocorax neglectus</i> , 6 <i>Phalacrocorax capensis</i> , 4 <i>Phalacrocorax africanus</i> , 4 <i>Sula capensis</i> , 8 <i>Spheniscus demersus</i> , 3 <i>Ibis aethiopica</i> , 4 <i>Larus dominicanus</i> .
			1 Reptile.— <i>Trimerorhinus tritaeniatus</i> .
G. C. Shortridge	...	...	3 Mammals.—1 <i>Crocidura varilla</i> , 1 <i>Myosorex varius</i> , 1 <i>Vespertilio capensis</i> .
			1 Bird's egg.— <i>Ardea cinerea</i> .
Claud Southey	...	...	1 Mammal.— <i>Graphiurus ocularis</i> .
Major Sparrow	...	...	63 Birds' eggs.—4 <i>Asio capensis</i> , 2 <i>Columba arquatrix</i> , 4 <i>Numida coronata</i> , 2 <i>Otis leucoptera</i> , 2 <i>Cursorius rufus</i> , 4 <i>Scopus umbretta</i> , 7 <i>Corvus capensis</i> , 6 <i>Stephanibyx coronatus</i> , 2 <i>Aegialitis pecuaria</i> , 6 <i>Tephrocorys cinerea</i> , 5 <i>Motacilla capensis</i> , 2 <i>Pratincola torquata</i> , 1 <i>Corvus scapularis</i> , 3 <i>Sitagra capensis caffra</i> , 3 <i>Myrmecocichla bifasciata</i> , 4 <i>Saxicola monticola</i> , 1 <i>Hirundo albigularis</i> , 5 <i>Tinnunculus rupicola</i> .
Dr. F. O. Stoehr	...	...	69 Bird skins.—1 <i>Lamprotornis meevesi</i> , 1 <i>Oriolus larvatus</i> , 1 <i>Hyphantornis cabanisi</i> , 1 <i>Hyphantornis nigriceps</i> , 1 <i>Ploceipasser pectoralis</i> , 1 <i>Pytelia melba</i> , 2 <i>Lagonosticta brunneiceps</i> , 1 <i>Estrilda angolensis</i> , 3 <i>Quelea quelea</i> , 1 <i>Pyromelana oryz sunderalli</i> , 2 <i>Passer diffusus</i> , 1 <i>Anthus rufulus</i> , 1 <i>Cinnyris leucogaster</i> , 1 <i>Cinnyris gutturalis</i> , 1 <i>Cinnyris kirki</i> , 1 <i>Zosterops andersoni</i> , 2 <i>Purus niger zanthostomus</i> , 1 <i>Telephonus minor</i> , 2 <i>Dryoscopus cubla</i> , 2 <i>Dryoscopus mossambicus</i> , 1 <i>Laniarius starki</i> , 2 <i>Nicator gularis</i> , 1 <i>Prionops talacoma</i> , 1 <i>Crateropus jardinei</i> , 1 <i>Pycnonotus layardi</i> , 1 <i>Chlorocichla occidentalis</i> , 1 <i>Phyllotrophus streptans</i> , 2 <i>Cisticola cheniana</i> , 1 <i>Prinia mystacea</i> , 1 <i>Erythropygia quadrivirgata</i> , 1 <i>Muscicapa caerulescens</i> , 2 <i>Pachyrora molitor</i> , 1 <i>Hirundo puella</i> , 1 <i>Rhinopomastus cyanomelas</i> , 1 <i>Irrisor erythrorhynchus</i> , 1 <i>Caprimulgus fervidus</i> , 1 <i>Coracias caudatus</i> , 1 <i>Melittophagus meridionalis</i> , 1 <i>Corythornis cyanostigma</i> , 1 <i>Halcyon orientalis</i> , 2 <i>Colius erythromelon</i> , 1 <i>Lophoceros melanoleucus</i> , 1 <i>Lophoceros epirhinus</i> , 2 <i>Dendropicus cardinalis</i> , 1 <i>Centropus superciliosus</i> , 2 <i>Poecocephalus meyeri</i> , 1 <i>Falco biarmicus</i> , 1 <i>Francolinus sephoena</i> , 1 <i>Francolinus natalensis</i> , 1 <i>Pternistes swainsoni</i> , 1 <i>Glareola pratincola</i> , 1 <i>Himantopus candidus</i> , 1 <i>Aegialitis pallida</i> , 1 <i>Totanus hypoleucus</i> , 2 <i>Hyphantornis shelleyi</i> .
G. H. Stevens	...	...	1 Birdskin.— <i>Buteo jackal</i> .
L. E. Taylor	...	...	2 Birdskins.—2 <i>Phalacrocorax capensis</i> .
			1 Snake.— <i>Psammophis crucifer</i> .

Capt. Tayler	2 Mammals— <i>Trichosurus vulpecula</i> , 1 <i>Zorilla striata</i> .
J. Tregidga	1 Birdskin— <i>Upupa africana</i> .
Capt. Turbyne (S.S. <i>Pieter Faure</i>)...	19 Bird Skins,—3 <i>Diomedea melanophrys</i> , 3 <i>Megalestris antarctica</i> , 4 <i>Majaqueus aequinoctialis</i> , <i>Sterna fluviatilis</i> , <i>Oestrelata macroptera</i> , <i>Daption capensis</i> , <i>Ossifraga gigantea</i> , 3 <i>Diomedea exulans</i> , <i>Sula capensis</i> , 1 <i>Proifinus cinereus</i> .
F. G. Watermeyer	1 Mammal,—1 <i>Felis pardus</i> .
M. Watermeyer	1 Reptile.— <i>Homorelaps lacteus</i>
A. S. Weisbecker	12 Reptiles,—2 <i>Mabuia varia</i> , <i>Oedura varia</i> , 3 <i>Glauconia nigricans</i> , <i>Agama aculeata</i> , <i>Nucras delalandi</i> , <i>Zonurus cordylus</i> , 2 <i>Nucras tessellata</i> , <i>Eremias pulchella</i> .
	1 Amphibian,— <i>Hylambates natalensis</i> .
Miss M. Wilman	1 Bird's Egg,— <i>Sternus vulgaris</i> .
Master Wilson	2 Reptiles,—2 <i>Zonurus polyzonus</i> .
R. B. Woosman	1 Bird Skin,— <i>Passer diffusus</i> .
British Museum (by exchange) ...	Mammals,—9 <i>Mus</i> sp., 1 <i>Arvicanthus pumilio</i> , 2 <i>Gerbillus</i> sp., 1 <i>Otomys sloggetti</i> , 2 <i>Otomys brandtsi</i> , 1 <i>Otomys unisulcatus granti</i> , 2 <i>Vespertilio capensis</i> , 2 <i>Macroscelides proboscideus</i> , 1 <i>M. edwardsi</i> , 1 <i>M. rupestris</i> , 1 <i>Myoscalops argentocinereus</i> , 1 <i>Golunda fallax</i> , 2 <i>Sciurus mutabilis</i> , 1 <i>Rhynchocyon cirnei</i> , 2 <i>Petrodromus tetradactylus</i> , 1 <i>Hyrax</i> sp., 1 <i>Desmodus vufus</i>
	23 Bird skins— <i>Lamprotorus mevesi</i> , <i>Oriolus larvatus</i> , 2 <i>Ploceipasser pectoralis</i> , <i>Prionops talacoma</i> , <i>Crateropus kirki</i> , 2 <i>Pycnonotus layardi</i> , 1 <i>Bleda fuscipes</i> , 2 <i>Bleda strifacies</i> , <i>Phyllostrophus cerviniventris</i> , 1 <i>Turdus libonianus</i> , 2 <i>Tarsiger johnstoni</i> , <i>Terpsiphone perspicillata</i> , 2 <i>Dicrurus afer</i> , 1 <i>Alcedo semitorquata</i> , 1 <i>Poeecephalus fuscicapillus</i> , 1 <i>Asturinnula monogrammica</i> , 1 <i>Ochthodromus asiaticus</i> , 1 <i>Aegialitis pecuaria</i> .
Museum Collector	40 Bird skins—2 <i>Aegialitis marginata</i> , 2 <i>Calidris arenaria</i> , 1 <i>Cisticola subruficapilla</i> , 1 <i>Larus dominicanus</i> , 6 <i>Phalacrocorax capensis</i> , 4 <i>Spheniscus demersus</i> , 2 <i>Larus dominicanus</i> , <i>Cotile cincta</i> , 2 <i>Larus hartlaubi</i> , 2 <i>Alaemon nivosa</i> , 1 <i>Tringa minuta</i> , 1 <i>Haemantopus moquini</i> , 1 <i>Stephanibyx coronatus</i> , 2 <i>Cotile cincta</i> , 1 <i>Hirundo dimidiata</i> , 2 <i>Coturnix capensis</i> , 1 <i>Tringa subarquata</i> , 1 <i>Calidris arenaria</i> , 1 <i>Larus hartlaubi</i> , 1 <i>Phalacrocorax africana</i> , 1 <i>Turtur senegalensis</i> , 1 <i>Turtur capicola</i> , 1 <i>Laniarius gutturalis</i> .
Purchased from C. G. Shortridge ...	105 Mammals—14 <i>Lepus saxatilis</i> , 1 <i>Procavia capensis</i> , 1 <i>Zorilla striata</i> , 5 <i>Suricata tetradactyla</i> , 5 <i>Xerus capensis</i> , 18 <i>Otomys unisulcatus granti</i> , 4 <i>Otomys brandtsi</i> , 1 <i>Otomys sloggetti</i> , 2 <i>Mystromys albipes</i> , 8 <i>Pachyuromys auricularis</i> , 5 <i>Gerbillus paeba</i> , 23 <i>Mus</i> sp., 6 <i>Arvicanthus pumilio</i> , 3 <i>Macroscelides rupestris</i> , 2 <i>Crocidura</i> sp., 1 <i>Pedetes caffer</i> , 6 <i>Vespertilio capensis</i> , 3 <i>Macroscelides proboscideus</i> , 1 <i>Erinaceus frontalis</i> , 3 <i>Cynictis penicillata</i> , 1 <i>Herpestes pulverulentus</i> , 1 <i>Saccostomus campestris</i> , 1 <i>Felis caracal</i> .
	229 Bird skins—2 <i>Spreo bicolor</i> , 5 <i>Hyphantornis velatus</i> , 2 <i>Passer arcuatus</i> , 3 <i>Serinus flaviventris</i> , 4 <i>Serinus albigularis</i> , 2 <i>Fringillaria capensis</i> , 4 <i>Callendula crassirostris</i> , 3 <i>Certhilauda rufula</i> , 6 <i>Alaemon semitorquata</i> , 2 <i>Parnu afer</i> , 6 <i>Lanius collaris</i> , 2 <i>Laniarius gutturalis</i> , 2 <i>Pycnonotus nigricans</i> , 4 <i>Eremomela flaviventris</i> , 4 <i>Myrmecocichla formicivora</i> , 12 <i>Saxicola monticola</i> , 2 <i>Saxicola familiaris</i> , 4 <i>Ptyonoprogne fuligula</i> , 2 <i>Colius capensis</i> , 7 <i>Tricholaema leucomelas</i> , 2 <i>Turtur capicola</i> , 2 <i>Rhinoptilus bicinctus</i> , 4 <i>Alario alario</i> , 2 <i>Tephrocorys cinerea</i> , 2 <i>Motacilla capensis</i> , 1 <i>Nectarinia famosa</i> , 2 <i>Lanius subcoronatus</i> , 5 <i>Parisoma layardi</i> , 2 <i>Prinia maculosa</i> , 1 <i>Sylviella rufescens</i> , 2 <i>Emarginata pollux</i> , 5 <i>Emarginata sinuata</i> , 2 <i>Erythropgia coryphaeus</i> , 1 <i>Bradyornis infuscatus</i> , 5 <i>Apalis scita</i> , 2 <i>Totanus tricollaris</i> , 1 <i>Melierax canorus</i> , 2 <i>Otis caerulescens</i> , 2 <i>Scopus umbretta</i> , 1 <i>Estrilda astrild</i> , 3 <i>Fringillaria impetuani</i> , <i>Pyrrhulauda australis</i> , 3 <i>Anthus nicholsoni</i> , 1 <i>Cinnyris fusca</i> , 2 <i>Aegithalus capensis</i> , 2 <i>Pratincola torquata</i> , 1 <i>Cossypha caffra</i> , 2 <i>Cotile paludicola</i> , 4 <i>Hirundo albigularis</i> , 4 <i>Petrochelidon spilodera</i> , 3 <i>Oena caensis</i> , 4 <i>Pterocles namaqua</i> , 1 <i>Francolinus africanus</i> , 2 <i>Oedicnemus capensis</i> , 1 <i>Stephanibyx coronatus</i> , 1 <i>Aegialitis asiatica</i> , 4 <i>Aegialitis pecuaria</i> , 1 <i>Totanus glareola</i> , <i>Amydrus caffer</i> , <i>Cisticola subruficapilla</i> , <i>Turdus cabanisi</i> , 1 <i>Hirundo dimidiata</i> , 2 <i>Hirundo cucullata</i> , 1 <i>Falco biarmicus</i> , <i>Tinnunculus rupicola</i> , 1 <i>Tringa subarquata</i> , <i>Pavoncella pugnax</i> , 2 <i>Ardea cinerea</i> , 1 <i>Sitagra capensis</i> , <i>Lagonosticta brunneiceps</i> , 2 <i>Estrilda angolensis</i> , 1 <i>Estrilda subflava</i> ,

- 2 *Pyromelana oryx sundevalli*, 1 *Vidua principalis*, 2 *Passer diffusus*, 1 *Poliospiza gularis*, 2 *Serinus angolensis*, 1 *Emberiza flaviventris*, 1 *Mirafra africana*; 1 *Tephrocorys cinerea*, 1 *Anthus rufulus*, 2 *Zosterops virens*, 2 *Lanius collurio*, 1 *Nilaus brubru*, 1 *Dryoscopus cubla*, 1 *Pycnonotus layardi*, 1 *Parisoma subcaeruleum*, 2 *Sylvia simplex*, 1 *Phylloscopus trochilus*, 1 *Prinia flavicans*, 1 *Prinia sp.*, 2 *Cisticola aberrans*, 1 *Cisticola tinniens*, 1 *Sphenocercus natalensis*, 1 *Turdus litsipsirupa*, *Tarsiger silens*, 1 *Dierurus afer*, 1 *Cotile cineta*, 1 *Hirundo rustica*, 2 *Hirundo semirufa*, 2 *Melittophagus meridionalis*, 2 *Merops apiaster*, 1 *Haleyon albiventris*, 1 *Dendropicus cardinalis*, 3 *Chrysococcyx cupreus*, 1 *Coccyzus jacobinus*, 1 *Tinnunculus naumanni*, 1 *Cursorius rufus*.
- 14 Reptiles.—3 *Pachydaetylus capensis*, *Mabuia varia*, *Zonurus polyzonus*, 5 *Eremias pulchella*, 3 *Agama aculeata*, *Agama atra*.
- 4 Amphibians.—1 *Rana delalandi*, 2 *Bufo graati*, 1 *Bufo angusticeps*.
- Purchased 3 Mammals.—1 *Cobus lech*, 1 *Madoqua damarensis*, 1 *Herpestes albicauda*.
- 22 Bird skins.—1 *Centropus burchelli*, 1 *Lophoceros melanoleucus*, 1 *Herodias ralloides*, 1 *Dilophus carunculatus*, 1 *Bradypterus babaceula*, 2 *Quelea russi*, 1 *Serinus angolensis*, 1 *Motacilla campestris*, 1 *Oriolus larvatus*, 1 *Cinnyria gutturalis*, 2 *Coracias mossambicus*, 1 *Asturina mou-granica*, 1 *Tinnunculus rupicola*, 1 *Astur polyzonoideus*, *Puffinus cinereus*, *Sterna fluviatilis*, *Sterna minuta*, *Hydrochelidon hybrida*, *Oreanodroma leucorhoa*, *Podiceps minor*.
- 18 Fishes.—*Chrysophys gibbiceps*, *Seriola lalandi*, 2 *Scomber pneumatophorus*, *Dipterodon capensis*, *Parascorpus typus*, *Pagrus laticeps*, *Genypterus capensis*, *Agriopus torvus*, 2 *Clinus superciliosus*, *Otolithus aequidens*, *Trigla capensis*, *Temnodon saltator*, *Acanthistius Sebastoides*, *Pimelopterus fuscus*, *Agriopus superciliosus*, *Thyrsites atun*.

3. LIST OF INSECTS ACQUIRED DURING THE YEAR.

NOTE.—All the Species here mentioned are new to the Museum Collection.

- A. Bodong *Coleoptera*: 2,547 examples, 300 species, *Styphoderma asperatum*, *Hexagonia umtalina*, *Hexagonia angustata*, *Zelottius umtalinus*, *Disphaericus rhodesianus*, *Chlaenius epigraphidus*, *Chlaenius sp.*, *Chlaenius sp.*, *Chlaenius pronus*, *Bascanus dissidens*, *Badister sp.*, 5 *Abacetus sp. sp.*, *Gazanius crassicornis*, *Cryptobium sp.*, *Medon sp.*, *Attalus sp.*, *Pseudocoletes*, *Polystalactica sp.*, *Scolytus sp.*, 2 *Longicorn n. sp.*, 1 *Poecilomorpha sp.*
- Hymenoptera*: *Arge sp.*, *Megachile sp.*, *Mutilla sp.*
- Hemiptera*: 7 species undetermined.
- Orthoptera*: *Gryllid sp.*, *Xiphocera loboscelis*, *Eugaster juv.*
- J. E. Beare 17 examples, 15 species,
Coleoptera: *Lordites sp.*, *Longicorn*, gen. and spec. ign.
- D. Dod 1,575 examples, 267 species.
Coleoptera: *Omophron sp.*, *Macrochilus sp.*, *Lionychus sp.*, *Chlaenius sp.*, *Lasiocera egregia*, *Rathymus melanarius*, *Anaulacus sp.*, *Tachys sp.*, *Tachys sp.*, *Callistomimus placens*, *Hyphidrus sp.*, *Hydrophilus sp.*, *Bidessus sp.*, *Hydrovatus sp.*, *Platychora sp.*, 2 gen. and spec. ignot., *Attagenus sp.*, *Attagenus sp.*, *Xylolaenus sp.*, *Colydid gen. ignot.*, *Milichus picticollis*, *Onthophagus rhyncophorus*, *Onthophagus sebakuanus*, *Onthophagus decedens*, *Onthophagus exoletus*, *Onthophagus porrectus*, *Aphodius senegalensis*, *Aphodius sp.*, *Aphodius sp.*, *Macroretrus singularis*, *Gargilius trispinosus*, *Alaus sp.*, *Pantolamprus nitens*, *Eletica niansana*, *Scolytus sp.*, *Urodon sp.*, *Spermophagus sp.*, *Ploederus hamifer*, *Macropsebius cotterrilli*, *Pachystola erinacea*, *Zographus sp.*, *Callematicus sp.*, *Clitanthus dodi*, *Distenia sp.*, *Hyphargira sp.*, *Prosopocera cretacea*, *Ossibia sp.*, *Eunidia sp.*, *Syssita sp.*, *Blepisanis sp.*, 2 gen. and spec. ignot., *Leucastra sp.*, *Lema sp.*, *Peploptera sp.*, *Cryptocephalus sp.*, *Chrysomela sp.*, *Danae sp.*, *Danae sp.*, *Alesia sp.*, *Alesia sp.*, *Pharus sp.*, *Pharus sp.*, *Chilocorus sp.*, *Halyzia exiguenotata*, *Aulis sp.*, *Epilachna sp.*, *Cassida sp.*, *Cassida sp.*, *Cassida sp.*, *Acolastus sp.*
- Neuroptera*: *Tmesibasis lacerata*.

A. J. I. Janse ... ..	...	184 examples, 170 species <i>Coleoptera</i> : <i>Callaecus carinatipennis</i> , <i>Hypomeces optivus</i> , <i>Siderodactylus</i> sp., <i>Siderodactylus</i> sp., <i>Anomalipus variabilis</i> , <i>Mylabris</i> sp., <i>Ocladius</i> sp., <i>Tenebrio laticollis</i> , <i>Psammodes</i> sp., <i>Psammodes</i> sp., <i>Lycus</i> sp., 3 Gen. and spec. undeterm., <i>Scarabaeus westwoodi</i> .
W. E. Jones ... ..	...	135 specimens, species. <i>Lepidoptera</i> : <i>Agrotis</i> sp., <i>Illema</i> sp., <i>Hypaena</i> sp., <i>Leucana</i> sp., <i>Onychia</i> 5 sp. sp.
Rev. H. Junod ... ..	...	36 examples, 19 species. <i>Anisonyx</i> sesouto, <i>Buprestid</i> , Gen. sp. ign., <i>Agrilus</i> sp., <i>Cassida</i> sp.
Dr. H. Martin ... ..	...	254 examples. <i>Coleoptera</i> : <i>Aphodius connexus</i> , <i>Genuchus nigriclavus</i> , <i>Asida lieuosa</i> , <i>Trigonopus egenus</i> , <i>Hoplonyx luscus</i> , <i>Psaromarygmus graciosus</i> , <i>Lagria egena</i> , <i>Derosphaerius impressifrons</i> , <i>Trigonopus amplicollis</i> , <i>Platydemia piccolipes</i> , <i>Chrysomela efferta</i> , <i>Laetana histrio</i> , <i>Luperus</i> sp., <i>Aspidomospha</i> sp., 3 gen. and spec. ign.
G. A. K. Marshall ... ..	...	112 examples, 41 species. <i>Coleoptera</i> : <i>Atys hypocrita</i> , <i>Atys fallax</i> , <i>Camenta salisburiana</i> , <i>Empeccamenta mashona</i> .
The Rev. J. A. O'Neil ... ..	...	102 examples, 46 species. <i>Coleoptera</i> : <i>Myrmedonia longicornis</i> , <i>Myrmedonia gracilicornis</i> , <i>Myrmedonia nigrita</i> , <i>Tachyusa</i> sp., <i>Homalota</i> sp., <i>Cryptobium capense</i> , <i>Stilictus pygmaeus</i> , <i>Sunius exilis</i> , <i>Scopaeus</i> sp., <i>Pinophilid</i> gen. and sp. unknown, <i>Oxytelus</i> sp., gen. and sp., unknown, <i>Heterochelus cristaticeps</i> , <i>Heterochelus simulator</i> , <i>Heterochilus arduus</i> , <i>Syagrus antennalis</i> .
P. A. Sheppard ... ..	...	465 examples, 140 species. <i>Coleoptera</i> : <i>Pheropsophus pallidipunctatus</i> , <i>Gymnopleurus</i> sp., <i>Onthophagus optivus</i> , <i>Adoretus</i> sp., <i>Heteronychus beiranus</i> , <i>Stomylus varians</i> , <i>Nannocerus beiranus</i> , <i>Perichilus violaceiceps</i> , <i>Strongylium angustatum</i> , <i>Lagria vittatipennis</i> , <i>Lagria pustulosa</i> , <i>Formicomus</i> sp., <i>Amblysterna nyassae</i> , <i>Eremnus</i> sp., <i>Alcides</i> sp., <i>Alcides</i> sp., <i>Apoderus</i> sp., <i>Ceutorhynchid</i> sp., <i>Apomecyna</i> sp., <i>Hyllisia subvirgata</i> , 2 Genera and species unknown, <i>Frea flavoscapula</i> , <i>Aspidomorpha natalensis</i> , <i>Abacetus importunus</i> , <i>Abacetus evulsus</i> , <i>Abacetus vertagus</i> , <i>Stenolophus inops</i> , 3 gen. and sp., unknown, <i>Tanymecus</i> sp., <i>Cylas</i> sp., <i>Ceutorhynchid</i> sp., <i>Baridiid</i> sp., <i>Prioseelis trideus</i> , <i>Nannocerus cylindricus</i> , <i>Nematognatha coerulans</i> . <i>Lepidoptera</i> : <i>Teracolus eunomia</i> .
Slater, W. L. ... ..	...	<i>Lepidoptera</i> : <i>Agrotis plecta</i> .
R. M. Lightfoot ... ..	...	1,181 examples: 214 species. <i>Coleoptera</i> : <i>Tenebrionidae</i> , 3 spec. and gen. unknown. <i>Lepidoptera</i> : <i>Plusiodontus</i> sp., <i>Plusiodontus</i> sp., <i>Chilena</i> sp.
Mrs. Marchant ... ..	...	214 specimens: 71 species. <i>Lepidoptera</i> : <i>Estiella</i> sp., <i>Lenodora</i> sp., <i>Boechoris</i> sp. sp., <i>Crambus</i> sp., <i>Pyralis</i> sp. sp.
By purchase ... ..	...	502 examples, 243 species. <i>Hymenoptera</i> : 3 spec. undet. <i>Coleoptera</i> : <i>Discoderes</i> sp., <i>Natalis</i> , 2 sp. sp., <i>Longicornis</i> and <i>Chrysomelids</i> , 4 sp. sp., <i>Curculionids</i> , 3 sp. undet., <i>Palenis</i> sp. <i>Lepidoptera</i> : <i>Estigmene</i> sp., <i>Diaphone dominicana</i> , <i>Ophius intermedius</i> , <i>Mamestra</i> sp., <i>Charadissa</i> , 2 sp. sp., <i>Chrysopoloma</i> sp., <i>Craspidia</i> sp., <i>Macaria</i> sp., <i>Teras</i> sp., <i>Zetta</i> sp., 36 species undetermined. <i>Diptera</i> : <i>Tabanus</i> sp., <i>Microstylus</i> sp., 3 sp. indeter.

4. LIST OF LAND AND FRESHWATER INVERTEBRATES, EXCLUSIVE OF INSECTS ACQUIRED DURING THE YEAR.

NOTE.—Names printed in *Italics* signify species new to the Museum Collection.

H. P. Abernethy ... ..	...	12 Spiders (<i>new</i> : <i>Paranomastola abernethyi</i> n.g. and n.sp. <i>Zolavriidae</i> 1 sp., <i>Drassidae</i> 1 sp.).
C. Allen ... ..	...	1 Scorpion (<i>Hudogenes</i> sp.). 1 Myriapod.
E. G. Alston ... ..	...	1 Scorpion. 3 Solifugae.
G. E. Beare ... ..	...	1 Solifuga. 3 Scorpions. 14 Spiders (<i>new</i> : <i>Lycosa</i> n.sp.).
A. Birula (by exchange) ... ..	...	27 foreign Scorpions (8 kinds). 3 foreign Spiders (<i>Argiope lobata</i>). 7 foreign Scorpions (5 kinds).

A. Bodong	...	...	...	2 Mites. 3 Spiders.
H. Brauns	...	...	...	4 Opiliones. 82 Spiders (<i>new</i> : <i>Andromma</i> sp., <i>Drassidae</i> 4 spp., <i>Pholcidae</i> 1 sp., <i>Spiroctenus</i> 1 sp., <i>Stasimopus</i> n.sp., <i>Teutonia</i> 1 sp., <i>Zodariidae</i> 1 sp.).
R. Bruom	...	...	...	2 Solifugae. 13 Scorpions. 20 Spiders.
R. Colson	...	...	...	1 Solifuga. 30 Spiders (<i>new</i> : <i>Selempis</i> 1 sp.).
A. Dendy	...	...	...	9 Phyllopod crustaceans (<i>Streptocaphalus</i> sp.). 1 Scorpion.
C. J. de Smidt	...	...	...	1 Isopod Crustacean. 2 Scorpions. 27 Spiders. 3 Myriapods.
I. L. Drège	...	...	...	1 Isopod Crustacean. 2 Opiliones. 23 Spiders.
Cyril French	...	...	...	13 Peripatus. 1 Pseudoscorpion. 2 Solifugae. 13 Spiders.
G. French	...	...	...	1 Worm (<i>Freshwater Leech</i>). 10 Pseudoscorpions. 5 Solifugae. 1 Mite. 6 Scorpions. 9 Myriapods.
H. A. Fry	...	...	...	68 Spiders (<i>new</i> : <i>Drassidae</i> 2 spp., <i>Spiroctenus</i> 1 n. sp.). 2 Worms (<i>Land Planarian</i>). 3 Isopod Crustaceans. 1 Pseudoscorpion. 2 Mites. 4 Scorpions. 1 Pedipalp. 9 Spiders (<i>new</i> : <i>Aranea</i> 1 sp., <i>Acantholom fryi</i> n. sp.).
J. E. C. Gould	...	...	...	1 Solifuga. 3 Opiliones. 42 Scorpions. 71 Spiders.
H. Herman	...	...	...	11 Spiders.
H. Junod	...	...	...	19 Myriapods. 12 Scorpions. 2 Opiliones (2 spp.). 2 Pseudoscorpions (1 sp.). 7 Solifugae (<i>new</i> : <i>Solpuga spiralicornis</i> n. sp.; <i>S. junodi</i> n. sp.). 118 Spiders (<i>new</i> : <i>Argiopidae</i> 6 spp., <i>Aranea</i> 2 spp.), <i>Argyro-</i> <i>cheira</i> 1 sp., <i>Clubionidae</i> 2 spp., <i>Heliponomecus cafer</i> n. sp., <i>Oxyopidae</i> 1 sp., <i>Selempis</i> 1 sp., <i>Thomisidae</i> 1 sp.).
J. H. C. Krapohl	...	...	...	2 Myriapods. 46 Scorpions. 8 Solifugae (<i>new</i> : <i>Hexisopus</i> sp.). 11 Spiders (<i>new</i> : <i>Ariadna</i> n. sp., <i>Dresserius</i> n. sp., <i>Drassidae</i> 1 sp., <i>Pisauridae</i> 1 sp., <i>Thomisidae</i> 1 sp.).
N. C. B. Langston	...	...	...	4 Spiders (<i>new</i> : <i>Clubionidae</i> 1 sp.).
R. M. Lightfoot	...	...	...	9 Isopod Crustaceans. 7 Myriapods. 2 Pseudoscorpions. 2 Mites. 9 Scorpions. 2 Solifugae (<i>Ceroma</i> n. sp.). 223 Spiders (<i>new</i> : <i>Attidae</i> 4 spp., <i>Argiopidae</i> 1 sp., <i>Clubionidae</i> 1 sp., <i>Drassidae</i> 2 spp., <i>Thomisidae</i> 2 spp., <i>Theridiidae</i> 1 sp.).
I. Meiring	...	...	...	1 Spider.
Eric Nobbs	...	...	...	1 Spider (<i>Senhyra</i> n. sp.).
T. O'Connor	...	...	...	6 Spiders (<i>new</i> : <i>Moggridgea</i> n. sp.).
J. A. O'Neil	...	...	...	2 Opiliones. 7 Scorpions. 15 Solifugae. 57 Spiders (<i>new</i> : <i>Ancylotrypa</i> n. sp., <i>Attidae</i> 1 sp.). 4 Myriapods.
J. Paynter	...	...	...	122 Scorpions. 4 Solifugae. 2 Spiders. 38 Myriapods.
Miss A. Pegler	...	...	...	1 Opilio. 2 Scorpions. 86 Spiders (<i>Brachionopus annulatus</i> n. sp., <i>Aranea</i> 2 spp., <i>Attidae</i> 2 spp., <i>Clubionidae</i> 2 spp., <i>Drassidae</i> 1 sp., <i>Theridiidae</i> 1 sp., <i>Lycosidae</i> 1 sp., <i>Oxyopidae</i> 1 sp., <i>Pardosa</i> n. sp.).

W. F. Purcell	...	...	6 Earthworms. 40 Isopod Crustaceans. 3 Opiliones. 5 Solifugae. 31 Scorpions. 319 Spiders (<i>new: Mogyridae 1 pectunguqi</i> , <i>Sim.</i> , <i>Spiroctenus pectiniger</i> , <i>Sim.</i> , <i>S. n. sp.</i> , <i>Pelmatorcyeter n. sp.</i> , <i>Harpacticrella n. sp.</i> , <i>Therididae 3 spp.</i>).
Mrs. W. F. Purcell	...	...	35 Myriapods. 5 Isopod Crustaceans. 6 Scorpions. 1 Opilio. 1 Solifuga. 59 Spiders. 6 Myriapods.
F. A. Pym	...	...	2 Spiders (<i>Spiroctenus flavopunctatus n. sp.</i>).
S. C. Cronwright Schreiner	...	...	27 Pseudoscorpions. 7 Solifugae. 5 Mites. 15 Spiders (<i>new: Ariadna n. sp.</i>).
S. Schönland	...	...	4 Myriapods. 3 Scorpions.
E. H. L. Schwarz	...	...	3 Opiliones. 5 Solifugae. 17 Scorpions. 28 Spiders (<i>new: Harpacticrella n. sp.</i>).
W. L. Schloter	...	...	1 Myriapod.
W. C. Scully	...	...	1 Mite.
G. Shortridge	...	...	1 Solifuga. 1 Isopod Crustacean. 2 Solifugae. 11 Scorpions. 12 Myriapods. 27 Spiders.
G. Watermeyer	...	...	3 Spiders (<i>Harpacticra chrysoquater</i> <i>Poc.</i>).
A. S. Weisbecker	...	...	1 Amphipod Crustacean. 4 Isopod Crustaceans. 1 Opilio. 3 Mites. 15 Scorpions. 45 Spiders (<i>new: Argyripidae 1 sp.</i> , <i>Attidae 2 spp.</i> , <i>Drassidae 1 sp.</i>).
M. G. Williams	...	...	9 Myriapods. 3 Solifugae.
J. Williamson	...	...	3 Spiders.
Miss M. Wilman	...	...	65 Spiders (<i>new: Brachionopus n. sp.</i> , <i>Agaleus 1 sp.</i> , <i>Aranca 3 spp.</i> , <i>Gasteracantha 1 sp.</i> , <i>Attidae 1 sp.</i> , <i>Mimetidae 1 sp.</i> , <i>Pardosa 1 sp.</i>).
	...	...	1 Scorpion.

5.- LIST OF MOLLUSCA ACQUIRED DURING THE YEAR.

NOTE.—Species new to the Museum are printed in italics.

Mrs. H. M. Barber	...	...	35 examples, 11 species— <i>Ennea separata</i> , <i>Achatina crawfordi</i> , <i>A. semidecusata</i> , <i>A. spec.?</i> <i>Lutinacia kraussi</i> , <i>Obeliscus lanceolatus</i> , <i>Trachycystes loveni</i> , <i>Pomatias inclare</i> , <i>Cerithium decollatum</i> , <i>Unio-caffer</i> , <i>Corbicula? africana</i> .
J. Berg	...	...	12 examples, 7 species— <i>Cypraea helvola</i> , <i>C. ascellus</i> , <i>C. cribraria</i> , <i>C. poraria</i> , <i>C. staphylaea</i> , <i>Nerita sanguinolenta</i> .
D. Dodds	...	...	32 examples, 4 species— <i>Achatina granulata</i> , <i>A. panthera</i> , <i>Physopsis africana</i> .
H. A. Fry	...	...	4 examples, 1 species— <i>Trachycystes planti</i> .
J. C. Gould	...	...	28 examples, 2 species— <i>Dorcasia</i> sp. <i>Trachycystes subuletorum</i> .
Miss Le Sueur	...	...	2 examples, 1 species— <i>Haminea natalensis</i> .
R. Le Sueur	...	...	55 examples, 9 species— <i>Limex maximus</i> , <i>Helix hortensis</i> , <i>H. lepida</i> , <i>H. cantiana</i> , <i>H. arbustorum</i> , <i>H. pizana</i> , <i>H. pomatia</i> , 2 spec.?
R. Lightfoot	...	...	152 examples, 22 species— <i>Sepia burnupi</i> , <i>Aplysia</i> sp., <i>Bullia rhodostoma</i> , <i>B. pura</i> , <i>Desmoulea retusa</i> , <i>Fissurella funata</i> , <i>Columbella lightfooti</i> , <i>Marginella diadochus</i> , <i>Turbonilla candida</i> , <i>Eulima nitida</i> , <i>Cynisca granulosa</i> , <i>Risson niga</i> , <i>Latirus rousi</i> , <i>Assimia</i> sp., <i>Pleurotoma</i> sp., <i>Lasea rubra</i> .
W. F. Purcell	...	...	325 examples, 11 species— <i>Testacella aurigaster</i> , <i>Oopelta nigromaculata</i> , <i>Trachycystes</i> sp., <i>Succinea delalandei</i> , <i>Fissurellidae hiantula</i> , <i>Ianthia nitens</i> , <i>I. exigua</i> , <i>I. fragilis</i> , <i>Assiminia</i> sp., <i>Pandora dissimilis</i> , <i>Tellina rosea</i> .
A. W. Rogers	..	..	1 example, 1 species— <i>Natalina caffra</i> .
E. H. L. Schwarz	..	...	16 examples, 1 species— <i>Zingis trotteriana</i> .
H. W. Struben	..	..	<i>Margaritifera margaritifera</i> .
G. Tredgold	..	..	<i>Natalina</i> sp.
A. S. Weisbecker	...	...	3 examples, 2 species— <i>Natalina</i> sp., <i>Veronicella</i> sp.

6.—LIST OF ADDITIONS TO THE DEPARTMENT OF GEOLOGY AND
MINERALOGY DURING THE YEAR.

J. M. Bain	...	...	A collection of Rocks and Fossils made by his father, the late T. Bain, from various parts of the Colony.
Kenneth Bethune	...	...	Minerals from Colesberg.
T. Bright	...	...	Fossils from the Uitenhage beds, Koega.
British South Africa Co.	...	...	Minerals and Building Stones from Rhodesia.
R. Broom	...	...	Skull of <i>Oudonodon gracilis</i> from Pearston.
Cape Copper Company	...	...	Collection of Ores, etc., from O'okiep, Namaqualand.
J. Christianssen	...	...	Echinoid from Lammifjorden.
Langham Dale	...	...	Copper Ores and other Minerals from Namaqualand.
P. Debell	...	...	Rocks and Minerals from Jagersfontein Mine.
De Beers Consolidated Mines Ltd.	...	...	Rocks and Minerals from Kimberley.
Durban Museum	...	...	Minerals from Natal.
English Church Mission, St. Marks	...	...	St. Mark's Meteorite.
John Fergus	...	...	Skull of <i>Pentecostichus fergusi</i> Tarkastad.
J. T. Higgo	...	...	Septarian Nodule from England.
H. Howard	...	...	Fossil Wood from Matatiele.
G. Johnston	...	...	Collection of Pleistocene Fossils, West Wittering, England.
Dr. Kolbe	...	...	Quartz Crystal.
Mrs. J. Lewis, senr.	...	...	Fossils from the Uitenhage Beds, Sunday River.
J. Lewis	...	...	Fossils from the Uitenhage Beds, Sunday River.
Sir L. Michell	...	...	Minerals from Rhodesia.
J. H. Paynter	...	...	Bokkeveld Fossils from De Doorns.
M. Ricono	...	...	Reptilian remains from Mount Fletcher.
T. E. Robertson	...	...	Rocks from Kimberley.
J. P. Snyman	...	...	Reptilian Skull, Knofloeks Fontein.
Mrs. W. Sprigg	...	...	Opal from Queensland.
J. C. Theunissen	...	...	Reptile from Duikerfontein, Beaufort West.
A. L. du Toit	...	...	Jarrowite from the Clyde.
G. Trill	...	...	Cassiterite, Kuils' River.
C. J. de Villiers	...	...	<i>Eudalman bathystoma</i> and skull of <i>Dicynodon</i> .
F. W. Voit	...	...	Rocks from Narriep Desert, G. S. W. Africa.
Prof. Ward (New York) Exchange	...	...	2 meteoric irons, (1) N'Goureyuna, Sudan, (2) Mukerop G. S. W. Africa.
J. Wright	...	...	Garnets, Macdonnell Range, Australia.

7.—LIST OF ADDITIONS TO THE DEPARTMENT OF ANTHROPOLOGY AND
ANTIQUITIES DURING THE YEAR.

J. M. Bain	...	...	Skull and part of skeleton of a Bushman from the Knysna Caves. 1 Bushman bow with quiver of leather. 37 Bushman arrows. 4 Carved wooden animals, Sechuana. Collection of 148 Stone Implements, including axes, arrow-heads, scrapers, ringstones, arrow-sharpener, flakes and pounders from various districts of the Colony. 2 Complete Bushman pots and fragments of several others.
A. G. Bettington	...	...	Medal, Queen Victoria, 1837, found at foot of Signal Hill, Cape Town.
M. van Breda	...	...	Old Bell, formerly used on the Oranjezicht Estate, in Cape Town, dated 1775.
Chamber of Commerce, Cape Town	...	...	Five gold, five silver and four copper English coins of George III: two gold, sixteen silver and one copper Dutch coins found in a tin box in the foundation of the Old Commercial Exchange, when pulled down in April, 1893.
Colonial Government	...	...	Old Iron Chest or Safe, formerly belonging to the Colonial Customs Department.
L. Dale	...	...	8 Stone Implements, European, 90 Arrow Heads, 2 Spear Heads, 7 Pounders, 10 Scrapers, 3 Throwing Stones, 1 Core, 1 perforated Stone, all from the Cape Flats.
Capt. Barrett Hamilton	...	...	1 Stone Axe from Griqua Town.
Messrs. C. P. Heydenrych	...	...	Die for stamping tea spoons with the arms of the late South African Republic.
H. Seton Kerr	...	...	12 Stone Implements (axes, etc.) from Cuddapah, Madras Pres., India, 4 Flint Knives from the Wadi Sheikh Mines, Egypt, 13 small Flint Knives and Arrow Heads from the Fayoum, Egypt.
T. G. MacLear Ladds	...	...	9 Scrapers and Spear Heads from Sterkstroom, 1 Arrow Head from the Cape Flats.
G. Oats	...	...	Walking stick entirely made of empty cartridge cases.
J. B. Parkinson	...	...	1 Stone Knife from Orange River Station, C.C.
Messrs. Rogers & du Toit	...	...	13 Scrapers and other implements from Ceres, Worcester and Calvinia.
G. C. Shortridge	...	...	19 Arrow heads and Scrapers from Hanover, C.C.
T. Williams	...	...	Old Cannon Ball from the slopes of Table Mountain.
Purchased	...	...	Delf china Plate with the monogram of the Dutch East India Company.

8.—LIST OF ADDITIONS TO THE LIBRARY.

(a) BY EXCHANGE OR PRESENTATION.

Donor.	Donation.
Adelaide, Geological Department ...	Report on the White Range Gold Mines and Arltonga Goldfields.
Adelaide, Public Museum and Library ...	Annual Report, 1901-1902.
Batavia, Natural History Society of the Dutch East Indies ...	Natuurkundig Tijdschrift. Vol. LXII
Bergen Museum ...	Aarvog 3te Hft. 1902. 1te-2te Hft. 1903. Aarsberetning, 1902.
Berlin, Berlin Entomological Society ...	Zeitschrift. Vol. XLV., Hft. 3-4. Vol. XLVII. Hft. 3-4. Vol. XLVIII., Hft. 1-3.
Berlin, Society of Friends of Natural History ...	Sitzungs Berichte N. 1, 1903.
Berlin, Zoological Museum ...	Mitteilungen, Bd. II, Heft. 3te. Bericht, 1903. Neue Rhopaloceren aus Ost-Afrika.
Boston, Natural History Society ...	Proceedings, Vol. XXX. Pts. 4-7. Vol. XXXI. Pts. 1-3.
Brooklyn, Museum of the Institute of Arts and Sciences ...	Scientific Bulletin, Vol. 1, No. 3. Cold Spring Harbour Monographs, No. 1-2.
Brisbane, Royal Society of Queensland ...	Proceedings, Vol. XVII, Pt. 2.
Brussels, Belgium Entomological Society ...	Memoirs IX. Annales, Tome 45, N. 12, Tome 46, N. 4, 12, 13, Tome 47, N. 1-11.
Brussels, Royal Museum Natural History ...	Les Coprolithes de Bernissart, Part I, by C. Bertrand. Les Népadites des Couches Eocènes de la Belgique, by Seward and Aber. Description des Echinides Crétacés de la Belgique, by J. Lambert.
Buda-Pest, Natural History Museum	Annales, Vol. I., Pt. 1. Termeszetráji Füzetek, Vol. XXV., Pts. 3 and 4.
Buenos Aires, National Museum ...	Annales, Vol. VII., VIII., Pts. 1 and 2.
Bulawayo, Rhodesia Scientific Association ...	Annual Report, 1902. Proceedings, Vol. VI., No. 1.
Bulawayo, Rhodesian Museum ...	The Zimbabwe Ruins, by F. P. Mennell. 1st Annual Report, 1902.
Calcutta, Asiatic Society of Bengal	Proceedings, Nos. 6-10, 1902, Nos. 1-4, 1903.
Calcutta, Indian Museum ...	Annual Report, 1901-1902. Notes, Vol. V., Nos. 3 and 4. Report, Indian Marine Survey Ship "Investigator." Crustacea, Pt. 10.
Cambridge, Philosophical Society...	Proceedings, Vol. XI., Pts. 6 and 7, Vols. XII., Pts. 1-3.
Cambridge, Mass., Museum of Comparative Zoology ...	Annual Report, 1901-2. Bulletin, Vol. XXXVIII., No. 8, Vol. XXXIX., Nos. 5-8, Vol. XL., Nos. 4-7, Vol. XLI., No. 1, Vol. XLII., Nos. 1-4.
Cape Town, Colonial Government	"Agricultural Journal," Vol. XXII., Nos. 1-6, Vol. XXIII., Nos. 1-4. Report, Government Marine Biologist, 1901-02. Marine Investigations in South Africa, Vol. I., Vol. II., pp. 93-264. History of South Africa under the Administration of the Dutch East Indian Company, 1652-1795, by Geo. McCull Theal. Fauna of South Africa, Birds, Vol. III.
Cape Town, Geological Commission	Annual Report, 1901-2.
Cape Town, Government Guano Dept. ...	Report, 1902.
Cape Town, Philosophical Society...	Transactions, Vol. XII., pp. 897-920, Vol. XIV., Pts. 1-4.
Cape Town, Public Library ...	Travels in the Interior of Southern Africa, Vol. I., by W. J. Burchell. Nature, Vols. III.-LVI.
Cape Town, Western Districts Game Protection Association ...	Annual Report, 1903.
Chicago, Field Columbian Museum	Publications, Nos. 46, 54, 64-74, 76.
Cincinnati Museum Association ...	22nd Annual Report.
Colombo, Museum ...	Spolia Zeylandica, Vol. I., Pts. 1 and 2. Annual Report, 1902.
Dar-es-Salaam, Land and Forestry Department, German East Africa ...	Bericht, Vol. I., Pts. 3, 4, 5, 6.
Dublin, Royal Society ...	Scientific Proceedings, Vol. XI., Pt. 5. Scientific Transactions, Vol. VII., Nos. 14-16, Vol. VIII., No. 1. Economic Proceedings, Vol. I., No. 3.

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Frankfurt A/M, Senkenbergian Natural History Society ...	Bericht, 1903.
Geneva, Zoological Society of Switzerland	Annales, Tome 10, Fasc. 2 and 3, Tome 11, Fasc. 1 and 2.
Glasgow, Museum and Art Galleries	Report, 1902.
Grahamstown, Albany Museum ...	Annual Report, 1902.
	Records, Vol. 1., Pt. 1.
Halifax, Nova Scotian Institute of Science	Vol. X., Pt. 3.
Hamburg, Natural History Museum	Mitteilungen, Vol. XIX.
Honolulu, Bernice-Pauahi-Bishop Museum	Memoirs, Vol. I., Pt. 5.
	Fauna Hawaiiensis, Vol. III., Pt. 2.
Leyden, Royal Museum of Natural History	Notes, Vol. XXIII.
Lisbon, Royal Academy	Journal de Ciencias, etc., Vol. VII., n. 25.
London, British Museum	Return, 1903.
	Catalogue of the Lepidoptera Phalaenae, Vol. IV.
	Catalogue of the Birds' Eggs in the British Museum, Vols. II. and III.
	Catalogue of the Collection of Palaeartic Butterflies formed by the late John H. Leech.
	Guide to the Coral Gallery in Department of Zoology, Natural History Museum.
	Catalogue of the Madreporarian Corals in the British Museum.
	Catalogue of the books, manuscripts, maps and drawings in the British Museum Vol. I.
	A monograph of the Culicidae, or Mosquitos Vol. III.
	A handlist of the genera and species of Birds Vol. IV.
	First Report on Economic Zoology.
	A monograph of the Tsetse Flies.
	Report of the Collection of Natural History made in Antarctic Regions during the voyage of the "Southern Cross."
	Handbook of instructions for Collectors.
	Set of plates of Westwood's Phasmidae in the British Museum.
London, Royal Society	Proceedings No. 469, 471, 479, 480.
	Philosophical Transactions Ser. B Vols. 192-195.
London, Zoological Society	Proceedings, Vol. II., pt. II., 1902. Vol. I., pt. I., and II., 1903.
	Transactions, Vol. XVI., pts. 5-8, XVII., Nos. 1 and 2.
	Catalogue of the Library.
	Guide to the garden of the Society.
Lubeck, Geographical Society and Natural History Museum ...	Mitteilungen, 2 te Reihe, Hft. 17.
Madrid, Natural History Society of Spain	Memoirs, Tome, I n. 2-4. Tome, II., n. 1-2.
	Boletin, Tome, 3 n. 1-6.
Manchester, Literary and Philosophical Society	Memoirs and Proceedings, Vol. XLVII., Nos. 1-6.
Manchester, Museum	Notes, No. 11.
	Publications, 47, 48.
Manilla, Phillipine Museum ...	Bulletin, Tome 1 and 2.
Marseilles, Natural History Museum	Annales, Sect. de Géologie T. VII.
Melbourne, Royal Society of Victoria	Proceedings, Vol. XIV., pt. 3, Vol. XVI., pt. 1.
Milan, Natural History Museum ...	Atti, Vol. XLI. Fas. 4, Vol XLII. Fasc. 1 and 2.
Milwaukee Public Museum ...	Annual Report, 1900-1901.
Milwaukee, Wisconsin Natural History Society	Bulletin, Vol. II, No. 4.
Moscow, Imperial Society of Naturalists	Bulletin N X., 3, 4, 1902. N: 1, 1903.
Montevideo National Museum ...	Anales, Tome VI, Pts. 1 and 2. Tome II., p.p. 1-1 160.
Newcastle-on-Tyne, Natural History Society of Northumberland, Durham, etc.	Transactions, Vol. XIV., Pts. 1 and 2.
New York, American Museum of Natural History	Bulletin Vol. XVI.
	Annual Report, 1902.
	List of Papers published in the Bulletins and the Memoirs
New York Zoological Society ...	Annual Report, 1901, 2, 3.
	Bulletin No. 5, 7-11.
Nova Scotia Institute of Science ...	Proceedings and Transactions, Vol X, Pt. 4.
Oberlin, Ohio College	The Wilson Bulletin, Nos. 41, 42, 43, 44.
Para, Museum	Boletin Vol. III. N. 3, 4.
	Against the Destructions of White Herons, etc., on the Lower Amazon.
	Album de Aves Amazonica, Fas. 2.
Paris, Entomological Society of France	Bulletin, 1900.
	Annales, Vol. LXIX, Pt. 1-4.

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Paris, Museum of Natural History	Bulletin No. 7, 8, 1901. Nos. 1-8, 1902.
Paris, Zoological Society of France	Bulletin, Tome XXVII, 1-3, 5-10. Memoirs, Tome XV.
Philadelphia, American Philosophical Society	Proceedings, Nos. 160—173.
Philadelphia, Academy of Sciences	Proceedings, Vol. LIV, Pts. 1-3. Vol LV, Pt. 1.
Philadelphia, Geographical Society	Bulletin, Vol. III., No. 5.
Philadelphia, University of Pennsylvania	Contributions from the Zoological Laboratory. Karyokinensis and Cytokinensis; maturation, fertilization and cleavage of Crepidula and other Gasteropods.
Pittsburgh, Carnegie Museum	Publications, No. 1. Annals, Vol. I, Pts. 3, 4, Vol. II. Pt. 1. Founder's Day, 1902, Carnegie Institute. Prize Essay Contest, 1902. Annual Report, 1901-2, 1902-3. Memoirs, Vol. I., 2, 3.
Plymouth, Museum and Art Gallery	The Registration and Numeration of Museum Specimens. 4th Annual Report.
Rio de Janeiro, National Museum	Archivos, Vol. X., XI.
San Paulo Museum	Revista, Vol. V.
Springfield, Mass., Natural History Society	Report, 1902-3.
Stettin, Entomological Society	Zeitung, Vol. 64, Hft 2.
Stockholm, Entomological Society	Entomologist Tidskrift, Vol. XXIII., Nos. 1-4.
Stockholm, International Committee	Conférence Internationale pour L'Exploration de la Mer résumée à Stockholm, 1899.
St. Petersburg, Entomological Society of Russia	Bulletins, Vol. XXXVI., Nos. 1-4.
St. Petersburg, Zoological Museum	Annuaire, Vol. V., No. 1 and 2, Vol. VII., Nos. 3 and 4, Vol. VIII., No. 1.
Sydney, Australian Museum	Records, Vol. V., Nos. 1 and 2. Memoirs. Vol. IV., Pt. 6. Special Catalogues, No. 3.
Sydney, Department of Mines	Records Vol VII, pt. 3.
Sydney, Linnean Society	Proceedings, Vol. XXVII pt. 3 and sup. Vol. XXVIII pts. 1 and 2.
Tokio, Zoological Society of Japan	Annotations Vol IV pts. 4 and 5.
Tring, Museum	Novitates Zoologicae Vol. IX, No. 3 and sup. Vol X, No. 1 and 2.
Travandrum, Museum	Report 1901-'02.
Turin, Museum of Zoology and Comparative Anatomy	Bolletino, Vol XVII.
Upsala, Geological Institute	Bulletin, Vol. V pt. 2.
Upsala, University	Den Skandinaviska Vegetationens Spridningsbiologi. Beiträge zur Kenntniss der Aleyonidengattung Spongodes, Lesson. Studien über den Baues Schlundes und des Magens der Vögel. Om lefvern sasom blodbildande och blodrenande Organ. Bidrag till kannedomen om Gallens kemiska bestandsdelar. Revista Chilena, Vol. VI, No. 4—6, Vol. VII, No. 1 and 2.
Valparaiso Museum	Verhandlung Vol. LII, pts. 1—10
Vienna, Imp. Roy. Zoological and Botanical Society	Jahresberichts, 1901.
Vienna, Imp. Roy. Natural History Museum	Verzeichnis der Meteoriten in k.k. naturhistorischen Hofmuseum.
Washington Academy of Sciences...	Proceedings, Vol. V, p.p. 1—229.
Washington, Smithsonian Institution	Annual Report, 1901. The Children's Room in the Smithsonian Institution.
Washington, U.S., National Museum	Report 1897—1900. Bulletin, Nos. 39, Parts H—O, Nos. 50—52. VOL. XVIII., pt. 1, pp 1—150. Proceedings. Vol. 21—26. Observations on the Number of Young of the Lasiurine Bats. Mammals collected by Dr. W. L. Abbott on the Coast and Islands of N.W. Sumatra.
Bain, J.	Researches on the Structure, etc., of Fossil Reptilia. By H. G. Seeley. Descriptive and Illustrated Catalogue of the Fossil Reptilia of South Africa, parts 1—3, 5—7. By R. Owen. Fossil Mammals of Australia. By R. Owen. Transactions Geological Society of London. Vol. VII. 1 Bound Volume of Pamphlets, chiefly on Palaeontology.
Boulenger, G. A.	Sur les affinités du genre Oreosoma. Descriptions of New Lizards in the Collections of the British Museum.
Broom, R.	15 Pamphlets on Zoology. 2 Pamphlets on Palaeontology. On the Structure of the Palate in the Primitive Theriodonts.
Cohen, E.	Meteoric Iron from N'Goureyma, near Djenne, Province of Macina, Soudan.
Cronwright Schreiner, S. C.	Das Meteoreisen von N'Goureyma. Some Arachnids at Hanover, Cape Colony.

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Molyneaux, A. J. C.	...	The Sedimentary Deposits of Southern Rhodesia.
Monaco, S.A.S. le Prince Albert I. de	...	Sur la Quatrième Campagne de la Princesse Alice II.
Péringuey, L.	...	Descriptive Catalogue of the Coleoptera of South Africa. Addenda, Index, etc. Some Phases of Insect Life in South Africa. Note sur le genre Monoplius Mars, avec descriptions d'espèces nouvelles. Arcana Entomologica by J. O. Westwood. 2 vols. Notes on three Paussi. Descriptions de deux espèces nouvelles du Gen. Brachycerus. Oliv.
Raffray, Mon. A.	...	Voyage de M. L. Biro dans les possessions Allemandes de la Nouvelle-Guinée—Psélaphides.
Sc Slater, W. L.	...	Bulletin of the British Ornithological Union, No. 93-100. The Preservation of Big Game in Africa by E. N. Buxton. Aves das possessoes portuguezas da Africa occidental, 5ta. 6ta lista, by J. V. Barboza du Bocage.
Smith, J. B.	...	New Noctuids for 1903, Nos. 1-3. A revision of the Boreal American Species of Nonagria, Ochs. Report Entomological Department, New Jersey Agricultural College, 1902.
Thomas, O.	...	New African Mammalia of the genus Petrodromus, Dendromys, etc., etc. On a species of the genus Rhinopoma. Two new Dormice of the genus Eliomys.
Trouessart, D. E.	...	Note sur les Acariens marins (Halacaridae). Sur une variété nouvelle du Zebra de Burchell. Description d'espèces nouvelles d'Halacaridae. Endoparasitisme accidentel chez l'Homme.
Wilman, Miss	...	A treatise on Mineralogy by C. U. Shepard. Die chemische Natur der Meteoriten by C. Rammelsberg. Die Meteoriten der Naturhistorischen Museum der Institute der Universität Bonn, by G. von Rath. Mitteilungen aus dem mineralogischen Institute der Universität Bonn, Theil VIII and IX. On the meteorites which have been found in the desert of Atacama and its neighbourhood. Kurze Uebersicht der im K. K. Mineralien-Kabinette zu Wien by Paul Partsch.
(c) <i>By Purchase.</i>		
Anderson, J.	...	Zoology of Egypt, 2 vol.
Andre, Ed.	...	Species des Hyménoptères Fas 82, 83, 84.
Berwerth, F.	...	Der Meteorisenzwilling von Mukerop, Bezirk Gebeon, Deutsch Südwest Africa.
Bingham, Lt.-Col.	...	Fauna of British India, Hymenoptera, Vol. II.
Boettger, Dr. O.	...	Beiträge und Zweite Beiträge zur Herpetologie und Malakozoologie, Südwest Afrikas. Materialien zur Fauna des unteren Congo, II Reptilien und Batrachien. Kataloge der Reptilien Sammlung in Museum der Senkenbergischer Naturforschenden Gesellschaft. Kataloge der Batrachier Sammlung in Museum der Senkenbergischer Naturforschenden Gesellschaft.
Buller, W. L.	...	Manual of the Birds of New Zealand.
Butler, A. G.	...	Foreign Finches in Captivity.
Capello, F. de Brito	...	Especies novas ou pouco conhecidas d'aracnidos d'Africa occidental.
Chun, Ch.	...	Wissenschaftliche Ergebnisse der Deutschen Tiefsee Expedition auf dem Dampfer Valdivia, 1898-99, Vol. III., 1-6.
Dalla Torre, Dr. C.	...	Catalogus Hymenopterorum, Vol. III.
Delalande, P.	...	Précis d'un Voyage au Cap de Bonne Espérance.
Distant, W. L.	...	Insecta Transvaaliensia, Part III.
Drury, D.	...	Illustrations of Exotic Entomology.
Drygalski, E. von	...	Deutsche Südpolar-Expedition auf dem Schiff Gauss, Heft. 5.
Duméril, Prof. A.	...	Reptiles et Poissons de l'Afrique occidentale.
Fisher, J. G.	...	Ueber einige Afrikanische Reptilien, Amphibien und Fische.
Fritsch, Gus.	...	Die eingeborenen Süd Afrikas.
Grill, J. W.	...	Zoologiska Anteckningar under en resa i södra delarne af Caplant are 1853-5, af J. F. Victorin.
Karsch, Dr. F.	...	Die Insecten der Berglandschaft Adeli im Hinterland von Togo.
Kertész, Dr. C.	...	Catalogus Dipterorum, Vols. 1 and 2.
Lichtenstein	...	Verzeichniss einer sammlung von Säugethieren und Vögeln aus dem Kaffernlande, 1843.

- Lichtenstein Verzeichniss einer sammlung von Säugethieren und Vögeln aus dem Kaffernlande, 1834 (typed).
- Mäklin, F. W. Die Gattung Praogena und deren Representaten.
- Michel, Ch. Vers Fashoda.
- Noack, Dr. Th. Dr. Ed. Fleck's Reiseausbente aus Süd-west Africa, I. Säugetiere.
- Pfeffer, Dr. G. Uebersicht der von Herrn Dr. F. Stuhlmann in Aegypten auf Sansibar, etc., gesammelten Reptilien, Amphibien, Fischen.
- Pocock, R. J. 12 pamphlets, chiefly on South African Arachnidae.
- Rap, Dr. Wm. von Naturhistorische und medicinische beobachtungen uber Guadenthal in Sud Afrika.
- Reichenow, Ant. De Vögel Afrikas, Vol. II., Pt. 2.
- Ridgway, Rob. Manual of the North American Birds.
- Salvin, O. A Catalogue of the Collection of Birds formed by the late H. E. Strickland.
- Shelley, G. E. Birds of Africa, Vol. III.
- Sherborn, C. O. Index Animalium.
- Sordelli, Prof. F. Materiali per la conoscenza della fauna Eritrea, Mammiferi.
- Stark, A. Zoology of South Africa—Birds, Vol. III.
- Sykes, E. R. Degesta Malacologica, No. I. and II., Pt. 1.
- Thorell, T. Araneae specias novae minusve cognitae.
- Warburg, O. Kunene-Sambesi Expedition, H. Baum, 1903.
- Waterhouse, C. O. Index Zoologicus.
- Wytzman, P. Genera Insectorum, Fasc 10, 11, 12, 13, 14.
- Entomologische Litteraturblätter No. 1—12, 1903.
- Entomologist, No. 476-487.
- Entomologist Monthly Magazine, Nos. 464—475.
- Journal für Ornithologie, Vol. LI. pt. 1—4
- List of British Birds, compiled by a committee of the British Ornithological Union.
- Museum Journal, Vol. II., No. 6,—Vol III., No. 5.
- Naturae Novitates, No. 24, 1902—24, 1903.
- Nature, Nos. 1730—1780.
- Royal Society's Catalogue of Scientific Papers, Vol. XI., 1874-1883.
- Science, Nos. 413—417.
- Das Tierreich, Lief 9, 18, 19.
- Regeln der Zoologischen Nomenklatur; Internationalen Zoologen Congresses, Berlin, 1901.
- Wiener Entomologische Zeitung, 1882-1900.
- Zoological Record, 1901.
- Zoologische Jahrbücher, Vol. 18., Heft. 4, 5.
- Zoologist, No. 738-749.

9.—LIST OF INSTITUTIONS TO WHICH COPIES OF THE ANNALS HAVE BEEN SENT; FROM THOSE MARKED WITH AN ASTERISK SIMILAR PUBLICATIONS HAVE BEEN RECEIVED IN EXCHANGE.

(a) EUROPE.

1. The Cambridge Philosophical Society.
- *2. The Royal Dublin Society.
3. The Liverpool Public Museum.
- *4. The Royal Society.
5. The Linnaean Society.
- *6. The Zoological Society of London.
7. The Zoological Record.
8. Nature.
- *9. The British Museum (Natural History).
- *10. The Manchester Literary and Philosophical Society.
- *11. The Owens College Museum, Manchester.
- *12. The Plymouth Marine Biological Station.
- *13. The Tring Museum.
14. The Museums Association, Sheffield.
- *15. The Natural History Society, Newcastle-on-Tyne.
- *16. The Imperial and Royal Natural History Museum, Vienna.
17. The Vienna Entomological Journal.
- *18. The Zoological-Botanical Society of Vienna.
- *19. The National Hungarian Museum, Budapesth.
- *20. The Royal Museum of Natural History, Brussels.
21. The Museum of the Congo, Brussels.
- *22. The Royal Malacological Society, Brussels.
- *23. The Entomological Society of Belgium.
- *24. The Zoological Society of France.
- *25. The Entomological Society of France.
- *26. The Museum of Natural History of Paris.
- *27. The Museum of Natural History, Marseilles.
- *28. H. S. H. The Prince of Monaco.
- *29. The Royal Museum of Natural History, Berlin.

- 30. The Society of the Friends of Natural History, Berlin.
- 31. The Entomological Union of Berlin.
- 32. The German Entomological Society, Berlin.
- 33. The Senckenberg Museum, Frankfurt a/M.
- 34. The New Zoological Society, Frankfurt a/M.
- 35. The Upper Hessian Society of Natural History and Medicine, Giessen.
- 36. The Natural History Museum Hamburg.
- 37. The Natural History Museum, Lubeck.
- 38. The Entomological Club, Stettin.
- 39. The Royal Museum of Natural History, Leyden.
- 40. Messrs. E. J. Brill and Co.
- 41. The Civic Museum of Natural History, Genoa.
- 42. The Royal Museum of Natural History, Florence.
- 43. The Natural History Museum, Milan.
- 44. The Royal Museum of Zoology and Anatomy Turin.
- 45. The Royal Spanish Society of Natural History.
- 46. The Zoological Museum, St. Petersburg.
- 47. The Entomological Society of Russia, St. Petersburg.
- 48. The Imperial Society of Naturalists, Moscow.
- 49. The Concilium Bibliographicum, Zurich.
- 50. The Museum of Natural History, Geneva.
- 51. The Royal Academy of Sciences, Stockholm.
- 52. The Royal Museum of Natural History, Stockholm.
- 53. The Entomological Society of Stockholm.
- 54. The Library of the Royal Museum of Upsala.
- 55. The Natural History Museum, Bergen.
- 56. The Royal Academy of Science, Lisbon.

(b) ASIA.

- 57. The Colombo Museum.
- 58. The Indian Museum, Calcutta.
- 59. The Asiatic Society of Bengal.
- 60. The Geological Survey of India.
- 61. The Government Central Museum, Madras.
- 62. The Zoological Society of Japan.
- 63. The Botanical Institute, Buitenzorg, Java.
- 64. The Royal Natural History Society, Batavia.

(c) AFRICA.

- 65. The Albany Museum, Graham's Town.
- 66. The Port Elizabeth Museum.
- 67. The King William's Town, Museum.
- 68. The Cape Town Public Library.
- 69. The Parliamentary Library, Cape Town.
- 70. The South African Philosophical Society.
- 71. The Government Entomologist, Cape Town.
- 72. The Durban Museum.
- 73. The Durban Public Library.
- 74. The Natal Government Museum, Pietermaritzburg.
- 75. The Orange River Colony Museum, Bloemfontein.
- 76. The Rhodesia Museum.
- 77. The Rhodesia Scientific Association.
- 78. The Museum, Pretoria, Transvaal.

(d) AMERICA.

- 79. The National Museum, Buenos Ayres.
- 80. The Museum of La Plata.
- 81. The National Museum of Rio de Janeiro, Brazil.
- 82. The Para Museum, Brazil.
- 83. The San Paulo Museum, Brazil.
- 84. The Nova Scotia Institute of Science.
- 85. The National Museum of Chili, Santiago.
- 86. The Museum of Natural History, Valparaiso.
- 87. The Boston Society of Natural History.
- 88. The Museum of Comparative Zoology, Cambridge, Mass.
- 89. The Field-Columbian Museum, Chicago, Ill.
- 90. The Milwaukee Public Museum.
- 91. The American Museum of Natural History, New York.
- 92. The New York Zoological Park.
- 93. The American Geographical Society, New York.
- 94. The Academy of Natural Sciences, Philadelphia.
- 95. The American Philosophical Society, Philadelphia.
- 96. The Californian Academy of Science.
- 97. The Carnegie Museum, Pittsburgh.
- 98. The Smithsonian Institute.
- 99. The United States National Museum.
- 100. The United States Department of Agriculture.
- 101. The Washington Academy of Natural Sciences.
- 102. The National Museum of Natural Sciences, Uruguay.

(e) AUSTRALASIA.

- 103. The Australian Museum, Sydney.
 - 104. The Linnæan Society of New South Wales.
 - 105. The Geological Survey of New South Wales
 - 106. The Queensland Museum, Brisbane.
 - 107. The Royal Society of Queensland, Brisbane.
 - 108. The Bernice-Pauahi-Bishop Museum, Honolulu.
 - 109. The Royal Society of South Australia.
 - 110. The Public Museum of South Australia.
 - 111. The Royal Society of Victoria.
 - 112. The National Museum, Melbourne.
-

STATEMENT OF THE INCOME AND EXPENDITURE OF THE SOUTH AFRICAN MUSEUM FOR THE YEAR ENDED 30TH JUNE, 1903.

To Balance from last year	£414 16 7	By General Museum Expenditure :—	
„ Ordinary Government Grant...	3,050 0 0	Salaries	£2,113 1 1
„ Miscellaneous Receipts	1 13 4	Taxidermists' and other Stores	103 18 10
„ Special Government Grant for publication of Annals	£70 0 0	Purchase of Books	67 8 0
„ Proceeds of Sale of Annals	8 14 6	„ Specimens	208 9 2
	78 14 6	„ Camera	11 3 0
„ Special Government Grant for new Cases and Furniture...	500 0 0	Uniforms	24 12 7
		Labelling	66 15 0
		Stationery	15 7 6
		Freight, &c.	21 1 6
		Insurance	31 10 0
		Cleaning Museum	8 5 9
		Rent of Post Office Box	1 10 0
		Travelling Allowance	4 17 6
		Photographs	12 17 0
		Purchase of Spirits	23 17 0
		Cable	1 10 0
		Postage	16 4 10
		Washing and Petties...	21 7 8
		Fee of Audit Office Examiner	3 3 0
		Bank Charges	2 11 9
			£2,759 11 2
		„ Expenditure on Publication of Annals	201 4 7
		„ Expenditure on New Cases and Furniture	509 1 10
		„ Balance 30th June, 1903 :—	
		In Bank	459 7 5
		Petty Cash in hand	4 19 11
		Advances Outstanding :—	
		T. Williams	£9 5 0
		Zoological Society	1 14 6
			10 19 6
		Donation from Hadji Suleiman Mohammed invested with S. A. Association	100 0 0
			575 6 10
			£4,045 4 5

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UNIVERSITY OF ILLINOIS
FEB 5 - 1940

30

Audited and found satisfactory,
WALTER E. GURNEY, Controller and Auditor-General.
18th September, 1903.

W. L. SCLATER,
Director, South African Museum.
16th September, 1903.

CAPE OF GOOD HOPE.

COLONIAL SECRETARY'S MINISTERIAL DIVISION.

REPORT

OF THE

SOUTH AFRICAN MUSEUM

THE LIBRARY OF THE
FEB 5 - 1940
UNIVERSITY OF ILLINOIS

FOR THE

YEAR ENDING 31ST DECEMBER, 1904.

Presented to both Houses of Parliament by Command of His Excellency the Governor
1905.

CAPE TOWN :
CAPE TIMES, LIMITED, GOVERNMENT PRINTERS, KEBROM STREET.

1905.

[G. 21.—1905.]

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TRUSTEES OF THE SOUTH AFRICAN MUSEUM.

The Hon. JOHN XAVIER MERRIMAN, M.L.A.

Sir DAVID GILL, K.C.B., LL.D., F.R.S., Hon. F.R.S.E.,
His Majesty's Astronomer at the Cape.

THOMAS MUIR, C.M.G., M.A., LL.D., F.R.S., F.R.S.E.,
Superintendent-General of Education.

STAFF OF THE MUSEUM.

Director : WILLIAM LUTLEY SCLATER, M.A.

Assistant Director : LOUIS ALBERT PERINGUEY.

First Assistant : WILLIAM FREDERICK PURCELL, B.A., Ph.D.

Keeper of Marine Invertebrates and Fishes : JOHN DOW FISHER GILCHRIST,
M.A., Ph.D., B.Sc.

Hon. Keeper of the Geological Department : ARTHUR WILLIAM
ROGERS, M.A.

Assistant in the Geological Department : Miss M. WILMAN.

Librarian : ROBERT MARK LIGHTFOOT.

CAPE OF GOOD HOPE.

COLONIAL SECRETARY'S MINISTERIAL DIVISION.

Report of the South African Museum for the Year ending 31st December, 1904.

Presented to both Houses of Parliament by Command of His Excellency the Governor
1905.

REPORT OF THE TRUSTEES.

The Trustees regret to state, that owing to the restrictions of expenditure, necessitated by the financial depression, it has been impossible to proceed with the contemplated additional wing to the Museum buildings foreshadowed in their report for the year 1903. The provision of any further accommodation for the rapidly increasing collections must therefore be postponed to a more favourable opportunity. They are glad, however, to announce that the sum of £500 placed on the Estimates for the provision of furniture and exhibition cases in the room formerly occupied as an office by the Marine Biologist, has been passed, and that that sum is now available for this purpose. It is hoped that this room, which will be devoted to the exhibition of Insects, will shortly be opened to the Public.

The number of Visitors during the year was 82,656, again a slight falling off from that of the previous year; had it not been for the opening of the Museum on Sunday afternoons during the second half of the year, the number would doubtless have been much less. There can be little doubt that this decrease has corresponded with the general depression throughout the country, which has prevented many Visitors from up-country and from abroad visiting Cape Town during the year.

As the opening of the Museum to the Public on Sunday afternoon was considered to be of more direct advantage to the inhabitants of Cape Town than to those of the Colony at large, it was agreed that the extra expense involved in the matter should, if possible, be met from local funds. A communication to this effect having been made to the Town Council of Cape Town, an answer was received stating that the Council were prepared to make a grant of £100 per annum for this purpose, and furthermore, as there appeared to be some legal difficulties connected with the matter, His Worship the Mayor, Sir William Thorne, most kindly gave a personal guarantee for the payment of that amount annually. As a result of these negotiations it was arranged that the Museum should be opened to the Public on Sundays, Christmas Day and Good

Friday between the hours of two p.m. and five p.m., from July, 1904, onwards. The Trustees are glad to state that the experiment has proved very successful and that the opportunity thus afforded of visiting the Museum on Sundays has been largely made use of by the inhabitants of Cape Town. The average number of Sunday visitors during the second half of the year was 340, and exceeded the average for week days by more than 100.

During the year five parts of *The Annals* have been issued, four of which form part of the Palæontological series published in conjunction with the Geological Commission. It is much to be regretted that owing to financial difficulties the Commission have found it necessary temporarily to suspend the publication of these *Memoirs*.

The financial statement, which deals with the period July, 1903, to June, 1904, shows a balance of £148 1s. 7d., in addition to the Hajee Sullaiman Shah-Mahomed fund amounting to £100. As is always the case this result has only been brought about by very rigid economy and by restricting all expenditure to the routine operations connected with the safe-guarding of the Museum and its contents. It is the earnest desire of the Trustees to undertake some more wide-ranging operations in connection with South Africa as a whole, but at present this is quite out of the question.

One very important piece of work which should be commenced without delay before it is too late, is an Anthropological Survey of South Africa on somewhat similar lines to the one now in progress in India. Such a survey besides being of the greatest scientific importance and of immediate necessity before the Native races are reduced to one dead level by the spread of civilisation and of European ideas, would probably be of the greatest use to those who are responsible for the administration of the Coloured races throughout South Africa.

The Trustees regret to add the melancholy fact that there has been during the past year no evidence on the part of the many wealthy people in South Africa that they have any notion of the importance of a National Institution like the South African Museum, and that the painful contrast between the position of South Africa in this respect, of private munificence for a public object, and that of other countries, still continues to be marked.

JOHN X. MERRIMAN,
Chairman of Trustees.

REPORT OF THE DIRECTOR.

The Trustees of the South African Museum.

SIRS,—I have the honour to lay before you a Report on the general organization of the Museum during the past year.

1. State of the Collections.

The general state of the Collections continues to be satisfactory; very little trouble has been experienced during the year from insects and other pests. The Public Works Department have taken in hand the outer wall at the south-eastern corner of the Museum, which has been a constant source of trouble owing to the damp soaking

through. As the bookcases of the Museum Library abut on the corner the books have been somewhat endangered in the past. A coating of damp-proof paint has now been placed on the outer wall with up to the present very satisfactory effect.

2. Additions to the Collections.

An account of the principal accessions to the Collections is given in the Reports of the Officers in charge of each Department and a complete list of these will be found in the Appendices. The number in each class together with the corresponding one for the year previous are given in the following tables:—

	Species new to the		Specimens.	
	1903.	1904.	1903.	1904.
Mammals	6	8	166	103
Birds	17	33	471	473
Birds' Eggs	9	19	126	239
Reptiles and Amphibians... ..	2	4	92	50
Fishes	1	3	18	39
Molluscs	3	0	663	166
Insects	274	554	6,654	4,163
Arachnids, etc.	119	79	2,173	1,243
Crustaceans	1	3	74	65
Vermes	2	2	9	23
Coelenterata and Echinodermata	0	13	0	61
Geological Specimens... ..	—	—	32	43
Anthropology and Antiquities ...	—	—	415	96
	434	718	10,893	6,764

3. Visitors.

The total number of Visitors during the year was 82,656, a slight decrease on the numbers for the previous year. During the second half of the year the Museum was open to the Public on Sunday afternoons between the hours of 2 p.m. and 5 p.m. The total number on those twenty-six days was 8,943, giving an average of 340, whereas the total number on 312 weekday days alone was 73,713, giving an average of 236. It is therefore clearly evident that the Sunday opening is appreciated, as although the Museum is only open on that day for three hours as against eight on week days the average number of Visitors is more than one hundred in excess.

The highest number on a single day was 1,091 on May 24th (Victoria Day) and the lowest, 59, on June 23rd.

The following table shows the number of visitors during the last seven years:—

1898	1899	1900	1901	1902	1903	1904
81,480.	88,571.	69,169.	59,901.	89,801.	86,516.	82,656.

4. Museum Staff.

There have been no changes in the Museum Staff during the half-year. It has, however, been found necessary to revert to the old number of attendants in order that the Museum should be thoroughly patrolled.

The names of Professor Robert Broom, of the Victoria College, Stellenbosch, and of Mr. Harold Fry, of Johannesburg, have been added to the list of our correspondents. The latter is an old contributor to our collections and has always been a good friend of the Institution; the former has not only contributed to our collections, but has been of the greatest assistance in naming and describing the Reptilian fossils from the Karoo beds.

5. *Annals of the Museum.*

Five parts of the Annals containing 135 pages and illustrated by 17 plates have been published and distributed during the half-year.

The following are the contents:—

Vol. III., Part 5.—Descriptions of some New Species and Characters of Three New Genera of Araneidæ from South Africa, with four Plates. By the Rev. Octavius Pickard-Cambridge, M.A., F.R.S.

Vol. IV., Part 3.—Brachiopoda, from the Bokkeveld Beds, with Plates XX.-XXIII. By F. R. C. Reed, M.A., F.G.S.

Vol. IV., Part 4.—The Trilobites of the Bokkeveld Beds, with Five Plates and One Text Figure. By Philip Lake, M.A., F.G.S.

Vol. IV., Part 5.—Foraminifera and Ostracoda, from the Cretaceous of East Pondoland, South Africa, with Plate XXIX. By Frederick Chapman, A.L.S., F.R.M.S.

Vol. IV., Part 6.—Mollusca, from the Bokkeveld Beds. By F. R. C. Reed, M.A., F.G.S.

Owing to want of funds the further publication of the Palæontological series of Memoirs in Vol. IV. has to be temporarily suspended; for the third volume, however, we have in the press a "Sixth Contribution to the South African Coleopterous Fauna," by Mr. Peringuey, besides a memoir on the St. Mark's Meteorite, promised by Professor Cohen.

6. *The Library.*

The great and rapid growth of the Library has made it necessary to put up additional shelving in the Director's Office, to which a number of less frequently consulted periodicals have been transferred. This will, I fear, help us for a short time only, the number of periodicals received by exchange are increasing so rapidly.

The only additional institution placed on our exchange list during the half-year is the Zoological Museum at Naples, but complete sets of the Annals to date have been sent to the Government Library at Bloemfontein and to the Public Library at Kimberley.

The following table gives a summary of the additions to the Library during the half-year, together with the corresponding figures for the previous year. A complete list of these will be found on the Appendix No. 8.

	Purchased.		Presented or received in exchange.		Total.	
	1903.	1904.	1903.	1904.	1903.	1904.
Separate Volumes ...	29	38	28	14	57	52
Pamphlets... ..	37	9	79	54	116	63
Serial Numbers	147	138	356	437	503	575
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	213	185	463	505	676	690

7. *Informal Lectures to School Children.*

The series of informal lectures to school children has been continued, and a number of schools have taken advantage of the arrangement. Among others, parties from St. Hilda's School, St. Philip's A3 School, Wynberg High School and the Good Hope Seminary have been shown round the Museum and have had the principal features pointed out to them.

8. *Tristan d'Acunha Expedition.*

Last December I received a letter from Dr. Hartert, of the Tring Museum in England, asking me if I could arrange to send a collector, on behalf of the Hon. Walter Rothschild to Tristan d'Acunha with the gunboat which he had heard was shortly going there. In reply I offered to try to arrange to send a collector if the Tring Museum would share the expenses and proceeds with our Institution. By the kindness of Vice-Admiral Sir Arthur W. Moore, the Commander-in-Chief of the South African Station, and Commander H. L. D. Pearce, of H.M.S. "Odin," which had been selected to carry the yearly mail to Tristan d'Acunha, a passage was arranged for the collector; for this purpose I selected Signor Peter Bonomi, an Italian collector and naturalist, to whom I had given some temporary employment in the Museum.

Signor Bonomi accordingly embarked at Simon's Bay on the 14th of January and reached Tristan on the 23rd, where he remained until February 4th, when after a day passed at Inaccessible and Nightingale, the neighbouring islands, he returned to Cape Town. He brought back with him a good collection of Birds, including examples of the two land Birds known from the island, a number of insects, which are commented on by Mr. Peringuey in his Report, and a few land shells, plants and rock specimens.

Half of the collections were sent to Tring, while the other half remain the property of the Museum.

W. L. SCLATER,
Director.

DEPARTMENTAL REPORTS.

1. REPORT ON THE DEPARTMENT OF VERTEBRATES.

The Trustees of the South African Museum.

SIRS,—I have the honour to report on the work on which I have been engaged during the last year in connection with the development of this department.

I have continued the work begun during the previous year of overhauling and renovating the exhibited collections of Birds. The work progresses but slowly, as the Taxidermist can only devote a small portion of his time to it; when any fresh specimens come in it is necessary for him to attend to them at once, and so the work is constantly interrupted; but the whole of the group of Passeres and the greater portion of the Picarians of the South African Collection has now been worked through and the appearance of the two cases has been very much improved.

[G. 21—1905.]

The total number of accessions to the Museum in this department were 854 as against 873 for the previous year, while the number of specimens new to the Museum were 67 as against 35 for the previous year; so that while the total accessions show a slight falling off, the number of novelties has increased very markedly.

The only important addition to our exhibited series of Mammals is a fine male Inyala (*Tragelaphus angasi*) acquired by exchange from the Natal Museum. Hitherto this species has only been represented in the Museum by a female example obtained by Mr. Selous some years ago in Amatongaland. The present specimen was shot in Zululand by a hunting party sent out to collect for the Natal Museum.

The special thanks of the Museum Trustees must be accorded to the following donors for their contributions during the year:—

Mr. H. A. Fry, of Johannesburg, for a collection of 25 Fishes from the Mooi River at Potchefstroom. These were kindly determined for me by Mr. Boulenger, of the British Museum, who is specially interested in South African fresh water Fishes; five species were represented in the collection, two of which were new to us. Mr. Fry has also sent us the Egg of a Cattle Egret (*Bubulcus ibis*), new to the collection and not before obtained in South Africa.

Mr. A. Roberts, for a Shrike (*Nilaus brubru*), together with its nest and eggs, the latter new to our collections, also for the eggs of four other birds.

The Scottish Antarctic Expedition, for the skin of an Adelia Penguin (*Pygoscelis adeliae*), with its eggs, and for the eggs of two other species (*P. papua* and *P. antarctica*), all from the South Orkneys Islands and all new to our collections.

Mr. A. D. Millar, our correspondent in Durban, for a large collection of birds' eggs, 110 in number, representing 30 species, five of which are new to our series.

Mr. A. Moorhouse, for a new Lizard, of the family Geckonidae, and the genus *Diplodactylus*, found by him near Port Elizabeth. This is a specially interesting form, as all the other species of the genus hitherto known have been obtained in Australia.

Mr. C. D. Rudd, for a collection of Mammals from Namaqualand, containing five species new to the Museum. This is the first consignment of the duplicates of a systematic collection now being made in various parts of South Africa by Mr. C. H. Grant, for the Natural History Museum in London, at the expense of Mr. Rudd, who has kindly arranged that the South African Museum should receive the first set of duplicates.

Major Sparrow, of the 7th Dragoon Guards, for 55 Birds' eggs, chiefly from Natal; among them were five species new to the Museum.

Dr. Stoehr, of the Geodetic Survey of North-East Rhodesia, for a large additional collection of Birds from the Zambesi Valley, in the neighbourhood of Zumbo, to the number of 176. Thirteen of these are new to our collections, and the whole forms a most valuable contribution from a comparatively unrepresented district.

Mr. S. Terblanche, for a Blesbok (*Damaliscus albifrons*), sent down to the Museum in the flesh from his farm near Kroonstad, in the Orange River Colony.

Other important donations have reached us from Messrs. J. C. Angle, J. M. Bain and A. K. Haagner, Miss L. Orpen, Mr. G. C. Shortridge, Captain Taylor, and Messrs. R. B. Wooseman and R. C. Wroughton.

An important collection of Birds was received from the Tristan d'Acunha Expedition, some account of which has been given above. The collection, which consisted chiefly of sea birds, contained 31 examples comprising 12 species, three of which had not been previously represented in our collections.

On the 31st of August, accompanied by Mr. J. Drury, I made a short excursion to the Victoria Falls and the Zambesi, in order to examine the country thereabouts and make some collections for the Museum; a few days were spent at the Falls themselves and at Livingstone, a settlement on the north bank of the Zambesi, some six miles up the river, while for ten days we were encamped at the junction of the Sinde River and the Zambesi, again some seven miles above Livingstone. On the return journey I visited the Khami and Zimbabwe ruins, in Rhodesia, and Serowe, the capital of the Paramount Chief of the Bamangwatos, the well-known Khama.

As a result of my journey I have added three Mammals, 126 Birds' skins (six new to the Museum), one Snake (new to the Museum), 3 Batrachians and 3 Fishes, one a new species, and all new to the Museum collections. A good many insects were also brought back, reference to which will be found in the Entomological reports.

A fine specimen of a Crocodile (*Crocodylus niloticus*), measuring 13 feet in length, and obtained in the Portuguese Colony of Mozambique, has been deposited by its capturer, Dr. Eric France, in the Museum, where it is now exhibited.

The purchases during the six months have not been of any great importance; perhaps the most striking being a skin on an Emperor Penguin (*Aptenodytes foersteri*), obtained from a member of the crew of the "Gauss," of the German Antarctic Expedition.

Mr. J. Drury has continued to perform his duties as taxidermist in a most satisfactory manner. In addition to the Inyala and the Crocodile above mentioned, he has mounted for exhibition 146 birds and has remounted and cleaned 210; two large Sharks (*Carcharias makloti* and *Carcharodon rondeletti*), a Kabeljaauw (*Sciaena aquila*) and four other small fishes have also been set up for exhibition.

I have now completed the fourth and last volume of "The Birds of South Africa," commenced in 1900 by the late Dr. Stark. The manuscript is in the press and will, I hope, be shortly issued.

W. L. SCLATER,
Director.

2. REPORT OF THE DEPARTMENT OF ENTOMOLOGY.

To the Director of the South African Museum.

SIR,—I have the honour to submit the Report of my Department for the year 1904.

The accessions consist of 4,163 specimens, represented by 1,982 species, of which 554 are new to the Collection. This comparatively large number of novelties is due to obtaining by exchange two lots of named foreign *Coleoptera* and *Hymenoptera*. If, however, the number of these extraneous accessions is deducted, it is found that that

of South African origin is 285. The novelties in *Coleoptera* total 287; *Hymenoptera*, 180; *Hemiptera-Homoptera*, 7; *Orthoptera*, 8; *Diptera*, 4; *Lepidoptera*, 47. Most of my time has been spent in incorporating series of Insects in the Cabinet, and in the usual routine work of pinning, labelling, sorting, and registering; identification of many specimens has also been given to contributors. The Museum has been fortunate in securing for the short period of two and a half months the services of Mr. F. W. Jones. With his assistance, the accumulated duplicates of *Cicindelidae*, *Carabidae*, and *Scarabaeidae* have been sorted, labelled, and identified. This sorting and grouping have enabled me to send series of duly named duplicates of *Coleoptera* to the Stockholm, Paris, and Geneva Museums as a return for communication of types, and also for sundry donations.

The very short stay of Signor P. Bonomi at Tristan d'Acunha prevented him from devoting much of his time to a thorough search for insects. He brought back, nevertheless, two species of *Lepidoptera*, a diurnal one—*Pyrameis huntera*, which is a native of Northern America and occurs also on the Canary Islands; and a greatly-rubbed moth; belonging to the genus *Lucania*, seven species of *Cleoptera*, five of which are natives of the Cape and imported thence to the island; the sixth belongs to a widely-spread genus of *Curculionidae*, also represented at the Cape; but the seventh is identical with a species of water-beetle first discovered at Santa Cruz, in Patagonia; the eighth is an Anthribid Beetle not yet identified. I was in hope of obtaining on the island, representatives of the curious group of small weevils, which nearly connect the *Curculionidae* with the *Scolytidae*, and are characteristic of the Insect fauna of the Canary Islands and of St. Helena, and of which closely-allied forms have been lately discovered near Cape Town; but Signor Bonomi did not come across any of them. He brought back several examples of a small dipterous fly, and the larvæ of two dipterous species, presenting the hitherto unrecorded feature of having "pseudopodia" or false legs, like caterpillars, or the grubs of some saw-flies. These larvæ, which, judging by the very peculiar anal appendage with which they are provided, are of semi-aquatic habits, have at the apex of the false legs a crown of hooked bristles, enabling them to hold firmly on the wet moss covering the rock in certain parts. This interesting discovery will form the subject of a note when the fly has been identified.

The thanks of the Museum Trustees must be accorded to the following Donors for their contributions during the half-year.

- Mr. A. Bodong for a lot of miscellaneous Insects, most of which were poorly represented in the Cabinet, while several are new to the Collection.
- Dr. H. Brauns, for interesting specimens of *Hymenoptera* and *Coleoptera*, some of them being co-types of species described by him or by other specialists.
- Mr. C. N. Barker, for numerous species of S. African *Chrysomelidae* collected by him, and described by Mr. Jacoby.
- Mr. C. Davison, for a number of Moths collected at the electric light at the Kalk Bay Railway Station.
- Mons. L. Fairmaire, for an interesting collection of Madagascar *Coleoptera*, a large proportion of which consists of types of species lately described by him.
- Mr. Harold Fry, for a miscellaneous collection of Insects containing, among others, specimens of the Tsetse Fly, *Glossina palpalis*, which causes in Uganda the dreaded disease called the "sleeping sickness."

- Mr. A. J. L. Janse, for a lot of *Coleoptera* and *Orthoptera*, sent for determination. The Insects were collected in the Zoutspansberg District of the Transvaal and contained rare forms.
- Mr. T. W. Jones, for an interesting collection of miscellaneous Insects made in the vicinity of Vryburg. The specimens are of special interest, as they help greatly to the knowledge of the distribution of Insects in Bechuanaland. This is the first collection from that locality received at the Museum.
- Mr. G. A. K. Marshall, for some *Coleoptera* collected near Bulawayo and in Gazaland, and containing, as usual, species new to the collection and to science.
- The Rev. J. A. O'Neil, for a valuable lot, containing, among other rare things, a number of co-types of species described by Messrs. Pic and Jacoby; 48 of these were new to the collection.
- Miss L. Orpen, for some sundry specimens collected by her in the neighbourhood of Douglas, in Griqualand West.
- Mr. J. Paynter, for a large series of highly interesting Buprestid *Coleoptera* and others collected by him at Touw's River.
- Professor H. H. W. Pearson, for some Insects belonging to several orders, and captured by him in German South-west Africa.
- Dr. H. de Saussure, for an important collection of named *Hymenoptera* containing, among others, a number of species from North Africa.
- Sister Anne, of the Blue Cliff Mission, for some *Coleoptera* collected round Dunbrody.
- Mr. P. A. Sheppard, for a collection of *Coleoptera* made in the Matopos and round Beira.
- Dr. F. O. Stoehr, of the Geodetic Survey Expedition, for specimens collected at Feira, on the north bank of the Zambesi.
- The Zambesi Expedition, for a number of Insects of different groups.
- To Mr. R. M. Lightfoot, Dr. R. Broom, the Rev. B. Price, Miss Buyskes, Miss Pelger, Mr. A. K. Haagner, and Dr. W. F. Purcell for smaller, yet interesting donations.

L. PERINGUEY.

3. REPORT ON THE DEPARTMENT OF LAND AND FRESH WATER INVERTEBRATES (EXCLUSIVE OF INSECTS AND MOLLUSCS).

To the Director of the South African Museum.

SIR,—I have the honour to present to you my report on the work done in my Department during the year 1904.

Nearly all the new Spiders of the families *Uloboridae*, *Dictynidae*, *Eresidae*, *Sicariidae*, *Dysderidae*, *Caponiidae* and *Prodidomidae*, which have been accumulating in the Collection during the past eight years, have been described, as well as a number of additional new species of the families which were investigated during the previous year. These descriptions have been published during the year in the Transactions of the South African Philosophical Society

The additions of South African Arachnida (Scorpions, Spiders, Mites, etc.) are considerably less, the number of specimens being little more than half and the number of species new to the Collection only about two-thirds of the numbers contributed during the preceding twelve months.

The most important contributions were received from Mr. Chas. Lounsbury, the Government Entomologist, who presented the Museum with a fine collection of 12 species of South African Ticks, carefully named, and comprising adult male and female specimens of each kind,—and from Mr. D. L. Patrick, who contributed a collection of Arachnids, made on the Pungwe River, in Portuguese East Africa.

Other donations, containing interesting forms, were received from Mr. H. P. Abernethy (Kentani), Mr. P. Bonomi (Tristan d'Acunha), Mr. S. Blackbeard (Bechuanaland), Mr. R. Colson (Lydenburg), Mr. J. Drury (Victoria Falls), Mr. H. A. Fry (Transvaal and Natal), Dr. D. de V. Hugo (Cango Caves), M. J. Paynter (Touws River), Miss A. Pelger (Kentani), Mr. A. W. Rogers (Van Rhyns Dorp), Mr. S. C. Cronwright Schreiner (Hanover), Miss A. Rucker (Texas, U.S.A.), Mr. Merwyn G. Williams (L. Ngami), etc.

W. F. PURCELL.

4. REPORT ON THE MARINE INVERTEBRATA AND FISHES.

To the Director of the South African Museum.

SIR,—I have the honour to submit the following Report on the Department under my charge.

The additions to this Department have been comparatively smaller than during last year, though several new and interesting forms have been procured. Chief among these are several specimens of *Cephalodiscus*, which was first found by the "Challenger." As until now no specimens had been found subsequently, the material may be of value in throwing some light on this interesting form.

During the period two Reports have been received from Prof. W. C. McIntosh, F.R.S., etc., on collections of South African Polychaeta. The first comprises notes and descriptions of:—*Euphrosyne capensis*, *Lepidonotus wahlbergi*, *Euphione elisabethae*, *Eunoa capensis*, *Polynoë capensis*, *Hemilepidia tuberculata*, *Sthenelais boa*, *Eulalia viridis*, *Eteone spetsbergensis*, *Autolytus prolifer*, *Pionosyllis malmgreni*, *Syllis cornuta*, *Nereis (Mastigonereis) variegata*, *Lysidice capensis*, *Emmece aphroditis*, *Marphysa sanguinea*, *Arabella iricolor*, *Sumbriconereis tetraurus*, *Lumbriconereis* —? *Lumbriconeres cavi-frons*, *Trophonia capensis*, *Flabelligera luctator*, *Flabelligera imarenzelleri*.

The second comprises notes and descriptions of:—*Polynoë (Macellicephala) mirabilis*, *Polyemna laevis*, *Chelopterus variopedatus*, *Theodisca (Anthostoma) hexaphyllum*, *Young of Theodisca (Anthostoma) hexaphyllum*, *Cirratulus cirratus*, *Cirratulus tentaculatus*, *Dasybranchus caducus*, *Nicomache lumbricalis*, *Nicomache McIntoshii*, *Praxilla praetermissa*, var. *capensis*, *Sabellaria capensis*, *Pectinaria capensis*, *Schmardannella pterochaeta*, *Thelepus* —? *Potamilla reniformis*, *Bispira volutacornis*, *Sabelliphilus (?) bispirae* (Crustacean parasite).

A third paper, published in March, is a description of New South African Fishes by myself. It includes:—*Serranus knysnaensis*, *Pterois nigripinnis*, *Histioporus spinifer*, *Lampris immaculata*, *Cyttosoma boops*, *Cettunculus macrocephalus*, *Pseudorhombus natalensis*, *Pseudorhombus* (?) *andersoni*, *Platophrys dimorphus*, *Solea turbynei*, *Cynoglossus attenuatus*, *Cynoglossus brachycephalus*, *Arnoglossus macrolepis*, *Synaptura pelanoptera*, *Solea fulvo-marginata*, *Synaptura ciliata*, *Chlorophthalmus punctatus*, *Scopelus argenteus*.

A large collection of Lamellibranchs have been reported on by Mr. G. B. Sowerby, F.L.S., and named duplicates returned. A report has been received from Prof. Jeffrey Bell on a section of the Echinoderms, and other reports are to follow. Part II. of the report on the Alcyonaria, by Prof. S. J. Hickson, M.A., D.Sc., F.R.S., has been published. The collection of Alcyonaria is now very large and a valuable acquisition to the general collection. Part I. of a report on the Plankton of the South African Seas, by C. J. Cleve, has been published and named duplicates have been forwarded in sealed glass tubes.

Though the exhibiting of these specimens in the Museum has not proceeded very far, these reports will make it possible now to carry out this work with greater facility.

J. D. F. GILCHRIST.

5. REPORT ON THE DEPARTMENT OF GEOLOGY AND MINERALOGY.

To the Director of the South African Museum.

SIR,—I have the honour to send you a report on the state of the Geological Department at the end year 1904.

The most important additions to the collections during this period are reptilian fossils from the Karroo formation, especially the new crocodile, *Notochampsia*, from the Cave sandstone of Barkly East, presented through Mr. du Toit, of the Geological Survey, by Mr. Isted; Mr. du Toit obtained a specimen belonging to the same or a closely allied species from a slightly lower horizon. Dr. Broom has given several skulls and other bones from the Beaufort beds, and parts of the skull of a new reptile from the same formation in Prince Albert have been sent by Mr. du Plessis.

A fossil, of great interest on account of the hope it raises of more complete finds in the future, is the dinosaunian tooth from the Uitenhage series at Oudtshoorn sent by Mr. Muller Rex of that town.

No important re-arrangement of the exhibited specimens has been made since my last report was written, but now that the collections of Bokkeveld fossils sent to England for description has been returned, a more representative series of these fossils will be set out.

There is even now a great lack of accommodation for the exhibition of the South African collections, and this will become more pronounced when the Cretaceous fossils belonging to the Geological Survey and the Museum arrive from England.

ARTHUR W. ROGERS.

APPENDICES.

1.—LIST OF THE TRUSTEES, STAFF AND CORRESPONDENTS OF THE MUSEUM.

TRUSTEES OF THE MUSEUM.

Appointed by Proclamation of His Excellency the Governor under Section V. of Act No. 17 of 1857.

The Hon. John Xavier Merriman, M.L.A.	...	...	30th Aug., 1875.
Sir David Gill, K.C.B., LL.D., F.R.S., Hon. F.R.S.E., His Majesty's Astronomer at the Cape	...	...	15th March, 1880.
Thomas Muir, C.M.G., M.A., F.R.S., LL.D., F.R.S.E., Superintendent-General of Education	...	...	30th September, 1893.

STAFF OF THE MUSEUM.

1. Director	...	William Lutley Selater, M.A.	...	January 9th, 1896.
2. Assistant Director and Keeper of the Entomological Cabinets	...	Louis Albert Peringuey	...	November 20th, 1884.
3. First Assistant and Keeper of the Land Invertebrate Collection (except Insects)	...	William Frederick Purcell, B.A., Ph.D., B.Sc.	...	July 1st, 1896.
4. Keeper of Marine Invertebrates	...	John Dow Fisher Gilchrist, M.A., Ph.D., B.Sc.	...	September 17th, 1896.
5. Hon. Keeper of the Geological Department	...	Arthur William Rogers, M.A.	...	October 21st, 1902.
6. Librarian (in charge of Mollusca)	...	Robert Mark Lightfoot	...	April 1st, 1888.
7. Assistant in the Geological Department	...	Miss M. Wilman	...	May 9th, 1902.
8. Taxidermist	...	James Drury	...	July, 1902.
9. Head Attendant	...	James Henry Paynter	...	July 1st, 1894.
10. Second Attendant	...	Thomas Daniel Butler	...	January 11th, 1899.
11. Third Attendant	...	David Lewsley	...	April 1st, 1902.
12. Fourth Attendant	...	James Lithgow	...	June 16th, 1904.
13. Messenger	...	Henry Miller	...	April 15th, 1903.

LIST OF THE CORRESPONDENTS OF THE MUSEUM.

G. A. K. Marshall.	The Rev. F. C. Kolbe, D.D.	A. D. Millar.
C. N. Barker.	Dr. R. N. Howard.	C. W. Mally.
G. Alston.	John Wood.	Prof. R. Broom.
The Rev. J. A. O'Neil.	M. A. Raffray.	Harold Fry.

2.—LIST OF VERTEBRATE ANIMALS ACQUIRED DURING THE YEAR.

NOTE.—Names printed in Italics signify species new to the Museum collections.

Donors.	Donations.
Agricultural Department	... Brush and mask of <i>Otocyon megalotis</i> , 3 tusks of <i>Elephas africanus</i> .
J. C. Angle	... 15 Mammals—2 <i>Dasymys ineomatus</i> , 2 <i>Saccostomus campestris</i> , <i>Mus chrysophilus</i> , <i>Gerbillus afer</i> , 1 <i>Otomys irroratus</i> , 1 <i>Mus sp.</i> , 1 <i>Steatomys pratensis</i> , 1 <i>Mus musculus</i> .
J. M. Bain	... 7 Birds—1 <i>Cuculus clamosus</i> , 1 <i>Hapaloderma narina</i> , 1 <i>Circus ranivorus</i> , 2 <i>Elanus caeruleus</i> , 1 <i>Asturina monogrammica</i> , 1 <i>Astur polyzonoides</i> .
J. M. Bain	... 2 Mammal Skulls— <i>Hippopotamus amphibius</i> , <i>Rhinoceros bicornis</i> .
Bechuanaland Trading Coy.	... 1 Bird— <i>Pelicanus rufescens</i> .
F. W. Belt	... 1 Mammal— <i>Georchus sp.</i>
S. Blackbeard	... 8 Reptiles—2 <i>Pachydactylus bibroni</i> , 1 <i>Mabuia striata</i> , 1 <i>Pachydactylus sp.</i> , 1 <i>Gerrhosaurus flavigularis</i> , 1 <i>Bitis caudalis</i> , 1 <i>Thelatornis kirklandi</i> , 1 <i>Zonurus cordylus</i> .
P. Brodie	... 1 Batrachian— <i>Phrynomantis bifasciatus</i> .
P. Bonomi	... 1 Fish— <i>Salmo fario</i> .
P. Bonomi	... 8 Birds—1 <i>Aegialitis tricoloris</i> , 1 <i>Circus aeruginosus</i> , 2 <i>Phoenicopterus roseus</i> , 2 <i>Limosa belgica</i> , 2 <i>Podiceps nigricollis</i> .
Miss Buyskes	... 4 Birds—1 <i>Lagonosticta rubricata</i> , 1 <i>Cinnyris afra</i> , 2 <i>Barbatula pusilla</i> .
B. G. Clark	... 1 Fish— <i>Salmo fario</i> .
J. Courtenay	... 1 Bird— <i>Ardea purpurea</i> .
Miss F. Dummer	... 1 Bird— <i>Nycticorax griseus</i> .
T. Dunar	... 1 Bird— <i>Strix flammea</i> .
F. Erinus	... 5 Bird's Eggs— <i>Larus hartlaubii</i> .
H. P. van Eyk	... 1 Mammal— <i>Orycteropus afer</i> .
J. Feltman	... 1 Reptile— <i>Naia flava</i> .
G. French	... 3 Reptiles—2 <i>Mabuia homolocephala</i> , 1 <i>Tropidosaura montana</i> .
H. A. Fry	... 1 Bird— <i>Rhynchops flavirostris</i> .
H. A. Fry	... 1 Bird's Egg— <i>Bubulcus ibis</i> .
H. A. Fry	... 1 Reptile— <i>Pachydactylus sp.</i>

Donors.	Donations.
H. A. Fry	1 Batrachian— <i>Breviceps gibbosus</i> .
	25 Fishes—2 <i>Labeo capensis</i> , 7 <i>Baobas lobati</i> , 7 <i>Baobas trimaculatus</i> , 6 <i>Tilapia sparrmanni</i> , 3 <i>Gephyroglanis setleri</i> .
W. R. Ogillvie Grant	1 Bird— <i>Oceanodroma castro</i> .
A. K. Haagner	4 Mammals—1 <i>Eptesicus capensis</i> , 1 <i>Mus coucha</i> , 2 <i>Crocidura varilla</i> .
	8 Reptiles—1 <i>Homocleaps dorsalis</i> , 1 <i>Sepedon haemachaetes</i> , 1 <i>Ablabophus rufulus</i> , 1 <i>Glaucenia nigricans</i> , 1 <i>Chamaesaura aenea</i> , 1 <i>Chameleon parvilobis</i> , 1 <i>Aparallaetus capensis</i> , 1 <i>Pachydactylus sp.</i> .
Dr. R. N. Howard	1 Reptile— <i>Acontias meleagris</i> .
R. H. Ivy	1 Bird— <i>Astur tachiro</i> .
	2 Bird's Eggs— <i>Astur tachiro</i> .
A. Jenkins	1 Bird— <i>Otis kori</i> .
J. W. Jones	3 Mammals—3 <i>Eptesicus capensis</i> .
	4 Fishes—1 <i>Tilapia sparrmanni</i> , 3 <i>Tilapia phillander</i> .
Kalk Bay Cold Storage Coy.	1 Fish— <i>Sciæna aquila</i> .
P. C. Keytel	2 Birds—2 <i>Dilophus carunculatus</i> .
Dr. A. H. Kirkman	1 Bird— <i>Agapornis lilianae</i> .
M. J. B. Langfield	1 Mammal— <i>Rousettus collaris</i> .
R. M. Lightfoot	1 Reptile— <i>Phyllodactylus lineatus</i> .
	2 Amphibia— <i>Arthroleptis boettgeri</i> .
Marine Biol. Surv.	1 Fish— <i>Scyllium africanum</i> .
A. D. Millar	2 Mammals— <i>Sciurus cepapi</i> .
	110 Birds Eggs—2 <i>Buphaga erythrorhyncha</i> , 2 <i>Hyphantornis subaureus</i> , 8 <i>H. spilonotus</i> , 2 <i>Sitagra ocellaria</i> , 1 <i>Synglyptus bicolor</i> , 4 <i>Pyromelana taha</i> , 7 <i>Urobrachya axillaris</i> , 6 <i>Coliopasser ardens</i> , 2 <i>Cinnyris leucogaster</i> , 4 <i>Lanius collaris</i> , 2 <i>Andropadus importunus</i> , 2 <i>Phyllostrophus capensis</i> , 1 <i>Turdus olivaceus</i> , 3 <i>Pachyprora capensis</i> , 2 <i>Terpsiphone perspicillata</i> , 3 <i>Dicrurus afer</i> , 8 <i>Dicrurus ludwigi</i> , 5 <i>Ptyonoprogne fuligula</i> , 3 <i>Hirundo albigularis</i> , 4 <i>Hirundo puella</i> , 4 <i>Corythornis cyanostigma</i> , 3 <i>Colius erythromelon</i> , 1 <i>Lybicus torquatus</i> , 6 <i>Centropus hurchelli</i> , 4 <i>Asio capensis</i> , 2 <i>Circus ranivorus</i> , 3 <i>Turtur semitorquatus</i> , 4 <i>Haplopelia larvata</i> , 7 <i>Turnix hottentota</i> , 5 <i>Phyllozeus africanus</i> .
A Moorhouse	1 Reptile— <i>Diplodactylus sp. nov.</i>
T. J. Murray	2 Mammals— <i>Oryx capensis</i> , <i>Bubalis caama</i> .
A. C. Nicholson	1 Mammal— <i>Pelea capreolus</i> .
Miss L. Orpen	1 Bird— <i>Bubo lacteus</i> .
J. Paynter	17 Birds—1 <i>Passer arcuatus</i> , 1 <i>Serinus flaviventris</i> , 2 <i>Callendula crassirostris</i> , 2 <i>Tephrocorys cinerea</i> , 1 <i>Cisticola subruficapilla</i> , <i>Saxicola pileata</i> , 2 <i>Saxicola familiaris</i> , 2 <i>Emarginata pollux</i> , 1 <i>Erythropygia coryphæus</i> , 1 <i>Hirundo rustica</i> , 2 <i>Oena capensis</i> , 1 <i>Fulica cristata</i> .
Miss O. Pegler	1 Reptile— <i>Chamaesaura didactyla</i> .
L. Peringuey	1 Bird— <i>Sternus vulgaris</i> .
S. S. Ponder	1 Reptile— <i>Pachydactylus maculatus</i> .
W. F. Purcell	1 Reptile— <i>Mabuia varia</i> .
	2 Batrachians— <i>Bufo angusticeps</i> .
A. Roberts	1 Bird— <i>Nilaus brubru</i> .
	16 Birds eggs—2 <i>Nilaus brubru</i> , 3 <i>Coliopasser procne</i> , 5 <i>Hyphantornis velatus</i> , 1 <i>Passer arcuatus</i> , 5 <i>Chrysococcyx cupreus</i> .
A. W. Rogers	6 Reptiles— <i>Chameleon namaquensis</i> , 1 <i>Acontias meleagris</i> , 4 <i>Glaucenia nigricans</i> .
H. Rosser	1 Reptile— <i>Psammophis notostictus</i> .
C. D. Rudd	16 Mammals—2 <i>Herpestes ruddi</i> , 1 <i>Macroscelides melanotis</i> , 1 <i>Otomys broomi</i> , 2 <i>Mus auricomis</i> , 1 <i>Bathyergus jannetta</i> , 1 <i>Petronys typicus</i> , 2 <i>Lepus capensis granti</i> , 1 <i>Lepus crassicaudatus melanurus</i> , 1 <i>Nycterus capensis</i> , 1 <i>Myosorex varius</i> , 2 <i>Arvicanthus pumilio</i> , 1 <i>Mus minutoidea</i> .
P. L. Sclater	2 Birds—1 <i>Bradypterus brachypterus</i> , 1 <i>Otis barrowi</i> .
W. L. Sclater	1 Mammal— <i>Rhinolophus ferrum-equinum</i> .
	3 Birds—2 <i>Ibis aethiopica</i> , 1 <i>Lagonosticta rubricata</i> .
	4 Birds eggs— <i>Passer diffusus</i> .
	1 Batrachian— <i>Chironantis xerampelina</i> .
Scottish Antarctic Expedition	1 Bird— <i>Pygoscelis adeliae</i> .
	6 Birds eggs—2 <i>Pygoscelis adeliae</i> , 2 <i>Pygoscelis papua</i> , 2 <i>Pygoscelis antarctica</i> .
G. C. Shortridge	1 Mammal— <i>Cercopithecus balandii</i> .
	5 Birds—2 <i>Chlorocichla flaviventris</i> , 1 <i>Cossypha natalensis</i> , 1 <i>Camaroptera olivacea</i> , 1 <i>Cinnyris leucogaster</i> .
	39 Bird's eggs—2 <i>Amblyospiza albifrons</i> , 3 <i>Pyromelana oryx</i> , 1 <i>Urobrachya axillaris</i> , 3 <i>Serinus icterus</i> , 1 <i>Cinnyris leucogaster</i> , 2 <i>Cinnyris amethystinus</i> , 3 <i>Cinnyris olivaceus</i> , 3 <i>Zosterops virens</i> , 2 <i>Lanius collaris</i> , 6 <i>Pycnonotus layardi</i> , 2 <i>Chlorocichla flaviventris</i> , 4 <i>Cisticola natalensis</i> , 1 <i>Cisticola aberrans</i> , 4 <i>Terpsiphone perspicillata</i> , 2 <i>Colius striatus</i> .
	1 Batrachian— <i>Rappia horstocki</i> .

Donors.	Donations.
Major Sparrow....	55 Birds' eggs—2 <i>Sitagra capensis caffer</i> , 3 <i>Pyromelana capensis minor</i> , 10 <i>Coliopasser procne</i> , 2 <i>Serinus canicollis</i> , 5 <i>Anthus rufulus</i> , 2 <i>Pycnonotus layardi</i> , 3 <i>Cisticola tinnicus</i> , <i>Bradypterus babaecula</i> , 5 <i>Turdus olivaceus</i> , 6 <i>Hirundo albicularis</i> , 3 <i>Hirundo cucullata</i> , 3 <i>Cypselus caffer</i> , 2 <i>Chrysococcyx cupreus</i> , 1 <i>Hyphantornis subaeneus</i> , 2 <i>Hirundo atrocaerulea</i> , 2 <i>Pterocles bicinctus</i> .
Col. Sluggett ...	1 Batrachian— <i>Bufo granti</i> .
G. H. Stevens ...	1 Bird— <i>Sula capensis</i> .
Dr. F. E. Stoechr ...	2 Mammals—1 <i>Macroscelides brachyrhynchus</i> , 1 <i>Gerbillus lobengulæ</i> .
	176 Birds—1 <i>Lamprocolinus sycobius</i> , 2 <i>Pholidauges verreauxi</i> , 2 <i>Oriolus gallula</i> , 2 <i>Hyphantornis shelleyi</i> , 4 <i>Hyphantornis cabanisi</i> , 1 <i>Hyphantornis nigriceps</i> , 3 <i>Anaplectes gurneyi</i> , 3 <i>Ploceipasser pectoralis</i> , 3 <i>Lagonosticta niveoguttata</i> , 2 <i>Amalimia fasciata</i> , 1 <i>Pyromelana flaviceps</i> , 4 <i>Pyromelana oryx sundevalli</i> , 1 <i>Pyromelana xanthomelana</i> , 1 <i>Coliopasser albonotata</i> , 1 <i>Vidua principalis</i> , 3 <i>Vidua paradisea</i> , 2 <i>Hypochaera funera</i> , 2 <i>Petronia petrorrella</i> , 4 <i>Passer diffusus</i> , 3 <i>Serinus icterus</i> , 3 <i>Emberiza flaviventris</i> , 1 <i>Fringillaria tahapisi</i> , 1 <i>Mirafra fischeri</i> , 2 <i>Anthus lineiventris</i> , 1 <i>Motacilla capensis</i> , 1 <i>Salpormis salvadori</i> , 1 <i>Cinnyris kirki</i> , 1 <i>Cinnyris venusta</i> , 4 <i>Zosterops anderssoni</i> , 1 <i>Parus xanthostomus</i> , 1 <i>Parus pallidiventris</i> , 6 <i>Lanius collurio</i> , 1 <i>Lanius minor</i> , 1 <i>Telephonus minor</i> , 1 <i>Telephonus senegalus</i> , 1 <i>Dryoscopus cuba</i> , 1 <i>Dryoscopus guttatus</i> , 2 <i>Sigmodes tricolor</i> , 1 <i>Prionops talacoma</i> , 1 <i>Chlorocichla occidentalis</i> , 2 <i>Phyllostrophus strepetans</i> , 1 <i>Parisoma plumbeum</i> , 1 <i>Phylloscopus trochilus</i> , 1 <i>Acrocephalus arundinaceus</i> , 3 <i>Amniptera brevicaudata</i> , 1 <i>Salicella pallida</i> , 2 <i>Prinia mystacea</i> , 1 <i>Cisticola aberrans</i> , 1 <i>Cisticola cinereus</i> , 2 <i>Cisticola erythropis</i> , 3 <i>Pinacornis plumosus</i> , 2 <i>Turdus libyanus</i> , 2 <i>Monticola angolensis</i> , 5 <i>Saxicola falkensteini</i> , 2 <i>Thammodaea cinnamomeiventris</i> , 2 <i>Thammodaea arnotti</i> , 1 <i>Cossypha heuglini</i> , 1 <i>Erythropygia quadringata</i> , 1 <i>Bradyornis ater</i> , 1 <i>Muscicapa grisola</i> , 4 <i>Muscicapa caeruleus</i> , 1 <i>Alcedo adusta</i> , 4 <i>Hylota australis</i> , 2 <i>Erythrocerus livingstonii</i> , 1 <i>Terpsiphone perspicillata</i> , 1 <i>Hirundo rustica</i> , 1 <i>Pitta longipennis</i> , 1 <i>Rhinopomastus cyanomelas</i> , 1 <i>Tachornis parva</i> , 1 <i>Caprimulgus fossii</i> , 1 <i>Coracias spatulatus</i> , 1 <i>Coracias garrula</i> , 1 <i>Eurystomus afer</i> , 2 <i>Merops apiaster</i> , 2 <i>Merops nubicoides</i> , 1 <i>Haleyon swainsoni</i> , 1 <i>Lophoceros epirhinus</i> , 1 <i>Dendrocybus cardinalis</i> , 1 <i>Thripas namaquus</i> , 3 <i>Indicator sparrmanni</i> , 1 <i>Indicator major</i> , 1 <i>Indicator minor</i> , 1 <i>Protodiscus regulus</i> , 2 <i>Lybius irroratus</i> , 1 <i>Trachyphonus cafer</i> , 1 <i>Chrysococcyx cupreus</i> , 2 <i>Coccyzus jacobinus</i> , 1 <i>Centropus superciliosus</i> , 3 <i>Gallirex chlorochlamys</i> , 2 <i>Pooccephalus fuscicollis</i> , 1 <i>Falco minor</i> , 1 <i>Timnauculus nannami</i> , 2 <i>Vinago delalandii</i> , 1 <i>Francolinus shelleyi</i> , 1 <i>Coturnix delagorguei</i> , 1 <i>Limnocorax niger</i> , 1 <i>Fulica cristata</i> , 1 <i>Parra africana</i> , 1 <i>Nyctea arquat</i> , 1 <i>Herodias brachyrhyncha</i> , 1 <i>Butorides atricapilla</i> , 1 <i>Pseudotantalus ibis</i> , 1 <i>Anastomus lamelligerus</i> , 1 <i>Plegadis falcinellus</i> , 1 <i>Herodias alba</i> , 1 <i>Phalacrocorax africanus</i> , 1 <i>Nyroca erythrophthalma</i> .
	1 Reptile— <i>Pachydactylus</i> , sp. nov.
Captain Taylor ... (Wombwell's Menagerie.)	1 Mammal— <i>Papio hamadryas</i> .
L. E. Taylor ...	1 Bird— <i>Anthus trivialis</i> .
S. Terblanche ...	1 Mammal— <i>Damaliscus albifrons</i> .
Lieut. W. Tomkinson, R.N. ...	1 Fish— <i>Pagrus laticeps</i> .
R. B. Woosman ...	14 Mammals—1 <i>Gerbillus afer</i> , 2 <i>Gerbillus brantsi</i> , 2 <i>Pachyromys auricularis</i> , 2 <i>Otomys irroratus</i> , 1 <i>Mus concha</i> , 1 <i>M. colonus</i> , 1 <i>M. lelochla</i> , 1 <i>Arvicanthus pumilio</i> , 1 <i>Saccostomus</i> sp., 1 <i>Georchus hottentotus</i> , 1 <i>Georchus lugardi</i> .
	7 Birds— <i>Mirafra sabota</i> , 2 <i>M. africanoides</i> , 1 <i>M. africana</i> , 1 <i>Tephrocorys cinerea</i> , 1 <i>Anthus pyrrhonotus</i> , 1 <i>Turdus litsisirupa</i> .
R. C. Wroughton ...	18 Mammals—2 <i>Mystromys albicaudatus</i> , 1 <i>Mus concha</i> , 5 <i>Mus colonus</i> , 1 <i>Georchus hottentotus</i> , 4 <i>Arvicanthus pumilio</i> , 3 <i>Otomys irroratus</i> , 1 <i>Myosorex varius</i> , 1 <i>Crocidura flavescens</i> .
Albany Museum ...	1 Mammal— <i>Mus auricomis</i> .
American Museum of Natural History, New York.	2 Reptiles— <i>Bitis cornuta</i> , <i>Lycophidium capense</i> .
Canterbury Museum, New Zealand (by exchange.)	1 Bird— <i>Cathartus solitarius</i> .
Natal Museum (by exchange)	1 Mammal— <i>Tragelaphus angasi</i> .

Donors.	Donations.
Pretoria Museum ...	... 1 Mammal— <i>Helogale parrula</i> . *4 Birds—1 <i>Anthus trivialis</i> , 1 <i>A. pyrrhonotus</i> , 1 <i>Mirafra sabota</i> , 1 <i>Anthus rufulus</i> .
Museum Collector ...	... 14 Birds—1 <i>Sternus vulgaris</i> , 2 <i>Pyromelana capensis</i> , 1 <i>Fringillaria capensis</i> , 1 <i>Mirafra apiata</i> , 1 <i>Prinia maculosa</i> , 1 <i>Cisticola tinniens</i> , 1 <i>Sphenoeacus africanus</i> , 1 <i>Laniarius gutturalis</i> , 2 <i>Hirundo cucullata</i> , 2 <i>Colius capensis</i> , 1 <i>Elanus caeruleus</i> . 1 Reptile— <i>Pseudaspis cana</i> .
Tristan Expedition ... (P. Bonomi.)	... 31 Birds—4 <i>Diomedea exulans</i> , 8 <i>Thalassogeron chlororhynchus</i> , 2 <i>Phoebetria fuliginosa</i> , 2 <i>Puffinus gravis</i> , 2 <i>Oestrelata mollis</i> , 1 <i>Cymodroma grallaria</i> , 2 <i>Sterna vittata</i> , 2 <i>Sterna virgata</i> , 2 <i>Anous stolidus</i> , 2 <i>Megalestris antarctica</i> , 2 <i>Catarrhactes chrysochrome</i> , 2 <i>Neosichla eremita</i> . 2 Birds' Eggs—1 <i>Thalassogeron chlororhynchus</i> , 1 <i>Megalestris antarctica</i> .
Zambezi Expedition ...	... 3 Mammals—1 <i>Genetta rubiginosa</i> , 1 <i>Funisciurus cepapi</i> , 1 <i>Gerbillus lobengulae</i> . 126 Birds—1 <i>Hyphantornis velatus</i> , 1 <i>Sitagra xanthoptera</i> , 2 <i>Ploceipasser pectoralis</i> , 1 <i>Lagonosticta brunneiceps</i> , 1 <i>Lagonosticta nitidula</i> , 1 <i>Estrilda angolensis</i> , 5 <i>Quelea quelea</i> , 3 <i>Vidua principalis</i> , 1 <i>Passer diffusus</i> , 3 <i>Serinus icterus</i> , 2 <i>Emberiza flaviventris</i> , 1 <i>Fringillaria tahapisi</i> , 1 <i>Anthus rufulus</i> , 1 <i>Anthus pyrrhonotus</i> , 2 <i>Motacilla vidua</i> , 2 <i>Cinnyris mariquensis</i> , 2 <i>Cinnyris gutturalis</i> , 2 <i>Zosterops anderssoni</i> , 2 <i>Parus xanthostomus</i> , 1 <i>Nilaus brubru</i> , 1 <i>Telephonus senegalus</i> , 1 <i>Telephonus australis</i> , 1 <i>Dryoscopus cubla</i> , 1 <i>Dryoscopus guttatus</i> , 1 <i>Laniarius sulphureipectus</i> , 3 <i>Sigmodus tricolor</i> , 3 <i>Prionops talacoma</i> , 1 <i>Crateropus jardini</i> , 2 <i>Pycnonotus layardi</i> , 3 <i>Chlorocichla occidentalis</i> , 1 <i>Cisticola chiniana</i> , 3 <i>Turdus libyanus</i> , 1 <i>Saxicola falkensteini</i> , 1 <i>Erythropygia zambeziensis</i> , 2 <i>Muscicapa coerulescens</i> , 1 <i>Pachyprora molitor</i> , 1 <i>Terpsiphone perspicillata</i> , 2 <i>Dierurus afer</i> , 2 <i>Rhinopomastus cyanomelas</i> , 2 <i>Coracias caudatus</i> , 1 <i>Coracias mossambicus</i> , 4 <i>Melittophagus meridionalis</i> , 3 <i>Melittophagus bullockoides</i> , 1 <i>Merops nubicoides</i> , 1 <i>Ceryle rudis</i> , 1 <i>Corythornis cyanostigma</i> , 2 <i>Haleyon orientalis</i> , 3 <i>Colius erythromelou</i> , 2 <i>Lophoceros melanoleucus</i> , 2 <i>Lophoceros erythrorhynchus</i> , 1 <i>Campothera bennetti</i> , 1 <i>Lybius torquatus</i> , 1 <i>Trachyphonus cafer</i> , 1 <i>Centropus senegalensis</i> , 1 <i>Centropus superciliosus</i> , 2 <i>Schizorhis concolor</i> , 1 <i>Poeocephalus meyeri</i> , 1 <i>Scops capensis</i> , 2 <i>Bubo lacteus</i> , 1 <i>Aquila wahlbergi</i> , 1 <i>Asturina monogrammica</i> , 1 <i>Gyps rueppelli</i> , 1 <i>Necrosyctes pileatus</i> , 1 <i>Vinago wakefieldi</i> , 2 <i>Turtur semitorquatus</i> , 1 <i>Turtur capicola</i> , 2 <i>Oena capensis</i> , 2 <i>Chalcopelea afra</i> , 1 <i>Pternistes swainsoni</i> , 1 <i>Limnocorax niger</i> , 1 <i>Otis melanogaster</i> , 2 <i>Hoplopterus armatus</i> , 1 <i>Totanus hypoleucus</i> , 2 <i>Totanus glareola</i> , 2 <i>Scopus umbretta</i> , 2 <i>Butorides atricapilla</i> , 2 <i>Phalacrocorax africanus</i> . 1 Reptile— <i>Psemmophis subtaeniatus</i> 2 Batrachians— <i>Rana oxyrhynchus</i> <i>Arthroleptis</i> sp.
Purchased (R. Williams)	... 11 Birds—2 <i>Emberiza flaviventris</i> , 1 <i>Mirafra africana</i> , 1 <i>Mirafra sabota</i> , 1 <i>Cinnyris mariquensis</i> , 1 <i>Cuculus gularis</i> , 1 <i>Schizorhis concolor</i> , 1 <i>Tinnunculus naumanni</i> , 1 <i>Melierax niger</i> , 1 <i>Turdix lepuraea</i> , 1 <i>Herodias alba</i> .
Purchased ...	... 8 Mammals— <i>Sciurus cepapi</i> , <i>Mus chrysophilus</i> , <i>Mus</i> sp., <i>Malacothrix</i> sp., 2 <i>Cephalophus grimmii</i> , 2 <i>Rhaphiceros campestris</i> . 39 Birds—1 <i>Dilophus carunculatus</i> , 2 <i>Lanius collurio</i> , 1 <i>Nilaus brubru</i> , 1 <i>Laniarius starki</i> , 1 <i>Mirafra africana</i> , 1 <i>Mirafra sabota</i> , 1 <i>Turdus litsitsirupa</i> , 1 <i>Irisor erythrorhynchus</i> , 3 <i>Merops apiaster</i> , 1 <i>Lophoceros leucomelas</i> , 1 <i>Schizorhis concolor</i> , 1 <i>Lybius torquatus</i> , 2 <i>Poeocephalus meyeri</i> , 1 <i>Melierax gabar</i> , 2 <i>Astur polyzonoides</i> , 1 <i>Circaetus pectoralis</i> , 2 <i>Urolestes melanoleucus</i> , 1 <i>Dryoscopus cubla</i> , 2 <i>Laniarius atrococcineus</i> , 1 <i>Coracias garrula</i> , 1 <i>Lophoceros erythrorhynchus</i> , 1 <i>Coccyzus cafer</i> , 1 <i>Schizorhis concolor</i> , 3 <i>Milvus aegyptius</i> , 1 <i>Pternistes swainsoni</i> , 2 <i>Hoplopterus armatus</i> , 1 <i>Aegialitis asiaticus</i> , 1 <i>Totanus glareola</i> , 1 <i>Aptenodytes forsteri</i> . 5 Fishes—1 <i>Carcharias makloti</i> , 1 <i>Zeus capensis</i> , 1 <i>Otolithus aequidens</i> , <i>Carcharodon rondeletti</i> , <i>Lophius piscatorius</i> .

3. LIST OF INSECTS ACQUIRED DURING THE YEAR.

NOTE.—All the Species here mentioned are new to the Museum Collection.

Donors.	Donations.
A. Bodong ... ..	...311 examples, 152 species. <i>Coleoptera</i> : Hyalaticus sp., Cybister immarginatus, Arthropterus pallidus, Pagurodactylus unitalinus, Floria sp., Balaninus spec., Curculionids 3 gen. & spec. unknown, Longicornus 2 spec. unknown. <i>Hymenoptera</i> : Arge sp., Arge sp., Mutilla sp. <i>Hemiptera-Homoptera</i> : Lygeus spec., Lygeus sp., 5 sp. undetermined. <i>Orthoptera</i> : Chironacta sancta, Danuria sp., Cymatomera sp. <i>Lepidoptera</i> : Nudauralia sp., Eutelia sp., Phyllalia sp.
H. Brauns ... ..	...104 examples, 39 species. <i>Coleoptera</i> : Omophren oneili, Monoplus imitator, Monoplus affinis, Mastigus procerus, Heterochelus sp., Chrysobothris sp., Ablabera Karroana, Cryptochilus sp., Gynandrophthalma triplagiata, Gynandrophthalma punctipennis, Miopristis virginica, Chrysomela perlustrata, 3 Galerucid sp., Blacodes sp. <i>Hymenoptera</i> : Anthidium abdominale, Meliturgula brauns, Anthidium braunsi, Ceramius saussurei, Ceramius fuscipennis, Masariella amabilis, Sapyga enderleini, Mutilla signatipennis, Mutilla basitorum, Mutilla androgyna, Mutilla gynandromorpha, Parnopus fischeri.
C. N. Barker ... ..	...108 examples, 60 species <i>Coleoptera</i> —Lema fuscitarsis; Lema tibialis, Lema bifoveata, Ismus suturalis, Odontiomorpha minuta, Lefevrea intermedia, Lefevrea fulvicollis, Syagrus alnaudi, Rhembastus natalensis, Colasposoma aurichaleca, Colasposoma ovulum, Chrysomela Livingstoni, Aphthona Barkeri, Wisana Barkeri, Chaetocnema subaterrima, Malvernia varicornis, Crepidodera peringueyi, Schaethe natalensis, Exosoma Barkeri, Palaeophylla granulosa, Aenidia imitans, Platyxantha hirticornis, Monocida inornata, Candezea pectoralis, Candezea infusata, Monolepta maculata, Hemixantha picipes, Sebaethe tibialis, Maceses pusilla, Gynandrophthalma amoenida, Hespera intermedia, Monolepta punctipennis, Spilocephalus distanti.
C. Davison ... ..	... 77 examples, 32 species <i>Lepidoptera</i> —Caradrina sp., Leucania sp., Tinea sp., 3 Gen Spec. unknown.
L. Fairmaire ... ..	...106 examples, 75 species <i>Coleoptera</i> —Megalomma janthina, Cicindela scollata, Brachinus abbreviatus, Clivina fairmairei, Ooidius cphippium, Adoretus rufulus, Enarca lividula, Hoplia pygidialis, Chrysobothris cyanicollis, Discoderes deformis, Nycteropis perrieri, Chalcostylus perrieri, Phyllactinus asperipennis, Hyposphilus ebeninus, Heterophyllus chrysomelinus, Anochilia bifida, Heterosoma attenuatum, Soronus erythaceus, Sphenophorus picirostris, Heterophyllus goudoti, Thallis pisceceus, Xanthophysa perrieri, Cassida latipennis, Prosodidius perrieri, Pheropsophus bimaculatus, Brachinus bimaculatus, Drypta cyanella, Zuphium perrieri, Tetragonoderus tsoamarinae, Paussus armiceps, Saprinus splendidulus, Peltodytes quadratus, Oniticellus perrieri, Liatongus unifasciatus, Serica castanea, Hoplia aculata, Aphodius tenuicollis, Pygora chamaeleon, Exproctus cinerarius, Bricoptis variolosa, Zophosis madagascariensis, Menistus angulicollis, Himatismus justii, Mictopsis laticollis, Hovarygmus insularis, Nothrocerus cylindricollis, Platydema coquereli, Prosodidius perrieri, Tricholepis niveopilosa, Cimbus atomarius, Homocorhynchus ornatus, Brachycerus madecassus, Lophoptera spectabilis, Eumimnestes perrieri, Brachytatus bipartitus, Trionychus mainti, Messalius albidosparsus, Nestacares leucopictus, Bruchus humerosus, Pachnephrus testaceipes, Laccoptera humerosa.
Harold Fry ... ..	...165 examples, 108 species <i>Coleoptera</i> —Stereostoma corpulentum. <i>Diptera</i> —Glessina palpalis.
A. J. T. Janse ... ..	...303 examples, 263 species <i>Coleoptera</i> —Lebistina spec., Selinus sp., Anophthalmus sp. <i>Orthoptera</i> —Xiphocera sp.
J. W. Jones ... ..	...397 examples, 173 species. <i>Coleoptera</i> : Bembidium sp., Epirrhinus gratus, Onthophagus sp., Ochodaeus sp., Colasposoma sp., Cassida spec. <i>Hymenoptera</i> : Lobopelta sp. <i>Orthoptera</i> : Brachylabis sp., Gyuopeltis sp., Batrachotettix peringueyi.
R. M. Lightfoot ... ..	... 100 examples, 10 species <i>Lepidoptera</i>

Donors.	Donations.
G. A. K. Marshall ...	...110 examples, 77 species. <i>Coleoptera</i> : <i>Metallica</i> sp., <i>Lebia evicta</i> , <i>Phloeozetus cribricollis</i> , <i>Onthophagus</i> spec., <i>Onthophagus</i> sp., <i>Clitopa precarya</i> , <i>Euronychia rufina</i> , <i>Machla matabele</i> , <i>Anchophthalmus</i> sp., <i>Strongylium purpureipenne</i> , <i>Strongylium</i> sp., <i>Victomorpha</i> n.g. and spec., <i>Cistelid</i> gen. ign., <i>Lagria</i> sp., <i>Lagria segnis</i> , <i>Adynata brevicollis</i> .
The Rev J. A. O'Neil ...	...153 examples, 98 species <i>Coleoptera</i> . <i>Oedichirus oneili</i> , <i>Philonthus</i> sp., <i>Falagria</i> sp., <i>Micrambe capensis</i> , <i>Typhaeus fumatus</i> , <i>Lasiodactylus tibialis</i> , <i>Hedybius crosus</i> , <i>Hedybius quadrimaculatus</i> , <i>Hedybioccephalus fossulifer</i> , <i>Attalus oneili</i> , <i>Sphingopalpus oneili</i> , <i>Attalus rufithorax</i> , <i>Pseudocoletes notatithorax</i> , <i>Pseudocoletes innotatus</i> , <i>Anexodes croceomaculatus</i> , <i>Pseudocoletes oneili</i> , <i>Formicomus tuberculatus</i> , <i>Formicomus truncatus</i> , <i>Anthicus flavopictus</i> , <i>Anthicus subapicalis</i> , <i>Anthicus bishipartitus</i> , <i>Leptaleus quadrillum</i> , <i>Anthicus stygius</i> , <i>Anthicus coeruleipennis</i> , <i>Anthicus biplagiatus</i> , <i>Anthicus fauvei</i> , <i>Anthicus basinotatus</i> , <i>Anthicus tumefactus</i> , <i>Oethenanus obscurus</i> , <i>Oethenanus elongatus</i> , <i>Sciobius varius</i> , <i>Platycopus squalidus</i> , <i>Bagous coenosus</i> , <i>Tychius luteo-viridis</i> , <i>Baris caffer</i> , <i>Nanophyes armatus</i> , <i>Microjullitus subconvexus</i> , <i>Caryobarus longus</i> , <i>Bruchus silaceus</i> , <i>Peploptera braunsi</i> , <i>Peploptera barkeri</i> , <i>Damia capitata</i> , <i>Gynandrophthalma picturata</i> , <i>Maetes puberulus</i> , <i>Syagrus antennatus</i> , <i>Pausiris arachnoides</i> , <i>Pausiris oneili</i> , <i>Pseudomalezia tibialis</i> , <i>Malvernina varicornis</i> , <i>Dibolia abdominalis</i> , <i>Longitarsus dunbrodiensis</i> , <i>Misotia</i> sp., <i>Crepidodera</i> sp., <i>Aphthona</i> sp., <i>Cariobarus longus</i> .
Miss Lilian Orpen ...	...48 Examples, 14 species, <i>Hymenoptera</i> : <i>Mutilla</i> sp. <i>Orthoptera</i> : <i>Xiphocera</i> sp. <i>Neuroptera</i> : <i>Hemerobiid</i> gen. and spec. undetermined.
H. H. W. Pearson ...	...28 examples, 12 species. <i>Coleoptera</i> : <i>Psanmodes debilis</i> , <i>Mylabris pearsoni</i> .
H. de Saussure ...	...711 examples, 373 species. <i>Coleoptera</i> : <i>Passalus punctiger</i> , <i>Passalus striatopunctatus</i> , <i>Passalus cephalotes</i> , <i>Passalus comptoni</i> , <i>Neleus interruptus</i> , <i>Macrognotus nepalensis</i> , <i>Onthophagus ferox</i> , <i>Onthophagus</i> sp., <i>Copris procidus</i> , <i>Anoplognathus olivieri</i> , <i>Anoplognathus analis</i> , <i>Antichira splendens</i> , <i>Pezochile bipunctata</i> , <i>Apogonia laticollis</i> , <i>Adoretus ovalis</i> , <i>Sepidium aegyptiacum</i> , <i>Cleonus superciliosus</i> , <i>Cossyphus depressus</i> , <i>Squamiga grandis</i> , <i>Mylabris orientalis</i> , <i>Mylabris</i> sp. <i>Hymenoptera</i> : <i>Pachymelus hova</i> , <i>Podalirius hispanicus</i> , <i>Podalirius robustus</i> , <i>Podalirius dentifabris</i> , <i>Podalirius nigrocinctus</i> , <i>Podalirius atroalbans</i> , <i>Podalirius parietinus</i> , <i>Apis fasciata</i> , <i>Ceratina albilabris</i> , <i>Vespa orientalis</i> , <i>Parasphex albicinctus</i> , <i>Sphex maxillosus</i> , <i>Philanthus triangularis</i> , <i>Cerceris lindeni</i> , <i>Astata boops</i> , <i>Ampulex compressus</i> , <i>Scolia bidens</i> , <i>Scolia flavifrons</i> , <i>Scolia birta</i> , <i>Scolia ciliata</i> , <i>Dielis collaris</i> , <i>Scolia interstincta</i> , <i>Elis villosa</i> , <i>Mutilla arenaria</i> , <i>Mutilla brutia</i> , <i>Evania appendigaster</i> , <i>Mutilla capitata</i> , <i>Polistes rubiginosus</i> , <i>Polistes aurifer</i> , <i>Polistes diadema</i> , <i>Polistes gallicus</i> , <i>Polistes pallipes</i> , <i>Polistes canadensis</i> , <i>Polistes erraticus</i> , <i>Vespa deusta</i> , <i>Vespa cincta</i> , <i>Vespa velutina</i> , <i>Vespa affinis</i> , <i>Vespa vulgaris</i> , <i>Vespa rufa</i> , <i>Vespa maculata</i> , <i>Vespa cuneata</i> , <i>Vespa silvestris</i> , <i>Vespa communis</i> , <i>Vespa austriaca</i> , <i>Eumenes guerini</i> , <i>Ischnogaster mellyi</i> , <i>Icaria bioculata</i> , <i>Leionotus julii</i> , <i>Leionotus sicilianus</i> , <i>Icaria variegata</i> , <i>Pelopaeus variegatus</i> , <i>Pelopaeus madraspotanus</i> , <i>Ammophila procera</i> , <i>Ammophila xanthoptera</i> , <i>Ammophila montezuma</i> , <i>Ammophila aureonotata</i> , <i>Sphex caliginosus</i> , <i>Sphex pensilvanicus</i> , <i>Sphex umbrosus</i> , <i>Sphex flavipes</i> , <i>Sphex rufipennis</i> , <i>Pelopaeus histrio</i> , <i>Pelopaeus cementarius</i> , <i>Harpactopus thornae</i> , <i>Harpactopus atratus</i> , <i>Sphex speciosus</i> , <i>Bembex monodonta</i> , <i>Bembex mediterranea</i> , <i>Bembex olivacea</i> , <i>Bembex cunctans</i> , <i>Bembex texana</i> , <i>Bembex longirostris</i> , <i>Monedula signata</i> , <i>Monedula carolina</i> , <i>Monedula surinamensis</i> , <i>Philanthus coronatus</i> , <i>Philanthus triangulum</i> , <i>Larra analis</i> , <i>Cerceris clypeatus</i> , <i>Cerceris venator</i> , <i>Cerceris imperialis</i> , <i>Cerceris fumipennis</i> , <i>Cerceris labiatus</i> , <i>Trypoxilon mexicanum</i> , <i>Trypoxilon albitarse</i> , <i>Pepsis caerulea</i> , <i>Pepsis luteicornis</i> , <i>Tiphia inornata</i> , <i>Chlorion lobatum</i> . <i>Hemiptera Homoptera</i> : <i>Dunderbia vaginatum</i> , <i>Cryptotympana acuta</i> , <i>Polyneura ducalis</i> , <i>Huechys incarnata</i> , <i>Pocharia fumata</i> , <i>Tettigonia ferrugina</i> , <i>Phryna candida</i> , <i>Phyllophantia producta</i> , <i>Eutylia</i> spec., <i>Cyclopelta obscura</i> , <i>Tessarotoma javanica</i> , <i>Dystereus cingulatus</i> .

Donors.	Donations.
F. O. Stoebr ... ..	... 81 examples, 41 species. <i>Coleoptera</i> : <i>Onthophagus</i> sp., <i>Adoretus</i> sp., <i>Stenocara feirana</i> , <i>Emyon cælatus</i> , <i>Sepidium zambesianum</i> , <i>Mylabris</i> <i>pruinosa</i> gen. and sp. unknown, <i>Zophosis</i> , sp., <i>Anchoph-</i> <i>thalmus</i> sp., <i>Stizopus</i> sp. <i>Homoptera</i> : Gen. and spec. unknown. <i>Orthoptera</i> : <i>Cymatomera braueksiki</i> .
Tristan d'Acunba Expedition	...24 examples, 11 species. <i>Coleoptera</i> , 10 species. <i>Diptera</i> : Gen. unknown.
Zambesi Expedition	...151 examples, 71 species. <i>Coleoptera</i> : <i>Osorius rugiceps</i> , <i>Zophosis</i> sp., <i>Deroctropus</i> sp. <i>Hymenoptera</i> : <i>Lobopelta</i> sp. <i>Neuroptera</i> : Perlid gen. and sp. unknown. <i>Orthoptera</i> : <i>Gryllacris</i> spec. <i>Lepidoptera</i> : <i>Agrotis</i> sp., <i>Caradrina</i> sp., <i>Dasychira</i> sp. 6 sp. 6 sp. unidentified.
By Exchange ... ..	...144 examples, 64 species. <i>Coleoptera</i> : <i>Omitis philemon</i> , <i>Onthophagus seniculus</i> , <i>Copris</i> <i>hopeianus</i> , <i>Copris reflexus</i> , <i>Onthophagus rubricollis</i> , <i>Geotrupes semicupreus</i> , <i>Geotrupes fossor</i> , <i>Geotrupes</i> <i>orichalceus</i> , <i>Trichogomphus moluccarum</i> , <i>Anthochia</i> <i>lucida</i> , <i>Anomala splendida</i> , <i>Phyllopeola octocostata</i> , <i>Rutela lineola</i> , <i>Anomala antiqua</i> , <i>A. rufozonula</i> , <i>Anomala cuprea</i> , <i>A. opalina</i> , <i>Mimela vittaticollis</i> , <i>Lago-</i> <i>chila trochanterina</i> , <i>Anthicira thoracica</i> , <i>Parastasia</i> <i>bimaculata</i> , <i>Holotrichia cavifrons</i> , <i>Holotrichia amboinae</i> , <i>Autoserica annamensis</i> , <i>Tricholepis vestita</i> , <i>Ancystrosoma</i> <i>buckleyi</i> , <i>Polyphylla albolineata</i> , <i>Armoxia mauritanica</i> , <i>Trigonoplous saundersi</i> , <i>Mimela vittaticollis</i> , <i>Cetonia</i> <i>joussellini</i> , <i>Cetonia ignicollis</i> , <i>Calopotamia</i> , sub- <i>marmorea</i> , <i>Dicranoccephalus adamsi</i> , <i>Glyciphina tricolor</i> , <i>Glyciphina</i> <i>Küperi</i> , <i>Gymnetis liturata</i> , <i>Anthrocephala atramaculata</i> , <i>Macronota antiqua</i> , <i>Tropinota hirtella</i> , <i>Cetonia pilifera</i> , <i>Protetia acuminata</i> , <i>Oxythyrea cinctella</i> , <i>Catoxantha</i> <i>opulenta</i> , <i>Catoxantha bonvilloiri</i> , <i>Chrysochroa mirabilis</i> , <i>Chaleophora japonica</i> , <i>Stenocara punctatofoveata</i> , <i>Stenocara aquisignata</i> , <i>Anomala distinguenda</i> , <i>Temnor-</i> <i>hynchus tridentata</i> , <i>Gnathocera</i> sp., <i>Gametis scalaris</i> , <i>Lixus sulcirostris</i> .

4.—LIST OF LAND AND FRESHWATER INVERTEBRATES, EXCLUSIVE OF INSECTS AND MOLLUSCS, ACQUIRED DURING THE YEAR.

NOTE.—Names printed in italics signify species new to the Museum Collection.

H. P. Abernethy ... ..	... 6 Spiders (<i>new</i> : <i>Drassidae</i> 1 sp.).
R. Baur ... ..	... 3 Scorpions. 1 Spider (<i>Argiopidae</i>). 1 Myriapod.
P. Bonomi ... ..	... 21 Earthworms. 30 Isopod crustaceans. 10 Myriapods. 3 Spiders (<i>new</i> : <i>Argiopidae</i> 2 sp.)
S. Blackbeard ... ..	... 13 Scorpions. 3 Solifugae. 1 Myriapod.
A. Bodong ... ..	... 6 Spiders.
Dr. R. Broom ... ..	... 11 Scorpions. 106 Spiders (<i>new</i> : <i>Spiroctenus</i> n. sp.).
Miss Buyskes ... ..	... 3 Spiders.
R. Colson ... ..	... 38 Spiders (<i>new</i> : <i>Clubionidae</i> 2 sp., <i>Lycosidae</i> 2 sp., <i>Ctenizidae</i> 1 sp., <i>Pisauridae</i> 1 sp., <i>Arcturizidae</i> 1 sp.).
J. Drury ... ..	... 1 Scorpion. 2 Solifugae (<i>new</i> : <i>Blossia</i> n. sp.). 15 Spiders (<i>new</i> : <i>Theridiidae</i> 1 sp., <i>Thomisidae</i> 4 sp., <i>Atidae</i> 4 sp.). 1 Myriapod.
I. Douglas Forster ... ..	... 1 Worm (<i>Gordius</i>).
Geo. French ... ..	... 1 Trap-door Spider with nest.
H. A. Fry ... ..	... 2 Scorpions (<i>new</i> : <i>Opisthophthalmus cristatus</i>). 9 Spiders (<i>new</i> : <i>Clubionidae</i> 1 sp., <i>Argiopidae</i> 2 sp., <i>Oxyopidae</i> 1 sp., <i>Thomisidae</i> 1 sp.). 1 Mite. 7 Myriapods.
J. E. C. Goold ... ..	... 2 Spiders.
A. K. Haagner ... ..	... 2 Scorpions. 3 Solifugae. 4 Spiders (<i>new</i> : <i>Pisauridae</i> 1 sp.).
—, Herden ... ..	... 1 Spider.

Donors.	Donations.
H. Hermann ...	... 1 Spider.
Dr. D. de V. Hugo ...	... 1 Spider.
J. W. Jones ...	... 9 Scorpions. 1 Solpuga. 17 Spiders. 11 Myriapods.
The Rev. F. C. Kolbe ...	... 2 Spiders.
R. M. Lightfoot ...	... 6 Spiders.
C. Lounsbury ...	... 262 Ticks (<i>new: Rhinoccephalus erectus, R. appendiculatus, R. capensis, R. sinus</i>).
Dr. J. Lückhoff... ..	... 2 Spiders.
Dr. R. Mavloth ...	... 1 Spider.
I. Meiring ...	... 1 Solpuga.
D. L. Patrick ...	... 1 Isopod Crustacean (<i>new</i>). 2 Scorpions. 1 Pseudoscorpion. 2 Solifugae. 4 Opiliones (2 <i>sp.</i>). 64 Spiders (<i>new: Ceratogyrus darlingi</i> Poe., <i>Idiosoma purgwenensis</i> n. <i>sp.</i> , <i>Attidae</i> 4 <i>sp.</i> , <i>Clubionidae</i> 8 <i>sp.</i> , <i>Argiopidae</i> 3 <i>sp.</i> , <i>Agelenidae</i> 1 <i>sp.</i> , <i>Hersiliidae</i> 1 <i>sp.</i> , <i>Drassulidae</i> 1 <i>sp.</i> , <i>Thomisidae</i> 1 <i>sp.</i>). 47 Myriapods (<i>new: Atipes appendiculatus</i> Kr.).
J. Paynter ...	... 75 Scorpions. 6 Solifugae (<i>new: Solpuga</i> n. <i>sp.</i>). 8 Spiders. 2 Myriapods.
Professor Pearson ...	... 1 Spider.
Miss A. Pegler ...	... 4 Opiliones (1 <i>new</i>). 64 Spiders (<i>new: Argiopidae</i> 6 <i>sp.</i> , <i>Attidae</i> 2 <i>sp.</i> , <i>Drassulidae</i> 1 <i>sp.</i> , <i>Theridiidae</i> 2 <i>sp.</i> , <i>Thomisidae</i> 2 <i>sp.</i> , <i>Hemacha</i> 1 <i>sp.</i>).
L. Peringuey ...	... 9 Isopod Crustaceans (1 <i>new</i>). 1 Mite.
S. S. Ponder ...	... 9 Scorpions. 5 Spiders. 1 Mite. 1 Myriapod.
Mrs. W. F. Purcell ...	... 11 Spiders.
W. F. Purcell, ...	... 2 Peripatus. 5 Scorpions. 37 Opiliones. 142 Spiders (<i>new: Argiopidae</i> 1 <i>sp.</i> , <i>Theridiidae</i> 1 <i>sp.</i> , <i>Zodariidae</i> 1 <i>sp.</i>). 84 Mites. 7 Myriapods.
Dr. Robertson ...	... Worm (<i>Taenia</i> <i>sp.</i>)
A. W. Rogers ...	... 2 Spiders (<i>Harpactirella</i> n. <i>sp.</i>).
Dr. S. Schönland ...	... 1 Spider.
S. C. Cronwright Schreiner	... 1 Pseudoscorpion. 2 Solifugae. 28 Spiders (<i>new: Drassodes</i> n. <i>sp.</i>). 35 Mites.
Dr. Schultze ...	... 1 Pseudoscorpion.
W. L. Sclater ...	... 1 Scorpion. 1 Spider. 1 Myriapod.
Dr. Stoehr ...	... 6 <i>Koeneria florensis</i> .
Miss A. Wheeler ...	... 3 Scorpions.
M. I. Williams ...	... 5 Solifugae.
A. Williamson ...	... 1 Spider.

APPENDIX.—MARINE INVERTEBRATES.

G. W. Dickinson ...	... 1 Starfish.
W. Lee ...	... 2 Crabs.
Marine Survey ... (Dr. Gilchrist.)	... 60 Specimens—13 species of corals all new to the Museum, viz.: <i>Flabellum siborgae</i> , <i>Flabellum paronivum</i> , <i>Flabellum rubrum</i> , <i>Sphenotrochus gilchristi</i> , <i>Trochocyathus rarsoni</i> , <i>Trochocyathus cinctulatus</i> , <i>Heterocyathus aequirostratus</i> , <i>Caryophyllia capensis</i> , <i>Caryophyllia ephyala</i> , <i>Cyathoceras corai</i> , <i>Ceratotrochus johnstoni</i> , <i>Ceratotrochus epithecata</i> , <i>Desmophyllum capense</i> .
L. Peringuey ...	... 23 Parasitic Copepoda.

5.—LIST OF MOLLUSCA ACQUIRED DURING THE YEAR.

J. C. Gould ...	... 148 examples, 4 species— <i>Phasis capensis</i> , <i>Trachycystia sabuletorum</i> , <i>Ducasia porphyrostoma</i> ? <i>Fauxulus capensis</i> .
J. H. Jones ...	... 1 <i>Succinea delalandei</i> ?
Marine Biological Survey	... 1 <i>Neptuniopsis gilchristi</i> .
Dr. F. W. Purcell ...	... 11 Examples 2 species— <i>Natalina cosmia</i> , <i>Pomatius insularis</i> .
Miss M. Versfeld ...	... 5 Examples 1 species— <i>Tapes</i> <i>sp.</i> ?

6.—LIST OF ADDITIONS TO THE DEPARTMENT OF ANTHROPOLOGY AND ANTIQUITIES DURING THE YEAR.

J. W. Allen	Copper Medal struck to commemorate the death of the Duke of Wellington.
J. M. Bain	Sandstone adze from the Cape Div. Collection of ostrich egg beads from Cape Div.
F. Christensen	Neolithic adze from Lammefjorden in Denmark.
Corpl. Clave A.S.C.	Old Flint Lock Pistol of French Manufacture.
H. Graham Cloete	4 Arrow head, 2 Flakes, 1 small polished Axe, 4 clay modelled heads from tombs, all from Mexico.
Colonial Govt.	Old Iron Chest formerly in the Customs Department.
C. Elliott	10 Stone Implements (Stellenbosch type) from Paarl Div.
James George	Silver quarter dollar of Kilaakama I of Hawaiian Isles.
J. A. Giffen	Copper Coin of William I of Holland 1827.
Prof. E. H. Giglioli of Florence (by exchange)	Six Palaeoliths from Tumba in the Congo Free State.
Mrs. Huntley	Makalunga wire bangle from Victoria dist. S. Rhodesia.
D. E. Hutchins	Bones (with ut skull) from a bushman cave at Knysna.
Dr. T. S. Keys	Silver shilling, George II England, 1745.
The Rev. H. Jennings	Gourd ladle, cup & water pot (Sechuana)
J. P. Johnson	Collection of "pigmy flakes" etc. etc. from Taaibosch Spruit near Johannesburg.
Miss Juta	Copper Medal struck in honour of Admiral Vernon.
J. Newey	Part of a Suezewood pile, 30 years old, bored by <i>Teredo</i> from the harbour at Port Alfred.
G. Oats	Walking Stick made of Cartridge Cases.
J. Paynter	Flakes & Chips from Touw's River.
F. Pickard	Copy of the "Kaapsche Stads Courant" for May 26th 1810.
J. Procter	Fragments of a skull forming part of a skeleton found digging a well at Melkbosch near Mossel Bay; handle of an earthenware pot, worked Elephant tusk, Flakes celts & ring stones from the Mossel Bay dist. Carved Wooden Spoon and Basket from Lake Ngami.
A. W. Rogers	1 Ringstone & 1 adze from Elliot div., 1 Ringstone, 1 adze & 4 flakes from Clanwilliam, 2 Stone Implements from Van Rhyns Dorp.
H. Schwartz	Portions of six skulls of adult & young Bushman & Hottentots from a cave in the Komgha dist.
P. L. Selater	Mummied Kestrel (<i>Tinnunculus alaudarius</i>) from Thebes in Egypt.
W. L. Selater	Implements, Quartz & Sandstone Chips from the Khami ruins & from a Bushman cave in the Matopos both near Bulawayo.
A. W. du Toit	5 Stone Implements from Dordrecht, Herschell and Aliwal North.
Wong Too	3 Brass Chinese Coins.
Purchased for the Museum by M. Christol in Basutoland	Collection of Sesuto and Barotse domestic and other utensils including snuffboxes, dolls, drums, beer strainers, sweat scrapers, divination bones, spoons and beadwork.
Purchased by the Director at Livingstone, N.W. Rhodesia and at Serowe, Bech. Prof.	Collections of Barotse and Sechuana Utensils and Implements including wooden dishes, baskets, wooden and pottery bowls, knives, spoons and beer strainers.
Purchased	Old Delft Plate marked with monogram of the Dutch East India Company.

7.—LIST OF ADDITIONS TO THE DEPARTMENT OF GEOLOGY AND MINERALOGY DURING THE YEAR

Alliston, S.	Volcanic Dust, Mt. Pelée.
Bradfield, E. R.	Silicified Tree Trunks, Dordrecht.
British South Africa Company	Block of Coal from Wankes. Mica from Rhodesia.
Brittlebank, H.	Garnets, Victoria Nyanza.
Broom, R.	Skull of large <i>Dicynodon</i> , Pearston. Pelvis, etc., of <i>Dicynodon</i> , Pearston. <i>Glossopterus</i> , Pearston. Skull of large <i>Oudenodon</i> , Pearston. Cast of interclavicle of <i>Rhynchosternus capensis</i> . Skull of new species of <i>Oudenodon</i> (<i>O. megalorhinus</i> Br.). Prince Albert Road Station.
Brown, Alfred	Dinosaurian remains, Kraai R., Aliwal North. Fossil Plants, Aliwal North.
Buonomi, P.	Rocks from Tristan d'Aeunha.
Burton, R.	Apophyllite, Corundum, etc., Jagersfontein.
Butler, D.	Fossil Plant, Cape Flats Sandstone, near Durban Road.
Cartwright, J. D., M.L.A.	Auriferous Quartz, Oudtshoorn Mine, Milwood. Galena, Milwood.
Cubbon, —	Molybdenite, Queensland.
Drury, J.	Copper Pyrites, Hippo Mine, N. W. Rhodesia. Native Copper, Silver King Mine, Rhodesia. Malachite, Silver King Mine, Rhodesia.
Fisher, A. W.	Supposed Meteorite, Ceres Road.
Isted, A.	Fossil Crocodile (<i>Notochampsus istedani</i> Br.). Funny Stone, Barkly East.

Donor.	Donation.
Louspaner, —	Lava, Gaus Island.
Malan, F. S., M.L.A.	Fossil Tree Trunk, Lady Grey, Aliwal North.
Medworth, A. B.	Galena, Oudtshoorn Mine, Milwood.
Moir, Alex.	Dinosaurian remains, Ladybrand, O. R. C.
Muller-Rex, F.	Rensselaerias from the Bokkeveld Beds, Uniondale. Crocodilian Tooth from the Enon Conglomerates, Oudtshoorn. Dinosaurian Tooth from the Enon Conglomerates. Fossil Wood from the Enon Conglomerates, Oudtshoorn.
Plessis, P. H. du	Portions of the Skull of a new Fossil Reptile, <i>Scapanodon duplessisi</i> Br., Zeekoegat, Prince Albert. Numerous large Bones of <i>Scapanodon</i> or <i>Titanosuchus</i> , Zeekoegat, Prince Albert.
Robinson, Capt.	Collection of Minerals, Basutoland.
Rogers, W., M.L.C.	Laterite, Glencairn, Cathcart.
Seavill, C. E.	Carnotite, Montrose Co., Colo.
Sheldon, J.	Euxenite and Monazite, Embabaan.
Smith, G. D., M.L.C.	Crocidolite, Western Transvaal.
Trill, G.	Cassiterite and other Minerals, Kuil's River.
Wiener, L.	Yellow Ground, Hay.
Young, A.	Yellow Ground, Peiser Mine.

8.—LIST OF ADDITIONS TO THE LIBRARY.

(a) BY EXCHANGE OR PRESENTATION.

Donor.	Donation.
Adelaide, Public Museum and Library	Annual Report 1902-3.
Batavia, Botanic Garden... ..	Mededeelingen Nos. 68, 69, 71.
Bergen, Museum	Aarsberetning, 1903. Aarbog, 1904.
Berlin, Entomological Society	Zeitschrift, Vol. XLVIII., Hft. 3-4. Vol. XLIX., Hft., 1-2
Bristol, Museum and Library	Annual Report, 1903.
Brisbane, Royal Society of Queens- land	Proceedings, Vol. XVIII.
Brussels, Belgian Entomological Society	Mémoires, Vols. X, XI. Annals, Vol. 47, Nos. 11-12-13. Vol. 48, Nos. 1-11.
Brussels, Royal Malacological Society	Bulletin, Vol. XXXVII.
Buda-Pest, Natural History Museum	Anales, Vol. I., pt. 2. Vol. II., pts. 1-2
Buenos Aires, National Museum	Anales, Ser. III., Vols. 2-3
Buitenzorg, Botanic Gardens	Bulletin, No. 19. Verslag, 1903.
Bulawayo, Rhodesia Scientific Asso- ciation	Proceedings, Vols. I-III. Annual Report, 1903-4.
Bulawayo, Rhodesian Museum	2nd Annual Report, 1903. Special Report, No. 2.
Cairo, Zoological Gardens	Report, 1903.
Calcutta, Asiatic Society of Bengal	Proceeding, Nos. 1-4, 1904. Journal, Vol. 72, pt. 2, Nos. 3-4 and Index, Vol. 73, pt. 2, No. 1.
Calcutta, Indian Museum	Annual Report, 1902-3.
Cambridge, Philosophical Society... ..	Proceedings, Vol. XII., pts. 4-5. Vol. XIII., pp. 1-239. Vol. XV., pts. 1-2.
Cambridge, Mass., Museum of Com- parative Zoology	Bulletin, Vol. XXXIX., No. 9. Vol. XL., No. 2. Vol. XLI, No. 2. Vol. XLII., Nos. 1, 2, 3, 5. Vol. XLV., No. 3. Vol. XLVI., No. 1-2.
Cape Town, Colonial Government	Annual Reports, 1902-3. Agricultural Journal, Vol. XXIV., Nos. 1-6. Vol. XXV., Nos. 1-6. Report, Government Marine Biologist, 1903. International Catalogue of Scientific Literature. N. Zoology, pts. 1-2. Report, Government Entomologist, 1903. Flora Capensis, Vol. IV., Sec. 2, pts. 2-3.
Cape Town, Geological Commission	Annual Report, 1903.
Cape Town, Philosophical Society... ..	Transactions, Vol. XIV., No. 5.
Cape Town, Public Library	Alphabetical Subject Index to the System of Classification in the South African Public Library.
Cape Town, South African Associa- tion for the Advancement of Science	Report of 1903 Meeting.
Chicago, Field Columbian Museum	Publications, No. 45, 46, 75, 77-92, 95, pts. 1-2.
Cincinnati, Museum Association	Annual Report, 1903.
Colombo, Museum	Catalogue of Books Printed. Spolia Zealandica. Vol. I., pt. 3-4. Vol. II., pt. 5-6.
Dar-es-Salaam, Land and Forestry Department, German East Africa	Bericht, Vol. I., pt. 7. Vol. II., pts. 1-3.

- Dublin, Royal Society Scientific Proceedings, Vol. XI., pt. 7.
Scientific Transactions, Vol. VIII, Nos. 2-5.
Economic Proceedings, Vol. I., pt. 4.
- Frankfort, A.M. New Zoological Society Der Zoologische Garten, Vol. XLV., No. 1-11.
- Geneva, Zoological Society of Switzerland Annales, Tome XI., Fas. 3-4. Tome XII., Fas. 1-4.
- Grahamstown, Albany Museum Report for half year ending, June 30th, 1904.
Records, Vol. I., pts. 2-3.
Mitteilungen, Vol. XX.
- Hamburg, Natural History Museum
Honolulu, Bernice - Pauahi - Bishop Museum Fauna Hawaiianis, Vol. I., pt. IV. Vol. III., pt. IV.
Occasional Papers, Vol. II., No. 1-2.
Rock Carvings of Hawaii by A. T. Judd.
First Report of the Welcome Research Laboratories.
Verhandlungen, 1901.
- Khartoum, Gordon Memorial College
Leipzig German Zoological Society
Leyden, Museum Notes, Vol. XXIV., No. 1. Vol. XXV., No. 1-2.
Return, 1903-4.
- London, British Museum Proceedings, Nos. 460-1, 465-7, 470, 427-8.
London, Royal Society Proceedings, 1903, Vol. II., pts. 1-2. 1904, Vol. I., pt. 1.
- London, Zoological Society
- Lubeck, Geographical and Natural History Society Mitteilungen, Vol. 2, Hft. 13.
Bulletin, Vol. V., No. 1.
- Madras, Government Museum
- Madrid, Natural History Society of Spain Memoirs, Tome II., n. 3, 4, 10.
Boletin, Tome III, n. 7-10. Tome IV., n. 1-2.
- Manchester, Literary and Philosophical Society Memoirs and Proceedings, Vol. XLVIII., Nos. 1-3.
Publications, Nos. 50-55.
- Manchester, The Museum
- Marseilles, The Museum Annales, Vol. VIff.
- Melbourne, National Museum New or little known Victorian Fossils in the National Museum, Parts 1 & 2, by F. Chapman.
On some Foraminifera & Ostracoda from the Jurassic strata near Geraldton, Western Australia, by F. Chapman.
- Melbourne, Royal Society of Victoria Proceedings, Vol. XVI part 2, Vol. XVII part 1.
24th Annual Report.
- Metz, Geographical Union Atti, Vol. XLII, Fas 4; Vol. XLIII, Fas 1-3.
- Milan, Natural History Museum Annual Report.
- Milwaukee, Public Museum Bulletin, Vol. III, pts 1-3; Vol. IV, pt. 1.
- Milwaukee, Wisconsin Natural History Society
- Monaco, Oceanographic Museum Bulletin, 1-12, 15-17.
Résultats des Campagnes Scientifiques, fasc. 25-27.
Annales, Ser II, pt. 1.
- Montevideo National Museum
- Moscow, Imperial Society of Naturalists. Bulletin, Vol. XVII, N. 2-4
- Naples, Zoological Museum Annuario, Vol. I, 1-20
- New Brunswick, New Jersey Experiment Station Bulletin, Nos. 169, 171.
Report 1903.
- Newcastle-on-Tyne, Natural History Society of Northumberland, Durham, etc. Transactions, Vol. I, pt. 1, new series.
- New York, American Museum of Natural History Journal, Vol. I - IV, pts. 1-4
Bulletin, Vol. XVIII, pts 1-3.
Annual Report, 1903.
Memoirs, Vol. I-VII
Revised list Casts, Models and Photographs of Fossil Vertebrates.
Birds Eggs and Nests by F. N. Chapman.
- New York, Zoological Society Bulletin, No. 12.
- Oberlin, Ohio College The Wilson Bulletin, Nos. 45, 46.
- Otago, Museum Annual Report, 1902-3
- Paris, Entomological Society of France Annales, Vol. LXX, LXXI.
Bulletin, 1901, 1902.
- Paris, Natural History Museum Bulletin No. 1-4, 6 1903. Nos. 1-5, 7-8, 1904.
- Paris, Zoological Society of France Bulletin, Tome XXVIII, 1-8.
Mémoires, Vol. XVI.
- Philadelphia, American Philosophical Society Proceedings, Nos. 174, 5, 6.
- Philadelphia, Academy of Sciences Proceedings, Vol. LV, Pts. 2-3. Vol LVI
- Philadelphia, Geographical Society Bulletin, Vol. IV., No. 1.
- Philadelphia, Museum of Science and Art Bulletin, No. 4, 1904
- Philadelphia, University of Pennsylvania Contributions from the Zoological Laboratory, Vol. X,
The Adult Organization of *Paragordius varius*, Leidy.
2nd Report.
- Pietermaritzburg, Geological Survey
Pittsburg, Carnegie Museum Annual Report, 1903.
Annals, Vol. II, Pts. 2, 3, 4.
Founder's Day, 1903.
Memoirs, Vol. I., No. 4; Vol. II., No. I.
7 Pamphlets on Paleontology by J. B. Hatcher.
Prize Essay Contest, 1903.

Donors.	Donations.
Plymouth, Marine Biological Association	Journal, Vol. IV., No. 4; Vol. VII., No. 1.
Plymouth, Museum and Art Gallery	5th Annual Report.
San Francisco, Californian Academy of Sciences	Proceedings, Vol. I., pts. 1-12; Vol. II., pt. 1-2; Vol. III., pts. 1-6
Santiago, National Museum	Anales, 1903.
Stettin, Entomological Society	Zeitung, Vol. 65, Hft 1 & 2.
Stockholm, Entomological Society	Entomologist Tidskrift, Vol. XXIV., Nos. 1-4.
St. Petersburg, Zoological Museum	Annuaire, Vol. VIII., No. 2 and 4.
Sydney, Australian Museum	Report, 1902.
Sydney, Department of Mines	Memoirs, Vol. IV., Pt. 7 & 8.
Sydney, Linnean Society	Records Vol V, pts. 2 & 3.
Tokio, Zoological Society of Japan	Proceedings, Vol. XXVII, pt. 4; Vol. XXVIII pt. 3.
Trevandrum, Museum	Annotationes, Vol. V, pts. 1 and 2.
Turin, Museum of Zoology and Comparative Anatomy	Report 1903-'04.
Tufts, College Mass., U.S.A.	Bolletino, Vol XVIII.
Turin, Royal Academy of Sciences	Studies, Scientific Series, No. 8.
Upsala, University	Atti XXXIX, N. 8-15.
Valparaiso, Museum	Results of the Swedish Zoological Expedition to Egypt and the White Nile, 1901.
Vienna, Imp. Roy. Natural History Museum	Revista Chilena, Vol. VII., No. 3-4; Vol. VIII., No. 2-3.
Vienna, Imp. Roy. Zoological and Botanical Society	Carcinologia Chilena, by D. S. Porter.
Washington, Academy of Sciences	Algunos Conocefalinas Sud Americanas, by I. Bolivar.
Washington, Smithsonian Institution	Jabresberichts, 1902.
Washington, U.S. National Museum	Verhandlungen, Vol. LIII., pts. 1-10.
	Proceedings, Vol. V., pp. 231-429; Vol. VI., pp. 1-202.
	Annual Report, 1901-2, 1902-3.
	North American Fauna, No. 2-3.
	American Hydroids, Part III, by C. C. Nutting.
	List of generic terms proposed for Birds during the years 1890-1900 by C. W. Richmond.
	Report 1901.
	Proceedings, Vol. XXVII.
Beauge, J. B. V. du	Contribution à la faune des quatre Iles du Golfe de Guinée, by the donor.
Cohen, E.	Four pamphlets on meteorites.
Fletcher, L.	Three pamphlets on meteorites.
Gilchrist, Dr. J. D.	Matériaux pour la Faune du Congo, Vol. II., fas. 1.
Hetschko, Prof.	Wiener Entomologischer Zeitung, Vol. XXIII, No. 1-4.
Hutton, Capt. F. W.	Index Fauna Novae Zealandiae by F. W. Hutton.
Janet, C.	Four pamphlets on Ants and other insects.
Peckham, G.	New species of the family Attidae from South Africa, by G. and E. Peckham.
Purcell, Dr. W. F.	Catalogue of Land and Freshwater Shells of the Hawaiian Islands by D. D. Baldwin.
Sclater W. L.	Descrizione preliminare di due nuove specie di Koenenia by F. Silvestri.
	Bulletin, British Ornithological Club, Nos. 102-9.
	On the discovery of an Implement deposit in the neighbourhood of Johannesburg by J. P. Johnson.
	Saldanha Bay and its Bird Islands by W. L. Sclater.
	A new Mongoose from Namaqualand by O. Thomas.
Seeley, H. G.	Three pamphlets on Fossil Reptiles.
Shortridge, G. C.	On a Collection of Birds from the neighbourhood of Port St. John's, Pondoland, by G. C. Shortridge.
Souef, D. le	Collection of Australian Birds Eggs and Nests by D. le Souef.
Thomas, Oldfield	Three pamphlets on African Mammals.
Ward, H. A. D.	The Willamette Meteorite by H. A. Ward.
Weber, Dr. Max	Die Säugetiere.
Wilman, Miss	Minerals of New South Wales by A. Liversidge.
Wilson, J. T. & Martin C. J.	Researches on the solid carbon compounds in Meteorites by L. J. Smith
	Further observations upon the anatomy of the integumentary structures in the muzzle of Ornithorhynchus.

(b) BY PURCHASE.

- André, E., Species des Hyménoptères. Fas. 85-87.
- Berwerth, F., Der Meteorische Enkrit von Peramiho.
- Chun, Ch., Wissenschaftliche Ergebnisse der Deutschen Tiefsee Expedition auf dem Dampfer *Valdavia*, 1898-89, Vol. II., pt 7. Vol. VII., pt. 1.
- Davis, J. R. A., The Natural History of Animals, Vols. 1-7.
- Distant, W. L., Insecta Transvaaliensia. Pt. 4-5.
- The Fauna of British India: Rhynchota Vol. II., pts. 1-2.
- Dove, Dr. Karl, Ergebnisse einer wissenschaftlichen Reise in Südlicher Damaralande.
- Dresser, H., A Manual of Palaearctic Birds.
- Fernald, M. E., A Catalogue of the Coccidae of the World.

- Green, E. E., The Coccidae of Ceylon, pt. 3.
 Godman, F., The Natural History of the Azores or Western Islands.
 Henkel, C. C., The Native or Transkeian Territories.
 Henslow, G., South African Flowering Plants for the use of beginners.
 Huet, M., Note sur une espèce nouvelle de Chrysochlore.
 Hutton & Drummond, The Animals of New Zealand.
 Johnson, H., British Mammals.
 Kerremans, Ch., Monographie des Buprestides, Vol. 1, Livr. 1.
 Labille, F., Las Ballenas de Nuestros Mares.
 Meyer, Dr. R. B., Neuer Einrichtungen des Königlichen Zoologischen Museum in Dresden.
 Playfair, H., The Fishes of Zanzibar.
 Reichenow, Ant., Die Vögel Afrikas, Vol. III, Pt. 1.
 Renshaw, J., Natural History Essays.
 Rochebrune, A., Faune de la Senégambie, Mammifères.
 Thorburn, Lieut-Col. W. S., A guide to the History and Valuation of the coins of Great Britain and Ireland.
 Trouessart, E., Catalogus Mammalium, Supl. 1903. Supl. 1904 Fas 1.
 Verrill, G., Some birds and eggs collected by Mr. G. Comer at Gough Island, etc.
 Wattenwyl, C. B. von, 4 Pamphlets on Orthoptera.
 Observations on the colour of Insects.
 Wytsman, P., Genera Insectorum, Fasc 14b, 17b, c, d, 18c, 19c.
 Genera Avium, pt. 1.
 Avicultural Magazine, Vol. II, No. 3. Vol. III, No. 1 & 2.
 Bulletin de la Société Nationale d'acclimatation de France, March, 1904.
 Cambridge Natural History, Vol. VII.
 Das Tierreich, Lief 20.
 Entomologische Literaturblätter No. 1—11, 1904.
 Entomologist, No. 488-499.
 Entomologist Monthly Magazine, Nos. 476—487.
 Journal of the Anthropological Institute, Vol. XI, Nos. 1 & 2.
 Journal für Ornithologie, Vol. LII, pts. 1—4. Vol. XLIII, pt. 1.
 Loudon's Magazine of Natural History, Vol. 1, 1834.
 Museums Journal, Vol. III, No. 6-12.—Vol. IV, No. 1-5.
 Naturae Novitates, No. 24, 1903, No. 1-23, 1904.
 Nature, Nos. 1781—1787, 1795—1832.
 Palaeontologia Universalis, Ser. 1, Fas 2.
 Wiener Entomologische Zeitung, Vol. XXII, Heft VII—X.
 Zoological Record, 1902.
 Zoologist, No. 750-761.

9.—LIST OF INSTITUTIONS TO WHICH COPIES OF THE ANNALS HAVE BEEN SENT: FROM THOSE MARKED WITH AN ASTERISK SIMILAR PUBLICATIONS HAVE BEEN RECEIVED IN EXCHANGE.

(a) EUROPE.

- *1. The Cambridge Philosophical Society.
- *2. The Royal Dublin Society.
3. The Liverpool Public Museum.
- *4. The Royal Society.
5. The Linnaean Society.
- *6. The Zoological Society of London.
7. The Zoological Record.
8. The British Museum (Natural History).
- *9. The Manchester Literary and Philosophical Society.
- *10. The Owens College Museum, Manchester.
- *11. The Plymouth Marine Biological Station.
- *12. The Tring Museum.
- *13. The Museums Association, Sheffield.
14. The Natural History Society, Newcastle-on-Tyne.
- *15. The Imperial and Royal Natural History Museum, Vienna.
16. The Vienna Entomological Journal.
17. The Zoological-Botanical Society of Vienna.
- *18. The National Hungarian Museum, Budapest.
- *19. The Royal Museum of Natural History, Brussels.
20. The Museum of the Congo, Brussels.
21. The Royal Malacological Society, Brussels.
- *22. The Entomological Society of Belgium.
- *23. The Zoological Society of France.
- *24. The Entomological Society of France.
- *25. The Museum of Natural History of Paris.
- *26. The Museum of Natural History, Marseilles.
- *27. The Oceanographic Museum, Monaco.
28. The Royal Museum of Natural History, Berlin.
29. The Society of the Friends of Natural History, Berlin.
- *30. The Entomological Union of Berlin.
- *31. The German Entomological Society, Berlin.
32. The Senckenberg Museum, Frankfurt a.M.
33. The New Zoological Society, Frankfurt a.M.
- *34. The Natural History Society, Freiburg i.B.
35. The Upper Hessian Society of Natural History and Medicine, Giessen.

- °36. The Natural History Museum, Hamburg.
- °37. The Natural History Museum, Lubeck.
- °38. The Entomological Club, Stettin.
- °39. The Royal Museum of Natural History, Leyden.
- °40. Messrs. E. J. Brill and Co., Leyden.
- °41. The Civic Museum of Natural History, Genoa.
- °42. The Royal Museum of Natural History, Florence.
- °43. The Natural History Museum, Milan.
- °44. The Royal Museum of Zoology and Anatomy, Turin.
- °45. The Zoological Museum, Naples.
- °46. The Royal Spanish Society of Natural History.
- °47. The Zoological Museum, St. Petersburg.
- °48. The Entomological Society of Russia, St. Petersburg.
- °49. The Imperial Society of Naturalists, Moscow.
- °50. The Concilium Bibliographicum, Zurich.
- °51. The Museum of Natural History, Geneva.
- °52. The Royal Academy of Sciences, Stockholm.
- °53. The Royal Museum of Natural History, Stockholm.
- °54. The Entomological Society of Stockholm.
- °55. The Library of the Royal Museum of Upsala.
- °56. The Natural History Museum, Bergen.
- °57. The Royal Academy of Sciences, Lisbon.

(b) ASIA.

- °58. The Colombo Museum.
- °59. The Indian Museum, Calcutta.
- °60. The Asiatic Society of Bengal.
- °61. The Geological Survey of India.
- °62. The Government Central Museum, Madras.
- °63. The Zoological Society of Japan.
- °64. The Botanical Institute, Buitenzorg, Java.
- °65. The Royal Natural History Society, Batavia.

(c) AFRICA.

- °66. The Albany Museum, Graham's Town.
- °67. The Port Elizabeth Museum.
- °68. The King William's Town, Museum.
- °69. The Cape Town Public Library.
- °70. The Parliamentary Library, Cape Town.
- °71. The South African Philosophical Society.
- °72. The Government Entomologist, Cape Town.
- °73. The Public Library, Kimberley.
- °74. The Durban Museum.
- °75. The Durban Public Library.
- °76. The Natal Museum, Pietermaritzburg.
- °77. The Orange River Colony Museum, Bloemfontein.
- °78. The Government Library, Bloemfontein.
- °79. The Rhodesia Museum.
- °80. The Rhodesia Scientific Association.
- °81. The Public Library, Bulawayo.
- °82. The Museum, Pretoria, Transvaal.
- °83. The Geological Survey of the Transvaal, Pretoria.
- °84. The Welcome Research Laboratories, Gordon College, Khartoum.

(d) AMERICA.

- *85. The National Museum, Buenos Ayres.
- °86. The Museum of La Plata.
- °87. The National Museum of Rio de Janeiro, Brazil.
- °88. The Para Museum, Brazil.
- °89. The Sao Paulo Museum, Brazil.
- °90. The Nova Scotia Institute of Science.
- °91. The National Museum of Chili, Santiago.
- °92. The Museum of Natural History, Valparaiso.
- °93. The Boston Society of Natural History.
- °94. The Museum of Comparative Zoology, Cambridge, Mass.
- °95. The Field-Columbian Museum, Chicago, Ill.
- °96. The Milwaukee Public Museum.
- *97. The American Museum of Natural History, New York.
- °98. The New York Zoological Park.
- °99. The American Geographical Society, New York.
- °100. The Academy of Natural Sciences, Philadelphia.
- °101. The American Philosophical Society, Philadelphia.
- °102. The Californian Academy of Science.
- °103. The University of California, Berkeley, Cal.
- *104. The Carnegie Museum, Pittsburgh.
- °105. The Smithsonian Institution.
- °106. The United States National Museum.
- °107. The United States Department of Agriculture.
- °108. The Washington Academy of Natural Sciences.
- °109. The National Museum of Natural Sciences, Uruguay.

(c) AUSTRALASIA.

- 110. The Australian Museum, Sydney.
- 111. The Linnean Society of New South Wales.
- 112. The Geological Survey of New South Wales
- 113. The Queensland Museum, Brisbane.
- 114. The Bernice-Pauahi-Bishop Museum, Honolulu.
- 115. The Royal Society of South Australia.
- 116. The Public Museum of South Australia.
- 117. The Royal Society of Victoria.
- 118. The National Museum, Melbourne.

STATEMENT OF THE INCOME AND EXPENDITURE OF THE SOUTH AFRICAN MUSEUM FOR THE YEAR ENDED 30TH JUNE, 1904.

To Balance from last year	£575 6 10		By General Museum Expenditure :—		
Less Investment of Hajee Sullaiman Shah			Salaries	£2,460 0 0	
Mohomed's Donation	100 0 0		Christmas boxes to Attendants	17 10 0	
		£475 6 10	Temporary Assistance	93 8 6	
" Ordinary Government Grant		3,950 0 0	Purchase of Taxidermist and other Stores	123 17 5	
" Government Grant in aid of publication of Annals	70 0 9		.. Books, Maps etc.	84 17 11	
" Proceeds of Sale of Annals	8 5 7		.. Specimens	114 4 8	
		78 5 7	.. Cabinets	41 10 0	
" Miscellaneous Receipts		11 3 6	.. Glass Jars	39 6 0	
" Interest received on Hadji S. Mohammed fund to			Uniforms for Attendants	17 19 11	
30th June, 1903, vide Annexure "B".		8 13 4	Labelling	73 1 1	
			Part Cost of "Tristan" expenditure	19 19 6	
			Installation of permanent fixtures, carpenters'		
			work etc.	80 18 6	
			Freight and clearing	13 16 8	
			Cleaning Museum	4 16 0	
			Insurance	31 10 0	
			Rent of Telephone & P. O. Box	12 10 0	
			Travelling Expenses	3 6 8	
			Postage	18 13 10	
			Washing and Petty Items	21 19 2	
			Fee of Audit Office Examiner	3 3 0	
			Bank Charges	4 1 9	
					3,298 10 7
			" Share of expenditure on Publication of Annals		
			vide Annexure "A"		185 17 1
			" Balance 30th June, 1903 :—		
			Cash in Bank, Ordinary account	19 19 6	
			" Hadji S. Mohammed		
			special a/c.	8 13 4	
					28 12 10
			Petty Cash in hand	10 2 1	
			Advances Outstanding :—		
			Tring Museum	£20 0 0	
			Geological Commission	41 1 8	
			Public Works Department	39 0 0	
			T. Williams	20 0 0	
					109 6 8
					148 1 7
					£3,623 9 3
		£3,623 9 3			£3,623 9 3

Audited and found satisfactory,
WALTER E. GURNEY, Controller and Auditor-General
 12th August, 1904.

W. L. SCLATER,
 Director, South African Museum.
 11th August, 1904.

ANNEXURE "A."

DETAILS OF EXPENDITURE ON PUBLICATION OF ANNUALS DURING THE YEAR ENDED 30th 1904.

	£	s.	d.	£	s.	d.
Printing of Vol. III., parts 4-5 (98 pp., five plates and four text figures)				61	4	1
°Printing of Vol. IV., parts 1-5 (236 pp., nineteen plates and ten text figures)				318	19	0
Preparing Plates for a Memoir by Mr. Perringuey; not yet published				5	0	10
				<hr/>		
Total amount expended in publication of Annals in 1903-4 :—				385	3	11
Of which the Geological Commission paid in England direct	94	10	6			
Repaid by Geological Commission to South African Museum on account	63	14	8			
Advance to Geological Commission still outstanding	41	1	8			
				<hr/>		
				199	6	10
Leaving as cost to South African Museum				<hr/>		
				£185	17	1

°The Cost of printing and publication of Vol. IV. is shared by the South African Museum and the Geological Commission—the former paying 3 8ths, and the latter 5 8ths, i.e., £119 12s. 2d. and £199 6s. 10d. respectively.

ANNEXURE "B."

HAJEE SULLAIMAN SHAH MOHAMED FUND FOR PURCHASE OF COINS.

Sum invested with South African Association	100	0	0
Received for interest to 30th June, 1903, forming part of Bank Balance at 30th June, 1903	8	13	4
	<hr/>		
	£108	13	4

NOTE. - A further sum £8 13s. 4d. was due for interest on this investment to 30th June, 1904.

THE LIBRARY OF THE
FEB 5 - 1940
UNIVERSITY OF ILLINOIS

CAPE OF GOOD HOPE.

COLONIAL SECRETARY'S MINISTERIAL DIVISION.

REPORT

THE LIBRARY OF THE
FEB 5 - 1940
UNIVERSITY OF ILLINOIS

OF THE

SOUTH AFRICAN MUSEUM

FOR THE

YEAR ENDING 31st DECEMBER, 1905.

Presented to both Houses of Parliament by Command of His Excellency the Governor
1906.

CAPE TOWN:

CAPE TIMES, LIMITED, GOVERNMENT PRINTERS, KEEROM STREET.

1906.

[G. 53—1906.]
£27-17-0

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TRUSTEES OF THE SOUTH AFRICAN MUSEUM.

The Hon. JOHN XAVIER MERRIMAN, M.L.A.

Sir DAVID GILL, K.C.B., LL.D., D.Sc., F.R.S., Hon. F.R.S.E.,
His Majesty's Astronomer at the Cape.

THOMAS MUIR, C.M.G., M.A., LL.D., F.R.S.E.,
Superintendent-General of Education.

STAFF OF THE MUSEUM.

Director : WILLIAM LUTLEY SCLATER, M.A.

Assistant Director : LOUIS ALBERT PERINGUEY.

Hon. Keeper of the Land Invertebrates (except Insects) : WILLIAM FREDERICK PURCELL,
B.A., Ph.D.

Keeper of Marine Invertebrates and Fishes : JOHN DOW FISHER GILCHRIST,
M.A., Ph.D., B.Sc.

Hon. Keeper of the Geological Department : ARTHUR WILLIAM ROGERS, M.A.

Hon. Keeper of the Vertebrate Palaeontological Department : ROBERT BROOM, M.D., D.Sc.

Hon. Keeper of the Herbarium : H. H. W. PEARSON, M.A.

Assistant in the Geological Department : Miss M. WILMAN.

Assistant in the Herbarium : Miss S. TRELEAVEN

Librarian : ROBERT MARK LIGHTFOOT.

CAPE OF GOOD HOPE.

Report of the South African Museum for the Year ended 31st December, 1905.

Presented to both Houses of Parliament by Command of His Excellency the Governor
1906.

REPORT OF THE TRUSTEES, 1906.

Perhaps the most important event in the history of the Museum during the year was the transference of the Cape Government Herbarium to the charge of the Trustees. This collection had its origin in the historic collection of Cape Plants made by C. L. Zeyher, and was afterwards acquired by Dr. Ludwig Pappe, one of the early Trustees of the South African Museum. After the death of Dr. Pappe in 1862 the collection was purchased by the Government. For many years it remained in a very neglected condition. In 1881 Professor MacOwan was placed in charge, and he held the Curatorship, together with the office of Government Botanist, from 1892. Under Professor MacOwan's fostering care the Herbarium increased rapidly, and the collection now numbers about 44,000 sheets deposited in 62 Kew cabinets. Professor MacOwan retired on pension on June 30th of this year, and as there appeared to be no intention on the part of the Government to appoint a successor, the Trustees offered to take charge of the Herbarium. The offer was accepted, the services of Miss S. Treleaven, who had been Professor MacOwan's assistant for the past ten years, being also given to the Trustees. In order to direct the policy of the new department the Trustees invited Professor Pearson of the South African College to become Honorary Keeper. This position was accepted by him, and he will in future be responsible for the general management of the new department.

The increasing importance of the collections of fossil reptiles from the Karroo beds of the Colony, and the special interest taken in the collections by Professor Robert Broom, of the Victoria College, has induced the Trustees to ask that gentleman to associate himself more closely with the Museum, and they are glad to state that Professor Broom has accepted the position of Honorary Keeper of the Vertebrate Palæontological Collections.

During the year Dr. W. F. Purcell asked to be relieved of his regular duties in the Museum, but intimated that, should the Trustees assent to the arrangement, he would gladly keep up his connection with the institution, and continue to take charge of those groups of the Invertebrates which had hitherto occupied his attention. While deeply regretting Dr. Purcell's decision to sever his regular connection with the Museum, the Trustees were glad to accede to his request, and have appointed him Honorary Keeper of the Land Invertebrates.

The financial statement, which deals with the financial year, July, 1904, to June, 1905, shows a closing balance of about £125, as against £148 at the commencement of the year, which, in view of all the circumstances of the time, is not unsatisfactory.

REPORT OF THE DIRECTOR.

The Trustees of the South African Museum.

SIRS,—I have the honour to lay before you a Report on the general organization of the Museum during the year.

1. *State of the Collections and Buildings*

The general state of the Collections continues to be satisfactory; but little trouble has been caused by the presence of insect pests during the past year, except in the taxidermist preparing room, where it is difficult to keep specimens free from them during the mounting and drying processes.

Of the £500 voted on the Estimates for the provision of new cases, for the room lately occupied by the Marine Biologist, a sum of £250 only was devoted to this purpose. A contract was made with Messrs. Sage and Co. for a wall case and two central free-standing cases of special shape and design to be carried out in cast-iron and plate-glass in a similar style to the other cases in the Museum. I regret to say that on delivery the cases were not found to be satisfactory or at all up to the required standard, and Messrs. Sage recognizing this, have repeated the order. I hope the new cases will arrive in a month or so.

During the year it was found that the Soapstone birds forming part of the Bent Zimbabwe collection were suffering from exposure, and an exhibition case, with glass front, sides and top, and a teak frame, was made locally for their reception.

2. *Additions to the Collections.*

An account of the principal accessions to the Collections is given in the Reports of the Officers in charge of each Department and a complete list of these will be found in the Appendices. The number in each class, together with the corresponding one for the year previous, are given in the following tables:—

	Species new to the		Specimens.	
	1904.	1905.	1904.	1905.
Mammals	8	3	103	89
Birds	33	21	473	306
Birds' Eggs	19	6	239	172
Reptiles and Amphibians	4	3	50	193
Fishes	3	7	39	11
Molluscs.....	0	9	166	110
Insects	554	380	4,163	4,400
Arachnids, etc.	79	24	1,243	478
Crustaceans	3	1	65	44
Geological Specimens	—	—	43	115
Anthropology and Antiquities ..	—	—	96	297
	718	454	6,764	6,215

3. *Visitors.*

The total number of visitors during the year was 79,040, again a slight decrease on the number for the previous year. This is doubtless accounted for by the long-continued and far-reaching depression. Owing to the liberality of the Town Council of Cape Town, the Museum has been open to the public on Sundays, Christmas Day, and Good Friday during the afternoon between the hours of 2 p.m. and 5 p.m. The total number on those 54 days was 12,876, giving an average of 234, whereas the total number for the 311 week days is 66,164, giving an average of 212.

The highest number on a single day was 594 on April 24th (Easter Monday); the lowest 81, on May 27th.

The following table shows the number of visitors during the last seven years:—

1899.	1900.	1901.	1902.	1903.	1904.	1905.
88,571	69,169	59,901	89,801	86,516	82,656	79,040

4. *Museum Staff.*

There have been several changes in the Museum Staff during the past year.

At the end of June, Professor P. MacOwan, the Government Botanist who had had charge of the Cape Government Herbarium for the last 14 years, retired on pension. Pending the appointment of a successor the Secretary for Agriculture decided to hand over the charge of the Herbarium to the Trustees. Miss Treleaven, the Herbarium Assistant, became therefore a member of the Museum Staff. Furthermore in order to direct the general policy of the Herbarium the Trustees asked Professor H. H. W. Pearson, of the South African College, to accept the post of Honorary Keeper of the Herbarium.

At the end of June Dr. Purcell who had occupied the post of First Assistant since 1896 asked to be relieved of his regular duties in the Museum, but intimated that he would be glad to keep up his connection with the Museum if the Trustees would appoint him to the Honorary Keepership of the groups of animals of which he formerly took charge. To this arrangement the Trustees gladly gave their consent.

Finally recognising the excellent work done by Professor R. Broom in Vertebrate Palæontology and that the great improvement in the Museum collections in this group are almost entirely due to his untiring energy and devotion, the Trustees invited him to accept the post of Honorary Keeper of a new department of Vertebrate Palæontology.

The Staff of the Museum has therefore been increased by the addition of Professor Pearson, Professor Broom, and Miss Treleaven.

Two names have been added during the year to the list of our correspondents. Mr. Alfred Brown, of Aliwal North, who has a large and valuable private collection of Reptilian and other fossils, and who has contributed very materially to our collections, and Professor Duerden, recently appointed Professor of Zoology at the new Rhodes University College, at Grahamstown, and Curator of the Zoological Department of the Albany Museum.

Annals of the Museum.

Four parts of the Annals containing 272 pages and illustrated by two plates have been published and distributed during the year.

The following are the contents:—

Vol. III., Part 6.—Sixth Contribution to the South African Coleopterous Fauna, with Plate XIII. By L. Péringuey, Assistant Director.

Vol. III., Part 7.—Description of a New Fish of the Genus *Paretilapia*, from the Upper Zambesi, with Plate XIV. By G. A. Boulenger, F.R.S.

Vol. III., Part 8.—Check List of the Birds of South Africa, containing additions and corrections since the issue of the successive volumes of the Birds in the Fauna of South Africa Series. By W. L. Sclater, M.A., F.L.S., Director of the South African Museum.

Vol. III., Part 9.—The Moths of South Africa, Part III. By Sir G. F. Hampson, Bart., M.A., F.L.S.

This last part will conclude volume III., for which the usual title page and index is now in the press. For volume IV. two more parts are arranged, in conjunction with the Geological Survey, by Messrs. F. L. Kitchen, on the Mollusca of the Uitenhage beds, and H. Woods, on the Mollusca of the Pondoland beds.

This will finish Volume IV. A new volume will open with the late Professor Cohen's memoir on the St. Mark's Meteorite, now ready for distribution, while we have papers by Mr. P. Cameron on certain families of South African Hymenoptera, and Professor Broom on *Erythrosuchus Africanus*, a new Phytosaurian Reptile, in the press, which will be published during the current year.

The Library.

The Library has continued to grow very rapidly, more so even than during the year previous, as can be seen by the table given below.

Five new institutions have asked us to exchange publications, and have been added to our list. These are—the Geological Society in London, the Royal Academy of the Linei in Rome, the Natural History Department of the Imperial Museum in Tokio, the Bureau of Government Laboratories in Manilla, and the Princeton University in New Jersey.

The following table gives a summary of the additions to the Library during the half-year, together with the corresponding figures for the previous year. A complete list of these will be found on the Appendix No. 10.

	Purchased.		Presented or received in exchange.		Total.	
	1904.	1905.	1904.	1905.	1904.	1905.
Separate Volumes ...	38	44	14	16	52	60
Pamphlets... ..	9	51	54	36	63	87
Serial Numbers	138	256	437	509	575	768
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	185	351	505	561	690	915

W. L. SCLATER,

Director.

DEPARTMENTAL REPORTS.

1. REPORT ON THE DEPARTMENT OF VERTEBRATES.

The Trustees of the South African Museum.

SIRS,—I have the honour to report on the work on which I have been engaged during the past year in connection with the development of this department.

Apart from the usual work of registering, naming and incorporating the accessions which occupies a good proportion of my time, I have continued the work of overhauling and renovating the exhibited collection of South African Birds. The Picarian birds, the Birds of Prey, the Owls, Pigeons, and Game birds have now been completed. Fresh labels, new stands, and where desirable fresh specimens of the birds themselves have been substituted, a considerable number of additional specimens added, so that the cases now present a vastly improved appearance.

I regret to say that the accessions again show a slight falling off, as compared with those of the previous year. They number 771, as against 854, while the number of species new to the collection are 40, as compared with 67.

It is to be expected, however, as years go by this will occur; the novelties it is possible to acquire, especially among birds and mammals, decreases year by year as our collection become more and more complete, and now it is hardly possible for us to obtain any new birds, except from very out of the way parts of South Africa, so perfect are our collections in this particular group.

The special thanks of the Trustees must be accorded to the following donors for their contributions during the year:—

The Durban Museum for an example of a very rare Night Heron (*Nycticorax leuconotus*). So far as I am aware it has only been twice procured in South Africa, on the Kleinmont River in the Bathurst division of Cape Colony, by Messrs. Atherstone and Barber, and on the Hex River, in the Rustenburg district of the Transvaal, by Mr. Lucas. Mr. Queckett had a mounted specimen and a skin in the Durban Museum, from the neighbourhood of Durban, and most kindly presented the latter example to our Museum.

Messrs. R. Irwin and Co., of Cape Town, for a large Butterfly Ray, apparently referable to the American species *Pteroplatea macrura*. The genus has not hitherto been recorded from South African waters, and the form is entirely new to our collections. It has been mounted for exhibition, and is now on view in the Fish Case.

Dr. A. H. Kirkman for an example of a rare and little known antelope (*Raphicercus sharpei*), allied to the Grysbok and Steenbok; it resembles the former in colouration, and the presence of white hairs intermixed among the darker brown ones, the latter in being without the little false hoofs on the hind legs found in the Grysbok. It was first met with by Sir A. Sharpe, the Administrator of Nyassaland, in the Angoni country, but apparently its range extends southward to the Zambesi, and probably into Southern Rhodesia. Dr. Kirk-

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man shot the present specimen about 50 miles from the Falls, some little distance from the north bank of the Zambesi.

To Dr. Kirkman we are also indebted for an example of Allen's Reed Hen (*Porphyrio alleni*), only once previously obtained south of the Vaal River. This bird was shot by Dr. Kirkman at Verkeerde Vlei, near Touws River.

Messrs. G. H. K. Marshall and R. H. Thomas for collections of Reptiles from the neighbourhood of Salisbury, containing a number of interesting species, and some new to the Museum.

Major Sparrow, of the 7th Dragoon Guards, for a further consignment of 138 birds eggs, chiefly collected by himself in the Orange River Colony and Natal; there were examples of six species new to the Museum among them.

Mr. C. E. Stewart for a fine pair of Gemsbok from the Vryburg district, unfortunately the skin of the male was not properly prepared, and could not be mounted, but the female is now mounted for exhibition.

Dr. F. E. Stoehr, of the Geodetic Survey, now in North-east Rhodesia, for a large additional collection of Birdskins from the Zambesi valley, and various parts to the northwards, along the route taken by the Survey. The number of skins sent this year amounts to 210, and among these were examples of nineteen species quite new to our collection, and many of them exceedingly rare and valuable. Altogether Dr. Stoehr has sent us in the last three years 455 bird skins, representing species of which 39 are novelties. I am preparing with the help of Dr. Stoehr's notes, which he has kindly sent me, a complete account of his collections, which will, I hope, shortly be published in the Journal of the South African Ornithological Union.

Lieut. W. Tomkinson, R.N., of H.M.S. Crescent, for a large example of the Red Steenbres (*Pagrus laticeps*), which weighed when caught 85 lbs., and which was caught by him with a line, from H.M.S. Crescent when at anchor in Simon's Bay.

His Grace the Duke of Westminster for the skins, skulls and horns of several large Antelopes, including 3 Roan, 2 Waterbuck, 2 Reedbuck, 1 Kudu, and 2 Oribi, all obtained by himself and his party during a fortnight's shooting in the Lomagunde district of Mashonaland.

Other donors of valuable material are Messrs. A. K. Haagner, J. B. Lindley, H. Kotze, A. Moorhouse, and A. Lévy-Strauss.

Among the purchases made during the year the most important is perhaps that of a Hippopotamus, which has not been represented in our collection by a mounted specimen since the removal of the Berg River animal, which used to stand in the middle of the old Museum. Unfortunately the specimen which I obtained from a Mr. Bolle in Portuguese East Africa turned out to be a young individual, and a good adult male and a skeleton for mounting are still desiderata.

An additional large shark, a female (*Carcharodon rondeletti*), was purchased from fishermen who caught it in Table Bay, and is now mounted and exhibited beside the male acquired during the previous year. While among the birds purchased is a Sunbird (*Nectarinia kilimensis*), not hitherto known from south of Nyasaland, and now procured for the first time in South Africa, in the Melsetter district of Rhodesia.

During the year I made a short excursion to Basutoland, but was

not very successful in making collections. The country was very dry, and both animals and birds very scarce. I was able however to bring back a very good number of anthropological and geological specimens, so my time was by no means wasted.

I have prepared for publication during the year an account of the *Birds* met with during my visit to the Victoria Falls; this has been published in the "Ibis." I have also drawn up a "Check list of the *Birds* of South Africa, containing additions and corrections since the issue of the successive volumes of the *Birds* in the Fauna of South Africa Series." By this the number of species found in Africa south of the Zambesi has been revised from 814 to 868. This list is published in the Annals of the South African Museum.

In anticipation of the visit of the British Association, it was determined by the South African Association for the Advancement of Science to prepare a volume containing an account of the development and present state of our knowledge in various departments of Science. For this work I prepared an account of the "Land Vertebrates of South Africa," which formed a chapter of "Science in South Africa."

Mr. Drury has continued to perform his duties as Taxidermist in an exceedingly satisfactory manner. He has mounted for exhibition during the year eight Mammals, including a Hippopotamus, a Gemsbok, a Delalande's Fox, and a Grys-Steenbok, and has set up for exhibition the skeletons of an Aardvark and a Cape Sea-Lion. For the exhibited collection of birds he has mounted 72 skins, and cleaned and renovated 123 old stuffed specimens. A shark (*Carcarodon*), a Butterfly Ray (*Petroplatea*), a Red Steenbras, and four other smaller Fish have also been set up for exhibition. In addition to these, 13 smaller mammals and 53 Birds have been skinned and preserved for the study collections.

W. L. SCLATER,

Director.

2. REPORT OF THE DEPARTMENT OF ENTOMOLOGY.

To the Director of the South African Museum.

SIR,—I have the honour to submit the Report of my Department for the year 1905.

The accessions to the Entomological Collection number 4,400 examples, representing 1,757 species, among which are 380 new to the Collection, of these a fair average are also new to science. The annual proportion of these accessions is a normal one. This year, however, there are among them very few that are not of African origin, and the collection of the Ethiopian region has been greatly improved thereby.

All the available time has been devoted to sorting, labelling, grouping and incorporating. Great progress has been made, owing chiefly to the help of Mr. R. M. Lightfoot, whose time for that purpose is unfortunately too limited, in the arrangement in the Cabinets of the *Lepidoptera* from central and western Africa, and also of the *Hemiptera-Homoptera*. The re-arrangement of the *Orthoptera* has been begun; the series of Scarabidous Beetles have been incorporated in accordance with the arrangement followed in my Descriptive Catalogue of the South African *Coleoptera*. A beginning has also been made to sort, and group together the very large number of

duplicates stored at random in the insect boxes, where they are yearly accumulating. Very good progress has been made in this direction, and most of the *Coleoptera* have been brought together. This re-arranging will greatly facilitate exchanges or presentations to other institutions.

The novelties received during the year do not call for special comment, except, perhaps, the discovery of a new Neuropterous insect of the genus *Nematoptera*.

The continuation of the Descriptive Catalogue of the South African Coleptera is not proceeding very fast owing to a superabundance of other work. I have, however, nearly completed the MS of the Cetonidous Beetles; and I have also contributed a "Brief sketch of the South African Insect Fauna," in "Science in South Africa."

The thanks of the Museum Trustees must be accorded to the following Donors for their contributions during the year.

- Mr. J. M. Bain for a collection made by him in the neighbourhood of Darling, C.C., and containing among other rare kinds a new species of the curious Neuropterous genus *Nematoptera*, as well as two new species of the also rare Melolonthidous genus *Glyptoalossa*.
- Dr. Hans Brauns for co-types of newly described South African Bees and Wasps, as well as for some specimens of Karroid Beetles, most of which have been filling gaps or completing series in the Entomological Collection.
- Miss L. de Beer, of Barberton, for some interesting insects from that locality, the thorough investigation of which would well repay the entomologist, it being a place where the Fauna of Rhodesia and Southern Mozambique mingles with that of the Transvaal.
- Mr. T. D. Butler for a miscellaneous collection made in the neighbourhood of Johannesburg.
- Mr. Drury for a small collection made under great disadvantages during a short trip to the Lomagunda District of Southern Rhodesia.
- Mons. L. Fairmaire for a lot of Central African *Coleoptera*, several of which are co-types of species described by him, as well as several South African types.
- Dr. R. Broom for a few interesting Insects from the Karroo.
- Mr. Harold O. Fry for a miscellaneous collection including several examples of the dreaded dipterous fly *Glossina palpalis*, the cause of the "sleeping sickness" in Central Africa.
- Mr. A. J. L. Janse for a lot of *Coleoptera* from Pietersburg, mostly wanted for completing the Museum series, as well as for some insects from the neighbourhood of Pretoria.
- Mr. R. M. Lightfoot for numerous minute moths, which, on account of their dingy appearance, do not attract collectors.
- Mr. G. A. K. Marshall for rare and little known *Coleoptera* from Southern Rhodesia.
- Mr. A. Moorhouse for a collection of *Coleoptera* made in the neighbourhood of Port Elizabeth, which I found most useful for recording the habitat of many species.
- Mr. J. Naughton for a miscellaneous collection made in the Low Country of the Transvaal, a locality the entomological fauna of which is gradually getting better known.
- Dr. C. Nodier for a very comprehensive collection of *Coleoptera* from the upper reaches of the Senegal River, bringing testimony to the very close relation of that fauna with that of the

North Eastern part of the South African area, especially in the families *Carabidæ*, *Dytiscidæ*, etc. The usefulness of such a collection to the investigator of the South African entomological fauna is very great.

Rev. J. A. O'Neil, S.J., for numerous co-types of species described by Herr Jacoby and Mr. P. Cameron, as well as several new species of *Coleoptera*, and others poorly represented in the Collection.

Miss M. Pegler for Insects of different groups collected by her at Kentani, in the Transkei.

Dr. W. F. Purcell for numerous Insects of miscellaneous families collected by him in the Transvaal, Natal and Cape Colony.

Mr. Richardson for a small collection made in the neighbourhood of Matjesfontein, and containing rare and interesting species.

Mr. P. A. Sheppard for a collection of *Coleoptera*, *Hymenoptera* and *Orthoptera*, made in the neighbourhood of Beira, and also further north. The Beiran fauna approximates so much that of East and Central Africa that it should be separated from the true South African one. I have arrived at this conclusion, through the examination of the Insects collected by Mr. Sheppard.

Dr. Stoehr of the Geodetic Survey for some interesting Insects collected by him mostly at Feira, north of the Zambesi.

Miss M. Wilman for some examples, several of them very interesting, collected by her near Beaufort West, and,

Lastly, sundry persons for single specimens.

I have added a fair quota to the list of additions.

L. PERINGUEY.

3. **REPORT ON THE DEPARTMENT OF LAND AND FRESH WATER INVERTEBRATES (EXCLUSIVE OF INSECTS AND MOLLUSCS).**

To the Director of the South African Museum.

SIR,—I have the honour to present to you my report on the work done in my Department during the year 1905.

The new South African Spiders of the family *Drassidæ* have been investigated and described during the year, and it may be remarked that although the Collection contains many species of this family, nearly every one of them proved to be new to science.

Amongst the more interesting donations may be mentioned that of Mr. Berrangé, with a new Scorpion from Nelspoort, of Dr. Broom with a new *Ceroma* from Prince Albert, of Mr. A. L. Du Toit with a new *Blossia* from Bechuanaland, of Mr. Sykes with a new Scorpion from Zambesi, etc.

A large collection of Arachnids was made by myself during the latter part of the year in the eastern parts of South Africa, but with the exception of the Scorpions, it was found impossible to include these in this year's Report.

W. F. PURCELL.

4. REPORT ON THE DEPARTMENT OF MARINE INVERTEBRATES AND FISHES.

To the Director of the South African Museum.

SIR,—I have the honour to submit my report on the Department under my charge.

A list of specimens of the described or identified species and genera, which, according to agreement, have been handed in for the General Collection is appended.

It would be desirable that provision for the storing and exhibition of typical specimens in the Museum Buildings proper be provided.

The chief feature of the work in the Marine Institution this year has been the working out of an extensive collection of Tectibranchs and Nudibranchs. Specimens have been sent to Professor Bergh, of Copenhagen, and he has drawn up a report on the material. The collection includes several interesting new genera and species, and duplicates are available for Museum purposes.

The working out of the fossil remains in a series of deep sea deposits has been undertaken by Dr. Broom, who has found evidence of important geological data in the collection.

A collection of microscopic preparations of South African sponges has been received, and, being from the type, will prove useful for identification. They include *Lithabractum forte* (co-type, oscular region), ditto (poral region), *Stetilla harrens* (type), *Pachastrella isarrhapa*, *Discoderma natalensis* (type), *Pachastrella calciculala* (type), *Tetilla bonaventura* (type), *Spongocardium gilchristi* (type), *Crateromarpa lankesteri* (type), *Rhabdocalyptus lophodigitatus* (co-type), *R. plumodigitatus* (type), *Kalastrella vasiformis*, *Letrunculia natalensis* (type), *Placospongia labyrinthica* (type), *Fethya magna* (type), *Cappatias braculifer* (type), *Kalastrella vasiformis* (co-type), *Fragosia infundibuliformis* var. *natalensis*, *Thakellia microphara* (type), *Hymeniacidon calciculatum* (type), *Trachya nuda* (type), *Microscleroderma hirsutum* (type), *Triptolemus incertus*, *Monanthus plumosus*.

J. D. F. GILCHRIST.

5. REPORT ON THE DEPARTMENT OF GEOLOGY AND MINERALOGY.

To the Director of the South African Museum.

SIR,—I have the honour to submit a Report on the progress of the Geological Collection, excluding the Vertebrate fossils, during the past year.

Miss Wilman has arranged and set out more crystals than were previously exhibited in the collection, illustrating the forms of minerals. Though the collection is adequate as regards typical specimens, the shape of their case is unsuitable, so that many of the specimens cannot be seen to advantage.

In the South African room a new case has been provided for the fossils from the Sunday's River beds, and fitted provisionally, a great improvement in this collection and in that from the Umzamba beds will be made when the descriptions of the collections sent to England are completed.

The worst illustrated formations are now those older than the

Cape system, but until further accommodation is provided little improvement in this respect can be made, though those older works are of particular interest on account of the great area they occupy in South Africa, and the importance of their mineral contents.

ARTHUR W. ROGERS.

6. REPORT ON THE DEPARTMENT OF VERTEBRATE PALÆONTOLOGY.

To the Director of the South African Museum.

SIR,—I have the honour to submit to you the following Report on the Department under my charge.

During the past year there have been many and important additions made to the collection of fossil vertebrates, and it is very gratifying to be able to report on the interest which is taken in the collections by many who seem anxious to make the South African collection of fossil reptiles worthy of the country. In the past most of the valuable South African specimens were sent to London, and few ever returned; but within recent years a very healthy patriotism has sprung up and become surprisingly general. As a result our South African collection is rapidly becoming a national institution, and it is fully expected that soon it will no longer be necessary for the South African student of palaeontology to regard the British Museum as his Mecca, but rather will it be necessary for European and American students to make pilgrimages to the Cape.

Mr. Alfred Brown, of Aliwal North, has made some most important additions to our collections. The principal of these has been the remains of *Erythrosuchus africanus*, a large reptile somewhat allied to the crocodile, but with large powerful limbs. He has also presented a collection of Cynodont remains, including skulls of *Gomphognathus*, *Diademodon* and *Cynognathus*. Besides his additions to the Museum Mr. Brown has done much to increase our knowledge of the fossils of the Burghersdorp beds. During the year the following new forms have been described, which were collected by him. (1) *Erythrosuchus africanus*; (2) *Howesia Browni*, an interesting new type of reptile allied to *Hyperodapedon* of Elgin and India; (3) *Trirachodon minor*; (4) *Sesamodon Browni*, a new type of Cynodont; (5) *Melinodon simus*, another new type; (6) *Thelegnathus Browni*, a form allied to *Procolophon*. A new fossil fish, *Cœlacanthus africanus*, was also described from Mr. Brown's collection.

Mr. P. H. du Plessis, of Zeekoegat has added a number of very interesting specimens to the collection. The most important of these have been a skull of *Pareiasaurus bairni*, portions of the skull of *Titanosuchus ferox*, portion of skull of *Glanosuchus macrops*, a considerable portion of the skeleton of a new type of reptile named *Pelosuchus priscus*, and skulls of two new Therocephalians, not yet described.

Mr. J. L. Cairncross, of Prince Albert, has during the year made the important discovery of reptilian remains in the Ecca beds, where they had not hitherto been known. One of these (*Archæosuchus cairncrossi*) has been described. This, with the other remains, has been presented to the Museum.

The Rev. Mr. Whaites, of Prince Albert, has discovered and presented to the Museum a number of fossil reptilian remains from

Fraserburg Road. These are important, but have not yet been worked up.

Dr. Long, of Maseru, has presented a collection of Dinosaurian remains. These for the most part probably belong to *Massospondylus* but as yet they have not been critically examined.

Among more recent animals some important discoveries have been made. Near Darling remains of the extinct gigantic Buffalo, *Bubalus baini*, have been discovered, associated with the remains of other large mammals. Among these are portions of the skeleton of a Rhinoceros, probably distinct from *R. bicornis*; fragments of a large fossil horse, considerably larger than the average domestic horse; and fragments of a Hyæna, apparently identical with *Hyæna crocuta* or *spelæa*. There are also remains of the Eland. A deposit of mammalian bones has been discovered near Stanford, which are probably of Pleistocene age. These, when examined, will probably prove of great interest, and it is to be hoped that a special look out will be kept for human bones.

ROBERT BROOM.

7. REPORT ON THE DEPARTMENT OF BOTANY.

To the Director of the South African Museum.

Sir,—I have the honour to make the following report on the condition and work of the herbarium during the second half of the year 1905.

For additions to the collections we are particularly indebted to Mrs. Davidson, whose specimens from the neighbourhood of the Hex River Pass include several new forms, to Professor MacOwan, Miss Pegler, Dr. W. Robertson, Dr. P. L. Slater, and the Director of the Albany Museum.

In addition to the above a large number of plants have been sent in for determination, the majority by the officers of the Agricultural Department. About 230 species of Schlechter's South African (Eastern Region) plants have been poisoned and mounted. The rearrangement and cataloguing of the few books which constitute the library have been undertaken, and are now completed with the exception of the pamphlets. A number of reports on economic plants have been furnished, chiefly to the Agricultural Department.

As was anticipated, the herbarium has suffered severely from the loss of Professor MacOwan's services as Government Botanist. I have been unable to do more than generally direct the work of the department, and advise in cases of difficulty. Practically the whole of the work has fallen upon Miss Treleaven. This is greatly to be regretted, since it is impossible for one person, however well qualified, to maintain the collections in a state of efficiency, and at the same time deal with all the requests for economic and purely scientific information that are constantly submitted, particularly by Departments of the Government service.

I therefore urge that immediate steps be taken to increase the staff and improve the equipment of the department. Our most urgent requirements are:

- (1) An additional assistant, qualified to undertake taxonomic work under direction.
- (2) An increase in the maintenance allowance, to meet expenses incurred in the collection of plants and to provide new cabinets and apparatus.

- (3) A sum of at least £50 should be at once spent upon the Library.

In his last report, referring to the condition of the Library, Professor MacOwan says: "There will now be some pressing necessities which should receive attention at once." These necessities are immediately due to the removal of Professor MacOwan's private collection of books, which constituted the most valuable part of the Library. What is left of it is so deficient in works of reference and devoid of periodical botanical literature that it is now quite inadequate.

A further annual allowance for the purchase of new books as they appear and of periodical literature is also urgently required.

In view of the importance of the agricultural industries in the Colony, it is very desirable that the functions of the herbarium should be extended by the formation of a Museum of economic botany as a department of the South African Museum. At Kew and elsewhere Museums of this type have proved to be a source of interest and instruction highly appreciated by the public.

H. H. W. PEARSON,

Hon. Curator.

8. REPORT OF THE DEPARTMENT OF ANTHROPOLOGY.
AND ANTIQUITIES.

(a) *Anthropological.*

The Antiquarian Section of Anthropology has been greatly benefited by numerous additions, some of which are of considerable interest.

Admiral Maclear has presented a perforated stone almost similar to the so-called "Bushmen digging-stick stone," and which, but for the material it consists of (lava), does not differ from those found in the Karroo. This implement comes, however, from Atacama, in Northern Chile.

Guided by my directions, Mr. J. Crawford found at the foot of the Hill, at Port Elizabeth, stone implements of palæolithic type, the worn angles and facets of which denote a great antiquity.

Messrs. A. W. Rogers and A. L. du Toit, of the Geological Survey, have presented numerous specimens of stone implements, the abundance of which in South Africa is not easily explained.

A most interesting find has been that, made by Mr. J. M. Bain and myself, of stone implements associated with remains of large mammals, one of which, like *Bubalus baini* and others, is extinct. Most of the implements are extremely minute, and many of them have secondary chippings; there were, besides, small cores from which the chips had been detached, and also the mullers and quern stones of the usual midden type. Many of the bones bore traces of having been cracked to obtain the marrow. There is no clear evidence at present that the makers of these implements were contemporaneous with *Bubalus baini*. But in Northern African has been found, in pleistocene deposits, another fossil buffalo, *Bubalus antiquus*, which is probably the same species as *B. baini*, and the skeleton of which has been almost completely restored. The contemporaneity of man with this animal is now proved, for its portrait has been engraved on the abrupt surfaces of the rock by men of the

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same period. The reproductions are perfect, and the animal, with its horns fourteen feet across, its head with a very fine profile, and a beard, has a singularly ferocious appearance. We have in South Africa also rock-engravings of a similar nature, although the delineations known do not seem to be those of extinct animals. Yet they might, in connection with finds of implements similar to the one alluded to, help to refer the implements to a geological age.

I have contributed to "Science in South Africa" a paper on "The Stone Age in South Africa."

A very remarkable weapon has been presented by Dr. T. Muir. It consists of a large tusk of Hippopotamus, cleft lengthways in two; the top part has been thinned into a narrow handle, a stone implement having been plainly used for this purpose. This weapon was found on the banks of the Tarka River, in the Cape Colony, District of Cradock.

Mr. Claude Southey has presented some stone knives and flakes from the Middelburg Division.

Mr. John Wood, of East London, has donated his collection of stone implements from different localities in South Africa. Included among others are two remarkable diminutive saws of seemingly a new type.

A collection of Sesuto implements and ornaments has been obtained by purchase.

(b) *Antiquarian.*

Messrs. Murray Bros., of Quaggafontein, Colesberg Division, Cape Colony, have presented portions of Governor van Plettenberg's Boundary Stone from the Sea-cow River, in the Colesberg Division; and from the Public Works Department was obtained a tablet commemorating the wreck of the Transport "Ormiston," in 1815.

(c) *Coins.*

A few coins have been presented, and 13 purchased.

L. PERINGUEY.

APPENDICES.

1.—LIST OF THE TRUSTEES, STAFF AND CORRESPONDENTS OF THE MUSEUM.

TRUSTEES OF THE MUSEUM.

Appointed by Proclamation of His Excellency the Governor under Section V. of Act No. 17 of 1857.

The Hon. John Xavier Merriman, M.L.A.	...	...	...	30th Aug., 1875.
Sir David Gill, K.C.B., LL.D., F.R.S., Hon. F.R.S.E., His Majesty's Astronomer at the Cape	...	...	...	15th March, 1880.
Thomas Muir, C.M.G., M.A., F.R.S., LL.D., F.R.S.E., Superintendent-General of Education	...	...	...	30th September, 1893.

STAFF OF THE MUSEUM.

1. Director	...	William Lutley Selater, M.A.	...	January 9th, 1896.
2. Assistant Director and Keeper of the Entomological Cabinets	...	Louis Albert Peringuey	...	November 20th, 1884.
3. Hon. Keeper of the Land Invertebrate Collection (except Insects)	...	William Frederick Purcell, B.A., Ph.D., B.Sc.	...	July 1st, 1896.
4. Keeper of Marine Invertebrates and Fishes	...	John Dow Fisher Gilchrist, M.A., Ph.D., B.Sc.	...	September 17th, 1896.
5. Hon. Keeper of the Geological Department	...	Arthur William Rogers, M.A.	...	October 21st, 1902.
6. Hon. Keeper of the Vertebrate Palaeontology	...	Robert Broom, M.D., D.Sc.	...	October 26th, 1905.
7. Hon. Keeper of the Herbarium	...	H. H. W. Pearson, M.A.	...	October 26th, 1905.
8. Librarian (in charge of Mollusca)	...	Robert Mark Lightfoot	...	April 1st, 1888.
9. Assistant in the Geological Department	...	Miss M Wilman	...	May 9th, 1902.
10. Assistant in the Herbarium	...	Miss S. Treleaven	...	July 1st, 1905.
11. Taxidermist	...	James Drury	...	July, 1902.
12. Head Attendant	...	James Henry Paynter	...	July 1st, 1894.
13. Second Attendant	...	Thomas Daniel Butler	...	January 11th, 1899.
14. Third Attendant	...	David Lewsley	...	April 1st, 1902.
15. Fourth Attendant	...	James Lithgow	...	June 16th, 1904.
16. Messenger	...	Henry Miller	...	April 15th, 1903.

LIST OF THE CORRESPONDENTS OF THE MUSEUM.

G. A. K. Marshall.	The Rev. F. C. Kolbe, D.D.	A. D. Millar.	Alfred Brown.
C. N. Barker.	Dr. R. N. Howard.	C. W. Mally.	Prof. J. E. Duerden.
G. Alston.	John Wood.	Harold Fry.	
The Rev. J. A. O'Neil.	Mr. A. Raffray.		

2.—LIST OF VERTEBRATE ANIMALS ACQUIRED DURING THE YEAR.

NOTE.—Names printed in Italics signify species new to the Museum collections.

Donors.		Donations.
J. A. Austin	...	1 Mammal— <i>Bubalus</i> sp., (skull, 3 horns).
L. Baard	...	1 Reptile— <i>Mabuia varia</i> .
J. M. Bain	...	1 Reptile— <i>Testudo pardalis</i> .
Mrs. Paton Bethune	...	2 Mammals—2 <i>Dasyprocta prymnolopha</i> .
P. G. M. Borchers	...	1 Bird— <i>Casarca cana</i> .
F. Cairncross	...	1 Mammal— <i>Herpestes pulverulentus</i> .
H. G. Chalwin	...	1 Bird— <i>Turnix hottentotta</i> .
B. G. Clark	...	1 Fish— <i>Salmo fario</i> .
J. Courtenay	...	1 Reptile— <i>Naia flava</i> .
S. Cooper	...	1 Reptile— <i>Zonurus polyzonus</i> .
Durban Museum	...	1 Bird— <i>Nycticorax leucomotus</i> .
The Rev. J. Dyke	...	14 Reptiles—3 <i>Dasyplectis scabra</i> , 2 <i>Psammophis crucifer</i> , <i>Typhlops bibroni</i> , 2 <i>Leptodeira hotamboeia</i> , <i>Bitis arietans</i> , 2 <i>Pseudocordilus microlepidotus</i> , <i>Nucras delalandi</i> , <i>Sepedon hoemachates</i> , <i>Causus rhombeatus</i> .
G. French	...	1 Reptile— <i>Bitis cornuta</i> .
	...	1 Batrachian. <i>Rana angolensis</i> .

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Donors.	Donations.
J. D. F. Gilchrist	1 Mammal— <i>Grampus griseus</i> (skull only). 1 Reptile— <i>Boodon lineatus</i> .
W. B. Gordon	2 Bird's eggs—1 <i>Tetrapteryx paradisea</i> , 1 <i>Otis caffa</i> .
A. K. Haagner	1 Bird— <i>Hydrochelidon hybrida</i> . 10 Reptiles—3 <i>Boodon lineatus</i> , <i>Agama distanti</i> , <i>Lamprophis aurora</i> , <i>Dasypeltis scabra</i> , <i>Aparalactus capensis</i> , <i>Psammophis crucifer</i> , <i>Causus sp.</i> , <i>Naia nigricollis</i> .
B. G. Harris	1 Bird—Hybrid <i>Alario alario</i> + cage canary.
J. Hartung	6 Mammals— <i>Gerbillus afer</i> .
C. Hassard	2 Birds— <i>Otis melanogaster</i> .
Dr. D. de V. Hugo	1 Bird— <i>Terpsiphone perspicillata</i> .
J. C. Ingle	2 Mammals— <i>Galago garnetti</i> .
Messrs. E. Irvin	1 Fish— <i>Pteroplatea nuchlura</i> .
Capt. C. H. Jackson	2 Mammals— <i>Arctocephalus pusillus</i> (skin and skeleton.)
H. Jackson (by exchange)	29 Bird's eggs— <i>Alario alario</i> , 2 <i>Pyrhulanda verticalis</i> , 2 <i>Zosterops capensis</i> , 2 <i>Pycnonotus nigricans</i> , 4 <i>Parisoma layardi</i> , 3 <i>Erythropygia coryphaeus</i> , 1 <i>Bubo maculosus</i> , 1 <i>Tinnunculus rupicoloides</i> , 1 <i>Aquila verreauxi</i> , 1 <i>Aquila rapax</i> , 1 <i>Milvus aegyptius</i> , 2 <i>Elanus caeruleus</i> , 1 <i>Melierax canorus</i> , 1 <i>Gyps koloi</i> , 2 <i>Oena capensis</i> , 1 <i>Franco- linus africanus</i> , 1 <i>Otis caffa</i> , 1 <i>Serpentarius secretarius</i> .
J. Jacobs	1 Reptile— <i>Zonurus cordylus</i> .
Dr. A. H. B. Kirkman	1 Mammal— <i>Raphicerus sharpei</i> . 1 Bird— <i>Porphyrio alleni</i> .
H. Kotze	8 Birds—2 <i>Dendrocycena fulva</i> , <i>Anas undulata</i> , <i>Spatula capensis</i> , <i>Phoenicopterus roseus</i> , <i>Haematopus moquini</i> , <i>Recurvirostra avocetta</i> , <i>Podiceps cristatus</i> .
R. Leseur	1 Reptile— <i>Bitis arietans</i> .
R. M. Lighfoot	1 Bird— <i>Chrysomitris totta</i> .
J. B. Lindley	1 Bird— <i>Balaeniceps gibbericeps</i> .
W. E. Londt	2 Reptiles— <i>Aparalactus capensis</i> , <i>Zonurus cordylus</i> .
Mrs. Macpherson	1 Mammal— <i>Chrysobloris aurea</i> .
Marine Survey	1 Fish— <i>Rhina squatina</i> .
G. A. K. Marshall	17 Reptiles—2 <i>Trimerorhinus tritaeniatus</i> , <i>Glaucania nigricans</i> , <i>Typhlops dinga</i> , <i>Causus rhombeatus</i> , 3 <i>Mabuia striata</i> , <i>Chlorophis neglectus</i> , <i>Platysaurus guttatus</i> , 2 <i>Leptodeira hotamboeia</i> , <i>Limocephalus capensis</i> , <i>Chlorophis irregularis</i> , <i>Boodon lineatus</i> , <i>Typhlops mucroso</i> , <i>Agama aculeata</i> . 3 Batrachians— <i>Rana oxyrhyncha</i> . 1 Reptile— <i>Pseudaspis cana</i> .
W. Mason	2 Birds— <i>Laniarius quadricolor</i> , <i>Stactolaema leucotis</i> .
A. D. Millar	3 Birds' Eggs— <i>Buphaga erythrorhyncha</i> . 2 Birds— <i>Thannolaea cinnamomeiventris</i> .
Dr. T. C. Mitchell	36 Reptiles— <i>Pseudaspis cana</i> , 5 <i>Trimerorhinus rhombeatus</i> , 2 <i>Bitis atropos</i> . 2 <i>Ablabophus rufus</i> , 2 <i>Naia flava</i> . 2 <i>Leptodeira hotamboeia</i> , <i>Chamaesaura anguina</i> . 4 <i>Homolosoma lutrix</i> , <i>Zonurus cordylus</i> , <i>Dasypeltis scabra</i> , <i>Psammophis crucifer</i> , <i>Acontias meleagris</i> , <i>Nucras delalandi</i> , <i>Dispholidus typus</i> , <i>Bitis arietans</i> , <i>Gerrhosaurus planigularis</i> , <i>Agama planiceps</i> , <i>Mabuia varia</i> , <i>Chameleon pumilus</i> , <i>Agama atra</i> , 2 <i>Chlorophis natalensis</i> , <i>Lycophidium capense</i> , <i>Pachydactylus maculatus</i> , <i>Scelotes inornatus</i> .
James Murray	4 Mammals— <i>Otomys irroratus</i> , <i>Pachyuromys auricularis</i> , 2 <i>Nyctinomus aegyptiacus</i> . 3 Birds—2 <i>Tinnunculus rupicoloides</i> , 1 <i>Laniarius atrococcineus</i> .
J. P. Murray	6 Birds— <i>Falco biarmicus</i> , <i>Geocolaptes olivaceus</i> , <i>Asio capensis</i> , 3 <i>Francolinus africanus</i> .
Miss L. Orpen	1 Bird— <i>Hydrochelidon hybrida</i> .
G. Paton	1 Bird— <i>Falco biarmicus</i> .
L. Péringuey	4 Birds— <i>Phalacrocorax capensis</i> , 2 <i>Merops apiaster</i> , 1 <i>Chrysomitris totta</i> . 2 Reptiles— <i>Mabuia varia</i> , <i>Pachydactylus mariquensis</i> . 2 Fishes— <i>Scyllium edwardsi</i> .
Miss M. H. Porritt	1 Mammal— <i>Pantholops hodgsoni</i> (skull and horns)
O. Pritchard	1 Reptile— <i>Tetradactylus tetradactylus</i> .
W. F. Purcell	2 Mammals—1 <i>Macroscelides proboscideus</i> , 1 <i>Otomys irroratus</i> . 18 Reptiles— <i>Pachydactylus mariquensis</i> , 4 <i>Typhlops delalandi</i> , <i>Agama planiceps</i> , <i>Pachydactylus ocellatus</i> , <i>Chondrodactylus angulifer</i> , <i>Chameleon melanocephalus</i> , <i>Agama hispida</i> , 2 <i>Glaucania nigricans</i> , <i>Pachydactylus capensis</i> , <i>Agama aculeata</i> , <i>Agama distanti</i> , <i>Pachydactylus maculatus</i> . 2 Batrachians— <i>Bufo vertebralis</i> .
F. A. O. Pym	2 Birds— <i>Francolinus levaillanti</i> .
G. J. A. Reid	1 Bird— <i>Ceryle maxima</i> .
W. L. Sclater	1 Mammal— <i>Chrysochloris aurea</i> . 2 Reptiles— <i>Glaucania conjuncta</i> , <i>Psammophis crucifer</i> . 3 Fishes— <i>Hydrocyon lineatus</i> , <i>Paratilapia robusta</i> , <i>Paratilapia carlottae</i> .
G. Shortridge	1 Reptile— <i>Chlorophis hoplogaster</i> . 2 Batrachian— <i>Breviceps gibbosus</i> .

Donors.
The Hon. Dr. T. W. Smart
Major R. Sparrow

Donations.

- ... 1 Bird—*Lophoceros leucomelas*.
... 138 Bird's Eggs—4 *Corvus capensis*, 2 *Lamprocolinus melanogaster*,
12 *Hyphantornis subaureus*, 9 *Sitagra capensis caffer*, 7
Spermestes scutatus, 3 *Pyromelana capensis minor*, 7
Coliopasser procne, 3 *Serinus canicollis*, 4 *Tephrocorys*
cinerea, 5 *Anthus rufulus*, 3 *Motacilla capensis*, 2
Cinnyris amethystinus, 2 *Telephonus senegalus*,
Dryoscopus ferrugineus, 2 *Pycnonotus layardi*, 1
Parisoma subcaeruleum, 4 *Acrocephalus boeticatus*, 9
Cisticola aberrans, 6 *Cisticola terrestris*, 2 *Turdus olivaceus*,
3 *Pratincola torquata*, 3 *Saxicola monticola*, 2
Terpsiphone perspicillata, 2 *Hirundo albicularis*, 2
Hirundo cucullata, 2 *Cypselus caffer*, 1 *Buteo jackal*, 3
Tinnunculus rupicolus, 2 *Columba phaeonota*, 2 *Turtur*
semitorquatus, 2 *Chalcopelia afra*, 1 *Trachelotis*
caerulescens, 3 *Pteroclorus namaqua*, 3 *Stephanibyx*
coronatus, 2 *Hagadastris hagelash*, 2 *Cisticola natalensis*,
6 *Erythropygia leucophrys*, 2 *Spizocorys conirostris*, 2
Cisticola tinniens, 1 *Bradypterus babaeucula*.
... 1 Batrachian—*Rana fuscigula*.
... 1 Bird—*Upupa africana*.
... 2 Mammals—*Oryx gazella*.
... 1 Mammal—*Herpestes gracilis*.
210 Birds—*Corvultur albicollis*, *Circæus pectoralis*, *Milvus*
ægyptius, *Eutolmæus spilogaster*, 2 *Guttera edouardi*,
Ciconia alba, *Platalea alba*, *Scopus umbretta*, 2 *Ardea*
purpurea, *Plotus rufus*, *Chenalopex ægyptiacus*,
Pœcilonetta erythrorhyncha, 4 *Estrilda subflava*, 2
Passer diffusus, 2 *Anthus lineiventris*, *Dryoscopus cubla*,
2 *Lanius sulphureipectus*, *Nicator gularis*, *Acrocephalus*
arundinaceus, 4 *Cossyple heuglini*, *Bradyornis ater*,
Bycanistes buccinator, *Lophoceros epirhinus*, *Indicator*
Sparrmani, *Indicator minor*, *Coccyzus glandarius*,
Coccyzus jacobinus, *Bucorax cafer*, *Scotopelia peli*,
Aquila rapax, 2 *Haliaëtus vocifer*, *Buteo augur*, 2
Accipiter minullus, *Astur tachiro*, *Necrosyrtes pileatus*,
Vinago delalandii, 3 *Turtur ambiguus*, 2 *Francolinus*
shellei, *Pternistes swainsoni*, *Rhinoptilus chalcopterus*,
Plegadis falcinellus, *Ephippiorhynchus senegalensis*,
Leptoptilus erumeniferus, *Phalacrocorax africanus*,
Sarcidiornis melanonota, *Dendrocynia fulva*, 3 *Pholidanges*
verreauxi, 2 *Oriolus notatus*, 4 *Hyphantornis cabanisi*,
2 *Quelea cardinalis*, 5 *Quelea quelea*, *Pyromelana*
aundevalli, *Motacilla flava*, *Prionops talacoma*, *Alseonax*
adusta, *Halcyon swainsoni*, *Lophoceros erythrorhynchus*,
3 *Crex egregia*, *Crex pratensis*, *Ortygometra porzana*, 4
Hyphantornis nigriceps, 1 *Vidua principalis*, 2 *Amadina*
fasciata, 1 *Hypochaera funerea*, *Serinus sharpei*, 2
Petronia petronella, *Apalis thoracica*, 2 *Prinia mystacea*,
2 *Monticola angolensis*, *Ardetta sturmi*, 2 *Campophaga*
nigra, *Amydrus morio*, *Oriolus galbula*, *Oriolus*
larvatus, *Hyphantornis aurirapillus*, *Sitagra ocularis*,
Sitagra olivacea, *Anaplectes gurneyi*, 2 *Ploceipasser*
rufoscapulatus, *Lagonosticta jamesoni*, *Spermestes*
nigriceps, 3 *Coliopasser hartlaubi*, *Polioptila richardi*,
Serinus angolensis, 3 *Emberiza major*, 2 *Emberiza*
flaviventris, *Fringillaria tahapisi*, *Mirafrans nigricans*,
Macronyx fullibornu, *Anthus pyrrhonotus*, *Motacilla vidua*,
Salpornis salvadori, 4 *Cinnyris gutturalis*, *Cinnyris*
chalybeus, 2 *Zosterops anderssoni*, *Parus xanthostomus*,
4 *Parus parvirostris*, *Parus pallidiventris*, *Lanius collaris*,
2 *Nilvus nigriventris*, 2 *Dryoscopus hamatus*, *Lanius*
starki, 4 *Crateropus hartlaubi*, *Andropadus musukuensis*,
Phyllostrophus fulviventris, *Phylloscopus trochilus*,
Fremomela scotops, *Eremomela usticollis*, *Cisticola*
subruficapilla, *Myrmecocichla stuebeli*, *Pratincola torquata*,
Saxicola livingstoni, *Saxicola falckensteini*, *Thamnolaea*
arnoti, *Bradyornis murinus*, *Muscicapa caerulescens*,
Alseonax adusta, *Hylia barbozae*, 2 *Hylia australis*, 3
Platystira peltata, 2 *Elminia longicauda*, *Dicrurus afer*, 2
Graucalus pectoralis, 2 *Hirundo smithi*, *Caprimulgus*
fossii, 2 *Dicrocerus hirundineus*, *Halcyon orientalis*,
Halcyon chelicuti, *Campothera chrysurus*, 2 *Prodotiscus*
regulus, *Lybius torquatus irroratus*, 2 *Lybius mechowi*,
Sturtalanea anchietae, *Barbatula extoni*, *Trachyphonus*
cafer, *Cuculus solitarius*, *Cuculus clamosus*, 2 *Chryso-*
coccyx klaasi, *Astur polyzonoides*.
... 11 Reptiles—*Acontias greyi*, *Psammophis sibilans*, 2 *Psammophis*
notostictus, 1 *Boodon lineatus*, 1 *Psammophis leightoni*, 1
Bitis cornuta, *Acontias lineatus*, *Pachydactylus bibroni*,
Zonurus polyzonus, *Agama planiceps*, *Agama hispidi*.

A. Lévy Strauss

Donors.	Donations.
L. E. Taylor	1 Mammal— <i>Myotis tricolor</i> . 3 Birds— <i>Hypochaera funerea</i> , 2 <i>Tinnunculus naumanni</i> . 2 Reptiles— <i>Psammophis sibilans</i> , <i>Pachydactylus capensis</i> .
R. H. Thomas	33 Reptiles—2 <i>Naja haje</i> , 4 <i>Bitis arietans</i> , 1 <i>Gerrhosaurus nigrolineatus</i> , 1 <i>Agama brachyura</i> , 1 <i>Mabuia varia</i> , 1 <i>Ichnotropis squamulosa</i> , <i>Mabuia occidentalis</i> , <i>Agama planiceps</i> , 4 <i>Platysaurus guttatus</i> , 2 <i>Causus rhombeatus</i> , <i>Causus defilippii</i> , <i>Lycophidium capense</i> , <i>Dasypeltis scabra</i> , <i>Philothamnus semivariatus</i> , <i>Typhlops mucros</i> , <i>Leptodeira hotamboeia</i> , <i>Chlorophis irregularis</i> , 2 <i>Pseuda sp. cana</i> , <i>Homopholis macrolepis</i> , <i>Homopus sp. nov.</i> , 2 <i>Python sebae</i> , <i>Boodon lineatus</i> , <i>Psammophis sibilans</i> . 7 Batrachians—6 <i>Bufo regularis</i> , 1 <i>Bufo carens</i> . 1 Reptile— <i>Chelone mydas</i> (shell only).
Sir W. Thorne	1 Fish— <i>Pagrus laticeps</i> .
Lieut. W. Tomkinson, R.N.	1 Mammal— <i>Capra sibirica</i> (skull and horns).
Lieut.-Col. S. D. Turnbull	2 Birds— <i>Ceryle maxima</i> .
F. G. Watermeyer	11 Mammals— <i>Rhinoceros bicornis</i> , 3 <i>Hippotragus equinus</i> , 2 <i>Cobus ellipsiprymnus</i> , 2 <i>Cervicapra arundinum</i> , 2 <i>Ourebia scoparia</i> , 1 <i>Strepsiceros capensis</i> .
His Grace The Duke of Westminster	1 Mammal— <i>Gennetta senegalensis</i> . 1 Reptile— <i>Pachydactylus maculatus</i> . 1 Mammal— <i>Lepus whytei</i> .
Dr. Marius Wilson	14 Birds— <i>Hirundo cucullata</i> , 2 <i>Corythornis cyanostigma</i> , <i>Turtur senegalensis</i> , <i>Palaeornis torquatus</i> , <i>Pyromelana xanthomelana</i> , <i>Urolestes melanoleucus</i> , <i>Lanius minor</i> , 2 <i>Cisticola tinniens</i> , <i>Saxicola pileata</i> , <i>Coracias spatulatus</i> , <i>Cursorius temmincki</i> . 2 Reptiles— <i>Mabuia striata</i> .
J. Wood	8 Reptiles— <i>Agama atra</i> , <i>Agama planiceps</i> . 2 <i>Psammophis notostictus</i> , 2 <i>Trimerorhinus rhombeatus</i> . 2 <i>Scapteira knoxi</i> .
Museum Collector (J. Drury)	10 Batrachians— <i>Rana fuscigula</i> , 1 <i>Rana grayi</i> . Mammal— <i>Hippopotamus amphibius</i> .
Museum Collector (J. Paynter)	41 Mammals—2 <i>Genetta tigrina</i> , 2 <i>Herpestes pulverulentus</i> , 3 <i>Otomys irroratus</i> , 5 <i>Arvicantis pumilio</i> , 4 <i>Myosorex varius</i> , 2 <i>Chrysochloris aurea</i> , 2 <i>Mus minutoides</i> , <i>Acomys subspinosus</i> , <i>Georchus capensis</i> , 4 <i>Georchus hottentotus</i> , 2 <i>Crocidura flavescens</i> , 2 <i>Rousettus collaris</i> , 2 <i>Miniopterus schreibersi</i> , 4 <i>Bathyergus maritimus</i> , <i>Herpestes galera</i> . 16 Birds— <i>Pratincola torquata</i> , <i>Pachyprora capensis</i> , <i>Ceryle rudis</i> , <i>Astur tachiro</i> , <i>Tinnunculus rupicola</i> , 2 <i>Aegialitis hiaticola</i> , 4 <i>Totanus glotis</i> , 1 <i>Totanus hypoleucus</i> , <i>Tringa minuta</i> , <i>Cinnyris amethystina</i> , <i>Turdus olivaceus</i> , <i>Alcedo semitorquata</i> .
Purchased (L. Bollé)	<i>Sitagra ocularia</i> , <i>Anaplectris rubriceps</i> , <i>Grauculus caesius</i> , <i>Eurystomus afer</i> , 2 <i>Halcyon helieuti</i> .
Purchased (Edinborough & Daniels)	2 Mammals— <i>Funisciurus cipapi</i> , <i>Herpestes gracilis</i> . 7 Birds— <i>Amydrua morio</i> , <i>Pyromelana sundevalli</i> , <i>Mirafra sabota</i> , <i>Lanius minor</i> , <i>Merops apiaster</i> , <i>Pocephalus meyeri</i> , <i>Aquila wahlbergi</i> .
Purchased (Streeter)	1 Mammal— <i>Rousettus collaris</i> . 4 Birds— <i>Totanus glareola</i> , <i>Coliopasser ardens</i> , <i>Nectarinia kilimensis</i> , <i>Telephonus senegalus</i> .
Purchased (R. Williams)...	2 Fishes—2 <i>Caracodon rondeletti</i> , <i>Lophius piscatorius</i> .

3.—LIST OF INSECTS ACQUIRED DURING THE YEAR.

NOTE.—All the species here mentioned are new to the Museum Collection.

J. M. Bain ... ..	...124 examples, 69 species. <i>Neuroptera</i> : <i>Nematoptera darlingiana</i> . <i>Coleoptera</i> : <i>Bolbocerus capicola</i> , <i>Glyptoglossa darlingia</i> , <i>Glyptoglossa pallens</i> , <i>Tenebrionid</i> gen. spec. <i>Orthoptera</i> : <i>Cyrtotria</i> spec.
Miss L. de Beer... ..	...173 examples, 99 species. <i>Coleoptera</i> : <i>Cicindela hypocrita</i> , <i>Anthia omoplata</i> , var. <i>incolata</i> . <i>Camenta</i> sp., <i>Cymatura</i> var., <i>Meliniesthes hamula</i> . <i>Lepidoptera</i> : <i>Trabala monteiroi</i> , <i>Lasiocampid</i> sp., <i>Jana</i> sp., <i>Nudaurelia zambesina</i> .
Dr. Hans Brauns ... ..	...100 examples, 43 species. <i>Hymenoptera</i> : <i>Fidelia kobrowi</i> , <i>Liturgus capensis</i> , <i>Tetralonia braunsiana</i> , <i>Podalirius braunsianus</i> , <i>Ceratina nasalis</i> , <i>Ceratina braunsiana</i> , <i>Ceratina sulcata</i> , <i>Ceratina emarginata</i> , <i>Ceratina aloes</i> , <i>Ceratina labrosa</i> , <i>Ceratina truncata</i> , <i>Halictus jucundus</i> , <i>Colletes marsini</i> , <i>Coeliosis punctatrix</i> , <i>Coeliosis afra</i> , <i>Coeliosis difformis</i> , <i>Crocisa braunsiana</i> , <i>Prosopis rubroplagiata</i> , <i>Nomioides maculiventris</i> , <i>Podalirius niveatus</i> , <i>Podalirius braunsianus</i> , <i>Podalirius circulatus</i> , <i>Nitela capensis</i> , <i>Stizus imperialis</i> , <i>Ceramius schulteni</i> , <i>Ceramius beyeri</i> , <i>Chrysis jouncaumi</i> .

Donor.	Donation.
Dr. R. Broom ...	... 20 examples, 10 species. <i>Coleoptera</i> : <i>Julodis</i> spec. <i>Hymenoptera</i> : <i>Megachile</i> spec.
T. D. Butler ...	...144 examples, 20 species. <i>Coleoptera</i> : <i>Psammodes placidus</i> , <i>Aphodius</i> sp. <i>Orthoptera</i> : <i>Xiphocera picta</i> .
J. Drury ...	... 49 examples, 31 species. <i>Coleoptera</i> : <i>Dermestes</i> spec., <i>Cleonus</i> spec. <i>Orthoptera</i> : <i>Dystacta</i> spec., <i>Nauphoeta</i> spec.
C. L. du Toit ...	... 44 examples, 25 species.
L. Fairmaire ...	... 57 examples, 50 species. <i>Coleoptera</i> : <i>Polyhirma piazzae</i> , <i>Oxycera zophosina</i> , <i>Pogonobasis rugosula</i> , <i>Eurychra verrucosa</i> , <i>Adelostoma acutecostatum</i> , <i>Mesostenopa sericea</i> , <i>Homala integra</i> , <i>Homala opacula</i> , <i>Gnophota anthracina</i> , <i>Phrynocolus ikutanus</i> , <i>Oncosoma geminatum</i> , <i>Phrynocolus dentatus</i> , <i>Pterolasia asidoides</i> , <i>Selinus plicatulus</i> , <i>Selinus planus</i> , <i>Opatrinus semicribrosus</i> , <i>Usalaria major</i> , <i>Opatrinus ovalis</i> , <i>Ceropria anthracina</i> , <i>Peltoides pustulosus</i> , <i>Nyetobates rufoplagiatus</i> , <i>Taraxides sinuatus</i> , <i>Odontopezus major</i> , <i>Prioscelis fabricii</i> , <i>Prioscelis crassicornis</i> , <i>Aspidosternum physosternum</i> , <i>Eulithus nodipennis</i> , <i>Paramarygmus glaber</i> , <i>P. femoralis</i> , <i>Philacastus striolatus</i> , <i>Astenorrhinus contractus</i> , <i>Phaenomeris decora</i> , <i>Temnorhynchus raffrayi</i> , <i>Compsomera speciosum</i> , <i>Inesida leprosa</i> .
Harold Fry ...	...138 examples, 82 species. <i>Coleoptera</i> : <i>Longicorn.</i> 2 gen., and spec. unknown. <i>Diptera</i> : <i>Glossina palpalis</i> , <i>Conops</i> sp. c., <i>Tabanus</i> sp. <i>Hymenoptera</i> : <i>Megachile</i> sp.
A. J. T. Janse ...	...157 examples, 71 species. <i>Coleoptera</i> : <i>Anerodes</i> sp., <i>Pharus</i> sp. <i>Hymenoptera</i> : <i>Camponotus</i> sp.
R. M. Lightfoot ...	...101 examples, 42 species.
G. A. K. Marshall ...	... 34 examples, 48 species. <i>Coleoptera</i> : <i>Hyperops picipes</i> , <i>Acestus</i> spec., <i>Thrachynotus</i> spec., <i>Anomalipus arthriticus</i> , <i>Oncotus</i> spec., <i>Hoplonyx confidens</i> , <i>Paramarygmus</i> spec.
A. Moorhouse ...	...288 examples, 84 species. <i>Coleoptera</i> : <i>Ogmorphus</i> sp., <i>Psammodes</i> spec., <i>Crypticanus cuneatus</i> , <i>Emyon</i> sp.
H. Muller ...	... 41 examples, 17 species.
J. Haughton ...	...220 examples, 97 species. <i>Coleoptera</i> : <i>Camenta</i> sp., <i>Schizonycha</i> spec., <i>Longicorn.</i> gen. spec. unknown, <i>Demostis lydenburgiensis</i> , <i>Eunidia</i> spec., <i>Placcorhynes</i> spec., <i>Ca'omorpha</i> sp.
Dr. C. Nodier ...	...475 examples, 195 species. <i>Coleoptera</i> : <i>Megacephala senegalensis</i> , <i>Omophron minutum</i> , <i>Casnonia senegalensis</i> , <i>Stenidia corrusca</i> , <i>Dryta ruficollis</i> , <i>Callida ruficollis</i> , <i>Brachinus nodieri</i> , <i>Callida angustata</i> , <i>Tetragonoderus leprieuri</i> , <i>Tetragonoderus immaculatus</i> , <i>Tetragonoderus interruptus</i> , <i>Apristus latipennis</i> , <i>Blechnus rhytiderus</i> , <i>Blechnus vittatus</i> , <i>Eudema brevicollis</i> , <i>Coscinia minuta</i> , <i>Masoreus orientalis</i> , <i>Callistomimus nodieri</i> , <i>Chlaenius alternans</i> , <i>Chlaenius analis</i> , <i>Chlaenius obtusus</i> , <i>Chlaenius rufomarginatus</i> , <i>Chlaenius sellatus</i> , <i>Chlaenius venustulus</i> , <i>Eccoptomemus eximius</i> , <i>Chloemius nodieri</i> , <i>Axinotoma fallax</i> , <i>Pachytrachelus diacipennis</i> , <i>Bradyboenus festivus</i> , <i>Metaxis bipustulatus</i> , <i>M. bisignatus</i> , <i>Pangus aeruginosus</i> , <i>Pangus levipennis</i> , <i>Pangus vagans</i> , <i>Hypolithus aciculatus</i> , <i>Hypolithus congener</i> , <i>Hypolithus escheri</i> , <i>Hypolithus fuscus</i> , <i>Hypolithus pulchellus</i> , <i>Doryche leprieuri</i> , <i>Stenolophus fugax</i> , <i>Stenolophus vittatus</i> , <i>Anoplogenus alacer</i> , <i>Abacetus gagatinus</i> , <i>Abacetus picicollis</i> , <i>Tachys biplagiatus</i> , <i>Hyphidrus flavicollis</i> , <i>Hyphidrus grandis</i> , <i>Hyphidrus platycephalus</i> , <i>Hyphidrus senegalensis</i> , <i>Hydrovatus obscurus</i> , <i>Hydrovatus nodieri</i> , <i>Bidessus confusus</i> , <i>Bidessus curtulus</i> , <i>Bidessus dohrni</i> , <i>Bidessus mocquerysi</i> , <i>Bidessus nigrosignatus</i> , <i>Bidessus tschoffeni</i> , <i>Herophydrus nodieri</i> , <i>Canthydrus biguttatus</i> , <i>Canthydrus koppi</i> , <i>Canthydrus xanthinus</i> , <i>Hydrocanthus grandis</i> , <i>Laccophilus koppi</i> , <i>Laccophilus taeniolatus</i> , <i>Synchortus simplex</i> , <i>Rhansaticus signatipennis</i> , <i>Cybister filicornis</i> , <i>Dineutes aereus</i> , <i>Dineutes subspinosus</i> , <i>Orectogyrus glaucus</i> , <i>Orectogyrus alluaudi</i> , <i>Sternolophus unicolor</i> , <i>Sternolophus solieri</i> , <i>Amphiops gibbus</i> , <i>Rhyxiptloea corticina</i> , <i>Zophosis sulcata</i> , <i>Zophosis 4-lineata</i> , <i>Adesmia nigrogemmata</i> , <i>Pimelia senegalensis</i> , <i>Pimelia velutina</i> , <i>Pterolasia asidistoides</i> , <i>Pterolasia granocostata</i> , <i>Oncosoma delicatulum</i> , <i>Vieta senegalensis</i> , <i>Vieta tuberculosa</i> , <i>Hopatrius semicribrosus</i> , <i>Clitobius nodieri</i> , <i>Silerion</i>

Donors.

Donations.

			orientale, Hopatrum hispidum, Hopatrum micans, Pachypterus amplicollis, Pachypterus cognatus, Hopatrum pubescens, Hopatrum patricie, Hopatrum maculosum, Hopatrum elongatum, Hopatrum affine, Pachypterus elongatus, Trichonochus validus, Anemia granulata, Thalpophyla abbreviata, Oxycara pedinoides, Stenosis lateralis, Himatismus senegalensis, Himatismus villosus, Adlostoma acutecostatum, Adlostoma angustius, Stenosis seriepilosa, Peltoides senegalensis, Cossyphus costulicollis, Endostomus senegalensis, Hallecula hypuloides, Lagria cuprina, Lagria semicula, Dilamus rufipes, Formicomus angustiformis, Leptaleus klugi, Leptaleus punctatus, Leptaleus scabrinodis, Tomoderes ovipennis, Notoxus distigma, Anthicus punctatissimus Mylabris affinis, Coryna 12-punctata, Cantharis dussaulti, Cantharis flavicornis, Cantharis gigas, Cantharis granulipennis, Cantharis oculata.
Rev. J. A. O'Neil	...	...360 examples: 190 species.	<i>Coleoptera</i> , Brachinus oneili, Abacetus proximus, Anthaxia ditissima, A dumbrodia, Anthaxia hottentotta, Anthaxia consobrina, Eutelus requieni, Hoplonyx dumbrodianus, Agrilus 3 spec unknown, Cionus tristis, Oosonus varius, Hypsomus lembunculus, Ctenomerus palidulus, Terepopus spec., Plastologus costatus Pausiris oneili, Achaeonops oneili, Miopristis oneili, Cryptocephalus oneili, Echrusia capensis, Pausiris longicollis, Pausiris semirugosus, Pseudocolaspis oneili, Syagrus antennatus, Longitarsis salisburyensis.
			<i>Hymenoptera</i> , Eumenes rufolineata, Scelifrons violaceus, Ampulex spilopectera, Odynerus radiale, Piazetia striata, Tachysphex ferrugineipes, Anoplius argentodecoratus, Pseudagenia robusta, Pseudagenia iridipennis, Anoplius canocerus, Schizanoplius violaceipennis, Anoplius melanotenus, Cerceris africana, Cerceris melanospila, Cerceris ornativentris, Cerceris oneili, Cerceris holconota, Cerceris varilineata, Cerceris nobilitata, Salius dumbrodiensis, Trypoxilon capense, Eumidia rufolineata, Odynerus oneili, Stizus joannis, Notogonia rufoscapa, Halictus dumbrodiensis, Palarus oneili, Meria interrupta, Ichneumon johannis, Mesostenus basimaculatus, Mesostenus nimeticus.
Miss M. Pegler	...	... 69 examples, 24 species.	<i>Coleoptera</i> : Kentania peggleri, Rhysodes spec. <i>Diptera</i> : Tabanus spec. <i>Orthoptera</i> : Plangia spec.
L. Peringuey	...	...670 examples, 127 species.	<i>Coleoptera</i> : Macrochilus dorsalis, Arsinoe distinguenda, Scarites diductus, Calosotis sp., Trigonopus sp., Tenebrionid gen. unknown, Scarabaeus rugosus, Ablabera spec., Melyrid sp., Trigonopus sp., Psammodes sp. <i>Hymenoptera</i> : Methoca sp. <i>Diptera</i> : Bombylius sp. <i>Orthoptera</i> : Apteris ciliata, Cyrtotria spec.
Pretoria Museum	...	... 84 examples, 50 species.	<i>Coleoptera</i> : Onthophagus rubens, Aphodius spec.
W. F. Purcell	...	... 96 examples, 48 species.	<i>Coleoptera</i> : Astarta gentilis, Trigonopus spec. <i>Orthoptera</i> : Cyrtotria spec.
Richardson	...	... 18 examples, 12 spec.	<i>Orthoptera</i> : Batrachotettix acutus. <i>Diptera</i> : Gen. and spec. ign. <i>Neuroptera</i> : Palpares spec. <i>Hymenoptera</i> : Anthophora spec.
W. L. Slater	..	... 22 examples, 16 species.	
P. A. Sheppard	...	...374 examples, 73 species.	<i>Coleoptera</i> : Polyaulacus brunneus, Drypta beirana, Trimerus nyassanus, Graphipterus salinae, Anomalipus heraldicus, Onthophagus signatus, Caccobius ferrugineus, Menephilus spec., Genus unknown, Praogena pateuns, Praogena pembana, Praogena sp., Popilia sp., Pantolamprus sp., Thalpophyla gracilis. <i>Hemiptera</i> : 10 genera and species undetermined. <i>Orthoptera</i> : Petasia sp., Pilema spec., Gonolabis spec., Phaneoptera spec., Acridium spec., Cyloptenus pulchripes. <i>Hymenoptera</i> : Mutilla, 4 new species.
Dr. Stoehr	...	...147 examples, 46 species.	<i>Coleoptera</i> : Polyhirma zambesina, Anthia aequilatera, Vieta sp., Feira sp.
Miss M. Wilman	...	... 21 examples, 16 species.	<i>Coleoptera</i> : Sinoxylon sp., Galeruca sp.
By exchange	...	...289 examples, 152 species.	
Sundries	...	... 35 examples, 20 species.	

4.—LIST OF LAND AND FRESHWATER INVERTEBRATES, EXCLUSIVE OF INSECTS AND MOLLUSCS, ACQUIRED DURING THE YEAR.

NOTE.—Names printed in italics signify species new to the Museum Collection.

Donors.		Donations.	
H. P. Abernethy	2 Spiders.
G. Alston	2 Spiders (1 new kind).
R. Berrange	1 Scorpion (<i>Hadogeus</i> sp.)
R. Broom	1 Peripatus. 1 Mite. 2 Opiliones. 3 Solifugae (<i>Cevonia</i> n. sp.) 2 Spiders. 1 Scorpion.
R. Colson	1 Myriapod. 17 Spiders (2 kinds).
J. L. Drege	4 Ticks.
J. Drury	1 Myriapod. 1 Spider.
A. L. du Toit	8 Myriapods. 4 Solifugae (<i>Blossia</i> N. sp.) 19 Spiders (6 kinds). 6 Scorpions.
G. French	1 Spider.
H. A. Fry	44 <i>Crustaceans</i> . 2 Spiders.
J. E. C. Gould	8 Solifugae. 20 Spiders. 10 Scorpions. 2 Opiliones.
A. C. Haagner	2 Spiders.
R. M. Lightfoot	1 Solifuga. 1 Spider.
W. E. Londt	2 Scorpions. 2 Spiders.
Master Neeser	2 Solifugae. 3 Scorpions. 51 Spiders.
J. Newey	1 Scorpion.
H. M. Oakley	1 Solifuga.
J. Paynter	3 Scorpions. 4 Solifugae. 5 Spiders.
Miss A. Pegler	1 Myriapod. 43 Spiders (7 new kinds).
L. Peringuey	1 Spider.
W. F. Purcell	86 Scorpions (<i>Opiathophthalmus</i> n. sp.)
J. F. Quekett	1 Spider. 1 Solifuga (<i>Salpuga</i> sp.)
S. C. Cronwright-Schreiner	2 Pseudo Scorpions. 1 Solifuga. 1 Scorpion.
W. L. Sclater	137 Spiders. 1 Pseudo Scorpion. 1 Myriapod. 6 Spiders (3 new kinds). 13 Scorpions.
Dr. Stoehr	7 Mites. 1 Spider.
F. W. Sykes	2 Myriapods. 1 Scorpion (<i>Parabuthus</i> n. sp.)
R. T. Thomas	4 Solifugae. 5 Spiders.
W. C. Wroughton	1 Scorpion. 1 Spider.

5.—LIST OF MARINE INVERTEBRATES, INCLUDING ALL THE MOLLUSCA, RECEIVED DURING THE YEAR.

J. Drury	...	...	1 species, 1 example—1 <i>Succinea</i> sp., 3 <i>Vivipara tricolor</i> .
W. Jones	...	...	1 species, 1 example— <i>Succinea</i> sp.
R. Lightfoot	...	...	3 species, 7 examples—1 <i>Zingis afra</i> , 4 <i>Vallonia pulchella</i> , 2 <i>Pupa</i> sp.
Dr. Melle	...	...	1 species, 1 example— <i>Achatina zebra</i> .
F. Purcell	...	...	18 species, 75 examples—2 <i>Apera</i> sp., 4 <i>Helicarion</i> sp., 4 <i>H. Natalensis</i> , 5 <i>Varonicella</i> sp., 2 <i>Buliminus natalensis</i> , 5 <i>Obeliscus lanceolatus</i> , 1 <i>Buliminus spadiceus</i> , 2 <i>Trachycystis scolopendra</i> , 3 <i>Ennea wahlbergi</i> , 8 <i>Subulina</i> sp., 1 <i>Zingis</i> sp., 1 <i>Natalina caenotera</i> , 1 <i>Subulina</i> sp., 1 <i>Succinea</i> sp., 9 <i>S.</i> sp., 10 <i>Trachycystis bisculpta</i> , 3 <i>Zingis crawfordi</i> , 13 <i>Hijabia wahlbergi</i> .
A. W. Rogers	...	...	2 species, 17 examples—15 <i>Buliminus burchelli</i> , 2 <i>B.</i> sp.
Miss Wilman	...	...	1 species, 5 examples—5 <i>Uneo capensis</i> .

6.—LIST OF MARINE INVERTEBRATES MADE OVER TO THE MUSEUM BY THE GOVERNMENT MARINE BIOLOGIST.

- Mollusca*.—*Ancilla* angustata, *A. bullioides*, *A. contusa*, *A. obtusa*, *Arca lactea*, *Astrarium andersoni*, *A. gilchristi*, *Bullia annulata*, *Calliostoma graciliratum*, *Calliostoma iridescens*, *C. perfragile*, *Cancellaria imbricata*, *C. producta*, *Chiton sykesi*, *Conus eucaronatus*, *C. gilchristi*, *C. patens*, *Cypraea barelayi*, *C. fultoni*, *C. similis*, *Dentalium africanum*, *D. leleheri*, *D. exasperatum*, *D. inflexum*, *D. novemcostatum*, *D. plurifissuratum*, *D. politum*, *Eburna papularis*, *Epidromus crebriliratus*, *Fasciolaria rutila*, *Fusus rubrolineatus*, *F. subcontractus*, *Latiaxis tortilus*, *L. abnormis*, *L. imbricatus*, *Latorium nassariformis*, *L. ranelloides*, *Mangilia africana*, *Marginella dialochus*, *M. fusiformis*, *Melapium lineatum*, *Minolia congener*, *M. laevisima*, *Mitra cylindracea*, *M. daedala*, *Murex axicornis*, *M. fallax*, *Nassa analogica*, *N. desmouloides*, *N. eusulcata*, *N. trifasciata*, *Nassaria gracilis*, *Natica sagraiana*, *Neptuneopsis gilchristi*, *N. pyrhostoma*, *Oniscia macandrewi*, *Pedicularia sicula*, *Pleurotoma belaeformis*, *P. fossata*, *P. gilchristi*, *P. gravis*, *P. lignaria*, *P. lobata*, *P. marmorata*, *P. scitecostata*, *P. turriplana*, *Pseudoliva ancilla*, *Puncturella noachina*, *Scala tenebrosa*, *Scaphander punctostriatus*, *Siliqua polita*, *Solariella persculpta*, *Tritonidea natalensis*, *Trophon carduus*, *Turritella declivis*, *T. puncticulata*, *Vanikoro cancellata*, *Voluta quekitti*, *Valutithes abyssicola*, *V. gilchristi*, *V. philippiana*.
- Crustacea*.—*Platymaia turbynei*, *Seyramathia hertwigi*, *Charybdis cruciatus*, *Lupa sanguinolenta*, *Ovalipes trimaculatus*, *Goneplax angulata*, *Philyra punctata*, *Conchaecetes artificiosus*, *Homola barbata*, *Latreillia elegans*, *Porcellana dehaanni*, *Munida sancti-pauli*, *Urophychus niditus*, *Nephropsis atlantica*, *Polycheles sculptus*, *Jasus lalandii*, *Callinassa rotundicaudata*, *Jasus parkeri*, *Laphogaster typicus*, *Squilla armata*, *Lysiosquilla maculata*, *Apeudes grossimanus*, *Cirolana venusticauda*, *C. fluviatilis*, *Rocinela dumerillii*, *Neracila cephalotes*, *Glyptidotea lichtensteinii*, *Synidotea hirtipes*, *Idotea indica*, *Exosphaeroma amplifrons*, *E. validum*, *E. setulosum*, *E. gigas*, *Parasphaeroma prominens*, *Cymodoce uncinata*, *Cypronicus crosophari*, *C. africanus*.
- Copepoda*.—*Acartia danae*, *Acrocalanus gibber*, *A. gracilis*, *Aegisthus aculeatus*, *A. mucronatus*, *Aethidium giesbrechti*, *Augaptilus palumboi*, *Calanus brevicornis*, *C. darwini*, *C. finmarchicus*, *C. minor*, *C. tenuicornis*, *C. vulgaris*, *Calocalanus pavo*, *Candacia catula*, *C. inermis*, *C. pachydaetyla*, *C. tenuimana*, *C. truncata*, *C. varicans*, *Centropages chierchiae*, *C. furcatus*, *C. typicus*, *Chiridius pappoi*, *Chirundina streetsii*, *Clausocalanus arcuicornis*, *C. furcatus*, *Conca rapax*, *Caryceus danae*, *C. furcifer*, *C. robustus*, *C. speciosus*, *Candacia chirura*, *Coryceus ovalis*, *Candacia bipinnata*, *Eucalanus attenuatus*, *E. crassus*, *E. elongatus*, *E. monachus*, *E. mucronatus*, *E. pileatus*, *E. subcrassus*, *E. subtenuis*, *Eucheta acuta*, *E. affinis*, *E. longicornis*, *E. marina*, *E. media*, *E. tonsa*, *E. spinosa*, *Euchirella meesinensis*, *E. venusta*, *Gaëtanus armiger*, *G. miles*, *Heterorhabdus abyssalis*, *H. austrinus*, *H. papilliger*, *H. spinifrons*, *H. tanneri*, *Lucientia auritia*, *L. bradyana*, *L. clausii*, *L. flavicornis*, *Lubbockia aculeata*, *Labidocera acuta*, *Metricidia brevicauda*, *M. princeps*, *M. venusta*, *M. lucens*, *Oithona plumifera*, *O. rigida*, *O. nana*, *O. similis*, *Oncaea conifera*, *O. mediterranea*, *O. subtilis*, *O. venusta*, *O. media*, *Pachysoma tuberosum*, *Paracalanus aculeatus*, *P. parvus*, *Pleuromamma abdominalis*, *P. gracilis*, *P. robusta*, *P. xiphius*, *Phaëna spinifera*, *Phyllopus bidentatus*, *Pontella securifer*, *Pontellina plumifera*, *Pseudodiaptomus serricaudatus*, *Rhinocalanus nasutus*, *R. cornutus*, *Sapphirina gemma*, *S. nigromaculata*, *S. opalina*, *S. sinuicauda*, *S. angusta*, *S. salpe*, *Scoletrix danae*, *S. persecanus*, *S. securifrons*, *S. colecithricella minor*, *S. neptuni*, *Temara discaudata*, *T. stylifera*, *Undecheata major*, *U. minor*, *Xanthocalanus fragalis*.
- Echinodermata*.—*Diadema saxatile*, *Echinus angulosus*, *Astrapyga radiata*, *Echinus gilchristi*, *Lavenia elongata*, *Urechinus variesianus*, *Spatangus raselsi*, *Pourtalesia carinata*, *Palaeolampas crassa*, *Schizaster fragilis*, *Brissopsis lyrifera*, *Echinocardium australe*, *E. flavescens*, *Astropecten pontoparæus*, *Pseudarchaster tessellatus*, *Leptotyphaster kernelenis*, *Lindia africana*, *Pisaster acuminatus*, *Astropecten capensis*, *Culeita veneris*, *Palmipes novemradiatus*, *Asterina coccinea*, *Pentagonaster tuberculatus*, *Calliaster baccatus*, *Solaster penicillatus*, *Stichaster felipes*, *Retaster capensis*, *Asterias calamaria*, *Henricia ornata*, *Asterias volsellata*, *A. glacialis*, *A. capensis*, *Ophioderma wahlbergi*, *Ophiozona capensis*, *Ophiura trimeni*, *Amphiura incana*, *Ophiothrix aristulata*, *Ophiothamnus remotus*, *Ophiothrix roseo-coeruleans*, *O. triglochis*, *Ophioscalex dentatus*, *Gorgonocephalus pourtalesii*, *G. verrucosus*.
- Sponges*.—*Placospongia labyrinthica*, *Latrunculia natalensis*, *Kalastrella vasiformis*, *Coppatias baculifer*, *Tethya magna*, *Trachya nuda*, *Hymeniacidon caliculatus*, *Tragosia infundibuliformis*, *Phakellia microxephora*, *Axinyssa tethyoides*, *Syringella gorgonioides*, *Higginsia bidentifera*, *Sollasella hystrix*, *Sigmaxinella arborea*, *S. incrustans*, *Clathria mollis*, *C. typica*, *Bubaris reptans*, *Dendoryx incrustans*, *Histoderma natalense*, *Stylostichon involutum*, *Phlæodictyon eumitum*, *Hamacantha esperioides*, *Desmacidon grande*, *D. ramosum*, *Coscinoderma concentricum*, *Halichondria pachastrelloides*, *Psammopoma inordinatum*, *Hicinia arbuscula*, *Hicinia arenosa*, *Rhabdocalyptus plumodigitatus*, *Cratermörpha lankesteri*, *Spongocardium gilchristi*, *Tethya casula*, *Tetiela bonaventura*, *Pachastrella caliculata*, *Stellata (Astrella) harrens*, *Pachastrella isarrhapa*.
- Alcyonaria*.—*Acroplytum claviger*, *Heteroxenia capensis*, *Alcyonium pachyclados*, *A. antarcticum*, *Sarcophyllum trochiforme*, *Melitodes dichotoma*, *Spongioderma verrucosum*, *Gorgonia flammea*, *Eunicella papillosa*, *Juncella elongata*, *Primnoisia capensis*, *Villogorgia mauritiensis*, *Virgularia reinwardti*, *Cavernularia elegans*, *C. obesa*, *Alcyonium purpureum*, *Anthomastus grandiflorus*, *Wrightella coccinea*, *Trichogorgia flexilis*, *Acanthogorgia armata*, *Ciratoisia ramosa*, *Malacogorgia capensis*, *Gorgonia albicans*, *Juncella spiralis*, *Eugorgia gilchristi*, *Anthoptilum grandiflorum*.
- Hydrocoralline*.—*Allopara nobilis*.
- Turbinalid Corals*.—*Desmophyllum capense*, *Flabellum sibogæ*, *Trochocyathus cincticulatus*, *Flabellum pavoninum*, *F. rubrum*, *Sphenotrochus gilchristi*, *Trochocyathus rawsonii*, *Heterocyathus aequicostatus*, *Caryophyllia berteriana*, *C. capensis*, *C. epithecata*, *C. ephyala*, *Ceratotrochus johnsoni*, *Duncania capensis*, *Cyathoceras cornu*.
- Marine Annelids (Polychaeta)*.—*Euphrosyne capensis*, *Lepidonotus wahlbergi*, *Euphrosyne elisabethæ*, *Eunoa capensis*, *Polynoe capensis*, *Hemelipidia tuberculata*, *Sthenelais boa*, *Eulalia viridis*, *Pionosyllis malmgreni*, *Autolytus prolifer*, *Eteone spitsbergensis*, *Syllis cornuta*, *Nereis*

(*Mastigoneersia*) *variegata*, *Lysidice capensis*, *Eunice aphroditois*, *Marphysa sanguinea*, *Arabella* (*Aracoda*) *iricolor*, *Lumbriconereis tetraurus*, *L. cavifrons*, *Trophonia capensis*, *Flabelligera luctator*, *F. marenzelleri*, *Polynoë* (*Macellicephalo*) *mirabilis*, *Polyeunoe levis*, *Chaetopterus variopedatus*, *Theodisca* (*Anthostoma*) *hexaphyllum*, *Cirratulus cirratus*, *C. tentaculatus*, *Dasybranchus caducus*, *Nicomache lumbricalis*, *N. McIntoshi*, *Praxilla praetermissa*, *Sabellaria* (*Pallasia*) *capensis*, *Pectinaria capensis*, *Schmardanela pterochaeta*, *Potamilla reniformis*, *Bispira volutacornis*, *Sabelliphilus* (?) *bispira*, *Protula capensis*.

7.—LIST OF ADDITIONS TO THE DEPARTMENT OF ANTHROPOLOGY AND ANTIQUITIES DURING THE YEAR.

(a) ANTHROPOLOGICAL.

Donors.	Donations.
J. Clark	2 fragments of pottery from Strandfontein, Cape Div.
J. Crawford	4 Stone Implements from Port Elizabeth.
S. R. Ennis	Knife-like Stone Implement from Bushman's Hoek, near Sterkstroom.
Col. Feilden	Brass Ornament, probably the curb of a horse bit, found in a grave with stone implements on the Cape Flats.
M. Jacotet	Brass Neck Ring (Sesuto).
J. C. Keytel	2 Barotse Wooden Dishes.
Admiral Maclear	Implement of banded jasper from Griqualand West. 2 Arrow Heads from Peru.
Mrs. M. L. Milne	Ring Stone said to be from Atacama in Chile. Collection of Implements and Ornaments from Kashmir and Northern India, including charms, lamps, bracelets, necklets, flint and steel case, etc., etc.
R. Moffat	2 samples of fishing nets used by Mahenga tribe, Florence, being Lake Nyasa.
J. Morris	Native iron hoe found in Cape Town Suburbs.
Dr. T. Muir	Large Hippopotamus Tusk obviously used as a weapon, from the Tarka River, Cradock, Cape Colony.
J. B. Parkinson... ..	4 Stone Scrapers from a farm in the Fauresmith District, O.R.C., on the Orange River.
J. Paynter	4 Stone Implements from Touw's River.
L. Pinguéy, and T. M. Bain	Large collection of arrow heads, scrapers, pounders, etc., found at Bloembosch, in the Malmesbury District, in conjunction with remains of <i>Bubalus Bains</i> and other Mammals.
Miss Plewman	Bushman Quiver made of leather, with arrows, from Colesberg Div.
Rhodesia Museum	Section of an old wooden post taken from the Regina Ruins, Insiza District, S. Rhodesia.
A. W. Rogers	Stone Implements, chips and flakes, from the Hay, Prieska, and Van Rhynsdorp Divisions.
R. Rosenthal	Pottery vessel from Benin (Admiral Rawson's Expedition).
Claude Southey... ..	Stone knives and flakes from Culmstock, Middelburg division, C.C.
A. L. du Toit	Collections of scrapers, flakes, etc., etc., from the neighbourhood of Lady Frere, Dordrecht and Vryburg.
The Rev. G. Waits	Ringstone, round nodule, and stone implements, all from the Prince Albert Division.
John Wood	Collection of stone implements from different localities in Cape Colony. Large Kafir wooden spoon.
F. Yon... ..	Neolithic stone axe-head from Bona in Algeria.
Purchased in Basutoland by the Director	Collection of Sesuto implements and ornaments, including porcupine quill head-dress, flat basket, beer jar, straw hat, spatule, musical box, etc., etc.
Purchased	Skin petticoat, "Mose," of Sesuto, from Basutoland.
Purchased	Zulu doll (made by barren women).

(b) ANTIQUARIAN.

Messrs. Murray Bros., of Quaggafontein, Colesberg Division	Portions of Baron van Plettenberg's boundary stone from the Seacow River, Colesberg division.
Public Works Department	Slate tablet from the "Arniston" downs, Marcus Bay, Bredasdorp division, commemorating the wreck of the transport "Arniston" in 1815.

(c) COINS.

W. J. H. Benter	Transvaal Government Note for £10, printed on the veld during the War.
Mrs. B. Johnson	6 copper coins (various).
O. Kolsech	1 copper coin, George III.
R. M. Lightfoot... ..	22 copper coins (various).
Sir William Thorne	Silver and Bronze Coronation Medals of Edward VII., dated 1902.

Purchased	Donor.	Donation.
				2 gold coins, Philip of Macedon,	4 gold Mohur of East India Company.
				6 silver coins : 2 English, Edward VI. and George III. ; 3 Dutch East India Company ; 1 Java.	
				2 copper coins : Dutch East India Company and Roman Empire.	
				2 silver medals : Lord Roberts and Sir George White.	
				1 bronze medal : Christian de Wet and Koos de la Rey.	

8.—LIST OF ADDITIONS TO THE DEPARTMENT OF GEOLOGY AND MINERALOGY DURING THE YEAR.

— Bradley	...	...	...	Banket, Iron Pyrites : Robinson Mine, Johannesburg.
				Staurolite, etc. : Manicaland.
R. Bromley	...	...	...	Kaolin : Claremont Flats.
R. Broom	...	...	...	<i>Palaeomutulus</i> : Klein Waterval, Prince Albert.
Alfred Brown	...	...	...	Fossil fern, not yet determined : Aliwal North.
J. L. Cairncross	...	...	...	<i>Schizoneura</i> and <i>Spicophyton</i> : Prince Albert.
The Rev. N. W. Fogarty	...	...	...	Building stone : Caledon River, Maseru.
J. A. Giffen	...	...	...	Crystals of Gypsum : Port Nolloth.
The Rev. Dr. Kolbe	...	...	...	Collection of minerals, Tsumeb, Damaraland.
T. N. Leslie	...	...	...	Fossil plants : Vereeniging.
G. C. Long	...	...	...	Fossil plants : Basutoland.
— Melle	...	...	...	Concretionary nodules : Swellendam.
F. Oats, M.L.A.	...	...	...	Bornite, Pella, Magnetite : Witwaters North, Concordia.
P. H. du Plessis	...	...	...	Gold in quartz : Gans Kraal, Prince Albert.
Premier Diamond Mining Company	...	...	...	Photographs of the Cullinan diamond.
Rhodesia Museum, Bulawayo	...	...	...	Collection of minerals and rocks : Rhodesia.
G. Robertson	...	...	...	Collection of shells from Little Brak River.
Sedgwick Museum, Cambridge	...	...	...	54 Cambrian and Ordovician fossils, Great Britain.
G. D. Smith, M.L.C.	...	...	...	Crocidolite : Marokweng.
H. W. Struben	...	...	...	Magnetite : The Pyramids, Pretoria.
Tanganyika Concessions, Ltd.	...	...	...	Cassiterite and ingot of Tin : Central Africa.
				Chrysocolla : Kansanshi Mine, N. W. Rhodesia.
G. Trill	...	...	...	Cassiterite crystals and Wolframite : Kuil's River.
A. R. Wagg	...	...	...	Cassiterite : Vlaaklaagte, Pretoria.
The Rev. J. H. Whaits	...	...	...	<i>Spicophyton</i> : Prince Albert.
.. .. and J. L. Cairncross	...	...	...	Collection of Bokkeveld fossils, including several Trilobites new to the museum collection, <i>Buchiola</i> , etc.

LIST OF ADDITIONS TO THE DEPARTMENT OF VERTEBRATE PALEONTOLOGY DURING THE YEAR.

Broom, R.	...	...	...	Cast of <i>Colacanthus africanus</i> , Broom : Caledon River.
				Remains of <i>Titanosuchus</i> : Prince Albert Road Station.
Alfred Brown	...	...	...	Part of mandible of <i>Cyclotosaurus albertyni</i> , Broom : Aliwal North.
				Skull of <i>Cynocephalus</i> ; Kraai Poort, Aliwal North.
				Skull of <i>Diadenodon mustacus</i> , Seeley : Aliwal North.
				Skull of <i>Gomphocephalus kannemeyeri</i> , Seeley, Aliwal North.
				A number of specimens not yet determined, Aliwal North.
I. L. Cairncross	...	...	...	Part of the skull of <i>Archaeosuchus cairncrossi</i> , Broom, and other reptilian remains not yet determined ; Ecca Beds, Prince Albert.
				Skull of <i>Dicynodon jouberti</i> , Broom : Prince Albert Road Station.
				Skull of <i>Parasaurus</i> : Prince Albert.
				Fossil fishes, not yet determined ; Prince Albert.
— Lomas	...	...	...	Slab with footprints.
E. C. Long	...	...	...	Dinosaurian remains, not yet determined ; Basutoland.
				<i>Semionotus capensis</i> , Woodward ; Ficksburg.
H. M. Oakley and J. M. Bain	...	...	...	Interesting collection of fossil bones from the superficial deposits near Darling, including skull of <i>Bubalus bairni</i> , and bones of <i>Rhinoceros</i> , <i>Equus</i> , <i>Taurotragus</i> and <i>Hyaena</i> .
J. S. du Plessis	...	...	...	Fossil fish, nov. sp. ; Doorn River, Cradock.
P. H. du Plessis	...	...	...	Skull of <i>Glanosuchus macrops</i> ; Zeekoegat, Prince Albert.
				Part of jaw and cast of anterior part of skull of <i>Lycosuchus vanderietzi</i> , Broom ; Zeekoegat, Prince Albert.
				Skeleton of ? <i>Oudenodon megalochinus</i> , Broom ; Zeekoegat, Prince Albert.
				Skull of <i>Parasaurus bairni</i> , Seeley ; Zeekoegat, Prince Albert.
				Parts of jaw of <i>Titanosuchus ferox</i> , Owen ; Zeekoegat, Prince Albert.
				Fish scales ; Zeekoegat, Prince Albert.
				Two skulls of a new Therocephalian ; Klein Waterval, Prince Albert.
				Skull of a second new Therocephalian ; Klein Waterval, Prince Albert.
				<i>Pelosuchus priscus</i> ; Bokfontein, Prince Albert.

Donors.	Donations.
P. le Roux	Part of Skull of <i>Titanosuchus</i> , sp., and other reptilian remains; Uitkyk, Beaufort West.
Claude Southey	Fragments of skeleton of <i>Procolophon</i> and of a Labyrinthodont; Schombie District.
The Rev. J. H. Whaites	Skull of <i>Lycasuchus vandervielii</i> , Broom, and other reptilian remains; Fraserburg Road Station.

LIST OF ADDITIONS TO THE HERBARIUM DURING THE HALF-YEAR
(JULY 1ST TO DECEMBER 31ST).

Albany Museum	5 Photographs—Aloe Greatheadii, Schönl., Aloe Orpeniae Schönl., Aloe Davyana, Schönl., Aloe decora, Schönl., Aloe n. sp.
— Cawod	<i>Dichilus lebeckioides</i> , DC. (?)
H. C. Chalwin	<i>Phillyrea latifolia</i> , L.
Mrs. Davidson	<i>Podalyria biflora</i> , Lam., <i>Pelargonium tricolor</i> , Bot. Mag. <i>Lachnaea</i> sp., <i>Sorocephalus villosus</i> , Schlect., <i>Prismatocarpus roelloides</i> , Sond., <i>Ornithogalum pilosum</i> , L., <i>Ornithogalum thyrsoides</i> , Jacq., <i>Satyrion bicorne</i> , Th., <i>Crassula portulacaeae</i> , Lam., <i>Hesperantha falcata</i> , Ker., <i>Heterolepis decipiens</i> , Cass., <i>Albuca</i> sp., <i>Helioterium variegatum</i> , DC., <i>Helichrysum ramulosum</i> DC., <i>Wahlenbergia</i> sp., <i>Athanasia longifolia</i> , Lam., <i>Aspalanthus</i> sp., <i>Teedia lucida</i> , Rud., <i>Barosma lanceolata</i> , Sond., <i>Phyllis</i> sp., <i>Spatalla</i> sp., <i>Spatalla</i> sp., <i>Serruria acrocarpa</i> R. Br., <i>Sorocephalus</i> sp., <i>Metalsia</i> sp., <i>Brunia Marlothii</i> , Schl., <i>Dilatris corymbosa</i> , Berg., <i>Bulbinella caudata</i> , Kunth., <i>Crassula peploides</i> , Harv., <i>Lobostemon Swartzii</i> , Buck.
Dr. P. MacOwen	<i>Phillyrea angustifolia</i> , Linn., <i>Cotyledon gracilis</i> , Harv., <i>Callitris</i> sp.
Dr. W. Robertson	<i>Holcus lamatus</i> , Linn., <i>Morrea</i> sp.
Dr. Sclater	<i>Widdringtonia</i> sp.
W. L. Sclater	<i>Eulophia cochlearis</i> , Lindl.
W. Smale	<i>Encephalartos</i> sp.
J. Smith	<i>Azelia cuanzensis</i> , Welw.
Mr. Storey	<i>Chaillitia cymosa</i> , Hook., <i>Bromus maximus</i> Desf.

II.—LIST OF ADDITIONS TO THE LIBRARY.

(a) BY EXCHANGE OR PRESENTATION.

Adelaide, Public Museum and Library	Annual Report 1903-4.
Algiers, Agricultural Department	Bulletin Nos. 11-18, 1905.
Algiers, Horticultural Society	Revue Horticole Nos. 6-8, 1905.
Buitenzorg, Botanic Gardens	Mededeelingen Nos. 73-75.
Bergen, Museum	Aarsberetning, 1904.
Berlin, Entomological Union	Aarboeg, 1904, 3rd Hft., 1905, 1st and 2nd Hft.
Berlin, German Entomological Society	Zeitschrift, Vol. XLIX., Hft. 3-4. Vol. L., Hft., 1-2
Berlin, Royal Museum of Natural History	Zeitschrift, 1905, Hft. 1-2.
Boston, Natural History Society	Mitteilungen, Vol. II., Hft. 4. Vol. III., Hft. 1.
Brisbane, Queensland Museum	Bericht, 1903-1904.
Brisbane, Royal Society of Queensland	Proceedings, Vol. XXXI., Nos. 2-10. Vol. XXXII., Nos. 1-2.
Brussels, Entomological Society of Belgium	Annals, No. 6.
Brussels, Congo Museum	Proceedings, Vol. XIX., pt. 1.
Brussels, National Botanic Gardens	Annales, Vols. 48, Nos. 12-13. Vol. 49, Nos. 1-9.
Brussels, Royal Malacological Society	Annals, Zoologie, Ser. 1, Vol. I., Fas. 1-6. Vol. II., Fas. 1-2. Ser. 3, Vol. I., Fas. 1-2.
Buda-Pest, National Hungarian Museum	Botanique, Ser. 1, Vol. I., Fas. 1-8. Ser. 2, Vol. I., Fas. 1, 2, and 2 bis. Ser. 3, Vol. I., Fas. 1-2. Ser. 4, Vol. I., Fas. 1-3. Ser. 5, Vol. I., Fas. 1-2. Ser. 6, Vol. I., Fas. 1.
Buenos Aires, National Museum	Ethnographie, Ser. 1, Vol. I., Fas. 1. Ser. 2, Vol. I., Fas. 1. Ser. 3, Vol. I., Fas. 1. Ser. 4, Vol. I., Fas. 1-5.
Buitenzorg, Botanic Gardens	Notice sur des Plantes utiles ou intéressantes de la Flore du Congo Pts. 1-3, by E. de Wildeman.
Bulawayo, Rhodesian Museum	Bulletin, Vol. I., Fas. 5-6.
Bulawayo, Rhodesia Scientific Association	Bulletin, Vol. XXXIV., XXXVIII., XXXIX.
Cairo, Zoological Gardens	Anales, Vol. III., pt. 1.
	Anales, Ser. 3, Vols. IV.
	Bulletin, No. 20-21.
	Verslag, 1904.
	3rd Annual Report.
	Proceedings, Vols. IV-V., pt. 1.
	Annual Report, 1904-5.
	Report, 1904.

Donors.	Donations.
Calcutta, Agricultural Department	The Agricultural Ledger, Nos. 1-2, 1905.
Calcutta, Asiatic Society of Bengal	Proceeding, Nos. 6-11, 1905. Journal, Vol. LXIII, pt. 2, Nos. 2-5 and sup. Journal and Proceedings, Vol. I., Nos. 1-4.
Calcutta, Indian Museum	Annual Report, 1903-4. An account of the Deep Sea Holothurioidæ collected by the Indian Marine Survey Ship, Investigator, by Kochler and Vanev. Catalogue Indian Decapod Crustacea, in the Indian Museum, Part II., Fas. 1, by A. Alcock. Illustrations of the Zoology of the Indian Marine Survey Ship Investigator, Crustacea, Pt. IX., Fishes, Pt. 8.
Cambridge, Mass., Museum of Comparative Zoology	Bulletin, Vol. XLII., No. 4-6. Vol. XLV., No 4. Vol. XLVI, No. 4-9. Vol. XLVII., No. 1. Annual Report, 1903-4.
Cambridge, Philosophical Society...	Proceedings, Vol. XIII, pts. 2-3.
Cape Town, Colonial Government	Agricultural Journal, Vol. XXVI., Nos. 1-12. Vol. XXVII., No. 1-6. Marine Investigations in South Africa, Vols. II., III., pp. 19-152. International Catalogue of Scientific Literature, N. Zoology, 3rd issue. Report, Government Entomologist, Jan.-June, 1904. Report of the South African Native Affairs Commission, 1903-5. Flora Capensis, Vol. IV., Sec. 1, pts. 1-2. Instructions regarding the formation of Natural History Collections. Belangrijke Historische Dokumenten No. 1, by G. McC. Theal. Annual Report, 1904, and Index to Reports.
Cape Town, Geological Commission	Report of 1904 Meeting.
Cape Town, South African Association for the Advancement of Science	Science in South Africa edited by Flint and Gilchrist. Publications, Nos. 93, 94, 98, 101.
Chicago, Field Columbian Museum	Spolia Zeylanica, Vol. II., pt. 7-10.
Colombo, Museum	
Dar-es-Salam, Land and Forestry Department, German East Africa	Bericht, Vol. II., pts. 4-6.
Dresden, Geographical Society	Mitteilungen, I. and pt. I., 1905.
Dublin, Royal Society	Scientific Proceedings, Vol. X, pt. 2. Scientific Transactions, Vol. VIII., Nos. 6-16, and Index, Vol. IX., pt. 1. Economic Proceedings, Vol. I., pt. 5.
Frankfort, A.M., New Zoological Society	Der Zoologische Garten, Vol. I., pt. 5.
Frieburg Natural History Society...	Bericht, Vol. IV.—XIV.
Geneva, Museum of Natural History	Annales, Tome, XIII., Fas. 1-2.
Genoa, Civic Museum of...	Annali, Ser. 3, Vol. I.
Giessen, Upper Hessian Society of Natural Science	Bericht, Vol. XXXIV.
Grahamstown, Albany Museum	Report, 1904. Records, Vol. I., pts. 4-5. Mitteilungen, Vol. XXI.
Hamburg, Natural History Museum	
Honolulu, Bernice Pauahi-Bishop Museum	Occasional Papers, Vol. II., No. 3.
La Plata Museum	Paleontologia Argentina, No. 2.
Leyden, The Museum	Report, 1903-4. Notes, Vol. XXV., No. 3-4, Vol. XXVI., Nos 1, 2 and 3. Return, 1904-5.
London, British Museum	Catalogue of the Books, Maps, etc., in the British Museum, Vol. II. History of the Collections contained in the Natural History Department of the British Museum. An introduction to the study of Meteorites. Catalogue of the Mesozoic Plants in the Department of Geology, pt. 4. Catalogue of the Lepidoptera Phalaenæ, Vol. V. and plates. Catalogue of the Collection of Birds' Eggs in the British Museum. Guide to the Gallery of Birds in the British Museum. Quarterly Journal, Vol. 54-60, Vol. 61, pts. 1-3.
London, Geological Society	Journal, Nos. 179-192
London, Linnean Society	Philosophical Transactions, Vol. 197.
London, Royal Society	Report of the Sleeping Sickness Commission of the Royal Society
London, Zoological Society	Proceedings, 1904, Vol. I., pt. 2; Vol. II., pts. 1-2, 1905; Vol. I., pts. 1-2.
Lübeck, Geographical and Natural History Society	Mitteilungen, Vol. II., Nos. 14-20.

Donors.	Donations.
Madras, Agri-Horticultural Society	Proceedings, January-June, 1905. Annual Meeting, 1905.
Madrid, Royal Spanish Society, of Natural History	Memoirias, Vol. I., No. 5-13; Vol. II., No. 5-9; Vol. III., No. 1-4. Boletin, Vol. IV., Nos. 3-10; Vol. V., No. 1-7.
Manchester Literary and Philo- sophical Society	Memoirs and Proceedings, Vol. 49, pts. 1-3.
Marseilles, The Museum...	Annales, Vol. IX., pt. 1.
Melbourne, Royal Society of Victoria	Proceedings, Vol. XVII., pt. 2; Vol. XVIII., pt. 1.
Milan, Natural History Museum ...	Atti, Vol. XLIII., Fas 4; Vol. XLIV., Fas. 1-2.
Milwaukee, Public Museum ...	22nd Annual Report.
Monaco Oceanographic Museum ...	Bulletin, Nos. 20-55. Résultats des Campagnes Scientifiques, Fas. 28-30. Annales, Vol. II., No. 17.
Montevideo, National Museum ...	
Moscow, Imperial Society of Naturalists... ..	Bulletin, Vol. XVIII., No. 1.
Naples, Academy of Science ...	Rendiconti, Ser. 3, Vol. IX., Fas. 8-12; Vol. X., Fas. 1-7.
New Brunswick, New Jersey Ex- periment Station	Bulletin, Nos. 178, 181, 186. Report, 1904. Report upon the Mosquitoes occurring in the State of New Jersey, U.S.A.
Newcastle-on-Tyne, Natural History Society of Northumberland, Durham, etc.	Transactions, Vol. XV., pt. 1, Vol. I. (n. ser.), pt. 2.
New York, American Museum of Natural History	Annual Report, 1904. Bulletin, Vol. XVII., pt. 3, Vol. XX. The Grande Soufrière of Guadeloupe. Funeral Urns from Oaxaca. Album of Phillipine Types. The Wilson Bulletin, Nos. 47-51. Bulletin, No. 6, 1904 Nos. 1-3, 1905. Bulletin, Vol. XIX.
Oberlin, Ohio, College	
Paris, Natural History Museum ...	Bulletin, No. 6, 1904 Nos. 1-3, 1905.
" Zoological Society of France	Bulletin, Vol. XIX.
Perth, Department of Agriculture of West Australia	Journal, Vol. XI., pt. 6, Vol. XII., pts. 1-3.
Philadelphia, Academy of Natural Sciences	Proceedings, Nos. 1-6, 1868, 1-4, 1869, 1-3, 1870. " Vol. LVI., pts. 2, 3, Vol. LVII., pt. 1.
Philadelphia American Philosophical Society	Proceedings, Nos. 177-180.
Pittsburg, Carnegie Museum	Annual Report, 1904. Founder's Day, 1934. Annals, Vol. III., pts. 1 and 2. Memoirs, Vol. II., pts. 2-5.
Plymouth, Marine Biological Asso- ciation	Journal, Vol. VII., No. 2.
" Museum and Art Gallery ...	6th Annual Report.
Pretoria, Department of Agriculture	Transvaal Agricultural Journal, Nos. 12 and 13.
" Mines Department ...	The Geology of Pretoria and Neighbourhood, and Maps.
" South African Ornithological Union	Journal, Vol. I., pt. 1, Atti, Vol. XIV., ser. 5, Fas. 1-14.
Rome, Royal Academy of the Lincei	
San Francisco, Californian Academy of Sciences... ..	Proceedings, Vol. III., pts. 7-13, and Index to Vols. I. and II.
" University of California ...	Publications, Zoology, Vol. I., Nos. 2-6.
Sao Paulo, Museum	Revista, Vol. VI.
Singapore, Agricultural Office ...	Bulletin, Vol. IV., Nos. 4-8.
" Botanic Gardens ...	Annual Report, 1904.
Stettin, Entomological Society ...	Zeitung, Vol. 66, No. 1.
Stockholm, Entomological Society	Entomologist Tidskrift, Vol. XXV., No. 1-4.
St. Petersburg, Entomological So- ciety of Russia	Horae Soc. Entom. Ross., Vol. XXXVII., Nos. 1, 2.
Sydney, Australian Museum ...	Report, 1903-4. Memoirs, Vol. IV., pt. 9. Records, Vol. V., No. 5 and 6, Vol. VI., Nos. 1 and 2.
" Department of Mines ...	Records, Vol. VII., pt. 4, Vol. VIII., pt. 1. Memoirs, Paleontology, No. 13.
" Fisheries Commission ...	Report, 1903.
" Linnean Society ...	Proceedings, Vol. XXVIII., pt. 4, Vol. XXIX., pts. 1 and 2.
Tokio, Imperial Museum ...	Natural History Proceedings, Vol. I., Nos. 1 and 2.
" Zoological Society of Japan	Annotationes, Vol. V., pts. 3 and 4.
Tring, The Museum	Novitates Zoologicae, Vol. XII., Nos. 1, 2.
Upsala, Geological Institute ...	Bulletin, Vol. VI., Fas. 11 and 12.
Valparaiso, Museum	Revista Chilena, Vol. IX., No. 4.
Vienna, Imp. Roy. Zoological and Botanical Society	Verhandlung, Vol. LIV., Hft. 1-10.
Washington, Academy of Sciences...	Proceedings, Vol. IV., pp. 203-481, Vol. V., pp. 1-300.

	Donors.		Donations.
Washington	Smithsonian Institution	...	Annual Report, 1903-4. American Hydroids, Part III. Description of a new <i>Sylvietta</i> . Miscellaneous Collections, Vol. III, Part 1.
Washington,	U.S. Department of Agriculture	...	North American Fauna, No. 24.
Washington,	U.S. National Museum	...	Report 1902. Bulletin, 50 and 51, pt. 1. Contributions from the Herbarium, Vol. IX.
Bruce, Wm. S.	Outline Map of Laurie Island, South Orkneys, 1903.
Cameron, P.	Descriptions of a new Genus and three species of Chalcididae from South Africa. A new Genus and species of Cynipidae from South Africa.
Davis, C. A.	Check list of the Minerals of Rhode Island.
Prof. Hetschko	Wiener Entomologische Zeitung, Vol. XXIII.
Kerrenmans, Ch.	Faune Entomologique de l'Afrique Tropicale, Buprestidae I.
Kunz, G. F.	Moissanite.
Leigh, G. F.	Synepigonid series of <i>Papilio cenea</i> and <i>Hypolimnas misippus</i> .
Linton, R. G.	On the morphology of the Mammalian Palatine Rugae.
Luchan, Von	Anleitung für Ethnographische Beobachtungen und Sammlungen in Afrika, etc.
Péringuey, L.	A brief sketch of the South African Insect Fauna.
Poole, F. S.	The relations of the superior oblique muscle of the eye in the Mammals.
Raffray, A.	Généra et Catalogue des Psélaphides.
Roux, Dr. J.	Reptilien und Amphibien aus Celebes. La Famille des Ranidae.
Sclater, W. L.	Report Western Province Game and Trout Protection Association, 1904. Bulletin British Ornithological Club. Nos. 100-119. The distribution of African Freshwater Fishes, by G. A. Boulenger.
Seton-Karr, H. W.	Fayoum Flint Implements.
Shrubsall, F.	Crania of African Bush Races. A study of Bantu Skulls and Crania, and Notes on Ashanti Skulls and Crania.
Tragardh, Ivar	Acariden aus Agypten und dem Sudan. Teil 1.
Vanhoffen, Dr. E.	Einige Zoogeographische Ergebnisse der Deutschen Südpolar Expedition.
Visiak, H. C.	A Map of the Peninsula of the Cape of Good Hope.
Wilman, Miss	Expériences synthétiques relatives aux Météorites, by A. Daubrée. Notice sur deux espèces de Brachiopodes, by J. de Konick. Proceedings Royal Geographical Society, Vol. VI, No. 1, 1884.

(b) BY PURCHASE.

- André, E., Species des Hyménoptères, Fas 88-90.
 Bartlett, Ed., A Monograph of the Weaver Birds.
 Bedriaga, Dr. J. v., Beiträge zur Kenntniss der Lacertiden Familie.
 Bethel, A. J., Notes on South African Hunting.
 Bingham, C., Fauna of British India. Butterflies, Vol. I.
 Bocage, J. & B., 7 Pamphlets on Reptiles, amphibia.
 Bocage, J. du, Mélanges Erpétologiques.
 Boettger, Prof. O., Eine neue Eidechse aus Süd-West Afrika.
 Bolivar, J., Monografía de los Pírgomorfinos.
 Chaper, M., Constatation de l'existence, du terrain glaciaire dans l'Afrique.
 Chavanne, J., Afrika im Lichte unserer Tage.
 Chun, Ch., Wissenschaftliche Ergebnisse der Deutschen Tiefsee Expedition auf dem Dampfer Valdivia, 1898-89, Vol. II., pt. 1. IV., V., pt. 1, VI., VII., pt. 2, VIII., IX., pt. I.
 Clifton, W., The Birds of Keiskama Hoek, Cape Colony.
 Cohn, L., Der Tentakelapparat von *Dactyletra calcarata*.
 Cuvier, Le Règne Animal.
 Dana, E. S., Descriptive Mineralogy.
 Dewitz, H., Afrikansche Tagsschmetterlinge.
 Afrikansche Nachtschmetterlinge.
 Distant, W. L., Insecta Transvaaliensia, pts. 5-6.
 Doudin, W. L., Histoire Naturelle des Reptiles.
 Drygalski, E. von, Zum Kontinent des eisigen Südens Deutsche Südpolar Expedition, 1901-3.
 Duvernoy, G. L., Fragments d'histoire Naturelle. les Musaraignes.
 Dyer, W. Thiselton, Flora of Tropical Africa.
 Engler, A., Das Pflanzenreich Hft. 21-22.
 Fischer, P., Recherches sur les Reptiles fossiles de l'Afrique Australe.
 Gürich, G., Deutsch-Südwest Afrika.
 Hatch & Corstorphine, The Geology of South Africa.
 Hilaire, Geof. S., Sur la Giraffe.
 " Genus Proteles.
 Herman, O., Die Decticiden der B. von Wattenwyl'schen Sammlung.
 " The Method for Ornithophaenology.

- Huet, M., Recherches sur les Ecurouils Africains.
Liste des espèces des Antilopides.
- James & Lister, A Monograph of the Anopheles Mosquitoes of Africa.
- Jordan, D. S., Fishes.
- Kerremans, C., Monographie des Buprestides, Vol. I., Fas. 2-14.
- Kolbe, H. J., Beiträge zur Zoogeographie Westafrikas.
Ueber Coleopteren von Deutsch Ostafrika und Mosambik.
- Lewis, G., A systematic Catalogue of Histeridae.
- Lampe, Ed., Catalogue des Reptilien und Amphibien in Sammlung des Naturhistorischen Museum zu Wiesbaden.
- Loudon, J. C., An Encyclopædia of Gardening.
- Meyer, A. B., Studies of the Museums of New York City.
- Murray, D., Museums : their History and their use, Vol. I.-III.
- Peters, W., Flederthieren und Amphibien aus Otjimbingue in Südwestafrika.
Säugethieren und Amphibien aus der Insel Puerto Rico.
Beiträge zur Kenntniss der herpetologischen Fauna von Südafrika.
- Piaget, E., Les Pédiculines.
- Pocock, R. J., The Cape Colony Quaggas.
- Preiss, P., Neue Cetoniden aus Deutsch-Ostafrika.
- Redtenbaker, J., Monograph der Conocephaliden.
- Reed, C. K., Guide to Taxidermy.
- Rochobrunne, A. de, Faune de la Sénégambie.
- Roth, H. L., Great Benin, its Customs, Arts and Horrors.
- Shelly, G., Birds of Africa, Vol. IV, pt. 1.
- Sim, T. B., The Ferns of South Africa.
" Handbook of the Ferns of Kaffraria.
- Schaek, F. de, Monographie des Francolins.
- Senbra, A. F., Diagnoses de quelques nouvelles espèces et variétés de Chiroptères d'Afriques.
- Schaufuss, Dr. L., Nunquam otiosus, Vols. 1 and 2.
- Sherborn & Richmond, the New Species of Birds in Vroeg's Catalogue, 1764.
- Spinks & Sons, Numismatic Circular, Nos. 145-147.
- Trouessart, E., Catalogus Mammalium, Supl. Fas. 3 and 4.
- Waterhouse, C. O., Supplementary List of Generic Names.
- Woods, J. E. T., Monograph of the Genus Distichopora.
- Woods, Jos., The Tourist's Flora.
- Wytaman, P., Palaeontologia Universalis, Fas. 3.
" Genera Insectorum, Fas. 20-35.
" Genera Avium, Fas. 1-5.
- Annals and Magazine of Natural History, Nos. 85-96.
- Avicultural Magazine, Vol. III., pt. 3-12.
- Bulletin of the British Ornithological Club, Nos. 1, 3; 43, 47-53, 55-67.
- Das Tierreich, Lief. 23.
- Entomologische Litteraturblätter, 1904, No. 12, 1905, Nos. 1-12.
- Entomologist, Nos. 500-511.
- Entomologist Monthly Magazine, No. 488-489.
- Journal, Anthropological Institute, Vol. I., No. 3, Vol. VIII., No. 1.
- Journal of Botany, No. 511-516.
- Journal für Ornithologie, Vol. XLII., pts. 1-4.
- Museumskunde, Vol. I., Heft 1.
- Museum Journal, Vol. IV., No. 6 12, Vol. V., No. 1-5.
- Naturae Novitates, 1904, No. 24, 1905, No. 1-23.
- Nature, No. 1833-1884.
- Palaeontologia Universalis, Ser. II., Fas. 1.
- Wiener Entomologische Zeitung, Vol. XXIII., Hft. 1-10, XXIV., Hft. 1-6.
- Zoological Record, 1903.
- Zoologist, No. 762-773.
- Zoologischer Anzeiger, Nos. 482, 592, 468, 255, 574, 581.

12.—LIST OF INSTITUTIONS TO WHICH COPIES OF THE ANNALS HAVE BEEN SENT; FROM THOSE MARKED WITH AN ASTERISK SIMILAR PUBLICATIONS HAVE BEEN RECEIVED IN EXCHANGE.

(a) EUROPE.

- *1. The Cambridge Philosophical Society.
- *2. The Royal Dublin Society.
3. The Liverpool Public Museum.
- *4. The Royal Society.
- *5. The Linnaean Society.
- *6. The Zoological Society of London.
- *7. The Geological Society.
8. The Zoological Record.
- *9. The British Museum (Natural History).
- *10. The Manchester Literary and Philosophical Society.
- *11. The Manchester Museum.
- *12. The Plymouth Marine Biological Station.
- *13. The Tring Museum.
14. The Museums Association, Sheffield.
- *15. The Natural History Society, Newcastle-on-Tyne.
16. The Imperial and Royal Natural History Museum, Vienna.
- *17. The Vienna Entomological Journal.
- *18. The Zoological-Botanical Society of Vienna.

- *19. The National Hungarian Museum, Budapest.
- 20. The Royal Museum of Natural History, Brussels.
- *21. The Museum of the Congo, Brussels.
- *22. The Royal Malacological Society, Brussels.
- *23. The Entomological Society of Belgium.
- *24. The Zoological Society of France.
- 25. The Entomological Society of France.
- *26. The Museum of Natural History of Paris.
- *27. The Museum of Natural History, Marseilles.
- *28. The Oceanographic Museum, Monaco.
- *29. The Royal Museum of Natural History, Berlin.
- 30. The Society of the Friends of Natural History, Berlin.
- *31. The Entomological Union of Berlin.
- *32. The German Entomological Society, Berlin.
- 33. The Senckenberg Museum, Frankfurt a. M.
- *34. The New Zoological Society, Frankfurt a. M.
- *35. The Natural History Society, Freiburg i. B.
- *36. The Upper Hessian Society of Natural History and Medicine, Giessen.
- *37. The Natural History Museum, Hamburg.
- *38. The Natural History Museum, Lubeck.
- *39. The Entomological Club, Stettin.
- *40. The Royal Museum of Natural History, Leyden.
- *41. Messrs. E. J. Brill and Co., Leyden.
- *42. The Royal Academy of the Lincei, Rome.
- *43. The Civic Museum of Natural History, Genoa.
- 44. The Royal Museum of Natural History, Florence.
- *45. The Natural History Museum, Milan.
- 46. The Royal Museum of Zoology and Anatomy, Turin.
- 47. The Zoological Museum, Naples.
- *48. The Royal Spanish Society of Natural History.
- 49. The Zoological Museum, St. Petersburg.
- *50. The Entomological Society of Russia, St. Petersburg.
- *51. The Imperial Society of Naturalists, Moscow.
- 52. The Concilium Bibliographicum, Zurich.
- *53. The Museum of Natural History, Geneva.
- 54. The Royal Academy of Sciences, Stockholm.
- 55. The Royal Museum of Natural History, Stockholm.
- *56. The Entomological Society of Stockholm.
- 57. The Library of the Royal Museum of Upsala.
- *58. The Natural History Museum, Bergen.
- 59. The Royal Academy of Sciences, Lisbon.

(b) ASIA.

- *60. The Colombo Museum.
- *61. The Indian Museum, Calcutta.
- *62. The Asiatic Society of Bengal.
- 63. The Geological Survey of India.
- 64. The Government Central Museum, Madras.
- *65. The Natural History Department, Imperial Museum, Tokio.
- *66. The Zoological Society of Japan.
- *67. The Botanical Institute, Buitenzorg, Java.
- 68. The Royal Natural History Society, Batavia.
- 69. The Bureau of Government Laboratories, Manilla.

(c) AFRICA.

- *70. The Albany Museum, Graham's Town.
- 71. The Port Elizabeth Museum.
- 72. The King William's Town, Museum.
- 73. The Cape Town Public Library.
- 74. The Parliamentary Library, Cape Town.
- 75. The South African Philosophical Society.
- 76. The Government Entomologist, Cape Town.
- 77. The Public Library, Kimberley.
- 78. The Durban Museum.
- 79. The Durban Public Library.
- 80. The Natal Museum, Pietermaritzburg.
- 81. The Orange River Colony Museum, Bloemfontein.
- 82. The Government Library, Bloemfontein.
- *83. The Rhodesia Museum.
- *84. The Rhodesia Scientific Association.
- 85. The Public Library, Bulawayo.
- *86. The Museum, Pretoria, Transvaal.
- *87. The Geological Survey of the Transvaal, Pretoria.
- 88. The Welcome Research Laboratories, Gordon College, Khartoum.

(d) AMERICA.

- *89. The National Museum, Buenos Ayres.
- *90. The Museum of La Plata.
- 91. The National Museum of Rio de Janeiro, Brazil.
- 92. The Para Museum, Brazil.
- *93. The Sao Paulo Museum, Brazil.

- 94. The Nova Scotia Institute of Science.
- 95. The National Museum of Chili, Santiago.
- 96. The Museum of Natural History, Valparaiso.
- 97. The Boston Society of Natural History.
- 98. The Museum of Comparative Zoology, Cambridge, Mass.
- 99. The Field-Columbian Museum, Chicago, Ill.
- 100. The Milwaukee Public Museum.
- 101. The American Museum of Natural History, New York.
- 102. The New York Zoological Park.
- 103. The American Geographical Society, New York.
- 104. The Princetown University, New Jersey.
- 105. The Academy of Natural Sciences, Philadelphia.
- 106. The American Philosophical Society, Philadelphia.
- 107. The Californian Academy of Science.
- 108. The University of California, Berkeley, Cal.
- 109. The Carnegie Museum, Pittsburg.
- 110. The Smithsonian Institution.
- 111. The United States National Museum.
- 112. The United States Department of Agriculture.
- 113. The Washington Academy of Natural Sciences.
- 114. The National Museum of Natural Sciences, Uruguay.

(c) AUSTRALASIA.

- 115. The Australian Museum, Sydney.
- 116. The Linnean Society of New South Wales.
- 117. The Geological Survey of New South Wales.
- 118. The Queensland Museum, Brisbane.
- 119. The Bernice-Pauahi-Bishop Museum, Honolulu.
- 120. The Royal Society of South Australia.
- 121. The Public Museum of South Australia.
- 122. The Royal Society of Victoria.
- 123. The National Museum, Melbourne.

DR. STATEMENT OF THE INCOME AND EXPENDITURE OF THE SOUTH AFRICAN MUSEUM FOR THE YEAR ENDED 30TH JUNE, 1905. CR

To Balance from last year	£148 1 7	By General Museum Expenditure :—	
" Ordinary Government Grant	3,050 0 0	Salaries	£2,526 0 0
" Special Government Grant for Show Cases	250 0 0	Christmas Boxes to Attendants	24 12 0
" Government Grant in aid of publication of Annals	70 0 0	Purchase of Taxidermist and other Stores	85 3 1
" Proceeds of sale of Annals	8 3 8	" Books	113 17 11
	78 3 8	" Specimens... .. .	59 6 10
" Grant from Cape Town Corporation towards expenses of Sunday Opening	100 0 0	" Coins	3 2 6
" Interest received on Hadje Shah Sulieman Mohammed Fund, vide Annexure "B"	4 15 0	" Glass Jars... .. .	38 0 2
" Geological Commission, for Annals, vide Annexure "A"	24 18 2	Installation of permanent fixtures—Carpenter's work, &c... .. .	29 9 8
" Public Works Department—refund of Gardener's Wages, &c.	55 10 0	Renewal of Museum Blinds	21 7 0
" Rhodesian Railways—refund of Taxidermist's Fare—Vryburg to Victoria Falls	14 10 0	Uniforms for Attendants	23 4 7
" Cape Government Railway—refund of overpayment on carriage	1 10 3	Freight and Clearing	16 16 9
		Travelling Expenses: including Victoria Falls Expedition	58 13 4
		Labelling (wages of writer)	20 3 0
		Cleaning Museum, Washing, "Petties"	24 1 11
		Postage	12 18 6
		Insurance	24 0 0
		Rent of Telephone and Post Office Box	11 10 0
		Expenses of Sunday Opening... .. .	73 10 0
		Auditors' Fee	3 3 0
		Advance to G. Williams, written off under authority of the Board of Trustees	9 5 0
		Bank Charges	1 9 2
			£3,179 14 5
		" Publication of Annals vide Annexure "A"	87 19 2
		" Balance 30th June, 1905 :—	
		Cash in Bank, Ordinary Account	109 15 4
		Special Government Grant for Show Cases—unexpended	250 0 0
		Hadje S. Mohammed Special Account vide Annexure "B"	10 5 10
			370 1 2
		Petty Cash in hand	7 3 11
		Public Works Department—Advance outstanding... .. .	82 10 0
			459 15 1
	£3,727 8 8		£3,727 8 8

Audited and found satisfactory.
WALTER E. GURNEY, Controller and Auditor-General.
17th November, 1905.

W. L. SCLATER,
Director, South African Museum.
October, 1905.

ANNEXURE "A."

DETAILS OF EXPENDITURE ON PUBLICATION OF ANNALS DURING THE YEAR ENDED 30TH JUNE, 1905.

	£	s.	d.	£	s.	d.
Printing of Vol. III, part 6, 134 pages				48	4	0
† Printing of Vol. IV., part 6, 36 pages and 3 Plates				39	15	2
Total amount expended in publication of Annals in 1904-5:—				<u>87</u>	<u>19</u>	<u>2</u>
Advance from last year, repaid by Geological Commission ...	41	1	8			
Repaid by Geological Commission for expenditure incurred in 1904-5 on Vol. IV, part 6	24	18	2	24	18	2
	<u>£65</u>	<u>19</u>	<u>10</u>			
Total cost to South African Museum during year ...				<u>£63</u>	<u>1</u>	<u>0</u>

† The cost of printing and publication of Vol. IV, is shared by the South African Museum and the Geological Commission—the former paying 3.8th and the latter 5.8th, i.e., £14 17s. 0d. and £24 18s. 2d. respectively.

ANNEXURE "B"

HADJE SULIEMAN SHAH MOHAMMED FUND FOR PURCHASE OF COIN.

	£	s.	d.	£	s.	d.
Sum invested with South African Association	100	0	0			
Interest in hand from last year	8	13	4			
Received for interest during year 1904-5	4	15	0	113	8	4
Expended on Coins during year				3	2	6
				<u>£110</u>	<u>5</u>	<u>10</u>

£10 5s. 10d. of which forms part of Bank balance at 30th June, 1905.

NOTE.—A further sum of £2 7s. 6d. was due for interest on this investment for half-year ended 30th June, 1905.

THE LIBRARY OF THE
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CAPE OF GOOD HOPE.

COLONIAL SECRETARY'S MINISTERIAL DIVISION.

REPORT of the South African Museum for the Year ended 31st December, 1906.

Presented to both Houses of Parliament by Command of His Excellency the Governor
1907.

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The Hon. JOHN XAVIER MERRIMAS, M.L.A.

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HARRY BOLUS, D.Sc., F.L.S.

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Keeper of Marine Invertebrates and Fishes : JOHN DOW FISHER GILCHRIST,
M.A., Ph.D., B.Sc.

Keeper of the Geological Department : ARTHUR WILLIAM ROGERS, M.A.

Keeper of the Vertebrate Palaeontological Department : ROBERT BROOM, M.D., D.Sc.

Keeper of the Herbarium : H. H. W. PEARSON, M.A.

Assistant in the Geological Department : Miss M. WILMAN.

Assistant in the Herbarium : Miss S. TRELEAVEN.

Librarian : ROBERT MARK LIGHTFOOT.

REPORT OF THE TRUSTEES OF THE SOUTH AFRICAN MUSEUM.

We have the honour to present the Annual Report of the Director of the South African Museum, with annexures and statement of accounts. The Reports of the different departments are so full that little remains to add to them.

The Institution continues to be conducted with an eye to the economy called forth by the unfortunate state of the finances, and in that absence of support from those who have derived large fortune from South Africa, which is such a regrettable and unique feature of our country. We can do no more than draw attention to the lament over insufficient space which is raised by the officers in charge of the special branches.

The Trustees take occasion to emphasise the necessity that exists for a greater development of the ethnological and antiquarian side of the collection, and they much regret that they are unable to avail themselves of the rich field for making the Institution in some degree representative of the whole continent that is afforded by recent excavations in Egypt, and by the British occupation of the country now called Nigeria, which was at one time the home of a curious civilisation partly indigenous and partly exotic. It is hopeless in our indigent condition to think of doing anything in either of these directions, nor in that of taking any sort of cognisance of those older civilisations from which we inherit our own. The side of the Museum work, valuable as it would be to education, remains hopelessly stunted, and must apparently remain so, until the dawn of a more prosperous day.

J. X. MERRIMAN, Chairman.

REPORT OF THE DIRECTOR.

The Trustees of the South African Museum.

SIRS,—I have the honour to lay before you my report on the general organisation of the Museum during the year, and on the progress made during that period.

Visitors.

The total number of visits paid by the public to the galleries of the South African Museum was 79,713, as compared with 79,040 in 1905. The largest number in any one day was 557 (4th June); the lowest 48 (24th December). The average attendance on Sunday afternoon (2 to 5 p.m.) was 276.

Three school parties were guided through the galleries, and some 60 teachers, following the Art Course, were, for nearly a fortnight zealously copying the objects on exhibition during a part of the day.

Presents.

The total number of Presents received is 5,309; that of specimens obtained by purchase 105. The specimens new to the collection numbered 408. This is a falling off, as compared with the previous year (1905), when 6,215 specimens were obtained, of which 454 were new.

Museum Staff.

The only change in the Staff has been my appointment as Director in the place of Mr. W. L. Sclater, resigned. During the year Professor H. H. W. Pearson has made a successful collecting botanical journey to Beaufort West, C.C.; Miss M. Wilman, who was going to the Victoria Falls and Kimberley, was instructed to look for, trace and locate Bushman paintings and rock engravings in addition to obtaining geological and mineralogical specimens, a task in which she has been most successful. Mr. R. Lightfoot has gone on a collecting trip, mostly entomological, to Saldanha Bay, at the only time of the year when certain insects can be obtained. Dr. R. Broom was prevented at the last moment from going and investigating the deposits near Darling, where the remains of *Bubalus bairni* occur. This will be done early next year. Dr. J. D. F. Gilchrist has done a great deal of travelling with the object of obtaining information and specimens of the South African fresh-water

fishes, a subject which he is now investigating. The services of the Taxidermist, Mr. J. Drury, just back from England on four months' leave of absence, were loaned to his Grace the Duke of Westminster, who was going on a shooting expedition to the Kafue River, on condition that two hippopotami should be procured for the Museum, a by no means easy task which Mr. Drury has very satisfactorily fulfilled. I have been investigating the sand-dunes of the Cape Flats, in search of implements and abodes of the former aboriginals.

Annals of the Museum.

Four parts of the Annals, containing 270 pages and illustrated with 18 plates, have been published and distributed during the year.

The contents are :

Vol. IV., Part 7. The Cretaceous Fauna of Pondoland, with Plates XXIII.-XLIV. By Henry Woods, M.A., F.G.S.

Vol. V., Part 1. On the Meteoric Stone which fell at the Mission Station of St. Marks, Transkei, on January 3rd, 1903, with Plates I.-III. By Professor E. Cohen.

Vol. V., Part 2. Descriptions of New Species of Parasitic Hymenoptera, chiefly in the Collection of the South African Museum, Cape Town. By P. Cameron.

Vol. V., Part 3. Contributions to South African Palæontology : No. 1, On the remains of *Erythrosuchus africanus*. Broom. With Plate IV. By R. Broom, M.D., D.Sc.

The Library.

The Library continues to grow. No new Institution has asked for an exchange of publications.

The additions are as follows :—

	Presented or		Total.
	Purchased.	Exchange.	
Separate Volumes	14	16	30
Pamphlets	23	87	110
Serial Numbers	210	579	789
	<hr/>	<hr/>	<hr/>
	247	682	929

ARRANGEMENT AND CONSERVATION

DEPARTMENT OF ZOOLOGY.

MAMMALIA.—In order to find room for the regrouping of the Birds, I was compelled to remove the *Cetacea* from the large South African Bird and Reptile Exhibition Room to the corresponding general Foreign Room. The case in which they are now displayed is, however, almost a prolongation of the bay leading to the South African Mammal Room, and a sort of uniformity is thus still maintained. But in order to obtain the necessary space for the accommodation of these *Cetacea* the contents of the foreign mammals cases had to be re-arranged. By means of new glass shelvings and iron brackets it has been found possible to gain a little additional space. But owing to the intrusion also of the Cape Fishes into the same room, we had to remove valuable specimens of African antelopes from their cases, and to set them unprotected in the centre of the room. Two large glass cases are urgently needed for the protection of these exhibits. The floor space of this Foreign Room is going to be still more reduced when the two hippopotami, lately added to the Collection, are placed on exhibition. Unless the Museum building be enlarged at no distant date, the collection of foreign animals must perforce be reduced yearly to make room for the gradual increase of the South African Collection.

THE LIBRARY OF THE
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UNIVERSITY OF ILLINOIS

AVES.—The completion by the late Director, Mr. W. L. Slater, of the fourth, and final, volume of the Birds of South Africa has necessitated the re-arrangement of a great part of the mounted birds. The difficulty encountered was also that of space, but by the removal of the Fishes, in addition to that of the *Cetacea*, this difficulty has been overcome, and the cases in this room now contain the Birds and Reptiles only. Through the addition of glass-shelving it has been found possible to exhibit all the birds without crowding, and at a height that permits of an easy examination of the contents of the cases. The bird-nests, with a good many additions procured during the year, have been brought together into three cases adjoining each other. Old labels have been replaced by new and more legible ones. The Birds are now systematically grouped, and their arrangement will require no modification for some time to come. Old specimens are being replaced, as fresh ones are obtained, and the exhibition of this class is now a very successful and effective one.

In the Foreign Animals Room it was found necessary, if we were to transfer there the South African Fishes, to dispense with a great number of the exhibited birds, and I caused the long wall case, and also a lateral one, to be emptied. In the latter were transferred the skeletons of the gigantic extinct birds (*Dinornis*, *Aepyornis*, etc.), but this is only a temporary measure, as this case is urgently required for our local fishes, especially the fresh-water ones. When this is done, which will be next year, the number of foreign birds will be, of course, greatly reduced as only four cases can be allotted them. My intention, however, is to select the most typical forms from regions of the world other than African, and exhibit these only until newer and larger accommodation is provided. The remainder will be unmounted—a sad end for the brilliant and extensive series brought together with so much difficulty by the former Curators, Layard and Trimen.

It has been found possible, however, to exhibit by themselves some typical Birds of Paradise in a wood and glass case unsuitable for other purposes.

REPTILIA—BATRACHIA.—No new accession was incorporated this year in the exhibition series. But the Tortoises and the Lizards have been shifted towards the entrance to the South African Room, and through a new arrangement of the larger examples, a little space has been gained for the addition of new examples next year.

PISCES.—As already said, the mounted South African Sea Fishes have been removed to the Foreign Specimens Room, into a 36-foot wall case. They are not too much crowded as yet. The examples mounted in flat glass jars will be arranged in one of the lateral adjoining cases. It is intended to begin with the Soles and the fresh-water fishes.

In order to save some floor space for the reception of the two *Hippopotami*, the two large mounted Sharks (*Carcharodon*) will have to be hoisted to the top of the Fishes cases. Their size is such, however, that they will stand very plainly visible, albeit in that elevated position. Room will also be found there for the big Rays and moderately large-sized Sharks, still left on the floor space of the South African Bird and Reptile Room.

MOLLUSCA.—Owing to the removal of the Insects from the Invertebrate Room, we have been able to arrange the Foreign Collection, restricted, however, to very typical forms, in one of the large desk-cases rendered vacant. Another desk-case has been utilised for the exhibition of our local Cephalopoda, all mounted very carefully and successfully in flat glass-jars.

INSECTA.—The transfer of the Insects from the Invertebrate Room to that formerly occupied by the Marine Biologist has allowed of expansion in the other groups displayed in the former. The purchase of new cases made the step possible, but the equipment of the Insect Room is, however, insufficient. Very great prominence has been given to the display of South African forms, but examples from parts of the world other than Africa had also to be shown. It is intended to increase the series of small cases illustrating the life-history of some Insects, their plant food, etc.

CRUSTACEA.—A series of the Cape Seas Crustacea, very carefully mounted in square glass-jars, has been arranged in another vacant desk-case of the Invertebrate Room. This series is highly interesting and of great value, containing as it does very rare deep-sea specimens, some of them obtained at a depth of 800 fathoms. It is, however, far from complete, but will be greatly added to next year. In order to

preserve the original colour of the specimens from the bleaching effect of the strong light obtaining here, the cases have been fitted with spring roller-blinds, which the public is invited to pull up and down. This invitation is generally appreciated and acted upon.

COELENTERATA.—Most successful perhaps of all the new objects exhibited is the collection of local *Alcyonaria*, which have also been mounted in flat glass jars. Having still retained their bright colour, they form in that respect a probably unique collection. Most of the forms occurring in the Cape seas are there represented. They have been accommodated in one of the desk cases formerly occupied by the Insects, and which, like the Crustacea case, is provided with spring roller-blinds.

DEPARTMENT OF GEOLOGY AND MINERALOGY

The great accumulation of material chiefly obtained by the Geological Survey has made the expansion of exhibition room a matter of urgent necessity. It has, therefore, been decided that the Cape series, geological, mineralogical and palæontological, be transferred into the large Foreign Geological Room, the contents of which will be disposed in the former South African Room, as well as in the adjoining one now occupied by the Geological Survey. The latter will be housed in the Caretaker's cottage, which they have already partially occupied.

DEPARTMENT OF ANTHROPOLOGY.

The addition of three new exhibition cases has allowed of a very considerable increase in the number of objects presented to the public. The room has been entirely re-arranged during the year, and a display on more systematic and scientific lines has resulted thereby. Native basketware, pottery, dresses, necklaces and trinkets, musical instruments, implements of domestic use, pipes and snuff-boxes, iron or other tools, stone implements, etc., etc., are now grouped together, and the walls have been utilised for a display of aboriginal stone-engravings which is probably unique, as well as for series of photographs of our native races, copies of tracings of Bushman paintings, etc.

The skeleton of the "Strand Looper" aboriginal has been exhibited in one case by itself, but when the expected model of a Bushman has been put in exhibition, there will be no vacant space left in the Anthropological-Ethnographical Room, which should be four times the size of the present one, were justice to be done to the very complete series owned by the Institution.

L. PERINGUEY.

REPORT ON THE DEPARTMENT OF VERTEBRATES.

The Trustees of the South African Museum.

SIRS,—I have the honour to report on the work of and accessions to this Department.

The alterations made in the Exhibition Room have been mentioned in my Directorial Report.

The number of examples received or purchased is slightly inferior to that of last year, being 448 against 454.

Mammals.

The number of specimens purchased is 29, representing 15 species.

The thanks of the Trustees must be accorded to the following donors for their contributions during the year :—

The Right Honourable Sir Henry de Villiers, P.C., for the skin of the White-tailed Gnu (*Connochaetes gnu*). The example is a female.

- Sub-Inspector Wm. Proctor for an albinic form of the Steinbok. This animal is creamy white and light fawn; three of the hoofs are whitish and longer than the fourth, which is of normal size and black. The animal was obtained in Griqua Town.
- The Duke of Westminster has presented two Hippopotami, shot by his party on the Kafue River, North-Western Rhodesia. The skins were prepared on the spot, with all the difficulties attending such an undertaking, by Mr. J. Drury, the Museum Taxidermist, who accompanied His Grace's shooting party mainly for the object of securing these two animals. The complete skeleton of the female was also secured.
- Mr. Drury obtained also the skins and horns of two female Puku, wanted for the collection; a good pair of horns of the Leechwee for the Horn collection; a young Puku calf, also the young of Sharpe's antelope (*Raphicerus sharpei*) and a spotted Hyæna (*Hycena crocuta*). He secured a good number of fresh-water fishes (28); the egg of *Bucranus carunculatus* (the Wattled Crane), and 16 Crocodile eggs. His entomological captures and also the ethnological specimens he procured during his two and a half months' absence, are mentioned in their respective departments.
- Other donors of valued and interesting mammals are the Rev. J. H. Whaits, G. H. Herman, H. Courtney, and Dr. A. H. B. Kirkman.

Birds.

- Sir Alfred Sharpe has presented a collection of birds from British Central Africa, numbering 31 species representing 14 genera. Two species were new to the collection, viz., *Cichladusa arcuata* and *Lybius zombæ*.
- Mr. E. G. Davies has donated two examples of *Quelea erythropis*, a species new for the South African fauna. He also procured an example of the *Tringa canutus*, a European species very seldom noted as having been met in South Africa. He has forwarded the rare *Butorides capillus* and *Nyctiorax leuconotus*.
- To Miss Newdigate we are indebted for a stuffed example of the rare species *Porphyrio alleni*.
- Mr. J. Drury has brought from the Kafue River six birds, including an example of the Marabou (*Leptoptilus cumeniferus*).
- Other contributors have been Mr. W. G. Fairbridge, J. Coetze, J. McNab, Miss Roux, J. H. Paynter and Master Peringuey.
- Another bird, new to the South African fauna, i.e., *Pytelia afra*, has been received from Barberton. It has also been met with at Beira.
- Seventy-four birds from the Transvaal and Rhodesia were obtained by purchase.

Reptilia and Amphibia.

- The collection has received ten reptiles collected by Mr. F. W. Sykes, near the Zambesi Falls.
- A new species of *Breviceps* from Namaqualand, a very singular toad, has been procured through the Rev. F. C. Kolbe.
- An example of the interesting frog *Phynogmantis bifasciatus*, found in a log of wood, was sent from Kimberley by Mr. H. A. Gain. The habits of this animal would seem to put in the shade all the "toad in the hole" stories. Sir Andrew Smith, in his Zoology of South Africa, says that "he found the species in the hollowed part of a massive tree cut down to obtain wood in order to repair a waggon. When the workman sawed the trunk longitudinally nearly along its centre, it was discovered that the saw in its course had crossed a large hole in which were five specimens of the frog, each about an inch in length. Every exertion was made to discover a means of communication between the external air and the cavity, but without success. When discovered the Batrachia appeared inanimate, but in a few hours from the time they were liberated, they were tolerably alive," etc., etc. The specimen sent by Mr. Gain was also found in a log of wood, without visible aperture.

Seven reptiles, including a species of Gecko, new to the collection, were presented by Mr. J. Naughton, of Leydsdorp.

An example of the Sea Snake (*Pelamis bicolor*), alleged to have been captured in Table Bay, was donated by Mr. J. J. Youatt. This species has not, to my knowledge, been recorded from there before, inhabiting as it does the Indian Ocean and the tropical and sub-tropical Pacific. But another example has been captured this year in the Liesbeek River, near the Observatory.

Lieutenant W. Tomkinson, R.N., of H.M.S. "Crescent," has donated an example of the Nile Monitor, captured at Mombassa.

Fishes.

The Fishes are dealt with in the report of the Keeper of that Department. I may, however, mention the placing on exhibition of two examples of that very rare fish *Ragalecus gladius*, one of which is 14 feet long. These two specimens were found: the one stranded, the other swimming on the surface of the sea.

The specimens incorporated during the year in the Exhibition Series consist of 1 Dolphin, the skeleton of the Spring Hare, 24 Birds, with 14 re-mounted; 1 large shark, and 6 fishes.

L. PERINGUEY.

REPORT ON THE DEPARTMENT OF ENTOMOLOGY.

To the Trustees of the South African Museum.

SIRS,—I have the honour to report on the work done in the Entomological Department.

The number of Insects received, mounted and labelled during the year is 2,891, represented by 889 species, and numbering 154 new species, of which about one-fourth are new to science. The donations are thus inferior in number to those of last year, when they had been abundant. A fair number of African species other than South African have been received in exchange, and been partly incorporated in the African cabinet. Progress has been made with the re-arrangement of some of the groups, a task requiring much time and much care.

Apart from the capture by Mr. J. Drury, our Taxidermist, of a second example of a Lycaenid Butterfly, known hitherto by one example only (*Aphnaeus erikssoni*), the additions do not call for special comment.

The thanks of the Museum Trustees must be accorded to the following Donors for their contributions during the year:—

Mr. H. P. Abernethy has presented a series of insects from the Transkei, containing 5 species new to the collection, and three of which will probably prove to be new to science.

Mr. J. M. Bain has collected sundry kinds of insects in the neighbourhood of Moorreesburg, and has met there with the extremely rare *Ophthalmopone hottentota*, as well as with a new species of *Trachynotus*.

Mr. W. Bevins, of London, has allowed me to pick from a collection of Coleoptera made mostly near Tokai, several species including an example of *Ptyocerus capensis*, for which I have vainly looked for for years, a new *Monochelus*, and a new *Opilo*.

Mr. D. Dods has presented a small collection of Coleoptera from Gwanda, Southern Rhodesia, containing 5 new species, as yet unidentified, as well as some rare species such as the Cerambycid *Phrynesthis pachystoloides*, etc.

Mr. J. Drury has brought from the Kafue River, in North-Western Rhodesia, an interesting lot belonging to various orders and numbering 253 examples

- represented by 119 species, 20 of which are new. Among the Lepidoptera he captured the extremely rare *Aphnaeus erikssoni*, Trim., the type of which is, I believe, the only example known. Although captured beyond the South African limit, all the insects are typically South African.
- Mrs. Foster has forwarded from the Zoutpansberg, in the Transvaal, 21 insects of various orders, including a Coleopterous species of *Paramarygmus* that seems to be new to science, and is also new to the collection.
- Mr. R. M. Lightfoot has brought from Saldanha Bay, where he went for a short visit, 467 examples of insects collected by him in conjunction with Mr. G. H. Herman. This collection contains good series of insects appearing only for a very short period, and so much rarer in collections owing to that. Thanks to the series procured by Mr. Lightfoot it is possible to consider merely as varietal forms species supposed to be well established. Five species are new, and the series of *Zeritis osbecki* is peculiarly instructive.
- We have received from Mr. J. Naughton two series of Coleoptera, from the neighbourhood of Leydsdorp, numbering 219 examples, and containing rarities such as *Eudema bonvouloiri*, *Hypsideres junodi*, *Dinocephalus ornatus*; 3 species of *Acmaeodera* and 2 of *Anthaxia*; also 3 *Eunidia*, unrepresented, making in all 10 species new to the collection. Among the Lepidoptera are two examples of a new *Nephela* species. Although this collection is not large, it shows plainly that the neighbourhood of Leydsdorp is the meeting ground of the Rhodesian and Mozambique faunules with that of the Transvaal.
- Mr. H. M. Oakley has presented two lots of insects. A small one from Kenhardt, Cape Colony, included two remarkable Neuropterous species of the genus *Palpares*, one of which is a new species, and the other the rare *P. sinuatus*, Oliv., and also that very rare beetle *Psammodes procursor*. The second lot was collected at Darling, Cape Colony, where he met likewise rare insects including *Scarites exaratus*, a new acquisition, and also two new Moths, a Noctuid and a Geometrid. The number of insects donated by him is 100, and of the identified species 5 are net.
- The cones of the Cycads which Professor H. H. W. Pearson is investigating have yielded him quite a number of Curculionids Beetle, which he has handed over to this Department. The species of the genera *Amorphocerus*, *Platynerus*, were hitherto represented by one dilapidated example, dating from the time of Drege and Ecklon.
- Miss Alice Pegler has presented some insects from the Transkei, which include very good specimens of Orthoptera, among which is one of that singular form *Pseudoglomeris*, the general aspect of which is that of a wood-louse. Among the minute species sent by this lady are several new ones not yet identified; also galls and the Cecydomied flies forming them on the tree *Cissies cuneifolia*, as well as the inquilines, or parasites living at the expense of the former. This donation is very much valued.
- Two lots of Beira insects have been transmitted by Mr. P. A. Sheppard. Specimens from that locality, the extreme limit of the South African entomological area, are always full of interest. In addition to these, Mr. Sheppard has presented co-types of 5 species lately described, as well as 12 identified species of *Chrysomelidæ*, seven of which were unrepresented in the cabinet. Moreover, Mr. Sheppard sent me several species of cetonid beetles which I required for completing my monograph of this sub-family of Scarabæidæ.
- Mr. A. Tucker has collected a few insects in the Nylstroom district of the Transvaal. Some of the forms are very interesting.
- Rev. J. O'Neil has donated a series of Coleoptera, Hymenoptera, Orthoptera and Hemiptera from Rhodesia, numbering 269 examples, representing 72 species.

By exchange we have obtained 87 Coleoptera from Rufisque in Senegal; 12 species are new acquisitions. The great affinity of the insect fauna from that part of Africa to the southern is well demonstrated even by such a small number of species, and stand in great contrast with a collection of British East African forms, made by Mr. Alluaud, and which are greatly differentiated from the South African ones. This collection, also obtained by exchange, numbers 131 examples, of which 31 species were hitherto unrepresented.

Miss M. Wilman has collected, during her journey to Rhodesia, a few insects of different orders, including a new ant, *Camponotus* spec.

With the assistance of Mr. R. M. Lightfoot, the insects were transferred from the Invertebrate Room to the one formerly occupied by the Marine Biologist, and which is now to be known as the Insect Room. A very large number of local insects are now on exhibition, as well as many illustrations of their mode of life, parasitism, etc. New cases are, however, much required, as many specimens and instructive series cannot be exhibited without these special contrivances.

The first five families of Bugs (Homoptera) have been incorporated in the cabinet by Mr. R. M. Lightfoot, and a fair number of Coleoptera and two families of Orthoptera have been dealt in the same manner by me.

The manuscript of a new part of the Descriptive Catalogue, that of the Cetonidæ, is now in print, and I have also completed that of the family *Cantharidæ*. The publication of the latter is, however, delayed by the production of illustrative plates.

The *Ichneumonidæ*, *Braconidæ*, *Chalcididæ* of the collection have been identified by Mr. Peter Cameron, who has published a memoir on the subject in the Annals of the South African Museum. The identified specimens have been returned, but have not been incorporated as yet in the cabinet.

L. PERINGUEY.

REPORT ON THE DEPARTMENT OF LAND AND FRESH WATER INVERTEBRATES (EXCLUSIVE OF INSECTS AND MOLLUSCS).

To the Director of the South African Museum.

I have the honour to present to you my report on the collections pertaining to my Department during the year.

The additions to the collections have been but few in number, as compared with previous years, only 302 specimens of Arachnida, including 16 species new to the collection, having been received, while of other groups only 21 specimens and one new species were received.

Amongst the donations the following may be mentioned here :—

A small collection of Arachnids from Bechuanaland, made by Mr. A. L. Du Toit, which contained several new spiders and Solpugidæ.

Several further collections from Kentani made by Miss A. Pegler and Mr. A. P. Abernethy, who have frequently contributed Arachnida from that locality.

A number of fresh-water Leeches, found on a fresh-water beetle at Port Elizabeth by Mr. I. L. Drege. As only one or two fresh-water Leeches have been previously recorded from South Africa, this contribution is interesting.

A small collection of spiders from the Transvaal, made by Mr. D. L. Patrick.

List of Additions for 1906.

			Specimens.	Species new to collection.
Arachnida	..	..	302	16
Myriapods	..	..	6	0
Crustacea	..	..	7	0
Worms	..	..	8	1
			<hr/> 323	<hr/> 17

W. F. PURCELL.

REPORT ON MARINE INVERTEBRATES AND FISHES.

The Director of the South African Museum.

I have the honour to present my report on the Marine Invertebrates and Fishes.

The addition to the collection of the marine invertebrates have not been so numerous this year owing to the partial suspension of the work of the Government Steamer, but a fair collection of invertebrates and a few fishes, including a new genus of *Scopelus*, was made on the Agulhas Bank.

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The most important additions are from shore collections. These are a new species of *Balanoglossus*, recorded for the first time from South Africa, a new genus and species of the *Phoronidea*, also recorded for the first time, and a large *Arenicola*, procured in a collection of Marine Invertebrates from Saldanha Bay.

Very extensive additions have been made to the collection of fishes. About one hundred specimens have been sent by Mr. Romer Robinson from Natal for identification and description. Of these, about twenty are new species.

Mr. Brooking, of East London, also forwarded a collection (20) of fishes from East London, and these included a new genus of the *Ophidiidae* and some new species.

A large collection of fresh-water fishes of South Africa has been made in connection with the work of the Committee of the British and South African Association appointed for the purpose, and duplicates of these have been added to the Museum collection, which has hitherto been very meagre. Specimens have been procured by officers of the Museum from various parts of the Cape Colony, Transvaal and Rhodesia, and the following have considerably aided the work by sending specimens :

A. T. Cooke, Nelspruit, Transvaal.
 C. R. Seeber, Clanwilliam, C.C.
 J. R. Jacobs, Fraserburg, C.C.
 F. J. Lawrence, Steytlerville, C.C.
 M. J. Lyne, Kuruman, C.C.

Some progress has been made with the exhibition of specimens in the cases of the Museum.

J. D. F. GILCHRIST.

REPORT ON THE DEPARTMENT OF VERTEBRATE PALÆONTOLOGY.

To the Director of the South African Museum.

I have the honour to submit to you the following report on the Department under my charge.

During the past year there have been again many and important additions to the collections of fossil vertebrates.

One of the most important specimens added in 1906 was the greater part of the skeleton of the Pareiasaurian reptile *Propappus*. This was discovered near Graaff-Reinet by Mr. A. Louw, Vice-Principal of the Graaff Reinet College. The discovery is important not only in that it throws much light on the structure of a very remarkable animal, about which little was hitherto known. Though little of the head and anterior part of the skeleton is preserved, the greater part of the back portion of the animal is in good condition. *Propappus* was a small Pareiasaurian which was armour-plated all over the back somewhat like a crocodile.

The Rev. Mr. Whaits, of Prince Albert, has been fortunate during the past year in having had his industry and enthusiasm amply rewarded by a number of discoveries of great importance. Near Fraserburg Road Station he discovered the remains of the skeleton of a large reptile which is probably new. It is a large Pareiasaurian, a little larger than *Pareiasaurus baini*, but differing in the important character of having the edges of the teeth smooth. It is possible that it may be the same animal as has been named *Tapinocephalus atherstoni*. Unfortunately the type of this latter, which is in London, is a most unsatisfactory specimen, being only a fragment of the snout without the crowns of any of the teeth. The cast we have of the London specimen is practically useless for purposes of comparison. This affords but another instance of the difficulties that have been occasioned by the unfortunate habit of earlier collectors of sending all specimens to London. When a good specimen gets named it is possible to recognise others of the same sort again, but when, as has too frequently been done by English palæontologists, fragments of vertebræ and limb-bones have been given names it becomes almost impossible to recognise others of the sort even though they are in good condition. From the Nieuwveld Mountains Mr. Whaits has obtained a number of Anomodont skulls which, however, have not yet been critically studied. At Fraserburg Road he has also made the important discovery of a new Labyrinthodont of a very remarkable sort, and also the snout of a new Therocephalian. But perhaps his most important find has been an almost perfect skull of a large Therocephalian from Rietfontein, Prince Albert district. He has also found the remains of two other Therocephalians—one new, the other *Pristerognathus baini*, Seely.

Mr. C. G. Maddison has kindly sent to the Museum a fairly complete skeleton of a *Pareiasaurus* sp. non. det., and imperfect skeletons of probably *Tapinocephalus*.

Mr. J. Maddison, of Beaufort West, has contributed an important portion of the skeleton of the little known *Eunotosaurus africanus*, Seely.

Mr. J. L. Cairncross has again sent us a number of interesting specimens. At Colesberg he found an interesting example of *Saurosternon baini*, and some *Dicynodon* remains. From Oudtshoorn he sent some fragments of Dinosaurs, including three very interesting and well-preserved teeth.

By purchase the Museum has been enriched by the addition of a complete set of casts of the remains which form the types of the carnivorous Dinosaurs—*Massospondylus carinatus*, Ow., *Pachyspondylus orpeni*, Ow., and *Leptospondylus orpeni*, Ow., *Massospondylus carinatus*, Ow.

Mr. Versfeld, of Darling, to whom the Museum has already been indebted for many specimens of the teeth and bones of the large extinct animals that inhabited South Africa before the advent of the white man, has again forwarded additional specimens. These include teeth of a large extinct horse, and fragments of another large unknown animal, too imperfect for determination.

From Izerplaats, near Maitland, a most interesting and valuable specimen has been presented by Mr. Binedell. This consists of a series of molar teeth of a large horse from the limestone deposit which is found in Table Bay. This is pretty satisfactory proof that the large South African horse is a very old inhabitant.

The recent additions, especially of large reptiles, has so overcrowded the present available space in the Museum that it is impossible to exhibit all the recently added specimens. It is hoped, however, that the collections will soon be re-arranged and that much more space will be devoted to the fossil Vertebrates.

REPORT ON THE DEPARTMENT OF GEOLOGY AND MINERALOGY.

The Director of the South African Museum.

I have the honour to present my report on the Geological collections.

Until the new cases arrive no material improvement can be made in the arrangement and display of the specimens. The South African collections are especially crowded at the present time, even though they are quite inadequate as illustrations of the geology of the sub-continent. Some recent additions show that a great increase in the space allotted to certain groups will be required in the near future, especially the sub-recent and possibly tertiary faunas of Cape Colony. These faunas are of very great scientific importance, and some attempt should be made to obtain more material for their elucidation. At present nothing can be done in this direction by the Geological Survey.

During the past year a selection from the Bokkeveld fossils, given by the Rev. J. H. Whaits and Mr. J. L. Cairncross, and described by Mr. F. R. C. Reed (*Geol. Mag.*, 1906, pp. 301—310), has been added to the exhibitional specimens.

The Survey collection of Upper Cretaceous fossils from Pondoland has been returned by Mr. H. Woods from Cambridge; Mr. Woods' memoir on these fossils in Vol. IV., Part 7, of the *Annals* was published at the end of 1906. A selection from this collection is being made for exhibition.

Miss Wilman has set out many minerals, and has done much labelling during the year; she was also instrumental in obtaining valuable specimens from Kimberley and Rhodesia during her visit to these places.

Several donations of importance have been received.

A collection of minerals given by Mr. Bain contains some peculiar prehnites.

A further collection of Kimberley rocks and minerals was given by the De Beer's Co.

Mr. Drury brought down a good specimen of malachite from Rhodesia; interesting collections of minerals from that country have been given by Major Heany, Mr. Kenny and the Rhodesia Museum; they include minerals from the Somabula gravels and a fine collection of chalcedony from the Charter district.

Miss Lockington presented a good specimen of marcasite from the Transkei.

From Mr. E. Tait-Coe we received a good collection of minerals from the Transvaal.

The few fossil plants received include *Glossoptris* from Colesberg given by Mr. Cairncross, and the same species from the Fraserburg district given by Mr. Whaits.

The chief additions to the invertebrate animal fossils are those from the Bokkeveld beds of the Zwartberg Pass, given by Mr. Cairncross, and those from the same formation at Clanwilliam and the Hex River valley by Miss Fuechsel and Mr. Paynter.

Cretaceous fossils from Inhambane were given by Mr. Strauss. A very interesting collection from Need's Camp, near East London, has been sent to the Museum by Mr. J. W. Wood; the fossils were sent to Mr. Woods, of Cambridge, who finds that they are of Upper Cretaceous age. A description of them will appear shortly.

Additions to the Meteorite collection are portions of the Hex River and Makerop (German S.W. Africa) irons, received in exchange from Dr. Aristides Brezina, of Vienna; and the magnificent Jackalsfontein stone given by Miss Luttig.

The thanks of the Trustees are also due to the following donors:—

E. Backhouse, Auriferous quartz; Wodehouse Kraal Crown Reserve.

J. H. Basson, Slag from a wheat-stack; Malmesbury.

C. Blatschley, Copper and lead ores.

De Lancey Dodds, Ammonite from Rhodesia.

C. J. Gray, Conglomerate from the coal measures; Umhlati, Natal.

P. J. Howe, Granite and ochre; Spitzkop, Boshof.

H. F. Kendrick, Gypsum and Zinaite.

M. Kennedy, Haematite; Dalton-in-Furness.

Rev. Dr. Kolbe, A stem; Herbertsdale.

A. B. Medworth, Pyrites; Rooi Kraal, Knysna.

S. S. Pondor, Fossil wood, Klipgat, Murraysburg.

Premier Diamond Mining Co., Glass model of the Cullinan diamond.

Miss J. Roux, Epidote and quartz; Springbokfontein, Namaqualand.

J. D. Thorne, Asbestos; Diepgesit, Carolina.

A. L. du Toit, Copper ore; Mount Ayliff.

W. Whittaker, Pseudomorphs of limonite after pyrites; Kambove.

ARTHUR W. ROGERS.

REPORT OF THE DEPARTMENT OF BOTANY.

To the Director of the South African Museum.

I have the honour to submit the following report on the condition and working of the Herbarium during the year 1906.

Specimens of about 1,300 species of flowering plants have been received during the year. A large proportion of these are unidentified, and they certainly include many undescribed species. Under existing conditions it is impossible to deal with additions as they are received, and less than 300 of these newly added species have been worked up. Of these about 40 appear to be new species.

We are indebted to Mrs. A. Dieterlen for further collections of Basutoland plants. Unfortunately many of these have arrived in such a condition that their determination has been impossible. As was expected, they include a noteworthy proportion of interesting plants, a complete investigation of which is eminently to be desired. With the dried specimens have been included a number of bulbs, tubers and rhizomes, most of which are under cultivation with a view to their determination.

We have received further specimens of considerable interest collected by Mrs. Davidson on the Matroosberg and in the Hex River Valley. These include an almost unexpected number of new forms which await further study.

During the year I have paid three visits to the foot hills of the Nieuweveld Mountains in the vicinity of Nelspoort, where I have obtained specimens of some 400 species of flowering plants and ferns. The flora of these mountains and of the upper region generally is still but partially known, and results of no little interest have already been obtained. This investigation has also an economic importance, for until the floras of this and other sheep-grazing districts have been more thoroughly examined, information which should be at the disposal of the sheep-farmer and his technical advisers, is still wanting. Owing to the pressure of other duties I have been able to devote but little time to the study of these collections, and hardly one-third of the plants have yet been determined.

By far the greater part of Miss Treleaven's time has been occupied with the determination of specimens sent in by various officers of the Agricultural Department. These identifications do little to increase the efficiency of the Herbarium, the specimens submitted being usually so imperfect that no useful purpose would be served by adding them to the collection.

We have sent to His Highness Prince Roland Bonaparte, a collection of 200 species of characteristic South African plants illustrative of the floras of the South-Western and the Upper Karroo Region. As long as we are without any proper staff or machinery for adding to the existing collections, the demands of other botanical establishments, which we are most anxious to meet, cause a disorganisation of the routine work of the Herbarium which is out of all proportion to the benefits that we are able to confer.

With the concurrence and co-operation of the Chief Conservator of Forests, we have commenced the formation of a Forest Herbarium. This was initiated with the object of establishing an authentically named collection of trees and shrubs of importance in South African forestry, for the use of the Forestry Department and for the instruction of students in the South African School of Forestry. Contributions have already been received from Robertson, King Williamstown, the Cedarberg and Tokai, but up to the present the assistance received from the officers of the Department has been somewhat less than was expected. In view of the useful purpose from both the economic and the purely scientific standpoints, which such a collection would serve when fairly established, a more effective co-operation of the Forestry Department is much to be desired.

I have again to urge the necessity of the provision of additional assistance whereby the Herbarium may be enabled to exercise one of the most important of the functions of a National Herbarium, which has for some time past been in abeyance, viz., the scientific study of the Flora of the Colony. Apart from the purely scientific value of researches of this nature in a region whose flora is so diversified and complicated as is that of this part of South Africa, its economic importance to a colony which must depend largely on its agricultural resources can hardly be over estimated. The formation of a Museum illustrating the economic botany of the country is to be as strongly urged, and I trust that its establishment, if necessary on a small scale, will not be longer delayed.

H. H. W. PEARSON.

Number of additions acquired by the Herbarium during the Year 1906.

	Species.
G. Alston	1
J. M. Black	5
G. N. Blackshaw	1
H. Chalwin	12
Chief Vet. Surgeon	2
Chief Conservator of Forests	51
Mrs. K. Davidson	97
Mrs. A. Dieterlen	655
I. L. Drege	6
R. Dummer	11
E. E. Galpin	160
Geological Commission	1
Grahamstown Museum	78
R. M. Lightfoot	1
Dr. P. MacOwan	40
Dr. E. A. Nobbs	10
Dr. E. Paine	1
Miss A. Pegler	132
Rev. F. A. Rogers	6
T. R. Sim	7
Miss Wilman	3

REPORT OF THE DEPARTMENT OF ANTHROPOLOGY AND
ANTIQUITIES.

To the Trustees of the South African Museum.

I have alluded in my general report to the expansion in the number of objects exhibited afforded by the erection of three large show-cases in the room affected to Anthropology and Ethnology.

(a) *Anthropological.*

I was able to procure from several sources ancient photographs of Bushman and kindred races, which fortunately proved to be sufficiently good to be enlarged. They are now disposed in frames. A series of photographs of Damaras, Berg Damaras and Hottentots from German West Africa has been treated in the same manner, and is placed on the wall along the Bushman and Hottentot series. Disposed also along the wall are copies of tracings of Bushman paintings, showing four kinds of technic. These photographs and tracings are protected from the destructive effect of bright light by spring-blinds, which the public is invited to pull up and down. Along the remaining parts of the walls have been fixed by solid clamping the aboriginal stone engravings which form such an interesting part of the antiquarian section of Anthropology. The series of South African stone implements is being re-arranged and, when completed, will be of singular interest.

Thanks to the courtesy of Mr. F. S. Lewis, the Librarian of the Cape Town Library, copies of the Bushman-paintings tracings in the Grey Library have been made, and form now the nucleus of a collection, the importance and value of which will yearly increase as the originals on the rock fade away. Some of these copies, which were only on tracing paper, have been transferred to linen-backed paper. I was able to enter into correspondence with some of the volunteers who had taken these tracings.

Dr. C. Nieuwoudt, of Darling, presented his original tracings of scenes in the Cedarbergen, and Mr. A. Leipoldt took them anew for us.

Mr. John Wood sent us detached tracings of figures of animals which I have been able to locate through the information obtained by the Public Works Department, the Secretary of which, Mr. L. Mansergh, was good enough, at my request, to ask the District Inspector and Engineers to report on the presence of such paintings in their respective districts. Very valuable information has been received from that source.

Mr. J. M. Orpen has presented four coloured scenes of paintings from New England, Barkly East, "carefully copied" by Mrs. J. M. Orpen.

Miss M. Wilman, of the Museum, has traced in the Matoppos, Southern Rhodesia, a remarkable picture. There the colouring is of a deeper red than that of the paintings occurring in the Cape Colony.

Mr. Kidger Tucker, of Johannesburg, has allowed us to make a copy from his sketch book of several scenes in the Stormberg.

Mr. J. M. Bain has presented several coloured reproductions of paintings and tracings made by his late father, and by means of a sketch album now in the possession of his daughter, Mrs. Lister, I have been able to reconstruct, check and locate several pictures, the position of which was uncertain, or the reduction in size faulty.

Miss Struben has very kindly consented to trace from the original, and reproduce a remarkable painting lately discovered in the Hex River Valley.

We have the promise of help of this kind in several quarters, but owing to the remoteness of most of the places where these pictures are found progress is somewhat slow.

To Mr. F. B. Parkinson we are greatly indebted for the gift of three remarkable stone engravings, removed and forwarded by him at considerable trouble.

Miss Wilman, on the occasion of a visit to Kimberley and the Victoria Falls, was instructed, in addition to taking tracings of Bushman paintings, to visit the localities where engraved stones had been reported, and to take imprints or rubbings where it was impossible to remove the boulders. Her efforts in that direction have been most successful, and through the great generosity of the Directors of the De Beer's Co., and of Rev. G. E. Westphal, the collection is now enriched with a most interesting series of such representations; while Mr. Walser has generously promised specimens which, in point of finish and boldness of treatment, are possibly unequalled.*

* These specimens have been lately received.

The donations of stone implements have been numerous.

The Misses Orpen, of Douglas, have presented a most complete collection of perforated stones, grooved stones for manufacturing bone bodkins or bone arrow-shafts, of large and small scrapers of diverse shapes, of tongue-shaped implements of palaeolithic type, some of which might prove to be of very great antiquity, and of polished mullers or pestles of a type and of a size seldom met with. The Misses Orpen sent also some rubbings of stone engravings.

Mr. J. M. Bain has presented some implements of palaeolithic type from Uniondale and Moorreesburg, and also pigmy implements which we discovered together in the sand dunes of the Cape Flats. These rimmers or borers with secondary chippings are extremely small, some of them measuring 12 mm. only. They were used in the process of manufacturing the ostrich eggshell disks which we found there in abundance and also in all stages of manufacture. These implements can hardly be differentiated from similar ones found in the Sudan, Abyssinia, Egypt, etc., where they were evidently put to the same use. In these aboriginal workshops we found also the remains of a smithy. Stones with an artificial medium depression had been used as an anvil, and pounders with abraded ends as hammers. Pieces of hematite (iron-ore) were found with those, and calcinated lumps of limestone showed where the fireplace was built. Kolben, whose veracity has been often impugned, was right after all when he stated of the Hottentots that they were good smiths.

"Smithy, as it stands among the Hottentots, require a great deal of labour it is furnished with no other implements than *stone* as soon as the receiver is cold they take it out and break it to pieces with *stones* and with *stones* beat 'em out and shape 'em to weapons."—Kolben's "The Present State of the Cape of Good Hope," English edition, London, 1738.

Rev. W. A. Adams has donated 12 stone implements made of dolerite and found near the Mission Station, Pniel. These instruments, although of palaeolithic type, are so much weathered or polished by water, or perhaps eolian agency, that, if found in Europe, they would certainly be looked upon as neolithic.

Messrs. A. W. Rogers and A. du Toit, of the Geological Survey, have likewise presented numerous implements from the Hay and Barkly West districts of the Cape Colony, several of which bear unmistakable signs of deep weathering. One specimen, probably an axe, is 240 mm. long and 143 mm. at its widest part.

Mr. R. C. Camp has given one of the best-finished axes of branded jasper that I have yet seen, and also a "Gorah," the most primitive of musical instruments.

The Trustees are indebted to Miss Schunke-Hollway for several stone implements found on the talus of the Simon's berg, and to Dr. F. C. Kolbe, the Rev. W. Gardner, and the Bulawayo Museum for some chalcedony implements. T. Paynter has procured in some ballast pits in the Hex River Valley implements of the Stellenbosch type, but so much worn that they might be taken for naturally produced eoliths.

Rev. H. J. Whaits has contributed some fragments of aboriginal pottery from the Prince Albert district, very similar in texture to that found in the middens ascribed to the Strand Loopers, and also a very small pot of unique design.

Of other pottery there has been donated a large earthenware pot of Batlapin manufacture by Mr. G. Hunter, of Griquatown. This valuable addition was brought to the Museum by Mr. A. W. Rogers, of the Geological Survey.

Mr. J. Drury, the Museum Taxidermist, has brought from the Mashukulumbé country 4 earthenware pots of local manufacture, and also six ornamental pipes of remarkable artistic design, being the reproduction of heads of antelopes, or bearing on the bowls forms of animals in relief. He obtained also a photograph of the natives using their pipes, which after enlargement has been placed in the show case alongside the specimens.

Mr. M. Jeffreys, of Bulawayo, has presented a quiver and some poisoned arrows tipped with bone, and said to have been obtained from the Kalahari. The point and the bone shaft are of one piece. This type was not hitherto represented in the collection.

To Mrs. M. Grove, the Trustees are indebted for the presentation of a block of hard stone with an artificially produced hollow depression supposed to have been used as a mortar for pounding auriferous quartz. The specimen is from Insiza, Southern Rhodesia.

(b) Antiquarian.

The Colonial Government has presented several stones bearing inscriptions recording the call in Table Bay of Dutch, English, French, and perhaps Danish ships. These stones were discovered lately while excavating near a spot which had most probably been used in former days as a landing place. Four of them are to be placed in a niche built to commemorate the spot, and *fac-similes* of those will be made and added to the series of these mementoes now under the charge of the Trustees.

Mr. Adriaan Jurgens has donated a Sedan Chair, plainly of local manufacture, and which his mother, who died at a very advanced age, remembered using still before her marriage, *circa* 1829.

(c) Coins.

Mr. J. M. Bain has presented a small collection of 13 coins, which includes some Roman and Greek ones.

Mr. O. van Blommestein has very generously presented 47 silver and bronze coins, several of them South African.

No purchase has been made during the year.

Our collection of Khoi Khoi skulls, Bushman, Strand Loopers, Hottentots, has been forwarded for study and report to Dr. Frank Shrubbsall. The result of his investigations will duly appear in the Annals of the Museum.

I have read before the South African Philosophical Society a paper on the "Tikoe and Kibi," the perforated stone and stick, known under the name of Bushman digging-stick, and another on "Rock engravings of animals and the human figure, the work of South African aborigines, and their relation to similar ones found in Northern Africa." The latter has been published, but not so the former as yet.

I have drawn up and circulated among people who are interested on the subject, "directions for tracing Bushman paintings and taking prints of rock engravings."

L. PERINGUEY,

DR. STATEMENT OF THE INCOME AND EXPENDITURE OF THE SOUTH AFRICAN MUSEUM FOR THE YEAR ENDED 30TH JUNE, 1906. Cr.

To Balance from last year	... ..	£459 15 1	
Less advance recovered in 1904—5 and shown separately in the statement for that year	... ..	55 10 0	
		<u>£404 5 1</u>	
„ Ordinary Government Grant	... ..	3,050 0 0	
„ Grant in aid of publication of Annals	... ..	70 0 0	
„ Proceeds of sale of Annals	... ..	15 12 0	
			15 12 0
„ Grant from Cape Town Corporation for Sunday Opening	... ..		100 0 0
„ Interest received on Hadje Shah Sulieman Mohammed Fund, vide Annexure "A"...	... ..		4 15 0
„ Miscellaneous Receipts :—			
Refund of Overpayment of Account M. Miller	... ..	2 2 0	
Advance C. H. B. Grant	... ..	0 8 1	
" by Agricultural Department of amounts included in General Expenditure	... ..	8 11 7	
" of Customs Duty and Postage	... ..	0 4 0	
Entry to adjust Surplus Petty Cash	... ..	1 3 0	
			<u>12 8 8</u>
			<u>£3,657 0 9</u>

By General Museum Expenditure :—			
Salaries	... ..	£2,209 0 0	
Purchase of Taxidermist and other Stores	... ..	111 0 3	
Books	... ..	105 19 8	
Specimens...	... ..	61 10 3	
Coins	... ..	6 19 0	
Glass Jars...	... ..	2 5 0	
Installation of Fixtures (including Show Cases)	... ..	412 8 2	
Uniforms for Attendants	... ..	19 10 2	
Freight, &c.	... ..	19 15 10	
Cleaning Museum, Washing, Petties	... ..	35 14 9	
Insurance	... ..	25 5 10	
Postage	... ..	18 0 0	
Rent of Post Office Box and Telephone	... ..	11 10 0	
Travelling Expenses	... ..	24 14 5	
Auditors' Fee	... ..	3 3 0	
Cost of Sunday Opening	... ..	115 12 0	
Labelling (Wages of Writer)...	... ..	92 7 4	
Mounting and Framing Photos, Cards, &c.	... ..	11 3 9	
Bank Charges	... ..	1 10 6	
Publication of Annals	... ..	153 6 6	
			<u>£3,440 16 5</u>
„ Balance :—			
Cash in Bank, Ordinary Account	... ..	£154 13 6	
" Hadje S. Mohammed Special Account vide Annexure "A"	... ..	8 1 10	
			<u>162 15 4</u>
Petty Cash in hand	... ..	6 19 0	
Advance outstanding—			
Public Works Department	... ..	40 5 6	
Agricultural Department	... ..	6 0 0	
			<u>46 5 6</u>
Overpayment of Gardener's Wages to be refunded	... ..	0 4 6	
			<u>216 4 4</u>
			<u>£3,657 0 9</u>

45

Audited and found satisfactory.
WALTER E. GURNEY, Controller and Auditor-General.
25th January, 1907.

L. PERINGUEY,
Director, South African Museum.
25th January, 1907.

ANNEXURE "A."

Hadje Sulicman Shah Mohammed Fund for the purchase of Coins.

Sum invested with South African Association	£100 0 0	
Balance of Interest in hand from last year	10 5 10	
Received for Interest during year 1905-6.. ..	4 15 0	
	<hr/>	115 0 10
Expended on Coins during year		6 19 0
		<hr/>
		£108 1 10
		<hr/>

£8 1s. 10d. of which forms part of Bank balance at 30th June, 1906.

NOTE.—A further sum of £2 7s. 6d. was due for interest on this investment for half year ended 30th June, 1906.

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ANNEXURE "B."

Details of Expenditure on publication of Annals during the year ended 30th June, 1906.

Printing of Volume III., part 7, 2 pages and 1 plate	£8 17 6
8, 86 pages	30 19 0
9, 50 pages	18 15 6
Title and Index to Volume III., 16 pages	6 6 0
Volume V., part 1, 16 pages and 3 plates	14 18 0
Translating portion of Volume V., part 1	2 10 0
Printing of Volume V., part 2, 170 pages	61 7 0
Envelopes for distribution of Annals	1 13 6
Making Blocks to illustrate part by Professor Seeley, not yet used ..	8 0 0
	<hr/>
	£153 6 6
	<hr/>

CAPE OF GOOD HOPE.

COLONIAL SECRETARY'S MINISTERIAL DIVISION.

REPORT

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OF THE

SOUTH AFRICAN MUSEUM

FOR THE

Year ending 31st December, 1908.

Presented to both Houses of Parliament by Command of His Excellency the Governor.
1909.

CAPE TOWN :

CAPE TIMES LIMITED, GOVERNMENT PRINTERS.

1909.

[G. 13—1909.]

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TRUSTEES OF THE SOUTH AFRICAN MUSEUM.

The Hon JOHN XAVIER MERRIMAN, M.L.A.
 THOMAS MUIR, C.M.G., M.A., LL.D., F.R.S.
 Superintendent-General of Education.
 HARRY BOLUS, D.Sc., F.L.S.

STAFF OF THE MUSEUM.

Director : LOUIS ALBERT PÉRINGUEY, D.Sc.
 Keeper of the Land Invertebrates (except Insects) : WILLIAM FREDERICK PURCELL, B.A., Ph.D.
 Keeper of the Marine Invertebrates and Fishes : JOHN DOW FISHER GILCHRIST, M.A., D.Sc., Ph.D.
 Keeper of the Geological Department : ARTHUR WILLIAM ROGERS, M.A., Sc.D.
 Keeper of the Vertebrate Palaeontological Department : ROBERT BROOM, M.D., D.Sc.
 Keeper of the Herbarium : H. H. W. PEARSON, M.A., Sc.D.
 Assistant in the Geological Department : A. R. WALKER, B.Sc., A.R.C.S.
 Assistant in the Herbarium : E. P. PHILLIPS, M.A.
 Librarian : ROBERT MARK LIGHTFOOT, F.E.S.

CAPE OF GOOD HOPE.

COLONIAL SECRETARY'S MINISTERIAL DIVISION.

REPORT of the South African Museum for the Year ending 31st December, 1908.

Presented by the Trustees to both Houses of Parliament by Command of His
Excellency the Governor, 1909.

REPORT OF THE DIRECTOR.

The Trustees of the South African Museum,—

SIRs,—I have the honour to lay before you my Report on the general organisation of the Museum during the year 1908, and on the work done during that period.

Visitors.—The number of visits paid by the public to the galleries of the South African Museum has been 79,257, or 675 less than last year, but that of the visitors to the Museum Aquarium at St. James has been 12,454, and promises to be much greater next year, judging by the returns of the first month of 1909. The Sunday visitors to the Museum numbered 13,508; the largest number in one afternoon was 444.

Presents and Purchases.—The acquisitions by donations—there were only eight purchases—or through the exertions of the Museum officers amount to 12,489 examples, representing 3,015 species; of these, 1,053 are new to the collection.

These figures, except that of the new species, are in excess of those of the last three years when they were respectively 6,211, 2,454, and 1,256.

The Library.—The number of separate volumes purchased or presented is 46; of pamphlets 123, of serial numbers 1,075, giving a total of 1,244 (or an excess of 241 on the number obtained in 1907, and of 315 in 1906).

The annals of the Museum have been sent in exchange to six new institutions, and to four private persons.

Labels.—222 labels for the exhibition series have been printed and affixed during the year.

Museum Staff.—Miss Wilman, Assistant in the Geological Department, was appointed at the beginning of the year Curator of the newly-founded McGregor Memorial Museum at Kimberley, and left in March for her new sphere of work. Mr. A. R. E. Walker, B.Sc., A.R.C.S., then Assistant to Professor W. W. Watts, F.R.S., Professor of Geology at the Royal College of Science, London, was appointed to fill the vacancy, and entered on his new duties in September last. Researches in the field by members of the staff have not been numerous this year owing to the financial circumstances obtaining. Mr. Walker was, however, absent in the field for six weeks with a member of the Geological Survey in order to become acquainted with the geological features of the country. Mr. R. M. Lightfoot and Mr. J. M. Baines went to investigate some caves containing human remains; Mr. E. P. Phillips went on some botanical excursions; Professor H. H. W. Pearson collected for a month on the banks of the Modder River, where Mr. T. L. Butler spent some three weeks in obtaining birds. Mr. Drury, the taxidermist, was twice absent for a month engaged in taking casts of natives; he accompanied also the Duke of Westminster on a shooting trip to the Kafue Flats, securing there some specimens which we wanted.

Publications by Members of the Staff and Others, based on the Collections of the South African Museum, or procured by the Geological Survey.—Six parts of the Annals of the Museum, containing 593 pages and illustrated by 31 plates, have appeared during the year. The contents are:—

Vol. IV., Part 13: Contributions to South African Palæontology, by R. Broom. (2) On the Pareisaurian genus *Proppappus*. (3) On some new Therocephalian Reptiles. (4) On the inter-relationships of the known Therocephalian genera. (5) On a new Labyrinthodont from the Permian Beds of South Africa. (6) Note on the Species of *Mesosaurus*.

Part 14: New Fossils from the Bokkeveld Beds, by F. R. C. Reed.

Vol. V., Part 7: Seventh Contribution to the South African Coleopterous Fauna, by L. Peringuey.

Vol. VI., Part 1: (1) South African Crustacea, by the Rev. T. R. R. Stebbing. Part 2: (2) Blenniidae of South Africa, by J. D. F. Gilchrist and W. Thompson. (3) Description of Fishes from the Coast of Natal, by J. D. F. Gilchrist and W. Thompson. (4) On two new species of Ptychodera, by J. D. F. Gilchrist.

Vol. VII., Part 1: (1) Polyzoa and Anthozoa from the Upper Cretaceous Limestone of Need's Camp, Buffalo River, by W. D. Lang. (2) Echinoidea, Brachiopoda and Lamellibranchiata from the Upper Cretaceous Limestone of Need's Camp, Buffalo River, by Henry Woods. Part 2: (3) The Invertebrate Fauna and Palæontological Relations of the Uitenhage Series, by F. L. Kitchin.* In the Transactions of the South African Philosophical Society has appeared the concluding part of the Descriptive Catalogue of the South African *Scarabaidæ* with Index, Plates, etc., by L. Peringuey, and in Schultz's "Forschungreise im Westl. und Zentral Sudafrika," *Tenebrionide* und *Curculionide*, by L. Peringuey, and *Aranæ* (1) by W. F. Purcell.

The papers now in the Press are:—Vol. V., Part VII.: New South African Micro-Lepidoptera, by E. Meyrick. (9) On the Milk dentition of *Orycteropus*, by R. Broom. (10) On some new and little known Mutillidæ (Hymenoptera), by L. Peringuey.

Vol. VI., Part III.: Description of Fishes from the Coast of Natal (Part II.), by J. D. F. Gilchrist and W. Thompson.

Vol. VII., Part 3: (7) The Fossil Fishes of the Upper Karroo, by R. Broom. (8) Notes on some new Amphibians, by R. Broom. (9) On a large extinct species of *Bubalis*, by R. Broom. (10) On evidence of a large horse in South Africa, by R. Broom. (11) On the shoulder girdle of *Cynognathus*, by R. Broom. (12) An attempt to determine the horizon of the fossil vertebrates of the Karroo, by R. Broom. Transactions of the Royal Society of South Africa. Descriptive Catalogue of the South African Meloidæ (3 plates), by L. Peringuey.

This long list of papers, printed or being printed, sufficiently demonstrates that the scientific part of the Institution is keeping pace with the improvements and additions to the exhibition part. A number of other important papers are also on hand.

New Cases.—The erection of nine new glass-and-iron exhibition cases has been completed to my satisfaction. Four have been mounted in the Zoological Room. They are 9 ft. 6 in. high: their width varies from 6 feet to 10. The largest case has glass panes 10 feet wide; the others, four wall and two table cases, are of a different design and adapted to the display of Geological and Mineralogical specimens. By means of these fine cases the exhibition space of the Geological Mineralogical section has been increased from 510 square feet to 968, with a corresponding increase of drawers for storage. But the number of specimens obtained yearly is such that this addition will afford only a respite of short duration, and as the Palæontological Series are increasing at the same rate as the Geological ones, we shall, even next year, be put to sore straits for space. The whole ground floor should be allotted to that Department (Geology, Mineralogy, Palæontology) in order to do it justice.

The new cases for the Zoological Series were intended for the large unprotected mammals standing on the floor, and no additional space was gained thereby. We have once more been compelled to employ one of the lateral cases of the Foreign Room to provide for the exhibition of additional specimens of the fresh water fishes of South Africa.

Want of Exhibition Room.—This process of elimination must, however, come to an end as we have no room left wherein to store or pack the dismantled specimens. Yet the large South African Mammal Room could be enlarged by one third were the outer wall of the lean-to, serving as part of the office rooms and library, raised to the height of the building, and the present outer wall pulled down. The expense involved in carrying out this alteration would be small and the advantage derived thereby be that all the South African mammals, which necessity compels us to have in separate rooms, would come together and make a homogeneous collection.

The Museum Aquarium at St. James's is, since its transfer to the Trustees of the Museum—at which time the charge for admittance was abolished—proving a great success. It has been visited by quite a number of people, and its popularity is on the increase. It is a matter of regret that the duplication of the existing tanks which would only cost £250, cannot be proceeded with owing to lack of funds for

* The cost of publication of these two papers is jointly defrayed by the Museum and the Geological Survey of the Cape of Good Hope.

that purpose. Not only would it then be possible to exhibit twice as many living objects as we are now doing, but the facilities for observing the manners and habits of the inmates would be increased considerably.

It is in the Anthropological-Ethnological Room that the want of space is at present most seriously felt. All I could incorporate this year are four busts of natives, Bushman and Hottentot, and a few native pots. It is to me a source of great regret that we cannot exhibit the magnificent series of casts taken from the flesh and coloured from nature which we have completed this year. The space occupied by the Art Gallery would be hardly sufficient for the scientific arrangement and display of our present Ethnological and Antiquarian collections, of which some of the most valuable articles are stored up as best we can.

The Botanical Section is not represented in the Exhibition Series also from want of space. That this is a serious defect is unfortunately too obvious.

It is very plain to me that some new cases, especially for the Invertebrate and Insect Rooms are urgently needed. But in spite of these drawbacks, good progress has been made in the Exhibited Series, as shown in the following account.

Arrangement and Conservation.—*Mammals*: In the large new glass case have been placed the male and female Hippopotami; the former is over 12 feet long. There is room in the same case for the juvenile Hippopotamus which had, however, to be reset, and also for the extremely large skull formerly in the collection. In order to erect this large case (20 feet by 10 feet) it was found necessary to remove the large man-eating sharks to a platform erected above the 10 feet high wall cases. Although large enough not to be too much dwarfed by the elevation, they are showing, alas, too much of their seamy side. The Tibetan and Black Buck antelopes, three of the Central African ones, the Asiatic Wild Ass, and Grevy's Zebra have been accommodated in a new case; it was time indeed that they should, as they had greatly suffered from the too close attention of the general public, as well as from that scourge of museums, the Anthrenus-Beetle. The white and black Rhinoceroses have been similarly accommodated, each having its own case. But in order to exhibit rationally and effectively these large specimens, we had to remove from the gallery, and store as best we could the mounted skeletons of the Buffalo, Black Rhinoceros, Zebra, Lion, the Casuarine Meionornis, and others. An attempt will be made shortly to turn the store-room in which they have been deposited into an apology for a gallery of Osteology.

Birds: One of the smaller South African bird cases next to that of the Ostriches was emptied to accommodate the skeleton of *Dinornis maximus*, and of the gigantic leg (cast) of *Aepyornis*, in order to show the affinities of these extinct flightless birds with the surviving *Ratita*.

No bird was exhibited with the exception of the White-browed Weaver Bird and its curious nest, but the "Clou" of the Bird's Nest Series is that of the Social Weaver Bird, which measures some 12 feet in length and 7 feet in width, and for which a special exhibition-case will have to be constructed. An example of that size is, I believe, the first of its kind ever exhibited in a Museum, but it is not one of the largest met with in the veld.

Fishes: The removal of the foreign birds from one of the lateral cases has permitted of the exhibition of the Fresh-water Fishes of South Africa, including the different Trouts from our artificially stocked rivers. These new exhibits have been arranged in large, flat glass jars. This system of exhibiting fishes is far preferable to stuffing and painting the specimens; unfortunately these tanks, or flat jars, cannot be made of sufficient length to accommodate all the fishes, and moreover they are very expensive. In addition to these Fresh-water Fishes, glass jars containing four species and nine mounted specimens have been added to the exhibition series.

Reptiles: A few specimens (6) have been mounted in flat jars, but they have not been exhibited as yet.

Insects: Twenty-two cases, representing the Economy of Insects, their Transformations, Housing, Parasitism and Food Plants have been added, and the room is getting very full. The life history of the white ants (Termites) has also been added to by three new exhibits, one of which consists of the section of a Termitarium.

Spiders, Crustaceans, and Worms.—Thirty-seven species have been mounted and placed on exhibition. One of these exhibits represents the evolution of the "Bonte" Tick; others portray the life history of Gordiid worms living as internal parasites in insects, etc.

Coelenterates, Echinoderms.—Only three specimens have been mounted and exhibited this year.

Anthropology and Antiquities.—We have succeeded in modelling and colouring during the year ten life-size figures and six busts of Aborigines of the Hottentot

racés, and have also completed a piece-mould for the reproduction of a Bush boy playing the "gorah." These figures, with the exception of four busts, cannot be accommodated in the Ethnological Room, and are temporarily stored on the Museum ground floor. In addition to these reproductions, casts of six Bush people and Bakalahadi from the Kalahari desert have been obtained, and the moulds have already been taken in hand.

We have been able to secure several skeletons and skulls of Strand-Looper Hottentots, and also of well authenticated skulls of full-blooded Bush people; they are an addition of the greatest value to our Study-Collection. All these relics have been submitted to Dr. F. Shrubbsall, the eminent African Craniologist.

Two members of the staff investigated two newly-discovered caves near the sea-shore in the Caledon district. The first cave had unfortunately been already tampered with, and several human skeletons, which were said to have been discovered, were it seems buried again by the discoverer, who fled on hearing that we were coming to inspect the deposit, and who has not since been seen.

This cave was partially filled with the bones of the Elephant, Hippopotamus, Whale, Lion, Leopard, Hyæna, Jackal, Eland, and other Antelopes, Ox, Sheep or Goat, Seal, Otter, Bush-pig, etc., etc. Most of these bones had the appearance of being very old, others not. Many had been gnawed by animals of prey and greatly crunched, the marks of the teeth showing as if primitive stone implements such as axes had been used. In fact it was a moot question with me whether these marks were to be attributed to man's agency or not, until a few pieces of pottery, and especially two horn cores of eland fashioned as clubs, and bearing marks of having been used *inter alia* to break marrow bones, as well as other indices, showed that this cave had not only been the den of carnivorous animals, but had also been inhabited, perhaps spasmodically, by Aborigines. These two horn cores are almost fossilised and weigh approximately one third more than those of a freshly killed animal of the same size. We recovered several human skulls buried deep in the mould of some recesses, but they were detached from the skeletons, of which odd bones only were found. These skulls bore no traces of having been tampered with by the Carnivora, although they lay intermingled with the bones of the animals. The second cave did not contain any bones; in it were found one single flat ostrich-shell bead, some few pieces of pottery and four small stone scrapers.

More original photographs, and in some cases negatives, of Bush people and others taken in Cape Town in the seventies and eighties have at last been traced. The Trustees of the British Museum were kind enough to let us have some; others were obtained locally. Mrs. Bleek and the Misses Bleek have kindly identified a few. The heads of the most striking ones have been enlarged so as to be as near as possible of natural size, and after being framed they will be exhibited in the place of some of those that have already done duty in the Ethnological Room.

The casts of the new Rock Engravings, the numerous stone implements and other Ethnological objects obtained during the year have been packed until the time comes when they can be exhibited.

In the Antiquities and local Curiosities Room have been placed:—(1) The mahogany wheelbarrow used by Sir George Grey for turning on the 31st of March, 1858, the first sod of the South African Railways. (2) Sir Harry Smith's Staff of War and Staff of Peace which he gave to the Kafir Chiefs to choose from at the great Indaba in 1847. (See Theal's History of South Africa, The Seventh Kafir War.) The Staff of War is a regimental pike (72nd Regt.), the Staff of Peace a tent pole with a small brass door-handle at the top. (3) The brass-headed Captain's Staff presented to Adam Kok by "Governor Caledon." (4) An iron "Kist" formerly in the Government Offices at George, closing with a very powerful spring, and of a type very different to those the Museum possesses.

One of the show cases has been emptied of a somewhat heterogenous collection and appropriated to relics of local interest. It is not generally known that among these is the cross-bow provided by the British Government for the use of the Emperor Napoleon during his captivity on the Island of St. Helena; and the copy of the invoice for the same certified to by John Desfontain in charge of the Hon. East India Co. Stores Department on the island. This invoice reads thus: New patent Steel Cross-bow made by A. Forsyth & Co., No. 8, Leicester Square, sent to St. Helena for General *Buonaparte*— — — £24

The instrument was ultimately sent to London for repairs and returned, as there appears a later item: Cleaning, etc., with additional new silk strings— — — £8. — — — £32.

L. PERINGUEY, Director.

Report of the Department of Vertebrates other than Fishes.

To the Trustees of the South African Museum,—

I have the honour to report on the work and accessions to the Dept. during the year.

The number of examples received, fishes excluded, is 368, representing 233 species, of which 15 were unrepresented in our series.

Mammals.—We have procured by purchase two skins of Crawshay's Waterbuck, *Cobus crawshayi*, but they cannot be mounted as we have no exhibition room left.

The Duke of Westminster has presented the skins and skulls of a lioness and of four lion cubs of different ages, shot on the Kafue Flats.

Major J. Stevens Hamilton has forwarded the skin of a wild dog (*Lycyon pictus*) of which we stood much in need, but this skin must likewise remain unmounted.

Mr. A. G. H. Kotze, who is a strong believer in there being two distinct races of our local Duiker (*Cephalophus grimmii*) has presented the skin and horns of three examples. The females have horns ringed like those of the male, but not quite as long.

Mr. J. C. J. Knoble has very kindly donated a most singular skin of what appears, judging by the horns, to be a male steinbok, but the colour of the skin instead of being fulvous is even darker than that of the Blaauwbok (*Cephalophus monticola*) with here and there a few interspersed white hairs. The horns are unringed as in the Steinbok.

This pelt was obtained from a native in Linchwe's country in the Bechuanaland Protectorate. It is the second that came to the notice of Mr. Knoble's brother, who is a Missionary in these parts.

We are greatly indebted to the Trustees of the British Museum (Natural History) for a series of skins and skulls from South Africa procured by Mr. C. B. Grant. The cost of this collector's expedition in South Africa was defrayed by Mr. C. D. Rudd. This series contains several species and varieties hitherto not represented in our collection, and being co-types, they are the more valuable on that account.

The Rev. R. Godfrey has forwarded examples of the Bat (*Kerivoula lanosa*) hitherto unrepresented in our alcohol study collection; Rev. J. Dornan, formerly of Morija, has sent us specimens of *Chrysochloris*, interesting as showing the area of distribution of these moles. Mr. T. D. Butler has procured some hares and steinboks; Mr. J. H. Morton five species of mammals, and Mr. J. Drury the young of *Raphicerus sharpei* and *Connochotus taurinus*.

We have purchased a White Rhinoceros horn 39½ in. long. The female Hippopotamus has been mounted and exhibited.

Birds.—The number of birds received or procured is 142, representing 83 species.

The Transvaal Museum has kindly presented two skins of the parrakeet (*Agapornis nigrigenis*) represented in the collection only by the type of the species.

We have received from Corporal Hill of the Bechuanaland Police a skin of *Melierax niger* which shows very plainly that this so-called species is a more or less sombre melanic form of *M. gabar*.

Mr. T. D. Butler has collected 71 birds, representing 37 species, near Modder River.

Mr. J. H. Morton has sent us 21 birds and three nests and eggs, as well as several mammals from that locality and from Orange River.

Mr. J. Drury has collected 18 skins in Wallfish Bay and on the Kafue River.

Sir Donald Currie has presented two large mounted specimens of the capercaillie (*Tetrao urogallus*).

To Messrs. J. J. Bisset, Major Young, R. M. Lightfoot, G. H. Ridley, and Master L. Peringuey the Museum is indebted for several examples of bird skins.

Mr. J. W. Connan has presented and forwarded at his own expense a huge nest of the Social Weaver Bird (*Philetarus socius*); Mr. T. D. Butler that of *Ploceipasser mahali*, and Mr. E. Teunissen an oak trunk containing the nest of *Mesopicus griseocephalus*.

Reptilia and Amphibia.—The number of Reptiles and Batrachians obtained is 111, representing 73 species, and containing five species new to the collection.

Captain J. Laycock has presented the skin and skull of a large Crocodile from the Kafue River.

Dr. D. R. Kannemeyer numerous species of Reptiles and Batrachians.

Mr. J. Ffolliott Darling has collected for us in Southern Rhodesia a number of very interesting snakes; three of them were unrepresented, and one is hitherto not recorded from the South African area, or is possibly a new species. Time has not permitted of the identification of Dr. Kannemeyer's and Mr. Darling's collections.

The thanks of the Trustees are also due to Mr. Drury, G. French, and the Department of Agriculture for their presentation of several reptiles.

L. PERINGUEY.

Report of the Department of Fishes and Marine Invertebrates.

To the Director of the South African Museum,—

I have the honour to present my report on the Dept. of Fishes and Marine Invertebrates.

The number of fishes has been considerably increased by collections from East London, made by Mr. H. E. Brooking, from Durban, by Mr. Romer Robinson, and from Delagoa Bay by Mr. Bayly. Owing to the greater variety of fish in the warmer waters of this region, most of the specimens are new to the Museum, and some are new genera and species. The Museum collection of marine fish is now fairly representative, and it is gradually being worked up. Owing to the variety and abundance of species from Durban, the collection from this locality has received attention first, and a preliminary report describing eighty-six species has been printed in the *Annals of the Museum* (Vol. VI.). Twenty-two families are represented in the collection, the chief additions to the Natal fauna, as well as the greater number of species (eight) being in the family of the Sparidae. The list shows that the fishes of this region have a closer affinity to those of India than to those of the Cape, several of the commonest of the Cape fishes being entirely absent. Twenty-six species are described as new, and the descriptions of fifty-nine species have been revised or amplified from examination of specimens.

An additional report, which will complete a series of this collection, is now ready to be published. The collection from East London, though not so varied, contains some striking forms, such as a deep sea *Alcisaurus ferax*, and some new forms of the Gadidae. A flat fish was sent for report from Delagoa Bay, where it was thought to be a young turbot, and to indicate possibilities of a lucrative fishery. It proved, however, to be *Pseudorhombus russelli*. Another supposed turbot, which was afterwards forwarded to the Museum from the same place was found to be *Pscttodes etrumci*. Neither are of commercial value, though they are valuable additions to the Museum collection.

In addition to the collections made by Mr. H. E. Brooking, some fresh water fishes from the Limpopo and the Kuruman Rivers have been received from Mr. Harold Fry, and some from Mr. A. T. Cooke, Klip River, Transvaal. Mr. J. Drury has obtained a few examples from the Kafue River and Walfish Bay. Master L. Peringuey has presented several examples from Table Bay that were required for mounting in glass jars; and to Mr. H. Stephan we are indebted for a very large example of *Mugil capensis*.

A descriptive catalogue of the Blenniidae of South Africa has appeared during the year in the *Annals of the S.A. Museum*. The local collection in this group is now very complete.

Nineteen new species are described, chiefly in the genus *Clinus* (Klipfish). The list shows an interesting distribution of the family in South African waters, the genus *Clinus* having only one representative in the East Coast, the remaining nineteen species being found in the waters south-west of Cape Colony. On the other hand the genera *Blennius* and *Salarias* are much more abundant on the East Coast. Most of the species of South African Blenniidae hitherto described have been identified. *Aspidontus cristiceps* recorded from the Cape has not been found, and the British Museum which possesses several specimens has kindly presented us one.

With reference to Marine Invertebrates, Mr. J. H. Dale has presented 18 species of Mollusca, 13 of which are new. Mr. J. C. Day has generously allowed us to select from a collection he made, chiefly at Lobito Bay, several species not represented in the Museum Cabinet, such as *Arca transversa*, *Lima hians*, *Sigarcus papilla*, etc.

A few Crustacea have been obtained for mounting in the exhibition series; the donors are Master L. Peringuey and Messrs. Lightfoot and French. Others have been obtained at the Museum Aquarium.

Small collections of Echinoderms and Annelids have been presented by Mr. G. French, E. P. Phillips, R. M. Lightfoot, and Master L. Peringuey, and several specimens of these groups have been obtained at the Museum Aquarium.

Two species of *Ptychodera* have been described by me in the *Annals of the Museum*, one from St. James, the other from Natal; specimens of a new genus of the *Phoronidea* and a new species of *Phoronis* have been obtained at the former place, so that the important group of the *Hemichordata* proves to be well represented in South Africa.

J. D. F. GILCHRIST.

Department of Land Invertebrates other than Insects.

Arachnida.—The main donors are Mr. H. P. Abernethy, A. L. du Toit, H. Fry, T. D. Butler, and C. P. Lounsbury.

Dr. D. R. Kannemeyer has contributed an extensive series collected by him in the neighbourhood of Smithfield.

Dr. F. W. Purcell has secured for the Museum in consideration of his identification of the Araneae Spiders collected by Dr. L. Schultze, and his description of the

new species, an example of all the kinds of which there was more than one; and of about 35 new species described in the paper.

The very large "Bavian Spinakop," which was kept so long in captivity in one of the exhibition rooms of the Museum, died. It is now mounted with her mate in the Arachnid case.

Mr. C. P. Lounsbury, the Government Entomologist, has procured very kindly for our Economic Series, a number of the transmitter of the Heartwater disease, the Bonte-tick (*Amblyomma hebraeum*, Koch) in all their stages of growth, from the egg up to full distention. This series has been mounted, and is now exhibited. The life history of other species, such as the Fowl-tick (*Argas persicus*), etc., will also be illustrated shortly by mounted examples.

Report of the Department of Entomology.

The Trustees of the South African Museum,—

I have the honour to report on the work done in the Entomological Dept.

The number of insects received, mounted and labelled during the year is 3,446, representing 1,270 species; of the latter 264 were unrepresented, and many of this year's accessions will go to complete our series. In the number of accessions the *Coleoptera* predominate (2,573); the *Lepidoptera* are represented by 306 examples, the *Hymenoptera* by 268; the *Diptera* by 146; the *Orthoptera* by 105; the *Hemiptera* by 30; the *Neuroptera* by 18.

As already mentioned in my Directorial Report efforts have been made to obtain such entomological specimens as would exhibit phases of the life of a particular insect. Twenty-one cases representing these stages have been added to the Insect Room. They comprise three instances of Metamorphosis, 13 of Home buildings, 4 of Parasitism, and 5 of *Lepidoptera*, their growth and their food plants. Ten more models of these different native food plants are being executed, and the life history of ten more of our Butterflies and Moths will be thereby illustrated next year. This will absorb what is left of the vacant space in the Entomological Room.

Among other notable exhibits placed in this room figures the section of a moderately sized Termitarium of *Eutermes trinervius*, showing the numerous ramifications of the galleries, etc.

The incorporation of a large number of identified insects has been carried out during the year.

The entomological publications have been: Additions and Corrections to the Catalogue of South African Scarabæidæ, some 300 pp. and one plate; Seventh Contribution to the South African Coleopterous Fauna, a description of some 130 new species, illustrated by two plates; Descriptive Catalogue of South African *Meloidæ* (165 pp. and and three plates); this is the seventh Monograph published or edited by the writer, who is now preparing that of the *Tenebrionidæ*, a family containing some 2,000 local insects.

Mr. E. Meyrick has kindly worked out our South African Micro-*Lepidoptera* (*Pterophoridae*, *Tortricidae*, *Xylorictidae*, *Ecophoridae*, *Plutellidae*, *Tineidae*, etc.). They were found to contain 49 new species and 7 new genera the descriptions of which are appearing in the Annals of the South African Museum.

My descriptions and identifications of the *Tenebrionidæ* and *Curculionidæ* collected by Dr. L. Schultz in German South West Africa have appeared in the Scientific Appendix of his journey. The types of the new species belong by special arrangement to the Berlin Museum of Natural History, but one or more co-types of all the new species described by me have been presented to this Museum.

The thanks of the Trustees must be accorded to the following donors for their contributions during the year:—

J. M. Bain for a collection of *Coleoptera*, *Orthoptera*, *Diptera*, made in that entomologically little known part of the Colony, British Bechuanaland. It contains nine new species.

T. D. Butler for a fairly large number of insects of different Orders made at Modder River.

C. N. Barker, who sent a good number of Natal *Coleoptera*, including 16 species not represented in the collection, or hitherto not described.

A. L. du Toit, of the Geological Survey, for some insects collected during his professional rambles.

A. T. Cooke for numerous specimens and species, mostly of *Lepidoptera* collected in the Transvaal. The latter are either named by, or are co-types of species described by Sir George Hampson of the British Museum. I fervently wish the Museum had more helpers of Mr. Cooke's abilities.

J. Drury for a small collection of different orders made at Walfish Bay, on the Kafue River, and in the Bechuanaland Protectorate.

G. French for a good number of *Coleoptera* collected mainly in the Cape Peninsula.

H. Fry for a miscellaneous collection made mostly in the Transvaal, and consisting of 399 specimens and 237 species, of which 49 were unrepresented.

The Rev. R. Godfrey for a few rare insects found in ants' nests, and one of which is new to science.

C. N. Howard, formerly of the Transvaal Agricultural Department, for a number of identified or described Mosquitoes from that part of South Africa.

Dr. D. R. Kannemeyer, who sent a considerable number of insects of different orders (1,134 examples, 185 species, 23 new) made at Smithfield in the Orange Free State. This is the first collection of importance from that locality seen by me, and it has proved of great help for the knowledge of distribution.

Messrs. R. Lightfoot, H. Muller, E. P. Phillips, and Master L. Peringuey for insects of different orders.

Mr. C. P. Lounsbury has procured for use several interesting exhibits for the economical series, as well as presented several co-types of *Tortricida* and *Tineida*, among which figure *Scyrotis atbleta*, this new species of Tineid, the caterpillar of which produces and lives in the gall-like excrescences found on some species of *Rhus*, and known locally as the "jumping eggs." The larval habits of this insect are, in the words of Mr. Meyrick, who has described the species, quite exceptional. Major Marriott presented a few specimens from Little Bushmanland which proved of interest, like almost any insect obtained in that part of the Colony. One species may prove to be new. Mr. R. Williams, of Rhodesia, has forwarded two small consignments of *Coleoptera*, some of which proved interesting, and Miss Wilman has consented to let me retain a few examples, chiefly *Coleoptera*, which although of no value on account of their shattered condition, are of interest as showing their distribution.

An effort is going to be made next year to increase the collection of Diptera or two-winged Flies, especially of the blood sucking species. We have obtained several species of Mosquitoes, but the progress in that direction is very slow.

L. PERINGUEY.

Report on the Department of Vertebrate Palaeontology.

To the Director of the Museum,—

I have the honour to present my report on the collection of Vertebrate Palaeontology.

The number of specimens added has not been so large as in some previous years, but many of them are of great interest.

Mr. C. J. de Villiers sent from Modder River, through Dr. Rev. F. C. Kolbe, the fragment of a skull of a new and large species of *Haartebeest*. This discovery suggests that there are many new large mammals awaiting discovery in the alluvial deposits of the Colony. A few years ago the fragment of a tooth of a Mastodont was got in the river gravels at Barkly West, and we have other evidence that there lived at no very distant date many large mammals which are now extinct.

Mr. J. Cairncross has sent two bony fragments from the Cretaceous beds of Oudtshoorn. Though merely scraps, both are valuable, one being the fragment of the carapace or shell of a Turtle, and the other the frontal region of a small Crocodile.

Rev. J. H. Whaits has again been a generous contributor, and among the specimens sent is one of *Eumotosaurus africanus*, but unfortunately not revealing much that is new.

Among the specimens obtained by myself at Burgersdorp the previous year is a skull which on development proves to be a new species of the Labyrinthodont genus *Capitosaurus*, while Dr. Kannemeyer has sent a fragmentary skull of another Labyrinthodont from the Orange River Colony belonging to the genus *Trematosaurus*.

During the year I published in the Annals of the Museum five papers dealing with fossil reptiles. The first is the description of the small *Parciasaurian* called *Propappus*, which was remarkable in having the back covered with bony plates. The second paper contains descriptions of five new species of *Therocephalians*. The third deals with the relationships of the known *Therocephalian* reptiles, and an endeavour is made to trace their phylogeny. The fourth paper deals with a new Labyrinthodont genus *Rhinesuchus*, a genus found both in South Africa and Europe, and one of the few middle Permian genera found in both continents; and the fifth with the different species of *Mesosaurus*.

During the year I prepared for publication a series of papers which are now in the printer's hands. The largest and most important deals with the fossil fishes of the Upper Karroo beds. Mr. A. Brown, of Aliwal North, kindly consented to my examining his collection, and from the study of this and the collection sent to us by Dr. Kannemeyer, it has been possible to add greatly to our knowledge of our Triassic fishes. Among the new forms described are a small species of the shark *Hybodus*, measuring about a foot in length, a number of species of a new genus of Palaeoniscid Ganoids called *Helichthys*, and a very remarkable flat Ganoid

allied to *Cleithrolepis*, but differing in many important features. Unlike most of our modern flat fishes, it swam erect and not on its side. As it is almost as deep as long, and nearly square, it must have looked like a little chess board gliding through the water, and has been called *Hydropesum*. In another of the papers a description is given of *Bauria cynops*, the remarkably fine skull I found near Burghersdorp. It indicated a new type of Cynodont reptiles, nearer the ancestors of Mammals than any previously known. A description is also given of a new recently extinct horse. For some years it has been suspected that a large horse inhabited South Africa before the European occupation, yet contemporaneous with the Bushmen, but the remains were so imperfect that no description was offered. But from the fragments of a lower jaw found in a limestone slab cast up by the waves from Table Bay we get pretty conclusive evidence that South Africa had a large native horse, apparently larger than a Clydesdale.

Owing to the addition of new cases, and the consequent rearrangement of specimens, the fossil vertebrates will be displayed to much better advantage, and more specimens can be placed on exhibition. I have made an endeavour to restore a number of the deficiencies in the fragmentary skeleton of *Endothiodon bathystoma*; the result being that a much better idea is given of how the animal looked in life. We have in the Collection a cast of the British Museum specimen of *Cynognathus crateronotus*. Unfortunately, though the specimen is a very fine one, the legs are gone, and the heads and vertebrae, as they lie on the glass slab, give rather an unsatisfactory idea of the animal's appearance. From other specimens which we have in the Museum, obtained by me at Burghersdorp, I am attempting a restoration of the legs, so that the whole skeleton will now be set up in a natural attitude.

R. BROOM.

Report on the Department of Geology and Mineralogy.

The Director of the South African Museum,—

I have the honour to present my report on this Department.

The new cases for two of the rooms have been set up, so that the space for exhibiting specimens has been nearly doubled. This additional space, which was urgently required, necessitates the rearrangement of almost the whole of the collections previously shown, and the incorporation with them of many new specimens; it also allows of the illustration of many South African geological formations which were formerly unrepresented. The work entailed has been commenced, and will be carried on as quickly as circumstances permit.

The following account will give an idea of the plan on which the Geological collections will be rearranged and augmented.

One of the two smaller rooms will be kept for South African fossils. In the large room will be placed the South African rocks and minerals; an introductory collection to illustrate the formation of sedimentary rocks and the alterations undergone by sedimentary and igneous rocks below and at the surface of the earth; certain collections of typical foreign rocks and fossils, for which there is at present insufficient accommodation in the small room; and a case for the meteorites.

The space reserved for South African fossils is adequate for the present collection, though there will be very little room for expansion. The specimens will be arranged, so far as circumstances permit, according to the stratigraphical position of the rocks from which they came, and, within each formation, on a biological basis.

The South African rocks and minerals will be arranged in four large groups: (1) a collection to illustrate the nature of the sediments and extrusive igneous rocks arranged stratigraphically; (2) a collection of intrusive igneous rocks arranged according to their age; (3) a collection of rocks occurring in the "pipes" and fissures of post-Karoo or post-Neocomian age; (4) minerals arranged chiefly according to their economic use; there will be room for the temporary exhibition of collections to illustrate discoveries of economic importance.

The foreign minerals and fossils will, as far as possible, be accommodated in one of the small rooms. Until new cases adapted to the needs of the collection are available they cannot be satisfactorily provided for.

Amongst the maps exhibited, a very interesting one is that drawn by Andrew Wyley in 1859, embodying the result of his own work, combined with that of A. G. Bain and others. This map was placed on loan with the Geological Survey by the Surveyor-General in 1907, but could only be exhibited to the public when the Survey left the Museum building. The sheet of sections, a contemporary copy of Wyley's original, accompanying the map, is at present in the Survey Office. These sections are very carefully drawn, and show that the relations of the rock systems in the south were clearly understood at that time. Four new sheets of the Geological Maps of Cape Colony, published by the Geological Commission, have been framed and exhibited.

Amongst the donations of fossils, great interest attaches to the *Cladophlebis* from the Uitenhage beds of the Oudtshoorn basin, presented by Mr. J. L. Cairncross, along with some Bokkeveld shells; Dr. Watson, of Ladismith, has again given Bokkeveld fossils from that neighbourhood.

The most important addition to the rock and mineral collection is the lump of eclogite containing a well-shaped octahedron of diamond, from the Kimberlite of the Roberts Victor Mine, presented by Dr. G. S. Corstorphine. A fine specimen of scheelite from Rhodesia was given by Mr. Fenwick Stow, with other Rhodesian minerals.

A typical example of a "drickanter," or sand cut pebble, from the Sinai peninsula, was given by Professor Walther, of Halle.

Dr. R. Marloth presented an interesting sample of the diamond-bearing gravel from Lüderitzbucht, in German S.W. Africa.

The thanks of Trustees are also due to the following donors:

Mr. Dittmar. Quartz Crystals in drusey dolerite, and specimens of natrolite and tachylyte from Jackals' Fontein, Sutherland.

Mr. A. G. Howard. Nickeliferous pyrrhotine, Mount Ayliff, Griqualand East.

Mr. F. J. Lawrence. Limonite, Swaylands, Jansenville.

Mr. H. Luttmann-Johnson. Glaciated pebble, Fortuna Station, Natal Railways.

Mr. B. McMillan. Tourmaline, and specular iron pseudomorphous after pyrites, Uppington.

Mr. Eustace Pillans. Coal, Bamboo Siding.

Mr. Poingdestre. Malachite, Bwana M'Kuba Mine, N.W. Rhodesia.

Dr. Van der Riet. Covellite, W. of Helderberg.

Mr. Seavill. Tinstone, Tygerberg.

Mr. A. H. Wallis. Calcareous tufa, "Wondergat," 18 miles E. of Mafeking. Bloemfontein Museum. Two casts, a meteorite and a cast of some fossil wood.

ARTHUR W. ROGERS.

Report on the Department of Botany.

To the Director, South African Museum,—

I have the honour to submit the following report on the condition and working of this Department.

As in former years, the time of the scientific Assistant has been chiefly devoted to the very necessary work of drying, poisoning and mounting specimens. It is hoped that it will soon be possible to make other provision for the purely mechanical duties, in order that the scientific side of herbarium work may receive more attention than is possible under the present conditions. Mr. Phillips has, however, found time to revise the naming of several orders and large genera by reference to recent published parts of the Flora Capensis and to the contents of Dr. Bolus' Herbarium. We are greatly indebted to Dr. Bolus for the facilities he has so kindly given in this connection. Mr. Phillips has also been engaged upon a special study of the Families Proteaceæ and Myricaceæ, and in naming collections made in Basutoland by Mrs. Dieterlen, and by myself, in the Nieuwveld Mountains, at East London, and on the Orange and Modder Rivers. I have worked up, as completely as our named collection permits, the specimens obtained by Mr. Galpin, F.L.S., and myself in South-West Africa in 1907. A set of these, including representatives of about 200 species, has now been incorporated in the Herbarium. Mr. W. Tyson, F.L.S., has spent some time in working through collections made by himself in Griqualand East. This has resulted in the incorporation in the Herbarium of a considerable number of valuable additions.

During the year I have visited various localities between Matjesfontein and Magersfontein for collecting purposes; Mr. Phillips has collected about 150 species at Garcia's Pass, a remarkably rich locality whose flora has hitherto been very inadequately represented in the Herbarium.

Among the presentations and additions made to the Herbarium during the year, the following are to be specially noted: Dr. Trelease, Director of the Missouri Botanic Gardens, has presented a valuable collection of 362 numbers, obtained in Texas in 1849-1851 by Ferdinand Lindheimer. Thirty-four specimens collected in Tristan d'Acunha by Mr. P. Bonomi, a former member of the Museum staff, have been incorporated. About 60 species, comprising specimens of Ecklon and Zeyher's Santalaceæ and Thymeleaceæ, and of Tyson's Griqualand East Thymeleaceæ, which were found among the duplicates, have been added. Many of these were not hitherto represented in the Herbarium. To Mr. Medley Wood, A.L.S., and Mr. T. R. Sim, F.L.S., we are indebted for a number of interesting species of Thymeleaceæ, several of which are from Zululand. Mrs. A. Dieterlen has sent a further collection of 150 numbers in continuation of the important series of Basutoland plants which she has already contributed. We have received several orchids and other cultivated plants from Mr. J. Chalwin, Curator of the Municipal Gardens. Mr. R. Dümmer has presented specimens of several rare Peninsular species.

Very little attention has hitherto been paid to the South African representatives of various cryptogamic groups. A systematic collection of fresh-water Algæ has been commenced during the year; these are being sent to Dr. F. E. Fritsch, F.L.S., of University College, London, who has undertaken to work them up. By the kindness of the Director of Kew, a number of Mosses from Griqualand East (Mr. Tyson) and Tristan d'Acunha (Mr. Bonomi) have been named at Kew, and are now incorporated in the Herbarium.

Several important additions have been made to the Forestry Herbarium. Two collections from the Transkei have been received through the Chief Conservator of Forests. Two others, one from Maritzburg and the other from Tokai, have been presented by Students of the S.A. School of Forestry.

Parcels of duplicates have been sent to H.H. Prince Roland Bonaparte, Kew, Dr. Bolus, Mr. H. G. Flanagan, Mr. E. E. Galpin, Dr. Pitard, Dr. Reinecke, and Dr. A. Engler. In exchanges for most of these specimens have been received or promised.

The numerous additions made within recent years have caused certain parts of the Herbarium to become unduly congested. This has been to some extent remedied by the insertion of three new cabinets. Several parts of the collection have been re-poisoned, and there appears to be no immediate danger of the specimens undergoing deterioration.

Large additions to several groups and the careful working up of others are necessary, in order that the collection may possess a degree of efficiency commensurate with the *prestige* of a Herbarium whose nucleus is the combined herbaria of the famous Cape botanists, Karl Zeyher and Wilhelm Ludwig Pappé. Since their time the materials for the study of the South African Floras have enormously increased, but the oldest of the South African Herbaria has not grown so rapidly as might be desired. Whilst the orders dealt with in the first three volumes of the Flora Capensis are fairly well represented, and important additions have recently been made to the Thymeleaceæ, Proteaceæ, and Cycadaceæ; the Cyperaceæ, Restiaceæ, Juncaceæ, and particularly the Grasses, are very incomplete, and in these, as in the petaloid Monocotyledons, the naming of the specimens is very imperfect. Of South African Mosses and Fungi the representation is at present very inadequate.

Since April 14th 244 visitors have availed themselves of the facilities afforded by the Herbarium for the identification of native plants. Numerous determinations have been made by the staff for the Department of Agriculture, the Department of Forestry, the Elsenburg Agricultural College, and for private correspondents.

It has not yet been possible to take any effective steps in the direction of forming an exhibition collection of specimens illustrating the economic Botany of South Africa. The pressing need for such a collection in connection with the S.A. Museum has been emphasised in former reports.

The thanks of the Museum Trustees must be accorded to the following donors for their contributions during the year:—

Dr. H. Bolus made a valuable donation of 34 species, of which 4 were new to the collection, and one (*Phymaspermum appresum*, Bolus) was a type specimen.

Mr. C. Chalwin has presented the Herbarium with a number of plants from the Municipal Gardens, Cape Town. The collection of exotic orchids, mostly new to the collection, have been a valuable addition.

Mr. A. C. G. Dawson has sent small collections from the Middelburg District, C.C. Among these 2 specimens, viz., *Mesembryanthemum uidens*, Haw. and *M. masculinum*, Haw., were new to the collection.

Mr. I. L. Drege has presented many interesting specimens; among these may be mentioned *Mesembryanthemum* sp., *Eriospermum paradoxa*, Gawi, *Heliophila brachycarpa*, Meisn., which were new to the collection.

Mr. R. Dümmer has again contributed many valuable specimens. These consist mostly of the rarer Peninsula species, such as *Disa racemosa*, L.f., *Xyris capensis*, Thb., *Tubaghia alliacea*, L.f., *Lycopodium carolinianum*, L., etc. *Disa uncinata*, Bolus, *Marasmodes*, sp., were new to the collection.

E. E. Galpin and H. H. W. Pearson presented 164 specimens collected in German South-West Africa. A great many of the plants were new to the collection, and some new to Science. This has been a most valuable addition to our collection from the West Coast region.

Dr. Marloth presented 5 species of Euphorbia and a specimen of *Cotyledon Phillipsia*, Marloth, nearly all of which were new to the collection.

Mr. E. P. Phillips made a collection at Garcia's Pass, in the Riversdale District. From this collection many new and interesting species will be added to the Herbarium.

Mr. Geo. Rattray has made welcome additions to the collection of Cycads by his donations of several species of *Encephalartos*.

Mr. T. R. Sim has presented the Museum with a set of his Herbarium specimens of Thymeleaceae. The rest of the specimens were sent to Kew.

Mr. J. Medley Wood presented a parcel of 9 plants, of which 5 were new to the collection, and one (*Campylogyne sp.*) was new to Science.

Miss S. Treleaven has presented a number of plants of economic importance. Among the donations was one (*Asparagus undulatus*, Bkr.) new to the collection.

Number of additions (species) acquired by the Herbarium during the year 1908:—

Dr. H. Bolus, 34; Dr. R. Broom, 1; Bundles in Herbarium, 276; Mr. C. Chalwin, 14; Conservator of Forests, 32; Mr. A. C. G. Dawson, 3; Mr. I. L. Drège, 6; Mrs. Dieterlen, 150; Mr. K. Dinter, 1; Mr. R. Dümmer, 41; Messrs. E. E. Galpin and H. H. W. Pearson, 164; Dr. Kolbe, 1; Mr. R. Lightfoot, 1; Mr. Chas. Lounsbury, 1; Dr. Maberly, 1; Dr. Marloth, 6; Mr. Neethling, 1; Prof. H. H. W. Pearson, 138; Miss A. Pegler, 2; Mr. E. P. Phillips, 168; Mr. Geo. Rattray, 7; Mr. W. T. Saxton, 4; School of Forestry, 74; Mr. T. R. Sim, 27; Miss M. Wilman, 4; Miss E. West, 1; Mr. J. Medley Wood, 9; Dr. Trelease, 362; Miss S. Treleaven, 14. Total, 1,543.

H. H. W. PEARSON.

Report on the Department of Anthropology and Antiquities.

To the Trustees of the South African Museum,—

I have the honour to present my report on this Department.

Anthropology.—We have received from Mr. J. W. Connan two very fine rock-engravings. The blocks, which are of granite, have been pared and trimmed. This is a valuable addition to our collection, which has moreover been greatly enlarged by a series of 18 plaster casts from a new locality, and in which several figures of man are depicted. The Museum modellers found, however, that the most remarkable scene, to secure a cast of which was the primary object of their expedition, had been removed without the knowledge or permission of the owner, and others destroyed in the attempt to remove them, a sheer act of vandalism.

The following coloured casts of natives have been completed during the year:—

Full-size figures: Hottentot-Bush girl; Hottentot-Bechuana girl; Bush boy; Hottentot boy; Nama Hottentot; Griqua Hottentot; Topnaar Hottentot; Hottentot; Koranna.

Busts: 2 Bushmen; 1 Bushman-Hottentot; 3 Hottentots.

We have been very successful in obtaining a good many specimens of skulls and skeletons of the Hottentot races. The thanks of the Trustees are especially due to Mr. R. E. Dumbleton, who very kindly undertook to investigate the contents of some caves on the George coast, and was successful in unearthing 3 skulls and 2 complete skeletons, which he very generously presented to this Museum. Dr. Scarbrough has presented a skull (Strand Looper); Dr. R. Broom two, one Bush and one Strand Looper(?); Mr. W. B. Magennis, a Bush skull from the Richter's Veld; Mr. I. J. de Villiers, a Bush skull from Prieska. We have purchased two complete skeletons of Strand Loopers, and obtained 6 skulls and parts of skeletons, also of Strand Loopers.

The donations of stone implements have been numerous. Dr. D. R. Kanne-meyer has sent a large collection of flakes of different shapes, which he has collected in the Smithfield District, O.F.S., and among which are many of the faceted-edge type, the use of which one cannot yet explain. Similar flakes were also sent by Mr. H. H. Cottel, who seems, from what he writes to me, to have found them associated with larger implements of the palæolithic shape. Mr. Abraham Johns, of Pearson, has sent us a scraper with the usual bulb of percussion, but made of green glass, and found with stone flakes and scrapers.

The thanks of the Trustees are due to Messrs. Pierre de Villiers, A. W. Rogers, J. M. Bain, W. Raubenheimer, Luttman Johnson, A. L. du Toit, H. H. Cottel, for their donations of stone implements.

Mr. G. D. Smith has presented a large porphyry bead, of an oval shape and of the size of a small fowl egg, perforated in the manner of the "Tikoe." This bead was found with similar ones in a grave near Vryburg, and is of considerable interest.

Professor M. Boule has sent some 34 implements from the Lake Karar, in Algeria, and from the neighbourhood of Toulouse, in France, which so greatly resemble our own here, and also types from Le Moustier, Madeleine, etc.

Mr. W. A. Caldecott has presented an interesting series of Aztec relics, procured by him in Mexico.

To Miss E. J. Neethling we are indebted for a series of 4 earthenware pots, made by the Zulu women; and Mr. J. Dury has brought back also 4 earthenware pots and other objects of domestic use, made by the Bechuanas, as well as Mashuku-

lumbe snares, network, and the chignon or top-knot of human hair which the men wear.

To the Rev. H. J. Edney, of Hershell, we are indebted for an extensive collection of apparel, musical instruments, and pottery, made by Fingoes and other Natives.

Rev. F. Christol has also presented several objects of interest, which are either no longer or not so readily made now by Basutos.

Mr. J. M. Bain has given a long wooden hoe, or rather spade, formerly used by the Kosa women; and Mr. R. G. Camp a bundle of poisoned arrows made by the Kalahari Bushmen, and also two "gorahs," made to his order by an aboriginal.

Antiquities.—Mr. J. M. Bain has presented the powder-horn said to have been the property of the Commandant-General A. W. J. Pretorius, the Boer leader in Natal, and ultimately in the Transvaal. Mr. F. Parks has presented a small caronade recovered from the H.M.S. "Sceptre" that foundered in Table Bay.

L. PERINGUEY.

STATEMENT OF THE INCOME AND EXPENDITURE OF THE SOUTH AFRICAN MUSEUM
FOR THE YEAR ENDED THE 30TH JUNE, 1908.

DR.						CR.
To Balance from last year	...	...	£984	7	6	
" Government Grants:—						
Ordinary	...	£3,050	0	0		
Herbarium	...	305	0	0		
Aquarium	...	167	5	2		
			3,522	5	2	
" Grant from Cape Town Corporation for Sunday Opening	...		100	0	0	
" Interest received on Hadje Shah Sulie-man Mohamed Fund	...		4	10	0	
" Sale of Publications	...		11	16	6	
" Refunds:—						
Colonial Secretary: Overpayment, '06-'07	...		0	5	6	
*Geological Survey	...		7	13	11	
Electric Printing Coy.: Overpayment, '06-'07	...		0	12	6	
F. Sage & Coy., Ltd.: Customs duty	...		14	15	0	
Geo Findlay & Coy.: Overpayment, '07-'08	...		1	12	0	
			£4,647	18	1	
By General Museum Expenditure:—						
Salaries	...	£1,790	10	0		
Expenditure in connection with Taxidermist and other Stores	...	228	8	4		
Books	...	147	14	0		
Specimens	...	110	0	5		
Installation of Fixtures (including Show Cases)	...	1,038	19	6		
Copying and Supplying Photos, Paintings, etc.	...	49	19	11		
Uniforms for Attendants	...	12	13	4		
Freight, etc.	...	50	8	7		
Insurance	...	22	10	0		
Rent of Post Office Box and Telephone	...	11	10	0		
Travelling Expenses	...	95	2	9		
Auditor's Fees	...	3	3	0		
Cost of Sunday Opening	...	90	16	0		
Publication of Annals	...	184	9	7		
Gratuities to Attendants	...	20	0	0		
Bank Charges	...	3	16	0		
Mounting and Framing Photos, Cards, etc.	...	13	11	0		
Postage	...	23	13	5		
Cleaning Museum, Washing, Petties	...	70	15	6		
			£3,968	1	4	
Balance:—						
Cash in Bank, Ordinary Account	...	£660	13	3		
Cash in Bank, Hadje Mohammed, Special Account	...	17	1	10		
			677	15	1	
Advances outstanding:—						
Public Works Department	...	5	8	0		
			683	3	1	
Amount due to Petty Cash	...	—3	6	4		
						679 16 9
			£4,647	18	1	£4,647 18 1

* Proportion of cost of publication of annals.

Audited and found satisfactory.

WALTER E. GURNEY,
Controller and Auditor-General.
9th January, 1909.

L. PERINGUEY,
Director, South African Museum.

ANNEXURE "A."

Hadje Sulieman Shah Mohamed Fund for the Purchase of Coins.

Sum invested with the South African Association	...	£100	0	0
Balance of Interest in hand from last year	...	12	11	10
Received for Interest during the year 1907-1908	...	4	10	0
		£117	1	10

£17 1s. 10d. of which forms part of the Bank Balance at 30th June, 1908.

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CAPE OF GOOD HOPE.

COLONIAL SECRETARY'S MINISTERIAL DIVISION.

Report of the South African Museum for the Year ended 31st December, 1909.

To be presented to Parliament.

On behalf of the Trustees, I have the honour to forward herewith the report of the South African Museum for the year 1909.

In doing so the Trustees can only confirm the remarks of the Director on the utter inadequacy of the funds at the disposal of this important institution.

The severe and drastic measures of retrenchment and economy rendered necessary by the state of the Colonial finances have unfortunately not spared the Museum.

The Trustees confidently hope that the brighter outlook may render it possible to do this institution the justice which its history and its position demand.

The trustees can only again lament the entire absence of that public liberality which in more enlightened communities takes a pride in supporting the institutions of their own country.

They wish to place on record their appreciation of the way in which the Director, Dr. Péringuey and his able staff of assistants have devoted their energies and scientific knowledge to the work of the Museum under somewhat discouraging circumstances, with a result which is highly creditable.

JOHN X. MERRIMAN.

REPORT OF THE DIRECTOR.

The Trustees of the South African Museum.

SIRS,—I have the honour to submit my report on the general organisation of the Museum during the year 1909, and on the progress made during that period.

The South African Museum, founded in 1854, is carrying on its operations as effectively as the three obstacles which stand in the way of perfecting its functions allow, viz.:—

1. Lack of space.
2. Insufficiency of staff to cope with the vast amount of material accumulating yearly.
3. Insufficiency of funds.

Not that strenuous and persistent efforts are not made with the work of classifying the collections and partly sorting the newly-acquired material for the finishing touch of the specialists. The list of original works and papers mentioned further on shows that Assistants and Collaborators have made important contributions to Science, and it will be found that the papers elaborated during the year under review are fully up to the standard maintained from the beginning of the publication in 1897 of the South African Museum Annals, of which 7 volumes have already appeared.

Visitors.—The visits paid to the galleries of the South African Museum numbered 81,266, or 2,007 more than last year, and to the Museum Aquarium at St. James' 22,951, *i.e.*, 10,497 more than in the previous year. The Aquarium was closed for a month. The Sunday attendance at the Museum averaged 285; the largest number of visitors on any one day was 1,207 on the 16th October, the lowest 44, on the 8th of August.

[G. 8.—1910.]

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C.T.Ltd.—B397.

Presents and Purchases.—The acquisition by donations, or collections made by the Museum officers amount to 10,543 examples, representing 4,461 kinds, 798 of which were hitherto unrepresented. They are divided as follows: Zoology, 5,016; Geology and Mineralogy, 164; Ethnology and Anthropology, 1,422; Botany, 3,924; Antiquities, 17.

The Library has been increased by 1,101 numbers, represented as follows: Serials, 992 (presented or exchanged 812, purchased 180); Pamphlets, 69 (presented 66, purchased 3); Books, 40 (presented 30, purchased 10).

This reference Library is the only one of its kind in South Africa, and although it is very far from being anything like what it ought to be, and will, I hope, eventually be, it is sufficiently representative to permit of the work of systematic research in nearly every branch connected with the study of the Natural History of South Africa. Still more slow than bringing together on scientific and technical lines a Natural History Collection is the gathering of a suitable Library. One man alone cannot do it, but the efforts of many Assistants pleading for their own line tend to success. We have supplied the South African Library with a list of the serials we receive and of the technical books we buy, so that there should be no duplication in the purchases—a step which the limited appropriation granted to both institutions renders necessary.

Staff.—There has been no change in the Museum Staff. Routine work, a work constantly on the increase, left little time for field collecting. Professor H. H. W. Pearson has continued during the year his researches in the Botany of Angola and neighbouring parts. Mr. A. R. E. Walker spent two months in the Orange River Colony obtaining remains of Dinosaurian Reptiles in the Fouriesburg District, and Mr. Drury and another modeller were sent to the Bechuanaland Protectorate to secure there casts from the flesh of the Kalahari Basarwas, a difficult and very costly undertaking, which they, however, carried out to my entire satisfaction. Our reduced appropriation has on two occasions prevented me from taking the field to investigate personally points of importance.

Publications by Members of the Staff and Others.—Three parts of the Annals of the Museum have been published. The contents are:—

Vols. V., VI., VII., New South African Micro-Lepidoptera, by E. Meyrick, F.R.S.; On the Milk Dentition of *Orycteropus*, by R. Broom, D.Sc.; New or Little-known South African Mutillidæ, by L. Péringuey, D.Sc.; Descriptions of Fishes from the Coast of Natal (pt. 2), by J. D. F. Gilchrist, D.Sc., and W. Wardlaw Thompson, F.Z.S.; The Fossil Fishes of the Upper Karroo Beds of South Africa: Notice of some new South African Fossil Amphibians and Reptiles; On a Large Extinct Species of *Bubalis*; On Evidences of a Large Horse recently extinct in South Africa; On the Shoulder Girdle of *Cynognathus*; An Attempt to determine the Horizons of the Fossil Vertebrates of the Karroo, by R. Broom, D.Sc.

In the Transactions of the Royal Society I have published the descriptive monograph of the numerous South African species of the Coleopterous family Mylabridæ (with 3 plates), and a second note on the Rock Engravings of Animals and the Human Figure found in South Africa (with 9 plates).

We have ready for the press or partly in print:—

1. New or Little-known Myrmeleonidæ (3 plates), by L. Péringuey.
2. New South African Micro-Lepidoptera, by E. Meyrick, F.R.S.
3. On a New Species of Panurothrips and of Anthothrips from South Africa, by R. S. Bagnall.
4. Descriptions of Fishes from the Coast of Natal (part 3), by J. D. F. Gilchrist and W. Wardlaw Thompson.
5. The Dinosaurs of the Stormberg Series, South Africa (2 plates), by R. Broom.
6. The Stone Age of South Africa, as represented in the South African Museum (plates), by L. Péringuey.
7. List of Apionidæ (Coleoptera), in the South African Museum, with Descriptions of New Species, by L. Béguin-Billecoq.
8. Descriptions of New Species of Myrmecophilous Pselaphidæ (Coleoptera), by A. Raffray.
9. A List of the Animals and Plants from the Tristan d'Acunha group of Islands, by L. Péringuey and E. P. Phillips.

In Preparation:—

1. Catalogue of South African Crustacea, with Descriptions and Illustrations of New Species, by Rev. T. R. R. Stebbing, F.R.S.
2. A Revised Check-list of South African Non-marine Mollusca, by Captain H. W. Conolly.

3. Eighth Contribution to the South African Coleopterous Fauna, by L. Péringuey.
4. A List of and Key to the South African Reptiles and Batracians of South Africa.
5. On Some New or Little-known South African Orthoptera, by L. Péringuey.
6. Notes on Some Bushman Crania (part 2), by F. C. Shrubbsall.
7. The Proteaceae of the Cape Peninsula, by E. P. Phillips, M.A.
8. The Descriptions of Two Meteorites: one, an aerolite by the late Dr. Brezina and Dr. W. Wahl, of Helsingford; the other, a siderite by Dr. B. van der Riet, will probably also be ready during the coming year.

The list and scope of these papers are sufficient to show that the routine work of the Museum, however arduous and time absorbing, is not the only task fulfilled by the Staff and its Collaborators, all of whom are spurred by the desire to maintain a high standard in the scientific publications emanating from the Museum. It is obvious that in order to provide for the cost of publications of these papers, the resources of the Museum, which for the last two years have been reduced by one-third, will be severely taxed.

Removal of Ethnological and Anthropological Relics from South Africa.—There are other reasons which demand that an increase of Staff and a larger appropriation should be taken into serious consideration. More and more attention is being paid in Europe, especially in Germany and Austria, to research in the Natural History of South Africa. The time when material brought back by tourists or touring travellers was made the subject of small monographs is past. Men of science have now for several years past been sent here to work systematically. They are so liberally supplied with money that some of our best examples—in certain lines—have been removed, and are irretrievably lost to the country. I have been told of 300 bushman paintings being bodily removed from the Natal side of the Drakensberg and sent to Europe; in the North-western part of the Cape Colony a systematic search for bushman skeletons—for which a very high price is paid—is going on, and has been going on for some time: gravestones have been and are being likewise removed for export; none is left at Pniel, and those at Warrenton have vanished; some of the Beaufort West specimens are gone, and probably also the same spoliation is taking place in other parts. In my last year's report I have alluded to the vandalism that resulted in the removal of some of these gravestones. Yet it cannot be said that these specimens from South Africa are wanting in Europe, being, to my knowledge, largely represented in the Paris, Berlin, Vienna, Budapest, Leipzig, and other Museums, although not in London, I believe.

In making these facts public, I wish it to be clearly understood that I do not begrudge the opportunities those investigators avail themselves of, of adding to the knowledge of the South African Fauna, Flora, Geology or Ethnology, for the field is large and their erudition often great. But I protest against such systematic spoliation, and I trust that legislation framed to stop the removal of some of these relics, except under certain clauses or conditions, will be passed by the Union Parliament. If such things are required for investigation in Europe or America, let the investigator apply to us for the loan of them, when every consideration would be given if a sufficient recommendation or guarantee from a learned society accompanied the requests.

It may be objected that we lay ourselves open to the accusation of a "dog-in-the-manger" policy, and that we are preventing others from doing the work that we cannot do ourselves. This objection is groundless: first, because we can do—in fact have been and are still doing—work connected with these very relics, whose removal is protested against; secondly, because we have been and are in the habit of loaning our material to specialists who apply for the same.

South Africa would not be the first country in which steps against the removal of relics of the kinds here mentioned had been taken. New Zealand forbids the exportation of all ethnological objects, and, moreover, the law is enforced; similar prohibitions prevail in Italy, Egypt, and Greece. By all means let scientists, no matter of what nationality, come and discover new material here, but let the material remain the property of the country, and, above all other things, let the country place its Museum in a position to obtain all the material obtainable in the country, and preserve it for the country.

New Exhibition Cases.—It was found possible, thanks to a rigid economy, to order and erect five steel-framed exhibition cases, surpassing in single glass surface even the very large ones erected the year before. Three of these cases (which have plate-glass panes 12 feet broad and 6 feet high) have been used for the new

Anthropological Room; a fourth was devoted to the reception of the South African weaver-birds' nests, one of which, the social weaver's, is 10 feet long and 5 feet wide, thus necessitating a very large show case; and the fifth is a prolongation of the slanting wall-cases appropriated to Insects.

Four more cases, on a reduced scale, however, are still required for next year, and when these have been mounted, there will be no coign of vantage left in the Show Rooms.

The necessity for having all our specimens under glass is urgent, owing to the "touching" mania of some visitors. The unprotected Tapir is getting bald every year, owing to the assiduous caresses of the public; the White Bear has so far stood its own; it was necessary to remove the Cape Seals to another part of the building, owing to a too close attention; the gape of the Crocodile proves too attractive to kleptomaniac individuals, who have succeeded in abstracting the last of its large teeth, notwithstanding increased precautions taken against that kind of accident.

Want of Exhibition Room.— But even if the funds necessary to defray the cost of the cases for those unprotected examples were forthcoming, there would be no room for them. The galleries are so congested that we can exhibit new objects only by removing others. Thus, the mounted skeletons of animals and birds have been removed from the exhibited series so as to allow of newly-mounted specimens being put on show. The gallery of South African Birds is absolutely crowded: that of the South African Mammals does not allow even of Crawshay's Water-buck, or Puku or Leechee females, etc., being shown in order to complete the series of South African Animals. Donors, too, are but little satisfied at their presentations not appearing among these exhibited series, especially when the donations are made with the object of filling gaps, or of adding to the effectiveness of exhibits. No rearrangement from which additional room could be obtained is possible; it has been tried too often. Next year two more side cases, containing birds from countries other than South Africa will have to be emptied to make room for South African Fishes. These valuable specimens will have to be unmounted and packed up as best we can in cases which, as I said before, I do not know *where* to store. In order to exhibit the life-size casts of Hottentot-Bush Natives, the contents of the Insect Room had to be transferred to the large Invertebrate Room; and this is the third time that the exhibits have been removed from room to room and from case to case, a transfer involving great loss of time and many breakages. This newly appropriated room is already too small, and I am sorely puzzled as to where to find space for the new figures. The Ethnological Room, were it three times its present size, would be crowded with the examples that are packed away; I cannot exhibit our tracings of Bushman Paintings, and many of our graven stones lie on the balcony, etc., etc.

No provision is made, nor could be made at present, for exhibits pertaining to the Botanical Section of the Museum, the instructive value of which is thus lost to the public.

If the wing occupied by the Art Gallery were to be vacated, as was originally intended, the occupation of the same would only give us temporary relief. The exhibition space of the Geological and Mineralogical Rooms, which was increased last year from 510 square feet to 968, is already insufficient; our South African Bird Gallery the same; our Mammal Rooms also: in fact the same sad tale can be told of all our exhibited series. Were the present building duplicated, *I could fill the whole space with the objects we already possess*, even with the addition of a special gallery for the Whales, Porpoises and Dolphins, of which we have numerous representatives; the skeletons of some of these lie unprotected in the Museum grounds.

The Museum Aquarium. The Museum Aquarium at St. James' is growing in popularity, as may be seen by the number of visitors frequenting it. There also an extension of the exhibition tanks is greatly needed. I am happy to record, however, that, thanks to the generous donation by Mr. Abe Bailey of £100, supplemented by a small grant from the Public Works Department, it was found possible to erect three more tanks, with glass fronts, thus adding to the attraction of the place, and facilitating the observations of the manners and habits of the finny inmates. There is space still in the present room for the erection of three similar tanks, and the small sum of £250 would be sufficient to cover the cost of their erection.

Arrangement and Conservation. Mr. P. C. Keytel, a friend of the Museum, made during a year's stay at Tristan d'Acunha a valuable collection of animals and plants, which he generously presented to us. In consideration of the importance of that gift, we arranged a special exhibition of the natural history of that group of islands, and details of the species will be given under their different headings.

Mammals.—Owing to the impossibility of exhibiting any animal of large size, we are compelled to keep back the mounting of a pair of Crawshay's Water-buck, a series of the Cape Duiker-bok and races with horned and hornless females, an albinic Springbok, a male Gemsbok, head and neck of a giraffe, females of Puku and Leechwe; all that we could insert in the cases was a young White-tailed Gnu, showing the singular disparity of the horns at that age with the ultimate shape of the adult stage. Owing to the removal of casts of South African Aborigines from one of the work rooms, the skeletons of some of our large mammals were removed from the Store Room, and accommodated in cases formerly occupied by these casts, but they are not on exhibition.

Captain P. Michelsen was kind enough to secure for us a *complete* skeleton of the Fin Whale, *Baluenoptera australis*, measuring over 75 feet. We have now ready for mounting a Right Whale, two Hump-back Whales, a Fin Whale, and several skeletons of Porpoises in addition. When proper shelter has been found, my intention is to have one side of the animals restored to their original shape, the other side showing the bone structure. The mask of the Hump-back Whale, with its curious scar-like warts, has been preserved in salt to serve as a model. A cast of the flipper of a Right Whale has also been made, and is now on exhibition in the general building.

I was very much struck by the colouring of the head skins of some antelopes shot in the vicinity of Lake N'Gami, which differs so much from that of animals from the North-East Transvaal and Rhodesia as to make it highly desirable to procure a collection of antelopes from that locality. From there was also obtained by Mr. A. W. Hodson an adult male giraffe, the bony horn prominence of which is very little bulging and completely smooth.

Birds.—Only few birds from South Africa were exhibited, but in the Tristan d'Acunha Collection no less than 12 mounted species are shown. They are, of course, mostly sea-birds, but in addition to the two land-birds, peculiar to this group of islands, there was also procured a South American Cuckoo, that had found its way to Nightingale Island, where the two land-birds are still found. Mr. Keytel procured eggs of all the sea-birds, among them being that of the Grey Shearwater, *Puffinus gravis*, the breeding place of which was hitherto unknown.

Reptiles.—A few specimens have been mounted in flat jars and placed on exhibition.

Fishes.—Sixteen specimens of fishes have been mounted and exhibited. The removal of the foreign birds from two wall cases will enable me to attempt an arrangement of the fishes in a systematic order, like that obtaining for the rest of the South African Fauna. Provision is made for ordering a number of specially made flat glass jars with that object in view, and we have on hand a small series of Natal Fishes, which, when mounted, will prove highly interesting. A few additions have been made to the number of exhibited fresh-water fishes, and others have been painted anew from fresh examples.

Insects and Other Land Vertebrates.—Little has been added to the exhibition, nor is it possible to add much. The insects are now transferred to the large Invertebrate Room, are arranged in sequence, and form a peculiarly instructive section, illustrating South African Insect Biology, Economy, Transformation, Housing, Parasitism, Food Plants, Injurious Forest Insects, etc.

Geology, Mineralogy.—Numerous additions have been made to the Geology and Mineralogy exhibited series. The division of the South African Rocks into four groups: Structure of rocks and the effects of weather and other agents of change; stratigraphically arranged series of sedimentary and other rocks, and their metamorphic derivations; intrusive igneous rocks arranged primarily according to age and sub-divided on petrological grounds; rocks occupying pipes and fissures of post-cretaceous age, etc., is one which could not, of course, have been carried out but for the help and generous co-operation of the Cape Geological Survey, the members of which do not, however, stand in need of a testimonial from me.

The work of re-arranging, labelling, and incorporating specimens is progressing at a good pace. The South African Mineral Collection has been greatly enlarged. That it affords a great deal of instruction is well proven by the number of visitors who repeatedly come, discuss, take notes, and even make sketches of the minerals, base or not, exhibited in that series.

Numerous applications, mostly by word of mouth, are made for the identification of some supposed precious minerals which means having expert opinion without paying a fee. We restrict ourselves, however, to giving a preliminary idea of the condition of the mineral submitted, so as to enable the applicant to go to a qualified assayer, if he deems fit to do so.

Vertebrate Palaeontology.—In this section more space has become available during the year, permitting of a better display of specimens, as well as allowing of more examples being exhibited. This, however, has only been a transient progress.

The restoration of some of these specially interesting fossil Reptiles pertaining to South Africa has been carried out by Dr. R. Broom, the Keeper of that Department. Though the South African fossil reptiles have been known for over 70 years, it is hardly to the credit of Cape Colony that until recently the only skeleton complete enough to show the general proportions of these primitive animals was that of *Parciasaurus baini*, obtained by Seeley, and now in the British Museum, London. Though South Africa has been slow in appreciating its wealth of palaeontological material, it is with some pride that we can now show in our South African Museum, not only a complete skeleton of a *Parciasaurus* in a much better preservation than the London specimen, but in addition Dr. Broom has mounted and partly restored a fine skeleton of the remarkable *Endothiodon bathystoma*—the only Anomodont mounted skeleton in any Museum; and, further, he has also restored the legs of *Cynocephalus crateronotus* from specimens in the Museum, so that we can also exhibit a nearly complete cast of this large Cynodont, the only specimen in any Collection showing the whole skeleton. Had we more space at our disposal, we could not only mount and exhibit another complete *Parciasaurus* skeleton, but many of our very valuable type specimens at present packed away could be shown. Research for Dinosaurian remains, undertaken in the Free State by Mr. A. R. Walker, our Geological Assistant, has been successful in spite of the extreme difficulty attending the removal of crumbling bones from an extremely hard rock, and their extrication and development afterwards from the matrix. The cost of the expedition or search is to be divided between the Bloemfontein Museum and ourselves, both sharing in the finds. The Dinosaurs belong to at least four species, of which three are new to science and two belong to new genera. But when the larger of these is (I will not say wholly, restored, space will forbid) partly restored, I shall be unable, I fear, to find room for it. Thus are we thwarted in any endeavour to add to the exhibitory value of the Collection. Enthusiasm does not survive very long impediments of that kind.

As a matter of fact, the whole basement of the building should be allotted to the Departments of Geology and Palaeontology, and what a brave show it would make.

Anthropology.—We were fortunate enough to obtain casts of three pure Basarwas, the Bushmen of the Kalahari (two women, one holding her child to the breast, the other sitting or squatting in the manner usual to these aboriginals, and a youth drawing the bow). In addition, the casts of two Bakalahari girls and a boy were also procured. These casts, of an accurateness that modelling on the live flesh can alone produce, and of a finish which I shall not qualify, leaving it to the visitors to pass a judgment, are of their kind unique, and these reproductions were made at the Museum by ourselves.

Casts of Rock-gravings have been added to our exhibited series, and they are as good as the originals themselves; some of them represent the human figure. Like similar engravings found in Spain and the South of France, the human face is merely indicated in outline, or rather line; two hunters, whose sex is very plainly indicated, are holding a bow. The graving of these human figures is of extremely poor technique, and contrasts singularly with the splendid rendering of the large antelopes that are found together. One of them, an admirably finished eland, is engraved across the extremely primitive figure of a man—the first palimpsest in graving as yet recorder. It is imperative to have a *Corpus* of these South African gravings and Bush paintings initiated by this Museum. We have already a long list of localities.

We have received a tracing of one of the largest Bush paintings known. It is the figure of a hippopotamus coloured in the usual red ochre. It measures 57 inches in length and is 23 inches broad at the widest part.

I have in addition, and through the collaboration of friends of the Museum obtained records of new localities, and photographs and tracings of Bush paintings, the more valuable because they have not the high finish of those met with in the Drakensberg and other places.

A number of phonographic records of the language of the Kalahari Basarwas was obtained for us by the Rev. H. Williams, who met with many difficulties in doing so.

We were successful in securing four complete skeletons and seven skulls of the Bush-Hottentot race. These have been submitted to Dr. F. C. Shrubbsall, well known for his researches on African crania, for a second report, and investigation.

At my request, the Trustees of the Albany Museum likewise forwarded to him the material they had. The number of *authenticated* skulls of that race is probably the largest ever brought together for purposes of study, and it bears out my contention that we are quite capable of collecting here valuable study material of that kind without its being surreptitiously removed from the country.

Numerous stone implements were obtained, and the situations in which certain palaeoliths were found were carefully investigated by Mr. A. du Toit, of the Geological Survey, and myself with a view to obtain, if possible, a clue to their age. So far, however, no conclusive evidence has been obtained in South Africa, and we have to be guided by the results of similar researches in Europe. The monograph of the Stone-age in South Africa as represented in our Collection is nearly completed, and a re-arrangement of our specimens is necessitated thereby. A good series of the quartzitic palaeoliths of Central and Southern Europe as well as of Northern Africa has been obtained to serve for comparison with our local examples.

Antiquities.—Among the presentations of a general character is a portrait (steel engraving from an oil painting by Thomas Lawrence, R.A.) of Mr. Andrew Barnard, and presented with an autograph inscription at the back by the Lady Anne Barnard to the President and Members of the Orphan Chamber; date 1809. This is probably another copy of the portrait which Lady Anne sent to the Prince Regent, eliciting from him in reply the remarkable letter quoted in "South Africa, a Century Ago."

Casts were made of two "Post-office stones," the originals of which the Museum did not possess—one is in the General Post Office, the other embedded in the walls of the Castle. The permission courteously granted by General Scobell, led to the discovery of another slab bearing two English inscriptions, and dated 1600 and 1607 respectively, as well as of a third recording the passage of John Pashly, of Indian fame, on the original slab of the "Lesser James."

A model has also been made of a stone bearing on each face mutilated inscriptions, found while digging for the foundation of Mr. Garlick's stores at the bottom of Adderley Street, and presented by him to the Corporation of Cape Town, which body permission for making the cast was kindly granted.

These relics of early colonisation are now complete, either in the originals or reproductions.

The Library Committee of George very considerably consented to send us for reproduction the "bank" erected at George by the order of "Gouverneur Cornelis Jacob van de Graaff" in 1785. An absolutely correct *fac-simile* of that slate slab has been made and is now on exhibition.

Somewhat interesting is the finding of several half stivers of the Dutch East Indian Company, dated 1746, and found in the sands of Holmesbucht, in German South West Africa. Although the date of the coins tallies more or less with that of Hop's expedition sent by Ryk van Tulbagh, this expedition did not reach so far north.

Another object of interest is a bronze token presented by Mr. G. G. Gie, and bearing on one side a dove with the classical olive branch and the legend Griqualand. I know, or have heard, of several of these tokens, but I cannot trace their history. Mr. J. M. Orpen suggests that they were issued by the London Missionary Society, because John Campbell giving an account of his travels and actions in Griqualand, etc., in 1813, says, speaking of the Griquas, "They should apply to the Missionary Society to get silver pieces of different value coined for them in England which the Missionaries would take for their allowance from the Society."

It is not generally known that the "Gouvernement van Nieu Griqualand volgens besluit van den Hoog-ed-Volksraad van den 5 den November 1867," authorised the issue of £1 bank notes to the amount of 10,000 pounds sterling. Taxes were at that time paid in kind, such as stock, grain, tobacco, etc., and money was extremely scarce. The discovery of the diamond fields brought, however, some relief, and through the agency of Mr. D. Strachan, to whom I am indebted for the information, Kaptyn Adam Kok was persuaded not to issue these notes as they would only be abused by his people, and Mr. Strachan intercepted them en route. "At the same time they got cardboard to give out for small sums, but none of the notes was ever used." We have several of these notes, but it would be very desirable to obtain examples of this cardboard currency.

Old documents, deeds of transfer, burgher paper, act of "Veniam aetatis," etc., have been added to our historical relics.

Botany.—The work of that department has devolved during the year on the Assistant, Mr. E. P. Phillips, owing to the absence of Professor H. H. W. Pearson, who was engaged on a tour of investigation of the Flora of Namaqualand, German South-West Africa and Angola. This tour has now been very successfully accom-

plished, and the sorting and identification of the specimens acquired is now proceeding. The Herbarium will be enriched by a second set of all plants obtained in the South, and a third set of the Angolan acquisitions. The general work of the Department is growing apace, and additional assistance will soon be required.

I must record here the generous assistance and hospitality given to Mr. Walker of our Geological Department by Mr. H. G. Gordon, of Hottentot's River, whilst the former was engaged in unearthing an almost complete skeleton of *Pareiasaurus*, and by Mr. J. L. Harries (of Fontani, O.R.C.) who, for a period of four weeks, also gratuitously rendered the same services to Mr. Walker during the removal of Dinosaurian remains.

L. PERINGUEY, Director.

Report on the Department of Vertebrates other than Fishes.

The Trustees of the South African Museum,

Sirs,

I have the honour to submit my report on the work of this Department.

Mammals.—The number of examples received is 46, comprising 42 species.

An exchange has been arranged with Dr. Lister Jameson of certain South African species or varietal forms of bats and small rodents which were not hitherto represented in the Collection, and which, therefore, go to complete our series—themselves of considerable extent.

Dr. D. R. Kannemeyer, this old friend of the Institution, has presented several bats and rodents preserved in alcohol, and obtained in the Orange River Colony, also several skulls, and the pelt of an albinic porcupine.

Mr. A. W. Hodson fulfilling an old promise sent us the skin of a male Gemsbok, which we particularly required, the head and neck of an adult Giraffe, skins and skulls of three Side-striped Jackals (*Canis adustus*), one Serval, so grey in colour that were it not for the typical shortness of the tail it might have been taken at first sight for the pelt of a quite different animal, two Kafir Cats (*Felis caffer*) and a Civet Cat (*Viverra civetta*); which last was not known, so far, to reach the deserticolous parts where it was captured.

I have mentioned in my Directorial report the peculiar coloration of several heads sent by Mr. A. W. Hodson. The colour of the Roan-Antelope is that of the Water-Buck; that of the common Hartebeest is hardly to be differentiated from that of the Sassaaby, except, of course, for the patches of silvery sheen; the Sable is extremely dark, and the lighter facings very much brighter fulvous than in any other examples I have seen from the North-Eastern Transvaal or Rhodesia.

Mr. B. Woest has forwarded the skin of *Poecilogale albinucha* from the Kafue River Valley (N.W. Rhodesia).

Mr. H. Doller has presented an African Vervet Monkey long kept in captivity, and remarkable by the comparative shortness of the tail.

Birds.—The number of birds received comprises 109 examples, representing 68 species; that of nests and eggs 86 specimens and 29 species, of which 10 are new to the Collection, and one, that of the Grey Shearwater, which frequents also northern latitudes, made known for the first time.

I have already alluded to the Collection made in the Tristan d'Acunha group of Islands by Mr. P. C. Keytel. The eggs collected and presented by him are those of the Sooty Albatross (*Phoebastria fuliginosa*); the yellow-nosed Mollymawk (*Thalassogeron culminatus*); the Rock-hopper Penguin (*Catarrhactes chrysom*); the grey Shearwater (*Puffinus gravis*); the long-winged Petrel (*Prion vittatus*); the Southern Skua (*Stercorarius antarcticus*) which was not hitherto known to breed nearer than the Crozet Islands; the Kerguelen Tern (*Sterna vittata*) the nesting place of which was not, I believe, accurately recorded; and the Lesser Noddy (*Micranous leucocapillus*), a fine booty indeed. This gentleman provided also valuable notes on the arrival and departure of Sea Birds in the Tristan Group.

Mr. J. D. Daneel has obtained a few local sea-birds. The distribution of some species on our coast is still a matter of much speculation. While boating some 6 or 7 miles from Table Bay, I plainly recognised the long-winged Petrel; the Southern Skua, and probably the grey Shearwater. Mr. Keytel, fresh from Tristan where these birds abound, described from the shore the Sooty Albatross and the Yellow-nosed Mollymawk. I ascertained last year the presence of the Frigate bird. It is somewhat singular that an example of that sea-bird should have been shot in the Orange River Colony last year. Lesson's Petrel, "the Mutton Bird" (*Oestrelata lessoni*) is reported from the Ichaboe Islands, where it is also alleged to breed, and I have information that a colony of what appears to be either the Kergue-

len Tern or the Noddy has settled and is breeding there. This information will be verified during the next breeding season.

Among other donors of birds nests and eggs are Master E. P. Edwards and Messrs. J. C. J. Knobel and J. M. Bain.

The Trustees are specially indebted to Mr. H. Connan for a number of live Social Weaver birds, the skins of which were wanted for showing the nesting habits of this peculiar species.

A large group of Kittlitz's Sand Plover (*Argalitis pecuaria*) has been put on show. It represents all the stages of growth; the beginning of nesting, and the mother bird dusting the eggs with sand before leaving the nest when alarmed, the young in all stages of growth from two days old fledgelings to full-fledged birds, etc., the assimilation of the chicks to the colour and contour of the ground, the manner in which they suddenly squat, etc.

Master Péringuey contributed most of these examples.

Three new species have also been placed in the Exhibition Series.

Reptiles.—103 examples, representatives of 68 species, 2 of which were new to us, have been received during the year.

The principal donors are Mr. A. Stephenson and Dr. D. R. Kannemeyer, the latter of whom has forwarded a numerous series from the Orange River Colony. Dr. R. Marloth has also contributed some examples from German South West Africa.

Mr. H. M. Oakley has presented two live land Monitors (*Varanus albigularis*), but the female unfortunately died. A cast of it was made and the mounted skin is now an absolutely correct representation of the animal.

L. PÉRINGUEY.

Report on the Department of Fishes and Marine Invertebrates.

The Director of the South African Museum,—

I have the honour to submit my report for the year 1909.

Numerous additions have been made to the collection of fish. These have been procured chiefly from the East Coast, more particularly Port Elizabeth, Port Alfred, East London, Durban and Delagoa Bay. The collection from the last named place is of interest, as only one other specimen had hitherto been procured from the locality by the Museum, and also as indicating the variety of species of fish as compared with those of Natal. These were obtained on a personal visit to the place, and the completeness of the collection is due largely to the assistance of Government Officials, and Mr. Bayley and Dr. Amaral Leal. The collection from Natal is due to the continued assistance of Mr. Romer Robinson; it is the largest of recent acquisitions, and contains several new species, nearly all being new to the Museum. The collection from East London consists of additional specimens sent by Mr. Brooking, and the collection from Port Elizabeth includes several sent by the Port Elizabeth Museum for identification and a few to be retained. The collection from Port Alfred was made on a personal visit, and was rendered possible by several nettings carried on chiefly through the instrumentality of the Mayor.

The collection from Delagoa Bay has not yet been worked out, and those from other places with the exception of Natal do not show many differences from the ordinary fish of Cape Colony. The large collection from Natal has been fully described in a second contribution to the Annals of the Museum by Mr. Wardlaw Thompson and myself. Eighty-nine species are redescribed, eleven of which are new to science, one of these being a new genus, of the family *Percidae*; and a very complete collection has been described of the species of *Epinephelus* (Rock Cod). There are fifteen of these, one being a new species and two being probably new, but apparently immature specimens which it has been thought advisable to describe without naming. A new species of *Dentex* (*D. robinsoni*) is also described in the same family. In the family of the *Sparidae* which is so well represented in South African waters three new species are redescribed, and one which may be the *Sargus durbanensis* of Castelnau who has given a description not adequate for specific determination. A new species has been described in the *Scorpaenidae* allied to but distinct from the *S. natalensis* of Regan. In the family of the *Carangidae* ten species are redescribed, none of which is apparently new. All the (six) species of *Scombridae* redescribed have been assigned to known species with slight differences which are detailed. One or two species have been described in the following families:—*Trachinidae*, *Pseudochromides*, *Pediculati Cottidae*, *Gobiidae*, *Sphyracidae* (with a new species), *Aulostomateidae*, *Scopelidae* *Gymnodontes*. Two new species and one new genus are described in the *Labridae*. On the whole, this collection indicates the greater variety of species in the warmer waters of the East Coast.

Of fresh water fish several have been found from various parts of South Africa, and are now being reported on. One new species *Barilius peringueyi*, from the Transvaal, was forwarded by Mr. A. T. Cooke, and three examples of *Barbus victorise* a species unrepresented in the collection, and caught at the Victoria Falls, were presented to Mr. R. Stephenson.

Dr. D. R. Kannemeyer has sent examples of *Barbus anoplus*, and Mr. C. P. Keytel has given a series of nine species from Tristan d'Acunha, several of which occur on the South African coast, and also a small collection of Mollusca.

The thanks of the Trustees must also be accorded to Captain M. Conolly for a collection of South African Land Shells, 14 of which were not represented in the collection.

Miss L. Pegler and Master L. Peringuey have contributed several specimens of interest.

J. D. F. GILCHRIST.

Report of the Department of Entomology.

The Trustees of the South African Museum, -

I have the honour to report on the work of the Entomological Department.

The number of insects received, pinned, set, labelled and partially identified is

An important collection was submitted to me for identification by Mr. M. C. W. Howard, the Government Entomologist of Lourenço Marques, who presented, as a return, a good number of species peculiar to that locality, which is so little known entomologically. Among them are several new kinds, and many that will go to complete our series.

Master Peringuey has assiduously collected the Micro-Coleoptera of the Peninsula, and has been very successful in obtaining numerous and rare kinds.

Mr. C. N. Barker has forwarded a certain number of Coleoptera, mostly *Carabidae* from Natal, and Mr. Bell-Marley a few *Tenebrionidae* from Zululand.

From Mr. I. L. Drege we have received a few Coleoptera from the neighbourhood of Port Elizabeth.

Mr. J. M. Bain has contributed a miscellaneous lot from Bechuanaland, and so has Mr. H. M. Oakley; Dr. Fröembling has also donated a small collection from German South-West Africa.

Dr. R. Marloth has presented a small series of various insects, also from German South-West Africa, among which are several examples of large locusts that can in spite of their size hardly be distinguished from their surroundings.

To Dr. D. R. Kannemeyer we are indebted for a long series of moths from the Smithfield District in the Orange River Colony, as well as for insects of other orders, among which I was pleased to find the wingless locust *Eremotttic Walkeri*, Saus. known hitherto from one example only in the British Museum.

The thanks of the Trustees are due to Rev. J. H. Whaits, Mr. S. W. Black and Professor W. C. Worsdell for some species of similarly wingless locusts (females) from our Karroo districts. So little is known of their habits that several kinds were reputed to be apterous in both sexes, whereas it is now proved that the male is winged. One of these species was known from the type only, in our Collection. (*Batrachotettix acutus*). Mr. G. French has donated several kinds of insects of various orders.

Miss A. Pegler has at last unravelled the mystery attaching to the life-history of a Psychid Moth, and the material sent by her, and duly labelled and mounted, forms now an important item in the Biological series. She has recorded several facts that are new, such as the young being hatched inside the pupal cases of the mother, etc. Miss Pegler has also succeeded in rearing gall-making Cecydomiidous flies, and the material collected by her will be investigated shortly. Mr. Abernethy has also sent a few interesting insects from the Transkei.

Mr. A. T. Cooke has sent identified moths from the Transvaal, several of which were not represented in our collection, and also a small but interesting series of Coleoptera.

To Mr. V. N. Dawson, of Cape Town, we are indebted for a collection of moths, containing a good number of species hitherto unrepresented.

An exchange has been arranged with Mr. A. J. T. Janse, of Pretoria, and several co-types of Tineid moths, etc., described by Mr. Meyrick, obtained in that manner.

A second batch of our Micro-Lepidoptera has been revised and described by Mr. E. Meyrick, and I have prepared a paper on new or little known African *Myrmeleonidae*.

Most of the time that I can devote to Entomology has been taken up with the work above enumerated. But I have in addition transferred personally the

numerous insects in exhibition to their new room, a transfer that absorbed a good deal of my time.

L. PÉRINGUEY.

Report on the Department of Vertebrate Palaeontology.

The Director of the South African Museum,—

SIR,—I have the honour to submit my report on the Department of Vertebrate Palaeontology.

During the past year, owing to the rearrangement of the geological collections, more space has become available for the exhibition of the fossil Vertebrates, and besides having obtained many new specimens, a much more satisfactory display has been made of those we already possessed.

The skeleton of *Endothiodon bathystoma*, which was described by me a few years ago, has been partly restored, and forms a very fine exhibit, giving a better idea of the general proportions of the Anomodont reptiles than any other skeleton in any Museum in the world.

Some little time ago we obtained the casts of those portions of *Cynocephalus crateronotus* which are in the British Museum, and as we have been able to restore from specimens in the South African Museum the missing limb bones, we have mounted the whole skeleton. This also is the first attempt to give a complete idea of the skeleton of one of the Cynodont reptiles.

The remains of the remarkable large reptile, *Erythrosuchus africanus* have been placed on exhibition. This animal is of much interest, as not only are there considerable differences of opinion as to its affinities, but a form apparently allied has been recently found in Brazil. The remains of *Erythrosuchus africanus* were loaned to the British Museum authorities in order to aid them in the making of a restoration in plaster of the complete skeleton.

Among other specimens placed on exhibition are a new head with horns of *Bubalus bairdi*, the fragmentary skull of a large extinct Hartebeest, *Bubalis priscus*, the fragmentary lower jaw of the extinct horse, *Equus capensis*, found in a slab of limestone cast up from Table Bay, and casts of Dinosaur footprints made from originals in the Bloemfontein Museum.

During the year the most important vertebrate remains received by the Museum has been a collection of Dinosaurian remains from near Fouriesburg, in the Orange Free State. The remains have not yet been completely worked, but the more important specimens have been studied. There is a large part of a skeleton of a Carnivorous Dinosaur, which probably stood about 10 feet high. The pelvis, hind legs, and front feet are fairly well preserved. A very similar but smaller form is represented by a hand and a foot and a few other bones. A much smaller form, allied to *Massospondylus*, is represented by a fairly well preserved hind foot, hand, shoulder, girdle and a few vertebrae. There are also a few other less-determinable remains.

Dr. Kannemeyer has contributed a good *Lystrosaurus* skull and humerus.

Rev. Mr. Whaits has again sent collections of fossils from Fraserburg Road and elsewhere. These comprise a beautiful skull of *Scylacosaurus selateri*, remains of *Tapinocephalus atherstoni*, and some less important specimens.

From Hottentots River was procured, through the kindness of Mr. H. G. Gordon, a fairly good skeleton of a *Parciasaurus bairdi*.

R. BROOM.

Report on the Department of Geology and Mineralogy.

To the Director of the South African Museum,—

SIR,—I have the honour to send you a report on the work done on the Geological Collections during the past year.

The foreign mineral collection has been rearranged in small desk cases. The South African Minerals have been placed in one of the new wall cases, and have been added to, and a case has been set aside for the illustration of mineral discoveries of economic importance.

The collection of South African rocks is now divided into four groups: a series illustrating important structures in rocks and the effects of weather and other agents of change; a stratigraphically arranged series of sedimentary and volcanic rocks, with their metamorphic derivatives; the intrusive igneous rocks, arranged primarily according to age and sub-divided on petrological grounds; and the rocks occupying pipes and fissures of post-cretaceous age. The separation of the last from other volcanic rocks is justified by their local importance and the peculiarities which distinguish them.

The labelling of the rock collection is not yet completed, partly owing to the fact that I was too busily engaged on survey work to attend to the matter, and partly because Mr. A. R. Walker had too much other work of urgent kind.

In the Invertebrate paleontological collection nothing has been done to the foreign series. To the South African exhibits several additions have been made, of which the most important are two slabs with plants from Vereeniging; and specimens of the mollusc *Eurydesma* from the Dwyka or Ecca beds of German South-West Africa, of particular interest as illustrating the earliest authentic discovery of marine animals in the Karroo formation.

Though only hypothetically connected with Geology, meteorites are usually placed in the neighbourhood of minerals or rocks in Museums. In the South African Museum the Meteorites have, unfortunately, for reasons of space, to be put in cases which also contain rocks or minerals. A separate case should be provided for them. During the past year a notable addition to the fine series of South African meteorites was made by the gift of a meteoric iron from Rateldraai by Mr. C. J. Smit. It is worth recording that this mass of iron, weighing over 1,200 lbs., was held to be the cap of a copper vein by prospectors, and the attention of one of the staff of the Geological Survey was called to it in consequence.

The following maps have been exhibited: Geological Map of Cape Colony, Sheet 33 (Britstown), Geological Survey of the Cape: Sheet A. 1 (Griqua Town), Geological Survey of the Cape.

The thanks of the Trustees are due to the following donors:—

The Chartered Company, Rhodesia; Messrs. J. O'Connor, B. J. Dangars, —, Goodchild; Prof. P. D. Hahn; Messrs. C. F. Holm, J. Horne, Rev. H. Kling, Rev. S. Lavis, Dr. Marioth, the Macgregor Memorial Museum, Kimberley; Dr. Thomas Muir; Messrs. A. H. Pearce, V. Pearson, S. C. Phillips, P. H. du Plessis, J. G. Rose, W. M. Smith, A. H. Wallis, Dr. Watson, J. T. Wylde, and John Wood.

A. W. ROGERS.

Report on the Department of Botany.

To the Director, South African Museum,—

SIR,—I have the honour to submit the following report on the working of this Department.

During the year my time has been largely occupied with the work of drying, poisoning and mounting specimens. Amongst work of this description may be specially noted the poisoning of the whole of Dr. Pearson's large collection made on his recent journey through Namaqualand and German South-West Africa, while a large part of this collection also needed further drying. The collection made by myself at Garcia's Pass, in the Riversdale District, in 1908, and by Dr. Pearson, at Nelspoort, in 1907, also a parcel of Natal plants from Mr. J. M. Wood, and a number of Tyson's East Griqualand Labiate have been mounted and incorporated in the Herbarium. Most of the collections received during the year have been sublimated, but some have only been treated with carbon disulphide fumes, and await further poisoning. The books in the Library have been kept catalogued up to date, and a subject catalogue of many periodicals has been prepared. I have, however, found time to revise the naming of several large genera by reference to recent published parts of the Flora Capensis, and have named, as far as our Herbarium collection permits, the collections from Garcia's Pass, Mr. Keytel's collection from the Island of Tristan d'Acunha, and a part of the Basutoland collection presented by Mrs. Dieterlen. Various small parcels of plants have also been named for correspondents.

As a continuation of the work I commenced last year on the Proteaceae, I have now completed the study of our Herbarium material, and have prepared a provisional key to all the genera. Through the courtesy of Dr. Schönland I was enabled, while on a visit to Grahamstown, to examine the Proteaceae in the Albany Museum, and part of this material will be sent to me early next year for further examination. From material in our Herbarium I have examined microscopically and prepared descriptions of the internal anatomy of the stem and leaf of almost all the species of *Spatalla*, and hope to finish the study of the remaining species at an early date.

During the year, 195 visitors availed themselves of the facilities afforded by the Herbarium for the identification of native plants. Mr. W. Tyson has spent some time in working through our collection of Marine Algae, and made several important corrections in the nomenclature of species. The Herbarium is also

frequently used by the Botanical Staff of the Department of Agriculture. Mr. N. Cook, a student at Elsenburg Agricultural College, worked at the Herbarium a few days, and availed himself of our collection of native and exotic grasses in determining a collection he made in the neighbourhood of Elsenburg. Numerous identifications have been made for the Department of Agriculture, the Urban Police, the Elsenburg Agricultural College, the Municipal Gardens, and for correspondents.

The following specimens and books have been loaned during the year:—

Mr. D. J. Kelly, Johannesburg: A specimen of *Aponogeton distachyon*, L.f.

Dr. R. Marloth: Four sheets *Heteromorpha arborescens*, 1 sheet *Vernonia*, sp., 2 vols. Hooker's *Icones Plantarum*, 1 vol. Engler's *Pflanzenreich*.

Dr. S. Schönland had sent him for examination, in connection with his proposed monograph of the South African Crassulaceæ, the sections *Margarella*, *Pachyarrhis*, *Globulea*, of the genus *Crassula*, also a volume of Engler's *Pflanzenreich*.

Parcels of duplicates have been sent to Kew, Dr. A. Engler, and Dr. H. Bolus.

By the kindness of the Director of Kew, a part of Mr. P. C. Keytel's Tristan d'Acunha plants have been named there; and a parcel of East Griqualand *Labiata* was named at Berlin by Dr. Gilg, through the kindness of Dr. A. Engler. Owing to the absence of Dr. Bolus during a great part of the year, I have not visited his Herbarium as frequently as formerly, though he has kindly allowed me every facility when I made use of his collection or library.

Among the presentations and additions made to the Herbarium during the year are to be specially noted: Mr. J. Medley Wood, Curator of the Botanic Gardens, Durban, who presented a parcel containing 50 species of Natal Plants, mostly *Aselepiadæ*, 25 of which were new to our collection. Dr. Pitard, of the Natural History Laboratory, Tours, in exchange for South African Plants sent him last year, has forwarded 100 species of plants from Tunis. Dr. E. M. Reineck, of Weimar, Germany, forwarded to the Herbarium 404 species representing the flora of Southern Europe. These last two collections will greatly enrich our already large series of exotic plants, and the majority of them will prove new to the collection. Mr. P. C. Keytel, during his visit to the Island of Tristan d'Acunha, collected and presented to the Herbarium 65 species of plants, among which were some endemic to the Tristan group. Miss A. Pegler, a constant contributor to the Museum, also presented 103 species from Kentani, Transkei. From N.W. Rhodesia we have received a valuable collection from the Rev. F. A. Rogers; this is a most welcome addition to the Herbarium, which is lacking in Rhodesian plants; when incorporated into our South African series a great majority will prove to be new to the collection. From among our duplicates I secured 34 of Tyson's East Griqualand *Labiata*, which were incorporated in the Herbarium; six of these were new to the collection, and two were new to science. Two fascicles of Tyson's Marine Algæ, representing 100 species, have been obtained.

The thanks of the Museum Trustees must also be accorded to the following donors for their contributions during the year:—

Mrs. A. Dieterlen, for a small parcel of plants from Basutoland; also 4 species of *Mesembryanthemum*, of which one was new to the collection.

Mr. R. Dummer, for a species of *Vangueria* from the Transvaal, which was new to the collection.

Mr. E. E. Galpin, for a parcel containing 55 species.

Mr. R. Lightfoot, for 3 species of *Stapelia*, which he succeeded in flowering; 2 of these proved to be new to the collection.

Dr. R. Marloth, for 3 species of *Euphorbia* and 1 species of *Mesembryanthemum*. *E. namibensis*, Marloth, and *M. rhopalophyllum*, Schltr. and Diels: both were new to the collection.

Mr. G. H. Ridley, Curator of the Municipal Gardens, for presenting at various times specimens of plants which have flowered in the Gardens.

Mr. Chas. Ross, Conservator of Forests, Umtata, for a palm from Pondoland, which proves to be closely allied to *Cocos Yatay*, Mart., a native of the Argentine, and which was new to the collection.

Mr. W. Tyson, for a small collection which he made round Queenstown.

Miss E. West, for 21 species collected in the neighbourhood of Port Elizabeth, among which was a *Massonia* sp., new to the collection.

Miss M. Wilman, Curator of the MacGregor Memorial Museum, Kimberley, for 2 *Stapelias* and a leaf specimen of *Encephalartos altensteinii* and *Cycas* sp.

The number of additions (species) obtained by the Herbarium during the year 1909 is:—Bundles in Herbarium, 50; Mrs. A. Dieterlen, 52; Mr. R. Dummer, 1; Mr. E. E. Galpin, 55; Mr. P. C. Keytel, 63; Mr. R. Lightfoot, 3; Dr.

Marloth, 4; Dr. H. H. W. Pearson, 23; Miss A. Pegler, 103; Dr. Pitard, 100; Dr. Reineck, 404; Mr. G. H. Ridley 3; Rev. Rogers, 400; Mr. Chas. Ross, 1; Mr. W. Tyson, 21; Mr. W. Tyson (Algae), 100; Miss E. West, 21; Mr. M. Wood, 50; Miss M. Wilman, 4. Total, 1,260.

Total 1,260 species, representing 3,924 examples, of which 135 were new to the collection.

E. P. PHILLIPS.

Report on the Department of Anthropology and Antiquities.

To the Trustees of the South African Museum,—

SIR,—I have the honour to present my report on this Department.

Anthropology.—Most of the important acquisitions of this Department during the year now elapsed have been dealt with or touched upon in my Directorial Report.

The casts of rock-engravings taken by the Museum Modellers have been completed, and have been added to the series of graven stones. One of these casts is of special interest, inasmuch as across the figure (a somewhat ludicrous one) of a man is engraved one of the best outlined elands we possess.

The room for native races was opened at the end of the year, and the three completed figures of the Basarwa, two women and a boy, as well as three Bakalahari, two girls and a boy, were incorporated in the exhibited series, which now consists of 17 life-size figures and 8 busts. Several enlarged photographs of bush-aboriginals taken in the seventies have been added.

The number of acquired skulls and skeletons is satisfactory, but perhaps hardly adequate to the efforts made to obtain some of these relics before they are systematically removed from the country. One of these skeletons, that of a woman, was partly petrified; on the pelvis were found two rows of minute ostrich-shell beads.

The thanks of the Trustees are due to the following gentlemen for the help afforded in getting together this year's acquisitions: To Dr. D. R. Kannemeyer we are indebted for numerous stone implements, and also to the MacGregor Memorial Museum at Kimberley. Mr. J. M. Bain has discovered a most interesting deposit in the sand-dunes of Fishhook, in which palæoliths and neoliths are so intermingled as to make it doubtful if both the types were not contemporaneous. I collected a great number of the Stellenbosch type palæoliths in the Drakenstein valley. Rev. J. H. Whaits has presented some primitive knife-scrapers from Laingsburg, and a series of chess pieces made by an aboriginal Hottentot-Bushman, which show clearly that the art of carving is not a matter of the past among these people. This man is shown a piece at one time. He examines it carefully for a few minutes, returns it, and a few days afterwards brings the pair of them, carved out of a piece of ebony and white wood; the knights, especially, have an equine expression of great merit. Rev. Whaits has elicited from the owners of that remarkable piece of stone carving in the round, representing a farmer in his best clothes driving a pair of spirited horses spanned to the typical Cape cart, and which I mentioned in a former Report, that the author is an old Griqua, who is looked upon as being somewhat "daft."

We are indebted to the Curator of the MacGregor Memorial Museum for the presentation of a Damara woman head-dress; to Mr. W. Horn, of Kanye, for a Bakalahari woman's cloak, and to Mr. A. W. Hodson for several pieces of the scanty clothing worn by the Basarwas, and required for dressing our models.

Mr. R. C. Camp has allowed me to make a cast of a long ovoid perforated bead of *baked* clay found at Somerset West, shaped somewhat in the manner of a very large bead in our collection: the perforation is, however, equal, showing that the clay had been modelled on to a slender stick before being baked. It is the first bead of this kind ever found. A knife, made of a ruminant's rib, and singularly suited for detaching shell fish, was found by Mr. J. M. Bain; and a similar instrument was received from Mr. J. S. Henkel. The maker of the latter was evidently left-handed.

Antiquities.—The Museum is greatly indebted to Mr. J. Heyneman, the Master of the Supreme Court, for the gift of the portrait of Mr. Andrew Barnard, presented by his widow, Lady Anne. The engraving is unfortunately somewhat defaced in parts, but the interest attaching to it is the inscription at the back in a big, bold hand. It runs thus: "This engraving of the late Andrew Barnard, Esq., Colonial Secretary of the Cape of Good Hope, is presented to the President and Members of the Orphan Chamber, as a mark of respect, by his widow, Anne Barnard."

With the permission of Mr. J. Heyneman were also deposited the following documents collected by Mr. C. G. Botha, of the Master's Office: I. Deed of Trans-

fer, dated 29th November, 1707, of a slave boy, Cupido of Maratange, aged about 18-19 years, sold by the Apothecary Joan Caspar Rigter. 2. Deed of transfer, dated 11th February, 1735, of a slave boy, Frans of Malabar, and a girl, Rosetta, of the same place, sold by the Ensign Mr. Rudolf Jurgen Obel to the Burgher Floris Mayboom. 3. New Year's letter or card from Pieternella Bockelbergh to her parents (undated). 4. Act of "Veniam Actatis," dated 17th February, 1722, granted by Governor Maurits Pasques de Chavonnes to the minor Hendrick Olivier. 5. Letter of intimation, dated at Bantam, the 22nd June, 1757, notifying the disease of Anna Catherina van Kervel, wife of W. H. van Offenbergh. 6. Burgher paper, dated 29th October, 1754, granted by Governor Ryk van Tulbagh to Fredrick Eland, of Coningsbergh, who arrived at the Cape in 1742, in the ship "Bosbeck," as soldier.

I am fain to think that search by "juniors," or for that matter "seniors," among the accumulated stores of official documents in the old Drostys would bring to light and also to preservation many such documents, documents musty no doubt, but that will prove most invaluable for the Domestic History of the people at the Cape.

Mr. Alfred Moses, C.M.G., has presented an old engraving of Cape Town; Mr. F. Parks, a barred-shot and other objects obtained from the wreck of the ill-fated H.M.S. Sceptre that was lost in Table Bay on the 5th of November, 1799 (the Sceptre went on shore, and Capt. Edwards, his sons, some officers and the greater part of the ship's company perished in the wreck). Their remains are buried in the Somerset Road Cemetery.

L. PÉRINGUEY.

STATEMENT OF THE INCOME AND EXPENDITURE OF THE SOUTH AFRICAN MUSEUM
FOR THE YEAR ENDED THE 30TH JUNE, 1909.

DR.						CR.
To Balance from last year	...	...	£679	16	9	
Government Grants:—						
Ordinary	...	...	£2,410	0	0	
Herbarium	...	...	305	0	0	
			2,715	0	0	
Grant from Cape Town Corporation for Sunday Opening	...	...	150	0	0	
Interest received on Hadje Shah Suliman Mohamed Fund	...	...	4	10	0	
Sale of Publications	...	...	5	9	3	
			£3,534	16	0	
By General Museum Expenditure:—						
Salaries	...	...	£1,904	13	4	
Uniforms for Attendants	...	...	5	10	1	
Purchase of Specimens	...	...	66	19	4	
Books	...	...	79	16	6	
Auditor's Fees	...	...	3	3	0	
Publication of Annals	...	...	165	19	10	
Moulding	...	...	138	7	1	
Copying and Supplying Photographs	...	...	26	10	6	
Cost of Sunday Opening	...	...	93	12	0	
Installation of Fixtures (Show Case)	...	...	330	18	3	
Rent P.O. Box, Telephone & Insurance	...	...	17	10	0	
Gratuities to Attendants	...	...	23	2	6	
Expenditure in connection with Taxidermist and other Stores	...	...	299	15	9	
Freight, Railway Carriage, Postage etc.	...	...	98	0	5½	
Passage Money, Assistant A. R. Walker	...	...	30	0	0	
Travelling Expenses	...	...	43	15	7	
Clerical Assistance	...	...	1	0	0	
Bank Charges	...	...	3	4	3	
			£3,331	18	5½	
Balance:—						
Cash in Bank, Ordinary Account	...	...	£172	3	2	
Cash in Bank, Hadje Mohammed, Special Fund	...	...	21	11	10	
			193	15	0	
Advances outstanding:—						
Public Works Department	...	...	9	6	8	
			213	1	8	
Amount due to Petty Cash	...	...	-0	4	1½	
			202	17	6½	
			£3,534	16	0	

Audited and found satisfactory.

WALTER E. GURNEY,
Controller and Auditor General.

16th November, 1909.

L. PÉRINGUEY,
Director, South African Museum.

16th November, 1909.

Annexure "A."

HADJE SULIEMAN SHAH MOHAMMED FUND FOR THE PURCHASE OF COINS.

Sum Invested with the South African Association	...	...	...	...	£100	0	0
Balance of Interest in hand from last year	...	...	...	...	£17	1	10
Received for Interest during 1908-09	4	10	0
					21	11	10
					£121	11	10

THE LIBRARY OF THE
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CAPE OF GOOD HOPE.

REPORT

THE LIBRARY OF THE
FEB 5 - 1940
UNIVERSITY OF ILLINOIS

OF THE

SOUTH AFRICAN MUSEUM

FOR THE

Years ended 31st December, 1910, 1911, 1912.

*Presented to both Houses of Parliament by Command of His Excellency
the Governor-General.*

CAPE TOWN :
CAPE TIMES LIMITED, GOVERNMENT PRINTERS.
1913.

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UNION OF SOUTH AFRICA.

Report of the South African Museum for the Year ended 31st December, 1910.

Presented to both Houses of Parliament by Command of His Excellency the Governor-General.

REPORT OF THE DIRECTOR.

TO THE TRUSTEES OF THE SOUTH AFRICAN MUSEUM.

SIRS.—I have the honour to submit my report on the general administration of the Museum for the year 1910, and on the work carried on during this period.

In my account of last year's work, I called your attention to the three obstacles which stand in the way of perfecting the work of this Museum, *i.e.*, lack of space; insufficiency of staff; insufficiency of funds.

The restoration by the Union Government of the 20 per cent. reduction in our yearly Parliamentary appropriation, a reduction which prevailed for three or four years, and the addition of a small grant in aid, has helped us to tide over financial difficulties, and has thus afforded relief, but the lack of space proves the insuperable difficulty which thwarts progress, and renders my efforts nugatory to a great extent.

Strong representations were made to the Union Government. They do not seem to have been successful, and the South African Museum, founded in 1827, replete with specimens of value which, for want of exhibition room, lie in boxes, the labels serving as food for fish-moths, is the only one of the four Provincial Institutions that receives no relief in this respect. To the Pretoria, Maritzburg, Bloemfontein Museums there have been granted this year large, even considerable, sums of money for new buildings, or for enlargement on an extensive scale of existing accommodation.

We have even been denied a wooden structure to shelter the skeletons of three of our Cape-Seas Whales which are erected in the open. Left unprotected, as they are now, they are not going to out-last one or two seasons.

Yet, the number of *bona-fide* visits made by the public to the South African Museum in Cape Town, and to the Museum Aquarium at St. James', seems to justify a more sympathetic treatment at the hands of the Government of the Union.

The total number of visitors recorded is 132,436, divided as follows:—Cape Town 103,409, St. James 29,027. The latter place was not this year thrown open on Sunday afternoons, but now that this step has been taken, the number of visits recorded by registering turnstiles is greatly on the increase. In fact it has been so already, at the rate of some 300 in one Sunday afternoon. The popularity of the Museum proper is thus shown to be steadily growing. Sunday afternoon visits number nearly 18,000.

Presents and Purchases.—The acquisitions by donations or collections made by the Museum Officers, in addition to the relatively small number of specimens obtained by purchase are 6,463 approximately divided as follows:

Zoology, 4,419; Geology and Mineralogy, 409; Ethnology and Anthropology, 1,200; Botany, 375; Antiquities or documents, 60.

Library. The number of books, serials and pamphlets has been increased by 1,029 numbers. In that part of the department space is also very much wanted, and additional shelving must, of necessity, be provided.

Staff.—Dr. R. Broom, the keeper of the palaeontological series has removed from the Cape Province to the Transvaal, but he still continues his research work on the material of this Museum. Arrangements have been made for the appointment of an Assistant in the Marine Zoology department, and in addition the services of an Herbarium Attendant have been temporarily secured.

Publications.—The issued publications have this year been on a considerable scale and have severely taxed our slender budget. The enumeration is as follows: Vol. V. New South African Micro-Lepidoptera, pt. II., by E. Meyrick, F.R.S. New Species of S. African Myrmecophilous Pselaphidae (Coleoptera), by A. Raffray. New South African Thysanoptera, by R. S. Bagnall. List of species of the Coleopterous genus *Apion* (Curculionidae), by L. Béguin-Billecoq. Description of New or Little Known species of the Hemerobiidae (Order Neuroptera) from South Africa (3pls.) by L. Peringuey. A revised list of the South African Reptiles and Batrachians, with synoptic tables, special reference to the specimens in the South African Museum, and descriptions of new species, by G. A. Boulenger, F.R.S. General Catalogue of South African Crustacea (8pls.) 320 pp. by the indefatigable carcinologist Rev. R. R. Stebbing, F.R.S. completes Vol. VI. Vol. X., devoted to Botany, begins with an account of the collections of dried plants obtained in South West Africa, etc., by Dr. H. H. Pearson. Vol. VIII., given to Anthropology and Ethnology, includes a voluminous paper with some 28 double plates and text figs. "On the Stone Age of South Africa as represented in the collection of the South African Museum" by L. Peringuey. It is however found impossible to issue this paper before the 31st of December, but it will be published shortly. In addition Mr. E. P. Phillips has published the following: New species of *Protea*. Kew Bulletin No. 7, 1910, pp. 229-237. *Spatallopis*, a new genus of Proteaceae. Kew Bulletin No. 8, 1910, pp. 286-290. New species of *Leucospermum* and *Spatalla*. Kew Bulletin No. 9, 1910, pp. 330-336. The Genus *Diastella*, Journal of Botany Jan., 1911, pp. 28-31. Three important papers are in the printer's hands, and five more which are being elaborated will be also probably published during the incoming year.

Removal of Ethnological and Anthropological Relics from South Africa.

The cry of alarm which I found myself compelled to raise in last year's report in connection with the disappearance from the country of various relics of a race that is no more, seems not to have fallen unheeded, and it is satisfactory to know that the Union Government is introducing before Parliament a Bill the object of which is to prevent the recurrence of the vandalism that obtained, and to preserve traces in this country of culture, and others, of people as interesting as any in the world as affecting the progress of humanity.

This Bill should be, however, supplemented by administrative measures, and a Commission appointed to classify, collate and tabulate all these relics in a *Corpus* (This Museum has already acted in this direction.) That Commission would decide which of the scenes should be preserved, by means of fences, shelters or awnings, and declare them, as the French have it, "objects of public utility." And a grant in aid of the preservation, and above all, of the periodical inspection by responsible persons of these relics, would be a case of public money not spent in vain. While rock-gravings are well-nigh imperishable the same cannot be said of the Bushman paintings. It is doubtful if the oldest ones are, even in well sheltered positions, more than a century old. I mean of course those that are still clearly delineated. I know of some, the history of which can be established for the last 80 years and, which from that time have remained well nigh unimpaired, but this duration must be exceptional, and I am of opinion that, in order to ensure their lives, some of the most typical scenes should be bodily removed where possible, and transported to a Museum for preservation as illustrative frescoes of an art, that has, in spite of enormous lapse of time, remained primitive in so many respects.

Arrangement and Conservation.—As explained in my remarks regarding the lack of space for exhibition, no new arrangements or additions on a large scale were possible, and none was attempted. But the contents of some of the cases were diversified, and several minor arrangements and additions effected.

Mammals.—In the open ground, at the back of the Building, I had the skeletons of three Whales from our Cape Seas set up. They are: "The Blue Whale"

(the animal measured 72 ft., and the skeleton 65), the "Hump back," and the Southern "Right Whale." Another Whale, the "Fin-back," inhabits or visits our Cape Seas, and the Sperm-whale is met with not very far off. But I am compelled to decline the offer of these animals.

We secured the cow and young of *Kogia breviceps*, the Lesser Sperm Whale; a cast was made of the calf, and it has been placed on exhibition. It is believed to be the first example so reproduced or seen, for that matter. A cast was also made of the huge flipper—some 18 ft. in length—of the "Hump back" whale, and also of the Right Whale, with a view to restoring the shape of the animals on one side of the skeletons, and presenting them to the public in their natural appearance. These casts may perhaps be utilised one day!

Birds, Reptiles, Fishes.—A small number of these specimens have been mounted, or arranged in flat jars for display. Next year the whole series of South African Reptiles, especially the Ophidia, or Snakes, will be exhibited in that manner, other objects being taken down to make room—many have already been prepared for this purpose.

Land and Marine Vertebrates and Invertebrates.—A fair number of South African Crustacea have been mounted and placed on exhibition. Others already mounted have been painted from fresh examples. A beginning has been made in sorting the accumulated material, and the preserving fluid, formalin, replaced by alcohol. This attempt is now made possible by the publication in our Annals of the "General Catalogue of South African Crustacea, by the Rev. T. R. R. Stebbing to whom the remainder of our sorted material will be eventually sent for identification and description.

The Entomostraca are being investigated and reported upon. The Cheliferidae have been sent to another specialist.

The Acari are following and the Pycnogonida will shortly be taken in hand. Dr. Goddard has taken the study of our Polychaete worms and also Leeches. We have promised our Oligochaeta to another expert. The Arenicolidae are being investigated and reported on for our Annals by another specialist.

In the Mollusca, the fresh-water and land shells are being revised by Captain H. W. Conolly who is bringing out a revised Check List of South African non-marine Mollusca: the same to be published in the Annals of this Museum next year.

Two Cape University graduates are busy on research work with our marine mollusca—the one on Cephalopoda, the other on the distribution of certain molluscs on our coast.

The Brachiopods are being investigated by Professor Joubin, of Paris. Several groups of Insects have been entrusted to well known specialists. In spite of the progress made in this department, it is obvious that more permanent assistance is wanted in a section of such vast proportion; and upon the economic side of which, local demands of information are so numerous made. The monograph of the South African Fresh Water fishes, and a supplementary and somewhat exhaustive account of Natal sea-coast fishes, are, as I write, ready to be sent to the Printers. And when all the publications announced have appeared, which will be in the course of next year, they will show that although gleanings may yet be had, the South African crops have been somewhat fully garnered by the South African Museum.

It is obvious that our local collections stand and will remain unrivalled here, because the majority of types are ours, and must remain ours. "Lux ex promontorio."

Geology and Mineralogy.—In this section it was found still possible to add a fair series of specimens, but a limit seems also to have been reached, as Dr. Rogers' report clearly shows. The additions have been numerous and important. But an iron meteorite flanked on one side by "dreikanter" and by a lump of native copper on the other, and separated by several yards from its kindred the siderites and siderolites, does not impress the visitor with an exact appreciation of the scientific arrangements of our series.

Palaeontology.—Dr. Rogers' report shows that many additions have been made to the exhibits of fossils from the Bokkeveld beds.

Our series of extinct reptiles have received additions of importance. The restoration in carved plaster of the pelvis and hind limbs of the Dinosaur *Gryponix africanus* carefully executed by Mr. Walker, and by our modeller, Mr. Drury, is now on exhibition. Several other restorations have been made by them under Dr. Broom's instructions, and our South African series bid fair to become shortly, if they are not already, the most complete of their kind.

No less than 1,155 labels were made by hand, machine printed or stencilled for the Geological, Mineralogical and Palaeontological Sections, during the year.

Botany.—From the report of Dr. H. H. W. Pearson, Keeper of the Botanical Department it will be seen that progress is also the keynote, but a progress which in order to remain permanent, requires an addition to the staff. The first assistant, Mr. Phillips, has given a good account of himself in the task entrusted to him at Kew, but he cannot, in fairness, be left alone to cope with such a large Herbarium as the one we own. The prospects of exhibition of the Botanical series, economic or otherwise, are as far off as ever, and not until the duplication of the building is ensured, will this short-coming be remedied, and the facilities that could be offered in this respect to the general public made possible.

Ethnology-Anthropology.—We have been successful in obtaining or securing by purchase some 14 skeletons and 10 single skulls of Strand-Looper, Colonial, and Kalahari Bush people. This important addition has been placed in the hands of Dr. Shrubbsall, whose report has unfortunately been delayed, but which it is hoped will appear in the Annals during the incoming year. We have been able since his first report was published (Annals S. Afric. Mus. October 1907) to send him 62 more skulls of the "San" race for further investigations, and as these investigations bear now on some 162 specimens, the conclusions are the more weighty, because I believe this is the largest number of skulls of this type that have hitherto been studied by one specialist. But Dr. Shrubbsall's first conclusions have not been modified by this accession of new and well identified material. He is quite unable to distinguish between Hottentots and Bushmen so called, but the Strand-Looper of the Knysna, Humansdorp, etc., districts stands by itself. "The skull is distinguishable at sight." "The Bushmen are dolichocephalic. The Strand-Loopers are mesaticephalic, and nearer to brachycephalic but under 80 in index. The Hottentots are more dolichocephalic" etc. The importance of these conclusions is borne out by relics of Strand-Loopers discovered in some Knysna-Humansdorp caves, which reveal a culture somewhat different from that of Bushmen of to-day, or of the mixed lot that is left. Thus in these caves do we find the bodies laid in the "lunched up" position known as "child in the womb," and resting on one side like those of the prehistoric Egyptians. On the body thus laid, stones have been placed, of which some are decorated with still well preserved paintings. A bone industry has been found in the shape of bodkins or awls, knives or piercers. With them, ostrich egg-shell beads have been found, strings of pierced sea-shells, etc. These relics are a most valuable addition to our Collection. They have been supplemented by others, no less interesting, found in the rock shelters of inland districts, and they all throw new light on the culture of the makers. The best and most accurate description of the Bushmen is the one given by Sir John Barrow. We have executed and put on exhibition two such figures, male and female, corresponding in every detail, even in measurements, to Barrow's description. These models are, like the others, casts from life. They are the best we have produced hitherto.

Antiquities and others.—An exhibition of Old Colonial Antiquities, Pictures, Prints, and "objets de vertu" was held in Cape Town in connection with the "Pageant of South Africa," and proved a great success. The Museum loaned a number of objects of great interest. As a result of this exhibition there have been donated to us most interesting documents illustrating the manner, mode of life, etc. of the early Colonists. Such a one is a receipt for money paid for goods purchased at public auction and dated 29.12.1770 in which figures the item: 1 slave boy named Conridon of Mallabar, as he is.....350 Rd. 0 sk.; ditto "I pot of Atjar".....16 Rd. 6sk. is followed by: 19. female slave named Sophia, of the Cape-voestoots-without guarantee- sold for 383 Rd.....; ditto a bucket 1 Rd. 1 sk. and these accounts are duly certified by the Master of the Supreme Court, etc.

State of the Collections.—I regret to say that among the stored specimens, Zoological and Botanical, a certain amount of damage was caused by insects, necessitating overhauling and disinfecting on a somewhat large scale. Such an occurrence remains a constant possibility until we have more exhibition space, and adequate store-room. It is unnecessary for me to bear testimony to the zealous work of the Staff. Without their unabated devotion to their respective spheres of work, the account of progress which I am now reporting, could not have been rendered you.

L. PERINGUEY, Director.

REPORT ON THE DEPARTMENT OF GEOLOGY, MINERALOGY AND PALAEOLOGY.

Dr. L. Péringuey,
Director of the South African Museum.

SIR,—I have the honour to send you a report of the work done in the Geological Department of the Museum during 1910, and on the additions made to the collections.

The only new meteorite is an aerolite picked up by a son of Mr. Smit of Schaaps Kooi, in the Fraserburg Division; the stone was found on that farm, and was carried to the west as a curiosity. Whilst engaged on a geological survey of the district, I saw it lying on the ground and Mr. Smit presented it to the Museum.

The mineral collection has been enriched by a fine group of specimens from Namaqualand given by the Rev. H. Kling and Mr. W. E. Giffen; amongst them are some large crystals of corundum, and masses of native copper. Mr. Franklin White and the Rev. Rogers gave some good specimens from Rhodesia.

A valuable addition is the collection of 33 diamonds from Luderitzbucht, presented by the Kolman's Kop Diamond Mines, Ltd. The series of diamonds exhibited has been enlarged by the replacement of the Stonestreet collection in the cases. Mr. Walker has prepared over 50 labels for the South African minerals and has arranged the case in which newly acquired specimens are exhibited. The chief addition to the rock collection is a series given by the geological survey of the Transvaal from the Swaziland, Transvaal and Waterberg systems from the Bushveld intrusions and the later volcanic and sedimentary (Karoo) rocks of the Bushveld. The metamorphic rocks from the Swaziland and Pretoria series, and various differentiation types from the Bushveld were previously unrepresented in the Museum. A specially interesting series from the volcanic pipes, etc., of Geitai Gubib was given by Dr. R. Scheibe. The breccias have a close resemblance to those of Saltpetre Kop and Grenants Kop in the Cape Province. Mr. W. A. Anek Hahn gave a collection of rocks from the northern part of German South West Africa. It includes unaltered basalts and andesites of unknown age. Many additions from the survey collection have been made to the series of stratigraphically arranged rocks, and also to the igneous rocks, for which 500 labels have been written. About 50 specimens showing the effects of weathering on rocks, and an illustration of rock structures, have been prepared and labelled. Many additions have been made to the exhibits of fossils from the Bokkeveld, Cretaceous and Recent deposits of South Africa, and the specimens are now adequately named. Mr. John Wood of East London has again given fossils from the Danian beds of Need's Camp. In the section of vertebrate palaeontology the chief additions have been the Dinosaur bones from the Cave Sandstone of Barkly East, given by Mr. G. S. P. Mandy, and the types of *Cyclotosaurus Albertyni*, Broom. The skulls of *Cyclotosaurus albertyni*, *Capitosaurus africanus* and *Tapinocephalus atherstoni* have been restored and mounted by Mr. Walker under Dr. Broom's directions. A fine exhibit of Dinosaurian remains from the Stormberg beds of Fouriesburg (O.F.S.) has been prepared by Mr. Walker and Mr. Drury working under Dr. Broom's instructions. It consists of a restoration of the pelvis and hind limbs of *Gryponyx africanus* in plaster, and the right and left feet, femur, tibia and fibula of that fossil; and the following parts of *Massospondylus harriesi*, right hind foot, and the left front limb. These specimens were collected by Mr. Walker during the previous year. A fine slab with fourteen individuals of *Semionotus capeensis*, from the Stormberg beds of Ficksburg, was given by Mr. G. Fish of Dordrecht. A noteworthy addition to the foreign collection, a series of invertebrate fossils from the Devonian of the Rhine Province, has been made by Dr. H. Lotz. These fossils form a useful collection for comparison with the Bokkeveld fossils of the Cape. The space provided for South African rocks is inadequate, in spite of the new cases provided in 1908. The South African fossils are over crowded. The foreign collections are overcrowded and ill represented in the exhibition cases for want of room. The meteorites have to be kept in a large case along with rocks, with which they have no known connection in nature; they ought to have a separate case to themselves. The space for the exhibition of geological maps of the Union is very limited, and less than half of those published can be shown at the present time.

I have the honour to be,

Sir,

Your obedient servant,

ARTHUR W. ROGERS.

REPORT ON THE DEPARTMENT OF BOTANY.

To the Director,
South African Museum.

SIR,—I have the honour to submit the following report on the working of the Herbarium. I resumed the duties of the Keeper of the Herbarium in February 15th, 1910. Mr. Phillips was granted eight months leave of absence to enable him to work in the Herbarium of the Royal Botanic Gardens, Kew and left for that purpose on March 31st. His leave was later extended to ten months so that he was absent for the rest of the year to which this report refers. His work during his absence was undertaken by Mr. W. Tyson to whom we are indebted for his endeavours to maintain the efficiency of the herbarium. Mr. Phillips was mainly occupied at Kew in preparing a detailed account of the South African members of the Family Proteaceae for the Flora Capensis. This important South African Family has received little attention during the last half century, and it is satisfactory to record that Sir William T. Thiselton Dyer, the Editor of the Flora, has been able to entrust the working up of this difficult group, with the exception of the genus *Leucadendron* (in which Mr. Phillips was assisted by Mr. J. Hutchinson) to a member of the Museum Staff. In addition to his work on the Proteaceae, Mr. Phillips while at Kew named various specimens belonging to the Herbarium, including a collection from Tristan da Cunha. During the year I have collected about 1,400 species between the Oliphants River Valley and the Orange River at Bethany Drift. In the course of the journey I visited Koeberg, an isolated mountain in Western Bushmanland and crossed the Khamies Berg range in two places. Between Eendekuil and O'okiep I was accompanied by Mr. N. S. Pillans to whom I am indebted for valuable assistance in the field. All the specimens collected have been poisoned by the Herbarium Assistant and a set will in due course be incorporated. The expedition was financed jointly by the Percy Sladen Trust and the Royal Society of London. The following are the principal items of botanical work done in the Herbarium during the year with Mr. Tyson's assistance I have sorted into families all the Namaqualand and Damaraland specimens collected in the Percy Sladen Memorial Expedition of 1908-9, to which reference was made in last year's report. Of these, the Leguminosae have been partially named by Mr. Tyson, the Proteaceae by Mr. Phillips and the Portulacaceae and Verbenaceae by myself. A collection of Basutoland plants collected by Mrs. Dieterlen has been partly named and the naming and incorporating of Namaqualand and Stockenstrom plants collected by Mr. Scully has been proceeded with. Sixty-two specimens sent from Kentani by our valued contributor, Miss A. Pegler, and a further set of Tyson's Marine Algae have been incorporated. Small collections were received from the Rubber Co., in G.S.W. Africa and from Mr. Lightfoot. In addition numerous determinations have been made for the Department of Agriculture, the Municipal Gardens and private correspondents and visitors. A purchased set of Dinter's Damaraland plants constitutes a valuable addition to the Collection. An assistant has been continuously employed during the year in poisoning and other mechanical work. Practically the whole of the Collection has been treated with Carbon bisulphide and mercuric perchloride. 126 visitors made use of the Herbarium or the Library during the year. I must again refer to the necessity for increasing both the staff and the equipment if full justice is to be done to the collection under our charge. The employment of an assistant for the purely mechanical work has been a great advantage, but even now it is impossible to do much more than attend to the conservation of the existing herbarium. Valuable collections, some of which have been in the store for many years, are being made available for study as rapidly as circumstances will permit, but at the present rate it will be some years before they are all incorporated. We have, almost at our doors, extensive tracts of country whose vegetation is very incompletely known; field work must therefore rank as one of the important duties of the scientific staff. Owing to the varied duties that have to be performed by a small staff the output of scientific work has fallen far short of that which should have proceeded from the oldest herbarium in the country. Our library is inadequate and must be greatly increased before the most ordinary work can be carried out without reference to literature which we do not possess. One of the functions of a herbarium, whose importance it is difficult to over estimate, viz., the education of the public, is almost in abeyance at present owing to the absence of any facilities for exhibiting specimens where the general public can have access to them.

I have the honour to be, etc.,

H. H. W. PEARSON.

STATEMENT of Income and Expenditure of the South African Museum for the
Year ending June 30th, 1910.

To Balance	£193 15 0	By General Museum Expenditure—	
.. Government Grant Ordinary	£2,440 0 0	.. Salaries	£1,971 5 0
.. Government Grant Herbarium	305 0 0	.. Uniforms for Attendants	5 10 1
.. Town Council Grant	200 0 0	.. Purchase of Specimens and Modelling	88 9 5
.. Contribution from Transvaal Subscription to Entomological Congress, Brussels	10 0 0	.. Books	51 16 0
.. Sale of Annals	8 3 9	.. Auditor's Fee	3 3 0
.. Interest Coins Fund	4 7 6	.. Publications of Annals	110 18 2
.. Refund Gardener's Wages	62 8 0	.. Photographs	16 4 11
.. Refunds, other	7 8 0	.. Sunday opening	91 4 0
	3,037 7 3	.. Fixtures and Furniture	505 15 4
		.. P.O. Box, Telephone and Insurance	17 10 0
		.. Upkeep of Aquarium	51 6 7
		.. Freight, Transport, Incidentals, Chemicals, etc.	90 5 0
		.. Travelling Expenses	24 1 8
		.. Clerical Assistance	1 0 0
		.. Subscriptions Entomological Congress	11 0 0
		.. Upkeep of Garden	56 8 0
		.. Bank Charges	1 12 6
		.. Petty Cash	84 12 5
			£3185 2 1
		.. Balance	46 0 2
	£3,231 2 3		£3,231 2 3

Audited and found satisfactory,

WALTER E. GURNEY,

Controller and Auditor-General.

L. PÉRINGUEY,

Director South African Museum.

Report of the South African Museum for the Year ended 31st December, 1911.

The Minister of the Interior.

SIR,—

I have the honour to forward the Annual Report of the Director of the S.A. Museum for the year 1911. In doing so I have to express the general concurrence of the Trustees in the regret expressed by the Director, that it has not been found possible to place the institution on a footing more consonant with the wealth and position of the Union of South Africa.

The Trustees feel that it is not necessary to remind the Minister that from its geographical position Cape Town is the port of call of a number of visitors who must carry away with them their impressions of the institutions of the Union from their visits to those which have their seat in Cape Town. In conclusion, the Trustees desire to add, that while feeling disappointed that it has not been found possible to increase the grant so as to place the Museum under their care on a level with similar institutions elsewhere, they will continue with the scanty means at their disposal to endeavour to make the South African Museum not wholly unworthy of the unique geographical site which it occupies.

J. X. MERRIMAN,

Chairman of Trustees.

22nd February, 1912.

REPORT OF THE DIRECTOR.

To the Trustees of the South African Museum.

SIRS,—

I have the honour to submit my Report on the general administration of the Museum for the year 1911, and on the work executed during this period.

The three obstacles which stood in the way of perfecting the work carried on under my supervision, and to which I called your attention in my Reports for the previous years, namely: (1) lack of space; (2) insufficiency of staff; (3) insufficiency of funds, stood during the year as prominent as they were last year.

I am informed, however, that for the year 1912 there is to be a small increase in the grant-in-aid, and also provision for an iron building to protect the whale skeletons now mounted in the open. But it is when we compare the grants given to the Museums of the three other provinces of the Union that we realise how scanty is the relief in comparison with the appropriation meted out to the Pretoria and Maritzburg Museums, especially to the former—I am not alluding here to the cost of erection of the new buildings.

Pretoria figures on the Estimates of Expenditure for 1912 as receiving approximately the same grant in aid as Cape Town; but whereas the salary of our Staff, which absorbs about three-quarters of our grant, has to be defrayed from the same, that of Pretoria is defrayed by the Government of the Union under another chapter (£3,140) to which was added last year £300 for publications. The Pretoria Museum is thus able to devote per year, £4,200 for up-keep, purchase of specimens, etc., whereas we have only £900 to spend for the same purpose, which includes in addition, the cost of new exhibition cases and publications; heavy items. In addition Pretoria received in 1912 £6,000 for cases. This is, of course, for part only of the new equipment and is not comprised in the Pretoria Museum expenditure for up-keep.

These figures and their explanation indicate but too well the sense of inferiority under which we labour, one which, however important, will not dishearten me completely nevertheless, because the *res angusta domi*—the penurious ways of the house—has been the order of the day ever since I joined the Museum, 29 years ago. But the real important defect remains, *i.e.*, the lack of space.

The Trustees will remember that as far back as ten years ago, this want was so strongly felt that on representation being made to the Cape Government of the day, the addition of a new wing was decided upon. The fall in the Revenue prevented the execution of the scheme. Since that time, the accumulation of material has continued without there being any possibility of adding to the exhibited objects in the already congested show-cases.

The proposed iron-shed will enable me, it is true, to shelter our skeletons of whales and porpoises, and to save them from ruin, but it does not add to our exhibition space, since these whales (3) were already mounted, and on view in the open.

In order to keep our position, a duplication of the present building is absolutely necessary. Unless this is done, we shall find ourselves marking time until other institutions, better endowed and keen to overshadow ours, have reached their goal—or at least imagine that they have done so.

The absence of provision of any kind for the removal of the Art Gallery from the Museum Building, seems but too well to imply that it is not intended that the South African Museum should be enlarged so as to enable it to make the most of its possibilities.

It must, however, be remembered that the number of its visitors, the extent of its collections, the amount and value of its scientific publications, and its reputation among scientific bodies, make the South African Museum *facile princeps* among the similar Institutions of the Union.

Is it to be made to atone or expiate for its superiority? The Government has informed me that henceforth the Report of the Trustees will not be printed, but that a type-written copy will be laid on the Table of the Houses.

Visitors.—The visitors to the South African Museum numbered 108,411; and at the Aquarium, 33,018. This is the largest figure recorded hitherto. In the Museum the greatest number in any one day was 1,384 (22nd June), the least 72 (April 20th).

The visitors were divided as follows:—

White: (males) 43,612, (females) 26,537; Coloured: (males) 8,604, (females) 7,135.

Children: (No discrimination was made between White and Coloured) 22,523.

The average number of Sunday visitors has been 635.

Presents and Purchases.—The number of accessions, a few only were purchased, is 8,821, of which 1,314 were not hitherto represented in the Collection.

They are divided as follows:—

	Number.	New.
<i>Vertebrates:</i>		
Mammals 42	562	28
Birds and Nests 180		
Reptiles and Amphibians 81		
Fishes 259		
<i>Invertebrates:</i>		
Mollusca	46	35
Crustacea	20	1
<i>Insects:</i>		
Coleoptera	1,678	83
Orthoptera	77	16
Neuroptera	130	24
Hymenoptera	450	85
Diptera	304	55
Hemiptera	183	22
Lepidoptera	3,904	381
<i>Geology-Mineralogy:</i>		
Rocks	157	80
Minerals	18	
Fossils	12	
<i>Botany</i>	1,175	208
<i>Anthropological Section</i>	21	21
<i>Antiquarian Section</i>	161	161
<i>Ethnological Section</i>	42	40
<i>Curios and Antiques</i>	68	68

Library.—The increase in the Library has been on an unprecedented scale.

Books and Pamphlets, purchased and presented 130
 Parts of periodicals purchased and presented 1,577

making a total of 1,717

Additional shelving had to be provided.

Staff.—Mr. A. R. Walker, of the Geological and Mineralogical Department, left us at the beginning of the year to take up an appointment on the staff of the South African College, and Mr. S. H. Haughton, B.A., from Cambridge, has filled his place. In the Marine Department, Mr. K. Barnard, B.A., also of Cambridge, has been appointed Assistant, after having spent two terms at the Plymouth Marine Station. The third appointment sanctioned by the Trustees, has not yet been made, as I am awaiting first the return from Europe, in February next, of Dr. Purcell, before deciding on the same. Dr. H. H. W. Pearson has resigned his position of Curator of the Herbarium on being appointed Custodian of the Bolus Herbarium at the South African College.

Publications.—The annals of the South African Museum, which deal only with the material contained in the Museum, have now been divided into four series, for convenience; that is to say, into four volumes running simultaneously and devoted respectively to Palaeontology, Entomology, Marine Zoology and Botany. The publications issued this year have been on a very large scale, and are as follows:—

- Vol. V.—A revised list of the South African Reptiles and Batrachians, with Synoptic Tables, Special Reference to the Specimens in the South African Museum, and Description of New Species. By G. A. Boulenger, F.R.S., 194pp.
- Vol. VI.—General Catalogue of South African Crustacea. By the Rev. T. R. R. Stebbing, F.R.S. 312pp., 8pls.
- Vol. VII.—On the Dinosaurs of the Stormberg, South Africa. By R. Broom. 17pp., 3pls. Description of a New Plesiosaur (*Plesiosaurus capensis*, sp. n.) from the Uitenhage Beds of Cape Colony. By C. W. Andrews. 13pp. 1pl.
- Vol. VIII.—The Stone Age of South Africa, as represented in the Collection of the South African Museum. By L. Peringuey, 218pp., and 23pls, 26 text figs.
- Vol. IX.—On the Collections of Dried Plants obtained in South-West Africa by the Percy Sladen Memorial Expedition, 1908-1911, by H. H. W. Pearson, 19pp., 1 map.
- Vol. X.—On some South African *Dermaptera* (Earwigs) in the South African Museum. By Malcom Burr, 16pp., 8 text figs. Descriptions of some new *Geometridae* and *Pyralidae*, from South Africa. By W. Warren, 11pp. Descriptions of four new species of South African *Hemerobiidae* (Order *Neuroptera*), by L. Peringuey, 7pp., 5 text figs. On some South African *Rhyachata*, in the South African Museum. By W. L. Distant, 10pp., 9 text figs.
- Vol. XI.—The *Arenicolidae* of South Africa, including an account of *Arenicola loveni*. By J. H. Ashworth, 26pp., 1pl., and 5 text figs. Descriptions of Fishes from the Coast of Natal. By J. D. F. Gilchrist and W. Wardlaw Thompson, 29pp. Eighteen papers are still in hand, two-thirds of which will probably appear next year.

A REVIEW OF THE WORK OF THE YEAR.

Collecting.—Apart from the usual routine of receiving, preparing, labelling and classifying the specimens obtained, several members of the staff were sent to procure certain specimens, or do collecting work on four occasions. Mr. Drury, the Taxidermist, was sent to remove the magnificent Kouga meteorite; and also to carry on under my instructions excavations in a Rock-shelter once occupied by Aborigines in the Humansdorp District. He also, together with Mr. Phillips, of the Botanical Department, and Mr. R. M. Lightfoot, made a party to obtain skeletons of aborigines, plants and insects in a not much explored part of Little Namaqualand; and towards the end of the year, he proceeded to the Prieska and Kenhardt Districts in order to obtain casts of Bush figures. I made a short journey to Bulawayo and Livingstone. Messrs. Phillips and Lightfoot spent some days collecting plants and insects in the Van Rhyu's Dorp District.

An application to the Union Government for placing a sum of £500 on the £ for £ principle to enable this Museum to send a party of exploration—Zoological, Botanical and Ethnological—to the Lake N'Gami was refused and almost derided.

INCORPORATION IN THE COLLECTION AND SPECIMENS RECEIVED.

Mammals and Birds.—The number of Mammals and Birds received does not call for much comment. Through helping to bring together the Collection of South African Animals offered to His Majesty the King, and graciously accepted by him, we were able to "come in" for some of the casualties, and in this manner obtained several examples of great value. It has been, however, impossible to mount any Mammal of importance. An attempt to procure two wild Ostriches from Namaqualand for comparison with our two mounted domesticated specimens failed, but the attempt will be renewed next year. A few birds have been added to the exhibited series, including a *Gypaetus*, with partly outstretched wings, but no further addition is now possible.

Reptiles.—Mr. G. A. Boulenger, the well-known authority on Reptiles, has very kindly consented at my request, to examine, and verify my identification of all our specimens of this Class, a work of no mean magnitude, as a glance at his paper in the Museum Annals (Vol. V.), will show. As the outcome of this verification, he prepared the "Revised List of the South African Reptiles and Batrachians with Synoptic Tables, Special References to the Specimens in the South African Museum, and Descriptions of new species." This most important paper closes the chapter of the South African Reptiles and Batrachians. And, just as for the Birds and Mammals, the few additions that will be made eventually cannot be of much consequence.

Several groups of lizards have been put on exhibition, as well as a large number of snakes, the latter mounted in flat glass jars. Among them is a series showing different colouring of the three kinds of Cobras found in South Africa; and also several "Mambas," one of which is 9 feet 6 inches. I may mention here that all these Mambas, from a length of five feet to the one mentioned above, are uniformly dark-brown, and not green.

Fishes.—Owing to Dr. J. D. F. Gilchrist and Mr. W. Wardlaw Thompson having been jointly engaged for some time in the preparation of a Monograph of the fresh-water fishes of South Africa, and realising from their preliminary work that the material at their disposal was somewhat scanty, I made great efforts this year, especially to procure examples from as many localities as possible—a by no means easy task, and one that taxed heavily our pecuniary resources. The result of these efforts has been (1) the acquiring of a considerable number of specimens, including some 20 new species, in itself a considerable increase to the already very large number of species known; (2) the record of several new localities; (3) the filling of many desiderata in our Collection, which I regret to say, was not on investigation what I expected it to be. These efforts are not relaxed, and already several new species were obtained in the first month of 1912. It is thus hoped that this Monograph will be a complete one not needing addition or revision ultimately.

The Trustees of the British Museum, have very courteously and generously granted me the permission to reproduce the clichés of the South African species used by Mr. G. A. Boulenger for his great work "Fresh-Water Fishes of Africa." The Council of the Zoological Society, have done the same for all the lithographic plates of N'Gami Fishes, published in their Transactions; and, in addition, I am having executed 25 representations of the new species. Our local Monograph will thus be the best illustrated work on South African Natural History that has, as yet, been produced.

Invertebrates—Marine.—Mr. Barnard has begun his new duties as Assistant in the Marine Zoological Department. His preliminary work has been to put a little order in the "Pieter Faure" Collections, where chaos has reigned supreme for several years; chaos attended moreover by disintegration of many specimens preserved too long in an unsuitable medium. Such are the Crustacea, Echinoderms, Sponges, Corals, Bryozoa, etc. Nor am I sure that the Fishes will not require being transferred into the old orthodox preservative—alcohol.

My policy of publishing general catalogues of South African described species of any given Order, has in the case of Crustacea borne fruit already. With the help of Stebbing's invaluable "General Catalogue of South African Crustacea," it was found possible to catalogue the "Pieter Faure" and other collections of Isopoda, Amphipoda, Cirripedia, Sympoda, and Brachyura, and to obtain as a result a list of unidentified, and also of undescribed species. The work of cataloguing adequately the other Orders will take, probably, three or four years.

In addition to this systematic work, Mr. Barnard has assumed the management of the Aquarium at St. James which, in spite of being badly conceived as a

Marine Station, badly located, and certainly very badly equipped, I hope nevertheless to turn into a more useful Institution than a mere Aquarium. Its popularity is great, as shown by the yearly increasing number of visitors, and the educative value of the exhibits is indubitably in proportion to that number. At my repeated requests the Government has promised a sum of £250 for erecting new exhibition tanks during the coming year.

But with a little more pecuniary help it will be possible to make such arrangements that College Students, following a course of Zoology, or Past Graduates of the University will be able to take there, under their Professors, a marine course or prosecute research in the manner obtaining in the Marine Stations of Europe and America.

Mollusca.—Our fresh-water Molluscs have been revised by Major M. Conolly. He is bringing out a revised reference list of South African Non-Marine Mollusca, with descriptions of new species which will bring our knowledge of those shells to date, and is now in print for publication in our Annals. This list led to the discovery that in our Collection were many unrepresented species. Some 32 gaps have been filled since.

Land.—Our earth-worms have been loaned to Professor Michaelsen, for revision and identification, including Beddard's types, without which the Professor would have some difficulty in working out his Monograph of the African Species.

Professor Goddard, of Stellenbosch, has investigated our sea-worms material, and also the leeches, with the result that he has now two papers on hand.

Geology and Paleontology.—One of the most important acquisitions in this Department has been the Kouga meteorite (siderite) weighing no less than 2,585 lbs. The great difficulty was to dislodge this mass which was situated in one of the most inaccessible parts of the Kouga Mountain, in the Humansdorp District. A member of the Staff of the Museum was sent with special tackle, and with the great help of Mr. T. A. Kritzing, the owner of the farm, and donor of the specimen, this most interesting example was safely brought to the Museum. A special road had to be cut to join the wagon road; and at one place the meteorite had to be dropped from a height of 350 ft. It is most probably the same specimen of which Sir John Barrow speaks in his Travels. Vol. I. p. 387.

Dr. Broom has on hand four papers on Museum specimens which will be published in the Annals early this year.

As I stated in one of my previous Reports in my opinion attention had not been sufficiently paid to the procuring of South African fossil remains. Of course, there were many reasons militating hitherto against the successful accomplishment of the task. I have, however, made arrangements by which an exploration of the beds known to contain these fossil remains will be undertaken. At the beginning of next year, Mr. Haughton will proceed to investigate certain areas. And this preliminary search will, I hope, develop eventually into a palaeontological survey of the Cape Karroo first, and of other parts of the Union afterwards.

Ethnology and Anthropology.—The position in the scale of Humanity which the Bush-Hottentot race is to occupy is not yet satisfactorily settled; owing perhaps to the scantiness of well-authenticated material. It may be remembered that a third branch of the Hottentot, the Strand-Looper, probably the original one, has now been established, owing mostly to the material obtained by us. But there is a merging into the Bush and the Hottentot which has to be accounted for; and in order to obtain more material of both Hottentot and Bush, a party of three Museum Assistants were sent to a little known, or rather little explored part of Namaqualand, to discover burial places, which by their very isolation were more likely to be those of pure bred natives, especially if the sepulchres were old. Numerous Bush graves were found, but their contents found almost on the surface crumbled to bits when exposed or handled.

A few Hottentot graves, the mode of burial in which is quite distinct from that of the Bush, were discovered and five or six of the skeletons will prove of service to Dr. Shrubbsall, for his very comprehensive work, which is being completed for our Annals.

The great event of the year in the Ethnology and Anthropological Section is the result of the excavations carried in the Coldstream Cave, in the Humansdorp District. Not only have numerous skeletons been obtained, but also a number of tools and implements giving precious indications as to the domestic mode of life of the Aborigines who once occupied this rock-shelter, spasmodically perhaps because of the number of skeletons found—the place seems to have been used as a necropolis. Well preserved paintings on flat round stones, resting on the skeletons laid in the "foetus in the mother's womb" position throw quite a new light on the artistic, perhaps idealistic, tenets of these Strand-Loopers.

It is intended to reproduce this mode of interment in two of the cases of the Anthropological Room, which have, unfortunately, to be emptied of their contents for the purpose. The re-arrangement has already begun.

Botany.—While one of the collecting trips of the Botanical Assistant proved very successful, the other yielded but little, owing to the want of rain in the part visited. A large number of specimens have been mounted and incorporated in the cabinets—which form the Collection proper, the progress of which is steadily proceeding.

Botanical trips are being arranged for the incoming year.

State of the Collection.—I am happy to be able to report that the Collection has not suffered this year from damage by insects or mould.

I have the honour to be,

Sirs,

Your obedient servant,

L. PÉRINGUEY, Director.

REPORT ON THE DEPARTMENT OF GEOLOGY, MINERALOGY AND PALAEOLOGY.

To the Director of the South African Museum.

SIR,—I have the honour to submit a report on the Geological Department of the Museum for the year 1911, and on the additions made to the collections.

Early in the year, Mr. Walker left to take up a post in the Geological Department of the South African College. In addition to the routine work he performed, Mr. Walker collected, amongst other fossils, the limb-bones of *Gryponyx africanus* Broom, near Fouriesburg, and the reconstructed limb-bones now exhibited are a witness to the care and skill with which he removed them from their hard matrix and pieced them together.

Mr. Walker's place has been filled by Mr. S. H. Haughton from Cambridge, who, since his arrival in August, has been employed chiefly in revising the nomenclature of the Mesozoic and Tertiary fossils in the foreign stratigraphical series, a matter which has long required attention.

Amongst the newly exhibited South African fossils, the most important is the type of *Plesiosaurus capensis* Andrews, which was found by the geological survey as long ago as 1900 in the Sundays River beds of the Zwartkops valley, but which has only recently been described by Dr. Andrews of the British Museum. Unfortunately both girdles and the fore-limbs are wanting, as well as part of the back bone and part of the lower jaw. The fossil is of great interest, and it is the first and at present the only fossil of that class of reptiles known from South Africa. Amongst the donations to the mineral collections, are interesting crystals of sphene in granite from Selati given by the Transvaal Geological Survey; some fine corundum crystals from near Steinkop by Mr. Wylde; tantalite from German South West Africa by Mr. Swanson; mottramite from Tsumeb in the same country by Dr. Wagner; and a series of specimens illustrating the supposed new mineral from Kimberley which was proved by Dr. van der Riet to be artificial, given by that gentleman. Amongst the additions to the rock collections are an interesting set of typical N.W. Highland rocks given by Mr. A. L. Du Toit; a group of surface-quartzites from German South West Africa by Dr. J. Maclelland Henderson, and a collection of rocks from the Transvaal and Orange Free State got by myself while on a journey early in the year.

Very few fossils have been added during the year, the most important being the femur of *Gryponyx transvaalensis* Broom, from the Northern Transvaal, the first reptilian fossil found in that region, given by Dr. Broom.

It is to be hoped that systematic efforts will soon be made to collect reptilian bones from the Karroo region, where much may be expected that will be of great importance to vertebrate paleontology.

I have the honour to be,

Sir,

Your obedient servant,

ARTHUR W. ROGERS.

REPORT ON THE DEPARTMENT OF BOTANY.

To the Director, South African Museum, Cape Town.

SIR,—I have the honour to submit the following report on the working of the Herbarium.

I resumed my duties at the Herbarium at the beginning of February, 1911, after my return from Kew where I had been engaged in working up the South African *Proteaceae* for the Flora Capensis. An assistant was employed at the Herbarium until the end of August to help with the mounting and poisoning and more than one half of the plants in the store-room (comprising 225 bundles) were poisoned. Part of the Herbarium collection, viz., from the Iridaceae to the Gramineae, five Cabinets in all, has also been re-poisoned. During the year 1,175 sheets have been mounted and 806 sheets incorporated in the Cabinets out of which 208 were new to the Collection. Over 400 mounted sheets are waiting to be dealt with, but many are duplicates of those incorporated.

Our specimens of *Proteaceae* brought back with me from Kew were unpacked and replaced in the Cabinets but have not yet been systematically arranged; this will be done as soon as the Order is published in the Flora Capensis. I spent some time in making a revision of the genus *Pteronia* (Compositae) and described and prepared a key to over 60 species, some of which were new to science. Our thanks are due to the Director of the Albany Museum, Mr. E. E. Galpin, F.L.S., and Dr. Marloth who very kindly loaned their material of *Pteronia* to the Herbarium. Mr. Spencer Moore, of the British Museum, has undertaken to prepare the synonymy and to compare a few doubtful species and with this end in view our material and my manuscript have been sent to him. I have written up our herbarium sheets of *Loganiaceae* and *Acanthaceae* according to the naming in the Flora Capensis. I have also prepared a description and a key to the Cape Peninsula *Bruniaceae* and started descriptions of the Cape Peninsula *Compositae*.

Amongst the larger collections which have been worked during the year may be mentioned those of Mrs. Dieterlen from Basutoland, Miss Stewart's from Swaziland, Miss Chennel's from the Orange River Colony, and the species of *Pteronia*, *Scrophulariaceae* and *Bignoniaceae* collected by Dr. H. H. W. Pearson on the Percy Sladen Expedition; all these with the exception of a few of Miss Stewart's plants and some of Dr. Pearson's *Scrophulariaceae* have been named. Besides these I have determined numerous plants for private correspondents, also for the Municipal Gardens, Cape Town, the Provincial Secretary, the National Society, the Police, the Girls' High School, Rondebosch, besides naming and reporting on specimens sent by the Department of Agriculture.

The following donations have been made by the Herbarium:—Royal Botanic Gardens, Kew: 11 species *Pteronia*, seeds *Mimusops obovata*, Sond. Dr. Morrison, New York: Seeds *Mimusops obovata*, Sond. Municipal Gardens, Cape Town: *Tillandsia* sp. *Oxalis* sp.; 2 orchids from Fort William; *Stapelia* sp. Natal Herbarium: A collection of Swaziland and Basutoland plants. Dr. H. Bolus: *Erica tetragona*, Linn. fil. E. E. Galpin: *Pteronia* spp. King Wms. Town Museum: Collections of South African plants. E. M. Reineck: 25 spp. S.A. plants. Dr. Pitard: 25 spp. S. A. plants.

The following material has been sent out on loan:—Miss E. Stephens: N.O. *Portulacaceae*. Kew Herbarium: Herbarium material of *Euphorbiaceae* and *Loranthaceae*. Mr. W. T. Saxton: Specimens of *Caulerpa* and *Polyporus*, Natural History Museum, Paris: *Kalanchoe* spp.

During the year 204 visitors availed themselves of our named collection and library.

Last September I went on a collecting trip to the Gift Berg in the Van Rynsdorp District and was away 15 days, and had 9 days on the Mountain itself. Here I made an extensive collection of over 300 species many of which, as far as I have worked them, are new to the collection and some probably new to science. At the end of September I went to Bushmanland and was away 5 weeks; the collection I brought back was not a large one owing to the extreme drought the country had experienced during the early part of the year. This collection I have not had time to work, but it no doubt contains plants new to our collection as we have not many representatives from this part of the country.

The thanks of the Trustees are due to the following donors:—

The Curator, Municipal Gardens, C.T., for specimens of *Stapelia* spp. and other plants flowering in the Gardens, some of which were new to our collection. Dr. H. Dodd: A specimen of *Calanthe Natalensis*. G. H. Walters, Esqr.: A specimen of *Aristea dichotoma* and *Stapelia* sp. the latter of which was new to the Collection.

R. M. Lightfoot, Esqr.: Specimens of *Stapelia* spp. cultivated at Cape Town. Miss D. Chennels: 80 specimens from the O.R.C.; this donation is of interest as we have not many plants from this part. Dr. R. Marloth: Specimens of *Proteaceae*. Prof. H. H. W. Pearson: Specimens of Grasses. E. E. Galpin, Esqr.: A small collection of dried plants. N. S. Pillans, Esqr.: Specimens of *Erica* spp., *Stapelia* spp. and *Iridaceae*, many of which were new to the collection. Dr. J. Muir: Specimens of living *Proteaceae* from the Riversdale District. Mrs. A. Dieterlen: A collection of dried plants from Basutoland, many of which were new to the collection. J. Medley-Wood, Esq.: A small collection of Natal and Zululand plants. T. Johns, Esqr.: A small collection of plants from Umtata. Rev. A. W. Rogers: A small collection of Rhodesian plants.

A collection of 125 plants from Swaziland was purchased. A great many proved new to the collection and the purchase is valuable as we do not possess a representative collection of Swaziland plants.

During the year I have published:—

Descriptions of nine new species of *Proteaceae*. Kew Bulletin 1911. 2 pp. 82-87. Description of a new species of *Hoffmannseggia* (*H. Pearsonii*, Phillips) L. c. 1911. 6. 262. Description of a new species of *Sonchus* (*S. Tysonii*, Phillips) L. c. 1911. 6. 262. A note on the principal systematic work or publications dealing with the S.A. *Proteaceae*. Trans. Roy. Soc. S. Africa Vol. II.

I have the honour to be,

Sir,

Your obedient servant,

E. P. PHILLIPS.

25th February.

STATEMENT of Income and Expenditure of the South African Museum for the period ended 31st March, 1911.

DR.		CR.
To Balance	£11 16 5	By General Museum Expenditure—
.. Government Grants—		.. Salaries
Ordinary...£1830 0 0		£1,520 7 4
Do. ... 157 10 0		.. Uniforms for Attendants
Herbarium 300 0 0		8 5 0
Publications ... 420 0 0		.. Purchase of Specimens (including Modelling)
	3,007 10 0	82 1 2
.. Interest on Hadje Shah Suliman Mahammed Fund	4 0 0	.. Books
.. Sale of Publications	0 6 4	109 10 9
	3,011 16 4	.. Publication of Annals 411 14 4
		.. Auditor's Fee... ..
		3 3 0
		.. Photographs
		1 3 0
		2,136 4 7
		.. Cost of Sunday opening
		83 19 0
		.. Fixtures and Furniture
		217 15 11
		.. Rent Telephone and Insurance
		17 12 2
		.. Gratuities
		2 2 6
		.. Aquarium, upkeep of
		44 15 3
		.. Freight, Transport, Stationery, Taxidermist's and other Incidentals
		281 0 10
		.. Travelling Expenses
		46 13 7
		.. Clerical Assistance... ..
		1 1 0
		.. Bank Charges
		2 17 9
		Balance:—
		Cash in Bank—
		Ordinary
		152 12 6
		Hadje Mohammed Specimen Fund
		Statement A.
		29 7 0
		Plus Advances
		20 1 0
		Overpayment
		Wesley
		3 4 4
		Petty Cash
		3 9 4
		amount of Gardener's wages for the period 27 2 11 to 29 4 11, not yet repaid by the P.D. Dept., 9 weeks @ £1 4s. 0d. per week (Cheque drawn in advance)
		10 16 0
		219 10 2
	£3,053 12 9	£3,053 12 9

Audited and found satisfactory,
WALTER E. GURNEY,
Controller and Auditor-General.
Pretoria, 12th September, 1911.

L. PÉRINGUEY,
Director of the South African Museum,
Cape Town, 9th September, 1911.

Report of the South African Museum for the Year ended 31st December, 1912.

The Minister of Interior.

SIR,—I have the honour on behalf of the Trustees of the South African Museum to submit the Annual Report of the Director of that Institution for the year 1912.

Without entering upon any invidious comparison with other similar Institutions the Trustees desire to endorse the remarks of the Director as to the conditions in which the Museum is placed owing to lack of funds.

They may fairly plead the national character of the South African Museum which owing to the geographical position of Cape Town is, and must always continue to be the chief place of call for visitors from Europe, and from other parts of the British Empire and they may be forgiven for wishing that this Institution should make a worthy show of the natural features of South African interests as well as of such memorials as can be preserved of its history and of the conditions and habits of primitive man on this continent.

They deplore the lack of space which prevents them from making an adequate display of the many objects of interest which illustrate this phase of South African history which are of deep and far reaching scientific importance.

The Trustees cannot let the occasion pass without again deploring the lack of financial support from wealthy South Africans for the Museum which ought to be a store house of those relics of the past that are fast being obliterated by modern civilization.

They desire to express their sense of the energy and devotion of Dr. Peringuey and his Staff who have done their utmost under somewhat depressing conditions to maintain the character of the Museum.

Signed, J. X. MERRIMAN.

REPORT OF THE DIRECTOR.

To the Trustees of the South African Museum.

SIRS,—I have the honour to submit my Report on the general administration of the Museum for the year 1912.

As will be apparent to you from the detailed account of the work carried on in the different Departments, the ratio of progress in the investigation of the material in hand, and in the acquisition of new material has been fully maintained.

But the lack of space continues to thwart our efforts to make the exhibited series more complete and thereby more attractive to visitors. No incorporation of a mounted specimen is possible unless another one, quite as interesting, is removed; but if such an attempt is made I am faced with that other difficulty, namely, where to relegate the removed object because I have no storage accommodation.

The grant in aid remains what it was. The Institution is thus placed in comparison with the Pretoria Museum in a position of inferiority which nothing justifies, neither the volume and quality of the scientific publications issued by us, nor the number of our *bona fide* visitors.

A special grant of £1,000 was placed on the Estimates of this year for erecting a shed over the skeletons of the whales mounted in the ground and left at the mercy of the elements. This item was deleted at the last moment. The Maritzburg and Bloemfontein Museums did, however, get £3,000, each as a special grant for Exhibition cases; and £6,000 were voted for the Pretoria Museum for the same object.

No special grant was given to this Institution, and the £1,400 worth of new cases which we so urgently require have had to be provided from our ordinary Grants in Aid for 1911 and 1912. No provision other than the ordinary Yearly grant is made for 1913. This Institution should in fairness receive the same grant as the Pretoria Museum.

A duplication of the present building is an urgent necessity. The galleries are overcrowded; a defect which a conscientious Keeper must always guard against. The collections of special departments overlap; another serious defect which does not add to the attractiveness of the place, and which makes it easy for "candid" critics to pick holes.

I thus find myself in this difficulty; either to leave the exhibited Collection as it is at present, or to remove the foreign exhibits and replace them gradually by South African specimens. I have chosen the latter option and as the series of Cape Fishes are poorly exhibited, two of the foreign Bird Cases will be emptied, and the contents packed into boxes.

This process of eviction of parts of an ornithological collection of which most Museums would be proud, and which is unique undoubtedly in South Africa, has been going on for the last three years.

Without storing accommodation where one can get at these boxes and examine the contents from time to time, I fear that these boxed specimens will suffer in the same manner as a number of skins of mammals and birds which were destroyed by insect pests last year, and also this year.

Visitors.—The Visitors to the South African Museum numbered 114,539 divided as follows:—

White:						
Adults	...	...	Males	...	...	46,717
—	...	...	Females	...	...	27,852
Children	...	...	—	...	...	20,519
Coloured:						
Adults	...	...	Males	...	...	8,461
—	...	...	Females	...	...	7,183
Children	...	...	—	...	...	3,809

Through the arbitrary decision of an Official, given in such a manner that the Trustees could not make their voice heard in time, the St. James Aquarium which we had striven so hard to make attractive and educational was transferred to the Provincial Government to serve as a Marine Station, a purpose to which the building is absolutely unsuited, whereas the contemplated and promised alterations would have made the place fulfil its object as a public Aquarium.

That the popularity of the Museum is steadily increasing is shown by the number of visitors for the last four years.

1909	...	...	...	81,266
1910	...	...	...	103,409
1911	...	...	...	108,411
1912	...	...	...	114,539

New Exhibition Cases.—The four exhibition cases ordered towards the end of last year have just been erected. Four additional cases ordered this year will not arrive before the beginning of March, 1913.

Presents, Purchases and Acquisitions by the Staff.—The number of acquisitions through donations, purchases, or the collecting by the Staff is considerable.

They amount in:—

Zoology	...	...	13,117	specimens.
Geology and Mineralogy	...	...	216	"
Botany	...	...	1,578	"
Anthropology	...	...	8	"
Ethnology	...	...	48	"
Antiquities	...	...	132	"

a total of 15,099, approximately one fifth of which are new to the Collection.

Library.—The Library was increased by 1,389 numbers, of which 1,072 were presented in exchange for the Annals of the South African Museum. These figures tell a tale.

The following is a summary:—

Periodicals and Pamphlets:				
	Presented	...	...	1,072
	Purchased	...	...	238
Books:				
	Presented	...	...	22
	Purchased	...	...	52

Publications.—Unlike the publications of the other Museums in South Africa, the "Annals" of the South African Museum deal only with the material contained in the Museum. They have been this year on as large a scale as during the previous year; the issue being as follows:—

- Vol. VII.—On a new species of *Propappus*, and on the pose of the Pareiasaurian Limbs, by R. Broom. On a species of *Tylosaurus* from the Upper Cretaceous Beds of Pondoland, by R. Broom. On a new type of *Cynodont* from the Stormberg, R. Broom. On some points in the structure of the *Dicynodont* skull, by R. Broom.
- Vol. IX.—Itinerary of the Percy Sladen Memorial Expedition to the Orange River, by H. H. W. Pearson. List of the Plants collected in the Percy Sladen Memorial Expeditions 1908-1909.
- Vol. X. Descriptions of four new species of *Hemerobiidae* (Order *Neuroptera*) by L. Peringuey. On some South African *Rhynchota* in the South African Museum, by W. L. Distant. New South African *Micro-Lepidoptera*, by E. Meyrick. The *Pseudoscorpions* of South Africa based on the Collections of the South African Museum, by Edw. Ellingsen. The *Sympoda* (Crustacea) by the Rev. Thomas R. R. Stebbing.
- Vol. XI.—The South African *Hirudinea*, Part I, by E. J. Goddard and D. E. Malan. A Revised Reference List of South African Non-marine *Mollusca*; with Descriptions of New Species in the South African Museum, by M. Connolly.

These papers would form a volume of 500 pages, with 23 plates of illustrations and numerous text figures. In addition to the parts mentioned as having been issued during 1912, proofs of seventeen papers to appear in 1913 have been passed or revised. Thirteen important papers are also in preparation and material is sorted for new reports. It may not be out of place to add that those bodies who benefit primarily from these publications are the other South African Museums, nor that few Museums with the exception of the leading Institutions of England and the United States, publish more than we have done for the last two years, and are doing for 1913. Whether we shall be able to continue on the same scale will depend on the pecuniary help we receive, or continue to receive.

The Staff.—Realising that the number of Museums of Natural History found in the Union tends to the diminution, as far as this Institution is concerned, of gratuitous offerings which, however valuable in themselves, are however spasmodic, having moreover on the staff men, young and enthusiastic, I sent three of them to collect in the field to the utmost of our pecuniary resources, and kept them there as far as these resources permitted. Mr. E. P. Phillips, the Botanical Assistant, made a collecting tour in the Laingsburg District; the severe drought prevailing in Basutoland prevented him from going there on a botanical expedition, which, however, will be undertaken next year. Mr. S. H. Haughton, Assistant in the Geological Department, in search of fossils made four excursions, two in the Karroo, one to the Bokkeveld beds of Zwartberg, and one to the Cretaceous rocks of East London. I went to investigate certain pre-historic caves in the Knysna and Humansdorp District. Mr. K. H. Barnard, Assistant in Marine Zoology, was sent on a marine collecting tour of four months duration to Mozambique and Natal, and will not return until February, 1913.

The results of these collecting expeditions have been, so far as the material obtained has been investigated hitherto, satisfactory, and the experience acquired thereby cannot but prove of the greatest value to the Assistants concerned.

Arrangement and Conservation.

Zoology—Mammals.—Through the friendly help of Mr. K. Ellefsen, we have been able to obtain the skeleton of a fourth kind of whale; *Balenoptera borealis*, fortunately for us one that measures normally only some 40 feet. We have still to obtain two kinds, the Cape Rorqual or Fin-back, and the Sperm whale or Cachalot, frequenting the Cape Seas. Mr. Ellefsen has also procured for us the skeleton of a large Killer-whale, *Orca gladiator*. Both will be mounted in the Museum grounds next year. The number of skins and skeletons received or obtained is 29. The Natal Provincial Government has very kindly procured for us two examples of the Inyala Antelope of which we stood in need. I sent Mr. Drury to Sutherland, at the request of the Cape Provincial Secretary, to report on the alleged presence there of a long extinct Quagga. The herd proved to consist of Mountain Zebras.

Birds. The birds received or obtained do not require a special report, although valuable additions were made to the Collection.

Reptiles.—Sixty-seven specimens were received. At my request, His Excellency the Governor of the Seychelles sent us two live specimens of the gigantic land tortoises of the Mascarene Islands to keep company to that very old exile, who has been with us from 1884, and whose presence at the Cape I traced indubitably as far as 1870. I have reason, also, to believe that it is the survivor of two that were in Cape Town in 1835, and renowned at that time for their size. Its sex was not properly ascertained at the time I applied for his two female companions, the authentic age of which is forty years. The loan however of a male tortoise from Groot Schuur has been obtained and the quartette ought to form a happy family in the Museum grounds, were it not that the original "oldest inhabitant" will not mingle with the new set.

Fishes. Great efforts have been made in procuring examples of fresh-water fishes so as to make the illustrated monograph of the same, which is being prepared by Dr. Gilchrist and W. Wardlaw Thompson, as complete as possible. We have succeeded in obtaining several species new to the Collection, several new to science, and several records of new localities.

It is probable that only very few new forms remain to be discovered in South Africa.

We are very much indebted to Major Stevenson-Hamilton, Keeper of the Government Game Reserves at the Sabi, for numerous and varied examples of the fishes of his District.

Marine Invertebrates.—Mr. K. H. Barnard has been occupied in completing the incorporation of the Crustacea, and began that of the Mollusca. The Sympoda and the Holothurians have been sent to specialists. The Polyzoa and Pycnogonids have been sorted and arranged for the same purpose. The chaotic conditions of the Marine Collections is now nearly a thing of the past, although it will take still several years until it is sorted as it should be. We have obtained by purchase a certain number of land shells and obtained others by exchange or donation. The excellent publication in our "Annals" of Major Conolly's "Revised Reference List of South African Non-Marine Mollusca," will prove of great value to the students of this group.

Entomology. The number of accessions is considerable. Special attention has been paid to certain groups of Moths and especially Micro-Lepidoptera which were not represented as they should have been; and when it is stated that no less than 1,940 species numbering 3,905 examples of that Order were received, it will be realised that our efforts in this direction have been partially crowned with success.

The compilation of the described South African species continues; and so far as I have carried it, I am able to estimate that three fifths of the number are represented in the Collection.

I have begun the re-arrangement of the Orthoptera, Neuroptera and part of the Hymenoptera; five new mahogany cabinets were ordered last year for the purpose of incorporating these insects.

Material for the investigations of certain groups has been forwarded to several specialists.

Geology, Mineralogy, Palaeontology. The progress in this Department, as shown in Dr. Roger's report, continues. The congestion of some of the exhibited series will be slightly relieved by the addition of three new cases; but it will exist until an addition to the present building has been made.

The palaeontological series are especially crowded, so much so, in fact, that the newly reconstructed Karroo Reptile, *Parciasuchus*, upon which Mr. S. H. Haughton has devoted so much patient labour, had to be hoisted on the top of another exhibition case for want of available ground-floor; and the gigantic head of another Karroo reptile, *Tapinocephalus*, will have to share the same fate. Visitors can now admire the well executed restoration of the head of the gigantic extinct Cape Buffalo, *Bubalus baini*, which is hung against the wall of the room for Palaeontology.

Botany.—The advance of this department is on equal ratio to that of the others. A considerable number of plants has been dealt with, and more cabinets have to be ordered in consequence. A special volume of the Annals (Vol. IX.) is now devoted to the publication of the botanical material. The following figures give an idea of the present growth of the Herbarium. In June, 1905, when the Museum came back to its own, the collection was represented by 25,400 sheets. At the end of the present year we had added 6,493 sheets, of which 875 were new. Mr.

E. P. Phillips, the Botanical Assistant, calculates that the South African Collection of plants is now represented by about 32,000 sheets.

Anthropology, Ethnology, Antiquities.—"Caves." I visited the Coldstream Cave in the Humansdorp District which was investigated last year by Mr. Drury of the Museum. Dr. A. L. du Toit, of the Geological Survey, very kindly accompanied me on my visit with the view of ascertaining geologically the age of the shelter. I regret to say that he could come to no conclusion on the evidence obtainable.

More excavation took place while we were at Coldstream. The floor of the shelter was reached and some skeletons were unearthed. The evidence of the sepulture points clearly to the bodies having been laid on one side, in a crunched attitude, upon them being deposited two or more flat stones of no great thickness; a fire was afterwards made over the few inches of cave dust covering the corpse; upon this, food was cooked, as shown by the over lying black ashes, incinerated shells, and parts of large bones of buffalo, buck, fish-bones, etc. Evidence was also obtained that in order to make room for new burials, remains were removed from their original position, and reinterred towards the extremity of the shelter. Very little debris separated the skeletons, which were found in layers to a depth of 22 feet.

A special case has been fitted for the exhibition of two skeletons resting in the cave dust in their original position, and of all the bone and stone implements found in the cave together with a section of the kitchen midden debris.

Advantage was also taken during our presence at Knysna to visit another shelter at the Knysna Heads.

Inquiries revealed the fact that it is from this shelter that the first unrecorded specimens of Strand-Loopers culture received at the Museum in 1875 had been obtained. Ransacked as this shelter had been in order to obtain the cave-dust, locally termed "guano," we obtained nevertheless stone implements of the palaeolithic type, which showed conclusively that this type of stone industry was obtaining with the Strand-Loopers. The importance of this discovery is very great. Either the cave is very ancient, and then the type of tool or weapon is contemporaneous with that of any Chellean or Acheulean site, or if they are not very old this type of tool or weapon is a survival—and the only one known—of a culture of extreme antiquity.

But whether it is a question of survival of method or of succession of time, I am perfectly satisfied now, that the makers of these palaeoliths, which are however inferior to some of those found on the surface, made and used also not only the bone tools, ornaments, flakes, etc., which are singularly like the Aurignacian of Europe and elsewhere, but also the "kwe," mullers, brayers, etc., which have neither the Aurignacian facies nor that of the Mousterian.

Our visit to the Knysna and Humansdorp Districts will be productive of good owing to the interest taken there now by the residents, especially under the energetic encouragement of Mr. J. C. Henkel, the Conservator of Forests. New "caves" have been located, which will be explored next year. The abundance of the surface bouchers resting on the iron stone, called here gravel, is almost incredible. It may be said that from Knysna to Plettenberg Bay or to Humansdorp, there is no pit along the road from which gravel has been removed for coating or repairing it which does not contain these artefacts, or the flakes resulting from their fabrication.

One of the most interesting objects obtained by Mr. Henkel is an oval mass of cement five inches long and two inches broad made of resin and clay at one end of which is fitted a flake; a round hole at the other end of the mass shows that a slender stick was inserted thereby making it a hand-tool.

This mode of attachment was hitherto known among Australian aborigines only; and it is the third of its kind discovered here hitherto.

Stone implements.—The number of stone implements received or obtained during the year is considerable; and several are now recorded for the first time from Herero land and Mozambique.

Specially worthy of mention is a collection made by Mr. A. Wohlfahrt in the diamondiferous gravels of the Vaal River. Many of these large implements made of volcanic andesitic rock are deeply and closely pitted on either face, but if broken in two, it is found that the inner part is not pitted thus showing that this pitting occurred after the artefact was completed. It will be observed also that along the periphery there runs a zone of weathering equal to one sixth or more of the greater thickness of the palaeolith. The same condition obtains for large and small scrapers made of hardened shale, occurring in the neighbourhood of East

London and elsewhere, where there is no evidence that they have been subjected to water-action.

Such a natural phenomenon postulates for the implements so weathered an extreme antiquity.

Artistic Productions.—We are greatly indebted to Mr. J. A. Neser, M.L.A., for four fine examples of rocks with engravings representing elands, rhinoceros and hippopotamus. The execution is of the best; the eyes are quite plain; the folds of the skin are represented in high-relief. The technique is equal to that of the best graven stones in the Collection, but it has nevertheless a character of its own.

Towards the end of the year we have placed on exhibition not only the few pieces of Bushman paintings we possessed, but also a newly acquired large slab, nine feet by three feet six, on which is depicted a scene that will prove a revelation to the visitors. Without commenting at too great a length on the merit of this painting, I may add that the high skill of the colorists who painted the frescoes of the Central and Northern Caves of France and Spain is not superior to that of the aboriginal who portrayed the herd of Elands at bay, now on view at the Museum. The fresco was on the roof of the cave; the Cave Sandstone in which it was executed fell, face downwards, fortunately, and was thus preserved. On the walls were other scenes not so artistically executed perhaps, but still of a superior style, although plainly not attributed to the same author; their brightness of colour is not to be compared, yet it leaves one doubtful as to many of these now dully coloured monochrome or polychrome paintings left *in situ* having also been originally bright, and with various shades.

Another presentation of importance is that of several sticks (walking-sticks or "kirries") decorated by Bush people, only quite recently judging from the subjects delineated. On a short, broken stick are scenes of hunting, such as a man on horseback pursuing game, etc.; the line graving is an extremely fine intaglio, one of the horsemen however wears the uniform of the Mounted Police of 1875 or thereabout. The representation of the man and the horse could hardly be surpassed; but an attempt by the same artist at depicting a railway train is somewhat conventional. This stick was found in a cave shelter in the Britstown district, Cape Province, with other remains showing occupation. It is not improbable that the maker had "served time" in the Cape Town convict station, and recorded on his stick the impression he could not convey by word of mouth to his kinsmen, on his return. The "scenes" on the other sticks are in intaglio and poker work; and are remarkably well executed. They go far to prove, were this proof necessary, that in the rare survivors of the Colonial Bushman, the sense of art exists still.

A worked stone pendant found in a Griqua grave has been generously donated by Mr. J. D. Krige. It is not the Bull-shaped Amulet of the fifth or sixth Egyptian dynasty, but it is of very singular shape.

Physical Anthropology.—Four complete skeletons and two skulls of the Strand Looper Hottentots and Bush people have been added to the Collection.

An attempt at investigating Bush sepulchres in the Northern Districts failed owing to the drought which prevented "prospecting," and also owing to the exorbitant charges asked for transport. Another attempt in the neighbourhood of the N'Gami Lake failed also. Several skeletons have, however, been located for future removal.

We have taken this year casts of thirteen Colonial Bush people, and one Griqua girl. Several of the former were selected by Miss Doris Bleek, who justified the purity of the race on philological grounds, for they all spoke the Bush dialect or language. In this instance philology was supported by physical characters that could not be ignored. The models have been executed and are now on exhibition; a number of those previously on view having been removed to make room.

Five of the originals were induced to come to Cape Town and were modelled here. I learned much from them. Two of the men made a "kwé ka kka," or digging stick with a perforated round stone to give weight to the same, and shod with a spring-bok horn which they straightened before the fire. It was somewhat difficult to persuade them to make it. They, however, all vehemently declared that they did not know how to bore the hole in the stone, nor how it was done; they found them already bored in the veld just as the numerous ones I gave them to choose from. One of the old men made for us two "Ghoïn-Ghoïn" or "Bull-roarers," and parted with his other musical instrument, the "Gorah."

The mensuration of these Bush people has been very carefully taken and will be published in the Annals together with the three photographic reproductions, full face, three quarter and profile, also that of the cast. So rare, or unreliable, are the

reproductions in the nude of these rare survivors of an old race, that this publication must prove of great interest.

Ethnology.—Among the objects of Ethnological interest is a good representative collection of the Baila Batonga, among which I found the head-dress of a Mashukulumbe (Baila) warrior three feet long; an extremely rare article now that this style has gone out of fashion, and is replaced by an oval chignon.

Two stones with shallow holes always in multiples of eight on which the "fuba" game is, or was, played were received from Mashonaland. The Museum has acquired the gold necklace handed to Colonel J. W. Colenbrander in 1889 for presentation to King Lobengula, and bearing the inscription on the pendant. "From Queen Victoria to Lo Bengula, March, 1889." Lobengula gave the chain to one of his chief Gaza Queens to wear. The relic was found among abandoned baggage bearing the "canary-yellow" colour of the quondam Matabele King, once the Potentate over what is now Southern Rhodesia.

Archaeology.—We have received from the British School of Archaeology in Egypt a number of objects obtained during last year in an extensive cemetery thirty-five miles South of Cairo, dating from the earliest historic age down to the pyramid period, during the five dynasties 0 to 4. The special feature of the cemetery is the extraordinary preservation of both woodwork and clothing. The precise period was ascertained by a large tomb with pottery of Narmer-Mena. (The date of Menes' reign is either 4777 or 4715 B.C.)

These objects will be on view very shortly, a case having been emptied of its contents to allow of these new acquisitions being exhibited.

I have endeavoured to obtain replicas of ancient Egyptian pottery, affecting the forms of divers animals, to have been exhibited along with objects of similar shape found in Rhodesia, and even now occasionally fashioned by the Basutos. The Bulawayo Museum Authorities have very kindly allowed us to make a replica of a very remarkable vessel of the same shape representing probably a hippopotamus.

At Abydos and elsewhere, excavations have revealed bowls, decorated and plain that were used as hearths. In shape and form, and probably also in use, they are wellnigh similar to some found at Zimbabwe.

Several Post-Office Stones have been added to our series. Through the friendly help of Baron von Humboldt, the German Consul-General, I hope to obtain a replica of the Padrão, or Commemorative Pillar erected by Diogo Cão, at Cape Cross, in 1486, and discovered there in 1893. I have been promised also a facsimile of two fragments of Bartholomeu Diaz' pillar, erected in 1487, and ultimately discovered at Angra Pequena, now Luderitzbucht. The fragments when brought to Cape Town in 1856 were claimed by the Portuguese Authorities; they are now in Lisbon; another is in New Zealand.

The balance-sheet appended for the year 1911-1912 shows a surplus balance which, however, barely covers the amount of the orders in hand, including the first order for new exhibition cases.

I have the honour to be,

Sirs,

Your obedient servant,

L. PÉRINGUEY, Director.

REPORT ON THE MINERALOGICAL, PALAEOONTOLOGICAL, GEOLOGICAL DEPARTMENT FOR 1912.

The Director,

South African Museum.

SIR,—I have the honour to send you a report on the progress of the geological collection during 1912.

The chief additions to the mineral and rock collections are series of specimens from Rhodesia and the Transvaal presented by the Geological Surveys of those countries. The Rhodesian collection is mainly illustrative of minerals which are, or may be, in the future, worked on a commercial scale. The Transvaal collection is chiefly from the Palabora and Mashishimala Hills, and consists of rocks hitherto unrepresented in the Museum collection.

Amongst the individual donations the fine mass of native copper from the Richtersveld, given by J. A. Giffen, and the group of large boulders from blue-ground given by the De Beers Co., are specially noteworthy.

Amongst the Invertebrates the chief additions have been a collection made by Mr. A. R. Walker from the Uitenhage beds, and a number of Mollusca from the raised beaches of Algoa Bay given by G. C. Scully. The Uitenhage fossils include good specimens of species that were previously represented in the Museum by inferior examples, and some that may be new species.

The Vertebrate fossils received include thirteen new specific types, the chief donors being Dr. Broom and Rev. Whaits of Beaufort West. Mr. Fish of Dordrecht and Mr. Green of Queenstown also gave valuable specimens. From Dr. Kannemeyer was received the skull of *Bubalus bairii* which has been restored and mounted.

Mr. Haughton made four excursions during the year, two to the Karroo, one to the Bokkeveld beds of Zwartberg, and one to the Cretaceous rocks of East London. His visits to the Nieuwveld were very successful, especially as regards the exhumation of the almost complete skeleton of *Pareiasuchus*. The East London journey enabled him to settle the manner of occurrence of the small patches of Cretaceous beds on the hills near Buffalo River and to obtain a small collection of fossils which may help to determine the disputed age of those rocks, a matter of importance. On his way back from East London he collected insects and crustacea from the shales in the Cave Sandstone at "Siberia."

It is only by sending out a competent man that a satisfactory collection of the Karroo reptiles will be obtained.

The ordinary collector who has no special knowledge of anatomy is apt to leave important fragments in the rock or to omit a search for them. In view of the very great importance of these fossils it is to be hoped that funds will be found to pay the travelling expenses incurred on the work. The results hitherto obtained by Mr. Haughton fully justify the expenditure on this part of his work.

It is gratifying that Mr. Haughton shows ability in the determination and description of reptilian fossils, with which Dr. Broom has encouraged him to pursue.

Mr. Haughton has been engaged in the reconstruction of certain skeletons from the Karroo, especially that of *Pareiasuchus peringueyi*, and he has remounted and named the foreign Jurassic and part of the Tertiary fossils in the exhibition cases. The crystal collection has been catalogued, and the management of the stratigraphical series of Pre-Cape rocks has been made in accordance with changes necessitated by the progress of the Survey.

I have the honour to be,

Sir,

Your obedient servant,

ARTHUR W. ROGERS.

Hon. Keeper of the Geological Collection.

REPORT ON THE DEPARTMENT OF BOTANY.

The Director,
South African Museum,
Cape Town.

SIR,—I have the honour to submit the following report on the working of the Herbarium:—

Since the issue of last year's report considerable alteration has been made in the herbarium by re-arrangement of the cabinets.

During the year it was found necessary, to avoid undue congestion, to add six new cabinets; the collection from the *Compositae* to the *Graminaceae* was shifted to fill these, but further additions will have to be made to ease the collection from the *Ranunculaceae* to the *Rubiaceae*, as in some cases it is impossible to add further specimens. The herbarium now contains 72 cabinets in which are preserved our native and an extensive exotic flora.

A considerable mass of material has been dealt with during the year, out of which 1,627 sheets were mounted and 1,578 sheets incorporated in the cabinets; of the latter 349 species were new to the collection. This shows an increase on last year's incorporation.

During eleven months of this year an Assistant has been employed in the herbarium, leaving me more time to devote to herbarium and scientific work. The collection I made last year on the Gitt Berg has been worked through as far as our named collection and that of the Bolus Herbarium permit; it has yielded a number of most valuable finds of new and little known plants, and at present I am busy describing the new species. At the request of Dr. R. Marloth, Mr. N. S. Pillans and the Curator of the Bolus Herbarium I have worked through their respective collection of *Proteaceae* and among them made some interesting finds. I have also been engaged in preparing a list of the known plants of East Griqualand which will be ready for publication as soon as I receive the name of the grasses which Dr. O. Stapf, and the *Orchidaceae* which Mrs. Bolus have promised to name. During the year several collections of plants from Natal, the Transvaal and German South West Africa have been examined, besides collections which I selected from the store-room. These latter were mostly collected by Messrs. J. M. Wood, W. C. Scully and H. G. Flanagan; many proved new to the Collection.

A considerable amount of time has been spent on the work of cataloguing the contents of the cabinets. While at this work I have taken the opportunity of not merely making a list of the plants in our possession, but of correctly naming wherever possible those specimens which were either not named or about which there was some doubt. I have adopted a system which I saw in use at the Kew Herbarium of keeping all the specimens of the same species between "species covers," writing the name on this cover, and then noting on the outside of the genus cover the names of the contained species.

This, when finished will greatly facilitate work when naming a collection. In this way 13 cabinets have been treated.

The number of visitors during the year has not been so great as last, only 113 being recorded. In all cases the visits were prompted by demands for information which has been given to the best of my ability. Among the more important may be mentioned; Miss Mason who brought for identification a large collection of paintings of South African plants which has since been presented to the Kew Herbarium; the Curator of the Municipal Gardens, Cape Town, for whom I have identified such plants as from time to time flowered in the Gardens; the Provincial Council, and the Mountain Club.

Among the specimens incorporated in the Cabinets this year may be specially mentioned my collection from the Gitt Berg; a large number of Natal plants; a collection by W. C. Scully from the Stockenstrom Division; a collection from Swaziland made by Miss Stewart, and from German South West Africa, made and presented by Herr K. Dinter, and also by the Percy Sladen Memorial Expedition; a collection from the Transvaal presented by the Pretoria Museum, and Tyson's South African Algae.

1,065 specimens have been presented to the Museum, the more important being plants from Rhodesia, Uitenhage and George collected by the Rev. F. A. Rogers; a collection from Basutoland made by Mrs. Dieterlen; from Natal, presented by J. Medley Wood, and the above mentioned collection from the Transvaal and German South West Africa.

The thanks of the Trustees are also due to the following donors: - The Curator of the Municipal Gardens, Cape Town, for specimens of plants which have flowered in the Gardens during the year; Mr. Geo. French for a specimen of *Eleusine indica*, Gaertn; Bro. Fogarty of the Christian Brothers' College, Kimberley, who has contributed many interesting plants from this locality, of which a number proved new to the collection; Mr. E. F. Galpin, F.L.S., for a small collection of rare plants which were wanted to fill gaps in our series; Mr. A. Handel Hamer who from time to time contributed specimens of Cape Peninsula plants; R. M. Lightfoot, Esqr., for donations of various species of *Stapelia* which he has cultivated; Dr. J. Muir of Albertina who has from time to time forwarded living specimens of *Proteaceae*; Dr. R. Marloth for specimens of *Proteaceae* not represented in the Herbarium; Mr. W. Reid for specimens of the Cape Peninsula trees, one of which had not before been recorded from the Cape Peninsula; Mr. W. C. West, the Secretary of the Mountain Club, for a collection of plants he made on the Drakensberg which are valuable as the altitudes are recorded; Miss M. Wilman for specimens from Kimberley.

The following donations and loans have been made by the Herbarium during the year. - The Royal Botanic Gardens, Kew. 25 species of grasses (presented); 11 species *Euphorbiaceae* (presented); 22 species *Graminaceae* and 7 species *Asclepiadaceae* (loaned); our herbarium collection of *Thymeliaceae* and *Myricaceae* (loaned); a collection of Mosses and Liverworts from Basutoland which were sent on loan and a set of which we are presenting to Kew. Dr. S. Schonland has had several species of *Crassulaceae* on loan. Mrs. L. Bolus has had

on loan all the species of *Mesembryanthemum*, *Orchidaceae* and *Ericaceae* which I collected on the Gift Berg. Mr. W. T. Saxton has had on loan for demonstration purposes sheets of *Hypnum*, 3 sheets of *Splachnum* and 9 sheets of *Caulpera*. Herr Reineck received in exchange, 371 species of South African plants. Dr. Pitard has had 323 plants sent him in exchange for European plants received. The Bolus Herbarium was presented with a set of my Gift Berg Collection. To the Albany Museum we presented male and female specimens of *Leucadendron pubescens*, R.Br. Mr. E. E. Galpin, F.L.S., was presented with a small collection of duplicates. J. Medley Wood was presented with a small collection of *Proteaceae*.

Whenever possible material has been offered to Specialists who are engaged on special orders: by this means the naming of our sheets is not only authenticated but our specimens are quoted in the various standard works on South African Botany, and our knowledge of the distribution of the species is extended.

Owing to the prevailing drought in Basutoland it was thought advisable last October to postpone until next year a trip there for which I had been preparing. In September I spent a week at Seven Weeks Poort in the Laingsburg Division and made an extensive collection of the Flora; besides this trip I have only done local collecting which has yielded many species not represented in our Series from the Cape Peninsula.

A paper, "New and little known Proteaceae," by E. P. Phillips, is now in the Press; and another, "A description of a new species of *Leucadendron*," by E. P. Phillips and J. Hutchinson, was published in the Kew Bulletin, 100, 1912.

E. PERCY PHILLIPS,
Herbarium Assistant.

STATEMENT of Income and Expenditure of the South African Museum for the year ended 31st March, 1912.

To Balance	£219 10 2	By General Museum Expenditure—	
" Grants:—		" Salaries	£2093 6 0
Government £4,000 ... }	4,000 0 0	" Clerical Assistance... ..	3 11 0
C.T. Corporation £100 ... }		" Uniforms for Attendants	2 0 5
" Interest on Hadje Shah Suliman Mahommed Fund	4 0 0	" Purchase of Specimens (including Modelling)	142 13 10
" Sale of Botanical Paper... ..	2 5 0	" Purchase of Books... ..	123 4 2
Annals	35 4 10	" Freight, Transport, Stationery and incidentals... ..	467 10 7
" Contribution by Geological Commission towards publication of Annals... ..	31 13 5	" Rent P.O. Box, Telephone and Insurance... ..	17 10 0
	69 3 3	" Purchase of Horse and Cart	47 10 0
		" Furniture and Fittings	262 8 0
		" Travelling Expenses	274 11 0
		" Wages paid to substitute for Gardener in September	2 2 0
		" Sunday opening, cost of	165 9 6
		" Upkeep of Aquarium	49 3 1
		" Expenses in connection with the King's Collection	9 5 6
		" Publication of Annals	158 7 6
		" Bank Charges	1 10 3
		" Balance:—	
		Cash in Bank—	
		Ordinary	£696 6 4
		Hadje's Mohammed Specimen Fund	32 2 0
		<i>Vide</i> Statement A.	
		Plus overpayment to W. Wesley unadjusted	3 4 4
		Advances	4 5 0
		Petty Cash	2 6 11
		" Amount of Gardener's wages for period 25 2 12 to 29 4 12, 9 weeks at £1 1s 6d per week: £10 16s 0d, and £3 12s 0d, portion of wages paid to substitute in September, 1911, subsequently recovered from P.W.D. in May 1912	14 8 0
			752 12 7
	£4,392 13 5		£4,392 13 5

Audited and found satisfactory,
WALTER E. GURNEY,
Controller and Auditor-General,
Cape Town, October, 1912.

L. PÉRINGUEY,
Director of S.A. Museum.

UNION OF SOUTH AFRICA.

REPORT

OF THE

SOUTH AFRICAN MUSEUM

FOR THE

Year ended 31st December, 1913.

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Trustees of the South African Museum.

The Hon. JOHN X. MERRIMAN, P.C., M.L.A.
THOMAS MUIR, C.M.G., M.A., LL.D., F.R.S.
JOHN WILLIAM JAGGER, F.S.S., M.L.A.

Scientific Staff of the South African Museum.

LOUIS ALBERT PERINGUEY, D.Sc., Director.
ARTHUR WILLIAM ROGERS, M.A., Sc.D., Keeper of the Geological and Mineralogical Collections.
ROBERT BROOM, D.Sc., M.D., Keeper of the Palæontological Collections.
EDWARD PERCY PHILLIPS, M.A., Assistant in Charge of the Herbarium.
KEPPEL HARCOURT BARNARD, M.A., Assistant in Charge of Fish and Marine Invertebrates.
SIDNEY HENRY HAUGHTON, B.A., Assistant in Charge of the Geological and Palæontological Collections.
ROBERT MARK LIGHTFOOT, F.E.S., Assistant.

UNION OF SOUTH AFRICA.

DEPARTMENT OF THE INTERIOR.

Report of the South African Museum for the Year ended 31st December, 1913.

To be presented to Parliament.

26th February, 1914.

The Secretary for the Interior.

Sir,—I am instructed by the Trustees of the South African Museum to transmit the report of proceedings and progress of this Institution to be laid before Parliament according to paragraph 9 of Act No. 17 of 1857.

I have the honour to be,

Sir,

Your obedient servant,

L. PÉRINGUEY,

Director.

REPORT OF THE DIRECTOR.

To the Trustees of the South African Museum.

Sirs,—I have the honour to submit my Report on the general administration of the Museum for the year 1913.

The communication sent by the Trustees to the Minister of the Interior in which they declared themselves "forced again to call serious attention to the urgent need for increased accommodation for the collections under their charge, which, since 1893, have increased at such a rate that the Trustees find themselves almost compelled to call a halt in their work" has elicited a sympathetic reply, and it would seem as if an extension of the present building were contemplated. The Architect of the Union was asked to confer with me as to your requirements, which we have discussed together.

It is satisfactory for me to report that the Public Works Department have decided to renovate the outer and inner aspect of the main building. It was time indeed that a little attention was paid to the conservancy, for we were threatened with a serious subsidence of the main building. Relief of another kind is forthcoming in the shape of an iron and wood building on one side of the Museum ground. The structure will not be beautiful, but we are too hard pressed for storage accommodation for me to refuse the relief.

Owing to this lack of accommodation, which made access to the boxes in which specimens are packed almost impossible, periodical inspection became also extremely difficult, with the result, as reported to you previously, that many of our most valuable specimens of skins were completely destroyed by insects. This new shed will be also utilised for arranging our numerous mounted skeletons of animals which are now perched in most impossible places, wherever they can be hoisted with safety.

Koopman's House.—At the beginning of the year the Koopman's House and collection of objects of vertu and others was disposed of by auction. Special interest attached to the building and its contents. The house itself, or rather the first part of it, was probably erected in 1702, and the collection of objects brought together

by the late Mrs. Koopmans appealed greatly to the sentiments and feelings of many people. On strong representations being made to the Union Government, a grant in aid of £3,000 was made for the purpose of securing some of the objects of merit, and to preserve them for the nation. The purpose was satisfactorily fulfilled by a small committee of Cape Town Citizens, and the result of their choice will be judged when the House is thrown open for inspection in (it is hoped) March next. But, in addition, a private subscription amounting to £2,800 was raised for the purpose of purchasing the house itself and storing therein the acquisitions. That purpose has also been fulfilled, and the house and contents were presented to the Trustees of the South African Museum, and will be utilised as an Art and Antiquities Annex. It should be mentioned that many of the objects acquired, and also the house itself, could not have been obtained with the means at the command of the Committee, were it not for the forbearance of many a would-be purchaser, and also that the Cape Town Municipality has donated a sum of £500 towards repairs and purchases of specimens.

Herbarium.—The provisions of the Financial Relations Act have definitely settled the point that the South African Museum and the Transvaal Museum respectively are the Museums of the Union.

It was therefore with surprise that I was informed by the Department of the Interior, that henceforth the maintenance of the Herbarium, *i.e.*, the Botanical Section of the Museum, would devolve on the Provincial Authorities. The Botanical Department of the Pretoria Museum has not, however, been subjected to the same reading of the Financial Relations Act.

Visitors.—The number of visitors was 119,663, divided as follows:—

White—Adults.	Males	46,510
	Females	33,139
	Children	20,238
Coloured—Adults.	Males	9,329
	Females	7,007
	Children	3,440

This is the highest number recorded hitherto, and it seems to increase steadily as the figures for the last five years testify.

1909	81,266
1910	103,409
1911	108,411
1912	114,539
1913	119,663

Pupils of seven country schools and of four from Cape Town have visited the Museum; I have personally conducted on two occasions the members of the Junior Civic Association through those parts of the Museum which appealed most to them, such as the Antiquities, Native Races, etc.

Presents, Purchases, and Acquisitions by the Staff.—The number of objects received during the year is in excess of that of last year, namely 15,932 against 15,099, and they are divided as follows:—

Zoology	7,110
Geology and Mineralogy	418
Botany	7,374
Anthropology	16
Ethnology	819
Antiquities and Curios	195

Library.—The additions to the Library were:—

Periodicals and Pamphlets.

Purchased	228
Presented	1,153

Books.

Purchased	21
Presented	31

Total 1,433
or a slight increase over that of last year.

Gifts.—Attention should be drawn to a gift made to the Library of the Museum by Alex. L. Michie, Esq., of Scotland. This consists of 14 bound quarto volumes of manuscript, the work of Sir Andrew Smith (whose nephew Mr. Michie is), who led the expedition organised by the Cape of Good Hope Society for exploring Central Africa in 1833. They comprise one volume of Diary of the Expedition, two volumes of the Journal, three volumes relating to the history, habits and customs of the various Hottentot tribes and clans, two volumes dealing similarly with the Kaffirs, and six volumes comprising notes on Africa generally, its tribes, history, etc. Other than an abbreviated diary and his scientific studies of Africa fauna, none of Smith's writings have yet been published.

Catalogue.—A type written slip catalogue, Alphabetical Index, of the contents of the Library is in progress, and the Subject Index will follow. It is expected that this catalogue will be ready for the printers in the course of the incoming year.

Labels.—398 labels were printed during the year.

Publications.—The publications, all bearing on the material contained in the Museum, have been numerous and varied. The issues are as follows:—

Vol. IX. pt. III.—A contribution to the knowledge of the South African Proteaceae, by E. P. Phillips, 5 pp.

A list of the Phanerogams and Ferns collected by C. P. Keytel on the island of Tristan d'Acunha, by E. P. Phillips, 8 pp.

Descriptions of new plants from the Gift Berg, collected by the Percy Sladen Memorial Expedition, by E. P. Phillips, 3 pp.

Contributions to the Flora of South Africa, No. 1, by E. P. Phillips. 36 pp. 1 text fig.

Note on a Leucadendron found on the Cape Peninsula, by E. P. Phillips, 4 pp.

List of the Plants collected in the Percy Sladen Memorial Expeditions 1908-1909, 1910-11, by H. H. W. Pearson, 63 pp. 3 pls. and text fig.

Vol. X. pt. V.—The Symptoda, by Rev. T. R. R. Stebbing, 47 pp. 16 pls.

Pt. VI., Ephemeroptera from South Africa, by E. Petersen. South African Trichoptera, by G. Ulmer. Description of a new species of Pselaphidae, by A. Raffray, 16 pp. 11 text figs.

Vol. XI.—The fresh-water Fishes of South Africa, by J. D. F. Gilchrist and W. Wardlaw Thompson, 142 pp. 110 text figs.

Vol. XII., Pt. 1.—On some fishes of the Lower and Middle Karoo Beds. R. Broom. Pt. 2.—On a new South African Stegocephalian (*Phrynosuchus whaitsi*), R. Broom. Pt. 3.—On a nearly perfect skull of a new species of the *Gorgonopsia*, R. Broom. Pt. 4.—Man contemporaneous with extinct animals in South Africa, R. Broom. Pt. 5.—On the skeleton of a new Pareiasaurian (*Pareiasuchus peringueyi*), R. Broom and S. H. Haughton. Pt. 6.—On a new species of *Scymnognathus*, R. Broom and S. H. Haughton. Pt. 7.—On two species of *Dicynodon*, R. Broom and S. H. Haughton. Pt. 8.—On a skull of *Tapinocephalus atherstoni* Ow., S. H. Haughton. Pt. 9.—On a new species of *Propappus*, S. H. Haughton, 46 pp. 7 pls. 5 text figs.

Vol. XIII. Pt. 1.—Inscriptions left by early European Navigators on their way to the East, L. Péringuey. 40 pp. 23 text figs. Pt. 2.—On a new Lark from the Cape Province, W. R. Ogilvie Grant. Pt. 3.—Report upon the *Oligochaeta* in the South African Museum at Cape Town, W. Michaelsen. Pt. 4.—Note on the occurrence of the Euplectellid sponge *Regadrella phoenix*, O. Schm, off the South African Coast, R. Kirkpatrick. 23 pp. 1 pl.

No less than 38 other Memoirs are being prepared. Three of them are now in the printer's hands, and it is expected that 14 more will be issued this year.

Exhibition Cases.—The six additional cases ordered last year have been erected; they have, to a small extent, relieved the congestion in certain departments.

Collecting.—A good deal of collecting has been done by the staff. Mr. Barnard returned at the end of January from a four months' collecting tour along the coast of Portuguese East Africa and Natal. Mr. Phillips has visited Basutoland on a collecting trip, and spent some time also on the mountains round French Hoek, etc.

Mr. Haughton, in February, spent a month at Dunedin, on the Nieuwveld, collecting Karroo reptiles. In June-July he was four weeks on the Gouph, collecting on various farms, and also paid a short visit to Victoria West for the purpose of investigating the topographical and geological nature of the site on which has been found a large number of palaeolithic implements. In September-October he

went for a month's trip to Burghersdorp, Aliwal North and Lady Grey, collecting reptiles from the Upper Beaufort and Stormberg beds.

Mr. Drury was sent to remove a number of rock gravings in three districts of the Union.

It becomes, however, more and more evident that we require the constant services of a trained, good all-round collector to work systematically in different localities of the Union and elsewhere in South Africa, because spasmodic collecting and short visits, useful as they undoubtedly prove, leave too much to chance. But an attempt at training such a collector, who was sent to Southern Rhodesia, has proved a failure. He was struck down with fever almost immediately on his reaching the Mazoe district.

ARRANGEMENT AND CONSERVATION.

Zoology.—Mammals.—A very valuable addition to the osteological part of the collection is the skeleton of a Fin Whale, which has been mounted in the grounds, alongside the large Blue Rorqual. This whale, just described under the name of *Balaenoptera brydei*, was at one time thought to be identical with the northern kind *B. borealis*. Three years ago I had already strong suspicions as to it being different, and had I had the skeleton here, the comparison would have become possible. It is not certain, however, that it differs from another southern Rorqual, but one thing is now established, namely, that it is not the Northern Rorqual. The latter, however, the "seihval" of the Norwegians, occurs also in the Cape seas, and Mr. K. Ellefsen has donated us an example of this species.

We are going to have a large example of the sperm-whale, and the only large whale of the Cape seas left unrepresented in our series will be the Fin-whale, of which Mr. Ellefsen, with his usual generosity, has promised to secure an example.

The number of mammals received was 147, representing 79 species, 9 of which were new.

The Fossil Saurian doing duty as a centre piece in the Entrance Hall has been removed to the Palaeontological Gallery, and we have exhibited instead (in a case 10 ft. by 10 ft., and with one single pane of glass on each side) a number of our Cape Fur-Seals, showing their different stages of growth from the suckling "pup" to the "old wig" or large male.

Birds.—The number received was 194, representing 130 species. Ten were new to the collection. The bird-eggs numbered 77 examples, 35 species and 10 novelties.

The relief afforded by one of the lately erected show cases into which the Pelicans and Cormorants have been transferred has permitted the incorporation among the exhibited series of very realistic groups, such as the Bateleur eagle, with wings outstretched in its peculiar attitude; of the South African Gannet, feeding her fluffy gosling on the nest; of the large Falcon, *Buteo Jackal*, in the air striking its quarry; of Verreaux's Eagle Owl on the wing, bringing food to its young, etc. Were space to permit, most of our local characteristic birds would be treated in this manner by our very competent Taxidermist.

The "débacle" of the foreign birds has begun. Four exhibition cases have been emptied of their contents. There will be retained a group of Paradise Birds and a few of the more showy game birds.

Lizards.—The lizards have been remounted in flat jars of uniform size. The difficulty experienced with this kind of mounting is that the exhibited object must be hardened in position as soon as captured. As most species are not found in our neighbourhood the difficulty is thereby enhanced; but we have nevertheless placed 44 jars so prepared on exhibition.

Fishes.—The recorded number of described South African Marine Fishes is 670 species, and of Fresh-Water 130. This number is nearly the same as that of the South African Birds (870). Of the Marine kinds the Museum collection contains 467, and 95 of the Fresh-Water. Great efforts have been made to procure Fresh-Water Fishes, and some 20 new species have been added to the number known. These have been treated in the first part of the Monograph: "The Fresh-Water Fishes of South Africa." The second part will, it is hoped, be published during the forthcoming year.

An attempt, crowned with success so far, has been made by Mr. K. H. Barnard, Assistant in the Marine Biological Department, to paint the brilliantly ornate specimens exhibited in liquid in their natural colours, after the "Bergen" method. This spectacular effect will add great interest to this part of our exhibited series.

The number of specimens received is 336, of species 102, of novelties 22.

Insects.—The number of insects received has been 5,258, representing 2,571 species. The novelties amounted to 537.

A number of unidentified species has been entrusted to Specialists abroad, especially in the case of the obscure, unattractive groups, which collectors disdain on this account, but for which diligent and systematic search has been set on foot for the last three years.

Good progress is being made with the compilation and systematic arrangement of the described species of South African Insects; a very difficult, arid task. It is interesting to find that the compilation of these catalogues reveals the fact that apart from the Coleoptera and diurnal Lepidoptera, which are much better represented, the other orders in our cabinet average three-fifths of all species described. If the synonymy is taken into account this average will probably be three-fourths. Several additional cabinets were procured for the incorporation and rearrangement necessitated by the great increase of acquired material. The Hymenoptera have been re-arranged in 45 drawers. Of the Orthoptera, the Families Forficulidae, Blattidae, Mantidae, Phasmidae and the beginning of Acridiidae have been disposed in 22 drawers. The Micro-Lepidoptera are all ready for transfer, etc.

Marine Invertebrates.—It is now possible to have an idea of the contents of that part of the collection. The Hydroids and Marine Plankton have been prepared ready for sending away to Specialists, while others have received during the year the Macrurous Crustacea, Pycnogonida, Polyzoa, Holothuria and Fresh-Water Plankton. Mr. K. H. Barnard is himself working out certain sections of the Crustacea. The exhibited series of Crustacea has been added to and made thereby more representative. Several additions have also been made to the Phylum Collection, which represents and explains the various types of the animal kingdom.

The number of specimens obtained was 1,033; of species 174; of novelties 69.

Geology, Mineralogy, Palaeontology.—The additions to this department this year are numerically twice as many as those for 1912, and contain many specimens of both scientific interest and value as exhibits.

The addition of the cases has rendered a more systematic arrangement of the exhibits possible. As will be seen from Dr. Rogers' report, extensive re-arrangement has been undertaken among the rocks and minerals, as well as amongst the fossils. For the first time we shall be able to exhibit a series of Karroo Reptiles, arranged stratigraphically from the Dwyka beds up to the Stormberg series. These fossils are each being mounted separately to restore, as far as possible, the position of the bones in life. In addition, restorations in plaster of some valuable, but crushed and destroyed specimens will be made and put alongside in order to show the true original shape and proportions.

The arrangement of these fossils in the upper parts of the cases cause the small species to suffer somewhat, but this is unavoidable so long as the space is limited to its present extent. Mr. Haughton has been successful in procuring, during his collecting tours, very valuable and interesting material.

Botany.—I have alluded to the transfer of the Botanical Department from the Government of the Union to the Provincial Administration of the Cape.

Under the present circumstances the apportioning of the Provincial Grant towards the Administration and up-keep of the old Herbarium, for it can hardly apply to the new material acquired by us, will be very difficult, because the incorporated number of sheets in the Botanical Collection has been increased by one-third since the Herbarium reverted to us, and the present grant is quite inadequate for the maintenance of the Botanical Department.

The number of acquisitions, most of which were obtained by collecting, has been much in excess of previous ones, and so has been the number of mounted sheets incorporated in the cabinets, the number of which it was found necessary to increase by four.

I hope to maintain this rate of increase by repeated collecting trips next year.

I deemed it necessary to know exactly the number of sheets in the whole Herbarium, and to have them catalogued. This work is now completed so far as the Vascular Plants are concerned. The Algae and Fungi will be completed next year.

The collection contains 49,215 sheets, of which the South African numbers 30,960.

Anthropology, Ethnology, Physical Anthropology.—Four skeletons and two skulls of Bush or Hottentot-Bush have been obtained, and the authorities of the Paris Museum were kind enough to include this Institution among the first twenty-five recipients of the cast of the famous human skull of La Chapelle aux Saints. This cast, as well as the encephalic mass, is now exhibited in the series of the Moustier stone implements, to which mid-period it certainly belongs.

"The massive shape of the head is his most striking characteristic, but the conformation of the body and the usual attitude were not altogether those of the European man of to-day. The morphological characters of the brain are intermediate between the human and the simian, and indicate also that if articulate speech was not altogether absent it must have been rudimentary."

Numbers of measurements of Kalahari Bush people, and of others located in the Transvaal were taken for the Museum by Miss D. Bleek. The photographs unfortunately did not prove sufficiently distinct for reproduction in the nude. The Transvaal Bush people alluded to appear to me more interesting physically than our modelled specimens. They may prove to belong to the clans that were once to be found in the Drakensberg. I have made arrangements for having their casts taken at the beginning of next year, and I expect to be able also to secure casts of the Mytiopi Kaffirs, with their characteristic face or body raised tattooing.

Stone Implements.—Mr. S. H. Haughton has visited and reported on a deposit of stone implements at Victoria West, which, like similar deposits in the Stellenbosch, Drakenstein, Griqualand and other districts present the characteristics of the implements of the Mousterian period combined with the Acheulean. And although it is impossible to adduce proofs that they were contemporaneous with those of Europe or Asia, I have given my reasons in a presidential address to the Royal Society of South Africa for believing that in all likelihood there had been at one time contact between the hunters of the South or Central Africa with those of Central Europe, etc. Among the specimens sent by Mr. F. J. Jansen, C.C. and R.M., or collected by Mr. Haughton, are fragments greatly resembling the rostracinate pieces of Ray Lankester, but which in the present case are plainly due to the mode of detachment from the nucleus. I may also mention two lots of these bouchers received respectively from the diamond-bearing gravels of the Vaal River and from the tin-bearing gravels of Swaziland. To the unwary it would seem as if these were the tools of men who had looked after the precious stones or the metal, whereas they have gravitated there together through denudation of the higher levels in which the minerals naturally occurred, or the implements had been left by man. The whole of our series of man's primitive artefacts is going to be re-arranged during the incoming year.

Artistic Productions.—Next to the Zamenkomist Slab of Bush painting have been placed several of Breuil's admirable colour reproductions of the Cave of Altamira rock paintings, and the comparison is not detrimental to our local production. We have obtained seven more slabs, which have been placed on exhibition. Two of our specimens are the originals from which Miss Tongue obtained her copies, and the published version is very misleading. One new scene has been copied (traced) in the Dordrecht District, and three have been received from Southern Rhodesia, which, in the conception of the subject and its treatment, are so different from the paintings in the territories of the Union as to make one doubt somewhat if both are the artistic expressions of one race.

We were successful in obtaining in three districts of the Union good series of rock-gravings, differing in style from some which we had previously obtained. They make a comparison with the paintings possible, and an allegorical reproduction on rock is of the same style as an allegorical painted reproduction.

Ethnology.—Among the many interesting objects received or acquired is a collection from the Munchi tribe of Northern Nigeria; another from the Bushmen of Gordonia, and a very valuable one from Manicaland.

Archaeology.—We have received a second instalment from the British School of Archaeology in Egypt, mostly obtained, like the first, at Tarkhan. A few of the objects differed from those included in the lot received the previous year.

Through the good offices of the German Consul General in Cape Town, we have received from the authorities of the Museum für Meereskunde in Berlin a replica of the Memorial Pillar erected in 1484 or 1485 at Cape Cross (German S.W. Africa), by Diogo Cao, the first European to set foot in South Africa. We have also obtained facsimiles of the three fragments of Dias' Commemorative Pillar, which he erected at Angra Pequena, some 300 miles further south than the point reached two or three years before him by Cao.

I cannot conclude this lengthy account of the work of the year without commending the zealous help of the staff, for without the interest taken by them in their respective branches, the progress made this year would not have been possible.

I have the honour to be,

Sirs,

Your Obedient Servant,

L. PÉRINGUEY,

Director.

February, 1914.

DEPARTMENT OF FISHES AND MARINE INVERTEBRATES.

To the Director of the South African Museum.

Sir,—I have the honour to present the following report on the Department of Fishes and Marine Invertebrates for the year 1913.

At the end of January I returned from a four months' collecting trip along the coast of Portuguese East Africa and Natal, resulting in the addition to the Museum collection of a considerable number of fishes, crustacea, mollusca, etc., hitherto unrepresented in it. On the details of this trip I have presented a separate report.

In September I spent five days at Buffel's Bay for the purpose of shore-collecting in that locality, and also on the Atlantic coast near Cape Point. And I have since then been out shore-collecting in the neighbourhood of Cape Town fairly regularly once a fortnight. The results, as far as they have been worked out (namely the Crustacea), show several species new to science, and, also, that even within the narrow limits between high and low tides there is a rich field for future investigation.

With regard to the "Pieter Faure" collection: the whole of the marine fishes (with the exception of the Soles) have been sorted, arranged and incorporated. The Hydroids and Marine Plankton have been prepared ready for sending away to specialists, and the Mollusca and other groups have been arranged more or less in systematic order. It is now possible to give a rough idea of how much material of any particular group is present in the collection.

The following material has been sent out during the year to Specialists:—

The Macrurous Crustacea (Shrimps and Prawns) to T. R. R. Stebbing, Tunbridge Wells; Pycnogonida to T. V. Hodgson, Plymouth; Polyzoa to Prof. Calver, France; Marginellidae (Mollusca) to L. J. Shackleford, Blackpool; a further collection of Holothurians to Dr. Pearson, Ceylon; fresh-water Plankton to Prof. Sars, Christiania. I am myself working out certain sections of the Crustacea.

Public Exhibits.—Several additions have been made to the Crustacea of the larger forms, of which there is now a representative collection. The Phylum collection, a collection representing the various types of the animal kingdom, is very nearly completed. The exhibit of South African Fishes has been taken in hand, and, by the removal of three cases of foreign birds, space has been found for a fairly representative collection. The preparation and mounting of the specimens takes a little time, but it is hoped that the exhibit will be completed early in 1914.

The number of specimens received during the past year is as follows:—

Fishes (Marine and Fresh-Water), 336 specimens, 102 species, 22 species new to the Museum.

Mollusca.—115 specimens, 36 species, 11 species new to the Museum.

Crustacea.—714 specimens, 104 species, 41 species new to the Museum.

Worms.—137 specimens, 19 species, 7 species new to the Museum.

Other Marine Invertebrates.—67 specimens, 15 species, 10 species new to the Museum.

Total—1369; 276; 91 species new to the Museum.

The thanks of the Trustees are especially due to Major Stevenson-Hamilton, Keeper of the Komatiipoort Game Reserve, for his continued efforts in securing fresh-water fishes from the Sabi and neighbouring rivers; and to C. W. Black, Esq., of Mossel Bay, for his presentation of two hammer-head sharks and several other marine fishes. Several fresh-water fishes have been obtained by exchange with the Pretoria and Bulawayo Museums.

I have the honour to be,

Sir,

Your obedient Servant,

K. H. BARNARD.

DEPARTMENT OF ENTOMOLOGY.

To the Trustees of the South African Museum.

Sirs,—This is an account of the work done in this Department. The number of Insects received this year is 5,258, representing 2,571 species, among which are 537 kinds not represented in the cabinet.

They are divided as follows:—

	Examples.	Species.	Novelties.
<i>Hymenoptera</i>	1472	618	167
<i>Diptera</i>	328	92	35
<i>Coleoptera</i>	1522	648	72
<i>Neuroptera</i>	63	36	14
<i>Hemiptera-Homoptera</i>	433	200	66
<i>Orthoptera</i>	172	89	20
<i>Lepidoptera</i>	1268	898	163

A re-arrangement of the Insect Collection could be no longer postponed owing to the continuous accumulation of new material, and the addition of five new cabinets of 30 drawers each has greatly relieved the congestion. The revision of *Hymenoptera* has been completed, and the South African species occupy now 45 drawers. The *Orthoptera* have been taken next, and I have completed the re-arrangement of the Families *Blattidae*, *Forficulidae*, *Mantidae*, *Phasmidae*, and made a beginning with the *Acrididae*. The newly described South African *Ephemeroidea* and *Trichoptera* have been incorporated, and progress made with the re-arrangement of additions to the following families of *Lepidoptera*: *Lymenitridae*, *Hypsiidae*, *Lasiocampidae*, *Notodontidae* and *Sphingidae*, while many *Noctuidae* have been added to the exhibited series. The *Micro-Lepidoptera* investigated by Messrs. Meyrick and Warren are awaiting their turn.

We submitted to these two Specialists a number of our newly acquired material, which was found to contain 87 species new to science. They will form the subject of two separate papers.

The *Diptera* is a group of insects that has been much neglected by collectors and by specialists. Yet the number of described South African species is considerable. I have placed our *Tachinid*, *Asilid*, *Bombylid*, *Tabanid* and *Culicid* material in the hands of Experts, and I expect shortly a report on the same.

The bird-lice (*Mallophaga*) have also been entrusted to a Specialist, from whom a report is also shortly expected.

I have sorted and identified the *Homoptera* as far as possible.

With the help of my daughter I am compiling a catalogue of the described South African species of insects. This is, of course, not done in a year. But without such catalogue for our guidance it would be impossible to incorporate the specimens in the insect cabinets, which number now 18, containing 30 drawers each.

We have compared and identified a large number of insects for Institutions or Collectors.

Three Entomological papers were published during the year. Their titles figure in my Directorial Report. It is expected that 12 will be issued next year, bearing respectively on *Formicidae*, *Odonata*, *Bombylidae*, *Tachynidae*, *Tabanidae*, *Geometridae*, *Micro-Lepidoptera*, *Coleoptera*, *Mallophaga* and *Stratiomyidae*. Some of these reports, such as the *Formicidae* and *Odonata* are bulky, very comprehensive monographs.

The thanks of the Trustees are due to Mr. G. Arnold, Brother J. H. Power, Father J. O'Neil, S.J., J. H. Morton, W. Ellerton Fry, R. Jack, W. F. Purcell, R. Drummer, K. H. Barnard, E. P. Phillips, L. G. Péringuey, R. Godfrey, W. Haygarth, R. M. Lightfoot, H. W. Bell-Marley, Mrs. Patterson, and Miss Pegler.

I have the honour to be,

Sirs,

Your Obedient Servant,

L. PÉRINGUEY.

DEPARTMENT OF GEOLOGY, MINERALOGY AND PALAEOLOGY.

To the Director of the South African Museum.

Sir,—I have the honour to send you a report on the work of the Geological Department during 1913.

The installation of the new wall cases in the southern small room and the new case in the large room enabled some of the collections to be exhibited under better conditions than formerly. The rearrangement of the collections affected and the labelling of the additional specimens exhibited entailed much work, but the advantage of the new space is very great. The South African minerals are now placed in a large wall-case; the igneous rocks from South Africa have been arranged in a case which allowed several additions to be made to the series exhibited, and the series illustrating the diamond-pipes and allied phenomena has also been extended and exhibited in a more suitable manner than was possible in the past; a small wall-case has been devoted to the intrusive rocks which contain copper-ores in Namaqualand; the type collection of minerals has been re-arranged, and the stratigraphical series of foreign fossils has also been set out anew.

The fossil plants from the Karroo beds have been placed in a case by themselves, and a collection of fossil fish from the same formation has been exhibited. The skeleton of *Pareiasaurus serridens* has been remounted in accordance with the results obtained by Dr. Broom from an investigation of a well preserved specimen of the allied genus *Propappus*. Notable additions to the fossil reptiles exhibited are the skull and fore limb of *Scymnognathus tigriceps*, and the skulls of *Scylacops capensis*, *Tapinocephalus atherstonei*, and *Struthiocephalus whaitsi*.

The Rev. J. H. Whaits has again given important reptilian remains, and Messrs. Musto and Scholtz have also made valuable additions to the collection.

Among the additions to the invertebrate fossils are a series from the Cretaceous rocks of Natal, previously unrepresented in the Museum, given by the Resident Magistrate of Ubombo; a collection from the Cretaceous of Pondoland from Dr. G. B. Thomson, of Bizana; and a large number of shells from the raised beaches near Port Elizabeth and Zwartkops, given by Mr. G. C. Scully and Mrs. Paterson.

The rock and mineral collections have been added to by specimens from the Premier Mine, including two black diamonds given by Mr. P. Ross Frames, whom we have also to thank for models of the Cullinan diamond and other gems which have been cut from it. A fine mass of Copper minerals from Tsumeb, German South West Africa, has been presented by the Consul-General for the Netherlands. Other interesting specimens have been given by Captain Allaire, Mr. Roux, Professors R. B. Young and Van der Riet, Dr. Wagner and Messrs. Labahn, Hall, Barnard, Asmus, and Beedle.

The policy of pursuing a systematic search for fossils has been continued with considerable success, and it is to be wished that more could be done in this direction, especially with regard to the Karroo reptiles, the collections of which can only be carried out adequately by one who has a knowledge of osteology. Mr. Haughton was engaged in this work during parts of February, June and September in the Beaufort West, Laingsburg, Burghersdorp, Aliwal North and Lady Grey Districts, and he met with success in obtaining the remains of *Gorgonopsians*, *Dicynodon*, small *Endothiodonts*, *Tapinocephalus*, and *Dinocephalian* skulls, and parts of a large *Dinosaur*. Mr. Haughton has done much development work during the year, in addition to that involved by the extensive re-arrangement and enlargement of the exhibited collections.

The palaeontological papers published during the year in the *Annals* have been already cited.

I have the honour to be,

Sir,

Your Obedient Servant,

A. W. ROGERS.

DEPARTMENT OF BOTANY.

The Director, South African Museum, Cape Town.

Sir,—I have the honour to submit the following report on the working of the Herbarium.

The re-arrangements of the cabinets, undertaken last year and mentioned in my previous report, has greatly facilitated the herbarium work, as it is now not only possible to place tables next to the cabinets containing any particular group, but the most is also made of the light. The work started last year of putting our specimens between "species covers" is now almost complete, and the ease with which a given species can be located in the cabinets more than repays the time spent in writing up the names on the covers. This method of keeping the specimens also enables one at a glance to tell whether a species is represented in the collection or not, without having to go through the whole genus.

The collection is in a good state of preservation and shows no signs, since the last poisoning and fumigation, of damage by insects. I am pleased to report that the acquisitions this year greatly exceed those of 1912, but the number of mounted sheets incorporated in the cabinets and the number of species new to the collection show a slight decrease, due to the fact that other pressing duties have prevented me from devoting as much time to increasing our collection as was at my disposal last year. Nevertheless to meet the steady growth of our African series it was found necessary to add four new cabinets, bringing up the total number of cabinets in the herbarium to 76.

This year the number of specimens collected or received as donations has been 7,374, almost five times the number for 1912. The number of mounted sheets incorporated in the series has been 980, of which 253 were new to the collection.

At your request I undertook a systematic count of the sheets in the whole of the Herbarium, and estimated that our total collection is represented by 49,215 sheets, out of which 30,960 belong to the African series. The work of cataloging our collection has been pushed on, lately to the exclusion of all but necessary work, and I am pleased to state that the whole of the African Vascular plants have now been dealt with, but it has not been possible to finish the Algae and Fungi.

During the year I have revised the following genera and orders in the collection, naming them according to the latest monographs, viz.: *Lotonis* and *Alepidea*, (Dümmer), *Moraea*, *Homeria*, *Ferraria*, *Hexaglottis*, *Galaria*, *Syringodea*, *Romula*, *Borbartia*, *Witsenia*, *Aristea*, *Gladiolus* and *Triglochin*, *Ebenaceae*, *Oleaceae*, *Apocynaceae*, *Asclepiadaceae*, *Gentianaceae*, *Labiatae*, *Plantagineae*, *Nyctagineae*, *Amarantaceae*, *Chenopodiaceae*, *Phytolaccaceae*, *Polygonaceae*, *Podostemaceae*, *Cyrtaceae*, *Piperaceae*, *Laurineae*, *Proteaceae*, *Orchidaceae*, *Hamadoraceae*, *Commelinaceae*, *Eriocaulaceae*, *Cyperaceae* (Flora Capensis). Among the larger collections that I have named or partly named for correspondents may be mentioned those from the Curator of the Kimberley Museum, Madame A. Dieterlen (Basutoland), Dr. J. Muir (Albertina), and Prof. Geo. Potts (Mossel River), besides the above, many specimens have been named for correspondents and visitors, the Provincial Council, the South African Police, the Department of Agriculture, the Municipal Gardens and the Mountain Club. Madame Dieterlen, of Basutoland, has very kindly consented to allow us to work at her herbarium collection of Basutoland plants, and at intervals during the year has forwarded specimens which have been named for her, and I anticipate that this use of her herbarium will eventually prove of great use to us.

Many of the mounted sheets incorporated in the cabinets during the year have been taken from the so-called "duplicates" in the store-room, but amongst them I have found some not represented in the collection, and others which may be regarded as co-types of species. The principal collections mounted were those of Johanssen (Calvinia), Phillips (Basutoland), Dinter (G.S.W. Africa), Zeyher, Burke, Ecklon and Zeyher (various localities), West (Drakensberg), Tyson (Griqualand East), Dieterlen (Basutoland), Muir (Riversdale), Potts (Mossel River), Pearson (Nelspoort).

During the year the following were the principal collections received by donation or purchase:—From E. E. Galpin, Esq. (various localities), Dr. J. Muir (Albertina), Madame A. Dieterlen (Basutoland), Dr. Medley Wood (Zululand), W. Tyson, Esq. (Marine Algae), Rev. Rogers (British plants), Dr. Scott-Elliot (Swiss plants), R. Dummer, Esq. (British East Africa), but the thanks of the Trustees are also due to the following donors:—

W. C. Worsdell, Esq., for a specimen of *Protea punctata*, the Curator, Bolus herbarium for 2 spp. *Mesembrianthemum* and a species of *Walafrida*, W. Deas,

Esq., for interesting plants from the Zwartbergen, in the Oudtshoorn District, Bro. A. J. Fogarty, for specimens from Kimberley, R. M. Lightfoot, Esq., for a specimen of *Heliophila* from Bushmanland, G. H. Ridley, Esq., for specimens cultivated in the Municipal Gardens, W. J. Foly, Esq., for some interesting Peninsula plants.

The Herbarium has made the following loans and donations during the year:—

Royal Botanic Gardens, Kew.—Presented, specimens from the Gift Berg, Basutoland and French Hoek. A specimen of *Aulax encorifolia*, Kn. and a specimen of a new *Euryops* and *Muraltia*.

Bolus Herbarium, Cape Town.—Presented specimens from the Gift Berg.

The Government Mycologist.—Presented leaf of *Oxalis* sp. with a fungus. Loaned sheets of *Puccinia acidiformis*, Huem and *P. Prinzia*, Huem.

Dr. J. Medley Wood.—Presented a collection of Proteaceæ.

Albany Museum, Grahamstown.—Presented a specimen of *Crassula Galpinii*, Schönl.

The thanks of the Trustees are due to the Director of the Royal Botanic Gardens, Kew, for comparing some doubtful specimens with types at Kew; to Dr. S. Schönland, for examining some species of *Crassula*, and to Dr. J. Medley Wood for sending us on loan some type specimens in his collection.

Last February I succeeded, owing to a favourable season, in visiting Basutoland on a collecting trip. During my stay there of nearly a month I was the guest of the Rev. and Madame H. Dieterlen, whose kindness and willing aid made the trip a success. In September I spent a few days at Buffel's Bay, and collected on the southern portion of the Peninsula. During October I collected on the mountains round French Hoek, and the collection when worked will prove a welcome addition to our Series, in which few plants from this District are represented.

During the year 84 visitors have availed themselves of the facilities offered by the Herbarium, either for the determination of plants or for information on botanical matters.

Six papers mentioned in the Director's Report have been contributed by the Herbarium during the year.

I have the honour to be,

Sir,

Your obedient Servant,

E. PERCY PHILLIPS.

DEPARTMENT OF ANTHROPOLOGY, ETHNOLOGY AND ANTIQUITIES.

To the Trustees of the South African Museum.

Sirs,—

The following is an account of the work done, and of the additions obtained in this Department.

Anthropology.—Ten skulls and four skeletons of Bush Hottentots have been obtained during the year from various parts of South Africa, on the littoral or inland; and they prove a good addition to the Collection.

Owing to the great courtesy of Professor Boule, of the Paris Museum, we were able to obtain a cast of the "La Chapelle aux Saints" human skull, together with the encephalic mass. I have dealt with the importance of this skull in my Directorial Report.

Miss D. Bleek made a journey in the Kalahari in pursuit of her philological researches in the Bush language. She took for me careful mensurations of most of the people of that race she encountered, and also photographed them, or had them photographed. Unfortunately the results were not suitable for physical reproductions. Miss Bleek took also photographs of other Bush people whom she located in the Transvaal. These photographs have revealed a race of Bush people differing in some physical points from either the Colonial or the Kalahari Bushman.

Ethnology.—Miss Bleek has also secured for us a good series of wearing apparel, arms, trinkets, etc., of these Kalahari natives.

From Manicaland we obtained through the exertions of Father O'Neil a collection of objects of ethnological interest, among which is the complete outfit of a "wizard," or witch-doctor. Objects of this kind are not easily procured.

By purchase we acquired parts of dress, arms and trinkets of Ovampo and Damaraland tribes. Among them are knives of a pattern unrepresented in our series.

A very interesting donation by Mr. C. A. Blake is that of a collection of idols, ornaments, arms and objects of economic utility from the Munchi Tribe, of Northern Nigeria. Noticeable among these are belts of perforated disks made of a fresh-water shell, being the enlarged form of the disks made of ostrich shells, however, by the Bush people. This style of adornment has been found in neolithic sepultures of Spain, and we have received from Dr. Seligman specimens hardly distinguishable from those of the Bush, discovered in tumuli in the Sudan. This style of ornamentation is therefore very ancient.

Archæology.—Stone Implements.—In the gravels of Swaziland where tin-mining or tin-recovering is carried on are found "bouchers" of very large size, resembling closely the workmanship of other inland implements. We are indebted for a good series of these highly interesting artefacts to Mr. R. T. Coryndon, the Resident Commissioner. It is of interest to note that in these gravels there occur some of the best finished "laurel leaf" scrapers approaching the shape of lance-heads as yet discovered in South Africa, except those occurring in the Cape Peninsula. Two such ones however have been discovered in the Mossel Bay District by Mr. C. W. Black, and presented by him.

The singular association of the large bouchers with diamonds was once more illustrated in the following manner. Mr. A. Wohlfahrt, who last year sent us some of these palæoliths from the Vaal River gravels, wrote saying that he could not send any more at present, as he would be absent for some time. We eventually received three examples from the Transvaal, and in acknowledging them I told him that I knew he had been in search of dry diggings. This he admitted was the case, and he told me of the diamond indications where he had found these palæoliths.

To Mr. F. J. Jansen we are indebted for a large number of bouchers from Victoria West. Their appearance plainly indicate that their worn smooth aspect has been caused by surface weathering, but Mr. Haughton, who went to investigate the geological formation found enclosed in the conglomerate, some specimens showing direct evidence of attrition by water.

Mr. F. Sheldon has presented several examples of palæoliths from Swaziland, one of which is of remarkable finish, another series from Idutywa, Transkei, was donated by Mr. Fotheringham. In fact bouchers abound everywhere in South Africa from Groote Schuur to the Victoria Falls, in a manner certainly unknown in Europe or North America.

Major W. Jardine has presented a remarkably fine Strand-Looper earthenware pot, and Mr. D. Tennant an ostrich egg used as a bottle, and found in the sands of Camps Bay, near Cape Town.

Artistic Productions.—We have obtained nine slabs of Bushman paintings, and these have been put on exhibition. On exhibition also have been placed 32 rock gravings obtained from three different localities of the Union. They differ in style from the series obtained previously, and are the more interesting on this account.

Four tracings of Bush painted scenes have been added to the Collection. Three are from Southern Rhodesia and one from the Cape Province.

Antiquities.—Through the good services of the Right Honourable J. X. Merriman, Chairman of the Museum Trustees, we obtained from L. W. Wright, Esq., a series of Peruvian antiquities. The whole collection, but for the intervention of the gentleman aforesaid, would have gone to a sister Institution.

It consists of 35 pieces of Peruvian pottery of different shape, and of a style of decoration peculiarly their own, found in a very old cemetery some 40 miles from Lima. We had nothing like it among the numerous objects lying perdu in cases or shelves in the stone rooms.

We have also received a second share of the finds made in Tarkhan, Egypt, by Professor W. Flinders Petrie. It consists of palettes of alabaster and earthenware vases, Kohl-pots, beads of the 0 and 1st Dynasties, spindle-wheel, flint knives, ivory sheaths, etc.

Through the courtesy of the Trustees of the Bulawayo Museum we were enabled to make a replica of two very curious pots affecting the shape of animals, and thus resembling ancient Egyptian vases similarly treated.

I have the honour to be,

Sirs,

Your obedient Servant,

L. PÉRINGUEY.

SOUTH AFRICAN MUSEUM.

STATEMENT OF INCOME AND EXPENDITURE FOR THE YEAR ENDING 31ST MARCH, 1913.

To Balance, 1st April, 1912	£752 12 7	By Salaries	£2,231 12 8
" Grants:—		" Clerical Assistance	25 1 0
Union Government ... £4,400 0 0		" Publication of Annals	378 2 7
Cape Town Corporation 100 0 0		" Purchase of Specimens, Expenses <i>re</i>	
	4,500 0 0	same, Cost of Modelling, etc ...	354 1 10
" Interest on Hadje Shah Suliman	4 0 0	" Purchase and Binding of Books ...	276 14 9
Mohammed Fund	4 0 0	" Travelling Expenses, <i>i.e.</i> Collecting	
" Sale of Publications	49 5 1	Specimens	285 5 2
" Contribution by Geological Commission	18 1 3	" Furniture and Fittings	718 7 3
towards publication of Annals ...	18 1 3	" Cost of Sunday Opening	101 5 0
" Sale of Horse and Trap	35 0 0	" Stores, Freight, Stationery and Inci-	
" Refund of expenses incurred for		dentals	339 1 11
Administrator	52 16 3	" P.O. Box, Telephone and Insurance ...	22 0 8
" Recovery <i>re</i> advance in previous year	9 11 0	" Extra Labour	35 0 0
" Cost of specimen	5 0 0	" Stamps	35 19 0
" Sundries	1 18 0	" Uniforms for Attendants	2 16 0
		" Coins Purchased	3 0 0
		" Balance, 31st March, 1913:—	
		Cash in Bank:	
		Ordinary	£534 6 4
		Hadje S. S. Mohammed,	
		Coin Fund	33 2 0
		Petty Cash	9 1 0
		Advances:	
		Gardener's wages for	
		period 3rd March to	
		26th April, 1913, at	
		£14 0 per week re-	
		coverable from P.W.	
		Department	10 16 0
			587 5 4
	£5,428 4 2		£5,428 4 2

Audited and found satisfactory.

(Signed) WALTER E. GURNEY,
Controller and Auditor-General.

Pretoria, 24th July, 1913.

(Signed) L. PERINGUEY,
Director, South African Museum.

Cape Town, 19th July, 1913.

Statement "A."

HADJE SULIMAN SHAH MOHAMMED FUND FOR THE PURCHASE OF COINS.

Amount of Investment with the South African Association	£100 0 0
Balance of Interest on 31st March, 1912	32 2 0
Interest Received during the year 1912-13	4 0 0
	136 2 0
	3 0 0
	£133 2 0

£33 2s. 0d. forms part of the Bank on the 31st March, 1913.

L PERINGUEY,
Director of the South African Museum.
Cape Town.

18th July, 1913.

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UNION OF SOUTH AFRICA.

REPORT

OF THE

SOUTH AFRICAN MUSEUM

FOR THE

Year ended 31st December, 1914.

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Trustees of the South African Museum:

The Right Hon. JOHN X. MERRIMAN, P.C., M.L.A.

THOMAS MUIR, C.M.G., M.A., LL.D., F.R.S.

JOHN WILLIAM JAGGER, F.S.S., M.L.A.

Scientific Staff of the South African Museum:

LOUIS ALBERT PÉRINGUEY, D.Sc., Director.

SIDNEY HENRY HAUGHTON, B.A., Assistant-Director, and Assistant in Charge of the Geological and Palæontological Collections.

ARTHUR WILLIAM ROGERS, M.A., Sc.D., Hon. Keeper of the Geological and Mineralogical Collections.

EDWARD PERCY PHILLIPS, D.Sc., Assistant in Charge of the Herbarium.

KEPPEL HARCOURT BARNARD, M.A., Assistant in Charge of Fish and Marine Invertebrates.

RICHARD WILLIAM ETHELBERT TUCKER, B.A., Assistant in Charge of the Arthropoda (Insects excluded).

ROBERT MARK LIGHTFOOT, F.E.S., Assistant.

UNION OF SOUTH AFRICA.

DEPARTMENT OF THE INTERIOR.

Report of the South African Museum for the Year ended 31st December, 1914.

To be presented to Parliament.

2nd February, 1915.

The Secretary for the Interior.

Sir,—I am instructed by the Trustees of the South African Museum to transmit the report of proceedings and progress of this Institution to be laid before Parliament according to paragraph 9 of Act No. 17 of 1857.

I have the honour to be,

Sir,

Your obedient servant,

L. PÉRINGUEY,

Director.

REPORT OF THE DIRECTOR.

To the Trustees of the South African Museum.

Sirs,—I have the honour to submit my report on the general administration of the Museum for the year 1914.

Building Accommodation.—During the last session of Parliament a vote of £20,000 was passed to defray the cost of an additional wing to the present building. After consultation and discussion with the Union Architect, certain plans were drawn up which would give a two floor gallery measuring 200 feet in length and sixty feet in width. This length of the gallery was less by 40 feet than that which our immediate requirements demanded, and would also dwarf the original plan of extension, but experts held that the sum voted could only cover a building 200 feet in length.

Owing to the political circumstances prevailing this year no step has been taken towards proceeding with the erection of this additional building.

As to the Koopmans de Wet Museum Annex, there has been no restoration or repair this year by the Public Works Department, doubtless for the same reasons, and the throwing open to the Public of the three additional rooms, which it was hoped would be made possible this year, had to be postponed.

The outer and inner parts of the main Museum Building as well as the three outer buildings have been renovated gradually and it was thus found possible to have this much-needed renovation carried out without closing temporarily the exhibition rooms.

The erection by the Public Works Department of a long iron building and of an additional iron shed has enabled us to remove thereto the mass of material which we are not in a position to exhibit for want of suitable space, and to allocate to the Palæontologist the shed formerly occupied as a store. It can, however, hardly be called a laboratory, although the lighting of it, as well as that of the Taxidermy Room, has been greatly improved.

Grant in Aid.—The same circumstances that led to the postponement of the new buildings has also led to a reduction of the yearly grant in aid.

Visitors.—The number of visitors was 125,915, against 119,663 last year. This number is divided as follows:—

Main Building:

White—Adults.	Males	...	...	...	...	40,833
	Females	...	...	...	...	26,773
Children	...	...	...	...	...	21,009
Coloured—Adults.	Males	...	...	...	...	9,235
	Females	...	...	...	...	6,799
Children	...	...	...	...	...	4,248

Koopmans de Wet House:

White—Adults.	Males	...	...	...	...	7,044
	Females	...	...	...	...	6,774
Children	...	...	...	...	...	2,524
Coloured—Adults.	Males	...	...	...	...	411
	Females	...	...	...	...	124
Children	...	...	...	...	...	41

Eighteen school-parties, of which four came from a distance of over 30 miles, visited the Museum. Parties of the Art-school students and others made repeated visits to draw or sketch from what is as near "life" as our taxidermy enables us to make it.

Presents, Purchases, and Acquisitions by the Staff.—The number of objects received by donation, loan or purchase is 8,682, that is a much smaller number than during the previous year which was, however, an exceptional one. This decrease is mostly due to there having been no botanical collecting expeditions, whereas there were three in the previous year. It must also be remembered that not a few of our series are nearing completion so that special attention is no longer paid to them.

The number of objects received is as follows:—

Zoology	...	...	...	...	...	6,305
Geology and Mineralogy	...	...	...	...	...	101
Palæontology	...	...	...	...	...	147
Botany	...	...	...	...	...	1,313
Anthropology and Ethnology	...	...	...	...	...	657
Antiquities and Curios	...	...	...	...	...	159
Total	...	...	...	...	...	8,682

Library.—The additions to the Library were:—

<i>Periodicals and Pamphlets.</i>						
Purchased	...	...	...	...	...	195
Presented	...	...	...	...	...	52
Exchanged	...	...	...	...	...	1,113
<i>Books.</i>						
Purchased	...	...	...	...	...	19
Presented	...	...	...	...	...	13
Total	...	...	...	...	...	1,392

It was found necessary to fit a considerable quantity of new shelving, and the greatly restricted space left this year will barely suffice for the normal increase of the two incoming years.

Labels.—The number of large and medium sized labels printed during the year is 359; of the smaller ones, such as for insects, etc., the number is not recorded, but is considerable.

Publications.—The publications have been numerous, bearing as usual on Museum material and embracing many subjects. In addition there are five in proof; five are ready for the printers, and twenty-eight are promised. Those actually published are as follows:—

- Vol. X. pt. 7.—Contributions to the Crustacean fauna of South Africa, by K. H. Barnard, 33 pp., 8 pls.
 pt. 8.—Descriptions of South African Micro-Lepidoptera, by E. Meyrick, 13 pp.
 South African Chironomidae, by J. J. Kieffer, 11 p.
 pt. 9.—On some Ectoparasites in the South African Museum, by Rev. J. Waterston, 53 pp., 2 pls., 3 text figs.
 pt. 10.—Notes on South African Mutillidae (Hymenoptera) with descriptions of new or little known species, by L. Peringuey, 35 pp.
 pt. 11.—Contributions to the Crustacean fauna of South Africa, by K. H. Barnard, 120 pp., 13 pls.
 List of South African Tabanidae (Diptera) in the South African Museum with descriptions of new species, by Miss I. Ricardo, 14 pp.
 pt. 12.—Descriptions of Fishes from the coast of Natal (pt. 4), by J. D. Gilchrist and W. W. Thompson, 30 pp.
 Two new species of *Marginella* from South Africa, by W. Shackelford, 2 pp., 2 text figs.
- Vol. XV. pt. 1.—South African Crustacea (pt. VIII), by Rev. T. R. R. Stebbing, 53 pp., 12 pls.

Collecting.—Mr. S. H. Haughton made two journeys in search of additional material for the Palæontological Department. He went also to investigate and report on the deposit in which a fossilised human skull has been found. Mr. Drury was twice out securing models of certain aboriginals and fossils.

The Staff.—Mr. S. H. Haughton, Assistant in the Geology-Palæontology Department, has been promoted to the Assistant Directorship; and Mr. Tucker, B.A. Cant., has been appointed, on probation, Assistant in the Arthropoda section of the Invertebrates.

ARRANGEMENT AND CONSERVATION.

Zoology.—Mammals.—Special efforts have been made to increase the number of skins and spirit specimens of the South African small rodents and insectivorous mammals, especially from parts widely distant, so as to insure a more methodical idea of the distribution. The result has been fairly satisfactory as testified by the number of specimens obtained.

Owing to transport difficulties we have not been able as yet to receive the skeleton of the sperm-whale promised to us; and that of the European Rorqual (*Balaenoptera borealis*) also frequenting our waters, and received from Mr. K. Ellefsen, is unfortunately incomplete in some respects. The missing parts will however, be made good during the incoming year. The lesser fin-whale, or pike whale (*Balaenoptera rostrata*) is now proved to frequent our shores, as we have secured an example stranded on Cape Town beach. This animal, I am informed, is occasionally found in numbers along our western coast. Our large skeletons mounted in the open have been patched to try and save them from the disintegrating effects of the elements. They will not, however, last long in their present position. Our Sibbald Whale (Blue whale) is some 75 feet in length, and we have alongside a few vertebrae of an example alleged to have been 85 feet long—which in itself would be a record had I not been able to record authenticated lengths of 92 feet and a half, 97 feet and lastly of over 100 feet. This latter animal was projecting beyond the 100 feet inclined-plane used at the whaling station for hauling the animals. It was a female, and yielded 200 barrels of oil.

An agitation prompted by motives certainly not altruistic was begun a little while back in the Uitenhage District of the Cape Province which includes the Addo Bush, where a number of elephants are still at large, to have all the animals destroyed, it being alleged that they had become so dangerous that their destruction was imperative. Those lovers of animals who believe in the preservation of the large game will be glad to hear that the Provincial Government, in spite of the agitation, and supported by some landowners in the vicinity, are taking steps to ensure the safety of the three troops known to occupy the preserve. Doubtless

the herd will have to be thinned, but no indiscriminate shooting will be allowed, and provision will be made for insuring to the remainder a fair supply of water, the lack of which is oftener than not the cause of the animals' so-called depredations. The "wiping-out" of the herd, which is said to number 300 head, is thus no longer to be feared.

What promises to be a fine group of gemsbok antelopes had been put in hand, in anticipation of the enlargement of the building. The younger animals are not easy to procure but, thanks to the kindness of Mr. J. P. Frylinck, two calves in different stages of growth have been obtained, and will help materially in completing the group of these magnificent South African antelopes.

The number of small mammal skins obtained during the year will also enable us to renovate all or nearly all our mounted specimens, many of which are the worse for wear, and are badly mounted.

No birds, and only a few reptiles, have been added to the exhibited series—always owing to want of space—but the removal of all our foreign birds, except a case of game birds and birds of Paradise, has permitted of the exhibition in their place of the South African Fishes. Special care has been taken to colour those that are not uniformly silvery, original sketches being used whenever possible, and the display is an effective one. Two sharks, a female "Thresher" (*Alopias vulpes*), and a male "Hammerhead," (*Sphirna malleus*), were mounted and set on exhibition, thus completing the pairs of these two species.

A beginning has been made in identifying and incorporating in the study collection the large number of snakes received during the last three years. It is almost a case of *embarras de richesse*.

Geology and Palæontology.—In this department good progress has been made, the Palæontology claiming a very good share. Mr. S. H. Haughton was in the veld collecting for four months. These collecting expeditions have been highly successful, resulting in securing an almost complete skeleton of a large *Struthiocephalus*, which is being developed from the matrix and will be set up on exhibition in the early part of next year, the skull and part of the skeleton of a large new species of Anomodont, a Dinosaur allied to *Gryponyx*, a new Dinocephalian, part of a skeleton of *Pareiasaurus*, a nine feet long section of a fossil tree, etc. The Rev. J. H. Whaits, a constant friend of this Museum, has obtained for us another valuable example, a small Pareiasaurian, and the remains of *Esoterodon*, which, apart from its interest as a Museum specimen, throws some new light on the stratigraphical position of the beds of certain districts.

Interesting fossils were obtained by the Geological Survey, some of which, in the words of Dr. Rogers, are "throwing light on the age of the old land surface in the north-west of the Cape Province."

Through the courtesy of the Authorities of the Bloemfontein Museum, we were able to make a replica of what is probably one of the finest and most complete amphibian remains found hitherto in South Africa, one which I had vainly tried to obtain, and which the Bloemfontein Museum succeeded in securing. The animal is partly embedded in a slab 9 feet long. The replica is true in every respect, and will form an attractive object in the exhibition room. It is obvious that the exhibition of all these acquisitions will be difficult.

It was a standing reproach to my mind that the Permian Reptilian and other remains of South Africa were not better represented in our Museum, the main reason for their absence being the great distances to be covered by collectors, the uncertainty of finding remains which were not weathered (and useless on this account), and lastly the heavy cost of travelling. Little by little however these difficulties were gradually overcome, a clearer knowledge of the animals obtained, and more extensive collections made. It was thus a matter of regret that a collection containing many types was sold to the American Museum of New York, without the authorities of this Museum being approached as to the disposal of the same.

The transaction is the more to be regretted because a number of the specimens were supplied to the seller on the express condition that the types of the new species should be offered to the South African Museum.

An attempt at recovering from another Institution a large and very valuable specimen, which in the Trustees' opinion is the property of this Institution, has been so far unsuccessful.

A collection of Australian Permo-Carboniferous fossils presented by the Australian Museum, Sydney, is of particular interest in view of the close connection which existed between the life of this sub-continent and of Australia at the time when the two lands formed part of the one great continent of Gondwanaland.

Botany.—The incorporation of new material into the collection is proceeding steadily. No collecting expedition was undertaken this year, but a considerable portion of the material obtained the previous year has been mounted and incorporated.

Marine and Land Invertebrates.—Good progress is being made with the contents of the collection, special attention being paid to the Crustacea by the Rev. T. R. R. Stebbing and Mr. K. H. Barnard. Three papers on this order have been published during the year, the remainder of the *Macrura*, and the *Stomatopoda* are being investigated; and the MS. of the former is nearly ready. Some additions have been made to the exhibited collection. A good deal of material is still in the hands of Specialists.

In the *Arthropoda* section (with the exception of Insects) the collection of Spiders, Scorpions, and Mites, neglected somewhat for several years, is being overhauled.

We have been very unfortunate in our endeavours to have our extensive Myriapod material worked. Sent first to a specialist in the United States at his own request, it remained in his hands for ten years without the work of identification materialising. We had to insist on its return. It was then put in the hands of another specialist, and sent to Vienna, two years ago, but no progress seems to have been made as yet in the determination of the numerous forms.

Archaeology.—An addition of very great interest is a sacrificial stone, obtained in Southern Rhodesia, the shape of which suggests at once a phallic emblem, made of granite and about three feet high with a somewhat quadrate base, probably shaped by natural causes.

“It was found in the veld on the place where the natives congregated to bring their offering of beer (Mamba) to obtain rain. You may imagine that the older natives were much against its removal.” It will be remembered that numerous phalli were discovered at Zimbabwe in 1888. From that time evidence has been obtained showing that part of the ceremonial prevalent among our natives could be traced to a survival of this so-called cult, but the presence and use of this sacrificial stone because of its natural shape implies a survival of very old religious practices.

We find other evidence of contact with a civilisation that can be referred to the earliest days of that of Upper Egypt in two other exhibits added to our series this year. One consists of two extraordinarily fashioned large vessels affecting the shape of an Hippopotamus. The originals are in the Rhodesian Museum, and through the courtesy of the Trustees of that Institution we were able to make replicas of the same. One of these relics was the object of great veneration; it was found in a cave where a famous soothsayer lived. I do not know the history of the other. But the shape of both is of the same pattern as that obtaining in the early days of Egyptian civilisation, a pattern which persisted for a long time. Among the Basutos, who are an offshoot of the Barotse, are occasionally produced earthenware pieces representing animals such as geese, etc. Figures of old Egyptian pottery have been placed alongside our local objects to show the similarity which is not restricted to pottery alone. Thus, Bent found in Zimbabwe (and others have been since discovered at other places) round bowls of soapstone of large diameter, but shallow. They are either plain or decorated on the outside. Described at first as “bowls of sacrifice,” etc., they are now proved to have had a much more prosaic use, because similar ones have been excavated at Meroë, and at Abydos, close to the oldest known temple of Osiris, and they are now known by remnants of ashes and charcoal found in them to have been merely fire places, or ovens. Some of those, like ours, are decorated, others are not. Some of our specimens have the cord pattern style of decoration, and that pattern corresponds to the “knot” of the basketware found in the excavations of Tarkhan, in Egypt, believed to have been made there some 8,000 years B.C. This pattern is the identical one in use now among our Bantu speaking Native races. In one of the Abydos “hearths” the decoration includes the Agathomedon, the domestic fetish of the home in the shape of a serpent; a figure not unlike it was found also at Zimbabwe.

On a fragment of one of the “bowls” discovered by Bent, are carvings of animals which may at first be taken for Koodoo antelope, well known for its long horns. In spite of their conventional shape I am inclined to see in them the long-horned oxen known here under the name of “Damara”; and not the “*Bos opisthonomus*” of which Herodotus speaks “whose horns grow downwards to such an extent that on that account they walk backwards when grazing, because were they to move forward they would be pinned by them to the ground.” Another

fragment of the same fireplace was discovered ultimately also in Zimbabwe, and is now in the Bulawayo Museum. A replica has enabled us to restore the circular shape, and to make the decoration partly complete by letting in the cast of the missing piece.

If I have enlarged on these special acquisitions, it is because they are evidence of a civilisation obtained perhaps by contact with a very early Egyptian; perhaps also the case is reversed, and the early Egyptian one was derived partly or wholly from an autochthonous central African, which must then have been a negro civilisation.

Coming to times nearer to our own, there is to be recorded the presentation by the Batavian Society of Arts and Sciences of the fragment of the tombstone of the founder of the Colony of the Cape of Good Hope, Johan van Riebeeck. This tombstone is said to have been still intact in the middle of the 19th century (1849). It bore the following inscription: "Below this lies buried His Excellency Johan van Riebeeck, the founder of the Colony of the Cape of Good Hope, a former President of Malacca, and lastly Secretary to the Government of India. Died on the 18th of January in the year 1677, age fifty-eight years." Only half the inscription remains. Van Riebeeck was buried in the "Inner Portuguese Church" at Batavia. This church was burned down in 1808, and eventually it was found that this fragment of Van Riebeeck's tombstone had been used as a paving stone. Further search to recover the remainder of the epitaph has proved unsuccessful.

This important relic was obtained through the good offices of J. de V. Roos, Esq., the Secretary for Justice, who has been unremitting in his efforts to obtain its presentation to the people of the Union.

Anthropology.—I have already mentioned that Mr. S. H. Haughton went to report on the geological formation of a site in which fossil remains, unfortunately fragmentary, of a very ancient type of man were discovered. It is too early as yet to say much about this highly interesting discovery. In order to study the find thoroughly (it is not our property) casts of most of the known restorations of prehistoric skulls have been obtained, including that of the Piltdown skull. Unfortunately the state of war has precluded us from obtaining, or has delayed temporarily receipt of, all the literature concerning the subject.

We have been very successful in obtaining complete casts from life of a small clan of eleven Bush people encountered in the Transvaal. They have been reproduced, and part of them coloured. They will replace towards the beginning of next year some of the figures now on exhibition. The figures are to be arranged so as to produce a domestic group, but we shall have to wait for this one as well as for those on exhibition, which are intended also to be grouped, until a sufficiency of exhibition room is available.

To the series of casts from life have been added one bust and one whole figure of two Makua natives from northern Mozambique. All the tribes of this group of Natives bear deep incisions on the face, and are more or less tattooed on the body. These raised-scar markings vary much, and are said to denote the tribe.

The possibility of reproducing those two figures which are, by general consent, extremely typical of this style of tattooing, or properly speaking scar-raising, is due to the good offices of Dr. G. A. Turner and Mr. B. G. Lloyd, of Johannesburg.

We have added 7 bush paintings to our series, being indebted as heretofore to Mr. G. S. J. Mandy for this valuable and interesting acquisition. One of the scenes, a large one, is remarkable in being the first known to the writer in which there has been prepared a background on which the animals are delineated; the vividness of the colour is also very extraordinary. It may be of interest to note here that a special grant was obtained for the coloured reproduction in natural size of some of these most typical scenes. The present circumstances have partly jeopardised the undertaking. Three sheets, some 55 cm. by 35 cm., had been sent to Europe for reproduction, a little before the declaration of hostilities.

Several tracings of Bush paintings have been procured, some in the Union, others in Southern Rhodesia. The latter are puzzling in the extreme. The figures of men and women are not of the peculiar hieratic Bush type. They are fuller of life and detail. Birds perch on trees which are almost botanically treated, because

one can recognise a palm tree, etc. A woman sitting on the ground supports on her raised leg a standing suckling infant. The animals are wonderfully well treated; the spiral of the horns of the Koodoo being especially well rendered, etc. Can it be the Colonial Bush has retrograded or remained stationary while its congener has improved?

Stone Implements.—Time has not allowed for the rearrangement of the Antiquity Room which it is intended should be restricted to the history of the South African primitive races and their artistic productions. The task will be undertaken in 1915. A large number of palæolithic bouchers has been received, and I discovered on the slopes of Signal Hill in Cape Town the largest ever recorded. The material of which they consist is a shale indurated by contact with the granite, and it has not the hardness of similar but smaller bouchers made of quartzite, but I am nevertheless of opinion that they are artefacts in spite of the size of some of them—30 cm. in length by 13 cm. at their greater width. Some of the smaller ones have plainly seen usage, and one of the hammers is undoubtedly what is claimed for it. The size of these implements makes it probably impossible that they could have served the purpose of the typical, albeit large, South African bouchers, but the explanation that they may have been fashioned of such a size for ultimate reduction (as I have alleged, if not proved, for the quartzite implements of the Stellenbosch deposit) may well be taken into consideration. Very large implements of slate are recorded from Belgium.

Evidence has been obtained of the use which some of the flat mortars found in our kitchen middens served, namely, to grind the paint intended for decorating the body as well as for the drawing of parietal pictures. Two such stones and a miller have been found with traces of the paint left in the artificially depressed centre and at the ground end of the miller. The Museum has received also, from caves, or rather shelters, in Dordrecht the ferruginous shales, the results of rotten dolerite, weathered lydianite, etc., that served as pigments, and has also secured a declaration made before the Resident-Magistrate of a district where the last survivor of the Bush painters of the Drakensberg was to be found, that the pigment he used consisted of some of these colouring matters mixed with fat, and that the brush used was a straw split at one end.

Koopmans de Wet House.—The Koopmans de Wet House, containing the collection of objects of *vertu* or of domestic economy found at the Cape was opened in March last by the Mayor of Cape Town. The renovation was carried out under the personal direction and superintendence of Dr. W. F. Purcell, who is also acting as Honorary Keeper. This renovation—restoration would be perhaps the proper word—took a long time to complete, the intention being to keep as much as possible of the original parts of the house (which was probably erected in 1702) and of the additions made subsequently. Lack of further funds has unfortunately prevented the completion of the scheme, and several rooms are still vacant.

The popularity of this annex is well maintained, as proved by the number of visitors, and it is pleasant for me to state that this interest is also borne out by the number of donations and loans. The plan is to reproduce the house-economy of a person of position at the Cape in the 18th century. To insure this the acceptance of objects, used and found locally, is limited to the pre-Victorian period. Thus it is that next to Museum pieces are found many objects of much humbler use or origin, but having belonged to old Cape families, they are of an antiquarian interest which will grow as years proceed.

L. PÉRINGUEY,
Director.

DEPARTMENT OF ZOOLOGY.

VERTEBRATE ZOOLOGY (Fishes excluded).

To the Trustees of the South African Museum.

Mammals—The number of accessions has been comparatively large, being in all 350 examples representing 125 species of which 2 are new to the collection. Some large mammal skins were obtained to replace others destroyed by insects; the majority of the accessions, however, consist of small mammals, which by increasing our series from places far apart makes them a more reliable criterion of distribution

in South Africa. We have added the skeleton of one of the whales of our coasts, (*Balaenoptera borealis*) hitherto unrepresented in our series, and the missing parts of its congener *Balaenoptera brydei*. We have secured the small Rorqual (*Balaenoptera rostrata*, washed ashore in Table Bay. In addition we were able to obtain the fœtus of two or three kinds of whales, the anatomy of which is being now investigated.

With the prospect of enlargement of the building a large group of gemsbok was entrusted to a taxidermist to be mounted according to our design. We had some difficulty in procuring calves for the purpose. A very fine female chimpanzee and a young specimen together with their skeletons have been put on exhibition. The arrival of the male which was to complete the group was delayed owing to the outbreak of hostilities.

Birds.—The number of birds received is 68, representing 42 species. They do not call for special remarks; some of these skins will assist in completing the series. The bird-eggs received were not numerous, namely 21 specimens, representing 10 species. A good number of parasites were obtained from the skins of birds secured for the purpose.

Reptiles.—The number of reptiles received is 48 examples and 37 species, of which one was unrepresented in our series. Very few novelties can be now expected, except perhaps from the border lines of Angola and Southern Rhodesia, yet the discovery of varietal forms may still be looked for, and such an instance has already occurred in the somewhat rare *Aspidelaps scutatus* from the Bechuanaland Protectorate.

A beginning has been made in the incorporation of numerous duplicates into the working series. A few specimens have been added to the exhibited series.

The thanks of the Trustees are due to the 45 donors who have helped the Museum during the year in this department, and occasionally also in others. They are: Major J. S. Hamilton, Rev. J. O'Neil, Mr. K. Ellefsen, Rev. R. Godfrey, Mr. H. L. Jameson, Father Daignault, Messrs. H. L. Osborn, F. Cook, H. Vollhuter, Dr. D. R. Kannemeyer, Messrs. C. French, G. Rattray, W. E. Jones, W. G. Fairbridge, A. Woodgate, R. E. Coryndon, W. Hare, J. H. Powell, J. Morton, Dr. W. F. Purcell, Miss A. Marshall, Messrs. J. Drury, J. Fenton, Commander the Hon. R. Bridgeman, Capt. Collett, Dr. R. Gordon, Mr. J. S. Carr, Mrs. J. Coetze, Mr. J. S. Carlisle, Dr. R. Marloth, Messrs. S. H. Skaif, L. C. Péringuey, W. R. Zeederberg, Bro. J. H. Power, Messrs. J. G. Rex, P. C. Keytel, E. Currey, Dr. O. J. Currey, etc.

Your obedient servant,

L. PÉRINGUEY.

ENTOMOLOGY (INSECTS).

To the Trustees of the South African Museum.

The number of examples received is 4,441 representing 2,799 species, of which 399 were unrepresented in the Collection. They are divided as follows:—

	Examples.	Species.	Novelties.
<i>Hymenoptera</i>	571	283	62
<i>Coleoptera</i>	1864	1414	112
<i>Diptera</i>	872	293	134
<i>Neuroptera</i>	39	19	12
<i>Hemiptera-Homoptera</i>	55	37	12
<i>Lepidoptera</i>	1060	663	52

It is plain from these figures that the work of this Department exceeds that of all others. The distribution in the Cabinets affected of the six Orders here mentioned is a laborious task, requiring a great deal of time. It is however progressing satisfactorily. I have this year completed the incorporation of the Hymenoptera and of the Orthoptera, and sorted all the duplicates. Great efforts are being made to collect the insects to which very few collectors pay special attention. Several of these groups have been entrusted to Specialists, but the elucidation of the material is always slow. In the order Lepidoptera, the incorporation of the *Sphingidae* has been revised, and that of the very numerous family, the *Noctuidae*, has been begun but cannot be completed before the middle

of next year. Special effort is directed to the collection and determination of bird-parasites, but it is difficult to find helpers, amateur or otherwise, in this direction.

Six entomological papers have been published this year, four more are nearing completion, and three are on the stocks.

The main donors are Mr. W. E. Jones, Father J. O'Neil, Messrs. H. W. Bell-Marley, D. Dodds, W. Haygarth, R. Dummer, W. Ellerton-Fry, W. C. West, P. A. Sheppard, Bro. J. H. Power, Professor Hudson Beare, Dr. W. F. Purcell, Dr. J. F. Dreyer, Miss Schunke, Messrs. L. A. Péringuey, L. Feltham, R. M. Lightfoot, Miss Pegler and Miss Marshall.

Two exchanges have been arranged with Australia, and we have received from Mr. Bridwell a small number of interesting insects from Nigeria as a set-off for their identification.

Your obedient servant,

L. PÉRINGUEY.

ENTOMOLOGY (INSECTS EXCLUDED).

To the Director of the South African Museum.

Sir,—I have the honour to submit the following report on the working of this Department, from September 22 onwards. The first task on taking up my duties was the urgently needed overhauling and cleansing of the bottled spirit collection of Arachnida; afterwards this was sorted and arranged in groups of families, sub-families and sequence of genus and species in suitable closed presses; name cards were attached and space left for new additions. A considerable accumulation of unnamed, unsorted and unindexed material was then dealt with; the process of sorting, indexing, deleting and then resorting the tubes into collections of their respective families occupying some considerable time. This work was supplemented by checking a typed duplicate of Dr. Purcell's card catalogue of *Aranea* up to 1902, and also by cleansing, and in cases remounting, the exhibited collection of *Aranea* and making one or two additions thereto. The exhibited collection of scorpions has still to be dealt with. The task of identifying and working the collection of *Aranea* will start in the new year.

Of specimens received in 1914, there were 81 Spiders, 17 Scorpions, 3 Pseudo-scorpions, 9 Solifugae and 4 Myriapods. Shelves have been prepared and screened for the reception on its return of the Myriapod collection sent abroad to be worked.

I have the honour to be,

Sir,

Your Obedient Servant,

R. W. TUCKER.

FISHES AND MARINE INVERTEBRATES.

To the Director of the South African Museum.

Sir,—I have the honour to submit the following report on the Department of Fishes and Marine Invertebrates for the year 1914.

The collections under my charge are now in good order. The periodical examination of the collections for purposes of refilling jars, replacing old labels, etc., is a comparatively easy matter. On two sides of the spirit-room the shelving has been fitted with sliding doors and here have been arranged in systematic order the fresh-water fishes and the Mollusca. Also the majority of the marine animals have been thus arranged according to their various orders, families, etc., the exceptions being those groups which have not been worked out by Specialists.

The Hydroids have been sent to Dr. Ritchie, Edinburgh. Unfortunately it has hitherto been impossible to procure a Specialist to work out the marine plank-

ton. The Tunicates, Sea-anemones, Marine worms and Cephalopods are ready for study whenever a specialist can be found to undertake the task. I am still engaged on the study of certain sections of the Crustacea.

Collecting.—Collecting this year has been confined to the shores of the Cape Peninsula and considerable material has at various times been obtained from Sea Point, St. James, and Hout Bay. The "intensive" examination of certain small areas is frequently of as great importance as the hasty and somewhat superficial examination which is all that is possible on an extensive collecting-trip. The material obtained will go far towards compiling a complete Fauna-list of the Cape Peninsula.

Acquisitions.—The number of specimens acquired during the year is as follows:—

	Specimens.	Species.	Novelties.
<i>Fishes</i>	142	46	26
<i>Mollusca</i>	283	36	7
<i>Crustaceans</i>	947	126	46
<i>Worms</i>	158	27	3
<i>Other marine invertebrates</i> ...	211	19	8
Total	1741	283	90

Public Exhibits.—Most of my time has been occupied in mounting fishes. 70 jars, containing 94 species have been placed on exhibition. Of these 37 are coloured to represent the natural tints of the fish when alive. The collection may be said to be fairly representative, although there are still some gaps. These are due to the fact that the Museum, while possessing specimens suitable for scientific study, does not however possess specimens fresh enough for exhibition purposes. These gaps will be filled as time goes on. The collection contains most of the edible fishes common to the Cape seas. In other groups mention may be made of a fine specimen of a Durban crayfish, presented by H. W. Bell-Marley, Esq., which arrived in a condition fresh enough to show the natural colours. This has been mounted and coloured. A series of South African solitary corals and additional specimens of Echinoderms and Polychaets have also been placed on exhibition.

The thanks of the Trustees are especially due to W. R. R. Zeederberg, Esq., of the Government Guano Office, for presenting a fine male specimen of the thresher-shark; to Dr. A. W. Rogers for his collections of land-shells from Namaqualand and German South West Africa; and to H. C. Burnup, Esq., of Maritzburg, who, besides examining and naming the South African Museum's collection of *Siphonaria* (Mollusca), has added thereto several specimens from the Natal coast. A collection of fresh-water fishes from Uganda has been obtained by exchange with the Genoa Museum, which will prove valuable for a comparison with the South African forms.

I have the honour to be,

Sir,

Your obedient servant,

K. H. BARNARD.

DEPARTMENT OF GEOLOGY, MINERALOGY AND PALÆONTOLOGY.

To the Director of the South African Museum.

Sir,—I have the honour to send you a report on the conditions and progress of the geological collections during the past year.

A large table case formerly used for the exhibition of part of the mineral collections has been fitted with the collections from the Antarctic and Australia which were sent to us by the Australian Museum, Sydney, together with a few specimens given by Messrs. Priestly and Debenham of Scott's last expedition. Excepting this transference and the minor arrangements necessitated by it there has been no disturbance of the general order of the exhibited collections, though additions have been made to the exhibited series of S.A. rocks, S.A. minerals, Karroo fossils and Tertiary fossils of South Africa. The additions to the last named series consist of a group of marine fossils of Miocene age from the diamond

fields of Bogenfels, south of Pomona in the Namib; this collection includes examples of the extraordinary *Diplochaetetes* which is supposed to be a near relation of the Palæozoic tabulate corals.

The most important acquisitions during the year are the Karroo fossils obtained by Mr. Haughton on two journeys he made for the purpose. Much of the material is still in packing cases, but amongst the specimens worked out are an almost complete skeleton of *Struthiocephalus*, which will be articulated and set up early in the new year; an excellent skull and part of the skeleton of a large Anomodont to be described as *Kannemeyeria erithrea*, the remains of a large Dinosaur allied to *Gryponyx*, the skull of a new Dinocéphalian, *Moschosaurus longiceps*, and part of another skeleton of *Pareiasaurus*.

From Messrs. Sobey, of Queenstown, we have received an almost perfect skull of a large Temnospondylous Amphibian, *Trematosaurus sobeyi*, a cast of which has been sent to the Queenstown Council, and also a footprint, probably of the same animal.

Through the good offices of the Rev. J. H. Whaits we obtained the skull and almost complete skeleton of a small Pareiasaurian from Graaff-Reinet. Mr. Whaits found the remains of *Esoterodon uniseries* in the shales found in the river at the same place, proving that those beds belong to the *Endothiodon* zone. We obtained from the same gentleman a valuable collection from the Beaufort West district, of which the most striking specimen yet developed is a skull and lower jaw of *Rhinesuchus whaitsi*.

Interesting fossils obtained by the Geological Survey and developed are the skull and forepart of the skeleton of a new genus allied to *Euparkeria*, a Pseudosuchian closely allied to the ancestors of the Dinosaurs; another fragment of the type specimen of *Trithelodon riconoi*; and parts of a small Dinosaur, all from the Red Beds; from an old valley in Bushmanland, now filled up with detritus washed and blown into it, come the remains of a Dinosaur, including the femur, a tooth and remains of other bones. The animal appears to be allied to the Cretaceous Dinosaurs, and it is at present chiefly of interest in throwing light on the age of the old land-surface in the north west of the Cape Province.

Mr. Haughton went to Bloemfontein to describe the fine skeleton of *Rhinesuchus* deposited there, a cast of which will be exhibited here in the new year.

Among the new reptilian exhibits is a large but somewhat crushed skull of *Dicynodon magnus* cleaned of its matrix, and alongside is set up a plaster reconstruction showing what the skull was like before it was deformed.

The additions to the mammalian fossils are a very beautiful braincast of a Primate from the superficial deposits of Colesberg, presented by Dr. Hudson of Graaff-Reinet, and a skull of *Diceros bicornis* from Darling, presented by P. Brindean, Esq.

The thanks of the Museum authorities are due to the following gentlemen who helped Mr. Haughton in various ways during his collecting expeditions:—Messrs. C. S. Scholtz, W. van der Byl, F. Biesman Simons, B. Pocock, C. W. Cullingworth, B. Read, H. Kynaston, A. W. Lilford, W. Robertson, and the Rev. J. Mather.

The collection of Australian Permo-carboniferous fossils presented by the Australian Museum, Sydney, is a peculiarly interesting acquisition, for it illustrates the southern marine phase of the life of that period which is only represented by continental deposits in the Union.

The collection of crystals has had to be remounted with a view to greater stability.

Amongst the additions to the mineral and rock collections are two large crystals of tantalite given by Mr. J. T. Wylde; copper rocks from the Messina Mine given by Mr. J. Allen Woodhead; Natal rocks (igneous and metamorphic) from the Durban Museum; copper ores and other minerals from Tsumeb, rocks and minerals from the Namib and other parts of Great Namaqualand and Damaraland, including a good series from Gaitsi Gubib and from the alkali-intrusions of the coast-belt; a fine specimen of cassiterite-bearing granite from Rhodesia, presented by A. C. Jackson, Esq.; a series of alkali-intrusions from the Loch Borolan complex given by Prof. S. J. Shand, and a section of a coal seam given by the Witbank Collieries

The additions to the catalogue number 251.

Rocks, 81.

Minerals, 20.

Invertebrates, 110.

Vertebrates, 31.

Plants, 6.

In conclusion I must draw attention to the difficulty of finding room for the exhibition of the admirable reptilian fossils now being developed and set up as wholly or partially articulated skeletons. It should be our endeavour to obtain and exhibit as complete a series of these specimens as possible.

I have the honour to be,

Sir,

Your obedient servant,

ARTHUR W. ROGERS.

DEPARTMENT OF BOTANY.

The Director, South African Museum, Cape Town.

Sir,—I have the honour to submit the following report on the working of the Herbarium.

The collection remains in a good state of preservation and there has been no need during the year either to fumigate or poison any of the herbarium sheets. All parcels of plants received are first fumigated with carbon bisulphide and the contents poisoned before being incorporated into the cabinets and this in a great measure prevents the introduction of insects into the cabinets.

I am pleased to report that the collection is steadily growing in size and importance. The incorporations into the cabinets greatly exceed those of any previous year, and to avoid the overcrowding and relieve the congestion in certain orders new cabinets will be necessary. During the year 176 visits have been paid to the herbarium either by botanical workers, Government officials, or the public for information on matters pertaining to Botany.

No collecting has been done this year by the herbarium staff, and consequently the number of acquisitions shows a decrease on that of last year. The specimens acquired by donations, exchange, or which have been bought, total 1,313. The number of sheets mounted during the year has been 3,450, of which 2,432 have been incorporated in the cabinets. Of this number 379 were new to the collection, over 100 more than last year; this shows that year by year the gaps in the collection are gradually being filled. During the year I have named collections for various correspondents and visitors, and reported on plants forwarded by the Provincial Council, the Department of Agriculture, and the South African Police. I have also written out our sheets of *Scrophulariaceae* and *Selagineae*, brought our card catalogue up to date and catalogued all the pamphlets bearing on botanical subjects. As mentioned in my last report Madame Dieterlen, of Basutoland, loaned us her valuable herbarium; these sheets have all been named for her and the use of them has enabled me to draw up a flora of the Basutoland plateau and to map out a new floral region for South Africa. In this connection I must express my thanks to the Curator of the Bolus Herbarium who has allowed me every facility for consulting the collection under her care. A collection I made at French Hoek last year has been worked up and some interesting results are being deduced as to the flora of this rich locality.

The principal collections mounted during the year were those of Messrs. Deas (Oudtshoorn), K. Dinter (G.S.W. Africa), R. Dummer (B.E. Africa), R. Marloth (Basutoland), E. P. Phillips (Basutoland), J. Muir (Riversdale), J. M. Wood (Natal), Madame Dieterlen (Basutoland), a collection presented by the Bolus Herbarium (Percy Sladen Memorial Expedition), a collection acquired by exchange with the Transvaal Museum (Drakensbergen), besides numerous specimens from bundles in the store room, some of which proved new to the collection.

The principal collections received have been those from the Rev. F. A. Rogers (presented), Dr. J. Muir, Riversdale (presented), the Bolus Herbarium (presented), J. Drury, Lake Chrissie (presented), K. Dinter, G.S.W. Africa (presented), R. Dummer, B.E. Africa (bought), W. C. West, Central Africa (bought), the Transvaal Museum (exchange), and the thanks of the Trustees are also due to the following donors:—

Miss A. Taylor for a specimen of *Anacampteros Telephiastrum* D.C.; Dr. S. Schönland for specimens of *Crassula laticepala*, Schonl., *Neodregea Glassii*, C.H.W.; Madame A. Dieterlen for specimens of Basutoland plants; Mrs. Aspden for two specimens of *Polyporus umbraculum*, Fr., and to the Curator of the Muni-

cipal Gardens, Cape Town, for specimens which flowered in the Gardens from time to time.

The following loans, donations and exchanges have been made by the herbarium during the year:—

To the Bolus Herbarium.—New species of plants from the Gift Berg (presented); specimens of *Muraltia*, *Oxalis*, *Aspalathus*, *Lotononis* and *Acacia* (loaned).

To the Albany Museum.—New species from the Gift Berg (presented).

To Mr. E. E. Galpin.—New species from the Gift Berg (presented).

To Dr. J. Muir.—103 species (presented).

To the Transvaal Museum.—60 species of East Griqualand plants in exchange.

The thanks of the Trustees are due to Mr. E. E. Galpin and to Mr. J. M. Wood for the loan of type specimens in their respective collections; to Dr. S. Schönland for examining some critical species of *Crassulaceae*, and to the Director of the Royal Botanic Gardens, Kew, for reporting on some doubtful species.

Five papers have been prepared by the Herbarium during the year.

I have the honour to be,

Sir,

Your obedient servant,

E. P. PHILLIPS.

DEPARTMENT OF ANTHROPOLOGY, ETHNOLOGY AND ARCHAEOLOGY.

To the Trustees of the South African Museum.

The following is an account of the acquisitions obtained during the year.

Anthropology.—The skulls of two Strand Looper Hottentots, and that of a South Australian aboriginal have been added to the collection. The former were donated by Mr. C. W. Black, of Mossel Bay, the latter was presented by Mr. J. W. Jones.

Through the good offices and great help of Mr. R. Royston we were enabled to make eleven casts of a small clan of Bush people who are of a smaller average stature than the representatives of the other two groups of the San represented in our collection, and they belong in all probability to the group of this race who painted so freely on the Drakensberg range.

We have not succeeded in obtaining as yet Bush subjects from a part of the Kalahari where they are reputed to be of unmixed parentage. Of this third group of the Bush race we have casts of two women and of a boy only.

Casts have also been made, one of a full figure, the other of a bust, of two Makua men, whose face and body tattooing consists of raised scars, varying in pattern, it is said, with each clan.

Ethnology.—Tracings of Bush paintings have been presented by Dr. R. Marloth and Messrs. C. de Villiers, S. H. Haughton, E. H. T. Johnson and A. Handel-Hamer. To Mr. G. S. T. Mandy we are indebted for nine slabs of Bush paintings. The freshness of one of these paintings is specially striking.

We have secured interesting specimens of native economy from the Manica part of Southern Rhodesia; also a sacrificial stone of a very peculiar shape, and of undoubted archaeological interest.

Archæology.—The number of stone implements received has been very great. Among them is a long series of palæoliths illustrating a certain deposit. Bone tools, shells and milling stones with traces of red pigment still adhering, ferruginous shales used by the Bush painters of what is now the Dordrecht District (Cape), pots of unusual shape found in Basutoland caves, but pronounced by the Basutos not to be of their own make, are among the acquisitions.

Photographs of Basarwas and Bush paintings have been received.

Some of the newly acquired slabs of Bush paintings have been exhibited in the Ethnological Room, from which all the native pottery, arms, basketry, etc., had to be removed.

In addition to the names of the donors already mentioned, the thanks of the Trustees are due to Messrs. A. E. Hey, W. A. Petty, J. Drury, Walker, L. C. Bland, Sub-Inspector H. Ashton, Dr. A. W. Rogers, Dr. A. L. du Toit, Rev. W. Gladstone-Hawke, and others.

Miscellaneous.—Mr. F. Muller-Rex, of Oudtshoorn, has secured for the Museum the old "stocks" formerly in use in the jail of this town.

KOOPMANS DE WET HOUSE MUSEUM.

To the Trustees of the South African Museum.

This Annex to the Museum was opened to the public on the 12th of March, 1914. As reported last year, the house was purchased by subscription and presented to the Trustees to preserve for the Nation the objects of merit purchased at the posthumous sale of the proprietress of the house and its collection, after whom the house is called.

The donations number:—Furniture, 11; gold and silver, 8; glass, 26; porcelain and pottery, 34; brass, iron, and pewter, 42; portraits, 5; miscellaneous, 18. The loans comprise 111 pieces, and the purchases 15.

Amongst the principal donors have been the Misses Buyskes. They have presented 93 articles of furniture, silver and gold, glass, porcelain and pottery, brasses and miscellaneous, family portraits, etc.

Mr. A. C. F. Gore took a special interest in the Museum, and was instrumental in kindling in others the interest that led to the acquisition of the House and part of the Collection. We are indebted to him for several donations, and his unexpected demise has deprived the Institution of the services of a valuable supporter.

Mrs. Denholm Walker has given us the loan of 24 pieces of furniture, 42 pieces of gold and silver, 21 pieces of brass, 9 pieces of China, 3 pieces of glass and 14 miscellaneous pieces.

To Dr. W. F. Purcell the Trustees are especially indebted for the care and attention he devotes to the technical side of the Museum, as well as for his numerous and always interesting donations.

The thanks of the Trustees are also due to Lady Phillips, Mrs. F. Reitz, Mrs. E. Harold Smith, Mrs. C. C. de Villiers, Messrs. F. S. Bird, W. G. Carter, F. Dreyer, H. Herman, Sir S. Holland, Messrs. J. W. Jagger, A. Kannemeyer, and T. Manchester.

It is to be hoped that the old slave quarters, the kitchen and at least one of the rooms awaiting renovation will be taken in hand at the beginning of next year. As stated before, the attendance has been 1,691 per month.

A large number of labels in English and Dutch have been printed, and the hand-written ones are being gradually replaced.

Your obedient servant,

L. PÉRINGUEY.

SOUTH AFRICAN MUSEUM.

STATEMENT OF INCOME AND EXPENDITURE FOR THE YEAR ENDING 31st MARCH, 1914.

To Balance, 1st April, 1913	£587	5	4	By Salaries	£2,458	3	7
" Grants:—				" Library	103	19	0
Union Government ... £4,100	0	0		" Purchase of Specimens, £664	19	9	
Cape Town Corporation ... 600	0	0		" " " Coins ... 12	0	0	
Provincial Administration ... 300	0	0		" Transport and Travelling	201	11	2
	5,000	0	0	" Maintenance of Museum	665	0	9
" Interest on Hadje Shah Suliman				" Freight Charges	36	18	11
Mohammed Coin Fund	4	0	0	" Furniture and Fittings	928	1	6
" Sale of Publications	6	16	6	" General; including Petties, Stamps,			
" Balance Purchases Fund Koopmans				Telephone etc.	132	8	5
De Wet House	5	3	0	" Publication of Annals	336	12	5
" Contribution by Geological Commission				" Sunday Duty	96	4	0
towards publication of Annals ...	33	3	5	" Bank Charges	3	17	6
" Refund of freight charges from Michie	5	0		" Balance, 31st March, 1914:—			
" Value of damaged goods recovered from				Cash in Bank:	15	11	
Union Castle Co.	6	7	8	Advances against maintenance			
" Value of damaged goods recovered from				of Koopmans De			
Harbour Board	19	7	6	Wet Museum	3	14	6
				Advances against garden-			
				er's wages for period 1st			
				March to 25th April,			
				1914, at £1 7 0 per week			
				recoverable from P.W.			
				Department	10	16	0
				Petty Cash	8	3	0
						23	9
							5
	£5,662	8	5			£5,662	8
							5

Audited and found satisfactory.

(Signed) WALTER E. GURNEY,

Controller and Auditor-General.

Pretoria, 25th July, 1914.

(Signed) L. PÉRINGUEY,

Director, South African Museum.

Cape Town 22nd July, 1914.

Statement "A."

HADJE SULIMAN SHAH MOHAMMED FUND FOR THE PURCHASE OF COINS.

Amount of Investment with the South African Association	£100	0	0
Balance of Interest on 31st March, 1913	33	2	0
Interest Received during the year 1913-14	4	0	0
	137	2	0
Less Coins purchased	12	0	0
	£125	2	0

(Signed) L. PÉRINGUEY,

Director of the South African Museum,
Cape Town.

22nd July, 1914.

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UNION OF SOUTH AFRICA.

REPORT

OF THE

SOUTH AFRICAN MUSEUM

FOR THE

THE LIBRARY OF THE
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Year ended 31st December, 1915.

Presented to both Houses of Parliament by command of His Excellency
the Governor-General.

1916.

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CAPE TIMES LIMITED, GOVERNMENT PRINTERS.
1916.

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Trustees of the South African Museum.

The Right Hon. JOHN X. MERRIMAN, P.C., M.L.A.

Sir THOMAS MUIR, Kt., C.M.G., M.A., LL.D., F.R.S.

JOHN WILLIAM JAGGER, F.S.S., M.L.A.

Scientific Staff of the South African Museum:

LOUIS ALBERT PÉRINGUEY, D.Sc., Director.

SIDNEY HENRY HAUGHTON, B.A., Assistant-Director, and Assistant in Charge of the Geological and Palæontological Collections.

ARTHUR WILLIAM ROGERS, M.A., Sc.D., Hon. Keeper of the Geological and Mineralogical Collections.

EDWARD PERCY PHILLIPS, D.Sc., Assistant in Charge of the Herbarium.

KEPPEL HARCOURT BARNARD, M.A., Assistant in Charge of Fish and Marine Invertebrates.

RICHARD WILLIAM ETHELBERT TUCKER, B.A., Assistant in Charge of the Arthropoda (Insects excluded).

ROBERT MARK LIGHTFOOT, F.E.S., Assistant.

UNION OF SOUTH AFRICA.

DEPARTMENT OF THE INTERIOR.

Report of the South African Museum for the Year ended 31st December, 1915.

To be presented to Parliament.

22nd February, 1916.

The Secretary for the Interior.

SIR,—I am instructed by the Trustees of the South African Museum to transmit the report of proceedings and progress of this Institution to be laid before Parliament according to paragraph 9 of Act 17 of 1857.

I have the honour to be,

Sir,

Your obedient servant,

L. PÉRINGUEY,
Director.

REPORT OF THE DIRECTOR.

To the Trustees of the South African Museum.

SIRS,—I have the honour to submit my report on the general administration of the Museum for the year 1915.

Visitors.—The number of visitors was 133,174, against 125,915 last year. This number is divided as follows:—

White—Adults.	Males	...	...	...	...	48,862
	Females	...	...	...	...	34,885
Children	...	...	...	...	...	27,429
Coloured—Adults.	Males	...	...	...	...	10,366
	Females	...	...	...	...	7,378
Children	...	...	...	...	...	4,254

20 School parties visited the Museum.

The Sunday attendance (from 2 to 5 p.m.), totalled 18,074, or an average of 348 visitors per diem.

The largest number on any day was 996 (Easter Monday), the smallest 92 (June 18th).

Presents, Purchases, Acquisitions by the Staff.—The number of donations, purchases, or loans is as follows:—

Zoology	...	...	...	...	5,672
Geology and Mineralogy	...	...	...	...	217
Palæontology	...	...	...	...	181
Botany	...	...	...	...	1,104
Anthropology and Ethnology	...	...	...	...	367
Antiquities and Curios	...	...	...	...	17
Total	...	...	...	...	7,558

Library.—The additions to the Library were:—

Books.								
Purchased	...	...	...	...	...	...	48
Presented	...	...	...	...	...	...	161
Periodicals and Pamphlets.								
Purchased	...	...	...	...	...	...	136
Presented	...	...	...	...	...	...	848
Total							...	1,193

Labels.—520 labels were printed during the year.

Publications.—The publications in the *Annals of the South African Museum* number 9 *Memoirs*, covering 202 pages, and illustrated by 25 plates. In addition to those already published 10 papers covering approximately 790 pages and illustrated by 26 plates are in the printer's hands; while several other communications are in preparation. It is as well to point out that all these papers deal with Museum material exclusively.

Vol. IX. pt. IV., 11.—List of Plants collected in the Percy Sladen Memorial Expeditions, 1908-9, 1910-11, by H. H. W. Pearson, Sc.D., F.L.S., 3 pls., 79 pp.

12.—A Contribution to the knowledge of the South African Proteaceae, by E. P. Phillips, D.Sc., F.L.S., 4 pp.

Vol. XII. pt. II., 10.—Investigations in South African Fossil Reptiles and Amphibia, pts. 1 to 4, by S. H. Haughton, B.A., F.G.S., 2 pls. and 11 text figs., 16 pp.

pt. III., 11.—Investigations in South African Fossil Reptiles and Amphibia, pts. 5-9, by S. H. Haughton, B.A., F.G.S., 4 pls., 40 pp.

Vol. XIII. pt. IV., 7.—Notes on South African Mollusca, by M. Connolly.

I.—On some South African Tiarinae.

II.—The Genus *Marinula*, King, with diagnosis of an undescribed Species.

III. A Monograph of the Doreasiinae.

Appendix. Undetermined varieties. 4 pls. and 7 text figs., 79 pp.

Vol. XIV. pt. I., 1.—A Monograph of the Formicidae of South Africa (Ponerinae, Dorylinae), by G. Arnold, M.Sc., A.R.C.S., F.E.S., 1 pl., 159 pp.

Vol. XV. pt. II., 2.—South African Crustacea (pt. VIII.), by the Rev. Thomas R. R. Stebbing, M.A., F.R.S., F.L.S., F.Z.S., 13 pls., 47 pp.

Collecting.—Mr. S. H. Haughton has spent two months in the field, and Mr. R. W. E. Tucker accompanied a collecting expedition to the South-western Protectorate.

ARRANGEMENT AND CONSERVATION.

Zoology.—*Mammals.*—Two years ago there was erected in the Museum grounds a long building of iron lined with wood to serve as a store room. The pressing want for further space has led me, however, to remove all the mounted skeletons from the main building, and to devote one-half of this store to an osteological gallery. In this building, (90 feet long by 24 feet wide), have been placed 247 skeletons and skulls, ranging from large mammals such as elephant, rhinoceros, camel, buffalo, etc., to a bat or frog. A good number of animals, large and small, are ready for mounting, including two of the minor whales which cannot be set up in the open. In a large glass case our series of human crania, numbering 150, has been arranged. Relatively poor in representatives of Bantu-speaking natives, it contains no less than 106 examples of the San, Bush and Hottentot. All the crania have been mounted on specially made stands, which permit of their being set uniformly on the Frankfort line, the nearest possible approach to the position of the human skull and body in life.

The head of the northern Balaenoptera whale (*B. borealis*) has been set next to the southern (*B. brydeii*), so as to permit of comparison; the differences are important, and a memoir on the same will be published. The five other skeletons of

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FIG. 1.
Group of Seven Gemsboks (*Oryx gazella*).
(See Page 3.)

$\times \frac{1}{20}$

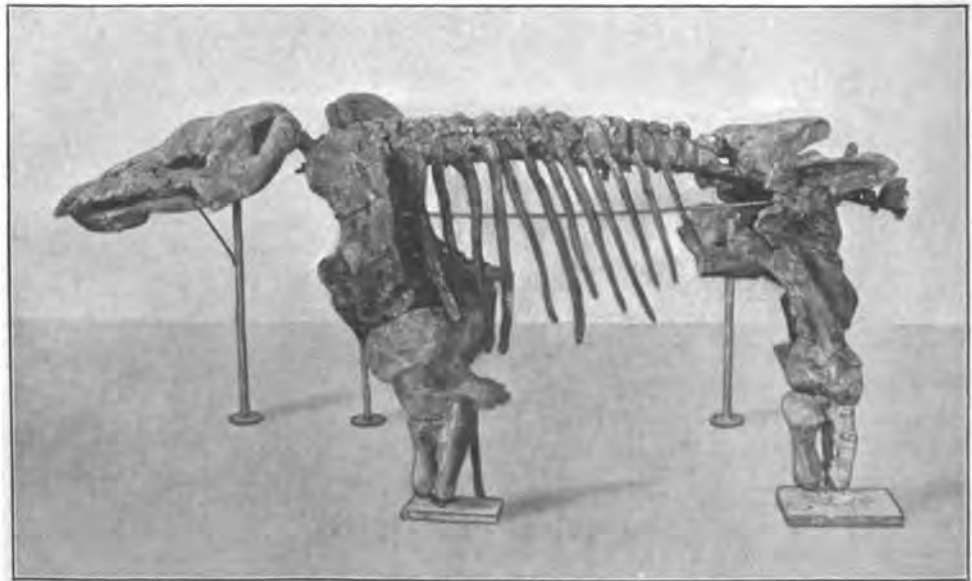


FIG. 2.
Skeleton of *Struthiocephalus whaitsi*.
(See Page 4.)

$\times \frac{1}{19}$

whales, likewise exhibited in the open, are in a bad way, so much so indeed that I am making arrangements to obtain parts of fresh specimens to take the place of the fast decaying ones.

To this exhibited collection has been added the skeleton of a fine example of the *Orca gladiator*, a dolphin, 19 feet long, popularly known as the "Killer Whale," and presented by Mr. C. F. Ellefsen. One fin-whale from our seas is still unrepresented, and it has not been found possible to remove hitherto the skeleton of the Sperm-whale awaiting transfer from Cape Point to the Museum grounds. In anticipation of the enlargement of the building, I devised a group of our large local Antelopes, 7 Gemsboks in different stages of growth, to serve as a model for the groups that were to follow. To accommodate it the three hippopotami were removed from a case 15 feet long by 10 feet wide, room being found for them where the large skeletons formerly stood. A group of wild pigs (*Potamochoerus*), boar and sow with a litter of pigs, is expected daily.

Fishes.—The incorporation in the exhibited series of marine and fresh-water fishes is still proceeding. Wherever possible the small or medium-sized fishes are fixed in flat jars and painted their natural colours, when they are not uniformly silvery. Such a preparation requires a good deal of time, apart from the needful skill. The bright, almost gaudy, colouration of many of our sea fishes is very striking. When the specimens are too large, either they are cast in plaster or mounted as skins. Several large skates have been prepared this year in this manner.

The extension of the fish collection compels me to empty three more cases of foreign birds and mammals. The general collection of Mammals and Birds is now reduced to one-third of its original contents.

We have succeeded in obtaining some fresh-water fishes from inland districts, especially from the North. Several were unrepresented before, but there are still several described species wanted to complete the collection.

Birds and Reptiles.—We have received a fair number of Birds and Reptiles from different parts. They do not call for special mention, except in the case of an example of the egg-eating snake, *Dasypeltis scabra*, caught in the act of swallowing in its peculiar fashion a "dummy" porcelain egg. This is the second case now brought to my notice.

Insects.—The Insects received number 5,822 examples, representing 3,752 species, 1,015 of which were not previously in the collection. This increase in new kinds is due to special attention having been paid to collecting Muscid Diptera, Micro-Lepidoptera, Ichneumonid and Chalcid Hymenoptera, etc., because I was able to secure the services of specialists in determining these minute, unattractive kinds so imperfectly known on this account. The kinds obtained, except for a small exchange with an Australian Museum, are mainly South African, but some were obtained from British East Africa, and an interesting lot from Nigeria was presented by Mr. J. C. Bridwell, an entomologist from the United States, as an acknowledgment of what he was pleased to call the kindness he experienced in the Entomological Department of the Museum. The main incorporation in the cabinets, in addition to many Hymenoptera, Diptera, and a fair number of Orthoptera, has been that of several families of South African moths, and although time could not be found to add to these the identified Micro-Lepidoptera, it is now possible to obtain a survey of the whole Lepidoptera of South Africa arranged according to Hampson's system in 8 cabinets of 30 drawers each.

We have, however, a fairly large number of species still unidentified, some of which have been sent this year to specialists; others will follow next year. In addition to the Lepidoptera, four sub-families of Coleoptera have been re-arranged, and six families of Diptera sorted, ready also for incorporation as soon as their identification is sufficiently advanced or complete. Considerable progress has thus been made in the Entomological Department.

While the troops of the Union were camped in the wide sand belt of Luderitz-bucht (Angra Pequena) and Swakopmund, waiting to advance inland, there appeared suddenly after heavy rains (a thing almost unheard of in these parts), all along the line, and probably beyond it, immense swarms of moths. The fact is the more extraordinary in that these sands are almost void of visible vegetation, nor were the "swarms" brought by the wind from inland. They disappeared as rapidly as they had come into existence. Thanks to Mr. V. N. Dawson, of the Transport Corps, who collected them for us, we found that the swarms consisted of 20 kinds of known Noctuidae.

Marine and Land Invertebrates.—Very good progress has been made in our knowledge of local Crustacea and Mollusca, and a good number of species new to the collection has been secured.

Four papers have been published, and three are in the printer's hands.

Progress is being made in the section of Arthropoda, which includes Spiders, Scorpions, Scolopendra, Mites, etc. Several genera were worked, and records made in addition to sorting and indexing other collections left untouched for some time. A new desk-case containing Solpugidae and typical examples of South African trap-door and tube-building Spiders has been added to the exhibited series.

Geology and Palaeontology.—The report of this Department shows that considerable advance has been made in the Geological, Mineralogical and Palaeontological sections. There have been important additions to the collection of Meteorites, both by donation and exchange. The rearrangement of the Crystals, and the setting out of models labelled with the names of the faces and their symbols, very kindly undertaken by Professor Shand, and nearing completion is, I believe, a new feature in South African museum or collegiate work. To admit of this innovation certain series have had to be removed from their case. A valuable addition is that of the rocks and fossils from Australia brought back by Dr. A. L. du Toit, and obtained with the help of the geologists on the New South Wales Survey, and Professor E. David; for these rocks and fossils illustrate the geological relation of the two continents.

A re-arrangement of the Palaeontological Rooms has permitted of the placing on exhibition of the large skeleton of the newly-developed and restored *Struthocephalus whaitsi*, and of a better display of the other fine skeleton of *Parciasuchus*. The replica of the slab, 9 feet long, containing the exposed remains of *Rhinesuchus senekalensis*, skulls of very large Dicynodonts, a cast of the right front limb of *Erythrosuchus*, and other pieces of similar interest have been set up, together with a part of a fossil tree 8 feet 6 inches high and 28 inches in diameter.

The cast of *Parciasaurus*, which has done such good service for the last 30 years, has been removed to the Osteological section to permit of these additions. Other fossils of importance have been located, and will be removed next year.

In connection with the Palaeontological section it is interesting to mention that it contains types of 56 Karroo fossil reptiles and amphibia, 7 Karroo fishes, 2 Cretaceous reptiles and 4 Tertiary mammals. The well-known collection of Karroo fossil reptiles in the American Museum of New York contains 52 type specimens.

Anthropology and Ethnology.—The fossilised skull of the "Boskop" man found in the Transvaal has been examined by Mr. S. H. Haughton, our palaeontologist, and a preliminary note on this very interesting discovery was read before the Royal Society of South Africa. Professor R. B. Thompson has examined the fragments of limb bones found in the neighbourhood of the skull cap, and I have ascertained that the stones found with the remains are not artefacts. This skull cap is the longest known, with the exception of that of La Chapelle, but its greatest affinity is with the Cro-Magnon prehistoric type rather than with the Neanderthal. The limb bones seem to point to a frail skeleton. A report on the brain cavity is now in progress.

A donation of great interest and importance is that by Dr. T. F. Dreyer, of a fossilised human jaw found in river gravels at Harrismith, in the Orange Free State. It shows strong affinities with the Bush type of the Kalahari, and would seem to point to a great antiquity for the Bush race.

Important also are the finds of Dr. Dreyer, in another locality of the Orange Free State, of long stone scrapers or scraper-knives found together with remains of extinct animals, such as two antelopes (*Cobus ventrae*, *Connochactes antiquus*), and another, possibly new, the extinct buffalo (*Bubalus bairdi*), and extinct horse (*Equus capensis*), in fact all except two of the extinct mammals discovered hitherto in South Africa. These bones, bearing the peculiar patina of similar ones from the Pliocene or Pleistocene of Europe, show unmistakable traces of having been broken or perforated for extracting the marrow. A wooden pin was also found, but no amygdaloid boucher or anything resembling this archaic weapon.

Of the position of these palaeolithic tools or weapons (bouchers), and of their antiquity we have corroborative evidence given by Mr. Wohlfahrt, who in sending us a fine collection from Griqualand West writes: "All the bouchers were found in the shaft seen on the enclosed photo. In sinking a shaft at this particular spot you first go through 3 feet of red, wind-blown sand, after which you get 23 feet of white river sand cemented together by lime, and then you get on a layer of gravel

and boulders from 2 to 4 feet thick resting on Dwyka conglomerate. In this water-worn gravel, which we are working and searching for diamonds, we find the bouchers."

To the exhibited series of casts we have added ten figures of Bush people encountered in the Transvaal, 4 men, 5 women, and 1 boy. They have all been cast in an attitude betokening their special occupation, and will prove a very fine group artistically and ethnologically when the time for enlarged exhibition space has come. The height of all these people is under 5 feet. Their facial appearance, absence of steatopygia, and other minor characters differentiate them from the Cape and Kalahari Bush people. The full figure and a bust of tattooed Makua Bantus have been also placed in the room of the Native Races, and form a singular contrast with the adjoining San people.

A considerable number of stone implements has been received from many districts of the Union. Certain dolerite specimens from Victoria West show a fracture so singular in shape that I can ascribe it to insolation only; the texture of this particular rock would lend itself to splitting under our climatic conditions.

Interesting among the donations is that of 3 sticks decorated in poker work by a Bush native, and 7 figures in coloured clay of gemsboks, hartebeestes and springboks made by another such native in the Calvinia District. Not only in shape, but in colour, these figurines are perfect.

I am proposing to re-arrange the Ethnological Room into an Antiquity Room restricted to the history of the primitive races and their productions, thus discarding for a time the exhibition of ethnological objects.

Botany.—In the Department of Botany the mounting and incorporation of new material continues, and more cabinets are required to cope with the steady increase. There has been no collecting expedition this year. Two papers have been published; three voluminous memoirs are being printed, and two more are on the stocks.

Koopmans de Wet House.—The increasing number of visitors (21,861, against 16,878 in 1914), testifies to the growing popularity of this Museum Annex.

There arose a difference between the Public Works Department of the Union and this Institution, the former refusing to admit their liability to keep the house in repair. This difference has, however, been settled in our favour, but the programme of repairs this year, some of them very urgent, has had to be postponed.

The appropriation of certain rooms for exhibition purposes is very desirable, because there also we are hard pressed for space. The donations have been of interest; and certain loans are very much appreciated. The erection of shelving protected by plate glass for the blue and white china service, has permitted of the removal of an unsuitable glass case, which, however, proved to be very serviceable in another department.

L. PÉRINGUEY,
Director.

DEPARTMENT OF ZOOLOGY.

Mammals.—The number of accessions is 146, representing 51 species, 4 of which are new to the collection. A gennet from the southern border of Northern Rhodesia, a *Raphicercus* from Southern Rhodesia, which seems different from our common widely spread Steinbok, and the skull of the race of the pig *Choeropotamus*, called *C. nyassae*, not recorded hitherto from S. Rhodesia, deserve special mention. From Groote Schuur we have received several animal skins, and we are indebted to Mr. C. Ellefsen for the presentation of a complete skeleton of the "Killer-Whale," *Orca gladiator*, which has been mounted in the open, together with the skull of the northern fin-whale, *Balaenoptera borealis*. A collection of some 120 small mammals has been received from S. Rhodesia, and all or nearly all the examples have been prepared as skins either for mounting or for the study collection, whereby many series have been completed. All the skeletons formerly on exhibition in the main building have been removed, and a little more room has thus been gained, permitting of the removal and replacing of the three *Hippopotami* by a group of 7 gemsboks.

Birds.—The number of birds received is 43, representing 34 species. A clutch of eggs of the night-jar, *Cosmethornis versillarius*, has been added to the collection. The additions do not call for special notice. The nest and parent birds of the white-browed tinker *Barbatula bilineata* obtained from Natal has been added to the exhibited series.

Reptiles.—The number of reptiles received during the year is 84, representing 34 species. A very interesting collection from the neighbourhood of Luderitzbucht shows on preliminary examination three kinds of lizards and snakes, which seem to be new to the South African Fauna. From there were also received 2 examples of the rare and singular Gecko *Palmatogecko rangeti*, not represented hitherto in the collection. A fair number of reptiles was also received from Southern Rhodesia. An exchange has been arranged with a Museum in the United States for West African species.

One of the two Seychelle land-tortoises loaned by us to Groote Schuur has been killed. It was obtained 4 years ago, and was 44 years of age.

Fishes.—Some fresh-water fishes were obtained from Rhodesia. There are still 7 or 8 species wanting to complete our series of known species. We encounter great difficulty in securing specimens.

The thanks of the Trustees are due to the following donors:—Messrs. H. W. Bell-Marley, H. A. Blackburn, the Hon. R. Bridgeman, Father C. M. Daignault, Messrs. H. C. Cooper, C. K. Ellefsen, G. H. Herman, W. E. Jones, P. C. Keytel, Miss Marshall, Dr. J. G. M. Melle, Mr. W. H. Millar, Dr. Stoehr, Messrs. P. F. du Toit, and R. R. Zeederberg.

L. PERINGUEY,
Director.

DEPARTMENT OF FISHES AND MARINE INVERTEBRATES.

To the Director, South African Museum.

SIR,—I have the honour to present the following report on the Department of Fishes and Marine Invertebrates for the year 1915.

The spirit collections continue to increase and, though the number of specimens received is not very great, their value is greater in that they help materially towards filling the gaps in our series.

The numbers are as follows:—

	Specimens.	Species.	New to the Museum.
<i>Fishes</i>	209	87	8
<i>Crustacea: ca.</i>	550	147	39
<i>Mollusca</i>	305	104	72
<i>Worms and other Invertebrates: ca.</i>	160	30	10

Amongst the fishes 5 are new to the South African fauna list. Of the total recorded species of marine fishes, namely 718, the Museum now has specimens of 497, or 63 per cent. The percentage is probably a little higher, as the total included several forms whose identity is still doubtful: they were described by the older writers, and may have to be regarded as synonyms.

The large number of new forms of Mollusca is due to the kindness of Dr. Becker, of Grahamstown, who sent numerous species from the Kowie and other localities in exchange for our duplicates.

Mr. H. W. Bell-Marley, of Durban, has helped to obtain for the Museum many Crustacea hitherto unrepresented, including the Japanese cray-fish, a spiny-prawn (*Stenopus*), and several small species of amphipods and isopods.

Collecting.—During the early part of the year I had a fortnight's collecting at Buffels Bay, and on several occasions I have collected at Sea Point and St. James. I am also carrying out a survey of the streams on Table Mountain; several Crustacea new to science have already been found.

Public Exhibitions.—Specimens of sponges and Crustacea have been placed on exhibition. Amongst the latter is a board with diagrams, specimens and descriptive labels illustrating as far as is yet known the life-history of the Cape Cray-fish (*Jasus lalandei*).

The collection of fishes has been considerably enlarged, and is now very representative of the marine species. The great majority are represented by specimens painted, as far as possible, to match the natural colours of the fishes, and mounted in glass jars. A certain number are stuffed skins, and a few are casts. 63 per cent of the species represented in the Museum collections are represented also in the public collection.

In connection with the fish collection mention may be made of Captain Collett's kindness in procuring for the Museum various specimens, including a large skate, a large electric skate, a steen-klip-fish, and other kinds.

I have the honour to be,

Sir,

Your obedient servant,

KEPPEL H. BARNARD.

DEPARTMENT OF ENTOMOLOGY.

To the Trustees of the South African Museum.

The number of specimens received, pinned, set and labelled during the year in this Department is 5,822, the number of species 3,752, that of novelties 1,015, of which a fair number are in process of identification. The proportion of new accessions is greater than the average; that of the whole is normal, and distributed as follows:—

	Examples.	Species.	Novelties.
<i>Hymenoptera</i>	1,294	904	314
<i>Coleoptera</i>	1,333	743	101
<i>Diptera</i>	1,286	791	210
<i>Lepidoptera</i>	1,400	967	290
<i>Neuroptera</i>	92	63	24
<i>Hemiptera-Homoptera</i> ...	200	152	30
<i>Orthoptera</i>	217	132	46

The incorporation of the moths section of Lepidoptera includes the families *Lymantriadae*, *Striphnopterygidae*, *Notodontidae*, *Limacodidae*, *Saturnidae*, *Psychidae*, *Arbellidae*, *Cossidae*, *Lasiocampidae*, *Zygaenidae*, *Uraniidae*, *Thyridae*, *Pyralidae*, *Sesiidae*, *Hepialidae*, and 2 sub-families of *Geometridae*. In the order Diptera, the *Tabanidae* have been completed; the upper *Myodariii*, the *Syrphidae*, and two other families sorted and temporarily incorporated, until the return of the material sent to specialists for identification and report is returned.

The co-types of South African Formicidae described by Mr. G. Arnold have been placed in the cabinets. In the Coleoptera the *Sagrinae*, *Criocerinae*, *Clythrinae*, *Eumolpinae*, and *Hispinae*, of the family *Chrysomelidae*, and the family *Bostrychidae*, have been similarly treated.

A fair amount of setting, pinning, and labelling has been done, and also a good many duplicates have been distributed in their respective store boxes. An exchange of Hymenoptera has been made with the Brisbane Museum.

One entomological paper on Formicidae has been printed and published; five are now in the printer's hands, namely, one on the South African Formicidae (pt. 2), by G. Arnold; one on *Stomoxys* (Diptera), by J. Villeneuve; two on Hymenoptera by R. E. Turner and C. Morley respectively; and one on South African Orthoptera by myself. Two other memoirs are ready for publication.

The principal donors have been: Messrs. G. Arnold, H. W. Bell-Marley, J. C. Bridwell, D. Bultitude, Father Daignault, Mr. and Mrs. Dieterlen, Messrs. V. N. Dawson, D. Dodds, R. Dummer, A. J. T. Janse, W. E. Jones, R. M. Lightfoot, Miss Marshall, Dr. J. G. M. Melle, Mr. F. W. Pettey, Bro. J. H. Power, Father J. O'Neil, Father A. Voigt, Miss Schunke, and L. Péringuey.

L. PÉRINGUEY,
Director.

DEPARTMENT OF ENTOMOLOGY (INSECTS EXCLUDED).

The Director, South African Museum.

SIR.—I have the honour to submit the following report for the year 1915.

The work of compiling the bibliography and record of species of the Araneida from works available at the Museum and Public Library was continued in the New Year. From this the card catalogue of species was commenced in continuation of

the one compiled by Dr. Purcell. When this was completed for the family *Ariculariidae* it was discontinued for the time, and the task taken up of working through the material then covered by the species catalogue. Several genera of the *Ariculariidae* were worked and new species described and other records made.

In addition to this the very considerable collection of Arachnida made in previous years by Dr. Purcell was received, sorted and indexed. Additions were made to the exhibited series, and a new case devoted to exhibiting Solpugidae; whilst other portions of the collections were overhauled and remounted. Exhibits were also made of trapdoor spiders and their nests, showing, as far as possible, the invisibility of the latter when in their natural soil.

Collecting has been done at various times in the neighbourhood of Cape Town.

The total acquisitions for the year 1915 are as follows:—

Acari, 140 specimens. *Araneida*, 880 specimens. *Myriapods*, 220. *Opiliones*, 14. *Pedipalpi*, 1. *Pseudoscorpiones*, 31. *Scorpionidae*, 63. *Solpugidae*, 18.

The principal additions have been made by Dr. and Mrs. Purcell, Mr. H. W. Bell-Marley, Mrs. Paterson, and Mr. Cronwright Schreiner, to whom the thanks of the Trustees are especially due.

I have the honour to be,

Sir,

Your obedient servant,

R. W. TUCKER.

DEPARTMENT OF GEOLOGY, MINERALOGY AND PALEONTOLOGY.

The Director, South African Museum.

SIR,—I have the honour to send you a report on the progress of the Geological collections during the past year.

The meteorites have been placed in a case by themselves, and the collection has been enlarged by exchange with the Geological Survey of India.

The iron meteorite from Kopjes Vlei has been obtained, and the British Museum has given us a cast of the meteorite from Daniel's Kuil. Exchanges of meteorites are being arranged with the British Museum.

A new feature in the mineral collection is the re-arrangement of the crystals and the setting out of models labelled with the names of the faces and their symbols on Miller's notation. So far as possible a model representing the perfectly developed crystal is being placed in parallel position at the side of each natural crystal, a method of exhibition which is very suitable for students of minerals. This work of arrangement, determination of faces and labelling is being done by Prof. Shaud, of Victoria College, Stellenbosch, and all interested in the mineral collection are deeply indebted to him for the skill and pains taken over what is often a tedious work. The space required for this exhibit was obtained by putting away the long series of foreign sedimentary, metamorphic and igneous rocks, which makes an unfortunate but, we hope, only temporary gap in the exhibits. Many of the rock types concerned are to be found in the African series, but as these are primarily arranged on a stratigraphic basis similar or related rocks are often widely distributed.

A good collection of minerals, rocks, and fossils from Australia has been obtained by Dr. du Toit, when he was there in 1914, with the help of the geologists on the New South Wales Survey and Prof. Edgeworth David, of Sydney, and Messrs. Todd and Samuel, of Adelaide, gave a collection of the radio-active minerals. The Australian specimens are an important addition, and the exhibit prepared from them illustrates the geological relation of the two continents: a similar collection from South America would be most interesting.

In the course of Mr. Chapman's examination of the small fossils from the Need's Camp beds five new species of foraminifera and ostracods were found, and the determinations help towards the correlation of these isolated deposits.

The reptilian and amphibian collection has received many valuable additions, including a good series of small skulls from the Beaufort West District, and a number of good Dicynodont and Gorgonopsian skulls from the neighbourhood of Graaff-Reinet, collected for the Museum by the Rev. J. H. Whaits, to whom we are much indebted.

The exhibited collection of Karroo fossils has been arranged in stratigraphical order so far as possible, and amongst the additions to it the most noteworthy are the following: a cast of the amphibian *Rhinesuchus senekalensis*; a complete skeleton of *Struthiocephalus whaitsi*; the mounted cast of the fore-limb and shoulder girdle of *Erythrosuchus africanus*; skulls of the large dicynodonts *D. whaitsi* and *Eocyclops longus*—the latter a much finer skull than the type and only other known specimen—and a skull of *Esoterodon uniseries*. The re-arrangement of the fossils allows the fine skeleton of *Pareiasuchus* to be displayed.

Mr. Haughton spent two months on an expedition chiefly for the purpose of getting Dinosaurs from the Red beds. For help in this matter and for the donation of specimens our thanks are due to Messrs. A. Brown, C. W. Cullingworth, S. J. Fourie, Dr. D. R. Kannemeyer, A. W. Lilford, B. Read, W. Robertson, Gideon Schoeman, and H. M. Taylor. To the trustees of the Albany Museum we are indebted for permission to take a cast of *Eosuchus colletti*.

The chief addition to the mammals is a collection from Haagenstad Pan, made for the Museum by Dr. T. F. Dreyer.

The trunk of a coniferous tree from Kromme Spruit, Herschel, of which fragments 9 feet long in all were sent down by Mr. Haughton, has been reconstructed and set up.

Our thanks are also due to the following gentlemen for the gift of specimens:— Messrs. A. Ebdon, E. Hughes, J. T. Kuhlmann, J. W. Jones, I.S.O. of Adelaide, South Australia, J. C. Moore, Mrs. T. V. Paterson, Dr. P. A. Wagner, E. W. Skeats, J. Sussmilch, and W. Ross.

During the year two parts (vol. XII, parts 2 and 3) of the Annals dealing with fossils have been issued. They contain descriptions of species belonging to the genera *Trematosaurus*, *Struthiocephalus* (gen. nov.) *Trochosaurus* (gen. nov.), *Titanosuchus*, *Dicynodon*, *Lystrosaurus*, *Rhinesuchus*, *Moschosaurus* (gen. nov.), *Galesuchus* (gen. nov.), *Gorgonognathus* (gen. nov.), *Scymnognathus*, *Kannemeyeria*, *Sphenosuchus* (gen. nov.) Mr. Haughton freed these specimens from the matrix and described them.

I have the honour to be,

Sir,

Your obedient servant,

ARTHUR W. ROGERS,

Hon. Keeper of the Geological Collections.

DEPARTMENT OF BOTANY.

The Director, South African Museum, Cape Town.

SIR,—I have the honour to submit the following Report on the working of the Herbarium:—

I am pleased to state that the Cabinets remain free from insects, and that the collection is in good condition. The precautions taken with parcels arriving at the Herbarium, as mentioned in my last Report, are still observed with the same good results.

The number of specimens mounted during the year has been 940, and 29 species have been mounted on sheets already in the Cabinets. The total number of sheets incorporated in the Cabinets has been 2,097, a number of these being mounted last year. I am pleased to state that we are gradually increasing the efficiency of the Collection by the addition of species not hitherto represented in the Cabinets. This year the number of new additions has been 512, an increase of just over 35 per cent on that of last year.

Four new Cabinets will be needed next year to allow for the incorporation of newly-acquired material.

The specimens received at the Herbarium during the year have been as follows:—

Donations	...	...	...	...	...	757
Exchange	...	...	...	...	...	103
Purchases	...	...	...	...	...	244
Total	...	...	...	...	...	<u>1,104</u>

Besides naming specimens and giving botanical information to visitors at the Herbarium and correspondents of the Museum, collections or specimens have been determined for the following:

Bolus Herbarium, Cape Town: S.A. Police; Provincial Council; Cape Rural Council; Elsenberg Agricultural College; Victoria College, Stellenbosch; Girls' School, Stellenbosch; Girls' School, Wellington; Municipal Gardens, Cape Town; Training College, Cape Town; Cape Peninsula Publicity Association; Wild Flowers Protection Committee; Forest Department; Pretoria Museum; Natal Museum; Natal University College; Albany Museum; Government Entomologist; Government Analyst.

During the year the following genera represented in the collection have been worked through, and the unnamed specimens named as far as possible, viz., *Calpurnia*, *Vernonia*, *Pteronia*, *Corymbium*, *Schizostylis*, *Hesperanthera*, *Geissorhiza*, *Dicrama*, *Lria*, *Frezia*, *Lapeyrousea*, *Tritonia*, *Sparaxis*, *Synnotia*, *Anthalyza*, *Ornithogalum*.

I have been able to describe and prepare keys* to the following genera:—*Ethulia*, *Hoplophyllum*, *Vernonia*, *Erlangea*, *Bothriocline*, *Corymbium* (Compositae—Tribe Vernoniaceae), and *Calpurnia* (Leguminosae). In this connection our thanks are due to the Curator of the Bolus Herbarium and the Director of the Albany Museum for the loan of specimens in their respective collections. In addition to the above I have almost completed describing our material of *Cyphia*, but as yet have not seen the species in other collections.

The Herbarium continues to attract a large number of students who wish to make use of the collection, and visitors wanting determinations or information on botanical matters. The number of visits during the year has been 203, besides which, on two occasions, parties from schools were shown the collection and the method of keeping a Herbarium briefly described to them.

The following loans and donations have been made by the Herbarium:—

Bolus Herbarium.—*Protea Dykci*, Phill. (donation); Genus *Aspalathus* (loaned); Species of *Oralis* (loaned); 23 species of *Gladiolus* (loaned).

Royal Botanic Gardens, Kew.—*Spatulopsis Begleyi*, Phill. (donation); 262 Basutoland plants (donation); *Agathosma alta*, Phill., and *A. Dummeri* (donation); 117 Basutoland plants (donation); 87 sheets *Lightfootia* (loaned).

Government Mycologist, Pretoria.—*Puccinia Printziac* and *P. aecidiformis* (donation); Genus *Meliola* (loaned); 33 sheets Fungi (loaned).

Albany Museum, Grahamstown.—5 species *Cotyledon* (loaned); 175 Basutoland plants (exchanged); *Hoplophyllum spinosum* (donation).

Dr. de Villiers, French Hoek.—Mounted sheets of French Hoek plants (donation).

South African College, Cape Town.—6 species of Mosses (loaned).

British Museum, South Kensington.—100 Basutoland plants (donation).

The thanks of the Trustees are due to the following donors for presentations made during the year: Mr. H. V. Begley, Prof. Geo. Potts, Mr. A. H. Hamer, The Curator, Municipal Gardens, Cape Town; The Curator, Bolus Herbarium; The Director, Albany Museum; The Director, Pretoria Museum; The Director, Natal Museum; Archdeacon F. A. Rogers, Madame A. Dieterlen, Dr. R. Marloth, Dr. J. W. Bews, and Mr. A. T. Prentice.

The following papers have been contributed by the Herbarium during the year:—

Published.—1. The Scrophulariaceae of the Percy Sladen Memorial Expedition (part authorship with Mrs. F. Bolus and N. E. Brown); Annals S.A. Museum, Vol. IX, pt. iv.

2. A Contribution to the knowledge of the S.A. Proteaceae (No. 2); Annals S.A. Museum, Vol IX, pt. iv.

In Press.—3. A Contribution to the knowledge of the Flora of the Leribe Plateau and environs, with a discussion on the floras of Basutoland, the Kalahari, and the South-East Regions.

4. A Revision of the genus *Pteronia*.

5. A Contribution to the knowledge of S.A. Flora (No. 2).

6. A Contribution to the knowledge of the S.A. Proteaceae (No. 3).

I have the honour to be,

Sir,

Your obedient servant,

E. PERCY PHILLIPS,
Herbarium Assistant.

DEPARTMENT OF ANTHROPOLOGY, ETHNOLOGY, AND ARCHAEOLOGY.

The donations number 367 specimens, very few of which could be exhibited.

The collection of stone implements continues to increase, and the presence of implements of a palæolithic type is being gradually recorded from most districts of the Union and beyond. The casts of the prehistoric skulls from Pithecanthropus to Cro-Magnon, etc., are now on view.

Of artistic interest are 7 perfect figures of 3 kinds of antelopes made of somewhat coarse clay, and coloured with a sense of exactness difficult to appreciate unless seen. They are the handiwork of a Bush native, and they were presented by Mr. Donald Bain.

The thanks of the Trustees are especially due to Mrs. Antrobus for an earthenware jar (prehistoric Egypt), and 2 Egyptian figurines; J. A. Ashley Cooper for bouchers from Griqua Town, and a photograph of the skull of an Australian Aboriginal; Dr. T. F. Dreyer, for finds made in the Free State of stone implements found together with bones of extinct and still living animals, as well for a fossilised human jaw, also found in the Free State; Dr. A. L. du Toit for some bouchers and scrapers from Natal; Mr. J. H. Herman for 3 decorated walking sticks, the work of a Bush native, and of the same style as that on other sticks made by a Bushman at Prieska years ago; Mr. C. H. Heese for some implements of South African palæolithic and neolithic type—among them being arrow heads with a tang for hafting, found, however, in the enclosures of "Kraal" Bushmen—a plain case of new culture obtained by contact; J. Fleming, for a Bundoo devil mask from the West Coast; J. S. Henkel for a fine series of bouchers from Knysna; Madame Jacques for tracings of Bush paintings in Basutoland; W. Immelman for a Basuto earthenware pot, in the shape of a cock, and affecting, therefore, that of some old Egyptian water vessels; Dr. D. R. Kannemeyer for numerous and varied specimens; the Hon. J. X. Merriman; Rev. W. E. Sharples, for a Strand-Looper quern, bearing on the reverse depression traces of red pigment, and a remarkable oval pendant, or perhaps palette also of Strand-Looper manufacture; Dr. P. A. Wagner for Kung Bushmen arms; Rev. J. H. Whaits for Kwe's and mullers and bouchers from the Beaufort West District; Messrs. Wilson Bros., for flakes from the Katberg District, with retouched edges on the reverse, a very uncommon occurrence; and lastly, Mr. A. Wohlfahrt, for a series of bouchers with the clearest explanation of the site where they are found as yet received by me.

I had ready for some time a memoir on the "Rock Shelters" of the South-western districts of the Cape Province. I hope that it will be possible to send it to the printers during the incoming year.

L. PÉRINGUEY,
Director.

 KOOPMANS DE WET HOUSE.

The Trustees of the South African Museum.

The number of visitors was greater by 4,983 than last year. The monthly average was 1,989.

It has not been possible to restore the dining room for exhibition purposes, nor to effect repairs for the conservation of the building. The "slave quarters" are positively dangerous.

The blue and white China service has been removed to shelves with a glass front, where the pieces make a fine display.

The more important donations consist of 23 objects; those of smaller importance number 6. Ten objects have been loaned.

M. Melt J. Brink presented cut glass bowls and engraved glasses of the 18th century, lustre ware, old silver spectacles, a silver snuff-box of 1695, and other objects.

Mrs. Heckroot, of Helena's Hope, Claremont, donated an old galvanic battery made at Cape Town about 1810, a lithograph and the photograph of a portrait; Mrs. J. L. Cobbin, of 7, Nicoll Street, a set of old oil paintings on wood, and an old red and gold China cup and saucer. Mrs. John Noble presented 3 old Venetian dram-glasses.

Dr. F. Engelenburg, of Pretoria, and Mr. J. M. Solomon, Architect, have promised to contribute a sum of £10 and £5, respectively, for purchasing objects of interest for the collection. A stinkwood table, a fine brass komfoor and kettle (dated 1818), and a stinkwood chair have been purchased.

The loans include 2 old Dutch portraits in oil and 2 engravings by Bowler (Mrs. Victor Kotzee); an old family Dutch Bible (Mr. R. C. Hoets); 2 medals—one being the first gold medal given by the South African College—(Mr. J. D. Marquard); oak inlaid Dutch chest, 17th century, and a stinkwood Rust-bank, 18th century (Dr. W. F. Purcell).

The thanks of the Trustees are also due to Messrs. F. Bird, T. Manschester and Co., J. H. Hablutzel, C. E. Woolley, W. Fick, and Dr. W. F. Purcell, for other donations.

L. PÉRINGUEY,
Director.

THE LIBRARY OF SOUTH AFRICAN MUSEUM.
FEB 5 - 1940
UNIVERSITY OF ILLINOIS

STATEMENT OF INCOME AND EXPENDITURE FOR THE YEAR ENDING 31st MARCH, 1915.

To Balance, 1st April, 1914	£23 9 5	By Salaries	£2,830 14 5
" Grants:—		" Library	99 9 5
Union Government	4,519 0 0	" Specimens Purchased	369 19 7
Provincial Administration	400 0 0	" Transport and Travelling	60 19 8
Cape Town Corporation	200 0 0	" Freight	21 0 5
	5,119 0 0	" Publications	516 9 7
" Donation from Aliwal North Municipality	1 1 0	" Upkeep of Museum	608 8 2
" Interest on Coin Fund	4 0 0	" General:—Petties, etc.	53 10 4
" Sale of Publications	9 4 5	" Sunday Duty	96 4 0
" Sale of Whale Bones	2 0 0	" Payment of award under Workmen's Compensation Act	175 0 0
" Refunds:—		" Legal charges on above	10 15 7
Postal Order issued on Germany	0 13 4	" Bank Charges	1 12 6
J. G. Steytler	1 12 8	" Balance in hand:—	
Overpayment to Haughton	0 0 10	Cash in Bank	£313 16 5*
Cheque to Coull drawn twice	7 8 6	Advances against garden-er's wages	5 8 0
	9 15 4	Warrant Voucher not yet cashed	5 8 0
		Petty Cash	8 14 1
			333 6 6
	£5,168 10 2		£5,168 10 2

* Includes £29 2s. 0d. held on behalf of the Hadje Shah Mohammed Fund for the purchase of Coins.

Audited and found satisfactory,

(Signed) WALTER E. GURNEY,
Controller and Auditor-General.

Pretoria, 10th May, 1915.

(Signed) L. PÉRINGUEY,
Director, South African Museum.

Cape Town, 5th May, 1915.

Statement "A."

HADJE SULIMAN SHAH MOHAMMED FUND FOR THE PURCHASE OF COINS.

Amount of Investment with the South African Association	£100 0 0
Balance of Interest on 31st March, 1914	25 2 0
Interest Received during the year 1914-15	4 0 0
	£129 2 0

(Signed) L. PÉRINGUEY,
Director of the South African Museum,
Cape Town.

5th May, 1915.

UNION OF SOUTH AFRICA.

REPORT

OF THE

SOUTH AFRICAN MUSEUM

THE LIBRARY OF THE
FEB 5 - 1940
UNIVERSITY OF ILLINOIS

FOR THE

Year ended 31st December, 1916.

Presented to both Houses of Parliament by command of His Excellency the Governor-General.
1917.

CAPE TOWN :

CAPE TIMES LIMITED, GOVERNMENT PRINTERS.

1917.

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C.T.Ltd.—B2260.

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Trustees of the South African Museum :

The Right Hon. JOHN X. MERRIMAN, P.C., M.L.A.

Sir THOMAS MUIR, Kt., C.M.G., M.A., LL.D., F.R.S.

JOHN WILLIAM JAGGER, F.S.S., M.L.A.

Scientific Staff of the South African Museum :

LOUIS ALBERT PÉRINGUEY, D.Sc., Director and Keeper.

SIDNEY HENRY HAUGHTON, B.A., Assistant-Director, and Assistant in Charge of the Geological and Palæontological Collections.

ARTHUR WILLIAM ROGERS, M.A., Sc.D., Hon. Keeper of the Geological and Mineralogical Collections.

EDWARD PERCY PHILLIPS, D.Sc., Assistant in Charge of the Herbarium.

KEPPEL HARCOURT BARNARD, M.A., Assistant in Charge of Fish and Marine Invertebrates.

RICHARD WILLIAM ETHELBERT TUCKER, B.A., Assistant in Charge of the Arthropoda (Insects excluded).

ROBERT MARK LIGHTFOOT, F.E.S., Assistant.

UNION OF SOUTH AFRICA.

DEPARTMENT OF THE INTERIOR.

Report of the South African Museum for the Year ended 31st December, 1916.

To be Presented to Parliament.

10th February, 1917.

The Secretary for the Interior.

SIR,—I am instructed by the Trustees of the South African Museum to transmit the report of proceedings and progress of this Institution to be laid before Parliament according to paragraph 9 of Act 17 of 1857.

I have the honour to be,

Sir,

Your obedient servant,

L. PÉRINGUEY,

Director.

REPORT OF THE DIRECTOR.

To the Trustees of the South African Museum.

SIR,—I have the honour to submit my report on the administration of the Museum for the year 1916.

Visitors.—The number of visitors was 161,639, against 136,557 last year. This number is divided as follows:—

White—Adults.	Males	...	...	...	...	68,142
	Females	...	...	...	...	38,946
Children	...	...	...	...	...	32,840
Coloured—Adults.	Males	...	...	...	...	9,766
	Females	...	...	...	...	7,317
Children	...	...	...	...	...	4,628

Forty-eight school parties, including drawing classes, and numbering 949 individuals, visited the Museum.

The Sunday attendance (from 2 to 5 p.m.) totalled 20,196.

The largest number on any day, except Sunday, was 2,241 on December 24th; the smallest, 67 on July 19th; and on Sundays, 946 on July 2nd, and 161 on October 12th.

Presents, Purchases, Acquisitions by the Staff.—The number of donations, purchases or loans is as follows:—

Zoology	...	...	...	...	9,996
Geology, Mineralogy, Palaeontology	...	...	...	...	453
Botany	...	...	...	...	1,607
Anthropology and Ethnology	...	...	...	...	184
Antiquities and Curios	...	...	...	...	13
Total	...	...	...	...	12,253

Library.—The additions to the Library were:—

Books.

Purchased	...	...	...	...	...	6
Presented	...	...	...	...	...	17

Periodicals and Pamphlets.

Purchased	...	...	...	...	...	137
Presented	...	...	...	...	...	1,067

Total 1,227

Labels.—908 labels were printed during the year.

Publications.—The following parts of the "Annals of the South African Museum" were published:—

- Vol. XIII, pt. V.—Notes on South African Non-Marine Mollusca, by M. Connolly, 13 pp., 11 text figs. Two new species of *Marginella* from South Africa, by L. J. Shackelford, 2 pp., 2 text figs.
- Vol. XIV., pt. II. A Monograph of the Formicidae of South Africa, by G. Arnold. 111 pp., 2 pls.
- Vol. XV., pt. III.—Contributions to the Crustacean Fauna of South Africa. The Amphipoda, by K. H. Barnard, 197 pp., 3 pls.
- pt. IV.—The Fresh-water Eutomostraca of Cape Province (Cladocera), by G. O. Sars, 48 pp., 13 pls.
- pt. V.—On some South African Ichneumonidae, by C. Morley, 47 pp.
Descriptions of New or Little-known Orthoptera, by L. Péringuey, 51 pp., 1 pl.

Corrected proofs of 18 other papers, covering 867 pp. and illustrated by 26 plates and 141 text figures, have been passed for press, and the papers should have appeared this year. Three new papers, with five plates and thirteen text figures, have been dispatched for printing.

Collecting.—All the Staff, myself included, have done field collecting in pursuance of a newly-inaugurated scheme of Zoological and Botanical Investigations of altitudes above 4,000 feet, together with a Palaeontological Survey.

ARRANGEMENT AND CONSERVATION.

Zoology.—Mammals.—The most important work done in the vertebrate series of animals has been the setting up of twelve skeletons of large mammals, including the Hippopotamus, Giraffe, Kudu, Eland, Blesbok, together with lesser ones, such as Pangolin, Lemur, etc. A fortunate accident enabled us to secure a somewhat large male of the finner whale, *Balaenoptera physalus*, the Northern Rorqual. It has been mounted in the open next to the other two species of the genus, and the addition of the fourth "finner," *Balaenoptera borealis*, daily expected from Saldanha Bay, will complete our series of the known species of this genus. Set up also, but not in the open, have been the skeletons of the lesser Cachalot and of a Porpoise. It was a great disappointment to me to lose the skeleton of a large sperm whale which had been awaiting transport to the Museum Grounds for the last two years. The new Management of the Whaling Company on whose wharf it partly lay had it turned into bone-dust a few weeks before the arrival of a Museum assistant sent to arrange for its removal. With the exception of a few species not known to frequent the Cape Seas, but which probably do so, our collection of whales is now nearing completion.

I am glad to state that provision is going to be made in the Government Estimates for 1917-1918 for the erection of a protective shed to preserve these huge skeletons from the disintegrating influences of the weather. So rapid is this decay that I had to dismount our 20 feet long "Killer," *Orca gladiator*, which had been on exhibition for less than one year.

Birds and Reptiles.—While the accessions of Birds do not lend themselves to much comment, the additions to the Reptiles have been on a good scale. We have obtained by exchange an interesting lot from the West Coast of Africa, and other examples from Nigeria. One new species of lizard has been detected among our South African material. A paper on the South African genus *Nucras* is in the printers' hands. Among the acquisi-

tions were four pythons of various length and thickness. Some years back there was a long controversy in the columns of the *Field*, respecting the length reached by a python. Recently a report of a python 22 feet long, killed in the Transvaal, appeared in our local Press. If my memory serves me well no one could bring satisfactory evidence of a length above 15 or 16 feet. That dried skins of that length are occasionally obtained, there is no doubt. But that the evidence of length deduced from that of the skin is not reliable is instanced by our experience of an 11 feet long python (10 ft. 11½ in.). The skin, after we had purposely avoided stretching it in the skinning process, measured slightly over 15 feet. The difficulty will consist in bringing it back to its normal size when mounting it.

Fishes.—The addition to the exhibited series of fishes proceeds gradually, mainly because glass jars assorted in size are just now things rare and costly. Our space is also limited. The incorporation of some of the more typical forms of our fresh-water fishes will probably absorb most of the space still left vacant. A large number of these fishes have been obtained; they have materially assisted in increasing the number of species dealt with in the second and final part of the *Monograph of the Fresh-water Fishes of South Africa*, in which 59 species are figured. It is probable that, except for the possible intrusion of a few species from beyond the South African limit, all the indigenous ones are now known and described. The bringing together of the material treated in this *Monograph* has been beset with many difficulties, financial and other.

Insects.—The number of insects received from donors or collected by the Staff is considerable. Their preparation is not yet completed, but the mounted and labelled specimens number 6,655 examples, representative of 3,133 species, of which 510 species are not apparently represented in the collection, and are being, or will be, reported upon.

The incorporation in the cabinets of identified species, comprising types, co-types, or species identified by specialists and labelled as such, has been on an extensive scale; and the inclusion of 1,120 species and 3,209 examples in two families of Lepidoptera—the Micro-Lepidoptera (which a few years back hardly numbered a few hundred, whereas now nearly a thousand species are described) and the Geometridæ—completes now the Lepidopterous series arranged on Hampson's System of the Order. In the Hymenoptera the addition of 78 new species to the parasitic group of Ichneumonidæ is a very marked progress. The only Order which has not been as yet treated as fully as the others have been, namely the Hemiptera-Homoptera, will be taken in hand next year and, it is hoped, will also be completed during that period, at which time the Entomological Cabinets will afford entomologists, no matter what their speciality be, a very fairly complete survey of the South African insect world, including obscure and little-known groups, such as Siphonaptera, Mallophaga and Collembola, all arranged in 30 cabinets of 30 drawers each.

A survey of high altitudes (above 4,000 feet) has been begun. It is too early as yet to draw any conclusion as to the presence or absence of an alpine fauna or faunule, and the collecting expeditions—twice repeated, but at different times of the year, to the same neighbourhood—must extend over a series of years in order to permit of a complete entomological survey of these high summits—using the word "entomological" in its broadest sense. But the first three results have proved distinctly interesting.

The important entomological Memoirs published or in preparation testify to the activity of the Entomological Department in obtaining material and supplying it to specialists. It would certainly be desirable to have an entomological collector devoting the whole of his time to the investigation of certain districts, taken in turn. But such collectors are not easily found at the best of times, which the present is not. On the whole I can report good progress in this Department.

In the Entomological section, other than that of Insects, fair progress has been made in the classification and separation of groups, and a good number of additions obtained, mostly by the Assistant in charge.

Marine and Land Invertebrates.—The sorting and arranging of the "Pieter Faure" collections are still proceeding. Laborious as the task is, it well repays the trouble it involves and results in many discoveries which will form subjects of papers for our Museum publications. The shells (South African) have been taken in hand, and the exhibited series, the greater part of which had been put hastily together at the time we moved into the new building (1896), are now being re-arranged and added to considerably from material previously obtained and in which the results of the "Pieter Faure" dredgings mainly predominate.

Geology and Palæontology.—A valuable addition to this Department has been the arrangement of the series of crystal models and crystals placed in parallel position by Professor Shand in the centre case previously partly occupied by meteorites. Several additions have been made in the stratigraphical series of rocks, but important additions have been made to the series of plants and animals from the Karroo Beds; and large and important finds of material have been obtained which after development will add considerably to our knowledge of the fossil reptiles of the Karroo and other beds.

Among the more important additions may be mentioned a series of slabs from the *Ecce* Series of the Cape Province showing numerous well-marked tracks of worms, crustacea, and semi-webbed footed Amphibia. These are the first of their kind in the Museum collection, and throw interesting light upon the little-known fauna of the *Ecce* Beds.

Anthropology and Ethnology. The additions to the Anthropological Department consist of seven skulls of the Strand-Looper, Nama Hottentot, Ovambo and Mashona types. Four casts of Nama Hottentots, two women and two men, have been taken and will be modelled next year. There is also the prospect of being able to make casts of three, and perhaps more, typical Kalahari Bushmen. They will prove of considerable value to our ethnological series for, although we have two typical Masarwa women and a boy, no adult males could be obtained hitherto.

I decided to recast the arrangement of the Anthropological-Ethnological Room and to devote it to the exhibition of the South African Stone Age and objects connected with it, such as parietal paintings and gravings. The re-arrangement is not quite complete, but will be so early in the coming year. Only few districts of the Union are unrepresented in the display of stone implements. My difficulty is again the want of room.

All the ethnological objects once exhibited in this room, together with those packed in cases or drawers, have been re-catalogued and arranged roughly in a wood-lined iron building once intended for storage. It is now possible to have at a glance a more comprehensive view of the extremely extensive and valuable accumulation of ethnological objects, arms, pottery, etc., that has been growing for many years.

It is impossible to throw this store open to the visitors, but when the new wing is built, the space allotted to the section of ethnology will be found to be perilously full at the start. The other half of the store is devoted to the Osteological series.

Relics of the Strand-Looper Hottentots from the burial caves have been added to the collection. The interest attaching to them is great. Were it possible to isolate the stone-age period of South Africa, one would be tempted to give a special name to that of the Strand-Loopers. But I prefer to look upon them as the true San or Bushman pushed to the coast by one or more other races, while others took to mountain fastnesses or to the desert to avoid extermination. The stone and bone implements of the Strand-Loopers are those of the Mountain Bushmen; both could paint and grave. Hottentots did not paint nor grave.

The addition of eight rock-gravings of animals, each on one detached dolerite boulder, has increased the importance of our series of the graver's art in South Africa.

Collections of native arms and industry from Southern and Northern Rhodesia have been obtained; also relics found in ancient workings in the Northern Transvaal, alleged to have been used for smelting or digging for tin, etc.

Through the great kindness of the Government of the Straits Settlement we have succeeded in obtaining the tombstone of *Vrouw Van Riebeck*, the wife of the founder of the Colony of the Cape of Good Hope.

This stone is 8 feet high and 4 feet broad, and the Latin inscription reads (translated): "Here lies buried *Maria de la Queillerie*, the wife of his Excellency *Johann van Riebeck*, first Commander and Founder of the Fort and Colony of the Cape of Good Hope in Africa in the establishment of the East India Company, now Commander and Governor of the City of Malacca and Dependencies. Born October 20th at Rotterdam A.D. 1629. Died on the 2nd of October, 1664." Underneath the coat of arms is an inscription in Dutch:—

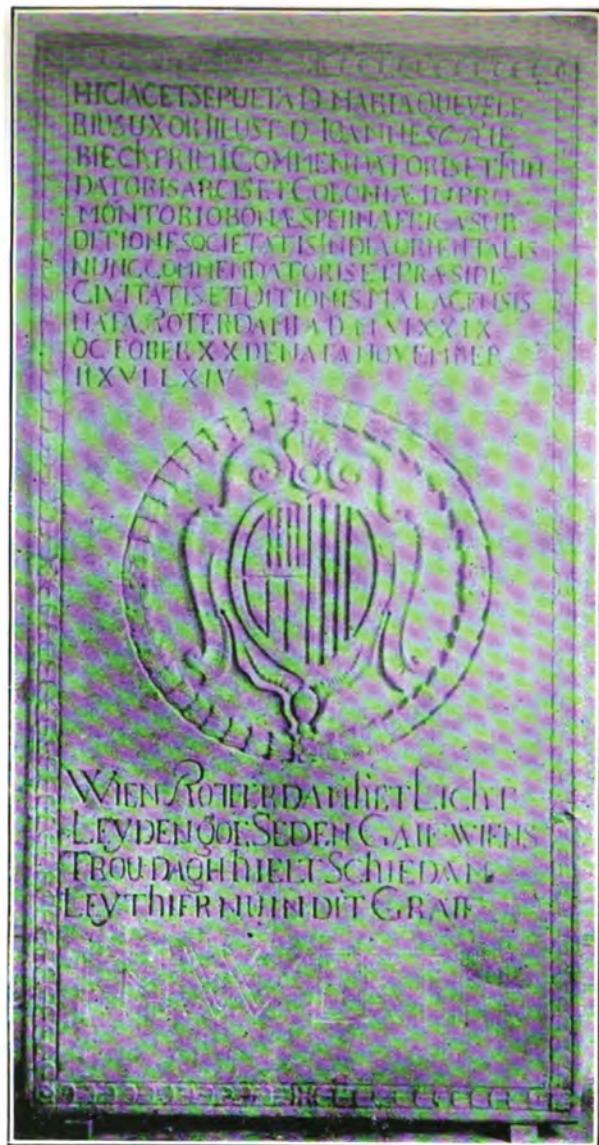
Wien Rotterdam het Licht
Leyden goe Seden Gaif Wiens
Troudagh hielt Schiedam
Leyt hier nu in dit Graif.

(In Rotterdam she saw the light of day;
at Leyden she received her education;
at Schiedam she was married;
in this grave she now lies.)

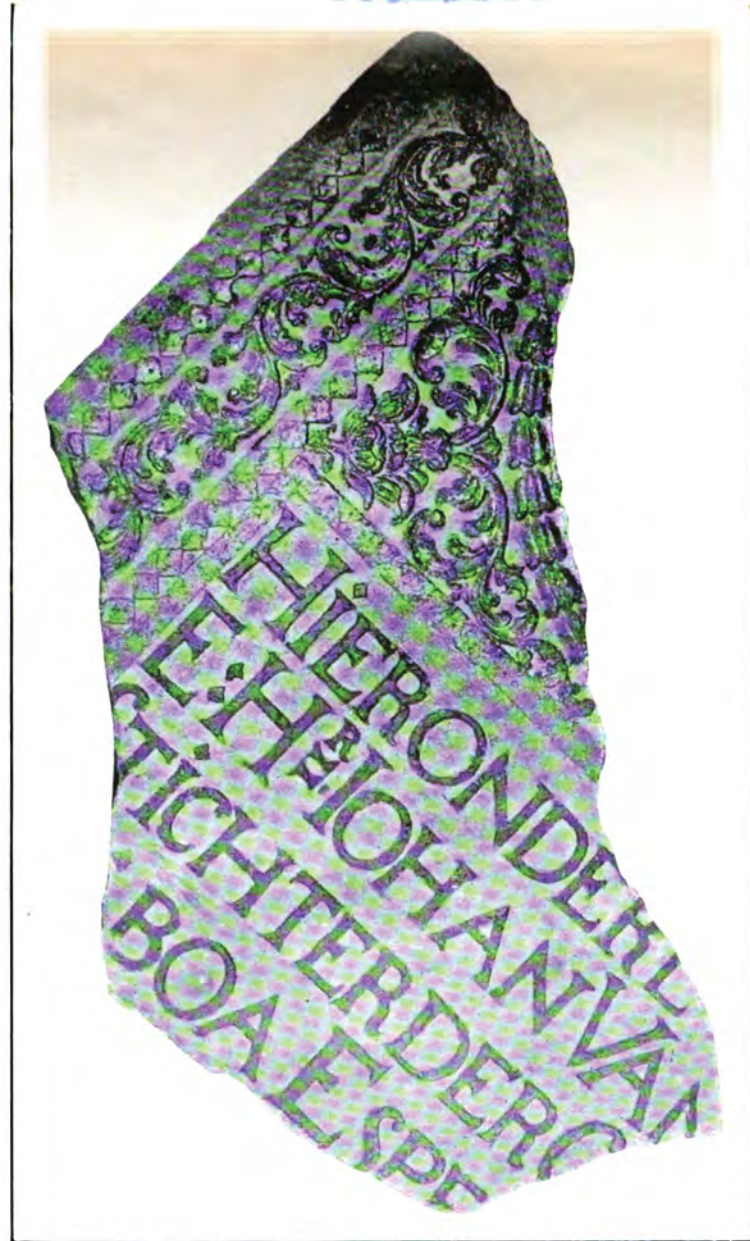
Marie de la Queillerie, the wife of Governor van Riebeck, was the mother of the second child of European parentage born in the fort "Good Hope." *Vrouw van Riebeck* followed her husband when he was appointed head of the Company's establishment at Malacca, which post he filled until 1665. She died there in 1664 at the age of 35.

This relic is now exhibited alongside the fragmentary epitaph of her husband's tombstone—*Johann van Riebeck*, who survived her for 13 years, dying in Java in 1677.

Our collection of Coins and Medals is fairly extensive, but its importance has been much enhanced by the deposition of a remarkable series of Imperial Roman and Byzantine, Carthaginian and Magna Graeca bronze and silver coins, etc. The value of this collection is greatly increased by the notes and figures explanatory of many of the objects, of which a good many result from finds in *Carteia*, in the neighbourhood of Gibraltar. An object of interest is also to be found in four gold and silver coins, Venetian and Indian respectively, from the site of the wreck of the "*Grosvenor*," the dates on which are only slightly anterior to that of the wreck.



TOMBSTONE OF VROUW VAN RIEBEEK.



FRAGMENT OF TOMBSTONE OF JOHANN VAN RIEBEEK.

Botany. In the Department of Botany progress continues to be made in the incorporation of specimens, donations and collecting. Four new cabinets have been added this year to the equipment. We are indebted to a generous donor for a series of framed coloured photographs of our most striking southern flowers, which have been hung in the middle room. This exhibition proves very attractive. Several bulky botanical publications by Pearson, Fritsch, Hutchinson and Phillips are in the press.

Koopmans de Wet House. The number of visitors shows a satisfactory advance of 3,221 (25,082 in 1916 against 21,861 in 1915). The donations have been on a very moderate scale, and there has been no purchase. In order to relieve congestion in certain lines, and to be able to add also to the objects exhibited, four new rooms and the kitchen are being restored. The frontal part of the house, including the stoep, has been repaired and repainted by the Public Works Department, but I have not succeeded in having the yard and the slave quarters attended to. They are a great eye-sore, and the roof of the latter will soon tumble in if steps are not taken this year to effect repairs.

L. PÉRINGUEY,

Director.

DEPARTMENT OF ZOOLOGY.

To the Trustees of the South African Museum.

Mammals.—The number of accessions is 60 species and 93 examples.

Special attention was directed to obtaining skeletons of large and small Mammals, in order to increase our mounted series. The additions this year to the Osteological gallery number 14, including Hippopotamus, Giraffe, Kudu, Eland, Blesbok, Baboon, Lemur, Pangolin, Dolphin, etc. Of marine animals were set up a Porpoise, a Beaked Whale and a Rorqual (50 feet long). The "Killer" *Orca gladiator* has been dismounted from the open and reset under shelter, for it could not have lasted long in its former position. A large specimen of the fourth kind of Fin-whale, *Balaenoptera borealis*, presented by our generous contributor Mr. C. F. Ellefsen, is lying in Saldanha Bay and is daily expected. The number of species of whales frequenting our shores has been increased by two examples, namely, the small Beaked Whale (*Balaenoptera rostrata*) known hitherto from the Northern Hemisphere only, and, although obtained a few days after the close of the year which this Report covers, by a southern kind (*Neobalaena marginata*). Owing to a regrettable mistake, a skeleton of a large Sperm-whale (which, owing to the size of the huge head, could not be transported by ordinary means) was destroyed; new efforts will be made to obtain another specimen, which will complete the series of species known to be found in the Cape seas. A fine specimen of Dolphin has been set up, and now replaces another, the mounting of which was found to be faulty. A number of small rodents has been received from Southern Rhodesia, and either put into skins or preserved in liquid. A second skull of the wild boar *Potamochoerus nyassae* has been received from Zululand, thus increasing the range southwards of this species or variety. Interesting among the donations are melanic pelts of the Serval, and of the Black-footed Cat.

Birds.—The number of birds received is 53. These accessions do not call for special mention. In order to make room for more of the South African Fishes, the display of sexual differences in the plumage of certain birds has been removed from the case it occupied, but it is hoped that a modification in the arrangement of one of the large rooms may permit of it being exhibited afresh.

Reptiles.—The series on exhibition are very unsatisfactory as, owing to lack of proper space, they cannot be arranged according to their affinities. We have received four large examples of the Python. One, the larger, has been cast in plaster for mounting. The very large Crocodile, which is unfortunately not in a case, has once more lost its whole set of teeth. Fifteen flat jars have been added to the exhibited series. The second of our large Seychelle land tortoises died. They were 45 and 46 years of age respectively, and had been obtained to keep company to the centenarian male who is still seemingly enjoying life. The skeleton of one of these tortoises has been mounted; the skin and shell of the other will be set up. Mr. Tucker made a fairly large collection of reptiles in South-West Africa, and his additions have materially increased our series. One of his captures may prove to be a new species. Another new species of lizard has been found in our material, and is being described.

The South African genus *Nucras* is being treated by Mr. G. A. Boulenger in a paper illustrated by 2 plates. Interesting specimens from Cameroons and Nigeria have been obtained by exchange and donation.

The principal donors have been Dr. G. Arnold, Mr. J. C. Bridwell, Major Brownlee, Father Daignault, Mr. C. F. Ellefsen, Rev. V. Ellenberger, Mr. P. C. Keytel, Rev. L. Jalla, Dr. G. M. Melle, Dr. W. F. Purcell, Messrs. M. and J. Rosenberg and J. Rex.

L. PÉRINGUEY.

ENTOMOLOGY.

To the Trustees of the South African Museum.

The number of specimens obtained this year is considerable: 6,655 examples have been prepared, labelled and partly identified. They represent 3,133 species, of which 510 were new additions to the Collection, and are distributed as follows:—

	Examples.	Species.	Novelties.
<i>Hymenoptera</i>	1,642	778	145
<i>Coleoptera</i>	1,119	507	20
<i>Diptera</i>	1,476	630	101
<i>Lepidoptera</i>	1,963	1,031	206
<i>Neuroptera</i>	129	51	17
<i>Hemiptera-Homoptera</i>	220	94	13
<i>Orthoptera</i>	106	42	8

The main incorporation in the Cabinets has been that of the *Micro-Lepidoptera* and *Geometridæ*, namely 676 species (including 1,731 examples) of the former, and 484 species (including 1,478 examples) of the latter.

The *Ichneumonidæ* have had an accession of 78 new species. This group of *Hymenoptera* is receiving special attention, because so little was known of the South African species and their habits. The collection contains now 170 types. I have not succeeded in finding a Specialist for the *Braconidæ*, of which we have a fairly large number of unidentified species, and a comparatively small one of identified. The third large group of these parasitic *Hymenoptera*, the *Chalcididæ*, is being investigated. In another order, parasitic *Muscidæ*, progress has been made and is still being made, and apart from the identification of already described species, 67 novelties have been described.

Several very important Entomological additions have been obtained through the three zoological-botanical explorations of mountain-tops carried out by members of the Staff. Among them are interesting *Ephemerid* and *Caddis* flies and others, a group which would seem to be very poorly represented in South Africa were we to judge from the number of species known; but the exploration of these high summits has revealed several new forms.

The *Diptera*, or flies, have received special attention during the last few years, and several families have been entrusted to specialists, namely the *Bombylidæ*, *Asilidæ* and *Muscidæ*. Reports on some of these groups are either in print or expected.

The incorporation of the *Diptera* of the family *Syrphidæ* has also been carried out during this year. Attention will be paid next year to the *Hemiptera-Homoptera*, and when the representatives of this order have been incorporated the series of Insects will be very complete, so that any specialist in Entomology will derive, it is hoped, considerable help from a visit to the cabinets. An interesting addition to the Collection are the *Siphonaptera* and *Mallophaga*, investigated by Mr. Waterston, and forming the subject of a memoir in our *Annals*.

Special attention is now being paid to obscure groups of Insects, hitherto neglected, and it is hoped to have one such, *i.e.*, the *Collembola*, investigated shortly.

The Entomological papers published this year, or the proofs of which have been corrected, dealing with Museum material are: On some South African *Ichneumonidæ*, by C. Morley; Description of new or little known *Orthoptera*, L. Péringuey; On some *Scolidæ*, mostly *Elidense*, by R. E. Turner; A contribution to the study of the South African Higher *Myodariæ*, by J. Villeneuve; Descriptions of a new *Tachino-Oestrid*, by J. Villeneuve; Descriptions of South African *Micro-Lepidoptera*, by E. Meyrick; New *Geometridæ*, by L. Prout; Monograph of the *Formicidæ* (*Tetramorium*), by G. Arnold, etc. Five MSS. have been sent to the printers.

The principal donors have been: Dr. G. Arnold, Messrs. E. A. H. Bedford, H. W. Bell-Marley, Mrs. W. van der Byl, Father Daignault, Messrs. Dieterlen, H. L. L. Feltham, R. Jack, Rev. Neville Jones, Messrs. W. E. Jones, P. C. Keytel, Dr. Knobel, Miss Marshall, Dr. Melle, Father J. O'Neil, Bro. J. H. Power, Miss Powell, etc. Messrs. Barnard, Haughton, Lightfoot, Tucker and myself, of this Museum, have contributed numerous and interesting finds.

The collecting at high altitudes carried on by members of the Staff has already been alluded to. Some collecting was done in the South-West African Protectorate by another member of the Staff in connection with the late Professor H. H. W. Pearson's expedition. The time of the year and perhaps the great rapidity of the journey did not prove very favourable to Zoological collecting.

I have personally obtained a fair number of novelties, principally *Diptera*, in the Outeniqua.

L. PERINGUEY.

ENTOMOLOGY (INSECTS EXCLUDED).

To the Director of the South African Museum.

SIR.—I have the honour to submit the following report on the working of this Department during the year 1916.

The first portion of January, 1916, was occupied by the journey through South-West Africa to Windhuk, commenced in December, 1915, in company with the late Professor Pearson. As much collecting as was possible was done during the trek. This material was then sorted and indexed on my return, and further additions were made to the card catalogue and bibliography of *Araaea*. In April collecting was undertaken on a Museum expedition to the Gt. Winterhoek Mountains; a large proportion of the *Arachnida* were juvenile at this season, but a fair number of new species and of others unrepresented in the Museum collection were obtained. This material was subsequently sorted and indexed, and a paper on *Araaea* was recommenced and finished in the subsequent months. The card catalogue of species was then again added to, preparatory to working fresh groups of which representatives had been collected in South-West Africa on the above-mentioned Percy Sladen Memorial Expedition. Another small paper was written supplementary to the previous one, already in the printer's hands. Exhibited specimens were also remounted where necessary, and additions made; also further work was done on the card catalogue.

During a second collecting expedition to the Gt. Winterhoek Mountains in November, more material and better results were obtained than in April, the specimens being largely adults. Higher ground up to 6,800 ft. was also worked, but with negative results. The sorting and indexing of the specimens finished the year.

Altogether 1,663 spiders were added to the collection in 1916, and examined, separated into species and classed under their respective families. Of scorpions, 212 specimens were added; *Myriapoda*, 129; *Acari*, 260; *Solifuga*, 58; *Opiliones*, 33; *Pseudoscorpions*, 20; the total number of additions being 2,375.

The thanks of the Trustees are due to Dr. and Mrs. W. F. Purcell, Dr. Melle, Mr. C. Cron, Schreiner, and Mr. H. W. Bell-Marley for the contribution of material during the year.

I have the honour to be,

Sir,

Your obedient servant,

R. W. TUCKER.

FISHES AND MARINE INVERTEBRATES.

To the Director of the South African Museum.

SIR.—I have the honour to present the following Report on the Department of Fishes and Marine Invertebrates for the year 1916.

Public Exhibits.—The exhibition of South African Marine Fishes is now as complete as the collections allow, but many gaps still remain. With regard to the exhibition of fresh-water fishes, considerations of space and the lack of glass jars have necessitated only a selection of representative forms being exhibited.

Short labels describing the chief peculiarities and habits of each family have been added.

The shell collection has for many years been representative neither of the South African fauna nor of the Museum collections.

This is now being remedied, large numbers of the shells collected by the SS. "Pieter Faure" from the deeper parts of the South African seas being exhibited for the first time. The Gasteropods have nearly been completed; the Lamellibranchs, Pulmonates, etc., will follow. This proposed exhibition of the shell collection will occupy at least twice as much space as the previous exhibited collection, and will necessitate the removal of the whole of the collection of foreign shells, except a very few of the larger forms.

Study Collection. The work of sorting and arranging the "Pieter Faure" collection continues. Large numbers of bottles containing mixed assortments of animals have been examined, resulting in the discovery of many forms not hitherto represented in the collection and, needless to say, still unidentified.

The Alcyonarians have been arranged in systematic order, and the Crustacea received back from Mr. Stebbing after examination have been incorporated.

The greater portion of the collection of fresh-water fishes is also now in order, but a part is still in the hands of the specialists pending identification.

The number of specimens received is as follows:—

Fishes	...	...	...	159 specimens, 34 species, 6 new to the collection.
Crustacea	...	...	...	357 " 63 " 28 "
Mollusca	...	...	..	113 " 14 " 7 "
Worms and other Invertebrates				45 " 13 " 2 "
				Total 668 120 43

Collecting.—At the beginning of the year I spent a fortnight in the Hottentot Holland Mountains, devoting myself chiefly to the study of the fresh-water fauna. On this, as well as on two trips to Tulbagh, separate reports have already been presented.

Donations. The thanks of the Trustees are due to H. W. Bell-Marley, for Crustacea, Shells, etc.; A. T. Prentice, for numerous fresh-water Crustacea; Major M. Connolly, for Shells from Portuguese East Africa; Dr. A. W. Rogers, for numerous Terrestrial Shells; and to several gentlemen in various parts of the country for their interest in collecting fresh-water Fishes.

I have the honour to be,

Sir,

Your obedient servant,

KEPPEL H. BARNARD.

DEPARTMENT OF GEOLOGY, MINERALOGY, AND PALEONTOLOGY.

The Director of the South African Museum.

SIR. I have the honour to send you a report on the Geological Department for 1916.

The arrangement of the series of crystal models and crystals placed in parallel position has been completed by Prof. Shand as far as the material in the Museum will allow. This collection is now of great use to students, and we are very greatly indebted to Prof. Shand for his skill and care in making the exhibit as good as it is.

Four new meteorites have been added to the collection.

In the exhibited series of rocks arranged stratigraphically, several additions have been made, but no re-arrangement of the collection is yet necessary.

The exhibited collection of fossil plants from the Karroo beds has been enlarged and re-arranged.

A mounted skeleton of *Propappus* has been placed near its ally *Parasuchus*, and a part of the skeleton of *Stenhioccephalus* has been remounted.

Mr. Haughton's journey in the Karroo was rewarded with much success, but the material obtained will take many months to work up.

Thanks for donations and assistance are particularly due to the Government Analytical Laboratory, the Zak River Estates, Mrs. T. V. Paterson, the Rev. J. H. Whaits, Dr. A. Marius Wilson, Messrs. P. Ross Frames, W. van der Byl, S. J. Fourie and P. Hattingh.

I regret to say that this is my last report as Honorary Keeper of the Geological Collections and, before I close it, I wish to record my high opinion of the work being done in the Karroo fossils by Mr. Haughton.

I have the honour to be,

Sir,

Your obedient servant,

ARTHUR W. ROGERS.

DEPARTMENT OF BOTANY.

The Director, S.A. Museum, Cape Town.

SIR.—I have the honour to submit the following Report on the working of the Herbarium.

The number of specimens incorporated during the year has been 1,410, and 1,338 sheets have been mounted, besides 45 specimens which were mounted on sheets already in the cabinets. Of the species placed in the series 536 were new to the Collection, which number is a slight increase on that of last year. To meet the expansion of the Collection it was found necessary to add four new cabinets.

The specimens received at the Herbarium during the year have been as follows:—

Donations	...	...	...	...	...	1,136
Exchanges	...	...	...	...	...	350
Purchases	...	...	...	...	...	121
						<hr/> 1,607 <hr/>

The number of visitors to the Herbarium enquiring for botanical information has been 183, and besides these, information has been given to numerous correspondents, the S.A. Police, the Agricultural Department, the Natal Museum, the Administrator's Department, the Municipal Gardens, etc.

A large collection of Natal plants was named for the Natal Museum, of which we received a great many duplicates. The more important collections incorporated were those of Galpin from the Drakensbergen, Madame Dieterlen's from Basutoland, Tyson's from East Griqualand, Miss Pegler's from the Transkei, a collection from the Transvaal Museum, a collection of *Ericaceae* from the Bolus Herbarium, a large collection of European plants collected by Reineck, a collection of European and Canary Island plants collected by Dr. Pitard, and a number of Indian plants received by exchange from Professor W. T. Saxton.

Our material of the following genera has been revised and brought into line with the most recent monographs, viz., *Dais*, *Cryptadenia*, *Gnildia*, *Englerodaphne*, *Peucea*, *Brachysiphon*, *Sarcocolla*, *Endonema*, *Geissoloma*, *Loranthus*, *Viscum*, *Lobostemon*, *Schistostephium*.

The Herbarium has made the following loans, donations and exchanges.

Pretoria Museum.—36 species East Griqualand and Zwartbergen plants (exchange).

Albany Museum.—21 sheets *Crassulaceae* (loaned); *Crassula sanguinea* (loaned); *Cotyledon* sp. (presented).

Analytical Department, Cape Town.—Material of *Leonotis leonurus* and *Cannabis sativa* (presented).

Bolus Herbarium.—*Scabiosa burkeana* (loaned); *Cyclopia* (loaned); 2 species heath (loaned); 59 sheets *Antholyza* (loaned); 30 sheets *Schistostephium* and *Tanacetum* (loaned); *Thesium costatum* (presented).

Kew.—32 species Basutoland plants (presented).

British Museum.—Species *Ericaceae* and *Leguminosae* (presented).

Dr. F. E. Fritsch.—Fresh-water Algae (loaned* and presented).

Prof. W. T. Saxton.—Collection of South African plants (exchange).

The thanks of the Trustees are due to the Curator of the Bolus Herbarium for a large collection of *Ericaceae*, many of which were not represented in the Series, and also for the loan of all their material of *Cyphia*; to Messrs. H. V. Begley and A. T. Prentice for specimens collected on the Hottentots Holland Mountains; to the Curator of the Albany Museum Herbarium for the loan of material of *Cyphia*, and to Madame A. Dieterlen, who still continues to forward plants from Basutoland.

During the year I have been away collecting, twice to the Great Winterhoek in the Tulbagh District, and twice to the Hottentots Holland Mountains.

The following papers have been contributed by the Herbarium and are now in Press:—

The genus *Calpurnia* (Leguminosae).

A Revision of the South African Material of the genus *Cyphia*.

E. PERCY PHILLIPS.

Assistant in Charge of the Herbarium.

December 30th, 1916.

DEPARTMENT OF ANTHROPOLOGY, ETHNOLOGY AND ARCHAEOLOGY.

To the Trustees of the South African Museum.

All the ethnological exhibits of the Anthropological room have been removed, and replaced by an extensive display of the South African implements of the Stone Age period, to which has been added a series of human skulls including casts of all the prehistoric ones, whether of ape-man or man. This step was inevitable because justice was not done to both sections without unduly overcrowding and confusing. Most of the specimens removed, as well as those that lay packed in drawers or cases for years, have now been suspended in an iron building lined with wood.

We have been able to increase the collection of rock engravings by eight very interesting examples, each cut on an isolated boulder of moderate size, whereas all the others known to me were on rocks offering large surfaces.

The interest attaching to our relics of what one might perhaps call the Bone and Stone Age in South Africa has been greatly enhanced by most generous donations of bone hooks, decorated sea-birds' bones used as ornaments, a lozenge-shaped bone fibula, bone knives, a slate palette, a slate ear-ring the size of an armlet, a stone sinker for fish line, etc. Most of these precious objects had been obtained in a large cave which was too much disturbed at the time of my visit to justify the cost of further excavation.

Two comprehensive sets of objects of native manufacture from Southern and Northern Rhodesia have been received. They contain several new forms of arms and pottery.

A valuable addition, for these things are very difficult to obtain, is that of three sets of divining bones that had figured in a case of witchcraft in Northern Rhodesia.

All the arms have been separated and hung in series in the new store—not only the South African or African ones, but also those from elsewhere. Thus, the series of bows and arrows begins with the Bushman, includes those of Japan, Ceylon, New Guinea, India, and Manchuria, and ends with the stone-headed Eskimo, and so on. This arrangement is of course provisional, but it makes possible an estimate of the space required when the new Gallery is constructed, as well as of the lacunæ in the collection itself.

The Mann collection of Coins has been deposited in the Museum by Mr. G. Mann. The whole is housed in five special wooden coin cases and consists of Imperial Roman Colonial and Carthaginian Bronze Coins; Bronze Coins of the Roman Empire from 200 A.D.; Imperial Byzantine Bronze Coins; Silver and Bronze Coins of Magna Graeca; books, extensive MSS. notes, onyx signets, etc.

We have had also, donated by Mr. P. Ross Frames, 4 coins from the wreck of the "Grosvenor." One is a Venice sequin of the Doge Francesco Loredano 1752-1762 A.D.; the other three are Rupees of the East India Co., issued in the name of the Mogul Emperor Alangir II., 1754-1759 A.D., at Fort S'George (Madras).

We have acquired a German 15 rupees gold piece struck by the Germans at Tabora, G.E.A. The edge is not milled and the one side is somewhat depressed. These defects lead one to believe that the die was manufactured locally.

Mr. W. Runciman has presented a flag of the American Confederated States given at the time by the Commander of the "Alabama" to his agents in Simon's Town. It is probable that this flag is now the only one in existence.

The Transvaal Chamber of Mines has loaned a large model of the surface equipment of a gold mine that had been sent to the Chicago Exhibition.

The principal donors have been:—Messrs. D. C. Thwits, L. Lazarus, Dr. G. M. Melle, Father A. Cassett, the Rooiberg Minerals Development Co., Mr. C. J. Hesse, Messrs. G. M. Murphy, P. Ross Frames, W. Runciman, Rev. W. G. Sharples, Miss Newdigate, Mr. J. Rex, etc.

L. PÉRINGUEY.

 KOOPMANS DE WET HOUSE.

To the Trustees of the South African Museum.

The number of visitors (25,082) exceeded that of last year (21,862). Among the principal donors are Mrs. Cobbin, who presented an Old Sheffield Plate Tea Urn; Mr. O. J. de Villiers, an old glass decanter; Mrs. J. A. Smuts, a Dutch Bible, 1714; Mr. T. J. du Toit, pair of old brass tongs; Mr. Melt J. Brink, silver emblems of the "Aurora Theatrical Society," an old brooch, etc.; Mr. E. G. Kotze, a very large earthenware pot; Mr. R. Allan, old copper and silver coins, etc. Miss Hull loaned 3 old dresses of early 19th Century.

The restoration of some new rooms is being proceeded with.

L. PÉRINGUEY.

SOUTH AFRICAN MUSEUM.

STATEMENT OF INCOME AND EXPENDITURE FOR THE YEAR ENDING 31st MARCH, 1916.

To Balance, 1st April, 1915	£333 6 6	By Salaries	£3,104 5 6
Grants:—		.. Library	71 9 10
Union Government.		.. Purchase of Specimens £55 19 0	
April, 1915 £1,000 0 0		" " Coins	1 12 6
July, 1915 1,000 0 0		.. Transport and Travelling	57 11 6
Oct., 1915 1,000 0 0		.. Maintenance of Museum	114 13 3
Jan., 1916 1,000 0 0		.. Freight Charges	323 10 7
£4,000 0 0		.. General:—Pettries, Stamps, etc.	27 18 6
Cape Town Corporation 100 0 0		.. Publication of Annals	108 8 3
Provincial Administration.		.. Sunday Duty	451 3 3
June, 1915	£75 0 0	.. Bank Charges	96 4 0
July, 1915	75 0 0	.. Balance 31st March, 1916:—	
Oct., 1915	75 0 0	Advances against Gardener's wages for period 27th	
Jan., 1916	75 0 0	February to 31st March,	
.. Interest on Hadje Suliman Shah	4,100 0 0	1916, at £178.0d. per week	
Mohammed Coin Fund	4 0 0	recoverable from Public	
.. Sale of Publications	20 12 5	Works Department	£6 10 6
.. Contribution by Mines Dept. towards		Cash in Bank	791 8 9
publication of Annals	13 1 10	Petty Cash	5 16 1
.. Department of Interior: Refund of			803 15 4
amounts paid under the Work-		Includes £31 9s. 6d. held on behalf	
man's Compensation Act in 1914/5,		of the Hadje Shah Mohammed	
and for repairs effected to Koop-		Fund for the purchase of Coins.	
man's De Wet Museum	383 5 7		
.. Value of cancelled Cheque No. 99804,			
dated 31-8-14, drawn in favour of			
P. Wytzman—substituted by			
Cheque No. 36912, dated 14-12-15...	9 13 8		
	£5,164 0 0		£5,164 0 0

Statement "A."

HADJE SULIMAN SHAH MOHAMMED FUND FOR THE PURCHASE OF COINS.

Amount of Investment with the South African Association	£100 0 0
Balance of Interest on 31st March, 1915	29 2 0
Interest Received during the year 1915-16	4 0 0
	133 2 0
Less Coins purchased during 1915-16... ..	1 12 6
	£131 9 6

Audited and found satisfactory,

(Signed) WALTER E. GURNEY,
Controller and Auditor-General.(Signed) L. PERINGUEY,
Director, South African Museum.

1st July, 1916.

Cape Town, 28th June, 1916.

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UNION OF SOUTH AFRICA.

REPORT

OF THE

SOUTH AFRICAN MUSEUM

FOR THE

Year ended 31st December, 1917.

Presented to both Houses of Parliament by command of His Excellency the Governor-General,
1918.

CAPE TOWN :
CAPE TIMES LIMITED, GOVERNMENT PRINTERS.
1918.

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UNION OF SOUTH AFRICA.

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Trustees of the South African Museum :

- THE RIGHT HON. JOHN X. MERRIMAN, P.C., M.L.A.
- SIR THOMAS MUIR, KT., C.M.G., M.A., LL.D., F.R.S.
- JOHN WILLIAM JAGGER, F.S.S., M.L.A.

Scientific Staff of the South African Museum :

- LOUIS ALBERT PÉRINGUEY, D.Sc., Director.
- SIDNEY HENRY HAUGHTON, B.A., Assistant Director, and Assistant in Charge of the Geological and Palæontological Collections.
- EDWIN PERCY PHILLIPS, M.A., D.Sc., Assistant in Charge of the Herbarium.
- KEPPEL HARCOURT BARNARD, M.A., Assistant in Charge of Fish and Marine Invertebrates.
- RICHARD WILLIAM ETHELBERT TUCKER, B.A., Assistant in Charge of the Arthropoda (Insects excluded).
- ROBERT MARK LIGHTFOOT, F.E.S., Assistant.

2507 S087 1917

UNION OF SOUTH AFRICA.

Report of the South African Museum for the Year ended 31st December, 1917.

Presented to both Houses of Parliament by command of His Excellency the Governor-General.

REPORT OF THE DIRECTOR.

To the Trustees of the South African Museum.

SIRs,—I have the honour to submit my report on the administration of the Museum for the year 1917:—

Visitors.—The number of visitors was 224,475 divided as follows:—

White.—Adults	...	...	...	Male	125,281
				Female	39,611
" Children	...	...	...		32,775
Coloured.—Adults	...	...	...	Male	12,510
				Female	7,823
" Children	...	...	...		6,475

Seventy-three School parties, from 23 Schools, including drawing classes, and numbering 1,512, visited the Museum under the guidance of their teachers.

The Sunday attendance (from 2 to 5 p.m.) totalled 31,775, an average of 611 per Sunday, on which day the highest attendance was on April 15th, 2,248; the lowest on August 19th, 159; while on week-days the highest number, 2,657, was reached on the 29th of July; and the lowest, 77, on July 25th.

It is interesting to compare this year's attendance with that of the previous four years as an indication of the growing popularity of the Institution.

1913	...	...	...	...	...	119,663
1914	...	...	...	...	...	122,915
1915	...	...	...	...	...	133,174
1916	...	...	...	...	...	161,639

Presents, Purchases, Acquisitions by the Staff.—The number of donations and purchases are 11,153, divided as follows:—

				Specimens.	Species or kind.	New to collection.
Mammals	...	...	...	69	45	4
Birds	...	...	...	147	125	3
Birds' Eggs	...	...	...	5	4	2
Reptiles	...	...	...	59	50	—
Fishes	...	...	...	170	49	6
Mollusca	...	...	...	200	36	28
Other Marine Invertebrates	...	...	...	80	15	7
Crustacea	...	...	...	230	35	14
Arachnida, etc.	...	...	...	1,431	372	160
Insects	...	...	...	5,884	3,470	280
Geology, Mineralogy and Palæontology	...	...	...	560	155	48
Botany	...	...	...	1,235	1,048	410
Anthropology	...	...	...	476	476	476
Ethnology	...	...	...	717	717	717
Antiquities—Curios	...	...	...	90	84	84
				11,513	6,681	2,239

Library.—The additions to the Library were 897, divided as follows:—

Books :	Purchased	...	...	...	9
	Presented	...	...	...	21
Pamphlets and Periodicals :	Purchased	...	...	...	136
	Presented	...	...	...	731

Labels.—858 labels were printed during the year.

Publications.—The following parts of the Annals of the South African Museum were published in 1917.

Vol. IX., pt. V.—A revision of the genus *Pteronia* (Compositæ). By J. Hutchinson and E. P. Phillips. 53 pp.

A contribution to the knowledge of the South African Protæaceæ. No. 3. By E. P. Phillips. 5 pp.

Contributions to the Flora of South Africa. No. 2. By E. P. Phillips. 17 pp.

Vol. IX., pt. VI.—List of Plants collected in the Percy Sladen Memorial Expeditions, 1908-11, continued. (Compositæ.) By H. H. W. Pearson and J. Hutchinson. 94 pp. 16 text figs.

A Revision of the South African Material of the Genus *Cyphia*, Berg. By E. P. Phillips. 26 pp.

The Genus *Calpurnia*, E. Mey. (Leguminosæ). By E. P. Phillips. 7 pp.

Vol. XI., pt. VI.—The Freshwater Fishes of South Africa. By J. D. F. Gilchrist and W. Wardlaw Thompson (continued). 100 pp. 56 text figs.

Vol. XIII., pt. VI.—A Revision of the Lizards of the Genus *Nucras*, Gray. By G. A. Boulenger. 22 pp. 2 plates.

Description of a New South African Lizard of the Genus *Eremias*. By G. A. Boulenger. 3 pp.

Vol. XIV., pt. III.—A Monograph of the Formicidæ of South Africa. (Myrmicinae.) By G. Arnold. 130 pp. 1 text fig.

Vol. XVI., pt. I.—A Contribution to the Flora of the Leribe Plateau and Environs; with a Discussion on the Relationships of the Floras of Basutoland, the Kalahari, and the South-Eastern Regions. By E. P. Phillips. 379 pp. 7 plates.

Vol. XVII., pt. I.—Descriptions of South African Micro-Lepidoptera. By E. Meyrick. 21 pp.

South African Crustacea (Part IX. of S.A. Crustacea). By Rev. T. R. R. Stebbing. 24 pp. 8 plates.

New Geometridæ (Lepidoptera) in the South African Museum. By L. B. Prout. 31 pp.

Vol. XVII., pt. II.—On some South African Aviculariidæ (Arachnida). Families Migidæ, Ctenizidæ, Diplothelæ and Dipluridæ. By R. W. E. Tucker. 60 pp. 1 plate. 13 text figs.

The Crane-Flies of South Africa in the South African Museum (Diptera, Tipulidæ). By C. P. Alexander. Part I. 48 pp. 5 plates. 2 text figs.

Description of an apparently Undescribed Moth of the Family Lymantriidæ (Lepidoptera). By A. J. T. Jansé. 1 p.

Two Species of Bittacidæ (Neuroptera) from South Africa. By P. Esben-Petersen. 4 pp. 4 text figs.

Vol. XVII., pt. III.—On some South African Ichneumonidæ in the Collection of the South African Museum. By C. Morley. Part II. 39 pp. 1 text fig.

Four contributions with corrected proofs are now in the printer's hands, and the publication of four more has been suspended owing to the ever-increasing cost of printing and printing paper.

Collecting.—The field collecting of the zoological and botanical investigation of high altitudes has been prosecuted by the Staff, and so has the palæontological survey.

ARRANGEMENT AND CONSERVATION.

Zoology.—Mammals.—Owing to difficulties of shipping, and others, I have not been able to add to the collection the skeleton of the Rorqual whale, *Balaenoptera borealis*, awaiting transport at Saldanha Bay, and to complete thereby the series of the "finner" whales (four) frequenting our coast. It may be possible to obtain another next fishing season, but I have been so often disappointed in this special line that I am not over sanguine. The sperm-whale also seems to be unobtainable, but a fresh attempt will be made to enlist the co-operation of at least one of our local Whaling Companies, not only to obtain the two kinds still wanting in our series, but also to replace the five mounted examples which, through the refusal of the Government to erect a protective shed, are

decaying but too rapidly. From this remark it will be seen that the erection of the shed provided for in the 1917 Government Estimates for the ensuing year has not been proceeded with, and no new provision is made for this year.

A pleasant surprise, however, was the capture in False Bay of an example of the rare minor "whalebone" whale *Neobalaena marginata*, recorded hitherto from New Zealand and Australian waters only. Two years ago it was the minor "finner" of Northern European seas which was for the first time recorded to be, if not a denizen of, at least a visitor to our seas. This time it is a southerner, and the range of these two whales is thus considerably enlarged. The skeleton is ready for mounting, whenever I can find room for the same. The collection of mounted porpoises has been increased by the painted cast of a suckling Dolphin, and the replacing of a somewhat unsatisfactory specimen by one mounted in the best style of our Head Taxidermist, Mr. J. Drury. I have also placed on exhibition a series of the baleen-blades of our seven whales. This series is very instructive, because it shows a fairly distinctive characteristic of each species, and gives also an idea of the differentiation among them in respect of food. To the toothed whales have been added partial restorations of the skulls of two of our beaked whales (ranging also as far as New Zealand and beyond), *i.e.*, Layard's and Gray's whales. Alongside the very much reduced model of the Sperm Whale is now displayed the whole set of teeth of an example 45 feet long. Large as some of these teeth are they sink to comparative insignificance if compared with two very large ones from the South Seas, placed there for the purpose.

A group of six Bosch Varken or Wild Pigs (*Potamochoerus choeropotamus*) has been mounted according to my sketches and instructions. It consists of a boar, a sow and four young ones, and is very realistic. Like certain groups of birds this one has been exhibited to show that I could, space allowing of it, make the exhibits more attractive and exhibit the animals in more natural poses and surroundings.

A fair number of animals have been secured and prepared for skeleton mounting (the programme for the Taxidermist Department next year), if space in the storeroom now turned into a depository allows.

The find in the coast sand-dunes at Hawston in the Caledon District of the Cape of the frontal and horn cores of a Black Wildebeeste, *Connochaetes gnu*, is of importance as it throws a new light on the former distribution of this Cape Antelope.

It is interesting also to state that in a cave in the same place there was found, among remains of many kinds of animals, the frontal and horn cores of a Hartebeeste, which is seemingly different from the present Red Hartebeeste, *Bubalis caama*. In this district also, there existed within the time of occupation by the colonist a now extinct Antelope the Blaauw Bok, *Hippotragus leucophaeus*, (of which only five mounted specimens are known) smaller and somewhat different in markings from the present Roan Antelope, *Hippotragus equinus*, and there also survives, and there alone, the Bonte bok, *Damaliscus pygargus*.

Birds.—A collection of bird-skins representative of the Glen Grey (C.C.) Avifauna is an accession worthy of notice, as it contains several species not hitherto known to range so far south. Three groups have been skilfully mounted by Mr. Drury, namely:—The Eared Grebe; the Cape Dabchick, and the white-necked crow, *Corvinultur albicollis*.

Reptiles.—The reptiles received or obtained this year do not call for much comment with the exception of the skin and skull of a large Crocodile from the N'gamiland region, the teeth of which were intended at first to replace those so systematically abstracted by visitors from the large specimen on exhibition; but on consideration of the size and good preservation of the donated skin, it was decided to let the toothless crocodile await another setting adequate to its size, which makes the execution of the task difficult.

A large number of our Agama Lizards has been loaned for mensuration and detailed examination, which may result in reviving or sinking old-named species. Our material has also been of great service for the revision of the lizards of the genus *Nucras*, which has appeared this year in our Annals. I have had reluctantly to put aside the setting of a group of pythons owing to want of space.

Fishes and Marine Invertebrates.—The cataloguing, incorporation and putting in order of the collections made by the "Pieter Faure" have been completed after five years continuous work; the undescribed forms revealed are being gradually prepared for Specialists to deal with them; and several papers are now being elaborated for publication in the Museum Annals, where there appeared this year the second part of the monograph on the South African Fresh-water Fishes, by J. D. F. Gilchrist and W. W. Thompson; the index and appendix are in the press. It is doubtful if this account of our fresh-water fishes will prove to contain many lacunae, for thanks to the great trouble taken by two French Missionaries on the Upper Zambesi, Messrs. V. Ellenberger and L. Jalla, many if not all the species inhabiting the waters of Barotseland have been collected, and they have materially increased our working material from a quarter whence very few examples had come. If any new or non-recorded forms are still obtainable they will be found in the Cunene water system, and thus link the ichthyological fauna of Angola, which is pretty well known, to the hitherto little known South African fauna.

I may be allowed to add, in passing, that one of my most difficult, disappointing, and costly tasks has been the collecting of the material necessary for this publication.

I record here with regret the demise of W. W. Thompson, Esq., who had not the satisfaction of seeing the advanced copy of the second part of his joint work.

There has been added to the exhibited series a fine cast of the Butterfly Ray, and a remarkably large White-Stumpnose. A 13 feet long ribbon-fish, or oar-fish, *Regalecus gladius* (King of the Herrings), captured at Three Anchor Bay, Cape Town, has been donated, and is being mounted. The specimen was complete: that is to say, it has not lost its tail like the two specimens we already had; and which will now be not only restored to their legitimate length, but will also be repainted from the newcomer's resplendent livery of a bright silver intersected with dark spots and bands, and crimson-red head-mane of filaments, dorsal fins, and long, oar-like pectoral fins.

A young example, 12 feet long, of *Cetorhinus maximus*, the "Basking Shark," has been secured on the Agulhas Bank and mounted. It is the first time that this shark, the biggest of its kind—it reaches 40 feet—is recorded from the Cape Seas.

The series of descriptions of Entomostraca bred from dry mud sent by us, has also been begun by Prof. Sars.

Entomology.—The number of examples and species dealt with in this department remains very high; the modest number of novelties obtained in proportion to the general number received, although not a fair criterion, points to a decrease in the limit of unknown or undescribed South African species. It is only in the minute forms that there exists still a possible chance for novelty-finding, which is in itself a great progress towards our ultimate knowledge of the Entomology of the South African Region. It is to be regretted that no means could be found to collect in the South-West Protectorate, beyond obtaining things which, just because they are conspicuous, are gathered easily, and are therefore well-known. All tends to show that the fauna is that of the Bechuana Protectorate; but only systematic collecting will establish the fact without cavil.

As stated before it is in the obscure groups, or in those that are preserved with difficulty that novelties are to be found; and that the Museum does its full share of publication in this line is borne out by the number of descriptions of Insects (apart from other Orders) that have appeared this year in the Annals.

In the other branches of Entomology, with the exclusion of Insects, good progress is being made in obtaining material which is sorted and indexed with a view to publication, as well as elaborating papers which are, unfortunately, held up for the present.

Geology, Mineralogy and Palaeontology.—Our lamentable restriction of space allows unfortunately of only five very large and whole mounted skeletons being put on exhibition. It must be remembered that only in the South African Museum are to be seen (and more could be seen if conditions permitted) such a number and variety of whole mounted skeletons of the fossil Reptiles which abounded when the Karroo was a vast expanse of marsh and shallow-water.

Such increase has been made of late years in the number not only of the Reptiles, but also of the Invertebrates, Plants, Fishes and Amphibia of the different South African Geological Ages, as well as of the Tertiary and Quarternary Mammalia, that it became interesting to compare the number of "types" in our Collection (the type is, of course, the standard) with those contained in the principal Museums of Europe, America, and South Africa. The resulting table is instructive.

South African Museum, 194.	Albany Museum, 47.
British Museum, 55.	Vienna Museum, 1.
American Museum, 55.	Yale University, 1.
Geological Survey, London, 73.	Victoria College, 1.
Natal Museum, 60.	Brown's Collection, 17.
Paris Museum, 1.	Transvaal Museum, 10.
Hamburg Museum, 11.	Kimberley, 4.
Germany ? 10.	Bloemfontein, 1.

Not only is the majority of types in South Africa, but this Museum contain half those known, and in addition, half at least of the species represented by types in the other Institutions are also represented in ours, many of them not merely by a fragment of the snout or perhaps a leg bone, but by much more complete remains.

But to go back to the tenour of the progress made during the year. Hitherto we had secured bones or parts of skeletons of Dinosaurian reptiles, but never sufficiently complete however to attempt a complete restoration of the animals. But as a result of the palaeontological survey undertaken by us, and previously mentioned, Mr. Haughton and, under his guidance, our ubiquitous Taxidermist and Mason Formator, Mr. Drury, have undertaken the reconstruction of the missing parts of the skeleton of a Dinosaur some 13 feet in height. This restoration is greatly advanced, and will surpass that of the legs and pelvis of a smaller species (*Gryponyx africanus*) in our exhibition room. The development from the matrix of several large reptiles continues, however doubtful the



MODELLING ROOM OF THE SOUTH AFRICAN MUSEUM.

On the left, Mr. J. DRURY; on the right, Mr. G. HARVEY; and THE DIRECTOR.

possibility of their future mounting. Apart from the fossils the additions in rocks and minerals have been numerous; a certain number from the South Western Protectorate, sent quite gratuitously, but also with returned kinds wanted as a set off, have improved our series of South African Minerals. A collection from Tsumeb and other localities has also proved very useful. Another prospective and much valued collection of Transvaal mineral products and rocks will necessitate the removal of the meteorite series to make room for the extension.

To the Transvaal Chamber of Mines the Trustees are indebted first for the loan and then for the gift of a 9 foot by 5 foot model of the surface working of an East Rand Mine made to scale. This extremely interesting object gives, and has given to our visitors from over the seas a true idea of the magnitude of our Transvaal gold ventures and industry.

Botany.—In the Department of Botany the incorporation of collections from S. Rhodesia, Gazaland and Uganda has added valuable material to the existing collection. The number of incorporated sheets is satisfactory, and satisfactory also is the number of accessions. The number of plants identified or named for collections or correspondents is considerable; and botanical information continues to be given to the Agricultural Department, the Administrator's Department, the Police, in regard to transgression of the Wild Flowers' Protection Act, etc.

Special attention is being paid to the collecting of Fresh Water Algae, and an important paper on the South African forms is now in the press. The botanical publications during the year have been more than normally extensive.

Anthropology and Ethnology.—The incorporation of the specimens illustrating the stone industry in the exhibited series has been continued, and the difficulty of discriminating between the archaic and neo-lithic South African forms is there made very evident. In fact implements of paleolithic style, but not of the best, have been found connected with the dwellers in caves of Bush race; and ostrich egg-shell beads made quite recently are shown to have their "double" in beads of the same shape and perforation, but made of porcelain, found in old Egyptian tombs. But can the imitation be explained without assuming contact? That the latter were a copy of the former there can be no doubt, and so the original industry survives its imitation by some 12,000 years.

The caves of certain parts of the littoral of the Union, if they have yielded little in the way of sufficiently well preserved skeletons, have led to an important discovery in the shape of paintings executed not against upstanding rock, whether wall or roof, but on small detached blocks. We had found already that certain flat blocks or slabs, thus decorated, served as votive offerings placed on the body, but some of the newly discovered stones could hardly have served that purpose. Most of the figures are executed in black. Buffaloes number 6; then there are scenes of men running, seizing hold of a jumping animal, etc., etc.; the style and size of the figures remind one of the pictures in the Long Kloof (Oudtshoorn, George); but one is very puzzling. On it are men with beards, head dress or perhaps tousled hair, large tattoo marks and the hieratic attitude is that of Nubians depicted by Egyptians. Are these Arabs? Are they the survivors of the Spanish ship *St. Gonzalo*, wrecked not far from the spot where this picture was discovered?

But whatever may be the speculation on the respective age of the neo-lithic objects alluded to, proofs of the very great antiquity of man's handiwork in South Africa are afforded by the exhibition of objects found in a peat bog—skulls of the extinct Antelopes *Connochaetes antiquus* and *Cobus venterae*, discovered there for the first time, together with the extinct buffalo *Bubalus baini*. With these are seen large marrow-bones plainly pounded or incised for extracting the marrow, and mixed with them were the stone knives and scrapers that served the purpose.

Still older and going probably to the dawn of man—for no human relic has as yet been found connected indubitably with the boucher industry—I have put on exhibition a series of pear-shape palæoliths very deeply and coarsely pitted on the surface. If split in two the fracture shows that the inner part of the rock not only is not naturally pitted but that there is all round a discoloured zone pointing to disintegration, and caused by exposure to the elements after it was made a tool by the art of primitive man. What a length of a time must have elapsed for such alteration to have taken place!

We have been able to secure through the courtesy of the Authorities of the Bechuanaland Protectorate casts of four pure-bred Masarwa Bushmen from the N'Gami region. They have been most faithfully reproduced by Mr. J. Drury, our Taxidermist and Mason Formator, assisted by Mr. G. Harvey, who have also executed during the year a most interesting group of four Nama-Hottentots grouped after a very old pen-and-ink sketch dating probably from the middle of the seventeenth century. Other figures and another bust have been obtained. The placing on exhibition of three of these Masarwas has necessitated the removal of others; 19 equally as good as the others are now packed away. The Taxidermy room has been turned this year into a modelling room, as shown in the reproduction annexed.

We have added a few Bush skulls to our collection; not enough, however, to claim

for it the superiority I have mentioned in other sections. One hears of very great activity in the Union in the search for these relics.

There is a belief among the aboriginals of the Kalahari and adjacent territories that a certain lizard there is an effective remedy against poisonous snake-bites, as well as, I understand, against the poison of arrows. Through the good offices of Mr. D. A. Stewart, of Rietfontein, Gordonia, I have been able to see the famous antidote. It is the dried body of the snake-like lizard—either *Chamaesaura* or *Scelotes* (the specimen is hardly recognisable)—which has retained only rudiments of legs, now absolutely useless for locomotion. The efficacy of the antidote cannot be doubted. Snakes with legs! No such thing is possible, hence it is supernatural, hence . . . and so on. It will be found likewise that the cause of the legend of the "Hottentot God" is the case-making grub of *Psychid* or *Melasina* moths.

Antiquities.—It was found necessary to withdraw from exhibition the fine and rare series of Inca Earthenware presented by J. W. Wright; but the rearrangement of the Anthropological room having released a glass case, it has been utilised for the display, not only of the Peruvian Antiquities as of old, but also of a typical series of Greek and Roman from Cumae, Rhodes, Cyprus, Smyrna and Cyraenica.

We had donated fac-similes much superior in reproduction to the single example we possessed hitherto of the two well known gold Vaphio Cups. The decoration is the capture of wild bulls, and the artistic execution of this example of Minoan art is really marvellous. I have exhibited also some Babylon terra-cotta tablets of 625 B.C., most of them relating to the revenues of the Temple; and from Ctesiphon the Museum has received a similar tablet picked up during the advance in Mesopotamia by an English officer.

War Museum.—A scheme is on foot for the collection and preservation of trophies and other objects associated with the war, particularly those having a special interest for South Africans, and the Honourable the Minister for the Interior proposes that the matter should be dealt with by a Central Organising Committee consisting of the Director of the Natal Museum at Pietermaritzberg and of myself, and that the Committee should be represented in each town or village in the Union by the Mayor or Chairman of the Local Authority or by the Magistrate of the District. An appeal is to be made through the press for the co-operation of the public and for donations of suitable material for inclusion in the Collections of War exhibits to be added to the existing exhibits of the Museums at Cape Town, Pretoria, Pietermaritzburg and Bloemfontein. Subject to a first selection by the National War Museum in London, all trophies captured by South African oversea troops will be handed over to the Union Government for distribution amongst the Union Museums above mentioned.

Previous to this proposal we received from the Defence Department several such trophies obtained in the South-West Protectorate: two German anti-aircraft guns surrendered by the Germans, a box trap containing an explosive charge, an Electric Generator for observation mine, etc. The two guns are on view under the porch, and attract a good deal of attention.

Koopmans de Wet House.—The number of visitors, 26,477, is an advance of 1,365 on that of last year.

The roof of the Slave Quarters having fallen in, the Public Works Department undertook the repair not only in the shape of a new roof but also in the restoration of the windows in the yard, etc., and the vista from the main part of the house will no longer be so conspicuous an eye-sore.

Four rooms and the kitchen have now been restored under the skilful supervision of Dr. W. F. Purcell, and some furniture, etc., at present loaned by him will be displayed there during the incoming year, when the repairs already mentioned are completed.

The large and valuable collection loaned by the late Mrs. Denholm Walker since the opening of the Museum has been bequeathed by her; and numerous articles bequeathed to a Museum of Cape Antiquities by the late Mr. Daniel Krynauw became also the property of the Museum in 1917, at the death of his sister, Mrs. Denholm Walker, who had already placed them on exhibition.

The donations this year have been fairly numerous, and several of them are of great interest; the loans are important; especially those of Dr. W. F. Purcell himself, whose assiduous, skilful and gratuitous services are very much appreciated.

Conditions of the Museum.—I regret to say that the position of this Museum remains what it has been from the time of Union. The Grant-in-Aid has remained the same, but for one year's increase which was reduced the next; the provisions for accommodation for visitors have not been improved; shed accommodation has not been provided, and the enlargement of the building is still postponed to the Greek Kalends. The mere recital of these facts taken in conjunction with a comparison of the grants made to similar Institutions elsewhere in South Africa will we hope be sufficient to bring about some amelioration in our lot.

The South African Museum is, by far, the oldest institution of the kind in this part of the world; and to many thousands of visitors who land on these shores it stands for the

outward and visible sign of the scientific achievement of a country which contains so many features of interest to the scientific world. Bricks are not made without straw; and if there is a scarcity of that material, and if in consequence the edifice is not quite as adequate as we could desire, it is to be hoped that the blame will not be laid on the shoulders of those who, sorely hampered, are doing their best to make the South African Museum worthy of the lofty aspirations of the South African People.

L. PÉRINGUEY,
Director.

DEPARTMENT OF VERTEBRATE ZOOLOGY.

Mammals.—The number of accessions is 69, representing 45 species, 4 of which are new to the collection. A number of skeletons have been prepared for mounting, including that of the rare minor "whalebone" whale, *Neobalaena marginata*. The only additions to the exhibited series has been a group of six Wild Pigs, *Potamochoerus choeropotamus*.

Birds.—The number of birds received is 147, comprising 125 species, of which 3 are new to us. Three groups have been mounted and placed on exhibition, and have necessitated the withdrawal of other and older specimens from the show-cases. Thanks are due to Mr. R. D. Bradfield for an interesting collection of bird-skins representative of the avifauna of the Glen Grey District of the Province.

Reptiles.—The additions number 59, representative of 50 species, all of which were previously in the collection. The greater number of the specimens of *Agama* have been loaned for study purposes, and material has also been sent away for assistance in a revision of the genus *Nucras*.

The thanks of the Trustees are due to the following donors:—Messrs. R. D. Bradfield, F. Dawson, J. Fenton, Dr. Forsyth, Messrs. C. W. Harry, H. L. Hill, Mrs. von Hirschberg, Messrs. G. D. Irvin, L. P. Louw, C. Taylor, H. Tredgold, G. Trollip, and H. Zeederberg.

L. PÉRINGUEY,
Director.

DEPARTMENT OF FISHES AND MARINE INVERTEBRATES.

To the Director of the South African Museum.

Sir,—I have the honour to present the following report on the Department of Fishes and Marine Invertebrates.

The greater part of the year has been spent in cataloguing and incorporating the "Pieter Faure" collection of Marine Mollusca and the whole collection, as far as identification is possible, is now in order. It was found impossible to identify a large number (about 400) of species, and these have been set aside for future report when specialists can be found to undertake their study. In all probability there will be a considerable number of undescribed forms among them.

At the same time the exhibited collection of Marine Shells has been completely remounted and considerably augmented: upwards of 750 species being now on view. The whole collection may be said to be fairly representative of the South African fauna, though there are still many gaps to be filled.

In other groups little has been done. In a paper now in the press I have presented a final report on the Marine Isopod Crustaceans collected by the s.s. "Pieter Faure."

We have received from Prof. Sars a complete series of the Cladoceran Entomostraca described in his recent report in the Museum Annals, which will be invaluable for comparison.

A number of Fresh-Water Fishes have been received, chiefly through the exertions of the Revs. J. Jalla and Ellenberger on the Upper Zambesi, several of which are new to our collection.

Collecting.—During the Museum trip to the Matroosberg I specialised in collecting the fresh-water fauna. The month of November I spent in Natal for the same purpose.

The number of specimens received during the year is as follows:—

Fishes	...	...	170 specimens, 49 species,	6 new to the collection.
Crustacea	...	...	230 " 35 "	14 "
Mollusca	...	...	200 " 36 "	28 "
Other Invertebrates	...	...	80 " 15 "	7 "

The thanks of the Trustees are especially due to Capt. Collett and Mr. Scott. All the fishes presented by them have been mounted for exhibition.

I have the honour to be,

Sir,

Your obedient servant,

KEPPEL H. BARNARD.

DEPARTMENT OF ENTOMOLOGY.

To the Trustees of the South African Museum.

The number of specimens received or collected during the year is about the same as that obtained last year, and the examples pinned or set, labelled and mostly identified number 5,684 representing 3,470 species; of the latter 280 are new to the Collection; the novelties being thus only three-fifths those of the previous year. This decrease is due to the constantly decreasing yearly limit of the final number of indigenous insects.

The species belonging to the different orders are divided as follows:—

	Examples	Species	New to collection.
Hymenoptera	1,080	935	70
Coleoptera	1,252	866	15
Diptera	1,326	522	59
Lepidoptera	1,043	616	45
Neuroptera	96	34	9
Homopt. Hemipt.	296	127	30
Orthoptera	171	75	4

In my last year's report I mentioned incorporations of several Sub-Families in the Cabinets. This year a considerable addition has been made by that of most of the Sub-Families of Chrysomelidæ (Coleoptera); of many Micro-Lepidoptera; of Hymenoptera, especially Ichneumonidæ; of Diptera (Muscidæ and Tipulidæ) and of Orthoptera.

Many captures made in the exploration of high altitudes are still being mounted for comparison and investigation. It may, however, be said already that with the exception of 3 or 4 striking species, the entomological result, although instructive, is somewhat disappointing.

A fair amount of material has been made ready for specialists; other has been returned identified; other again had to be put aside owing to exigencies of war.

The composition of the material obtained is very varied, as shown in the tables of division of Orders, but among it may be mentioned a series of the pupæ of the large handsome Saturniid, or Emperor, moths which are being successfully bred here.

The Entomological papers published this year are the following:—"On some South African Ichneumonidæ in the Collection of the South African Museum," part II., by C. Morley. "Descriptions of South African Micro-Lepidoptera," by E. Meyrick. "New Geometridæ (Lepidoptera) in the South African Museum," by L. B. Prout. "The Crane-Flies of South Africa in the South African Museum (Tipulidæ)," by C. P. Alexander. "Description of an apparently undescribed Moth of the Family Lymantriadæ (Lepidoptera)," by A. J. T. Janse. "The species of Bittacidæ (Neuroptera) from South Africa," by P. Esben-Petersen. "Monograph of the Formicidæ of South Africa," part III., by G. Arnold. The manuscript of two further parts completing this Monograph has been received, and so has that of a Monograph of the South African Bombylidæ by Bezzi, and descriptions of new South African Ephemeridæ, by P. Esben-Petersen, etc.

The principal donors, other than the members of the Museum Staff, have been: Messrs. S. Allman, H. W. Bell-Marley, Mrs. W. v. der Byl, Father A. L. Casset, Messrs. Dieterlen, H. L. L. Feltham, Mrs. V. Hirschberg, Messrs. W. E. Jones, A. J. T. Janse, C. P. Keytel, Dr. Knobel, Messrs. F. J. Kroeger, Martin, Dr. M. Melle, Messrs. H. K. Munro, Rev. J. A. O'Neil, Mr. A. W. Redfern, Miss Skuife, Mr. R. E. Symons, Father Vogt; Messrs. Barnard, Haughton, Lightfoot, Phillips and Tucker, of this Museum, have contributed rare and interesting captures

L. PÉRINGUEY.

ENTOMOLOGY (INSECTS EXCLUDED).

To the Director of the South African Museum.

Sir.—I have the honour to submit the following report on this Department for the year 1917.

The year commenced with a collecting expedition to the Matroosberg Mountains; systematic collecting was undertaken in the surrounding mountains and hills for a period of about ten days. On return the material was sorted and indexed, and the systematic working out of one of the groups of Arachnida was recommenced. This was discontinued at the end of March, when I proceeded on a collecting trip to Southern Rhodesia; collecting was there undertaken in the neighbourhood of Salisbury, and of the farm Mandau, N.W. of Bulawayo, and terminated at the beginning of May. The material obtained was sorted and indexed, and species added to the groups already worked.

Additions were next made to the card system of bibliography and index of species. Alterations were made in the storage of the spirit collection of specimens, additional cupboards being provided into which the collection was extended, thus to a certain extent relieving the past overcrowding and allowing more room for expansion.

Systematic work was recommenced, and a paper on Arachnida completed and despatched; the printing of it has, however, been unavoidably postponed. Part of the exhibited collection of Arachnida was remounted and attended to, and also permanent mounted preparations of certain Mallophaga and Anopleura were made. Towards the end of November a second collecting expedition to the Matroosberg Mountains was undertaken, and collecting done on a radius of about 10 miles from the camp for a period of ten days. The year then finished with the sorting and indexing of the material obtained.

The total number of specimens incorporated this year number 1,411, comprising 372 species, of which 160 are new to the collection.

Araneæ,	988 specimens,	290 species,	130 new to the collection.
Scorpionidæ,	131	20	6
Myriapoda,	124	29	12
Acari,	105	16	6
Solifugæ,	48	14	5
Pseudoscorpiones,	15	3	1

There have been very few donations this year, but the thanks of the Trustees are due to Mrs. von Hirschberg, the Rev. Father O'Neil, and Mr. R. Jack for their contributions of material during my collecting trip in Rhodesia, and to Bro. J. H. Power for contributions from Kimberley.

I have the honour to be,

Sir,

Your obedient servant,

(Signed) RICHARD W. E. TUCKER.

DEPARTMENT OF GEOLOGY, MINERALOGY AND PALAEOLOGY

Sir,—I have the honour to submit the following report upon the work of this Department for the year 1917.

The following additions were catalogued during the year:—

	Specimens.	Species.	New to collection.
Rocks ...	60	39	15
Minerals ...	115	49	5
Meteorites ...	2	2	2
Fossils:—Mammals ...	15	9	—
Fishes ...	1	11	1
Reptiles and Amphibia ...	61	50	24
Invertebrates ...	301	Species not yet determined.	
Plants ...	5	5	1
Total ...	560	155	48

A few alterations have been made in the exhibited series. The whole of the foreign fossils have been removed from exhibition and placed in drawers. The space thus gained has been utilised in extending the series of South African minerals and in adding a number of large skulls of Karroo fossil reptiles. The series of South African minerals has been wholly remounted, and a large number of additions made. The most striking of these is a large mass of Gypsum crystals formed round sand grains, obtained from a lagoon near Port Nolloth, and presented by Sir Frederick Smith. A number of minerals and rocks from the South-West African Protectorate have been presented through

the Right Hon. J. X. Merriman and by others, and a special exhibit of the minerals of that region has been arranged. The Directors of the Simmer Deep Mine have presented two uncut diamonds found in the Banket; and the Directors of the De Beers Company have sent a model of the large diamond found during the year in the Du Toits Pan Mine. The collection of diamonds has been remounted, and is now seen to better advantage, and a series of models of the chief South African finds has been added.

The additions to the exhibited Karroo reptiles consist of a partial skeleton in a slab of a new species of Dinosaur, the almost complete skeleton of *Prolystrosaurus natalensis*, a very fine skull and lower jaw of *Dicynodon whaitsi*, the carpus of *Pareiasaurus* sp., a skull and lower jaw of *Embrithosaurus* sp., a skull of *Pareiasaurus bombidens*, a skull of *Struthiocephalus* sp., and a skull of a large undescribed Dinocephalian allied to *Titanosuchus*. The post-cranial skeletons of some of these have been developed, but cannot be exhibited on account of lack of space. The skull of *Glanosuchus macrops* and the cast of a skull of *Lycosaurus* have been mounted.

I spent three weeks collecting from the Bokkeveld Beds of the Ceres District, and ten weeks collecting in the Lower Beaufort Beds. The Bokkeveld fossils have been numbered but not yet named.

Considerable progress has been made with the restoration and mounting of a medium-sized Dinosaur from the Stormberg Series, which, it is hoped, will be on exhibition early in the coming year.

In addition to the donors named, thanks are due to the following for gifts and for assistance rendered:—Miss Dudley, Miss M. Wilman, Messrs. C. W. Black, R. D. Bradfield, J. M. Bredenkamp, J. L. Cairncross, Dr. G. S. Constorphine, Dr. A. L. du Toit, Messrs. C. H. Erskine, H. Grimbeek, P. Hattingh, A. L. Hall, W. M. Hudson, J. L. Illingworth, F. J. Jansen, F. Kanthack, Dr. D. R. Kannemeyer, Rev. H. Kling, Dr. A. W. Rogers, Messrs. W. D. Robertson, C. E. Smith, C. S. Scholtz, Dr. Smuts, Rev. W. G. Sharples, Messrs. T. G. Trevor, W. van der Byl, J. van Niekerk, Dr. W. Versfeld, Dr. P. A. Wagner, Rev. J. H. Whaits.

I have the honour to be,

Yours faithfully,

(Signed) SIDNEY H. HAUGHTON.

DEPARTMENT OF BOTANY.

The Director, South African Museum, Cape Town.

Sir.—I have the honour to submit the following report on the working of the Herbarium.

During the year 987 specimens have been mounted and 1,048 sheets incorporated in the Cabinets. The number of species new to the collection still forms a large proportion of the specimens incorporated. Altogether 410 such species have been added, or nearly 40 per cent. of those placed in the Cabinets.

The number of specimens received at the Herbarium during the year shows a slight falling off. They are as follows:—

Donations	...	...	...	...	...	750
Purchases	...	...	...	...	...	35
Collected	...	...	...	...	...	430
						1,235

Number of Specimens.	No. of Species.	New.
1,235	1,048	410

Two large collections received towards the end of the year have not yet been fully worked, and will probably contain species not represented in the Collection.

The incorporation of collections from Rhodesia, Gazaland, and Uganda added many new genera to the collection.

The number of visitors to the Herbarium who bring specimens for identification or who require information on botanical matters shows an increasing interest among the public in the local flora. Botanical information has also been supplied to various correspondents, the S.A. Police, the Agricultural Department, the Administrator's Department, the Municipal Gardens, the Wild Flowers' Protection Committee, the Mountain Club, etc.

Several large collections have been named during the year, the principal being those for Dr. Geo. Potts, Mr. Fred Eyles of Salisbury, Rhodesia, and Miss Phillimore, of O'okiep, Namaqualand.

The number of plants identified and named for correspondents is 510, and odd specimens brought to the Herbarium 87; 597 in all.

The principal collections mounted and incorporated have been those of Swynnerton's from Gazaland, Dummer's from Uganda, Eyles from Southern Rhodesia, my own from the Great Winterhoek, and the first collecting on the Matroosberg, besides many specimens from the storeroom, among which may be mentioned several species of Ericaceae collected by Burchell.

Our material of the genera *Brachymeris*, *Marasmodes*, *Pentzia*, *Matricaria*, and *Chrysanthemum* have been revised on the lines suggested by Hutchinson in the Kew Bulletin.

The following loans and donations have been made by the Herbarium during the year:—

British Museum: 42 specimens from Uganda.

Kew Herbarium: Several parcels of Mosses and Lichens; plants from the Great Winterhoek.

Dr. Fritsch: Several tubes of Fresh Water Algæ.

T. R. Sim: 23 species of Mosses (exchange).

Bolus Herbarium: Specimens of *Muarltia*, *Ranunculus*, *Knowltonia*, *Plectranthus*, *Podalyria* (on loan); specimen of *Cyclopia* and *Sebwa repens* (presented).

The thanks of the Trustees are due to the Curator of the Bolus Herbarium for the loan of several specimens for examination, to Madame Dieterlen for plants from Basutoland, to Bro. A. J. Fogarty for tubes of Fresh Water Algæ, to Dr. Geo. Rattray for tubes of Fresh Water Algæ and several Mosses, to Mr. G. H. B. Fraser for several Mosses, to Miss A. Pegler for a collection of fungi, mosses, and lichens, to Mr. A. Taylor for a specimen of *Mimetes palustris*, to Miss G. Phillimore for a large collection from Namaqualand, to Dr. Knobel for plants from S.W. Africa, to Mr. Fred Eyles for a collection from Southern Rhodesia, to Mr. H. W. Beeton for a large collection from the Wakkerstroom District, etc.

During the year I have been away twice to the Matroosberg on collecting trips.

The following papers contributed by the herbarium have been published this year:—

A Revision of the genus *Pteronia* (Compositæ). Ann. S.A. Museum IX., v.

Contributions to the knowledge of the S.A. Proteaceæ. Ann. S.A. Museum IX., v.

Contributions to the flora of S. Africa. Ann. S.A. Museum IX., v.

A Revision of the S.A. Material of the genus *Cyphia*, Berg. Ann. S.A. Museum IX., vi.

The genus *Calpurnia*, E. Mey. (Leguminosæ) Ann. S.A. Museum IX., vi.

A Note on Buchu. Journal of Industries I., i.

(Signed) E. PERCY PHILLIPS,
Assistant in Charge of the Herbarium.

DEPARTMENT OF ANTHROPOLOGY AND ETHNOLOGY.

To the Trustees of the South African Museum.

The incorporation of the stone Industry series in the Anthropological Room has been continued this year, and it is now almost completed. The series of palæoliths are especially numerous and representative of all the Provinces of the Union, and Southern Rhodesia; the cases are almost too crowded.

Proofs of the co-existence in South Africa of man with extinct animals, in the shape of stone implements found together with remains of the now extinct animals and others he slew for sustenance, have been placed on exhibition together with a series of bouchers showing evidence of still greater Antiquity.

Three collections of ethnological objects have been received from South and Northern Rhodesia, and a very extensive collection of South African, African, Indian and Australian origins, including many varied objects, has been purchased and catalogued.

Three panels of Bush paintings have been added, as well as several paintings on single stones obtained in the rock-shelters of the littoral, and executed by Strand-Loopers. This is quite a new feature of Bushman—read Strand-Looper—pictorial art. Another large slab with paintings is expected soon, when the room will then be found full to repletion.

We have succeeded in obtaining 9 Bush skeletons, and 3 single skulls, as well as 6 Bantu skulls. The number of Bush skulls in our Collection is now 110. I do not know of any collection containing so large a number, but it is still very inadequate.

Miss Hawkins has very generously donated the fossilised Bush jaw of Harrismith, described and figured in the Transactions Royal Soc. S. Afric. in connection with the

preliminary note on the prehistoric "Boskop" human skull, by Mr. S. H. Haughton, the Assistant Director.

Mr. Drury went this year to the Bechuanaland Protectorate to make casts of four pure-bred Kalahari Bushmen. He also brought with him that of a huge Bechuana smith. These five figures have been executed, as have also the four alleged Nama-Hottentots taken last year. Three Kalahari Bush figures have been placed on exhibition, four others being removed to make room for them.

The finds resulting from the exploration of the Outeniqua littoral caves have been catalogued.

The donors and co-workers in this section have been numerous; the principal, to whom the thanks of the Trustees are due are:—J. M. Baiñ, C. E. Baker, G. Barnardo, R. D. Bradfield, Majors F. Brownlee and F. W. Bult, Dr. A. L. du Toit, G. Edelsten, Garnett, Lieut. C. F. Freeman-Lake, A. L. Hall, S. H. Haughton, Miss Hawkins, C. F. Hesse, Mr. Holmes, A. J. Humby, L. Jalla, Dr. D. R. Kaunemeyer, Dr. J. M. Melle, the Right Honourable J. X. Merriman, Rev. F. W. Sharples, D. A. Stewart, Miss Thorne, D. C. Thwaites, Dr. G. B. Thomson, C. H. Tredgold, T. G. Trevor, M. Westbrook, etc.

L. PÉRINGUEY.

KOOPMANS DE WET HOUSE.

To the Trustees of the South African Museum.

The number of visitors is 26,477 against 25,082 last year. The Public Works Department have undertaken the repairs of the picturesque back part of the yard, called the Slaves quarters; the yard itself is receiving attention, and certain structures added of late have been removed; old doors and windows have been restored, others too old for preservation have been carefully copied. The Music Room, two adjacent rooms and the kitchen have been renovated, and will be soon open to the public.

Mrs. Denholm Walker's bequest of the objects loaned by her until her demise are numerous and varied. Among the pieces of furniture are: a fine old century chair; 2 corner chairs, 2 Indian carved armchairs; 1 stoefie, set of 6 dining-room chairs, reading desk, clock, etc. Among other things are: a large number of pieces of old gold and silver, including buckles, seals, snuff boxes, mustard pots, bowls, trays, spoons, etc.; a large number of brass pieces, including braziers, spittoons, trays, basins, komfoors, etc.; Imari vases, Chinese plates, glass bokal, various portraits and pictures, also books.

The following articles belonging to her late brother, Mr. Daniel Krynauw, became our property at the death of Mrs. Denholm Walker, but they had been placed on exhibition previously: 3 old clocks, 1 old clothes press, 1 old bureau-cabinet, 2 old carved Indian gueridon tables, brass cistern, basin and soap dish (1771), several pictures and portraits, set of books on Heraldry, designs, banking, etc., a collection of sketches and wax impressions of coats of arms of old Cape families, etc.

The other donations have been:—

- Mr. E. J. Anderson, 2 groups of wax flowers and fruit.
- Mrs. Bowie, piece of embroidery and an ivory fan.
- Mr. H. Donnan, 1 old slate yard-sink.
- Mrs. H. Horne, writing desk (from the Birkenhead), military sash (worn by Capt. Blake at the taking of the Cape).
- Mr. D. J. Kotze and family, of Langvlei, Piquetberg, 1 very large old earthen jar.
- Mr. Lategan, Breede River Station, 1 old cradle.
- Mr. J. S. le Sueur, old embroidered waistcoat, 1 old sun bonnet.
- Mrs. A. Logie du Toit, old silk dress and old silk shawl.
- Mrs. J. Mostert, Oudtshoorn, old brass tinder box.
- Mr. B. T. Pritchard, Beaufort West, old copper tartpan and cover.
- Mrs. J. C. Rimer, Newlands, old green silk ladies bag, very old silk sampler, 6 old silk embroidered pictures, 17 pieces of silk ribbons of various patterns.
- Mr. A. W. B. Smuts, Poem by John Addey, 1860, printed on silk.
- Late Mrs. C. E. Solomon, Indian workbox (a trophy of the Indian Mutiny).
- Miss de Wet, Sea Point, old brass tinder box.
- Mrs. Young, 2 old English hot-water plates.

Among the loans are a number of pieces of Sheffield plate, old glass and china ware from Miss E. Dudley, and from Mr. David Tennant, 4 old Pictures of Cape Town and neighbourhood, and to conclude I must needs mention that of a magnificent wooden bed and cradle, three cabinets and a brass basin by Dr. W. F. Purcell.

L. PÉRINGUEY.

SOUTH AFRICAN MUSEUM.

STATEMENT OF INCOME AND EXPENDITURE FOR THE YEAR ENDING 31st MARCH, 1917.

To Balance, 1st April, 1916	£908 15 4	By Salaries	£3,323 5 6
Grants:—		" Library	30 9 7
Union Government.		" Purchase of Specimens £260 13 9	
May, 1916 £1,000 0 0		" Coins	2 10 0
Oct., 1916 2,000 0 0			263 3 9
Feb., 1917 1,000 0 0	£4,000 0 0	" Maintenance of Museum	544 9 11
		" Transport and Travelling	189 4 3
" Additional Grants in respect of previous Free Services.		" Freight Charges	30 17 0
Oct., 1916 142 10 0		" General:—Including Petties, Stamps, etc.	123 12 6
Feb., 1917 47 10 0		" Sunday Duty	91 13 6
March, 1917 70 0 0	£260 0 0	" Publication of Annals	298 11 9
		" Bank Charges	1 0 0
Cape Town Corporation.		" Balance, viz:	
June, 1916.		Cash in Hand	9 15 2
Sunday Duty 100 0 0		Petty Cash	5 0 0
June, 1916.		Treasury Bills	700 0 0
Koopmans de Wet Museum 100 0 0	£200 0 0		714 15 2
		Less overdrawn at Bank	22 5 10
Provincial Administration.			*692 9 4
July, 1916 150 0 0			
Oct., 1916 75 0 0			
Jan., 1917 75 0 0	£300 0 0		
	£4,760 0 0		
Interest on Hadje Suliman Shah Mohammed Coin Fund	4 0 0		
Sale of Publications	21 1 9		
	£5,588 17 1		
			£5,588 17 1

*Includes £32 9s. 6d. appertaining to the Coin Fund.

Statement "A."

HADJE SULIMAN SHAH MOHAMMED FUND FOR THE PURCHASE OF COINS.

Amount of Investment with the South African Association	£100 0 0
Balance of Interest on 31st March, 1916	31 9 6
Interest Received during 1916-17	4 0 0
	135 9 6
Less Coins purchased 1916-17	2 10 0
	<u>£132 19 6</u>

Audited and found satisfactory,

(Signed) WALTER E. GURNEY,
Controller and Auditor-General,

Control and Audit Office,
Cape Town, 14th May, 1917.

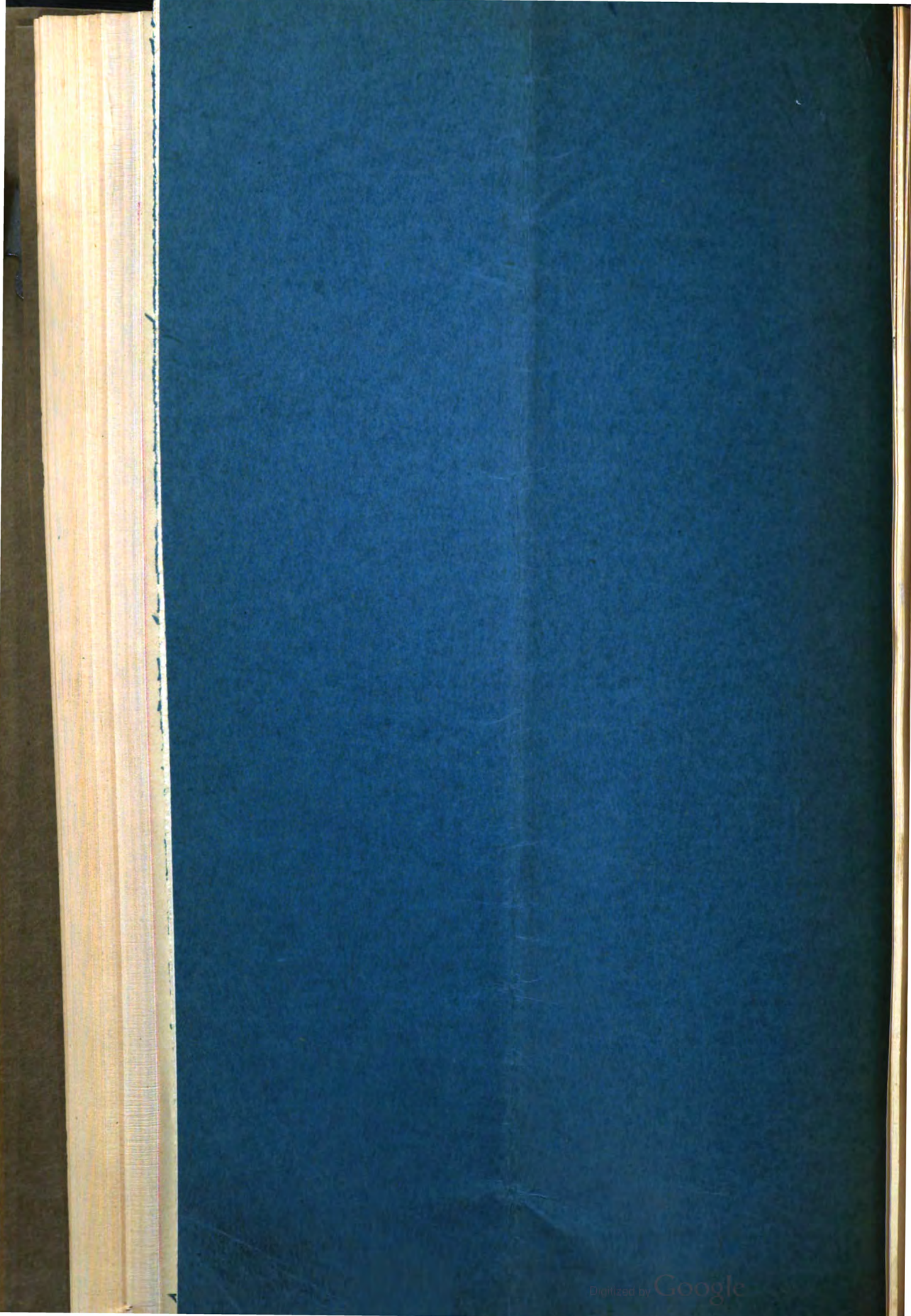
(Signed) L. PÉRINGUEY,
Director, South African Museum.

Cape Town, 12th May, 1917.

	Price s. d.
EDUCATION PAMPHLETS—(Continued):	
17. Education Office Library Catalogue ... 1902	0 6
18. School Libraries ...	0 9
20. School Board Act and Regulations (English) ... 1912	0 9
21. Do. do. do. (Dutch) ... 1912	0 9
The School Board Amendment Act No. 45 ... 1908	0 6
The School Board Amendment Act No. 25 ... 1909	0 4
Fencing Act, No. 17, 1912 (English and Dutch) ...	0 0
Field-Cornet's Manual, 1904 (English) ...	2 0
Do. do. (Dutch) ...	5 3
Education Commission, Minutes of Evidence, Vol. 1 & 2, 1911 (English only) ... each	5 0
Expicative Act with Regulations, 1911 ...	1 0
Geodetic Survey of South Africa, Vol. I., 1894	7 6
Do. Do. Vol. II., 1899	10 6
Geelack Register der Oude Knaapsche Familien:	
Vol. 1, A-J, $\frac{1}{2}$ Cloth ... nett	7 6
Do. do. $\frac{1}{2}$ Calf ...	14 0
Vol. 2, A-O, $\frac{1}{2}$ Cloth ... nett	7 6
Do. do. $\frac{1}{2}$ Cloth ...	11 6
Do. do. $\frac{1}{2}$ Calf ...	17 0
Vol. 3, P-Z, $\frac{1}{2}$ Cloth ... nett	7 6
Do. do. $\frac{1}{2}$ Cloth ...	13 9
Do. do. $\frac{1}{2}$ Calf ...	20 0
1 Set Vols. 1, 2, and 3, $\frac{1}{2}$ Cloth nett	21 0
<i>Gazette, Cape Govt.</i> Proclamations and Principal Govt. Notices, Index to, 1805-1881 ...	6 6
<i>Gazette, Cape Govt.</i> Proclamations and Principal Govt. Notices, Index to, 1881-1891 ...	4 0
<i>Gazette, Cape Govt.</i> Proclamations and Principal Govt. Notices, Index to, 1891-1901 ...	6 6
<i>Gazette, Cape Govt.</i> Index to, to June, 1906 ($\frac{1}{2}$ yearly) ... each	1 6
<i>Gazette, Cape Govt.</i> Index to, July, 1906, to December, 1909 ($\frac{1}{2}$ yearly) ... each	2 6
<i>Gazette, Cape Govt.</i> Index to, January, 1910, to 30th May, 1910 ...	2 6
<i>Gazette, Union Govt.</i> Index to, June to September, 1910 ... nett	5 0
<i>Gazette, Union Govt.</i> Index to, January, 1911, to March, 1914 ... nett	5 0
<i>Gazette, Union Govt.</i> Index to, April, 1914, to March, 1916 (Quarterly) ... nett	2 6
<i>Gazette, Cape Official.</i> Index to, June to December, 1910 ...	1 6
<i>Gazette, Cape Official.</i> Index to, January to June, 1911 ...	1 0
<i>Gazette, Cape Official.</i> Index to, July, 1911, to June, 1916 ...	1 6
Griqualand West, Laws of, 1871-1890 ...	6 6
Historical Documents (Theal), Dutch, 1896, Vols. 1 and 2 ... each	1 6
Historical Documents (Theal), Dutch, 1911, Vol. 3	12 6
Horse, Diseases of and their Treatment, by Dr. Hutcheon (English or Dutch) ...	4 0
House of Assembly, Index to Annexures and Printed Papers, 1854-97, 1898-1903 and 1904-1910 ... each	7 6
House of Assembly, Standing Rules and Orders of, 1912, English or Dutch, each ...	3 6
Insolvency, Act to Consolidate and Amend the Laws relating to, (No. 32 of 1916) ...	1 0
Irrigation Act with Regulations, 1912 (English and Dutch) ... each	3 0
Irrigation in America, 1915 (Lewis) ...	10 6
Justices of the Peace, Manual for the guidance of, 1891 (Tennant) ...	10 0
Kaffir War of 1835, Documents relating to the (Theal) ...	10 6
Leprosy, Handbook on, 1896 (Impey) ...	12 0
Liquor Laws, 1900 ...	0 9

	Price s. d.
Marine Investigations in South Africa, Vol. I. ...	20 0
Do. Do. Vol. II. ...	6 0
Do. Do. Vol. III. ...	20 0
Do. Do. Vol. IV. ...	20 0
Do. Do. Vol. V. ...	10 6
Marriage Laws, 1905 ...	1 6
Marriage Law Amendment Act No. 11 of 1906 ...	0 4
Miners' Phthisis Commission Report of the, 1911, English or Dutch ... each	2 0
Miners' Phthisis Prevention Committee, General Report of the, 1916 ...	7 6
Mines Works and Machinery Act with Regulations, 1911 ...	2 6
Municipalities, Acts of Parliament relating to ...	3 6
Native Territories, Statutes, Proclamations and Government Notices in force on the 30th June, 1907 ... Linen covers	12 6
Do. Do. Bound, non-interleaved	16 6
Ordinances, Cape Provincial 1911 ...	1 0
Do. do. do. 1912 ...	2 0
Do. do. do. 1913 ...	1 0
Do. do. do. 1914 ...	1 0
Do. do. do. 1915 ...	1 0
Do. do. do. 1916 ...	1 6
Do. Natal do. 1911 ...	3 0
Do. do. do. 1912 ...	2 6
Do. Orange Free State Provincial, 1911 ...	3 6
Do. do. 1912 ...	2 6
Do. Transvaal Provincial, 1911-12 ...	2 6
Patents: Act to Consolidate and Amend the Laws relating to the granting of Letters Patent for Inventions and for the Registration of Patents, Designs, Trade Marks and Copyright (No. 9 of 1916) ...	1 0
Postal Route Map, Mounted on Rollers ...	6 6
Do. do. Unmounted ...	1 0
Precious Minerals Act, No. 31, 1898 ...	1 4
Do. Do. Amendment, No. 16, 1907 ...	0 6
Do. Do. (Selections) ...	1 0
Precious Stones Act, No. 11, 1899 ...	1 4
Do. Do. Amendment No. 27, 1907 ...	0 5
Public Health Act, 1902 ...	2 6
Public Service List, 1914 ...	5 0
Records of Cape Colony (Theal), Vols. 3-35 (1799-April, 1831), per Vol. ...	17 0
Records of Cape Colony (Theal), Register of Contents, Vols. 1-35 ...	17 6
Records of South-East Africa (Theal), Vols. 2-9 per Vol. ...	17 6
Rural Council, Rules and Regulations for the Guidance of the ... nett	0 4
Sheriff's Instructions (Revised) ...	6 0
Stamp Duties Handbook, with Decisions of the Inland Revenue Department, 1916 ...	2 6
Statute Law of the Cape of Good Hope, 1896 to 1900 ... each	42 0
Do. Do. Do. Do. 1902 to 1906 } with index	
Statute Law of the Cape of Good Hope, Index to, 1896-1900 (Bound) ...	21 0
Statute Law of the Cape of Good Hope, Index to, 1902-1906 (Stitched) ...	5 0
Statistical Registers ...	21 0
Statistical Year Book, 1912/13 [U.G. 32-'14] ...	7 6
Do. do. 1913/14 [U.G. 14-'15] ...	10 6
Do. do. 1914/15 [U.G. 17-'16] ...	10 6
Do. do. do. [U.G. 26-'16] ...	0 6
(Supplement) ...	1 6
Supreme Court, Rules of ...	0 6
South Africa Act (Union) ... nett	0 6
Do. Index to ... nett	0 6
South African National Convention Minutes, English or Dutch ...	5 0
Trade and Shipping, Monthly Statement of the, each	3 6
Do. do. Annual Statement of the, each	30 0
Transfer Duty, Law of, 1894 ...	2 6

CAPE COLONY COAT OF ARMS, IN COLOURS.
SHEET 22 $\frac{1}{4}$ " x 17 $\frac{1}{4}$ ", 1s. 3d. each.



UNION OF SOUTH AFRICA.

REPORT

OF THE

SOUTH AFRICAN MUSEUM

FOR THE

Years ending 31st December, 1918, 1919.

Presented to both Houses of Parliament by command of His Excellency the Governor-General,
1920.

CAPE TOWN:
CAPE TIMES LIMITED, GOVERNMENT PRINTERS.
1920.

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1918-19

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Trustees of the South African Museum :

THE RIGHT HON. JOHN X. MERRIMAN, P.C., M.L.A.

SIR THOMAS MUIR, KT., C.M.G., M.A., LL.D., F.R.S.

JOHN WILLIAM JAGGER, F.S.S., M.L.A.

Scientific Staff of the South African Museum :

LOUIS ALBERT PÉRINGUEY, D.Sc., Director.

SIDNEY HENRY HAUGHTON, B.A., Assistant Director, and Assistant in Charge of the Palæontological Collections.

KEPPEL HARCOURT BARNARD, M.A., Assistant in Charge of Fish and Marine Invertebrates.

RICHARD WILLIAM ETHELBERT TUCKER, B.A., Assistant in Charge of the Arthropoda (Insects excluded).

ARTHUR LEWIS HALL, B.A., Honorary Curator of the Geological and Mineralogical Collections.

ROBERT MARK LIGHTFOOT, F.E.S., Assistant.

Handwritten text, possibly bleed-through from the reverse side of the page, running vertically along the left margin.

UNION OF SOUTH AFRICA.

Report of the South African Museum for the Year ended 31st December, 1918.

Presented to both Houses of Parliament by command of His Excellency the Governor-General.

REPORT OF THE DIRECTOR FOR THE YEAR 1918.

To the Trustees of the South African Museum.

SIRS,—I have the honour to submit my report on the administration of the Museum for the year 1918:—

Visitors.—The number of visitors was 158,457 divided as follows:—

White.—Adults	...	...	...	Male	64,874
				Female	35,364
" Children	...	...	...		31,671
Coloured.—Adults	...	...	...	Male	11,531
				Female	9,009
" Children	...	...	...		6,008

There were 57 visits from Schools and Training Institutions, numbering in all 1,163 pupils.

The Sunday attendance (from 2 to 5 p.m.) totalled 25,912, an average of 498 per Sunday. The highest attendance was on 19th December=1,002; the lowest on 6th October=143. On week-days the highest number, 1,723, was reached on the 19th of January; and the lowest, 65, on the 10th of October.

But for the epidemic of Spanish Influenza the number of visitors would have been much greater.

Presents, Purchases, Acquisitions by the Staff.—The number of donations and purchases are 7,892, divided as follows:—

				Specimens.	Species or kind.	New to collection.
Mammals	...	...	...	33	27	2
Birds	...	...	...	55	46	3
Birds' Eggs	...	...	...	12	58	—
Reptiles	...	...	...	29	29	—
Fishes	...	...	...	183	56	3
Mollusca	...	...	...	76	19	8
Other Marine Invertebrates	...	...	...	56	14	3
Crustacea	...	...	...	105	27	12
Arachnids, etc.	...	...	...	1,376	433	158
Insects	...	...	...	3,949	1,616	221
Geology, Mineralogy and Palæontology	...	...	...	587	315	254
Botany	...	...	...	1,201	1,000	866
Anthropology	...	...	...	75	75	75
Ethnology	...	...	...	107	107	107
Antiquities—Curios	...	...	...	48	48	48
				7,892	4,070	1,760

Library.—The total additions to the Library were 927, made up of:—

Books:	Purchased	...	...	...	4
	Presented	...	...	...	5
Pamphlets and Periodicals:	Purchased	...	...	...	119
	Presented	...	...	...	799

Labels.—A considerable number of labels was printed during the year.

Publications.—The enormous increase in the cost of printing caused not only by lack of paper but also by the continuous rise in wages, etc., has compelled me to suspend for a time the publication of several important papers of considerable size, and to restrict myself to the execution of illustrations only. During the year there appeared however:

Vol. IX., pt. 7.—Contributions to our knowledge of the Freshwater Algae of Africa.
A first report on the Freshwater Algae in the Herbarium of the South African Museum. By F. E. Fritsch. 128 pp. 43 figs.

Vol. XI., pt. 6.—Appendix to "Freshwater Fishes of South Africa," with coloured plate and Index to Vol. XI.

Vol. XII., pt. 5.—Some species of Anomodontia Reptilia. R. Broom and S. H. Haughton. Investigations in South African Fossil Reptilia and Amphibia. Pt. 10. S. H. Haughton. 56 pp. 3 plates and 26 text figs.

Vol. XII., pt. 6.—Investigations in South African Fossil Reptilia and Amphibia. Pt. 11. S. H. Haughton. 41 pp. 15 text figs.

Vol. XIV.—Plates 5–9, and Explanation of Plates.

The manuscripts at the printers' or in my hands number 11.

Collecting.—Two of the Members of the Staff have spent two months in the field, and two others are now in the South West Protectorate. These collecting expeditions were made possible by two grants-in-aid obtained from the Royal Society of South Africa, and by the generosity of Mr. J. W. Jagger, a Trustee of the Museum.

ARRANGEMENT AND CONSERVATION.

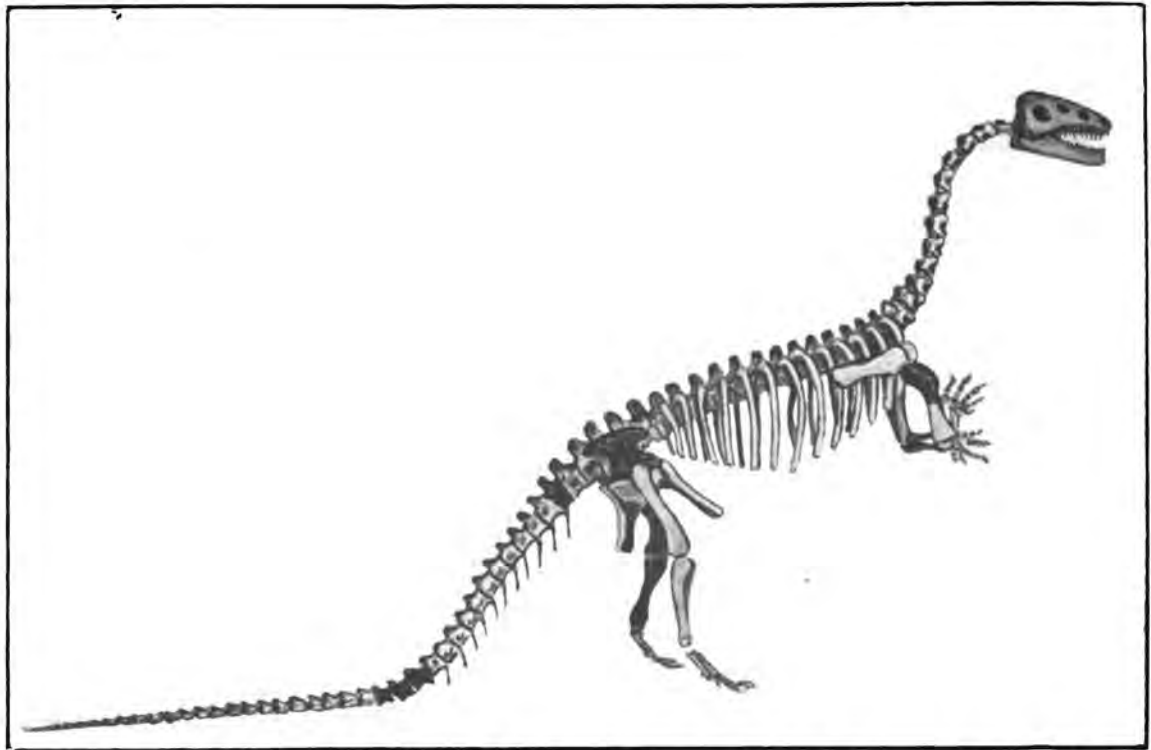
Zoology: Mammals.—The generous help of Mr. K. Ellefsen, of Saldanha Bay, has at last permitted of a Sperm-whale skeleton being added to the whale series exhibited in the open in the Museum grounds. It is a female example some 30 feet long. It gives an idea of the conformation of that extraordinary toothed-whale, but not of the huge bulk of the male which is double her length with a girth in proportion. This skeleton will, however, have to be taken down within six or 8 months' time—if not before—as the texture of the bone will not allow of the specimen being left exposed to sun and rain in the manner of the other mounted whales. After 10 years' exposure, parts of the latter are crumbling away. If the help asked for from the beginning of the Union is not forthcoming this year in the shape of protecting sheds, the disarticulating of these huge skeletons and storing of the same in cases in a hired store must be seriously considered. I can only reiterate that to my knowledge no Museum south of the Equator, and very few north of it can boast of such an exhibit as our whale-skeleton series. Its removal would greatly reduce the Museum attractions. Another and equally important fact to be considered is that whales are seemingly getting scarcer on our coasts, and to replace our weather-bitten specimens will become more and more difficult. To the skeletal series of smaller whales, dolphins, etc., has been added a "False Killer" (*Pseudorca crassidens*) harpooned while attacking a dead captured whale. So that, with the exception of the "Blackfish" and one or two Dolphins and Porpoises, all the Cetaceans ever recorded from the Cape Seas, are represented in our Collection, and in addition to these no less than three other kinds have been recorded for the first time.

Birds.—A good deal of time has been devoted to the re-cataloguing, and incorporating in the skin cabinet, of a large accumulation of bird skins. I am, at least temporarily, restricting the number of each species to 12, in addition to the 2 mounted examples in the exhibited series. Three fourths of the Passeres have been so dealt with, and 25 new drawers added to the number. The birds' eggs have been similarly treated, and a fair number of novelties added, catalogued, and set in glass-topped boxes. This re-arrangement permits of a full knowledge of the specimens mounted, and of those that we can offer in exchange which, I regret to say, are not as numerous as I should wish. A moderate number of new kinds have been obtained by exchange or donations. The number of new bird skins obtained by donation has not been large, but it contains several interesting species; nearly all have been incorporated in the study-collection or will be mounted for exhibition. A donation of a pair of Damaraland Guinea-fowl has enabled us to group in one of the cases the three South African kinds, each showing its specific characters. An interesting record is that of a Sandwich Tern (*Sterna cantianca*) in breeding plumage and ringed that was shot in May, at Strandfontein near Muizenberg (Cape District). The ring bore the inscription, Zoolog. Stat. Heligoland, No. 1563.

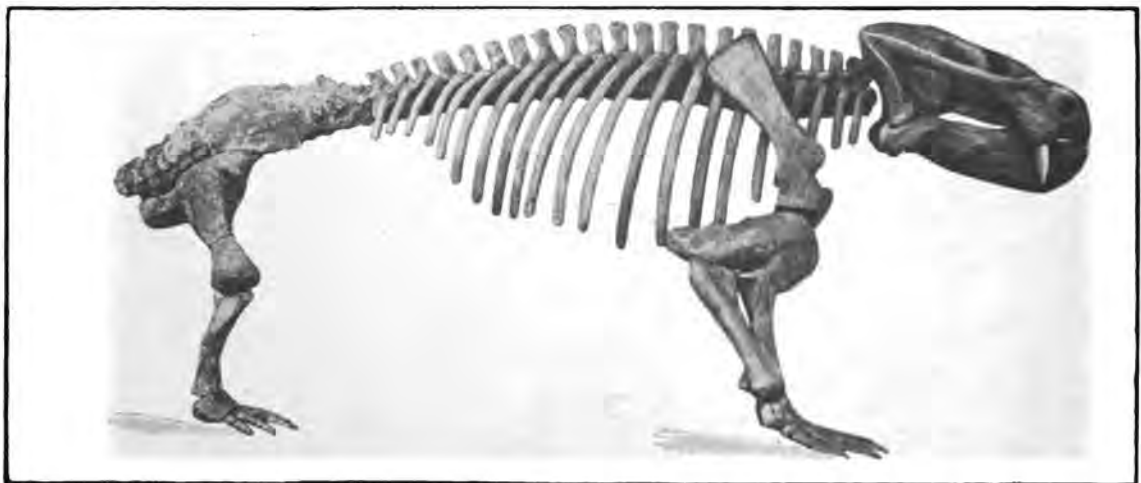
Reptiles.—The number of acquisitions is a small one, although it includes a few interesting species. A group of three Pythons has been most successfully set up by the Taxidermist, Mr. J. Drury, and is not only very realistic, but also true as to details, the largest reptile being a cast from the dead.

Fishes and Marine Invertebrates.—The number of specimens of Fishes received is very satisfactory. The large example of the extraordinary deep-sea ribbon-fish *Regalicus gladius* has been placed in the exhibited series. Very little indeed is known of this rare fish, and certain peculiarities of which we found traces in preparing the animal has led us to reconstruct the "mane" in a manner differing greatly from previous accounts and (mostly fanciful) descriptions. The cast of a large Sun-fish awaits for completion the return to normal price of plaster of Paris.

PLATE I.



Restoration of the skeleton of a Dinosaur *Melanorosaurus reedi* from Bensonvale, Herschel, C.P.
 $\times \frac{1}{4.3}$ nearly. (Total length 26 ft.).



Restoration of the skeleton of a species of *Dicynodon* from Dunedin, Beaufort West, C.P.

Entomology.—The number of specimens recorded, labelled and sorted is, in Insects, slightly less than last year, whereas in Arachnida, etc., it is well-nigh the same. This decrease in Insects is, however, a sign of progress, for it bears testimony to the growing completeness of the collection of the South African Insects. The scientific reports on its contents as exemplified by Memoirs or Monographs of whole Families, or other important papers describing the new species, are increasing in number and value. This result is made possible by the large amount of material patiently obtained and accumulated for many years; our growing knowledge of this material enables us now to supply the requirements of the many specialists who assist me in elucidating the Entomology of South Africa. The growth of both material and work in connection with this Department must necessitate very shortly the appointment of another qualified Assistant. Three collecting trips have been undertaken during the year with interesting results and a fourth is now proceeding with the South West Protectorate as its object. The detailed account of the work done in many directions shows satisfactory progress.

Geology, Mineralogy and Palaeontology.—In pursuance of my scheme of restoration of the skeletons of the extinct animals of South Africa, a 26 feet long Dinosaur has been mounted and placed on exhibition. The successful reconstruction of this huge reptile does great credit to Mr. S. H. Haughton, Assistant Director, and to Mr. J. Drury, the Taxidermist. A large *Dicynodon* has been treated in the same manner and also placed on exhibition. The public is now able to realise the general form of these extinct species. But in order to introduce these novelties in the exhibition room, other examples equally interesting have had to be removed or relegated to positions where they are imperfectly seen.

Owing to his removal to Pretoria, Dr. A. W. Rogers, F.R.S., Director of the Geological Survey, resigned as Honorary Keeper of the Geological and Mineral Collections, and Mr. A. L. Hall, Assistant Director of the Survey, has accepted the Honorary Curatorship of this branch.

Botany.—A considerable number of sheets of plants have been incorporated in the Cabinets, and the proportion of the new species is satisfactory. It may be of interest to mention that the number of sheets present at the time the Herbarium was made over to us has been increased by a third. Botanical information continues to be given to the Provincial Authorities in regard to the Noxious Weeds Act, and entails considerable work. A very important communication by Dr. Fritsch on the South African Algae of the Collections has been published during the year; and another, equally important, is being prepared.

The help given by this Department in enforcing the Wild Flowers Protection Act has resulted in 29 convictions against offenders.

Dr. E. P. Phillips resigned his Assistantship, having accepted an appointment elsewhere.

Anthropology and Ethnology. Physical Anthropology.—The collection of native skulls has received a fair number of additions, but they are mostly of the Bantu type which is and will be long with us. But among the "San" relics are some, very interesting on account of the locality in which they were discovered, namely, near the acclivity of Strand Street, in Cape Town, almost opposite the Koopman's Museum Annexe. An old house was being pulled down and on deeper foundations for a new one being prepared, remains of bodies and skulls of the Strand-Looper type, a round perforated stone, etc., were found in a patch of sand overlying the rock. We were unfortunately too late to secure all the relics; a similar find had been made close by some years before, while a store was being erected by the firm of Garlick, Ltd., and the two cases (borne out by other evidence) confirm the statement I once made that a line of sand dunes extended from the bottom of Adderley Street, to the Green Point Vlei, and that there dwelled, or were interred, the roving natives to whom the nickname of "Strand-Looper" was given by the first Dutch Settlers. Traces of their middens are still to be seen at Green Point and in sections of the well-known Victoria Road girding the marine line of the Cape Peninsula.

The results of the examination of the large and representative material of the "San" Race accumulated at such great cost and difficulties by this Museum has not, I regret to say, materialised much. An effort will, however, be made to publish the first results when printing facilities become more normal.

Antiquarian Anthropology.—In the Stone Industry section a very interesting discovery was made in the Transvaal in the shape of a large implement of diorite with a distinctly ground edge. The implement is not, however, wedged in the shape of an axe. Cases of this artificial grinding are so rare in South Africa that this new addition should be recorded. Another equally interesting example is from the Uasin Geshu plateau of Uganda, Central Africa, kindly donated by Rev. J. du Plessis. It is small but of quite Neolithic type (and probably was such), with the edge carefully ground into a cleaving tool. It forms a link with the polished stone implements found in the Congo State, which are almost Scandinavian in style. It is not of the pre-dynastic Egyptian type and is the more

interesting on this account, because if the "San" stone industry may be said to be Aurignacian in style, this tool is certainly not of it. I am gradually, but slowly I fear, accumulating evidence that the stone industry was also to some extent in vogue among the Bantu speaking races, and not among the Bush only. Of this, more in my next report.

Cultural Anthropology.—I received, after nearly three years' work, two large slabs of Bushman paintings. They amply repay the time spent on the removal, and the cost of transport. The treatment differs from those paintings we had before. I re-arranged the series, and incorporated, and set in panels, those we had not exhibited hitherto including solitary figures of animals executed on a small scale, sometimes on both sides of small detached slabs, found in the rock-shelters of the South Cape coast where they were placed over the inhumed bodies.

I regret to say that some of these monochrome (black) pictures have faded completely away. I have taken steps to counteract the action of light on the poorly fixed pigment; where monochromes are concerned, varnishes suffice pro tem, but not so in the case of polychrome where the intensity of the reds and browns (oxides of iron) are greatly affected thereby. But apart from the interest attaching to the pictorial side of the finds there is another relating to the possible age of the cave dwellers, or inhumers, directly connected with these slab-paintings. For in one of these shelters there was found such an one immediately close to and partly under a thick stalactitic column reaching from the roof of the shelter to the accumulation of kitchen midden material and therefore posterior to the said accumulation. In a locality rich in lime, a dolomitic formation for instance, the process of formation of these stalactitic-stalagmite pillars would be proportionately rapid but in these particular instances the ground is not only very poor in, if not almost void of, lime, but the shelters have but very few feet of rock above them. Truly the percolation bringing lime with it may come from higher levels, but it must needs be very indirect in a shelter that at no time is more than 50 feet broad and hardly 60 feet deep. It is therefore permissible to accept a greater antiquity for the remnants originally interred there and the paintings than is generally accepted. Several of the skulls obtained in these caves were found to be partially filled with a flocculent matter that on analysis turned out to be sulphate of lime, i.e., gypsum. While it may be objected that the decomposition produced by iron-pyrites on lime could easily bring about this result, i.e., production of gypsum, it must again be said that in the shelters where these occurrences have been met with there is no depth of overlying rock. If we take into consideration the conclusions of Shrubsall, that Strand-Looper skulls differ materially from the Hottentot, or so-called Bush races, I am justified, I think, in claiming for the Strand-Looper branch of the "San" that occupied at one time the southern littoral of the former Cape Colony, not only a mode of culture more primitive than that retained by any living human race, but also a greater antiquity than for any other African living race. It is a little piquant to mention here, that unless my premises (to be explained elsewhere with fuller details) be erroneous, they lead me to reinstate the name of "Hottentot" for the Strand-Looper, of which the so-called "Bushman" is one. The right appellation of the Hottentot must be Khoi-Khoi. I doubt if this nomenclature will ever prevail.

A remarkable example of rock-graving was obtained from the South-West Protectorate. On it are figured hoofs of large and small ungulate animals produced by picking and with the median line left in relief to show the division of the hoof. Photographs of the site show a number of these hoofs interspersed with schematic human feet and small circles; there is also a graven elephant of poor execution. This last representation connects this style of graving with those known to occur in the Union. A representation of this type is recorded from the Bechuanaland Protectorate, but I have not seen it; Mr. Drury has been sent to remove these relics, or to take a cast of them, if, as I fear, they cannot be chiselled out.

Ethnology.—The number of objects pertaining to Ethnology amounts to 107. They not only comprise examples illustrating the cultural and manufacturing sides of the South African Natives, but are also from the Western slopes of Mount Elgon, and Northern shores of Lake Victoria, Central Africa, which are in great contrast to the objects of our native manufacture. Among the latter stand pre-eminently four wooden models of birds and Giraffes found in a deserted Kraal in the Northern Transvaal where they stood on poles about 18 feet high round an enclosure some 15 yards in diameter. This is most probably a survival of totemism; and it has a strong bearing on the question of the soap-stone birds of Zimbabwe which in all probability were also totems; possibly the vulture!

For two years now all ethnological objects have been removed from the Exhibition Rooms, because they could no longer be adequately represented, and the accessions of this year will join those of the preceding ones packed in boxes or drawers.

Curios and Antiques.—An anonymous donor has presented to this Museum a collection of thirty Sévres vases of splashed and whole coloured glazes. These magnificent specimens of Ceramic Art emulate if not surpass their antique Chinese porcelain models. The donor considered that this Sévres porcelain should be sent to the Cape Town Museum "as it

may prove of educational value in shapes and colour when the Kaolin of the Cape Flats is used industrially".

The suggested War Museum Collection has not, so far, materialised. But we have received a piece of Zeppelin Bomb, dropped at Waltham Abbey, Essex, and earth fused by an incendiary bomb.

The only Antique received is a set of 3 necklaces from the prehistoric tombs of Egypt, the flat beads of which are like the flat disks made by the Bushmen of to-day.

Koopmans de Wet House.—The popularity of this Annexe to the Museum continues, as instanced by the number of visitors: 20,991.

The restoration of the outbuilding in the backyard, commenced in September, 1917, was completed in April, 1918, under Dr. Purcell's supervision, at the expense of the Public Works Department, together with the renewal of all the missing teak-shutters of the main building and the paving of the hitherto unpaved portions of the yard with old slate tiles. The Music Room, one adjacent Room and the Kitchen are now renovated and open to the Public. In the Music Room were placed 2 large and two small glass Cabinets for exhibiting small articles de vertu. These Cabinets were most generously loaned by Dr. W. F. Purcell, and will enable us to remedy a little the tendency to over-crowding which is always almost unavoidable where room is as restricted as it is in the Koopmans de Wet House.

The Kitchen is now equipped with a representative number of old copper pots, pans, and kettles.

A portion of the backyard, through which bulged a lean-to belonging to Messrs. Collison & Co., was very kindly restored to us by this Firm.

All the missing brass handles and door-furniture in the Main building have been replaced by exact copies of the originals.

I should like to testify here to the sympathetic help given us so unselfishly by Dr. Purcell, who has had charge of the complete renovation of the House, and who has so generously added many rare pieces when most wanted.

Administration.—In an attempt to call anew the attention of the Government to the great difficulties under which the S.A. Museum labours, the Trustees, acting in collaboration with the Members of the House of Assembly for the Cape Peninsula and several Senators, addressed to the Government a strongly worded Memorandum dealing with the claims of the Museum for an increased financial assistance, and for commencing the building of the new wing of the Museum which has been already planned, and for which provision has already been made by Parliament. An answer has been received to the effect that no relief can be granted.

(Signed) L. PÉRINGUEY,
Director.

DEPARTMENT OF VERTEBRATE ZOOLOGY.

Mammalia.—33 examples of skins and skeletons mostly of large antelopes from Zululand were acquired by donation or purchase. Mr. C. Ellefsen has very generously presented the skeleton of a female Sperm whale which has been mounted in the grounds next to the other whale skeletons, and the contrast in the structure of the baleen and the toothed whales is very striking. To Mr. Ellefsen we are also indebted for the skeleton of the "False Killer" (*Pseudorca crassidens*) which occurs in seas so widely separated as those of Denmark and Tasmania. Our specimen thus bridges the distance. The skeleton has not been articulated as yet, but the "whalebone" whale obtained last year (*Neobalaena marginata*) has been mounted.

Birds.—The number of specimens donated is 55, comprising 46 species, 3 of which are new to the Collection of South African species, including a pair of Damaraland Guinea Fowl, long wanted. A valuable addition has been that of an adult Bird of prey, *Nisaetus spilogaster*, which has permitted of a wrong identification being rectified. A small collection of Rhodesian birds' skins has increased our working collection and helped to complete our numbers. No new bird eggs have been obtained, but 14 clutches numbering 33 eggs have been received.

Reptiles.—Only a few reptiles were received. Most of them were secured by Mr. R. W. E. Tucker at the junction of the Marico and Limpopo Rivers. The principal Donors of Vertebrates were:—Messrs. J. Andrew, C. G. Finch-Davies, C. Ellefsen, G. H. Herman, Dr. G. M. Melle, Rev. J. O'Neil, Messrs. R. E. Symons, S. F. Townsend, R. W. E. Tucker, H. J. Wolheim.

(Signed) L. PÉRINGUEY.

DEPARTMENT OF FISHES AND MARINE INVERTEBRATES.

To the Director
South African Museum.

Sir,—I have the honour to present the following report on the Department of Fishes and Marine Invertebrates for the year 1918.

I have been engaged chiefly in the sorting and arrangement of the study collections and in preparing series for exhibition. Little field-work has been done except in connection with the fauna of the fresh-water streams in the Peninsula. I have undertaken a preliminary examination of the "Pieter Faure" collection of Polychaets, the fauna-list of which includes many species hitherto not recorded from South African waters and not a few species apparently new to Science.

Study Collections.—The collections of South African Land Shells and Polychaets have been sorted and put into systematic order. A beginning has been made with the extensive collection of Foreign Shells, both Marine and Non-marine, which will probably be found to be fairly representative of several regions of the world, especially of the Indo-Pacific Ocean. It therefore has considerable value for the comparative study of the South African Molluscan fauna.

Public Exhibits.—A series of S.A. Polychaets has been placed on exhibit, consisting of the chief types in this group; also a series of the tubes constructed by these animals showing the varying degrees of skill possessed by the different species.

The majority of the larger and more representative South African Land Shells are now on view. With regard to the Foreign Shells lack of space prevents any but a very few of the more showy kinds being exhibited. An exhibit has been put up explaining the nature of Pearls, with examples of the chief shells from which Pearls and Mother-of-Pearls are obtained. A series of Brachiopods has been added to the series of Marine Shells.

A very few species of Sea-Spiders (Pycnogonids), including the large abyssal *Colossendeis gigas*, are temporarily on view, the bulk of the collection being still in the hands of a specialist.

Additions.—The following additions have been received during the year:—

Fishes	...	...	183 specimens,	56 species,	3 new to the collection.
Crustacea	...	...	105	" 27 "	12 "
Mollusca	...	...	76	" 19 "	8 "
Other marine					
Invertebrates			56	" 14 "	3 "

The thanks of the Trustees are due to the following for donations:—Rev. V. Ellenberger and Rev. L. Jalla, for fresh-water Fishes; Brother J. H. Power, of Kimberley; for Entomostraca and dried mud from which further specimens are being bred; Mr. J. S. Brown and Mr. H. W. Bell-Marley for Crustacea; Father Casset, Major M. Connolly and Mr. Robson, for Mollusca, etc.

I have the honour to be,

Sir,

Your obedient servant,

(Signed) KEPPEL H. BARNARD.

DEPARTMENT OF ENTOMOLOGY.

To the Trustees of the South African Museum.

The number of specimens mounted and labelled during the year is 3,599 representing 1,591 species, of which 193 were not represented in the collection. This number is not as large as in the previous year but the reduction is due to the rejection of many examples exceeding our requirements, and also to some collections made by the Staff late in the year not being sorted as yet.

The species belonging to the different Orders are tabulated as follows:

	Examples	Species	New to collection.
Hymenoptera	298	190	22
Coleoptera	1,707	666	34
Diptera	589	160	29
Lepidoptera	568	379	78
Neuroptera	149	44	14
Homoptera-Hemipt.	171	89	11
Orthoptera	117	63	5

The additions to the Cabinet have been numerous and varied. In the Coleoptera the Sub-Families Chrysomelinae and Cassidinae have been incorporated. The Order Neuroptera has been re-arranged. It has proved a task of no mean difficulty, and the preparatory details have been so arranged for a complete account of the South African representatives of this Order that the latter could be undertaken when normal times prevail again. It seems very doubtful to me if much new, that is to say unknown, material exists in the South African Region such as to require many appendices to general treatises based on our present knowledge. This is well exemplified in the paper by Ris on the South African Odonata numbering 177 spp., etc. The South-West Protectorate might prove a possible, although scarcely probable, exception. But our present collecting expedition there will settle this point shortly, provided a suitable season prevails. I have sorted a good deal of material for specialists such as Diptera, Orthoptera, Mallophaga, Hymenoptera, Micro-Lepidoptera and others, and in spite of the difficulties due to the war I am glad to be able to report progress, as the publications of the *Annals* when resumed will show.

The Entomological MSS. either at the printers' or in my hands are numerous and bulky. They are as follows:—Monograph of the Formicidae of South Africa, pts. 4 and 5, G. Arnold; the Crane-Flies of South Africa in the South African Museum, pt. 2, C. P. Alexander; on the Bombyliid Fauna of South Africa, etc., M. Bezzi; Supplementary notes on South African Ephemeroidea, P. Esben-Petersen; on some South African Ichneumonidae, pt. III, Claude Morley; new species of Fossorial Hymenoptera, R. E. Turner; contribution to the South African Arachnid Fauna, No. 2, R. W. Tucker.

The identification of the insects collected at high altitudes in the Ceres and Worcester Districts has progressed. Only one such trip was undertaken this year, but the results have proved disappointing so far as novelties are concerned; sustained search may however prove that certain kinds (especially among micro-lepidoptera) are met with at certain altitudes only.

The main donors to which the thanks of the Trustees are due have been Dr. H. Brauns, Messrs. J. Brown, J. S. Carlisle, Father Casset, J. C. Faure, J. H. Feltham, G. French, C. Fuller, J. Gould, R. Jack, T. Kroeger, Dr. G. M. Melle, Mr. H. K. Munro, Rev. J. O'Neil, Father R. Sollier, Dr. A. L. du Toit. Messrs. Barnard, Haughton, Lightfoot and Tucker have largely contributed.

(Signed) L. PÉRINGUEY.

DEPARTMENT OF ENTOMOLOGY (INSECTS EXCLUDED).

To the Director of the South African Museum.

Sir,—I have the honour to submit the following report on this Department for the year 1918.

The commencement of the year was occupied in sorting, indexing, etc., the collection resulting from Museum expeditions and outside contributors, and also in preparing and mounting various Mallophaga. In the middle of January a collecting expedition was undertaken to Bechuanaland and the North West Transvaal; on arrival in Bechuanaland a four days' trek was commenced from Mochudi to the junction of the Marico and Crocodile Rivers, North West Transvaal. In this region collecting was undertaken for a period of two or three weeks, and return made to Cape Town towards the end of February.

The sorting, indexing, etc., of this and other material was then completed; subsequently further Mallophaga were mounted and minor additions made to the mounted series of Arachnida. Work was recommenced on the group Drassidae, and this and the revision of, and addition to, species of the genera dealt with in previous papers occupied the ensuing months.

A grant was then received from the Royal Society of South Africa in aid of faunal investigation in North and East Transvaal, and at the end of October a start was made for the low veld between the Drakensberg Mountains and Portuguese East Africa; various places in this region and in the middle and high veld were used as centres for collecting and finally a return was made to Cape Town about the end of December. Subsequently the examination of the material obtained was commenced, and is still in progress.

The total number of specimens incorporated into the collection during the year number 1,377, comprising 433 species of which at least 148 are new to the collection. The various Orders are represented as follows:—

Onychophora	1 specimens,	1 species,	— new to the collection.
Pseudoscorpiones,	11 "	3 "	1 "
Pedipalpi	18 "	2 "	— "
Solifugae,	25 "	5 "	1 "
Opiliones	47 "	9 "	4 "
Scorpiones	105 "	24 "	5 "
Myriapoda	117 "	33 "	6 "
Acari	160 "	10 "	4 "
Araneae	873 "	347 "	137 "

The thanks of the Trustees are due to Mr. W. E. Jones, Father J. O'Neil, Mr. G. French, and Bro. J. H. Power, for the contributions made by them during the past year.

I have the honour to be,

Sir,

Your obedient servant,

(Signed) RICHARD W. E. TUCKER.

DEPARTMENT OF GEOLOGY, MINERALOGY AND PALAEOLOGY.

Sir,—I have the honour to submit the following report upon the work of this Department for the year 1918.

During the year 1013 additions were made to the Catalogue, of which 587 specimens were acquired during that period. These were divided as follows:—

	Specimens.	Species.	New to collection.
Rocks	173	166	157
Minerals	143	38	6
Meteorites	1	1	1
Fossils:—Mammals	14	5	—
Reptiles and Amphibia	23	16	7
Invertebrates	218	84	79
Plants	15	5	4
Total	587	315	254

Geology and Mineralogy.—The exhibited stratigraphical series has been increased by the addition of a set of rocks from the Barberton Division belonging to the Swaziland System, and of a few rocks belonging to the Transvaal System, all presented by Mr. A. L. Hall. This has necessitated the transference of the meteorites to the case formerly occupied by the Introductory Series, which has had to be packed away in drawers.

The case formerly occupied by Australian fossils and minerals from the South-West Protectorate has been emptied of its contents—the former of which have been stored away, while the latter have been incorporated as far as possible in the general series of South African minerals—and has been devoted to a display of raw and manufactured articles illustrating the Asbestos industry of South Africa. This interesting economic exhibit has been made possible through the generosity of Messrs. A. L. Hall and the late A. E. V. Zealley, the Rhodesian Chamber of Mines, and the Charterland and General Exploration and Finance Co., Ltd., who kindly contributed numerous specimens of ore and of the marketed minerals. A large explanatory label accompanies the exhibit.

The meteorite collection has been enriched by the gift of a 26 lb. iron from the Prieska Division. This was donated by Mr. S. Grove, M.P.C. A large mass of corundum-bearing plumasite-pegmatite, donated by Mr. P. Ross Frames, has been placed on exhibition. Dr. P. A. Wagner added some diamondiferous samples from the Aliwal North field. A few minerals were obtained by exchange with the McGregor Museum and the Otavi Mining Co. Gifts of rocks and minerals have also been gratefully received from Father Casset, Mr. P. Dreyfus, Dr. G. M. Melle, Rev. H. Kling, and Dr. R. B. Young.

Palaontology.—The mounting of the restored 26 ft. long Dinosaur, *Melanorosaurus readi*, was completed early in the year, and was exhibited in one of the smaller rooms. A certain amount of re-arrangement was necessary to enable this to be done, and the skeletons of *Pareiasuchus peringueyi* and *Propappus sp.* had to be hoisted to the top of one

of the wall-cases, where they are by no means well seen. The large Dinosaur now occupies the whole length of the room in which it is placed. A femur of a yet larger form, sent by Mr. A. W. Lilford, has been placed in one of the cases.

The Rev. J. H. Whaits has again sent a number of good specimens, and of his finds a skull of *Dicynodon leoniceps* has been exhibited. During the year a restoration of the skeleton of a *Dicynodon* from the *Cistecephalus* zone has been completed and is now displayed on the top of one of the wall-cases. In addition another *Pareiasaurus* skeleton has been cleaned and mounted, but cannot be displayed owing to lack of room. Interesting reptilian remains have been presented by Messrs. J. Rose-Innes and T. P. Stokoe.

Work on the Karroo Reptiles has proceeded steadily and during the year two parts of Volume XII of the "Annals" have been issued. Part V contains "Some New Species of Anomodontia" by R. Broom and S. H. Haughton, and "Descriptive Catalogue of the Anomodontia, with especial reference to the examples in the South African Museum (Part 1)" by S. H. Haughton. Part VI contains "Some Carnivorous Therapsida, with Notes upon the Brain-case in Certain Species" by S. H. Haughton. Moreover, two months were spent collecting fossils from the Stormberg Series, an expedition partly carried out by a grant-in-aid from the Royal Society of South Africa.

The invertebrate type-fossils from the Bokkeveld, Uitenhage, and Pondoland Series have been catalogued. A commencement was made at the systematic arrangement of the Bokkeveld study collection and duplicates, and the specimens of the genera *Palaeoneilo* and *Nuculites* were named and card-catalogued. A large number of Cretaceous fossils from Zululand were named for the Geological Survey.

Mr. D. J. Jooste sent a section of a large fossil tree from Philipstown and this was followed by a number of sections of the same specimen collected and presented by Mr. J. W. Marais. The Rev. W. G. Sharples presented specimens of Bokkeveld plants.

In addition to those named the thanks of the Trustees are due to Messrs. C. Cullingworth, J. Frylinck, J. Milne, B. Read, W. Robertson, W. J. Wybergh, and Dr. Caldecott for assistance rendered and specimens donated.

I have the honour to be,

Your obedient servant,

(Signed) SIDNEY H. HAUGHTON.

DEPARTMENT OF BOTANY.

The Director, South African Museum.

Sir,—During the year 1133 plants were mounted; of this number 927 sheets have been incorporated in the cabinets and 370 new species, and also new genera were included; 65 new genus covers were written for the new genera, and also to replace soiled ones, etc.

The plants collected on the Matroosberg Expedition have been identified as far as found possible; a number of these species are new to science.

A number of species from Mt. Elgon, in the Uganda Protectorate, and also from Portuguese East Africa were purchased and 557 received from donations.

The Order Anacardiaceae has been revised according to the latest Monograph; and the Genus *Euphorbia* re-arranged with reference to the recently published part of the Flora Capensis.

Numerous plants have been named for several correspondents, among them, plants from the Orange Free State for Professor G. Potts; from the Transvaal for Mr. H. W. Beeton, and from Basutoland for Mrs. Dieterlen.

The Provincial Council has forwarded many plants chiefly noxious weeds for identification and information thereon. All our material of the genera *Borbonia*, *Ocimum*, *Becium*, *Sesbania*, *Zanthoxylon* have been loaned to the Department of Agriculture, Pretoria, and our sheets of the genera *Gazania* and *Gorteria* to the Bolus Herbarium. Dr. S. Schonland being engaged on a revision of the Order *Cyperaceae* has received our material of a number of genera, which he has kindly revised. The remainder will be sent him on his demand.

The main donors to whom the thanks of the Trustees are due are: Messrs. F. Bolus, P. van der Byl, Mrs. Dieterlen, Messrs. F. Evles, G. H. B. Fraser, Sir E. Kilpin, Miss A. Pegler, T. P. Stokoe, Miss M. Wilman, and also the Director of the Royal Botanic Gardens, Kew, and of the Philippine Bureau of Science.

(Signed) W. J. FOLEY.

DEPARTMENT OF ANTHROPOLOGY AND ETHNOLOGY.

A most valuable addition to our series of Bush Paintings has been obtained through the very kind exertions of a Museum friend, Mr. G. S. T. Mandy, in the shape of two huge panels, 7 and 9 feet long respectively, and 4 and 5 feet high. The work of chiselling out these huge slabs was long and costly. A re-arrangement of the paintings in hand was made necessary by this important addition, and the display is now a very creditable one. The room in which they are exhibited is however not very suited, and I am in constant fear that the excess of light, in spite of our precautions, will impair the colour of the pigments. In a few cases this has happened already, not for those paintings executed in the open air, but for those found in the cave deposits, where they served as epitaphs.

A rock carving of quite unusual composition has been added to the exhibited series.

From the Transvaal we have received huge Kwès—or perforated orb; their size prohibits the theory of their having been used as weights for digging sticks. One of them is made of iron ore.

Very interesting stone implements have been received, among them an example with artificially ground edge.

The acquisitions in Native implements, tools, arms, etc., have been numerous and varied. Many examples were not hitherto represented, and some specimens from Central Africa are particularly interesting. Unfortunately we cannot exhibit, for there is no room to do it, and all ethnological objects have been removed from exhibition. Many of the specimens received are from the Zambesi Native Tribes, as well as from the Ovambo; but several are from the Kalahari, and specimens of bows, arrows (not made for sale) and the few accessories of which the mobilier of the Masarwas consists are of peculiar interest and value.

In Antiques and "Curios" little has been received. Special mention must however be made, because they come in neither of these two categories, of the presentation of a collection of remarkable Sèvres vases of "flambés" and other oriental ware.

The Trustees are greatly indebted to the following donors: Mrs. R. Antrobus, Messrs. J. M. Bateman, Major F. Brownlee, Mr. S. Bebro, Mrs. E. B. Cashel, Father A. Cassel, Messrs. A. B. Ellis, R. A. Dümmer, Major R. H. Gage, Messrs. A. L. Hall, Lieut. E. H. Hahn, —Herbst, Rev. L. Jalla, Rev. H. Kling, Messrs. M. MacLelland, G. S. T. Mandy, Dr. G. M. Melle, Merivale Drury, Mrs. Mikdal, Mr. S. Naude, Rev. J. du Plessis, Messrs. G. C. Scully, P. J. Retief, J. S. Trevor, D. C. Thwaites, Dr. W. Versfeld.

(Signed) L. PERINGUEY.

KOOPMANS DE WET HOUSE.

To the Trustees of the South African Museum.

The restoration of the building in the back-yard, and of the yard itself, has been completed. The Music Room, two adjacent rooms and the Kitchen are now thrown open to the public. New glass-cabinets to contain several objects of vertu, too small or too fragile to be exhibited without this safeguard, have been placed in the Music Room. The glass and porcelain has been removed from the Hall to the large room upstairs. The Kitchen, also restored, has been provided with a fine set of old copper utensils. The lean-to belonging to Messrs. Collison & Co., and impinging deeply in the back-yard, has been pulled down. This is a great improvement.

The main donations have been:—

S. Bebro: Old spode porcelain cup and saucer; old Portuguese silver meat skewer; Portuguese silver candlesticks early 18th century.

C. W. Black: Old brass snuff box engraved; a pair of old steel spectacles.

W. G. V. Carter: Old wrought iron double candlestick.

Mrs. C. C. de Villiers: Old Dutch wooden tobacco box.

T. Manschester & Co.: Old tin candle-mould and copper ladle for pouring the tallow.

Mrs. J. C. Rimer: Old white silk; carved ivory box; silver button-hole holder; silver bobbin; silver ring; silver sautie skewer; 2 Batoche cups.

Miss A. E. Roux: Gold brooch (gold filigree frame) with picture made of human hair of the van der Riet family.

A. W. B. Smuts: Stone pipe and silver cover.

M. Versfeld, J. H's Son: 1 glass Bokaal (pistol-shape) brought from Holland in 1771 by W. F. Versfeld.

Miss M. Wilman: Old framed print of Table Mountain and Cape Town dated 1789.

Miss Rose: Loan of 15 pieces of china (Japanese spode, ironstone, wedgewood, etc.).

Mrs. J. H. Steyn: Loan of the following brass articles:—3 coffee pots, 3 kettles, 3 pots with lids, 1 water jug, 2 komvoors, 2 spittoons, 1 "Tesse," 1 tartpan, etc.

(Signed) L. PERINGUEY.

SOUTH AFRICAN MUSEUM.

STATEMENT OF INCOME AND EXPENDITURE FOR THE YEAR ENDING 31st MARCH, 1918.

To Balance, 1st April, 1917	£692 9 4	By Salaries	£3,581 8 2
To Grants:—		" Library	29 13 6
Union Government.		" Maintenance of the Museum	375 2 9
April, 1917 £1,050 0 0		" Expenses in Travelling and Collect-	
July, 1917 1,050 0 0		ing Specimens... ..	382 10 1
Oct., 1917 1,050 0 0		" Freight and Railway Charges	15 11 2
Jan., 1918 1,050 0 0		" Sunday Duty	106 1 0
	£4,200 0 0	" Publication of Annals	354 13 5
Provincial Administration.		" Petties and Postage	133 13 9
June, 1917 75 0 0		" Purchase of Coins	6 3 3
Aug., 1917 75 0 0		" Bank Charges	1 9 0
Oct., 1917 75 0 0		" Balance, viz :	
Jan., 1918 75 0 0	£300 0 0	Cash in Hand	15 0 0
Cape Town Corporation.		Cash in Bank	13 19 11
June, 1917,		Petty Cash	12 2 0
Sunday Duty 100 0 0		Treasury 5% Stock	500 0 0
June, 1917,			
Koopmans de			
Wet Museum 100 0 0	£200 0 0		
	4,700 0 0		
To Interest on Hadje Suliman Shah Mohammed Coin Fund	£4 4 7		
" Treasury Bill	25 3 1		
	29 7 8		
" Sale of Publications			
" Department of Mines, Contribution towards publication of Annals... ..			
	21 4 8		
" Department of Interior—Refund of part expenses incurred in grass laying and electric light installation			
	69 16 7		
	£5,521 8 0		
			£5,521 8 0

*Includes £37 0s. 10d. appertaining to the Coin Fund.

Statement "A."

HADJE SULIMAN SHAH MOHAMMED FUND FOR THE PURCHASE OF COINS.

Amount of Investment with the South African Association	£100 0 0
Balance of Interest on 31st March, 1917	32 19 6
Interest Received during 1917-18	4 4 7
	137 4 1
Less Coins purchased 1917-18	0 3 3
	£137 0 10

Audited and found satisfactory,

(Signed) WALTER E. GURNEY,
Controller and Auditor-General,

(Signed) L PÉRINGUEY,
Director, South African Museum.

Control and Audit Office,
Cape Town, 8th May, 1918

Cape Town, 2nd May, 1918.

UNION OF SOUTH AFRICA.

Report of the South African Museum for the Year ended 31st December, 1919.

*Presented to both Houses of Parliament by command of His Excellency the
Governor-General.*

REPORT OF THE DIRECTOR FOR THE YEAR 1919.

To the Trustees of the South African Museum.

Sirs,—I have the honour to submit my report on the direction and administration of the Museum for the year 1919.

Visitors.—The number of visitors, 283,630, is the highest attained since the foundation of the Museum. It speaks for itself, in spite of Cape Town being a port of call.

White.—Adults	Male	126,769
"	Female	62,678
Children... ..		48,381
Coloured.—Adults	Male	19,506
"	Female	17,106
Children		9,190

Eighty-three School Parties containing 1,729 children visited the Museum.

The largest attendance in any one day (August 4th) was 3,115; the smallest (July 18th) was 128.

Presents, Purchases, Acquisitions by the Staff.—The abundance of material received or obtained has not permitted of it being completely tabulated during the year. Many things are not as yet unpacked or sorted.

	Specimens.	Species or kind.	New to Collection.
Mammals	36	27	2
Birds	40	22	2
Birds' Eggs	261	60	24
Reptiles	6	6	1
Fishes	106	50	16
Mollusca	372	99	12
Marine or Land Invertebrates	150	20	5
Crustacea	185	42	8
*Arachnids, etc.	—	—	—
Insects	6,348	3,069	498
Geology, Mineralogy and Palaeontology	638	320	172
Anthropology	1,022	1,022	1,022
Ethnology	23	23	23
Antiquities and Curios	22	22	22

* Owing to the absence in the field of Mr. Tucker, the Assistant in Charge, the returns for the year are not available.

Library.—The additions to the Library total 1,238, divided as follows:—

Books :	Purchased	5
	Presented	4
Pamphlets and Periodicals :	Purchased	146
	Presented	1,083

Publications.—The ever growing increase in the cost of printing and illustrating has compelled me to keep back a large number of MSS. that have accumulated during the last four years, in addition to those prepared by the Staff. The specialists to whom I entrusted the material for reporting on expect that their gratuitous labour, of several years' duration in some cases, should be published within reasonable time, and naturally enough they resent the delay; but the appropriation on which the maintenance of the Museum depends was

reduced by a fifth at the beginning of the War and has remained the same in spite of the enormous increase of not only printing cost but also of everything required for the upkeep, workshop, etc. I have, however, sent four MSS. containing approximately 450 pp., 18 pls. and numerous text figs. to the printers. This will reduce the MSS. in my hand to about 1,500 pages of print.

Collecting.—The same monetary considerations that restricted the normal issue of publications have hampered the collecting. Fortunately the generosity of Mr. J. W. Jagger has permitted Mr. J. Drury, our Modeller-Taxidermist, and Mr. R. M. Lightfoot to proceed to the South-West Protectorate on an anthropological, entomological and botanical collecting tour. Two other Assistants have obtained personally a small Government Research Grant, one to conduct a palaeontological survey of the districts of Victoria East, Stockenstrom and Fort Beaufort; the other to carry on biological research in the South-West Protectorate. In addition, the Union Government also gave the Museum a special grant to carry on certain investigations. The latter are not yet completed, but the preliminaries have had excellent results.

Staff.—Owing to the peculiar conditions still obtaining, it was not found possible or expedient as yet to secure the services of a Botanical Assistant. The Junior Assistant has accepted another situation.

ARRANGEMENT AND CONSERVATION.

Zoology. Mammals.—Mr. A. C. Hughes has most generously donated a gigantic pair of the jaws of the Blue Whale, *Balaenoptera musculus*, measuring 22 feet 9 inches in the curve. The jaws of a 75 feet skeleton of the same species measure 18 feet 6 inches and the probability is that the former belonged to an animal near, or possibly more than, 100 feet in length. For I have now trustworthy evidence of a measurement of 102 feet 4 inches; and of another animal longer than the 100 feet hauling platform. The Blue Whale is therefore the largest animal that has appeared on earth.

At the present day the whaling industry in the South Polar Circle has attained such dimensions that unless checked or regulated one may well speculate on the time left for survival of the Humpback, Blue Whale, Fin Whale, Seiwhal and Bryde's Whale frequenting our waters. One vessel in the South, during the six months' whaling season, may capture 300 animals. The total number caught off South Georgia and the South Shetlands together is said to have exceeded 10,000 in one year. It seems that the whales frequenting our coasts are travellers to or from the equatorial waters where they resort for calving; that in each of the three species principally hunted in the South the pairing season is at its height when the whaling season is either slackening or not carried on, and that if these whales are to be protected during their breeding season it must be done further north than South Georgia if the whaling industry is to be kept going. Even here the number of captured Humpbacks is almost negligible, as is admitted by all whaling people. Most of them ascribe the fact to their having become more wary. Is it not more likely due to the fact of their destruction in large numbers in the South? In the first days of sub-antarctic whaling the Humpback constituted nearly the whole catch, even more than 96 per cent. in 1910-11. It was reduced to 478, about 18 per cent., in the same locality in 1913-14. People interested in the whaling industry admit that some measure of protection is necessary.

The number of species of Fin Whales (*Balaenoptera*) frequenting our coasts is still under discussion. The stranded example of *Balaenoptera rostrata*—with its characteristic white band on the flipper—is as far as I can ascertain the only example yet secured in the flesh. It is reputed to have been seen in the "Antarctic" and one was even captured, but neither the Captain nor the Naturalist of this expedition mention that conspicuous marking of the pectoral fin. So that it is quite possible that there are more than one kind of Menkeval. A good observer, Mr. K. Ellefsen, who was for several years in charge of an important whaling station near Cape Town, and to whom I am greatly indebted for much valuable information, is inclined to think that there is in our waters another species or variety besides Bryde's Whale. To the alleged points of difference between the latter and *Balaenoptera borealis* may be now added the strikingly different, much reduced sternum.

In connection with the moot question of the survival of the "Quagga," *Equus quagga*, in the Kaoko-veld of the South-West Protectorate, a skin of the said animal was submitted to me. I found it, however, to be that of *Equus zebra* (Mountain Zebra) which has been reported from there before. But I have received from a reliable source statements of a Zebra alleged in one quarter to have no bands on the legs, and in another to have bands on the hind quarters (? fore) only. It is not generally known that there is a variety of Burchell's Zebra without or with very few bands on the legs, called after Wahlberg the traveller. It is to this variety or to *E. Chapmanni* that the alleged Quagga will probably belong.

A report appeared in the press that a "Manati" 15 feet long had been killed at Struys Bay, in the Bredasdorp District. I failed to secure skin or skull. But the Keeper of Dyer's Island informed me some time before the occurrence that he had been trying to

secure for the Museum a large Elephant Seal (*Macrorhinus leoninus*) and that it was now to be found on the Struy's Bay Coast. Manati 15 feet long do not exist. It is thus an Elephant Seal that was killed; and as the occurrence of two more has been recorded from Possession and another Island, this species of earless Seal may be regarded as an occasional visitor and indexed in the list of the Fauna of the Union.

I have not succeeded in obtaining from the Natal Provincial Administration permission to secure an example of the "White" Rhinoceros. We have received from Zululand the skin and skull of the "Black" Rhinoceros. Among other skins are two very rare "Duyker" antelopes, *Cephalophus rubidus*, kindly forwarded by Sir R. Coryndon, Governor of the Uganda Protectorate. The lack of extended exhibition room stands in the way of mounting several specimens that would have made desirable and interesting exhibits.

Birds.—There has been some uncertainty hitherto about the species of Terns breeding on the islands of our coasts as well as to the identity of the birds themselves. Thus: *Sterna caspia*.—One egg is recorded from St. Helena Bay, but it proves now to be that of *Sterna bergi*. But the egg has been found on Possession Island. Its roughened surface is an indication of its identity. It is now ascertained that *Sterna Douglassi* is to be included in our Fauna and that it breeds on one of these islands. *Sterna vittata*, the Kerguelen Tern, has been received from there in full breeding plumage, together with young birds, but that it breeds with us is not yet proved.

The Birds' Eggs Collection has been increased by a fair number of clutches. It has grown in importance during the last six years, and an effort is being made to fill the lacunae as speedily as possible. The task is made easier now that several people interested in oology are paying special attention to the subject in different and often distant parts of the Union.

Time has not allowed of further re-cataloguing and new incorporation in the Study Collection of the considerable accumulation of birds' skins.

Reptiles.—Only a few species were received, but they included a rare and unrepresented lizard.

Fishes and Marine Invertebrates.—The sorting, identifying and arranging the Collection has proceeded as usual. We had accessions from Central Africa, some recently described. The Fresh-water Fishes of the Union are now arranged in systematic order. The Museum has been fortunate in securing a very large specimen of a Tunny which has been extremely well mounted by Mr. Drury, the Museum Taxidermist. The fish weighed 562 lbs. and fitted with the length of the case where it is now exhibited, i.e., 10 feet. Specimens of this kind are said to reach half-a-ton in weight. Tunnies are the only fish known to be warm-blooded. Other specimens of interest have been mounted, or cast, and added to the exhibited series.

Progress has also been made in arranging the very large collection of the Foreign Mollusca. A good collection of Marine and non-Marine Mollusca has been received, and rarities in land shells found anew in collecting trips made at high altitudes.

A small number of Crustaceans new to the Collection have been added to it, and the same has obtained for other Marine Invertebrates.

Insects.—A considerable number of insects has been acquired of which no less than 6,348 have been pinned, labelled and partly incorporated in the Cabinet. The number of novelties is greater than usual owing to a number of Central African species having been received. The entomological results of the investigation of high altitudes are growing in importance, but they will be reliable only when more explorations on a well-devised plan have been carried out and the results collated. So far in Micro-Lepidoptera alone, slightly over one hundred new species have been recorded in the Worcester, Ceres and Caledon Districts. Series sent to specialists for investigation are beginning to return after an absence of four or five years. An entomological excursion in the South-West Protectorate proved very disappointing.

Arachnids, etc.—The Assistant in charge of this Department is now in the field, and will not return in time to submit his report. Suffice it to say that the number of acquisitions is great and varied.

Geology.—In the Geological Department there have been exhibited series showing the economic importance of several deposits within the Union such as Mica, Corundum, etc., with their occurrence and uses, following the Asbestos series exhibited in the previous year.

Palaeontology.—The departmental report is very detailed. The acquisitions have been numerous and of interest. The tabulated numbers do not represent the whole. Numerous specimens of importance have still to be developed for study and eventual setting up—when new space be forthcoming. The very slow work of developing from an iron-like matrix several examples of very large Pareiasaurian reptiles is continued. A palaeontological survey of some three districts in the Eastern Province of the Cape has been carried on resulting in a fair number of fossils, mostly skulls, being collected, the contents and position of the Lower Beaufort beds better defined, and the absence there of Stormberg Beds

established. The discovery in Lime Quarries at Taungs of a possibly Pliocene skull of a new species of Baboon (*Papio*) is of interest. Another species is reported from Central Africa. Little was added to the exhibited series for want of space. In order to accommodate the expansion of South African Minerals and their finished products the series of shells of Tertiary and Quaternary Ages had to be withdrawn. This process seems to be endless.

Botany.—In the botanical section fair progress was made in the incorporation in the Cabinet of mounted sheets, a large proportion of which were new species; a somewhat large number of flowering plants and others were also received. Some of our material has been loaned for examination and revision; and many demands for our named material were made by the Division of Botany, Pretoria, and granted. Numerous identifications were made.

Anthropology and Ethnology. Physical Anthropology.—I have already stated that the generosity of J. W. Jagger, Esq., a Trustee of this Museum, permitted of my sending our Taxidermist and Modeller, Mr. Drury, and Mr. R. M. Lightfoot to the South-West Protectorate in search of Bush Natives to be modelled on the flesh. The epidemic of influenza then raging made matters somewhat difficult, but Mr. Drury succeeded in securing good casts of 1 male, 4 females and 1 boy, and 4 busts. Unfortunately the plaster of Paris gave up and as none was to be found in South Africa, the attempt at obtaining similar casts of the Nama Hottentot or Hottentots of other clans had to be given up. Four of the busts have been reproduced in Mr. Drury's best manner; the heavy cost of the material required for the six full figures compels me to postpone the casting until a more liberal policy of appropriation permits of meeting the enhanced cost of all the material we use.

I take this opportunity to record the very great help given to the Museum party by Sir Howard Gorges, the Administrator of the Protectorate. But for him and his instructions to his subordinates we could not have come into contact with the natives we were in search of. Moreover the cost entailed in attempting to reach these nomadic clans, as we succeeded in doing at Nuragas and elsewhere, would have made the attempt an impossible one.

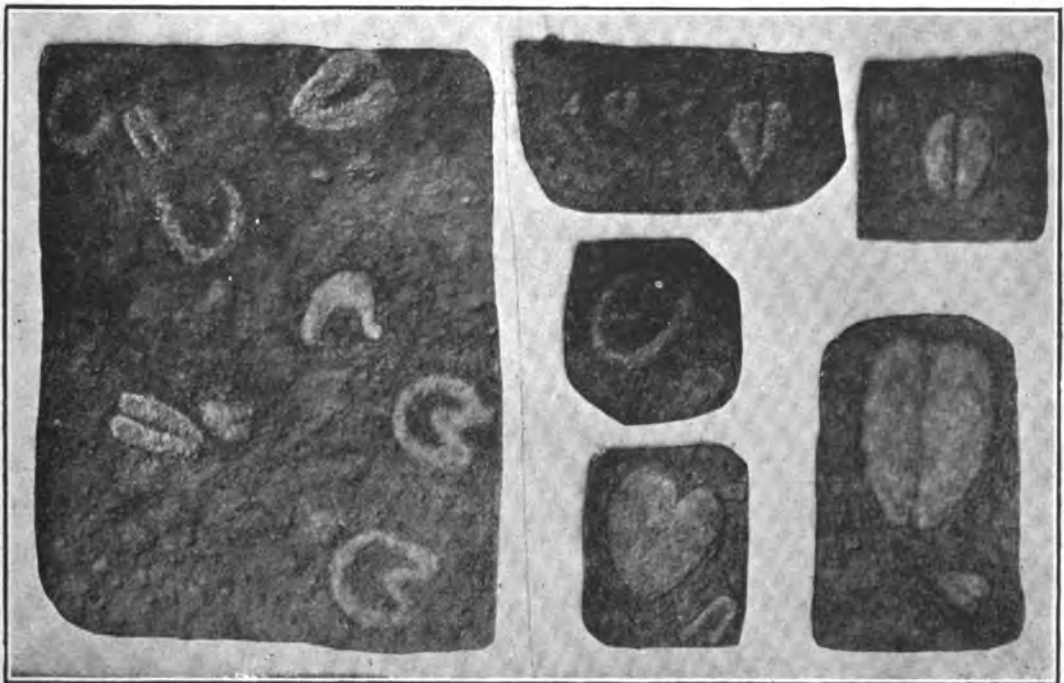
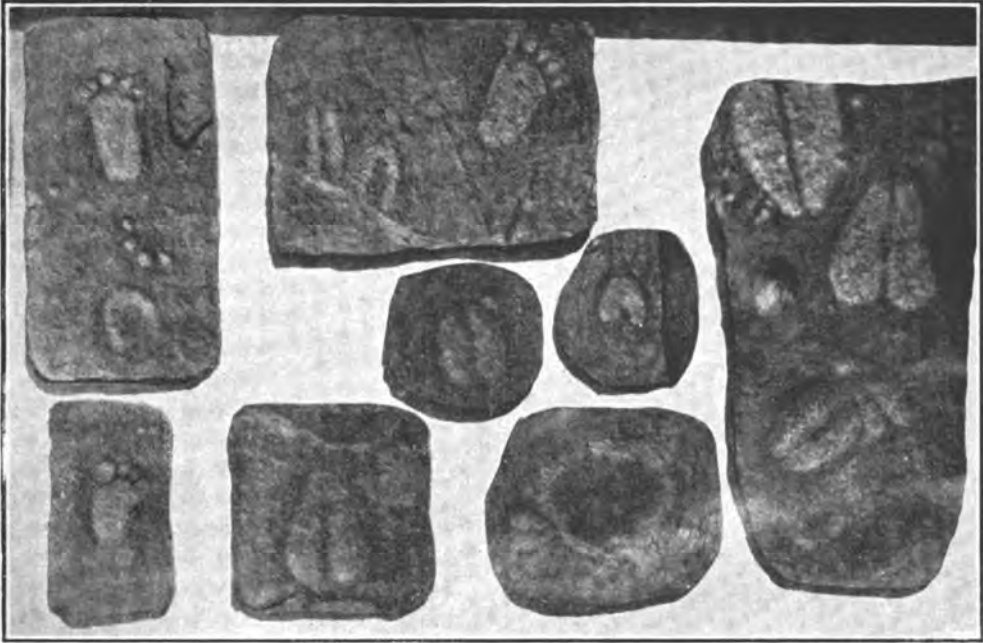
These so-called "Bushmen" natives are very difficult to explain, and will I fear be so for a long time to come. They have undoubtedly more negro characteristics than the more southern Bush of the Colony or the Strandlooper.

Another instruction given to Mr. Drury was to remove, if possible, and if not, to make a cast of some gravings on rocks, not representing as usual animals or figures that are perhaps symbolic, but hoofs of animals, some of natural size, like gemsbokken, hartebeeste, zebras, etc., and some reduced, including human feet, ? symbols, etc. These gravings of a new type are connected with what may be called the classical, as illustrated on the rocks of the more eastern and southern parts of the Union, by an elephant somewhat poorly executed but of the ordinary type. This latter could not be found, and the gravings could not be removed. But Mr. Drury has brought back fine casts which are now on exhibition. I do not despair of finding again the place where the other graved elephant is, and Mr. Tucker of this Museum, who is on the spot, has been instructed to make another search for it. Are these gravings symbolic? The late Theophilus Hahn has stated that in the Namib or Kaoko-veld the Bush People had signs (? painted or ? graved) to denote places where they had found water or game.

A careful study of the physical characteristics of the Masarwa Bush of the Kalahari may perhaps give a clue to the present position with regard to the Bushman of Northern Damaraland. This study will be made possible only when long series of skeletons are available. One hears of another and possibly purer race in the Namib; while those in the direction of the Cape Border are again said to be different. Of the latter I am promised seven skeletons. They will probably belong to the type studied by Pösch and of which we had only six or seven individuals.

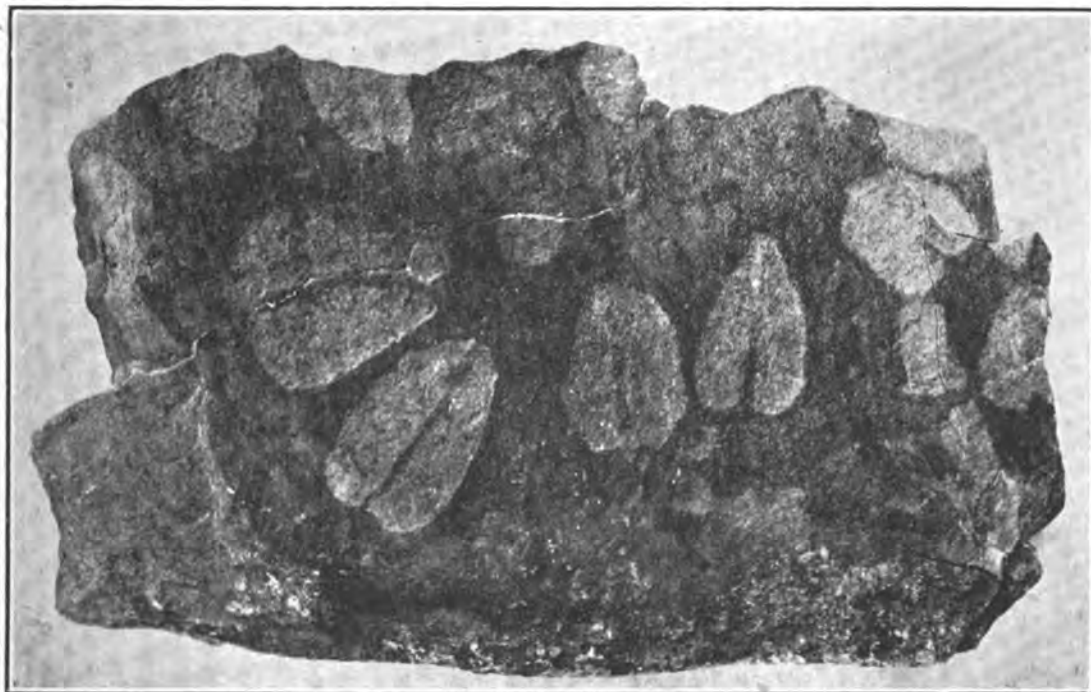
Antiquarian Anthropology.—In the years 1873-75, deposits of bat-guano were found in the Montagu District of the Cape in great quantity it is asserted, so much so that 1,000 tons of it were exported to Mauritius. In one of these caves, for it is presumable that the whole quantity even if the volume was exaggerated did not come from one cave, there was found a club made of olive wood plainly fashioned by a stone knife or scraper, a stone bead and a cube of iron pyrites. Three years ago one of the Museum Assistants invited to investigate the spot, perhaps more on the mountaineering than the antiquarian side, brought back on my instructions several stone implements, somewhat perplexing, for they seem to show that Bushpeople were still capable of making palaeoliths or "bouchers" of the most classical archaic type. Means, however, were lacking for the exploration of this cave and it had to be postponed. Meanwhile Mr. Jansen, a gentleman greatly interested in the subject, who happened to be staying at the Montagu Hot Baths and heard of the cave, started there some excavations which yielded a number of beautiful large implements. When the special Government grant I have already alluded to materialised, I lost no time in sending two of the Museum Assistants to proceed with a complete excavation of the cave to the bed rock which resulted in finding clear evidence of a surface Bushman layer

PLATE II.



Rock gravings (casts) from Gaub, S.W. Af. Protectorate. $\times \frac{1}{6}$.

PLATE III.



Rock gravings from Gaub, S.W. Af. Protectorate. $\times \frac{1}{6}$.



Rock painting from the farm Linton, Barkly East, C.P. $\times \frac{1}{6}$.

with the usual type of pottery, small scrapers, and so on, and three pre-Bushman layers containing a great quantity of palaeoliths in the making, and illustrating the whole process of manufacture from the first spall resulting from splitting a river-worn boulder to a finished flat, almond-shape boucher sharply pointed at the tip: the beau ideal of the "coup de poing" of the French, that flat type which obtains in so many places in the world, except Australia. This discovery does away with the suggestion—shall I say acceptance?—of some of these palaeoliths having been used as axes or cleaving tools. With the evidence we now have supported by some 650 specimens, one can definitely state that a broad cutting edge to one of these tools is only the initial result of the blow, and this broad base will be trimmed on the side of the long axis until reduced to a sharp point, the whole resulting in an almond-shape sharply acute tool. The small flakers to trim the facets, and the heavier ones with ends abraded for spalling either the nucleus or to do the larger, heavier flaking are there. But no skeleton was found; only tools in the making or in the finish. A full account of this very important discovery will be published shortly it is hoped.

A sensational account appeared in the Press about certain beads found in the copper mines of Messina, in the Northern Transvaal, some of which, it was alleged, were pronounced to be Roman beads of the 17th century. We have also a number of these beads from the same locality. I now find that the blue beads said to be Roman, are called "Mtinorock" by the Swahili traders of to-day; and that the other glass beads found at Messina are also articles of trade in use now by Swahili traders.

Cultural Anthropology.—The Trustees are greatly indebted to Professor R. B. Young for his donation of a large series of tracings of Bushman paintings and also of rock gravings taken by the late G. W. Stow. Stow's coloured tracings were never published, in spite of the efforts of Sir Bartle Frere and others. It was a unique collection at the time; now many more records are known. It is doubtful if the explanation of scenes, other than those representing animals, has made progress. The mind of primitive man only can appreciate to the full the meaning of primitive expression. But this mind is no longer primitive when, as in some Rhodesian paintings, it portrays palm trees, flower or fruit, a bird perched on a tree, etc.

Curios and Antiques.—The Museum has received from Mr. Kuys, R.M., of Bredasdorp, the "horn" and a piece of the shell of a German sea-mine washed ashore at De Mond, Bredasdorp, on the 3rd of November, 1918, and destroyed there by the Admiralty on the 19th of the same month. This "horn" still contains the tube of acid which when broken by impact explodes the mine. Another mine of the same origin was lately washed on the rocks of Struysbay and fortunately exploded without causing harm to life.

The authorities of the Victoria and Albert Museum have presented a dozen 18th century watches of English manufacture. They are of imitation gold in cases of the same material, of silver in silver cases, tortoise shell or cloisonné. In addition there are four English movements of the period.

H.M. the Queen has been graciously pleased to present to South Africa a silver medal struck to commemorate the investiture of His Royal Highness the Prince of Wales. This interesting exhibit has been allotted to the South African Museum.

Koopmans de Wet House.—The number of visitors at the Koopmans de Wet Museum Annex is on the increase, 28,097. The restoration of the House is now complete. The number of donations has been somewhat meagre, which is no doubt to be accounted for by the local eagerness to buy and sell "antiques."

It is with great regret indeed that I mention the demise of Dr. F. W. Purcell. My colleague for 12 years, he gave up his Zoological work owing to indifferent health but devoted all his time to restoring the old land mark of 1720 now known as Koopmans de Wet. An eminent connoisseur of things artistic, he carefully appraised the objects of vertu which the Museum now possesses, for the most part local relics of the local past. It was not only his voluntary services that he gave *con amore*, but he unostentatiously acquired for Koopmans' pieces of old furniture, plate or china of whose purchase the money at my disposal did not allow. He also deposited there certain pieces of old furniture which his widow has very generously donated to the Museum. Of his scientific work as a biologist I need not say anything. The work speaks for him.

Administration.—Better days seem to be dawning for the Administration of the Museum. I understand that provision is to be made on this year's Estimates of Expenditure for proceeding with the building of the new left wing of the Museum; a substantial shed for the protection of our whales exhibited in the open is in contemplation; a lavatory chalet for the public is being erected in the Museum grounds, and a return to the pre-war grant in aid is to take effect for the financial year 1920-21, when the years of tribulation will thus have ceased.

L. PERINGUEY,
Director.

DEPARTMENT OF VERTEBRATE ZOOLOGY.

Mammals.—The number of accessions is 36, representing 27 species, two are new to the Collection. A valuable addition is that of a "duiker" (*Cephalophus rubidus*) from the Uganda Protectorate and part of a skin of the yellow-backed Duiker (*Cephalophus sylvaticus*) from Angola. Two foetuses (skins) of *Elephas africanus* are a valuable addition and so is the skin and skull of a female *Rhinoceros bicornis* (black rhinoceros) which unfortunately we cannot set up for want of space. The large animals not exhibited in cases have suffered from the too close attention of the public and had to be attended to. Fortunately the damage was not of much consequence. No new incorporation was possible. A series of the whale bone of the different species of whales found on our coast line has been exhibited. The shape and texture of the fringe of the baleen is a distinctive feature of the species.

Mr. Drury, the Museum Taxidermist, proceeded to the Addo Bush, where an attempt was made to destroy the herd of elephants found in this locality, in order to instruct the shooting party how to prepare the skins and skeletons of the slain animals wanted for Museums and other Scientific Institutions. He stayed there two months, and prepared three animals and secured a few small mammals. He proceeded also inland to prepare on the spot skins of ostriches in full plumage intended for the Trade Commissioner in London. Later on two broods of ostrich-chicks were prepared and sent for the same object.

Birds.—The number of birds' skins received or prepared is 40, representing 22 species, 2 of which were not represented hitherto; one is an adult Great White Egret. Special efforts were made to ascertain the species of Terns frequenting our coasts and islands near the coast; it was very surprising to receive thence examples of *Sterna vittata* in full breeding plumage, together with others (? young) in no breeding plumage.

The number of birds' eggs received has been large, 261 belonging to 60 species and 29 new to us. The latter have been duly incorporated, but there are still many lacunae in our South African series.

Time has not permitted of proceeding with the further incorporation in the study collection of the accumulation during recent years of bird material.

The principal donors are: Dr. J. M. Melle, L. C. Péringuey, R. Zeederberg, the Albany Museum, Max Rose, Groote Schuur. J. Chapman, Jur., Sir Robert Coryndon, Father R. Sollier, F. Andrews and others.

L. PERINGUEY.

DEPARTMENT OF FISHES AND MARINE INVERTEBRATES.

To the Director, South African Museum.

Sir,—I have the honour to present the following report on this Department for the year 1919.

The greater part of the year has been spent in sorting and arranging the collections, both the old collections and the new ones received during the year. Amongst the latter may be mentioned a large collection of Marine and non-Marine Mollusca obtained through the instrumentality of Dr. A. W. Rogers and a collection of Fishes and Shells from Central Africa made by a Belgian Officer and containing types of several fishes recently described by G. A. Boulenger. The collections have been further enriched by material from Natal (Mr. H. W. Bell Marley) and Delagoa Bay (Prof. Dreyer).

Of the old collection, the Soles collected by the s.s. "Pieter Faure" have been sorted, classified and incorporated. I have completed a short descriptive account of the S.A. representatives of this family, which it is hoped will eventually form part of a more comprehensive work embracing the whole of the S.A. Marine Fishes. Part of my time has been spent, with this object in view, in the examination of the unidentified material in the Museum.

The Cichlid Fishes have also been arranged so that the whole collection of Fresh Water Fishes is now in systematic order.

Further progress has been made with the sorting and arranging of the Foreign Mollusca.

Exhibits.—Several important additions have been made to the exhibited series of Fishes. A large Tunny weighing 562 lbs. and a large Elft (*Pomatomus*) have been mounted, also a specimen of the Rainbow Trout, the Tiger Fish (*Hydrocyon*) and a Sting-Ray from Natal. Through the courtesy of Dr. Gilchrist a cast has been made of a large deep water Gadid Fish which appears to be new to these waters.

Collecting.—Little field collecting has been done. In the early part of the year I paid a visit to the Zonder End Mts., securing several interesting additions to the collections of Mollusca and Crustacea. Examples of these groups were also obtained in the Montagu District while I was engaged in the excavation of the caves.

The number of specimens received during the year is as follows:—

Fishes	...	...	106 specimens,	50 species,	16 new to the collection.
Crustacea	...	...	185 "	42 "	8 "
Mollusca	...	...	372 "	99 "	12 "
Other marine Invertebrates	...	...	150 "	20 "	5 "

The thanks of the Trustees are due to the following: His Excellency the Governor-General, Dr. A. W. Rogers, Mr. Mc.Bean, Mr. G. W. Pilkington, Mr. H. W. Bell Marley, Mr. Bearpark, Father Casset, Father Sollier, M. dhont de Bie.

I have the honour to be,

Sir,

Your obedient servant,

(Signed) KEPPEL H. BARNARD.

DEPARTMENT OF ENTOMOLOGY.

To the Trustees of the South African Museum.

The acquisitions have been important, both in number and in novelties. The number of examples dealt with is 6,348 comprising 3,069 species of which 498 were unrepresented in the Collection. They are divided as follows:—

	Example.	Species.	New to Collection.
Hymenoptera	637	369	58
Coleoptera	2,348	821	108
Diptera	873	384	60
Neuroptera	256	99	11
Lepidoptera	1,651	1,123	229
Hemiptera—Homoptera	309	149	19
Orthoptera	274	124	13
	<u>6,348</u>	<u>3,069</u>	<u>498</u>

The Micro-Lepidoptera described by Mr. Meyrick (the paper is now in the press) have been incorporated in the Cabinet. The Lasiocampid moths, the majority of which were submitted to Professor Aurivillius of Stockholm, an authority on the group who found among them several new species, have been also incorporated. An exchange was arranged whereby a fair number of South African moths wanted in our series were obtained. In the Diptera, some Asilidae and the Nemestrinidae have been revised and incorporated, and a certain number of Tipulidae, mostly new species, added. Three additional papers based on the material submitted to specialists have been received; they must however wait their turn for publication. I have now nine in hand.

The entomological expedition to the South-West Protectorate was disappointing. The dearth of insect life was very conspicuous, due apparently to the lack of rain at the time of the visit of the Museum party; but from the captures made in the North, Grootfontein and Nuragas, I imagine that the insect life is not so abundant as, although perhaps more varied than, on the eastern border of the Cape Province. As it is, Mr. Lightfoot brought only 24 new species spread among seven Orders.

Some very fine specimens of Butterflies from British East Africa and from the Uganda Protectorate have been purchased or donated. They are ready for incorporation in the African Cabinet, the contents of which they greatly improve.

A good series of three kinds of Tsetse flies from Portuguese East Africa have been obtained, i.e., *Glossina morsitans*, *pallidipes* and *brevipalpis*. They reached the Museum in good condition. The compilation of the list of identification of the insects collected at high altitudes is proceeding. About one hundred Micro-Lepidoptera have been found to be new.

The principal donors other than the members of the Staff are:— H. W. Bell-Marley, Dr. H. Brauns, W. G. Brocke, M. Dieterlen, R. A. Dummer, A. J. T. Janse, H. L. L. Feltham, G. French, Rev. Gladstone-Hawke, A. L. Hill, D. Loveridge, Dr. G. M. Melle, H. K. Munro, G. Robertson, Capt. G. A. Shortridge, S. H. Skaife, Father R. Sollier.

L. PERINGUEY.

DEPARTMENT OF ENTOMOLOGY (INSECTS EXCLUDED).

To the Director of the South African Museum.

Sir,—I have the honour to make the following report on the working of this Department for the year 1919.

The commencement of the year was occupied in sorting, and working portions of the Arachnid material obtained from the collecting expedition in Eastern and North-Eastern Transvaal on which I was engaged at the end of 1918. Towards the end of February collecting was undertaken for 4 or 5 days on the summit of Table Mountain and the material incorporated. Subsequently to this, work was resumed on the Group Drassidae, and further progress made towards completion of an account of the Drassids of South Africa.

Additions and revisions were made to the MS. of a previous paper for publication in the Annals. The foregoing and attention to the exhibited and study material occupied the months until the end of September. Collecting was then undertaken from a camp in the Mountains near Montagu for approximately a fortnight, and again for a similar period in November.

A week after returning from this preparations were completed and a start made on an expedition to collect and investigate the Entomological Fauna of South-West Africa, which work was still in progress at the end of the year.

The additions made during 1919 to the Museum collection, though not so numerous as in previous years owing to the growing comprehensiveness of the Arachnid collection, have nevertheless been satisfactory.

I have the honour to be,

Sir,

Your obedient servant,

(Signed) RICHARD W. E. TUCKER.

DEPARTMENT OF GEOLOGY AND MINERALOGY.

To the Director, South African Museum.

Sir,—I have the honour to submit the following report on this Department for the year 1919.

The following additions were catalogued during the year:—

	No. of Specimens.	New to Collection.
Rocks	107	98
Minerals	62	22
Meteorites	1	1

Among the more important additions are:—

A 3-carat diamond embedded in Blue Ground from the Dutoitspan Mine, presented by De Beers Consolidated Mines, Ltd.

Series of specimens of Mica, cut and graded, from the Transvaal, presented by Premier Mica Mines, Ltd.

Specimen of Block Mica, and sheets of various sizes, presented by the Geological Survey.

A series of Zircons, Sapphires and Pleonaste from the Ruby Fields, Queensland, presented by R. Varney, Esq.

Specimens of Fluor Spar from Zeerust District, presented by J. G. Gubbins, Esq.

A set of Limestones illustrating Mr. Wybergh's Memoir on the Limestone Deposits of the Union, presented by the Geological Survey.

Corundum Crystals and Corundum-plumasite from Zoutpansberg, presented by the Geological Survey.

Siderolite from Witklip, Carolina, Transvaal, which fell on May 26th, 1918, presented by the Union Astronomer.

In addition, thanks are due to J. Murray, Esq., Dr. Impy, W. B. Magennis, Esq., W. Bleloch, Esq., and Dr. G. M. Melle for specimens donated.

Special exhibits were arranged to emphasise the economic importance of several mineral deposits within the Union; these comprise Mica from the Leydsdorp District (Eastern Transvaal), Corundum crystals and corundum bearing rocks from the Zoutpansberg District (Northern Transvaal); and a series illustrating the economic occurrence of limestone was added to the Stratigraphical Collection, which was further improved by a large table of correlations.

The exhibit of diamondiferous and allied rocks and minerals, formerly occupying four cases, has been crowded into three, in order to allow of the re-exhibition of the "Introductory Series" which was removed into drawers last year.

The cases, available for this Department are now overcrowded and much material, which ought to be exhibited, has to be kept in drawers, for lack of space. Unless more accommodation is provided it will not be long before further exhibitions of this Department will be impossible.

I have the honour to be,

Yours faithfully,

A. L. HALL.

DEPARTMENT OF PALAEOLOGY.

Sir,—I have the honour to submit the following report upon the working of this Department for the year 1919.

The total number of accessions registered during the year is 468, divided as follows:—

Plants	...	...	...	...	...	...	13
Invertebrates	...	...	...	...	...	...	347
Pisces	...	...	...	...	...	...	29
Reptilia and Amphibia	...	...	...	...	...	...	35
Mammalia	...	...	...	...	...	...	44

This number does not represent the total acquisitions during the year, as a collection of fossil reptiles made towards the end of the year has not yet been unpacked. Of this 468, approximately 50 are species new to the collection, and some are new to Science; but it is impossible to give accurate figures until the various groups have been worked through and specifically catalogued.

A larger proportion of my time than usual has been spent in the field. In the early part of the year I collected at Saldanha Bay, investigating the phosphate deposits and the limestones of the Hoedjes Bay Peninsula and Geelbek.

In consequence of finds reported in the daily papers I went to Montagu to make arrangements for excavating the floor of the "Bushman Cave in the Langebergen. Having obtained full permission from Mr. Jan J. Kriel, the owner of Derde Heuvel, operations were commenced in October. Having worked there for a week I proceeded to the Eastern Province where, with the aid of a Government Research Grant, I conducted a palaeontological survey of the districts of Victoria East, Stockenstrom, and Fort Beaufort. The region lying between Adelaide in the west and Alice on the east, and between the Great Winterberg and the Cookhouse-King William's Town line on the north and south respectively was mapped in the course of two months' work and about 35-40 fossil reptiles collected (mainly skulls). The results as far as they have been worked agree with those obtained further west, but no detailed examination of the fossils has yet been made. The Lower Beaufort Beds are represented by the *Endothiodon* and *Cistecephalus* zones—the latter being thick. These are overlain by a Series composed mainly of sandstone largely impregnated with dolerite dykes and sheets (the Middle Beaufort Beds), and this by an Upper Beaufort Series of sandstones and purple and green shales. No Stormberg Beds were seen, although the Great Winterberg was ascended. The Middle and Upper Beaufort Beds are almost entirely grass-covered, and the exposures of the sediments are extremely few. Fossils were not found in them; but their lithological characters agree closely with those in the neighbouring districts. An extended report on this expedition with a map will be furnished to the Research Grant Board.

A short visit was paid to the Karroo for the excavation of fossils found there; and a journey was also made to the Northern Lime Quarries at Buxton, near Taungs. At the latter place, bones had been found in the more sandy patches (waste) of the limestone, and a skull sent to the Museum seemed to be that of a new species of Baboon (*Papio*). Specimens were collected in situ, and others obtained by gifts from Messrs. S. Taylor and C. R. Urbach. These are being worked up.

Very few alterations have been made in the exhibition cases. The expansion of the series of South African Minerals has necessitated the withdrawal from exhibition of the shells of Tertiary and Recent Age. A mounted hind leg and foot of a small Dinosaur, *Massospondylus hurriesi*, was added to the Stormberg exhibit. The remainder of the skeleton of this form is ready for mounting.

A skeleton of *Parciasaurus* (*Embrithosaurus*) sp. from Leeuw River was mounted in the store shed. The head is on exhibition, but room could not be found for the post-cranial skeleton. Even the erection of the specimen in the store necessitated the dismantling of the cast of *P. bairni* which has done duty for so many years.

The duplicate series of Uitenhage shells was sorted, registered, named and card-catalogued. The named Pondoland Cretaceous fossils were also card-catalogued. A small collection of Cretaceous shells from Portuguese East Africa presented by Dr. A. W. Rogers and a larger one from Zululand presented by Dr. A. L. du Toit were sorted; and the whole of the Cretaceous collection since 1908 will be sent to a specialist for examination.

In addition, a large number of shells from the Coastal Limestones of the Cape Province were named for the Geological Survey.

I have to acknowledge the kindness of the Curator of the Durban Museum in allowing me to examine and name his collection of Stormberg Dinosaurs.

By permission of the Trustees, a paper entitled "A Review of the Reptilian Fauna of the Karroo System of South Africa" was read before the Geological Society of South Africa and published in their Transactions.

In addition to those named above, thanks are due, for specimens and assistance given, to the Queenstown Municipality, the General Manager, N.C.C.R., Rev. Mr. Hamersma, and Messrs. B. Read, E. J. Dunn, H. J. Walker, and W. van der Bijl.

I have the honour to be,

Sir,

Your obedient servant,

(Signed) S. H. HAUGHTON,
Assistant Director.

DEPARTMENT OF BOTANY.

During the year 1919 the number of sheets mounted and incorporated in the Cabinet Collection was 682, including 158 species new to the collection.

The following additions have been made during the year by donation or collecting:—
282 species flowering plants, 40 species Mosses, and 2 tubes of Algae from Rhodesia, presented by F. Eyles, Esq.

151 named species from Griqualand West, presented by Miss Wilman.

30 species from Basutoland, presented by Dr. A. Millard.

24 species from Basutoland, presented by Mrs. Dieterlen.

406 species of flowering plants and 20 tubes of Algae, purchased from R. Dummer, of Uganda.

3 photographs of *Elephantorrhiza* and a specimen of *Protea rhodantha*, a species new to the Collection, presented by the Division of Botany, Pretoria.

Specimens of fibre, rope and paper manufactured from the Baobab tree, presented by the Baobab Concessions, Ltd.

172 species from South-West Africa and 250 species from Montagu, collected by Mr. R. M. Lightfoot.

25 species collected at River Zonder Einde by Mr. K. H. Barnard.

The work done during the year comprises the naming of the Rhodesian plants sent in by Mr. Eyles and of the additions made to the Basutoland flora, and the poisoning of all contributions received during the year. Information concerning, and the names of, noxious weeds was supplied on the application of the Provincial Council. Considerable assistance was given to the Police in connection with the sale of protected flowers and 12 convictions under the Ordinance were obtained.

A donation of 16 protected Heaths was made to the Forest Officer at Elgin.

Dr. Schonland received on loan all our material comprising the genera *Bulbostylis*, *Fimbristylis*, *Scirpus*, and *Ficinia* for examination and revision. The Division of Botany, Pretoria, asked for and received all our sheets of the genera *Elephantorrhiza*, *Geigeria*, *Entada*, *Aloe* and all our material of the Thistle family for examination. 44 sheets of Rhodesian plants are still in the hands of the Kew authorities for naming.

DEPARTMENT OF ANTHROPOLOGY AND ETHNOLOGY.

To the Trustees of the South African Museum.

The interest attaching to the Museum collection of Bush paintings and gravings has been greatly increased by the donation by Professor R. B. Young of the School of Mines, Johannesburg, of a considerable number of tracings of Bushman paintings made by the late G. W. Stow.

The acquisitions of stone implements have been on a considerable scale owing to the exploration of the Montagu Cave, where 675 implements of palaeolithic type were secured, apart from those of Bushman origin. A fine collection of similar implements was received from Taungs. Even Kirstenbosch and the Kommetje have yielded palaeoliths.

Among the acquisitions of Native implements are fishing nets, pottery, decorated sticks, snuff boxes, Bushman arrows and bow, divining bones, a musical bow of a new type, and a string of disc beads made of sea-shells by the Vasomba Natives of Angola. Similar beads but made of ostrich-egg were in former times manufactured by the Bush people of the

Kalahari and Northern Damaraland, and worn by the Damara and Ovambo. For some reason the production has ceased and is replaced by a very rude contrivance.

The collection of human skulls and skeletons has been increased by 13. They all but one belong to the Bush-Hottentot race; and we have the promise of seven more Bush skeletons.

The main donors are:—Messrs. Dimock Brown; J. Drury, F. J. Jansen, Rev. Neville Jones, S. H. Haughton, A. D. Divine, Dr. A. L. du Toit.

(Signed) L. PÉRINGUEY.

KOOPMANS DE WET HOUSE.

To the Trustees of the South African Museum.

The number of visitors is 29,807, the highest as yet reached. The accessions have not been numerous, but Mrs. W. F. Purcell has presented to the Trustees several objects exhibited only by the late Dr. W. F. Purcell, namely a magnificent bedstead, alleged to have been the property of Governor Ryk van Tulbagh, an ancient stinkwood rust-bank, an old Dutch cradle, two china plates with the arms of the Areuts family, cut glass and gilt jam pots, etc.

SOUTH AFRICAN MUSEUM.

STATEMENT OF INCOME AND EXPENDITURE FOR THE YEAR ENDING 31st MARCH, 1919.

To Balance 1st April, 1918	£541 1 11	By Salaries and War Bonuses to Officials	£3,706 11 3
„ Grants:—		„ Wages and Expenses: Upkeep of	
Union Government	£4,200 0 0	Museum	331 12 2
Provincial Administration	300 0 0	„ Expenses in travelling and collecting	
Cape Town Corporation	200 0 0	specimens	236 5 5
	4,700 0 0	„ Freight and Railway Charges	9 2 5
„ Interest:—		„ Library: Purchases and Subscriptions	10 17 2
Hadjé Suliman Shah		„ Petties, Postage and Bank Charges	101 0 11
Mahomed Coin		„ Sunday Duty	102 8 0
Fund	£4 5 0	„ Publication of Annals	560 4 3
Treasury Bill	25 0 0	„ Balance, viz.:—	
	29 5 0	Treasury 5% Stock	£500 0 0
„ Sale of Publications	25 1 9	Less: Over-	
„ Department of Mines and Industries:		drawn at	
Contribution towards publication		Bank	£4 6 2
of annals	72 5 6	Petty Cash	
„ Public Works Department:		Overexpen-	
Refund of Municipal Electric Light		ded	7 14 11
Charges	5 17 6		12 1 1
„ Department of Interior:—			487 18 11
Refund of Expenditure on services			
formerly rendered free	83 14 4		
„ J. W. Jagger:—			
Donation towards expenses of			
collecting expeditions	83 14 0		
„ Value of Cheque No. 62138 dated			
31st October, 1916, cancelled			
and re-debited	5 0 6		
	£5,546 0 6		£5,546 0 0

*Includes £41 5s. 10d. appertaining to the Coin Fund.

Statement "A."

HADJE SULIMAN SHAH MOHAMED FUND FOR THE PURCHASE OF COINS.

Amount of Investment with the South African Association	£100 0 0
Balance of Interest on 31st March, 1918	37 0 10
Interest received during year 1918-1919	4 5 0
	£141 5 10

Audited and found satisfactory,

J. DE V. ROOS,
Controller and Auditor-General.

Cape Town, 16th May, 1919.

L. PÉRINGUEY,
Director, South African Museum

Cape Town, 30th April, 1919.

SOUTH AFRICAN MUSEUM.

STATEMENT OF INCOME AND EXPENDITURE FOR THE NINE MONTHS ENDED
31st DECEMBER, 1919.

To Balance, 1st April, 1919	£487 18 11	By Salaries and War Bonuses to Officials	£2,781 19 0
" Grants :—		" Wages and Expenses: Upkeep of	
Union Government	£3,687 10 0	Museum	281 6 11
Provincial Administration	300 0 0	" Expenses in travelling and collecting	
Cape Town Corporation	200 0 0	specimens	226 7 10
	4,187 10 0	" Freight and Railway Charges	9 9 0
" Interest :—		" Library: Purchases and Subscriptions	49 13 9
Hadjc Suliman Shah		" Petties, Postage and Bank Charges..	67 0 7
Mohamed Coin		" Sunday duty	72 4 0
Fund	2 2 6	" Publication of Annals	132 18 5
Treasury Bill	25 0 0	" Balance, viz. :—	
	27 2 6	Treasury 5 % Stock	£500 0 0
" Sale of Publications	23 16 10	Cash in Bank	592 0 5
" Department of Mines and Industries:		Cash in Hand	29 4 0
Expenses in preparing Ostrich		Petty Cash	1 17 5
Skins	4 16 1		1,123 1 10
" Administrator of South-West Protectorate :—		Includes £43 8s. 4d. appertaining to	
Refund in respect of Expenses in		the Coin Fund.	
connection with travelling and			
collecting	12 17 0		
	£4,744 1 4		£4,744 1 4

Statement "A."

HADJE SULIMAN SH H MOHAMED FUND FOR THE PURCHASE OF COINS.

Amount of Investment with the South African Association	£100 0 0
Balance of Interest on 31st March, 1919	41 5 10
Interest received during period 1.4.19 to 31.12.19	2 2 6
	£143 3 4

Audited and found satisfactory,

(Signed) J. DE V. ROOS,
Controller and Auditor-General.(Signed) L. PERINGUEY,
Director, South African Museum.Control and Audit Office,
Pretoria, — February, 1920.Cape Town,
12th February, 1920.

UNION OF SOUTH AFRICA.

REPORT

OF THE

SOUTH AFRICAN MUSEUM

FOR THE

Year ended 31st December, 1920

THE LIBRARY OF THE
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*Presented to both Houses of Parliament by Command of His Royal Highness
the Governor-General.*

1921.

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Trustees of the South African Museum

THE RIGHT HON. JOHN X. MERRIMAN P.C., M.L.A.
SIR THOMAS MUIR, K.T., C.M.G., M.A., LL.D., F.R.S.
JOHN WILLIAM JAGGER, F.S.S., M.L.A.

Scientific Staff of the South African Museum :

LOUIS ALBERT PERINGUEY, D.Sc., Director.

SIDNEY HENRY HAUGHTON, B.A., Assistant Director, and Assistant in Charge of the Palaeontological Collections.

KEPPEL HARCOURT BARNARD, M.A., Assistant in Charge of Fish and Marine Invertebrates.

RICHARD WILLIAM ETHELBERT TUCKER, M.A., Assistant in Charge of the Arthropoda (Insects excluded).

STAR GARABEDIAN, B.A., Assistant in Charge of the Botanical Section.

ARTHUR LEWIS HALL, B.A., Honorary Curator of the Geological and Mineralogical Collections.

ROBERT MARK LICHTFOOT, F.E.S., Assistant.

UNION OF SOUTH AFRICA.

Report of the South African Museum for the Year ended 31st December, 1920.

*Presented to both Houses of Parliament by command of His Royal Highness the
Governor-General.*

10th March, 1921.

THE SOUTH AFRICAN MUSEUM.

The Secretary for the Interior.

SIR,—I am instructed by the Trustees of the South African Museum to forward for presentation to both Houses of Parliament, in accordance to Act 17 of 1857, the report for the year 1920.

Yours respectfully,

L. PÉRINGUEY,
Director.

REPORT OF THE DIRECTOR FOR THE YEAR 1920.

To the Trustees of the South African Museum.

SIR,—I have the honour to submit my report on the administration of the Museum for the year 1920.

Visitors.—The number of visitors was 245,541, divided as follows:—

White.—Adults		Male	84,791
		Female	64,860
" Children...			49,170
Coloured.—Adults		Male	21,782
		Female	16,188
" Children			8,750
The greatest number in one day			1,781
Least number in one day			92

112 school parties and school drawing classes, numbering 2,925, visited the Museum.

Presents, Purchases, Acquisitions by the Staff.—

	Specimens.	Species.	New to Collection.
Mammals	120	66	45
Birds	46	39	1
Birds' Eggs	24	4	1
Reptiles	119	70	1
Fishes	41	23	4
Mollusca	92	13	3
Marine or Land Invertebrates	43	6	2
Crustacea	87	24	3
Insects	4,343	2,357	167
Arachnids, etc.	971	263	109
Geology, Mineralogy and Palaeontology	159	159	159
Anthropology	283	283	283
Ethnology	37	37	37
Botany	3,962	3,962	?
Antiquities and Curios	60	60	60

Library.—

Books :	Presented			81
	Purchased			19
Periodicals and Pamphlets :	Presented			2,045
	Purchased			129

This very large increase is due to the generous gift of Mrs. W. F. Purcell, who has very kindly presented her late husband's scientific books and papers to the Museum.

Publications.—During the year the cost of printing has gone up considerably and another increase is threatened by the trade. Yet the Trustees were able to issue ten papers with plates and text figures, namely:—

South African Crustacea. By T. R. R. Stebbing.

Descriptions of South African Micro-Lepidoptera. By E. Meyrick.

A Monograph of the Formicidae of South Africa (Myrmicinae). By G. Arnold.

On some new species and others of Fossorial Hymenoptera in the South African Museum. By R. E. Turner.

New species of Neuropterous Insects from South Africa. (Ephemera, Megaloptera and Embiidina). By P. Esben-Petersen.

South African Neuroptera I. By P. Esben-Petersen.

A new genus of Chironomid (Diptera) from the Cape. By J. J. Kieffer.

New species of South African Tabanidae (Diptera). By Gertrude Ricardo.

Contributions to the Crustacean Fauna of South Africa. By K. H. Barnard.

Contributions to the South African Arachnid Fauna. By R. W. E. Tucker.

Five other entomological, carcinological and palaeontological papers have been sent to the printers for issue in 1921. I have still six on hand.

ARRANGEMENT AND CONSERVATION.

Zoology: Mammals. In my report for last year I mentioned the donation of the lower jaws of a Blue Whale, measuring 22 feet 9 inches, and from comparison with that of a skeleton of the same species, also in our collection and measuring 75 feet, I concluded that the jaws belonged to an animal near, or possibly more than, 100 feet in length, but the animal, a male, turned out to be 84 feet only. This year we have had, also donated, a pair of jaws of the same whale measuring very close on 23 feet. (I stated also that the Blue Whale is the largest animal that has appeared on earth, having trustworthy evidence of a measurement of 102 feet 4 inches. But my statement may just possibly be open to correction, for there has been placed in the palaeontological series the cast of a Jurassic reptile, *Brachiosaurus brancai*, which may claim to have been equal or perhaps superior in size to the Blue Whale. Thus runs, more or less, the label affixed to the newly acquired specimen: "The Sauropoda were enormous reptiles having a very elongate neck and tail and a remarkably small head; they were heavy-footed, swamp and lagoon dwellers, living on plants and possibly on fish. The best known representative is *Diplodocus Carnegiei*, a North American form which stood about 13 feet high and reached a length of as much as 64 feet. But *Brachiosaurus brancai* was much larger than that. From the size of the fore leg alone it is calculated that it stood 23 feet high at the shoulders and, if its proportions were more or less the same as *Diplodocus*, reached a length of 100 feet or more." The cast of the humerus exhibited is 7 feet long; that of our local *Melanorosaurus reudi*, an animal 26 feet long, is 19½ inches; but whereas *Melanorosaurus* was bipedal, *Brachiosaurus* went on all fours, and the fore limb would thus be longer in proportion to the hind than in *Melanorosaurus*. It is not the leg cast only that has been acquired, but also huge fragments of limb bones, vertebrae, etc., which will be restored, as time allows or room permits. These highly interesting fossils are from the Tanganyika Protectorate, and were successfully obtained through the good offices of Lord Buxton, when Governor-General of the Union, and of General Smuts. Nor were these huge reptiles confined to the tropical eastern belt of Africa, for in the Uitenhage cretaceous beds of the Cape there has been found parts of limbs of a size corresponding to that of these gigantic Sauropods.

Addo Bush Elephants.—The herd of elephants has been reduced to a very small number. Sixteen young animals are, I believe, left to continue the race. It is to be regretted that scientific observations could not be carried out regarding the size, proportion of sexes, and especially the dentition of the 90 animals that were slain. Such an opportunity will not occur again. From information received the number of tuskless animals of both sexes was very great. The three tuskless skulls I saw prove that the dropping of the tusk (canine) must have taken place at a very early age. The tusks when present were not of much weight in either sex. Those of the patriarch of the herd, shot several years before the present "thinning," were valued at about 40 or 45 lbs. each. None of those secured by Major Pretorius reached anything like this weight. But one, alleged to be the largest of the small herd confined to the Knysna forest and obtained for this Museum, has tusks 35 and 32 lbs. in weight. The height of the animal was 9 feet 4 inches. That of seemingly the largest elephant shot at Addo, a tuskless female, is 8 feet 3 inches.

The average size of the South African elephant is thus much under that of the Central African, and the tusks are unmistakably smaller. An adult Central elephant is reputed to be 10 feet 6 inches, and the tusks may reach 9 feet 5 inches and weigh 188 lbs. Two very fine examples in the collection measure 7 feet 3 inches and weigh 137 lbs. and 7 feet 1 inch weighing 158 lbs. No record approaching these is known from South Africa. The elephant shot by the Duke of Edinburgh at Knysna in 1860 is said to have measured 10

feet at the shoulder, but the weight or size of the tusks is not mentioned. The late A. W. Eriksson, who obtained in Damara and Ovambo land more ivory than any other hunter-trader (he brought back three thousand five hundred and a few odd tusks in an expedition of two years' duration), told me himself that he never encountered any tusk that might compare to those received at Zanzibar; Gordon Cumming, who hunted for five years in what is now Bechuana land, although extolling the tusks of some of his victims, does not mention their weight; incidentally, however, he mentions tuskless full-grown animals. The last survivor of the Zululand elephants, a solitary bull killed lately, and of which the skeleton is now in the Pietermaritzburg Museum, had tusks 6 feet 6 inches in length, one weighing 120 lbs. The conclusion that the elephant of the south was not as tall an animal or so heavy a tusker as the Central African elephant is, however, not justified now that through the courtesy and generosity of Mr. M. J. Breda, or Zoutendal Vley, Bredasdorp, Cape, we have received a tusk found embedded in the sand near the sea-coast but at a much higher altitude, measuring, when restored, 8 feet 6 inches and weighing in its present state 112 lbs. It is fairly well preserved. It is interesting to recall in connection with this find that where those sands fringe now that part of the sea-coast the Black Wildebeest once roamed, as proved by a frontlet found at Hawston. We have now evidence of the presence in South Africa of an extinct elephant, larger than the present African race, but the absence of molar teeth makes it unsafe to ascribe to it the ownership of this tusk. If tusks of large dimensions are connected with great age, one should conclude that the animals in the Addo and Knysna are still youngsters. But the great, almost prevailing, number of toothless animals of both sexes in the Addo herd, coupled with the reduced tusks when they occurred, and also the reduced size of the animals, points with more likelihood to the decadence of the race, possibly through in-breeding.

A small series of skulls and skins secured in Uganda has demonstrated the fact that the female of the small blaauw-bok Duyker, *Cephalophus aequatorialis*, has no horns. This character seems therefore to differentiate it from *Cephalophus melanorheus* with which Lydekker associates it as a variety. viz., *Cephalophus melanorheus aequatorialis*.

The Zebra with no leg-bands, reputed to be the Quagga, still surviving in South Africa, has not yet materialised, in spite of my efforts to secure one of the alleged examples.

The skeleton of the female Sperm-whale is too valuable to permit of the specimen being exhibited in the open, to share the fate of the other whale skeletons gradually rotting there for the last ten years, without shelter or without other protection than the "whited sepulchre" appearance imparted them by repeated lime-wash. It has been removed to a shed-store. The fact that such an exhibited assemblage of whale skeletons is not to be found in any museum south of the equator seems apparently to have no potentiality in preserving entire a unique exhibition. The osteological collection has been increased by two (Gemsboken, a Mountain Zebra, and smaller mammals. Lack of space precludes their being mounted. Interesting series of micro-mammals from the West Coast of Africa and Nyassa land have been added to the collection; and the ultimate return of some rare and doubtfully identified South African species, sent for examination in pre-war times, has not only cleared certain points of identity but increased the number of our South African species.

Birds.—The old specimens of the African Great Bustard, *Otis Kori*, have been remounted. The male, a very large example from Piquetberg, Cape, is said to have weighed from 40 to 50 lbs. Reports from South-West Africa imply that in the Namib desert examples of the Gou Paauw are there of colossal size and of weight adequate to their size. Skins of specimens weighing 50 lbs. were obtained, but could not be preserved. Two live examples, nearly one year old, were sent by me to the Zoological Gardens, London, for the King's Collection in 1913, but after their demise the skins were to be returned to me. This was done four or five years afterwards. The birds had grown but very little, and were only one-third the bulk and height of the large male already mentioned. In view of the statement that the Great Bustard of Europe (*Otis tarda*) lives to 50 years, it may be assumed that the South African bird does not reach its greater size within its first two or three years of maturity.

The possible addition to the fauna of South Africa of a most remarkable bird, *Musophaga rossae*, obtained in northern Barotse land, may be mentioned here. The exact locality has yet to be obtained.

Reptiles.—Many of the quondam young visitors to the South African Museum will be sorry to hear of the death of the old Seychelles Tortoise, of gigantic size, usually called Peter. Here is a case of longevity that should be recorded. In 1834, one reads of two enormous tortoises to be seen in the enclosure (? present paddocks) of the Avenue. From all accounts "Peter" was one of the survivors, and men somewhat now advanced in years remember having sat astride the old animal. She came to the Museum in 1835. I procured from Seychelles three companions of her kind, of which two were spinsters 40 years old, according to their pedigree. But except for a few minutes of inspection she evinced no further interest in them whatsoever, and the dislike was mutual. At death she was found to be full of incompletely formed eggs, that is eggs without shell. We misnamed her all along; she should have been "Petronella." This longevity is also shared by some of the Cape tortoises kept in our special paddock. One, also a female and the largest we

have, was presented to me in 1885 by a gentleman of Stellenbosch, to whom it had been given 42 years before as a wedding present, being valued then on account of its great size. I have good reasons to know that she fulfils still the objects of her sex.

Fishes and Marine Invertebrates.—The incorporation of new additions to the collection and the working up of certain groups of fishes, crustaceans and mollusca has proceeded normally. Two important memoirs, published during the year, complete the investigations on the crustacea obtained by the "Pieter Faure." A valuable addition to the fishes was a large kind, not recorded from South African waters, but from distant New Zealand. Another valuable addition has been a collection of the fishes of the Zambesi River, with the native name attached to each example. A new arrangement of the exhibited star fishes has been adopted, which would be more effective were a little more room available.

Entomology.—The advance in this section is explained in the departmental report. The number of accessions is considerable, although inferior to that of last year. The material sent to specialists before or during the war is now returning gradually together with the M.S. reports, the publication of which is a great source of embarrassment just now owing to the cost of printing. In spite of these difficulties seven papers on Insects have been published during the year, and one on Arachnida. Two bulky ones, a small part of the arrears, are at the printers and will be issued in the early months of 1921.

Only one collecting trip to test the distribution of insects at comparatively high altitudes has been undertaken this year, owing to the absence on long leave of two of the principal assistants; the material will, it is hoped, be reported upon at the beginning of the new year. A satisfactory increase in number of the insects of South West Africa is being noted and the collecting in this territory of Mr. R. W. Tucker, Museum Assistant, has much increased it. It is my intention to bring out a list of all the species known hitherto to inhabit that region, as well as to deal with or describe the unknown ones. The undertaking, which has already begun, is of some magnitude, but I am confident that this Museum can deal satisfactorily with it. This list will play an important part towards the execution of an entomological survey of the Union.

Peculiar to the South African fauna are a certain number of species of locusts known as "Toad Locusts," whose assimilation to the colour and situation of the ground on which they rest is hardly credible. Added to this resemblance is the fact that they are extremely slow of movement; some are wingless or only partly winged, and some are full-winged but very poor fliers. Unable, therefore, to spread much, these races have through restricted intercourse crystallised into varied forms which have mostly been considered as good species; and as these species affect most arid localities, the difficulty in obtaining adult specimens is greatly intensified. Efforts to this end have, however, been rewarded with partial success this year, and it is hoped to disentangle the synonymy of these most interesting species of locusts, seemingly restricted to the most arid parts of South Africa.

I wish it were possible to induce anglers, for whose pleasure or benefit our rivers or rivulets have been stocked with trout, to collect the contents of the stomach of their captures, preserve it in alcohol (I do not say under which name), or a weak solution of formalin, and send it to me for investigation. Only one fervent of the rod, Rev. G. Hawke, undertook to do so last year at Drakenstein (Cape) but, owing to circumstances beyond his control, did unfortunately carry on his collecting but for a short time. The food consisted of aquatic insects, which strike one who still retains vivid recollection of the conditions obtaining in Europe as being here very few in number or little in evidence, especially in the Western Province of the Cape.

The identification of these species of insects is proceeding. The collecting is more likely to be productive from the small fishes. So far as I know, the large specimens of English and Rainbow trouts are seldom found with insects' remains; and justify thereby the somewhat well-established belief here that they are cannibals.

The collections of Arachnida, etc., made by Mr. R. W. Tucker in South West Africa have been partly identified and incorporated during the year. The Myriapods of the collection have had a chequered career. For twelve years they were in the hands of a specialist in the United States without any report materialising. Claimed back for this reason, they hung on my hands until another specialist was found in Vienna seven years ago. The war intervened, and it is only now that the work is being taken in hand, the material for it having meanwhile increased considerably.

Geology, Mineralogy and Palaeontology.—We owe to the great generosity of Mr. P. Ross Frames a very valuable addition to the diamond series, in the shape of a 28 $\frac{3}{4}$ carat piece of white shot hoar with clear diamond at points of Octahedron. It is the largest of its kind known. We are greatly indebted to Mr. Frames for previous donations of specimens of unique character, such as a large black opaque diamond, etc.

The series of illustrations of local industries, this time clay and pottery, fire-bricks and iron, is being extended so far as space permits, but we are at the end. On the walls have been hung, above the exhibition cases, all the published maps of the geological survey of the Union.

Satisfactory as the geological and mineralogical accessions are, the palaeontological are easily uppermost this year; of these a number will prove to be new to the collection, and some of the reptilian remains new to science. But the development of the very large

amount of the latter is a very slow and therefore costly process, requiring great skill and constant supervision. A systematic grouping of the undeveloped remains, packed in boxes, has been carried out; two Pareiasaurians of very large size have been restored, and two of minor size developed, but they have to remain hidden in an iron shed closed to visitors. No such examples exist in any of the museums of the world.

The "clou" of the palaeontological section has been the restoration of the skeleton of a small Dinosaurian from the Red Beds. Small, next to the 26 feet long *Melanorosaurus*, measuring only 10 feet, it is very complete and the first of its kind in South Africa of which the skull is known. It displays also other new features of importance. On the gigantic remains of *Brachiosaurus brancai* I have already dwelt when comparing its size with the largest whale. The differences in the cranium and palate of the various Karroo reptiles have been illustrated by a series of specimens and diagrams, and a Guide to the Fossil Reptiles is now prepared.

The Trustees succeeded in securing for the Museum the Alfred Brown collection, consisting mostly of fossils from the Aliwal North district and neighbourhood. Its value to the Trustees is that it contains five types of fishes, one of amphibia and thirteen of reptilia, increasing thereby the number, already large, in the Museum collection. But the greater value of the acquisition is the large number of fossil plants hitherto undetermined, which will bring up this section of the palaeontological series to the level of the reptilian, etc. It is a matter of great satisfaction to me that it was found possible to retain these types in the country. The collection is being delivered, and its contents and importance will be dealt with in my next year's report.

Since the end of the year 1911, 2,263 additions have been made to the Register of Palaeontological Specimens, about 2,100 of which are South African. Up to the end of 1911 there had been only 711 entries, so that the registered collection has been more than quadrupled in nine years; and that without the addition of the Brown collection.

Botany.—In the botanical section the number of accessions due to collecting, exchange and purchase has been considerable. The Museum was able to secure a collection of South-West African plants comprising 2,100 sheets. Many of the species were identified in Berlin. This represents undoubtedly a large proportion of the South-West flora. A professional botanist who was there for 20 years collected in a radius of about 9,000 kilometres 3,000 plants in round number. This addition is, therefore, a great addition to the botanical section.

Anthropology and Ethnology.—An expedition has been sent to South-West Africa to photograph, measure and take casts of the Bush and Hottentot races still to be found in the territory. Strange as it may seem, a pure Nama is as difficult to locate as a pure Bushman; possibly because the name itself is subversive, and may not represent a reality. Now that more local information is available the Hottentots can be divided into two groups: The Nama or Naman, consisting of those tribes who are known to have lived in Great Namaqualand anterior to the time of the colonisation by the white race, and the Guuum or Orlam, consisting of tribes that migrated from the south of the Orange River during the 18th and 19th centuries, or who were more nomadic than the Nama. It is hoped to obtain one or more reliable physical indices of these two (?) races. The Bushmen are of course scattered; it is, however, generally admitted that the two races under the name of Aukwe and Aikwe are purer than the Hei-Unga and Kung. These forms are found on the Kalahari eastern border, and it is those with whom the expedition is first to get into contact with. Several of these Bush Clans are distinguished by their language, which is to be systematically studied by one of the Assistants who is versed in Bushman language, folk-lore and ethnological lines.

Three of the figures cast in a previous expedition from live Hei-Unga, in the Grootfontein area, have been modelled. They bear evidence of interbreeding. It is hoped that these casts of the Aukwe and Aikwe Bushmen—makers of ostrich egg shell beads—will prove more satisfactory, and a few photographs received lately seem to justify my anticipation. Another Assistant is proceeding to the north, in the Ovambo region. This Ovambo race is so totally different in manners and habits from our Xosa, Zulu and even Basuto, that their study cannot but prove of high interest. In the north also Bush people are found; some actually live on the water, and are called River Bushmen on that account. Reliable and helpful data will thus be obtained.

Anthropology and Ethnology: Physical Anthropology.—A very valuable addition to the anthropological series are six skeletons of the southern Bush of South-West Africa and of a Masarwa from the interior of the Kalahari.

Antiquarian Anthropology.—The K'we, or digging-stick weighting-stone, has not so far as I know been recorded from Central Africa beyond the Tanganyika Plateau. We have obtained one from the Myatu Hills about 1° S. on the former German East border, but it is a small specimen plainly intended as a club-head rather than for weighting a stick.

There is a popular tendency to connect the stone implements, querns, mullers, etc., with the Bushman race. That their stone and bone implement industry has undoubted affinity with the Aurignacian and following cultures, the Tardenosian also, seems proved; but I am more and more satisfied that the industry of butcher-making was not theirs, but

that of a race immensely older. With regard to their grinding stones and querns I am also satisfied that they were not mills for grain, but grinding mills for ore-crushing for paint making. But we find deeper and rounder artificial depressions made sometimes on non-detached rocks, as in Rhodesia, or on solitary, sometimes portable, blocks, as in the Eastern Transvaal and Bechuana land. The general opinion is that these hollowed stones were made and used by the Bantu natives for stamping ore, and this opinion is probably justified. We have received some from the Eastern Transvaal, from an old Kaffir Stadt in the Potgietersrust District, that leave little doubt as to this having been part of a smithy, other stones having served as anvil, hammer and polishers. There were not one or two, but several of these mills in this deserted village. Holding, as I do, that iron smelting is most likely an African discovery, the presence of these mills as ore-mills and not grain-mills implies that the population of the deserted village aforesaid consisted at that time of a guild of smiths. These African smiths never rose to the art of making thick or heavy utensils, and their requirements did not lead to the invention of the iron hammer. Stone tools they used or are using still. I have only seen one very poor imitation of a hammer from Bechuana land. It is a thick circle of iron with a piece of wood thrust in the hole to serve as handle, and I doubt if the thick ring, not unlike a "K'we," is of kaffir smelting.

In spite of numerous inquiries I cannot find anyone who can give me an account obtained *de visu* of the forging of a spade or weapon by a native smith, and of the tools used for the purpose.

Beyond these mills, all too shallow to permit of successful stamping of grain, the crushers or hammers, anvils, and occasional rubbing stones used now for grinding snuff, etc., but most likely first made by the Bush race, it is not possible to connect the Bantu-speaking races of the Union (and beyond, probably,) with a stone industry other than the one here mentioned.

Among the stone implements received two are of special interest. One from the neighbourhood of Peddie, seven miles from the sea, is the second example known to me showing a surface *ground* on either side into something like a cutting edge and thus resembling an axe. In the Graham's Town Museum there is a tool treated in this manner, and which, I am informed by the donor, was found in the same neighbourhood. The second piece of interest is a hand pick of hard sandstone, probably used for the perforation of K'wes the latter not being uncommon where the pick was discovered.

Curios and Antiquities.—The Secretary of State for the Colonies has made a permanent loan to South Africa of arms and armour from the Armouries of the Tower of London, and the share of this Museum consists in two examples each of Breast and Back Plates, Helmets, Skull Caps (for lining felt hats), Secretes and Plaquets, Arm Pieces, Bridle Gauntlets of the same period, and Swords, Cutlasses and Pistols of the 18-19th century. Very few such authenticated relics are to be seen in South African museums. Our collection contains a fair number, not sufficient however to make an important exhibition, and the value of the loan so generously made by the Secretary of State for the Colonies is the more appreciated on that account.

Likewise, each museum of the four provinces has received a gift of a piece of oak about three feet long removed from the trusses that once formed part of the roof of Westminster Hall. (The specimen I received was taken from a span of roof 69 feet high to apex from floor.) The walls were repaired and raised two feet by Richard II, but contain Norman walls built by William Rufus, 1099; the oak, however, is part of the original timbers of the time of Richard II.

Koopmans de Wet House.—The popularity of this annex continues, as shown by the 27,278 persons who visited it. The ancient floor-tiles and the old wooden floor are very much taxed by such an affluence of visitors. The donations, although not large, were of interest, and so is the loan of the hair and gold filigree ornaments once the property of the ancestress of the Tennant family.

Gift.—I have already alluded to the large number of scientific books and pamphlets (part of which only figures as yet in this year's record) donated by Mrs. Purcell. This lady presented in addition all the material prepared for section and otherwise by the late Dr. W. F. Purcell during the course of his studies on Arachnid morphology. This, Mrs. Purcell hopes, may be of use to future students who may elect to work on this group.

Collecting.—The Assistant Director has been in the veld for eight weeks collecting fossil reptiles, etc., and adding to the palaeontological survey map; a collecting excursion was made to Oude Bosh in the Caledon District, by three Assistants. I have already stated that two Assistants went in November to South-West Africa and will be there for some time bent on anthropological research especially.

Administration.—The Trustees have received during the year an additional Grant-in-Aid. A small sum of money was allotted for the erection of a shed for the whales, but it has proved insufficient for even part of it, and the erection had therefore to be postponed till next year.

L. PÉRINGUEY,
Director.

DEPARTMENT OF VERTEBRATE ZOOLOGY.

Mammals.—As a set-off for the considerable expenditure incurred in sending the Museum Taxidermist for two months' stay with the shooting party at the Addo Bush, to permit of the curing of the spoils, the Administration of the Province has presented skins of a tuskless elephant cow, of a very young male, and of a baby elephant. And later on, when it was found desirable to kill a specimen from the Knysna herd for comparison with that of the Addo herd, the animal was presented to us, but the skinning and transport to the nearest railway station has proved it to be a very costly gift. The animal is a fine example of its kind, and is said to be the largest animal in the small herd left in the Knysna Forest. When new space permits, the material for setting up a fine group of the South African elephants will be at hand. The Museum has obtained from Uganda a small series of the tiny "Duyker," *Cephalophus aequatorialis*, from which it is now ascertained that the female is hornless. Skulls of small antelopes from North-Eastern Rhodesia, Nyassa land and the Congo have been added to the collection. A series of small mammals from Nyassa, not yet completely identified, proves of special interest. And an exchange of identified small mammals from Camerouns and Central Africa has added interest to the African series.

Three skeletons of Gemsbok have been prepared, and also two of the mountain Zebra. The number of specimens incorporated is 124, representing 68 species, 49 of which are new to the collection.

Birds.—Two old, yet well-preserved examples of the Gom Paauw, *Otis Kori*, have been remounted to form a group of these large interesting birds, together with two examples set from life that I had sent alive in pre-war time to the Zoological Gardens, London. We are indebted to Mr. Morrel for a skin of *Musophaga rossae*, obtained on the upper Zambesi. The bird had hitherto been recorded from Angola and Uganda only. The number of accessions is 46 examples, representing 39 species, and 24 birds' eggs representing four species. Of the birds one was new; and also one new clutch of eggs was obtained.

Reptiles.—A fairly large number of specimens was received; 119, representing 70 species. Time, however, has not permitted of their identification or incorporation. Interesting among the lot is the skin of a Mamba that was 9 feet 5 inches long. The old Seychelles Tortoise, which had for so long been an object of interest to visitors, especially children, died at the beginning of the year. Contrary to belief, it proved to be a female. Its remains have been set up for exhibition purpose.

The main donors of vertebrate animals are: His Honour the Administrator of the Cape; K. H. Barnard; J. S. Brown; J. S. Carlisle; Sir R. Coryndon; T. J. Dreyer; R. Dümmer; C. French; Lieut. Ifahn; Dr. J. M. Gericke; R. S. Haagner; H. L. Hill; W. Horne; R. Jacobson; P. Kings; Dr. J. B. Knobel; Dr. MacIntyre; J. Morrel; B. Peers; Major Pretorius; J. A. Reid; T. A. Robertson; Father R. Sollier; Transvaal Museum; R. W. Tucker; W. R. Zeederberg.

L. PÉRINGUEY,
Director.

DEPARTMENT OF FISHES AND MARINE INVERTEBRATES.

To the Director of the South African Museum.

SIR,—I have the honour to present the following report on this Department for the year 1920.

For nearly seven months I was away on leave in England. The opportunity was taken of visiting the British Museum for the purpose of comparing methods of exhibiting specimens and studying some of the spirit collections.

The rest of the year was occupied in arranging the collections, incorporating new additions, and working up certain groups of fishes and crustaceans.

A report by Rev. T. R. R. Stebbing on the Malacostracous Crustacea, and one by myself on the Isopoda, have been published during the year. With the exception of a few, probably not more than about 50, species these reports complete the study of the "Pieter Faure" collection of crustacea.

A short collecting trip was made in December, in company with the other members of the staff, to the Zonder End Mountains. Camps were made in the forest and near the summit of the range, thus covering the same ground as on a former occasion, but at a different season. This continues the series of localities chosen with the object of collecting the mountain fauna and flora.

Additions have been made to the exhibited collections of fishes, crustacea and mollusca. The most interesting addition was a specimen of a large Tunny-like fish, *Gasterochisma melampus*, not hitherto recorded from South Africa. The series of starfish has been partly rearranged, the specimens being placed on a more or less conventionalised reproduction

LEY,
Director.

of the sea-bottom instead of on separate tablets. A continuation of the series is not possible until the return of the bulk of the collection from America, whither it was sent for study and where it is held up on account of transport difficulties.

The following are the numbers of accessions during the year:—

	Specimens.	Species.	New to Collection.
Fishes	41	23	4
Crustacea	87	24	3
Mollusca	92	13	3
Other Marine Invertebrates	43	6	2
Totals	263	66	12

The thanks of the Trustees are due to the following donors: Jas. Morell, Esq.; H. W. Bell-Marley, Esq.; Rev. Father Sollier.

I have the honour to be,

Sir,

Your obedient servant,

KEPPEL H. BARNARD.

DEPARTMENT OF ENTOMOLOGY.

The accessions have numbered 4,343, represented by 2,357 species. Of the latter 167 were not represented hitherto. This number, however, does not represent the total of insects received, but approximately those that have been pinned and labelled preparatory to special examination for identification or incorporation. A large number of specimens are therefore not included in the numbers above mentioned, and stored for future use as duplicates, if wanted.

The labelled species belonging to the different orders is as follows:—

	Examples.	Species.	New to Collection.
Hymenoptera	366	282	101
Coleoptera	1,367	795	34
Diptera	1,368	502	81
Neuroptera	174	88	2
Hemiptera and Homoptera	383	331	35
Lepidoptera	342	225	5
Orthoptera	343	134	9
	4,343	2,357	267

The additions to the cabinet have been varied, but not so numerous as in some previous years. But material sent to specialists before and during the war is returning together with the M.S. reports on the specimens sent for this purpose; and the number of *types* added to the collection is by this means increasing rapidly in importance. In the Diptera, the South African species of the two families Nemestrinidae and Bombylinae are reported upon, and the latter is already in the press. Through pressure being brought to this effect some Nemestrinid material which I had given up for lost was returned from Berlin, and the species described there.

In the entomological section proper, four papers have been published, viz.: On some New Species and others of Fossorial Hymenoptera in the South African Museum, by R. W. Turner; New Species of Neuropterous Insects from South Africa (Ephemera, Megaloptera and Embiidina), by P. Esben-Petersen; South African Neuroptera, by P. Esben-Petersen; A New Genus of Chironomid (Diptera) from the Cape, by J. J. Kiefer; New Species of South African Tabanidae, by Gertrude Ricardo; Descriptions of South African Micro-Lepidoptera, by E. Meyrick; and Part IV of Arnold's Monograph of the Formicidae of South Africa. Several important M.SS. are awaiting their turn for publication. Only one collecting trip to test the distribution of insects at high altitudes was undertaken this year. The material obtained is not yet sorted.

L. PÉRINGUEY.

DEPARTMENT OF ENTOMOLOGY (INSECTS EXCLUDED).

To the Director of the South African Museum.

SIR, I have the honour to submit the following report on this Department for the year ended December, 1920.

During the earlier portion of the year I was occupied by field work in the northern region of the South-West Protectorate, to which district I went at the end of November, 1919; and on this a separate and more detailed report has been furnished.

A considerable amount of ground was covered by trekking and camping, and as extensive a collection and examination as was possible was made of the entomological fauna in the Tsumeb, Grootfontein, Nuragas and Waterberg Districts, whilst general collecting was undertaken whenever occasion presented. Entomological collecting was greatly hampered by the extreme drought prevailing, which, coupled with the previous year's lack of rain, made insects scarce and hard to obtain.

I returned to Cape Town at the end of February. A month was then spent in examining and indexing the Arachnid material brought back, and also the material resulting from the second journey to Montagu District in November, 1919.

At the beginning of April I left for England on six months' leave, returning towards the end of September. In England I worked for a time at the British Museum on material brought from South Africa for comparison with the types in the British Museum.

In October work was resumed on material brought from South-West Africa, and the study of the Drassids of South Africa again restarted. This was discontinued for work in the field during the first fortnight of December in the mountain forest region at River Zonder Ende, and concerning which a separate report has been given.

Subsequently the entire Myriapod collection, which had accumulated since the original collection was sent to Vienna, was examined and packed for transit to the same destination in order that the whole might be worked.

A large number of books and pamphlets from the library of the late Dr. W. F. Purcell were received and are now being incorporated with the Museum Library.

The total number of specimens added to the collection during the year is 971, comprising 263 species, of which at least 109 are new to the collection.

The various orders are represented as follows:—

	Specimens.	Species.	New to Collection.
Araneæ	675	200	88
Acari	95	8	3
Myriapoda	48	16	6
Scorpions	65	12	5
Solifugæ	38	17	4
Pseudoscorpions	43	5	2
Opiliones	5	3	1
Onychophora	2	2	—

I have the honour to be,

Sir,

Your obedient servant,

RICHARD W. E. TUCKER.

DEPARTMENT OF GEOLOGY AND MINERALOGY.

To the Director, South African Museum.

SIR, I have the honour to submit the following report for the year 1920. The following additions were catalogued during the year:—

	No. of Specimens.	New to Collection.
Rocks	72	46
Minerals	34	5
Manufactured Articles	14	14
Total	120	65

Among the more important additions are:—

A series of rocks from the Transvaal, presented by the Geological Survey of the Union of South Africa.

A collection of typical tin ores from the Olifants River Tin Fields of the Transvaal Bushveld, presented by the Geological Survey.

Stormberg (Bushveld) sandstones from the Transvaal, presented by Dr. A. L. du Toit.

The Museum is indebted to Mr. P. Ross Frames for a very fine 28 $\frac{3}{4}$ carat piece of white shot hoart with clear diamond points, the largest example of its kind known.

From Tsumeb, South-West Protectorate, Mr. M. C. Vos has presented a number of rare minerals.

Mr. F. E. Kanthack has contributed a series of rocks from the Cunene River.

In view of the marked advance in industrial developments depending upon mineral resources, efforts are maintained to illustrate this progress by self-contained special exhibits. These now comprise the following sets:—

- The Asbestos Industry (Cape Province, Natal and Transvaal).
- The Mica Industry (Transvaal).
- The Corundum Occurrences (Transvaal and Namaqua land).
- The Tin Occurrences of the Union.
- The Iron Industry (Transvaal).
- The Portland Cement Industry (Pretoria).
- The Clay and Pottery Industries (Transvaal).
- The Refractory Materials Industry, e.g., Silica Bricks (Transvaal).

The collections have been arranged from material presented mainly by the Geological Survey, and arrangements exist for adding further industrial exhibits of various kinds in the near future.

A small collection of meteorites were sent to Vienna on loan before the war. Their detailed description is now being prepared and will be published in due time.

A notable feature in the larger room is the display of mounted sheets of the Geological Map of the Union, arranged above the stratigraphical cases. These maps should prove of great practical use to enquirers interested in the economic resources of the Union.

Attention must again be called to the lamentably overcrowded condition of the cases available for this Department, much material, which ought to be exhibited, having to remain in drawers for lack of show space.

I have the honour to be,

Faithfully yours,

A. L. HALL.

DEPARTMENT OF PALAEOONTOLOGY.

To the Director, South African Museum.

SIR:—I have the honour to submit a report upon the working of the Department of Palaeontology for the eleven months ended November 30th, 1920.

The following additions were registered:—

Plants	..	..	..	..	..	..	..	..	..	25
Invertebrates	..	..	..	..	..	..	..	..	..	37
Reptiles	..	..	..	..	..	..	..	..	..	86
Mammals	..	..	..	..	..	..	..	..	..	11

Total	..	..	..	..	..	..	..	..	..	159

Of these a number will prove to be new to the collection, and some of the reptiles new to science. The work of developing the large amount of reptilian material from its matrix has proceeded steadily, but a large portion of the collection is still undeveloped and unnamed. Part of the year was occupied in the systematic arrangement in the store-shed of the boxes containing this latter material.

A certain amount of rearrangement has enabled us to exhibit the restored skeleton of a small Dinosaur, *Massospondylus harriesi*, from the Red Beds, which was assembled in the early part of the year. This specimen is the first in South Africa in which the skull is known, and from it we had reconstructed another and more accurate skull for the exhibited skeleton of *Melanorosaurus*. The skeleton of *Massospondylus* is of great importance also in that it displays hitherto unknown features in the shoulder-girdle. A relief-exhibit of the type pelvis and sacrum of *Gryponyr taylori* has also been placed in one of the cases; and large sacral vertebrae and ischia of *Enskellesaurus* have been added to the exhibited series.

The collection has been enriched by a number of bones of the enormous Jurassic Dinosaurs from Tanganyika Territory, among them a plaster-cast of the type humerus of *Brachiosaurus brancai*, which has a length of seven feet. This has been shown alongside the *Melanorosaurus* skeleton, and forms a striking comparison with the humerus of that animal.

From the Beaufort Beds two skeletons of large Pareiasaurians have been prepared and mounted in the store-shed; and a skeleton of a large Titanosuchid partly prepared. Two small Pareiasaurians have been partly developed.

An exhibition case has been utilised for a series of skulls and drawings illustrative of cranial and palatal differences in the various Karroo reptiles. Short diagnoses of the various orders and sub-orders are attached. In this connection a Guide to Fossil Reptiles is approaching completion.

All the unworked Cretaceous Invertebrates have been sent to England for determination. A very large specimen of the Ammonite *Parapuzosia* from Zululand has been mounted and exhibited.

Only two short trips have been undertaken this year. No paper has been published, but a contribution has been sent for publication in a forthcoming "Williston Memorial Volume."

The Trustees are indebted to the following donors: His Honour the Administrator of Tanganyika Territory, for a collection of bones of large Sauropoda; Dr. A. L. du Toit, for an interesting collection of fossil plants from Pondoland, containing *Dictyozamites* with cretaceous forms, for a large specimen of *Parapuzosia* from Zululand, and for fossil plants from the Witteberg Beds; Mr. K. H. Barnard, for a collection of fossils from the neighbourhood of Cambridge, England; Mrs. A. Hill, for a few fossils from the Nile region; Mr. W. van der Byl, for the loan of two fossil skulls.

I have the honour to be,

Sir,

Your obedient servant,

S. H. HAUGHTON,
Assistant Director.

DEPARTMENT OF BOTANY.

During the year 1920 the number of sheets mounted was 1,136, of which 500 have been incorporated in the cabinet collection.

The following additions have been made during the year:—

By Purchase.—R. Dümmer, 48 sheets Uganda Plants.

By Donation.—M. Wilman, 29 sheets Kimberley Plants; F. Eyles, 114 sheets Rhodesian Grasses; W. Gilchrist, Book of European Sea Weeds; A. Divine, 57 species British Mosses; Bolus Herbarium, 49 sheets Miscellaneous Collection; N. R. Cheeseman, Specimens of *Ladiocea sechallarium*.

By Collecting.—Trip to Zonder Einde Mountains, about 100 specimens collected by Mr. Barnard and Mr. Lightfoot.

The following material has been sent out on loan:—

National Herbarium, Pretoria: 17 sheets *Cynodon*; 16 sheets *Olinia*; 4 sheets *Tristachya*; 50 sheets *Scolopia*, *Cyclopia*, *Cassine*, *Elaeodendron*; 13 sheets *Olea*.

British Museum: 170 sheets *Rhynchosia*.

Royal Botanic Gardens, Kew: 157 sheets Rhodesian Grasses.

Dr. Schönland: 145 sheets *Cyperaceae*; 94 sheets *Tetraria*.

Mr. S. Garside: 74 specimens *Lichens*.

Mr. N. Pillans: 80 sheets *Restiaceae*.

Dr. Schintz (Zurich): 267 named specimens.

The following exchange has been effected: 1,197 sheets with the National Herbarium, Pretoria.

We have been able to obtain Dr. Range's collection in the South-West Protectorate. The collection comprises about 2,100 sheets; a fair number of which are named. A start has been made on the grasses and the *Cyperaceae*, which are being worked out at present.

The Provincial Council has forwarded many plants, chiefly noxious weeds, for identification and information thereon. Numerous plants have been named for several correspondents, among them plants from Uganda Protectorate for Mr. Dümmer, and from Rhodesia for Mr. Eyles. A considerable time was spent in the making of a card catalogue which shall include every specimen in the collection; so far 17 cabinets have been dealt with.

DEPARTMENT OF ANTHROPOLOGY, ETHNOLOGY, ETC.

To the Trustees of the South African Museum.

SIRS,—Some enquiries which I set on foot regarding the kind of tools used by the native blacksmiths have resulted in obtaining ore-mills, being more or less shallow, broad or narrow artificial depressions in detached pieces of rock, found by Dr. G. J. Melle in old deserted kraals in the Zoutpansberg District. (Others from Rhodesia and Bechuana land are also in the collection.) Accompanying two of these mills are articles that can be admitted to be grinder or polisher, and stamper or crusher, and (?) an anvil. These specimens were not single, and therefore the smith's art flourished at one time among the native popula-

tion of this kraal. This belief, or rather certainty, is justified by the remains in this district of numerous old workings where gold, tin and iron had been the object of systematic mining. A quiver and poisoned arrows of the Wakamba tribe, near Nairobi, an otter-skin tobacco pouch from the Ba-Tussi of Ruanda; a clay charm used by Masai to hang round the neck of favourite cattle; a small K'we from the Myatu Hills; either a (?) talisman or a club-head and poison for arrows from the Geriama tribe, north of Mombassa, are valuable additions to the ethnological series of Central Africa. Strings of ostrich egg shell disks; miniature bows and arrows; pottery with rudimentary ears have been added to our stock of South African ethnology; together with six sets of Mashona divining bones and a witch doctor's stick; all former evidence in judicial cases.

The Bush skeletons and skulls have been increased by seven entire examples from the south-eastern part of the South-West Protectorate, generously presented by Dr. L. Fourie, and one, also complete, of a Masarwa, modelled four years ago and now figuring in the exhibited series.

An important series of Tasmanian stone implements has been obtained by exchange. The primitiveness of these artefacts leaves one somewhat perplexed. Are they the result of necessity leading to a discovery made long before elsewhere by other primitive races of mankind who had accidentally discovered the advantage resulting from the sharp fracture of a stone, or do we witness a case of retrogression in the lithic art? Both theories are plausible.

The main donors are: J. S. Backhouse; A. F. Bailey; F. Brownlee; J. Campbell; P. Colson; L. Fourie; R. S. Harger; F. E. Kanthac; Rev. H. Kling; D. Laidler; B. F. Marais; Dr. G. J. M. Melle; Capt. J. S. Phillips; A. L. du Toit; C. Vos; L. B. Yardley.

L. PÉRINGUEY,
Director.

KOOPMANS DE WET HOUSE.

To the Trustees of the South African Museum.

The donations and loans are as follows:—

Gifts.—6 brass pots and 1 brass strainer, by Miss Th. Wessels, Cape Town; 2 large Carcel oil lamps, by Mrs. W. F. Purcell; tray with porcelain centre, once the property of Paul Emile Leopold, originally from Berlin, by Mrs. van der Heever, Senekal, O.F.S.; 1 gold medal, awarded in Leyden to Rev. Dr. Heyns in 1833, presented by his daughter, the late Miss E. Heyns; 2 leather fire buckets, circa 1845; 2 glass wine bottles with metal stand, by G. Aling.

Loans.—2 hair bracelets, 2 brooches, 1 pair ear-rings mounted in gold filigree, once the property of the Tennant family, by Miss Buyskes.

L. PÉRINGUEY,
Director.

SOUTH AFRICAN MUSEUM.

STATEMENT OF INCOME AND EXPENDITURE FOR THE YEAR ENDING 31ST DECEMBER, 1920.

INCOME.		EXPENDITURE.	
To Balance, 1st January, 1920 ...	£1,123 10	By Salaries and War Bonuses to Officials	£3,855 14 10
.. Grants:—		.. Library: Purchases & Subscriptions	97 14 11
.. Union Government	£5,862 10 0	.. Wages and Expenses: Upkeep of Museum	654 3 7
.. Provincial Administration ...	400 0 0	.. Expenses in Travelling and Collecting Specimens...	806 8 2
.. Cape Town Corporation ...	200 0 0	.. Sunday Duty ...	101 4 0
	6,462 10 0	.. Freight and Railway Charges ...	22 15 7
.. Interest:—		.. Potties, Postage and Bank Charges...	114 6 9
.. Hadje Suliman Shah Mohamed Coin Fund ...	4 5 0	.. Publication of Annals ...	329 5 8
.. Treasury Bill ...	25 0 0	.. Balance:—	
	29 5 0	.. Treasury Stock ...	500 0 0
.. Sale of Publications ...	35 4 1	.. Cash in Bank ...	976 9 2
.. Discount and exchange on Drafts Standard Bank ...	11 7 3	.. Petty Cash ...	3 15 6
	£7,661 8 2		*1,480 4 8
		*Includes £17 13s. 4d. appertaining to the Coin Fund.	
			£7,661 8 2

Statement "A."

HADJE SULIMAN SHAH MOHAMED FUND FOR THE PURCHASE OF COINS.

Amount of Investment with the South African Association ...	£100 0 0
Balance of Interest on 31st December, 1919 ...	43 8 4
Interest Received during period 1.1.20 to 31.12.20...	4 5 0
	<u>147 13 4</u>

Audited and found satisfactory,

(Signed) R. J. BRUCE,

Actg. Controller and Auditor-General,

Control and Audit Office,

Pretoria 4th March, 1921.

(Signed) L PÉRINGUEY,

Director, South African Museum

Cape Town, 18th January, 1921.

THE LIBRARY OF THE
FEB 5 - 1940
UNIVERSITY OF ILLINOIS

UNION OF SOUTH AFRICA.

REPORT

OF THE

SOUTH AFRICAN MUSEUM

FOR THE

THE LIBRARY OF THE
FEB 5 - 1940
UNIVERSITY OF ILLINOIS

Year ended 31st December, 1921.

*Presented to both Houses of Parliament by Command of His Royal Highness
the Governor-General.*

1922.

CAPE TOWN :
CAPE TIMES LIMITED, GOVERNMENT PRINTERS.

1922.

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Trustees of the South African Museum :

THE RIGHT HON. JOHN X. MERRIMAN, P.C., M.L.A.
SIR THOMAS MUIR, C.M.G., M.A., LL.D., D.Sc., F.R.S.
THE HON. JOHN WILLIAM JAGGER, F.S.S., M.L.A.

Scientific Staff of the South African Museum :

LOUIS ALBERT PERINGUEY, D.Sc., Director and Keeper.
KEPPEL HARCOURT BARNARD, M.A., Assistant Director; in Charge of Fish and Marine Invertebrates.
RICHARD WILLIAM ETHELBERT TUCKER, M.A., Assistant in Charge of the Arthropoda (Insects excepted).
DAVID THODAY, M.A., Honorary Keeper of the Botanical Department.
STAE GARABEDIAN, B.A., Assistant in the Botanical Department.
ARTHUR LEWIS HALL, B.A., Honorary Keeper of the Geological and Mineralogical Collections
SIDNEY HENRY HAUGHTON, B.A., D.Sc., Honorary Keeper of the Palaeontological Collections.

UNION OF SOUTH AFRICA.

Report of the South African Museum for the Year ended 31st December, 1921.

*Presented to both Houses of Parliament by command of His Royal Highness the
Governor-General.*

REPORT OF THE DIRECTOR FOR THE YEAR 1921.

To the Trustees of the South African Museum.

SIRS,—I have the honour to submit my report on the Administration of the Museum for the year 1921.

Visitors.—The number of visitors was 152,340, divided as follows:—

White.—Adults				Male	50,544
				Female	40,318
Children...					32,032
Coloured.—Adults				Male	11,644
				Female	10,105
Children					7,697
The number of visitors on Sundays (afternoons)					22,367
Largest number in one day (12th October) ...					1,379
Smallest number in one day (8th August) ...					32

94 school parties and drawing classes, numbering 2,256, visited the Museum.

Presents, Purchases, Acquisitions by the Staff.—

	Specimens.	Species.	Approximately New to Collection.
Mammals	27	23	8
Birds	12	4	1
Birds' Eggs	197	66	9
Reptiles and Batrachians	62	40	—
Fishes	27	16	9
Mollusca	354	226	201
Marine and Land Invertebrates	54	5	—
Crustacea	65	16	2
Insects	4,798	2,023	327
Arachnids and Myriapoda	737	345	140
Geology, Mineralogy and Palaeontology	501	—	—
Anthropology	—	—	—
Botany	1,463	1,113	—
Antiquities Curios	17	16	16

Library.—

Books:	Purchased ... ..	...	...	...	145
	Presented ... ..	...	...	...	118
Pamphlets and Periodicals:	Purchased ... ..	...	...	...	142
	Presented ... ..	...	...	...	2,081

The considerable number of presented pamphlets include part of Mrs. W. F. Purcell's donation in 1920, which had not been registered in that year.

Publications.—The expectation regarding a decrease this year in the cost of printing has not been realised, and the printing bill has been the heaviest incurred in the history of the Museum, but there are still several papers of importance awaiting publication.

Those issued are:—

- Vol. XII. Spath. Cretaceous Cephalopods from Zululand. 104 pp., 8 pls.
- Vol. XVIII. Bezzi. Bombyliid Fauna of South Africa. 180 pp., 2 pls.
- Alexander. Crane-Flies of South Africa. Pt. 2. 51 pp., 2 pls.
- Aurivillius. Descriptions of South African Heterocera. 9 pp.
- Ris. Odonata of South Africa. 207 pp., 8 pls.
- Stebbing. South African Crustacea. Pt. XI. 16 pp., 8 pls.
- Bezzi. Additions to the Bombyliid Fauna. 10 pp.

Collecting.—Mr. K. H. Barnard, now Assistant Director, undertook a collecting trip to South-West Africa, including Ovamboland, and was absent for eight weeks. He made interesting collections representing the fauna and flora of a country somewhat poor in both. He investigated also the anthropology of the Ovambo.

Towards the end of the year he made a short excursion in the Uitenhage District to collect cretaceous fossils.

Mr. R. W. Tucker went to Coldstream in the Humansdorp District to complete the excavations of a Strand-Looper shelter cave begun several years ago but postponed owing to the cost.

Mr. Drury, accompanied by a junior assistant, was for three months in South-West Africa, taking casts and measurements of Bush and Hottentot Natives.

ARRANGEMENT AND CONSERVATION.

Zoology: Mammals.—There have been but few additions to the Mammals, and space does not allow of groups of large or even moderate size animals being taken in hand for exhibition purposes.

Birds.—Mr. F. Bolus has volunteered to incorporate in the catalogued bird-skin collection the numerous additions that have accumulated during the last ten years. The task is nearly completed and we are now able to decide as to the kind and number of specimens we can dispose of as exchanges, etc. With very few exceptions, the described South African species are represented in the skin collection, the exceptions—species not always well established—occurring in the northern and eastern borders of the Union and Rhodesia. A few additions have been made to the exhibited series.

There has been a notable increase in the number of clutches of birds eggs obtained by exchange, but the egg collection is still far from being complete.

An interesting addition has been that of an example of the European Common Tern, *Terna fluriatilis*, ringed in Sweden (Göteborg Museum III.) and shot at the Berg River, C.C. on the 24th of December, 1921. This bird turns out to have been ringed in 1913, and was thus nine years old. Its presence in our waters explains the line of migration, the species being not uncommon in Table Bay at the non-breeding season.

Reptiles and Batrachians.—A fair number of reptiles has been obtained mostly from South-West Africa, and although there seems to be no species either undescribed or unrepresented in the collection, most examples will go to complete our catalogued series.

Fishes.—The additions to the fish collection are not numerous, but the specimens added are of special interest, nine being unrepresented hitherto. The cast of a gigantic Tiger Fish *Hydrocyon lineatus*, a fresh-water kind, has been repainted from more reliable data, and a "Galjoen" fish, weighing over 14 lbs., said to be an angler's record, has been placed on exhibition.

Marine Invertebrates.—The importance of the shell collection has been increased by a donation by the collector himself of an important number of marine shells, being "topotypes" of the Turton Collection from Port Alfred reported upon by Bartsch.

Crustacea.—Professor Sars informs me that he has ready for publication a report on the fresh-water Ostracods, based on material mostly raised from mud sent him by the Museum.

Entomology.—The additions have been numerous and varied. The material brought back from South-West Africa by Mr. Barnard, and part of that collected there the year before by Mr. R. W. Tucker but not yet sorted, is being mounted and is proving of considerable value in the study of the insect fauna of this country, which from my present knowledge is seemingly neither varied nor abundant in species or individuals if compared with that of Eastern South Rhodesia or Mozambique. In addition to South African species, a not inconsiderable number, especially butterflies, has been received from British East Africa (Kenya) and Uganda and Nyassa land. A collection of the Congo Lepidoptera is shortly expected. Part of these Central African additions, chiefly the Lepidoptera, are being incorporated and cannot fail to be of interest for the study of distribution in Africa of species which were thought at one time to be restricted to this side of the tropic.

The Memoirs issued during the year are with one exception bearing on entomology. Nor is this surprising, for I estimate the number of insects to be nearly four-fifths of the whole animal kingdom, and I expect that the South African share will approximate 35,000 on a very conservative estimate. Many memoirs are needed for dealing comprehensively with such a mass of material, and more and more difficult becomes the task of the worker in systematics who has to wind his way through that labyrinth, ever increasing in size and difficulty, which is termed "Entomological Literature." Little honour, and I fear little adequate emolument, is nowadays the lot of the systematist. Yet one wonders if the worker in economics could do without him. But the fact is too patent that specialists in systematic entomology are now difficult to find.

Geology, Mineralogy.—The room rendered vacant by the removal of Bush figures has been converted into an exhibition of geology and mineralogy as applied to local industries on a larger and more effective scale than the former exhibits scattered in other rooms. It now contains as a central piece the model, on a scale of 16 feet to the inch, of the Modder "B." Gold Mine, which has produced to date 2,706,730 ozs. of gold valued at £11,497,458.

In flat cases are exhibits of most occurrences of asbestos in the Union, together with the manufactured product in the shape of tiles, flags, panels, etc. The same obtains for sands and bottles, clays and tiles, bricks and vases; mica, limes; tin ores in number; a mass of galena from the Transvaal Silver Mines Company, and a very valuable bar of silver and lead—bearing the mark of the Company—is left without cover, trusting to the protection of its own weight. In addition, there is an important array of building stones which should prove of considerable interest to architects and building contractors. The large geological map of the Cape of Good Hope has been transferred to this room, together with that of Wyley, sketched in 1855.

But for the help of the Honorary Keeper of Geology and Mineralogy, Mr. A. L. Hall, this exhibition of natural products utilised by local industries would have been, if not impossible, at least difficult of execution. Through the removal of certain exhibits to this economic section, a little space has been obtained but it is almost of no account in view of the room required for the additions of the samples of rocks, mainly from the Transvaal, awaiting their incorporation in the geological series to which they belong. To the series of meteorites has been added a mass weighing 1,431 lbs., presented by the South-West Government: it is one of 52 pieces collected in the neighbourhood of Gibeon, weighing as a whole 15½ tons.

Palaeontology.—The transfer of the economic section to another room above mentioned has permitted the reunion of the large skeleton of *Struthiocephalus whaitsi* with the mounted Pareiasaurian series. This, in turn, has allowed of a better display in the adjacent room of the restorations of a large humerus of the Dinosaur *Brachiosaurus brancai* and of the femur of a smaller form (9 and 5 feet high, respectively) both from the Tanganyika Territory. A valuable addition to the exhibited fossil plants has been the series of remarkably good and representative specimens of the Upper Burghersdorp plants from the Brown Collection. Several examples of our large reptiles have been developed, but not mounted. Two complete ones ready for exhibition are still waiting in an iron shed for transference to the main building.

Some Zululand Ammonites have been reported upon and have added five additions to our series of types, and the incorporation of the Brown Collection has also resulted in important additions to the said series.

In front of the building I had restored and erected a trunk of the tree *Dadoxylon*, a fossil tree which flourished while the beds of the Karroo system were deposited and was thus contemporaneous with the large reptiles of the Pareiasaurian type. *Dadoxylon* is also found in strata of similar age in India and Australia, and probably reached a height of 40 feet. The restored piece is 17 feet high.

Botany.—In this department the number of plants received, mounted and incorporated has not been unsatisfactory; the most important accessions are from South-West Africa. The sorting and incorporation of the large named collection obtained from there last year is being continued, and a list prepared of the grasses of that part of South Africa. The donation, through the generosity of Mrs. Purcell, of the admirably mounted set of the native plants representing the flora of the Bergvliet Estate, Constantia, made by the late Dr. Purcell, is of special interest. This collection is kept separately.

Anthropology and Ethnology.—Mr. Drury, the Museum modeller, returned from South-West Africa at the beginning of the year, bringing with him casts of 26 figures of Natives, Bush, Hottentot and Ovambo, i.e., 17 whole figures, 9 busts. On the direction of the local authorities, he operated among a clan of Bush Natives of great purity of race, the members of which are makers of bead ornaments, that special industry of the Bush race. Numerous measurements and some photographs were also taken. Of the casts, five figures have been modelled, painted, dressed, and will be placed on exhibition in the first days of January, 1922. Fifteen hundred feet of cinematographic film, illustrating the dances of the Bush people, have proved satisfactory. Miss Bleek, who accompanied Mr. Drury but returned later, was busy at the same spot, studying and recording the Bush dialect of this interesting clan. The Trustees must express their gratitude to the Government of South-West Africa for defraying the expense of the expedition. I very much regret that the continuance of the programme of research I sketched out and of which the Government approved, is not to be carried on by the staff of this Museum.

For a clear comprehension of the Bushman Race the Hottentot has to be investigated thoroughly, both physically and otherwise, and this investigation may throw light on the theory I hold that the Khoi Khoi (vulgo Hottentot) was physically absorbed by the conquered or subdued race we call the Bushman.

From a small, narrow room, utterly unsuitable for this type of exhibit, the models of the Native Races have been transferred to a fairly large room and a smaller one. In the larger are now two groups of 14 and 15 figures, each accommodated in a case 12 feet square with a single pane of glass on each face. I believe these cases to be the first of their kind. Round the room is a series of the Kalahari Masarwa Bush, numbering 12 figures, and in the smaller room 11; the latter including four Bantu figures.

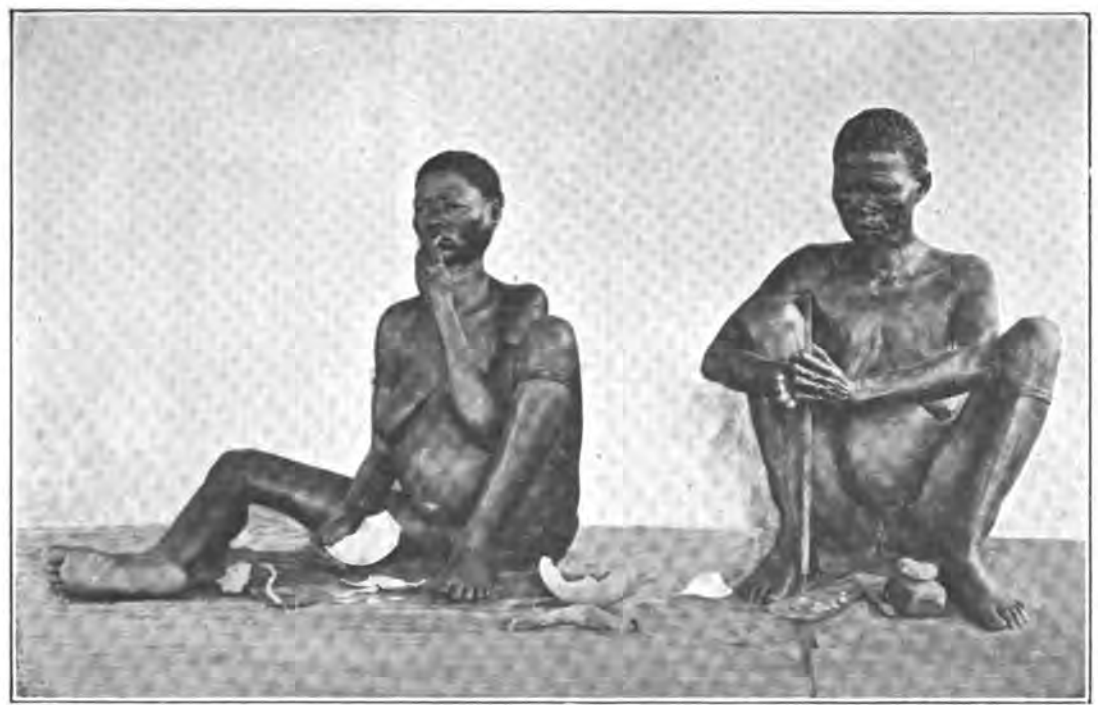
A series of busts and of enlarged photographs completes the exhibit. There are still 8 whole figures not exhibited and 13 casts await modelling.

Mr. Drury has also brought back casts of 19 rock carvings obtained in South-West Africa on the confines of the Kalahari Desert. Certainly inferior in technique to some occurring 2 degs. South in Bechuana land, these graffiti comprise the representation of large animals as well as of the hoof, and connect now two types of pictographs.

Through the assistance of Mr. T. G. Trevor, Inspector of Mines, a keen student of anything connected with the Bantu, ancient mining and many other things besides, there has been at last donated large rounded stones perforated in the manner of the Bush "Kwe"; but their weight, 18 lbs. and under (21 lbs. has been recorded), indicates manifestly that these implements could not have been used for weighting sticks used for digging. Nor is the hole straight enough to permit it to readily rotate on a wooden horizontal shaft held in both hands to act as a rolling mill-stone. Had this been the object, the periphery would be smooth, which is not the case. In addition to these spheroids were others also perforated in the centre, but somewhat flat with a sharp edge. On inquiry Mr. Trevor was told by the natives that they used to carry these stones strung on a stick in order to have them handy to throw at bucks, the idea being to throw them on edge like a skipping stone and attempt to break the bucks' legs. The shape of the stones makes the explanation a plausible one. Whether we have here an adaptation of the Indian "Tchakra," the sharp-edged steel ring rotated round the finger and projected to a distance really does not matter so much as the account of them given by the natives. For it is also on native traditions that we find an explanation to a find made in Swaziland consisting of 9 very heavy brass rings. These rings were tested there and pronounced to be brass. A second test here corroborated the first. The question then arises. Was the smelting of copper and zinc made locally; was the brass imported? Brass bars made in Europe and called, I believe, "Manillas," are, or rather, were an extensive article of trade in the 17th and 18th centuries. But the rings here mentioned are not of equal thickness or size, and this means that either there were several standards of thickness in the imported articles, or, on the other hand, they must have been re-smelted and worked by the natives. The Government Secretary, to whom I owe the information and also the possibility of acquiring this find, and with whom I discussed the possibility or otherwise of brass smelting by South African Bantu Natives, had the question put to the Chief Regent of Swaziland, who confirmed the local manufacturing and smelting of these relics and was quite definite in his statement: "The process of separating was by melting the minerals and certain chemicals known to our ancient blacksmiths and founders. In the making of brass and other metals copper, lead and zinc were used for the manufacture of bangles, etc., which were worn only by Royalties.* There are a few of these bangles in our treasury which are similar to the one sent me. The bangle in this form is known as Itusi: it is the form in which brass is kept, instead of making it into bars as the Europeans do." My objection that no zinc naturally suitable for alloy was known to occur in Africa (I have, however, found later that zinc sulphides are mined at Broken Hill, in Northern Rhodesia) was met by the statement that it used to be procured by barter from the North. The find by Mr. Trevor of a lump of zinc in one of the ancient workings is thereby explained, and it thus seems to be proved that some of the Bantu tribes knew how to produce brass, but not quite in the orthodox manner of Europe's modern way where brass consists generally of 65% of copper and 35% of zinc. The native alloy was copper 79% and zinc 18.6%, the difference being made of 2.7% of tin. But an alloy of tin and copper is bronze. Did, then, the Bantu-speaking natives have also a bronze industry? I am assured that our copper ores do not contain tin, and therefore this alloy is not accidental. Great quantities of copper and tin were mined in South Africa in ancient or more modern times, but it has been hitherto taken for granted that the Bantu had no bronze industry. But there has lately been found in the Transvaal a small lump of the alloy smelted in situ. This Museum possesses also a small ingot found in the Prieska District, and containing 5% of tin. Moreover we have in the Museum two objects found in Zimbabwe by Bent, made of bronze, as proved by the assay: (1) a spear of the laurel-leaf shape (assagaie) type coated with gold, and another with long barbs on each side and of unique design (approximating a fishing spear). The tenor of the first is 88.2% copper, 11.8% tin; that is above that of ancient bronze. In the second example the proportion of the tin is less: 7.3% to 92.7% copper. With these two spears were found bangles, but they are of copper without tin or zinc, except one, with 5% tin. Now that we

* Since writing this report, I have received from Zululand similar bangles and heavy beads of metal, ascribed there by the natives as having belonged to Chaka and his queens.

CASTS FROM THE LIVING BODY FOR THE ANTHROPOLOGICAL SERIES.



BUSHWOMEN IN THE ACT OF MANUFACTURING DISKS, USED AS BEADS, FROM THE SHELL OF AN OSTRICH EGG.

The façade of the House has been re-painted and repairs made to the stoep, etc.

The "Castle," with its old historical associations, has now been handed over to the Government of the Union, and the National Society has been urging on them the desirability of allotting the Governor's old residence for a National Museum of local antiquities and Art. If this demand be granted—and what would be more appropriate than housing things of old in the oldest building extant—the Trustees may have to contemplate the removal of some of the present contents of the Koopmans de Wet House to the new institution, provided, of course, sufficient guarantees were given them, such as suitable housing and maintenance. Were this agreed to, it would become possible to rearrange the Strand Street house with a selected but appropriate mobilier of the period, and nothing more. The numerous other objects having also an equally antique interest would then be removed to the Castle, and form there the nucleus of a Museum proper.

To this nucleus the Museum might add the objects it possesses of high historical interest: post-office stones and other inscriptions, padraos, arms, armour, even the executioner's sword (17th century). However loath I am personally to view the loss of these relics, I consider them as being more appropriate to the suggested Institution. It thus behoves now the public of Cape Town and of the Union to insist upon the reservation of this very small part of the Castle for the purpose of a National Museum of local antiquities with *free access* to the public.

Grounds and Buildings.—The sum of money provided in the Estimates proved insufficient for the erection of the sheds intended for the protection of the whale skeletons mounted in the open, and nothing was done. Meanwhile, the 75 feet example of the Blue Whale came to the ground. It has been restored as best we could, that is, with great difficulty, but it cannot endure much winter weather. The other five skeletons are in very much the same condition.

L. PÉRINGUEY,
Director.

15th January, 1922.

DEPARTMENT OF VERTEBRATE ZOOLOGY.

Mammals.—The number of accessions is small. Notable among them is an example of *Mungos auratus*, unrepresented hitherto. From the British Museum we have received six species of Rodents from different parts of Africa.

Birds.—Mr. F. Bolus has volunteered to incorporate in the Skin Collection the Bird-skins accumulated for several years, and to check the identification. The work is now completed. A number of clutches of birds eggs have been added to our local series.

Reptiles.—The expedition to South-West Africa has resulted in the capture of a moderately large number of species, mostly, if not all, Lizards. They were collected by Messrs. Drury, Gillman, and Barnard. They have been sorted, until I find time to proceed with the identification. Only a little taxidermy work has been done. Two tortoises, a large Seychelle specimen and a large example of our local *Testudo pardalina* have been mounted for exhibition.

There was also placed on exhibition an extremely large "Galjoen" fish, *Dipterodon capensis*, said to be a record in size and weight.

The main donors have been: K. H. Barnard, British Museum, R. Bigalke, Groote Schuur, J. S. Carlisle, J. Drury, S. Gillman, G. B. James, R. E. Symons, Mrs. T. Wiedeman.

L. PÉRINGUEY.

DEPARTMENT OF FISHES AND MARINE INVERTEBRATES.

To the Director, South African Museum.

SIR,—I have the honour to present the following report on this Department.

The work of sorting and incorporating has been proceeded with, but not so much has been done as in former years owing to pressure of other duties. Some of the minor groups of worms, for example, still remain to be sorted and registered.

A trip to South-West Africa and Ovamboland occupied two and a half months, and was carried out with the aid of a Government Research Grant for the purpose of investigating the Anthropology and Ethnology of the Ovambos and other tribes, as well as the fauna and flora of the country. I have already presented a separate report on the results of this trip.

The only other field work was a short excursion to the Uitenhage District for the purpose of collecting Cretaceous fossils.

The most important addition to the collections during the year has been a collection of 200 species of marine shells, presented by Lieut.-Col. Turton: these are topotypes of the Turton Collection reported upon by Bartsch in 1915.

The additions are as follows :—

	Specimens.	Species.	New to Collection
Fish	27	16	9
Mollusca	354	226	201
Crustacea	65	16	2
Other Marine Invertebrates	54	5	—
Totals	500	263	212

One report dealing with material from this Department has been published during the year, namely : Stebbing. Part II. of S.A. Crustacea.

The thanks of the Trustees are due to the following donors : C. W. Belcher, Esq., H. W. Bell-Marley, Esq., R. Bigalke, Esq., Dr. Cawston, Major Connolly, Dr. Dreyer, R. Dümmer, Esq., S. H. Haughton, Esq., the late R. M. Lightfoot, Miss E. L. Stephens, R. W. Tucker, Esq., and Lieut.-Col. Turton.

I have the honour to be,

Sir,

Your obedient servant,

KEPPEL H. BARNARD.

DEPARTMENT OF ENTOMOLOGY.

To the Trustees of the South African Museum.

The number of insects pinned, labelled and partly identified during the year is 4,798, representing 2,623 species. Of these, 327 are new additions. The incorporations in the cabinet have been numerous. A certain amount of material that could not be dealt with by the staff and had been sent to specialists abroad during and after the war is being returned, and although the Reports on the same cannot be published as speedily as the works deserve, yet the returned material is incorporated in the cabinet as well as such material as I have dealt with. The incorporations have been on a larger scale than during the past four years. They are : 1. Coleoptera. Families Malachiidae (part), Malacodermidae, Ptinidae and Bostrychidae. 2. Hymenoptera. Part of the Anthophila or Bees, Prosopidae, Podilegidae, etc., and the Braconidae. 3. Neuroptera. Bittacinae, Sialidae, Chrysopinae, etc., 4. Diptera. Families Tipulidae, Stratiomyidae, Mydidae, Nemestrinae, and the greater part of the Asilidae. 5. The whole of the Homoptera, Coccidae excepted. 6. Lepidoptera : Numerous additions to the Microlepidoptera and also to the Rhopalocera of British East Africa, etc., as well as South African Heterocera : Noctuidae and Geometridae. These incorporations include a good number of species hitherto undescribed or very little known, which often more than duplicate the number of the species known hitherto.

No less than six entomological memoirs have been issued during the year, that is if the Class Insecta of Latreille is, as it should be, taken to include the Arachnida, etc., and Crustacea.

Among the accessions is a fairly large number of named Lepidoptera (Rhopalocera) from British East Africa, and some 200 examples of the same Order from Uganda. The Museum has received a small number of Coleoptera from Nairobi, and from Nyassa land, neither of them very comprehensive but still containing a number of species new to the collection. We obtained by purchase some Coleoptera from Uganda, which makes one regret that the collector had no training in capturing the representatives of this Order, for the territory seems to be the meeting ground of the West Coast and Central Equatorial Africa.

The Museum has been promised a series of diurnal Lepidoptera from the Cameroons and Belgian Congo, which together with the material obtained from Kenya Colony will permit of a more than fair representation of the diurnal Lepidoptera of Africa.

An interesting collection of certain species of moths, of the Cape Peninsula (700 examples) has been donated.

Thus the additions for the year have been varied and fairly numerous.

The Entomological Memoirs issued during the year are :—

The Bombyliid Fauna of South Africa, by M. Bezzi ; Crane Flies of South Africa, by C. P. Alexander ; Descriptions of South African Heterocera by Chr. Aurivilius ; Odonata of South Africa, by F. Ris ; Additions to the Bombyliid Fauna, by M. Bezzi. Four other Memoirs on Insecta are awaiting issue.

The thanks of the Trustees are especially due to — Anderson, K. H. Barnard, C. P. Belcher, J. S. Brown, R. Bigalke, E. Köchig, J. Cairncross, R. A. Dümmer, W. J. Foley, J. N. Hunt, Dr. G. M. Melle, P. Penfold, J. H. Power, P. R. Robertson, Archdeacon St. Aubin Rogers, R. W. Tucker, Rev. J. Whaits.

L. PÉRINGUEY.

DEPARTMENT OF ENTOMOLOGY (INSECTS EXCLUDED).

To the Director of the South African Museum.

SIR,—I have the honour to submit the following report on the work of this Department, ending 30th September, 1921.

In January I continued the sorting and indexing of material collected in Zonder Einde Forest and Mountains. I then prepared to go to the Tzitzikama District to attend to the excavation of Coldstream Cave and to undertake entomological collecting in the adjacent forest; the cave was reached about the middle of January, and owing to unforeseen circumstances, the major portion of the time had to be spent in attending to the excavation of the cave and examining the immediate neighbourhood for other caves and little time could be devoted to entomological collecting. Cape Town was again reached early in February and reports of work done in excavating cave and collecting, with results and photographs, were compiled and handed in. The Arachnid material was then sorted and indexed, and work resumed on the Drassids. A further sending of Myriapods to Vienna was also made.

In June, the room adjoining the marine spirit collection was prepared for the reception of Arachnids and Myriapods, and the whole collection transferred to it from the main building.

The remaining pamphlets on Arachnids and General Zoology, donated by the late Dr. Purcell, were then catalogued and placed in the Library.

Work was again resumed in the Drassids and a large amount of revision and re-examination of species made in order to complete the Monograph. This was eventually completed and the MS. and figures handed in ready for publication later on in the year.

I have the honour to be,

Sir,

Your obedient servant,

RICHARD W. E. TUCKER.

DEPARTMENT OF GEOLOGY AND MINERALOGY.

To the Director, South African Museum.

SIR,—I have the honour to submit the following report on the Department for the year 1921.

During the year the following additions were catalogued:—

Rocks	..	..	..	..	..	..	..	55
Minerals	..	..	..	..	..	..	..	50
Meteorites	..	..	..	..	..	..	..	3
Manufactured Articles	..	..	..	..	..	..	..	1
Total	..	..	..	..	..	..	..	109

Among the more important additions may be mentioned:—

A series of 25 South African Building Stones in dressed cubes to illustrate the principal varieties of stones used for building and ornamental purposes. Presented by the Geological Survey.

A suite of exhibits illustrating the pyrites industry of Sabie in the Eastern Transvaal and including the crude pyrites ores and a number of graded concentrates of sulphur ore. Presented by the Geological Survey.

Verdite and Stichtite, both from the Barberton District. The latter is a very rare chromium mineral, hitherto only recorded from one locality in Tasmania and from one in Canada. Presented by the Geological Survey.

Asbestos. The rich collections of this mineral already available in the Department, have been enriched by the striking long fibre chrysotile from Kaapsche Hoop near Barberton, now in course of successful exploitation. Presented by the Geological Survey.

Lazulite, rare phosphate, from Lobito Bay, presented by Dr. W. Versfeld.

A series of minerals from South-West Africa, presented by Mr. Isaacs. A series of rocks, also from South-West Africa, and presented by K. H. Barnard.

The King William's Town Museum has presented a slice of the Mount Ayliff siderite, and the Government of South-West Africa, a Gibeon siderite weighing 1,431 lbs.

From the British Museum the Department received casts of the Daniel's Kuil and Kroonstad Aerolites.

Re-arrangement of Exhibits.—The redistribution of certain anthropological exhibits has made it possible to allot to the Department one extra room, in which are displayed objects specially designed to demonstrate the industrial aspects of South African mineral resources. This improvement has also enabled the Introductory Series to be shown again, the Meteorite Collection having been transferred to a case, where it is displayed to greater advantage.

I have the honour to be,

Sir,

Your obedient servant,

A. L. HALL.

DEPARTMENT OF PALAEOLOGY.

To the Director, South African Museum.

SIR,—I have the honour to submit the following report upon the work of this Department for the year 1921.

Additions to Register :—

Fossil Mammals	..	..	..	..	..	..	2
Reptiles and Amphibia	..	..	..	..	..	..	58
Fishes	..	..	..	..	..	..	49
Invertebrates	..	..	..	..	..	..	252
Plants	..	..	..	..	..	..	140
Total	..	..	..	..	..	..	501

The chief additions have been incorporations from the "Brown Collection" purchased at the end of 1920. From this important collection 25 types or described and figured specimens have been registered and catalogued, and further development work during the year resulted in a paper published in "Trans. Roy. Soc. S. Afr.," entitled "On the Reptilian Genera *Euparkeria* Broom and *Mesosuchus* Watson," by S. H. Haughton.

Other additions include a few reptiles from the Rev. J. H. Whaits, including two species new to the collection; a few Bokkeveld invertebrates from J. C. Cairncross and a small collection of Cretaceous fossils from Portuguese East Africa from Dr. A. L. du Toit.

Development work has proceeded on two skeletons of *Pareiasaurus*. A restoration of a large humerus of the dinosaur *Brachiosaurus brancai* and the femur of a smaller form from Tendaguru, Tanganyika Territory, have been placed on exhibition. A representative collection of Upper Burghersdorp plants from the Brown Collection has also been exhibited.

Work by Spath on Zululand Ammonites has been published as XII. 7 of the "Annals." Among the fossils examined by him are 5 types and 16 figured or described specimens—all in the Museum collection.

A short expedition was made for the purpose of collecting Uitenhage fossils from the Sundays River Valley.

I have the honour to be,

Sir,

Your obedient servant,

S. H. HAUGHTON.

Honorary Keeper.

DEPARTMENT OF BOTANY.

The Director, South African Museum.

During the year 1921, the number of sheets mounted was 1,374, made up as follows :—

240	..	Zonder Einde and district.
85	..	Karoo, Uganda and Rhodesian plants.
533	..	South-West African plants.
261	..	Rhodesian plants.
151	..	South-West African Compositae.
104	..	Grasses.

The number of sheets incorporated in the cabinet was 563, including 14 new general and 321 new species.

The following additions have been made during the year, by donation or collecting:—

240	sheets	collected	by	Mr. Barnard.
334	"	"	"	Mr. Barnard in South-West Africa.
111	"	"	"	Mr. Gillman
79	"	"	"	Miss Bleck
9	"	"	"	Mr. Tucker
205	"	presented	by	Mr. Eyles.
3	"	"	"	Miss Duthie.
45	"	"	"	McGregor Museum, Kimberley.
6	"	"	"	Mr. Stokoe.
13	"	"	"	Mr. Primos.
39	"	"	"	Sister Francis (Convent), Fort Beaufort.
20	"	collected	by	Mr. Barnard in Uitenhage.
243	"	presented	by	The Bolus Herbarium.

1,347

The thanks of the Trustees are due to Mrs. Purcell who has donated to this Herbarium the whole of a collection of plants made by Dr. Purcell in the Bergvliet area, Constantia. The specimens, which have been most carefully dried, are in most instances mounted and are kept separate from the general collection, occupying four cabinets.

Our Restionaceae material is being revised by Mr. Pillans, who has had on loan during the year 88 sheets. The Division of Botany, Pretoria, has had 8 sheets of *Brachylaena* spp. on loan, and Dr. Schönland, of Grahamstown, 88 sheets of Cyperaceae material. We have sent Dr. Schönland 22 sheets of Cyperaceae and 1 of *Crassula* for determination: 129 Grasses to Kew for identification, as well as 57 sheets Compositae, all from South-West Africa.

The making of a catalogue of all sheets in the cabinets begun at the end of last year has progressed slowly, the contents of 28 cabinets being catalogued. We have named at various times specimens of plants, in most cases noxious or supposed noxious weeds, for the Provincial Secretary, Administrator's Department, on behalf of various municipalities.

I have the honour to be,

Sir,

Your obedient servant,

S. GARABEDIAN,

DEPARTMENT OF ANTHROPOLOGY AND ETHNOLOGY.

To the Trustees of the South African Museum.

Time has not been allowed of the Alfred Brown Collection of stone implements being sorted, but the examples are all of the neolithic type of the Cape. Allusion has already been made to a Solutrean laurel-leaf spear head found among them. There is also a stone phallus. This is the second example known to me ascribable to the Bush race.

We have received from the Thabantchu District, Free State, a small whetting stone for bone bodkins, found a few hundred yards from the site where a *tanged* arrow head of one of the three examples only discovered hitherto was picked up.

The Department has obtained, through the good offices of Mr. B. Nicholson, the Government Secretary of Swaziland, 9 heavy brass rings that are really ingots. The alloy is not on the basis of the modern brass, and the smaller quantity of zinc it contains seems to point to the smelting process being known to native smiths. The fact is corroborated by the testimony of the Swazi Chief Regent. It appears moreover that bangles and beads made of this metal were worn by Royalty alone.

The Museum has received several very heavy more or less spherical stones perforated in the centre in the manner of the "Kwe," but the weight is too great to make them serviceable for this purpose satisfactorily. So far these huge tools have been discovered only in the Zoutpansberg and Lydenburg Districts of the Transvaal, as far as I know. With these heavy stones were others, flat with sharp edges, which the natives assert were carried on a stick and thrown edgeways so as to bring down game by breaking the legs.

A stone armlet, similar to those worn by the Strand-Looper Hottentots, and found in the Victoria East District, is a valuable accession.

The principal donors are: Major Tudor G. Trevor, J. H. Wellbeloved, G. Edelsten, J. S. Brown, K. H. Barnard, F. J. Mallet.

Sundry.—Several war trophies, including Heavy Howitzers, Field Guns and a Trench Mortar, captured by the British Forces on the Western Front in 1918, have been presented by the British Government; also a Pom Pom, surrendered in German South-West Africa to General Botha, and a Turkish Field Gun, presented by Field-Marshal Lord Allenby to the Cape Corps as a recognition of their bravery in Palestine.

An ancient inscription, dated 1642, and not easily decipherable, a facsimile of which appears in my Directorial Report, has been found at the top of Signal Hill, Cape Town, and donated by the Chief Signalman, Mr. G. W. Rickson.

L. PÉRINGUEY.

KOOPMANS DE WET HOUSE.

To the Trustees of the South African Museum.

The number of visitors during the year has been 25,842. Few donations are recorded, i.e. one silver cup, a floating trophy presented by the Cape of Good Hope Agricultural Society, founded in 1831, and won eventually by Ph. T. Haupt in 1842; 1 dish with coat of arms; 1 tea caddy; 2 stands with wax flowers; 2 tissue paper curtains; 1 doll; 2 pictures. Mrs. Bebro has donated a fine blue china vase in remembrance of the late Dr. Purcell.

I had transferred from the Museum two of the small "bombardes," used for firing salvoes in ancient households on important domestic celebrations, or others. One of them, particularly finely ornamented, bears the crest of Olaff Bergh, the founder here of the family of this name, 1680; the other and smaller one is less ornamented. I had also removed from the Museum an interesting relic, namely, the Deeds Chest of the Orphan Chamber, a massive coffer with five locks, bearing clamped on the cover the initials "W.K." and the date 1667 in large iron letters.

The façade of the house has been painted and small repairs effected.

The thanks of the Trustees are due to Mrs. J. W. Louw (now of Ladysmith), P. J. Viljoen, Mrs. Lyons, Mrs. Roberts, Mrs. S. Bebro and the Haupt family.

L. PÉRINGUEY.

SOUTH AFRICAN MUSEUM.

STATEMENT OF INCOME AND EXPENDITURE FOR THE YEAR ENDING 31st DECEMBER, 1921.

INCOME.		EXPENDITURE.	
To Balance, 1st January, 1921 ...	£1,180 4 8	By Salaries and Cost of Living Allowances to Officials ...	£3,712 8 2
" Grants:—		" Library: Purchases and Subscriptions ...	207 5 1
Union Government £6,000 0 0		" Wages and Expenses: Upkeep of Museum ...	1,900 2 1
Provincial Administration ... 100 0 0		" Expenses in Travelling and Collecting Specimens ...	254 14 11
Cape Town Corporation ... 200 0 0	6,300 0 0	" Sunday Duty ...	94 17 0
" Interest:—		" Freight and Railway Charges ...	62 15 7
Hadje Suliman Shah Mohamed Coin Fund ... 4 10 0		" Petty, Postage Commission and Bank Charges ...	157 9 11
Treasury Bill ... 13 2 4		" Publication of Annals ...	1,045 4 2
" Sale of Publications ...	17 12 4	" Gratuities:—	
" Sale of Specimens ...	13 12 7	T. D. Butler (on retirement) ... £60 0 0	
" Mines Department: Contribution towards publication of Annals ...	23 0 0	Mrs. R. M. Lightfoot (widow of late employee) ... 75 0 0	
" Administrator South-West Africa: Refund in respect of expenses in connection with travelling and collecting ...	157 15 10	" Balance:—	135 0 0
" Value of Cheque No. 85250 dated 30.9.19 cancelled and redebitd ...	580 10 0	Fixed Deposit—Standard Bank ... 1,000 0 0	
	3 12 0	Cash in Bank ... 304 1 4	
		Petty Cash ... 2 9 2	
			*1,306 10 6
		*Includes £52 3s. 4d. appertaining to the Coin Fund.	
	£8,576 7 5		£8,576 7 5

Statement "A."

HADJE SULIMAN SHAH MOHAMED FUND FOR THE PURCHASE OF COINS.

Amount of Investment with the South African Association ...	£100 0 0
Balance of Interest on 31st December, 1920 ...	47 18 4
Interest Received during period 1.1.21 to 31.12.21 ...	4 10 0
	<u>152 3 4</u>

Audited and found satisfactory,

(Signed) J. DE V. ROOS

Cape Town, 27th February, 1922.

Director, South African Museum,

Cape Town, 22nd February, 1922

(Signed) L. PÉRINGUEY.

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UNION OF SOUTH AFRICA.

REPORT

OF THE

SOUTH AFRICAN MUSEUM

FOR THE

Year ended 31st December, 1922.

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UNIVERSITY OF ILLINOIS

*Presented to both Houses of Parliament by Command of His Royal Highness
the Governor-General.*

1923.

CAPE TOWN :
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1923.

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Trustees of the South African Museum :

THE RIGHT HON. JOHN X. MERRIMAN, P.C., M.L.A.

SIR THOMAS MUIR, C.M.G., M.A., LL.D., D.Sc., F.R.S.

THE HON. JOHN WILLIAM JAGGER, F.S.S., M.L.A.

Scientific Staff of the South African Museum :

LOUIS ALBERT PÉRINGUEY, D.Sc., Director and Keeper-in-Chief.

KEPPEL HARCOURT BARNARD, M.A., Assistant Director ; in Charge of Fish and Marine Invertebrates.

REGINALD F. LAWRENCE, B.A., Assistant in Charge of the Arthropoda (Insects excepted).

DAVID THODAY, M.A., Honorary Keeper of the Botanical Department.

STAR GARABEDIAN, B.A., Assistant in the Botanical Department.

ARTHUR LEWIS HALL, B.A., Honorary Keeper of the Geological and Mineralogical Collections.

SIDNEY HENRY HAUGHTON, B.A., D.Sc., Honorary Keeper of the Palaeontological Collections.

UNION OF SOUTH AFRICA.

Report of the South African Museum for the Year ended 31st December, 1922.

*Presented to both Houses of Parliament by command of His Royal Highness the
Governor-General.*

REPORT OF THE DIRECTOR FOR THE YEAR 1922.

To the Trustees of the South African Museum.

SIRS,—I have the honour to submit my report on the administration of the Museum for the year 1922.

Visitors.—The number of visitors was 135,750, divided as follows:—

White.—Adults	Male	46,198
	Female	36,595
Children		28,761
Coloured.—Adults	Male	10,199
	Females	8,049
Children		5,948
The number of visitors on Sunday afternoons ..		21,721
Largest number in one day (2nd October) ..		1,291
Smallest number in one day (29th October) ..		68

122 school parties and drawing classes, numbering 3,367 pupils visited the Museum.

Presents, Purchases, Acquisitions by the Staff.—

	Specimens.	Species.	Approximately New to Collection.
Mammals	61	31	12
Birds	47	32	1
Birds' Eggs	18	7	6
Reptiles and Batrachians	40	22	1
Fishes	105	85	14
Mollusca	54	13	1
Marine and Land Invertebrates	20	9	—
Crustacea	27	6	—
Insects	4,112	2,245	516
Arachnids and Myriapoda	837	—	—
Geology, Mineralogy and Palaeontology ..	435	—	—
Anthropology	95	94	81
Botany	1,123	—	—
Antiquities and Curios	170	131	131

Library.—

Books :	Presented	64
	Purchased	57
Pamphlets and Periodicals :	Presented	851
	Purchased	72

Publications.—Only one part of the Annals—Part 5, Vol. XIV.—Formicidae of South Africa—has been issued this year together with several title pages and indices to completed volumes. Final proofs of eight important papers dealing respectively with Palaeontological Investigations, Echinoderms, Pisces and Insects have been passed, but the parts could not be issued in time to appear at the end of this year. It is hoped to issue during 1923, partly perhaps, but wholly I hope, seven important papers on material contained in the Museum.

Collecting Trips by the Staff.—Mr. K. H. Barnard, Assistant Director, has made several collecting trips, accompanied in some instances by another Assistant, at Montagu and Wellington, at Ceres and Rooi Els, Hangklip. He went to investigate and report on the so-called discoveries made at the Koster Caves in the Transvaal, of which so much was made journalistically in Johannesburg. These caves contained little, if anything, more than would be expected from the geological formation. Three sea trips were also undertaken with the main object of obtaining marine specimens and sea-birds.

The Building.—Owing to oft-repeated representations, the Trustees have succeeded in securing an iron and wood building, 100 feet long by 20 feet wide, formerly part of an outhouse of the Alexandra Hospital, but no longer fit for use. It was patched and re-erected at the back of the Museum grounds, but it proves already too small even for the osteological (skeleton) collection, and certainly does not belie the anticipation of it not being dust-proof. The sheds that were to cover the skeletons of the large whales, standing, as best they can now, in the open, have not yet been proceeded with and only as I write do I hear that tenders for the erection of the same are being called for at the end of January.

It is not possible to keep the packed specimens from damage. Even those hung in the sheds are rapidly deteriorating, since they are hung or exposed without case-protection. Thus the greater part of the wooden exhibits of the Ethnological Collection had to be soaked in petrol and poison, owing to the damage done by insects, involving thereby great trouble and additional expense. The same applies to skins, etc.

As a whole, the lack of space is such that the Trustees have called the attention of the Government to the urgency of the resumption of the wing occupied by the Art Gallery, in the following terms: that "until the requisite additions to the building, voted by Parliament, could be made, the Museum Rooms that are occupied by the Art Gallery should at an early date be handed over to them for the purpose for which they were intended."

Exhibition Cases.—Two new desk cases have been set up this year in the Economic Geology Room, and an order for six other kinds placed.

It is noteworthy that, alone of the other Government Museums so termed, the South African is the only one that has to provide out of its ordinary yearly grant the special equipment needed (£3,500 in the last three years, 1923 inclusive). The gravamen is that the Treasury has peremptorily declined to forego the Customs dues—a privilege dating from 1855—and made thus this burden of equipment still heavier.

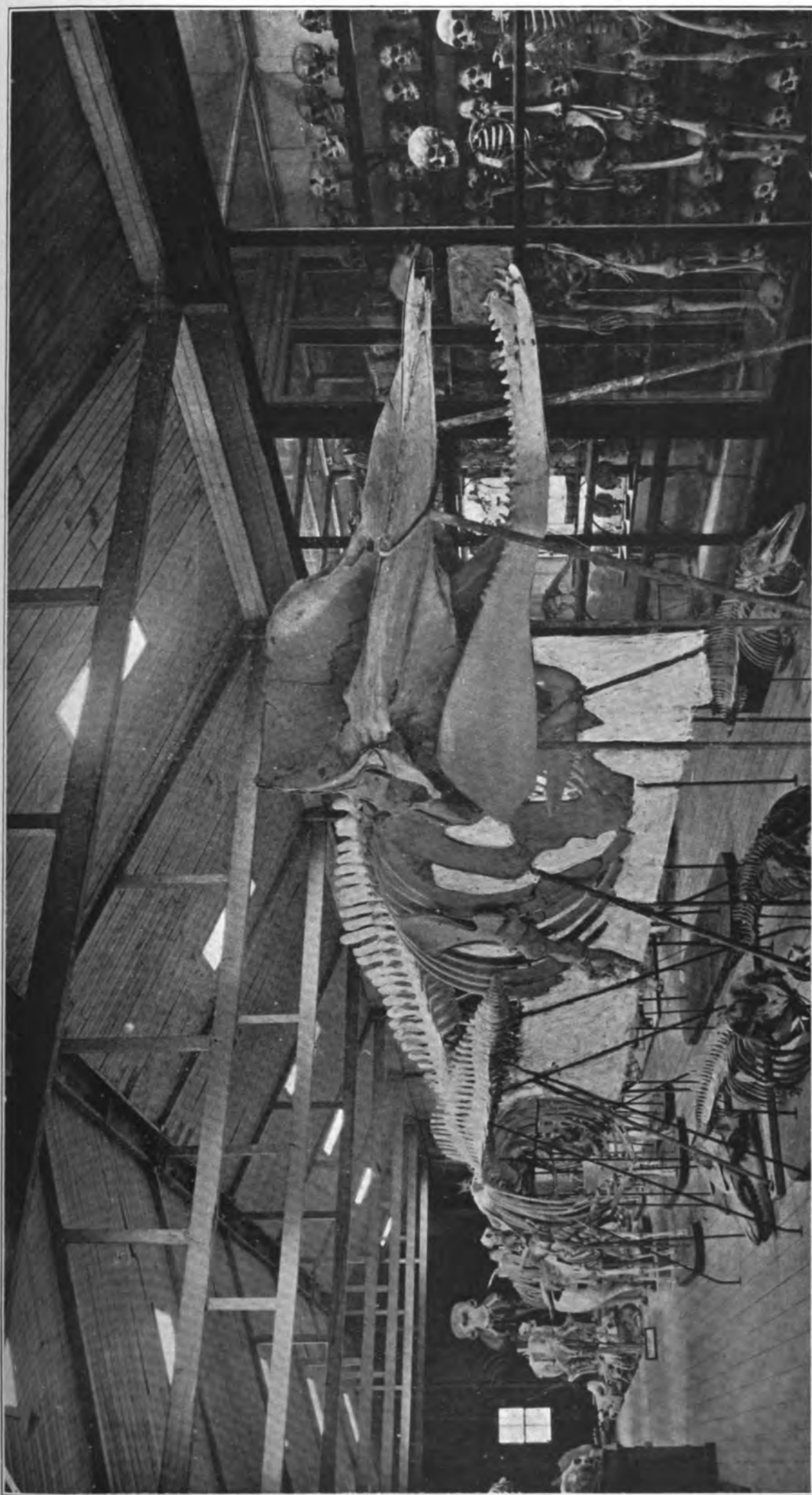
ARRANGEMENT AND CONSERVATION.

Zoology: Mammals.—The Museum has after several attempts succeeded in obtaining the skin and skeleton of two examples of the Square-lipped White *Rhinoceros* (*Cerathorium*) *simus*.

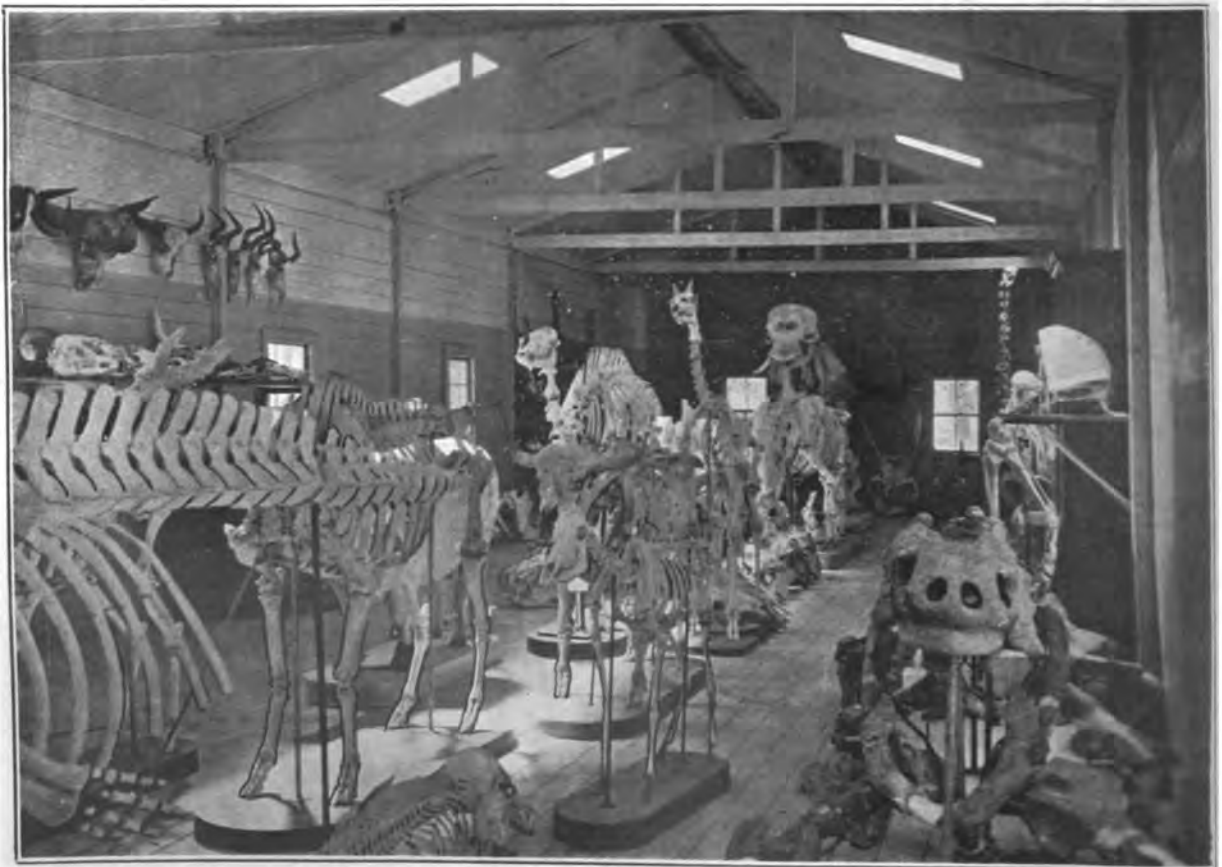
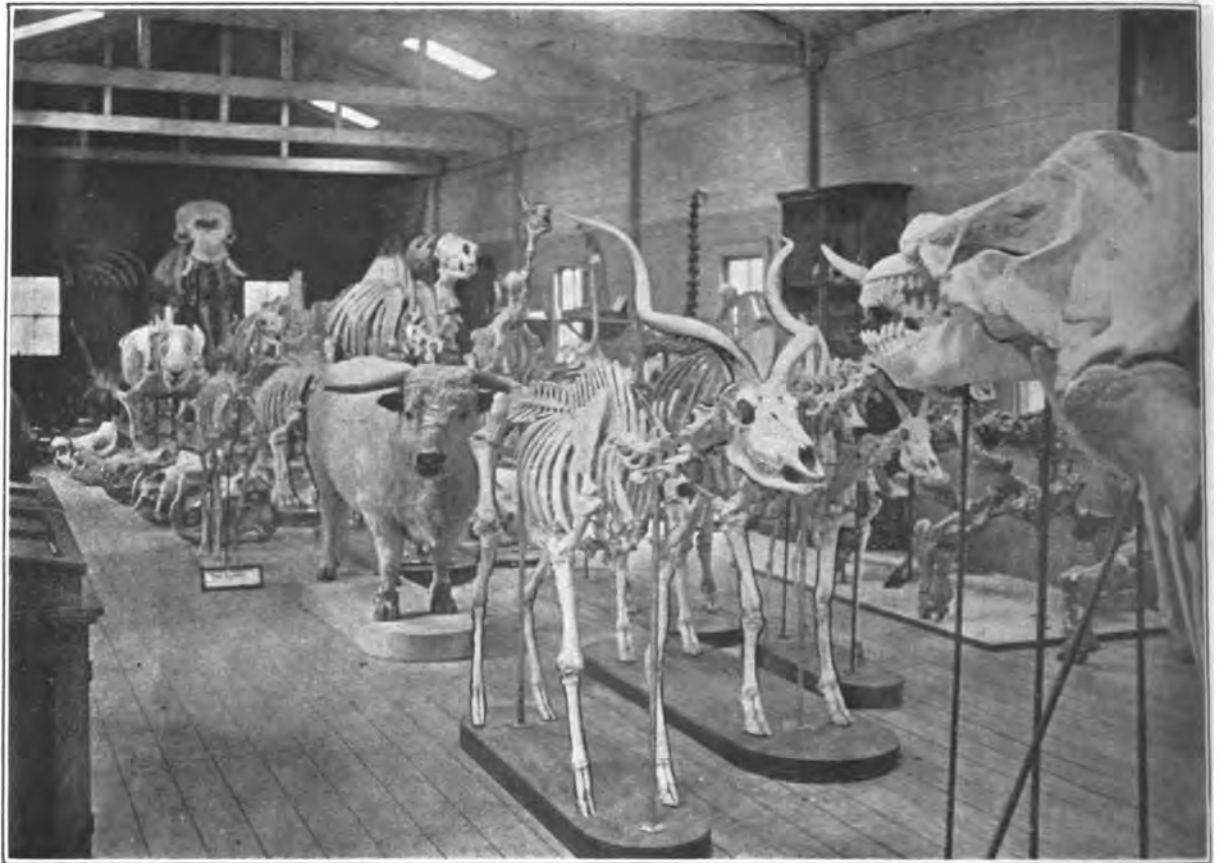
The rarity of this animal, once common in parts of South Africa, but lately on the verge of extinction, makes this addition the more important, because of the fewness of mounted skeletons and skulls that are preserved in the Museums of the world.

Another species, or rather a variety of our species, *Rhinoceros* (*Ceratorhinus*) *coloni*, was discovered in Central Africa, in the Belgian Congo, which seems to differ little except in the shape of the horns, which are characterised by their length and slenderness. Lang has given a very good account of *R. coloni*, of which he procured several examples for the New York Museum. He discusses also certain characteristics of the southern species.

Next to the elephant, the White Rhinoceros is the largest mammal. Lang's tallest animal is 5 ft. 8 in. in height, and 15 ft. 5 ins. in the greatest length. Our specimen—shot to order—which means that all measurements were very carefully taken—proves to be 6 ft. 2 in. at the shoulder, and 12 ft. 4 ins. along the curve of the back from tip of nose to root of tail, but this curve to my mind is exaggerated in the mounted animal and would have added probably 6 or 8 inches to the total length. The new male is 14 ft. 7 in. in length and 5 ft. 8 in. at shoulder. The variation in the length of horn, especially the fore one, which is very much the longer of the two, is great. The maximum length is given in Rowland Ward's book "Horns Measurements of Big Game," as from 25 to 56½ inches; but the highest "record" is 62½ inches, credited to Gordon Cumming, and probably from a female. The female used her horn to guide her young calf who was pressing against it. The length of the horns in the Collection varies from seventeen and a half—probably a posterior horn—to forty-four inches. All these horns are curved, but a straight one (the distinctive character of the alleged species, *R. keilloa*) is thirty-three inches in height, twenty-seven in circumference at base and twenty-one and a half above the hairy part of the base. This horn must have been borne horizontally or nearly so, because the under part of the tip is worn flat. But we have a stick with a large knob cut from the whole length of a horn and slightly bent, which measures fifty-two inches. If we add a depth of 6 inches for the concave base of the



THE OSTEOLGICAL COLLECTION (CENTRE FLOOR).



TWO VIEWS OF THE CENTRE FLOOR OF THE OSTEOLOGICAL COLLECTION.

horn from which distance the knob could alone be carved, and at least one inch for rounding the tip of the stick from the sharp apex itself, the horn from which this stick was made must rank second only to the largest "record," i.e., sixty-one inches. I may add that the "kerrie" or knobbed stick has only a slight curve. This seems to indicate that the horn was that of the *keilloa* variety. My excuse for giving these long details is that every information relating to animals that have been, and will probably be again, on the border of extermination, should be recorded, and this information about the Museum examples appears for the first time.

For it is not in South Africa only that *Rhinoceros simus* once existed. We find him, it is true, in the Lado District and other parts of Central Africa; but it existed also once upon a time in Southern Algeria, for its outline is there cut into the rock, together with an extinct buffalo with an immense sweep of horns, *Bubalus antiquus*, an extremely close ally to, if not identical with, the southern *Bubalus baini*, remains of which we have here connected with our primitive men. The figure given by Pomel, and which I have reproduced when treating of our South African Petroglyphs, leaves no doubt as to the identity of the animal, for the carriage of the head, so typical in *Rhinoceros simus*, is unmistakably reproduced.

It is not rash to state now in view of the evidence of the petroglyphs aforementioned, that *Rhinoceros simus* roamed at one time from the shore of the Mediterranean to that of South Africa. At present this distribution is restricted to two groups, one equatorial, and not numerous, the other austral and tottering.

Which is the one that will go first, and how long will the other take to do likewise?

A valuable accession has been that of a small collection of Micro-Mammals from Northern Rhodesia, which apart from some species new to the Collection, extends considerably the habitat of some of our local species.

As soon as the erection of the iron building I have mentioned already was completed, I had transferred to it all the mounted skeletons, crania, etc., in the manner shown in the illustration. Very little space in the exhibition cases of the Museum was thereby gained, as most of the large specimens had been gradually removed. But when the stock of unmounted skeletons is set up, the building will be inadequate.

Our collection of whale foetus sent to a specialist during the war was unfortunately lost through not having been looked after. This year, however, two foetus were secured.

On the erection of the whale shed the preservation of the skeletons depends. They will not undergo another year's exposure. Even then, new parts will have to be obtained to replace those that have decayed. Two of the skulls of the larger kind have to be replaced at once. The Museum Taxidermist went to secure one, but it has not as yet reached the Museum. Whale skeletons are *not* easily obtained.

Birds.—It is somewhat unsatisfactory to find that our knowledge of ocean birds frequenting the coast of the Union is still fragmentary, or to say the least, not as complete as it should be. Accordingly, an attempt was made to secure a number of these at some distance from Cape Town. I had especially in view the recording of the presence or absence of the three species of the Wandering Albatros, *Diomedea exulans*; *Diomedea regia*, the Royal Albatros and *Diomedea chionoptera*, the Snowy-winged Albatros. All the specimens obtained remain true to the type *exulans*, as figured by Godman, that is, with wings (scapulars and wing coverts) dark or black to or almost to the edge; the back slightly or distinctly vermiculate, or pure white (female); but the tail is white, with one or two small apical black spots. On comparison, I find that our examples from the Tristan D'Acunha group of islands are identical. It is not yet possible to connect the specimens thus obtained with *Diomedea chionoptera*, of which we have what I take to be an example, captured some 300 miles south of the Cape. Captain Wilkin, of the "Quest," assured me that he found the three so-called species breeding together. The greatest length of a male, across the back is 10 feet 10 inches, that of a female, 8 feet 10 inches. The only other kind of Albatros met with was *Diomedea melanophrys*, the Mollymawk. But we had the good fortune to secure a white Giant Petrel *Macronectes giganteus*. It was known that this bird "has occasionally but rarely a pure white phase of plumage, many of the nearly white birds having a sprinkling of dark feathers." Our example is snow-white, with a few small black spots widely scattered on the chest and secondaries.

In Layard and Sharpe's "Birds of South Africa" it is stated that this white variety is common up the west coast towards Walvish Bay and that it breeds on the Crozet Islands. Against this statement it should be said that in the very complete collection of sea birds (mounted or in skins) left by Layard, no such example exists, or is recorded.

Reptiles and Batrachians.—The number of species obtained is small; no special effort having been made to increase the Collection, and most examples came from South West Africa. Endeavours which have hitherto proved fruitless have been and are still being made to secure from the Zambesi River a crocodile of large size, that is, one above 14 or 15 feet long. I am informed by a very creditable friend that he measured one 20 feet long on

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the Upper Zambesi, whereas from reliable information the greatest recorded length seems to have been 16 feet. The Nile Crocodile seldom if ever reaches 16 feet, and I am afraid that a twenty-footer is not likely to be forthcoming for some time; but my missionary friend is quite sure, from actual measuring, that there are examples of greater length. I would be glad to receive information on the subject. The last crocodile in the Cape Province was shot in 1903 in Bonvanaland, Transkei.

Department of Fishes and Marine Invertebrates.—The number of fishes received during the year is large, and large also is the proportion of species new to the Collection. They were mostly from the Natal Coast, and were very welcome.

One of the unusual acquisitions has been that of a carp measuring twenty-eight inches, and weighing eighteen and a half pounds, caught by rod at Princess Vlei, Cape Flats, by Mr. H. R. Baird.

This large variety of carp—leather-carp, so-called because the very large scales are arranged in three longitudinal rows, broadly separated by bare skin—attains in Europe as much as a yard in length, with a weight of twenty-five pounds, but much larger specimens are on record, such as forty-five pounds in specimens from the Rhine. Mr Baird was assured that there are larger ones in the Vlei. He himself hooked a female weighing close to nineteen pounds but being in egg, he let her go. I believe Princess Vlei to have been stocked in 1887 or 1888. The growth of this fish in Europe is very rapid, but is equalled apparently if not surpassed in the Cape Peninsula, where owing to its extraordinary fecundity, it may be found necessary to introduce also the pike to keep the number within reasonable limit.

Taxidermy and Modelling.—A good deal of new work and of finishing other left uncompleted the previous year has been done, i.e.: *Mammals*. One mounted porpoise, and one cast still unfinished, both to be completed in time for the opening of the whale shed. *Fishes*. Two spiny sharks, one sand-shark, one Leer Fish, one Box Fish, and one Eel were completed for exhibition, together with a large size Kabeljaauw; and an example of a huge specimen—probably a size record—was repainted from nature. The *Birds* mounted include two Albatros, one Giant Petrel, two Skua Gulls, one Cape-Pigeon, one Roscate-Tern, one Angola Plantain-Eater, one Reed-Warbler, one White-bellied Stork, one Night-Heron. Casts were completed of six panels of rock paintings from South-West Africa, and three Hottentots were reproduced, but not painted. The restoration of *Erythrosuchus* was completed, and a certain amount of fossil development done. It was found necessary to disarticulate the large mammalian skeletons for transfer to their special shed, where they were re-articulated.

Crustacea.—The manuscript of Professor Sars' report on South African *Ostracoda*, many of them raised from mud, has been received, and it may be possible to begin its publication during the incoming year (1923).

Entomology.—The accessions continue to be numerous, and the incorporation in the cabinets are of special importance, owing to a fairly large amount of material sent to specialists being gradually returned, or to the work of identification carried on at the Museum. Among the former I may instance a series of moths from the Northern part of Southern Rhodesia: two families of *Diptera*: *Mydaiidae* and *Nemestrinidae*, and some *Mosquitoes* and *Oestrid* larvae; in the *Coleoptera* the *Malachiidae*, revised by Champion; the *Elateridae*, examined by Fleutiaux; the *Carabidae*, revised by myself, and a small number of *Curculionidae*, identified by G. A. K. Marshall; in the *Neuroptera*, the *Mecoptera* and *Planipennia*, described by Esben-Petersen, and by Banks, and several other Orders or Families. The accessions in this department always exceed all the others, and to keep up adequately with the mounting, identification, incorporation, and also setting material aside for specialists, is not an easy task. Entomological material from Equatorial Africa is now more easily obtainable, and as our knowledge of the insect fauna of this part of the continent increases, the ramifications of our southern one become clearer. It is therefore necessary to prolong entomological research in this direction, and a move is being made. The equatorial butterflies, i.e., from Kenya, Uganda, Congo and the West Coast, have been arranged into a special cabinet, and owing to a liberal donation from the Brussels Museum, and from the Rev. St. Aubyn Rogers, the series are now very representative. The *Coleoptera* have also been taken in hand, and arranged in forty-two large insect-boxes. The collection affords now a good survey of the distribution or identity of the Central African Coleopterous fauna. In short, the progress in collecting, identifying and incorporating in the cabinet, firstly, representatives of the local fauna, and secondly, that of the Ethiopian fauna of the rest of the African Continent, is steadily and satisfactorily increasing. The arrangement of the *Anoplura* and *Mallophaga* under recent systems of classification, completes now the systematic arrangement of the South African representatives of the whole class *Insecta*. There are lacunae, doubtless, but they are gradually getting fewer, and I may assert—with perhaps a certain amount of

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RESTORATION OF THE SKELETON OF ERYTHROSUCHUS AFRICANUS. LENGTH 15 FEET.

self-satisfaction—that now a systematic entomologist, whether tyro or specialist, cannot fail to derive some benefit from the entomological collection. It took 42 years to make it what it is.

In the Arachnid and Myriapod section no specific work was entered into; field-work and the indexing of the material collected, having been the main occupation of the assistant in charge.

The manuscript of the very extensive Monograph of the South African *Myriopoda* has, at last, been received, and may, I hope, be published next year.

This Monograph illustrates the difficulties attending such investigations. In 1900 I entrusted the work to a specialist, whose growing occupations left him, however, so little leisure, that in 1910 I had to request the return of the considerably large material sent him. After some time, I secured the services of another specialist of repute, but the war supervened just as the material reached him, and this important work is at last completed—twenty-three years after its inception.

Geology. Mineralogy.—The additions, one hundred and seven rock specimens, twenty-one mineral specimens and five manufactured articles, are satisfactory, and that special attention has been devoted to the varied mineral resources of the Union is fully explained in the Departmental Report. In the room now applied to local industries, there have been set two new desk cases of a far more effective display, as well as affording more exhibition space.

Palaeontology.—Additions to the Palaeontological exhibited series is made possible only by withdrawal of other specimens, often as equally interesting. This experience had to be repeated in the case of the restoration of the large Upper Beaufort reptile *Erythrosuchus africanus* (15 feet long) (*vide* illustration), details of which are given in the Departmental Report. This restoration made by the skilful modeller of the Museum, Mr. Drury, under the instructions and guidance of Dr. S. H. Haughton, proves a most interesting addition to the series of our local mounted reptiles, of which no less than three are lying *perdu* in a temporary shed to which the public cannot be admitted.

An example of the difficulty resulting from lack of suitable exhibition space is that this striking specimen had to be hoisted on a high wall-case, and another skeleton, nearly as large and quite interesting in its way, had to be removed to the limbo of a store-shed to make an exalted but totally unsuited place for it.

Botany.—The acquisitions in the Department of Botany received, mounted and incorporated, are of a very good average. The considerable collection of plants from South-West Africa acquired two years ago, has now been named, and the remounting in uniformity with the Museum sheets, is still being proceeded with. To the listing of this collection and others from the same locality will be added that resulting from the collecting in Northern Damaraland and Ovamboland, of the Museum expedition to these parts, when it will be possible to issue a fairly complete list of the plants to be found in the territory now known under the singularly unappropriate name of South-West Africa. An important addition has been that of a named collection of Nyassaland plants.

To cope with the continuous incorporation in the named collection, it has been found necessary to order several cabinets.

Anthropology and Ethnology.—It was not possible to complete this year all the casts of Hottentots and other Natives obtained in South-West Africa in 1921, but three male figures have been completed, save for the painting. Recording (by cast from the living body) a pure-bred Hottentot is, now, as important as recording a Bushman, for it is a moot question if a pure-bred Hottentot of middle age exists at the present time in the Cape Province. But atavism is still strongly noticeable, and helps one to realise what the normal form was. Of the Namaqua Hottentot there are reasons to believe that there are still living examples, and it is intended to secure such types next year with the help of the South-West African Administration.

The difficulty of obtaining the true cephalic index of the Hottentot as it was in the early days of colonisation is increased by the fact that he did not bury his dead, but thrust them into crevices in rocks, or laid in the open, surrounded by or covered with thorn bush. I have ample corroboration that this custom obtained from human bones found in hyaena dens and bearing the unmistakable traces of the animal's teeth. The Museum possesses even a stone bracelet bearing on the outer part the deep grooves made by the powerful molars of the animal crunching the arm-bone. This absence of burial or burial rite may prove of importance in discriminating between the Strandlooper or Bushman who buried his dead, and the Hottentot or Khoi-Khoi who did not. The Hottentot, originally a Bantu, who has become physically absorbed by the San, retained his mode of disposal of the dead, one adopted by many Bantu races; the Bushman stuck to his mode. But after colonisation had begun, the first native farm-servant would be the Hottentot who, when he died on the farm would be buried in the manner obtaining with his European master. To test the hypothesis, if

hypothesis it can be called, we investigated the burial ground allotted to coloured people in one of the first farms granted at some distance from Cape Town, in the neighbourhood of a locality still known as Hottentot's Kloof, and where, by the way, Bush paintings are found. The skeletons met were, however, too much mixed (racially) or too much decayed to be of service, except two. I am confident, nevertheless, that this line of research will be productive of results more reliable than many others, as some dates will thus be available. Digging was also carried on in rock-shelters in the neighbourhood of Hangklip in search of Strandlooper relics; the finds were of the usual type of primitive bone tools, such as awls, knives, mullers for grinding pigment or paint for the body, sherds of the conical pots, and several grooved flat paint-querns, or mortars. All the skeletons found were in a very bad state of preservation, but two skulls were serviceable, and one of them bore distinct traces of red pigment, a clear indication that the body was daubed with red ochre before burial or as a burial rite. This is the third instance I have personally met with, and the presence of numerous paint-querns found among the layers of the floor of the shelter would be explained thereby. Through decomposition of the tissues, the coating of heavy paint (oxide of iron) reaches the bone and colours it partly or wholly in the manner of the example above-mentioned.

I submit that to a process of the same kind is due the colouration of some skeletons found in the European Mediterranean region rather than to an assumed funeral rite consisting in first scraping the flesh from the bones and painting them afterwards before burial. If the hypothesis is correct we have again a new link between the Bush and the primitive culture of Southern Europe.

Stone Age.—A very important discovery connected with the genesis of the South African stone industry in South Africa was recorded in the finds made by us in the Montagu Cave (Cape) three or four years ago. The investigation brought to light the contents of a "workshop" for implements of palaeolithic type. The process of manufacture in all its stages was made clear from the block hewn out of the matrix to the completed thin, amygdaloidal "coup de poing" or "boucher" with a sharp point. This discovery led me to conclude that all bouchers not so shaped are only partially evolved: that is, they are unfinished. Moreover, the great scarcity of these completed implements implies that not only were they not easily made, hence their scarcity, but also that the great abundance of unfinished material does not imply a numerous population.

Evidence of the same nature has now been obtained near Cape Town by Lieut.-Colonel W. E. Hardy, but this time in connection with implements of the South African neolithic type (aurignacian). I doubt if there is in South Africa a "fontein," "pan" or natural spring without an abundance of "chips" to be found in its immediate vicinity or around its edge. Mostly rudely flaked there are occasionally some that show more delicate chipping on one side, always with a large bulb of percussion and one untrimmed face. But, in one of these localities, Colonel Hardy has found lying together five javelin heads of the "laurel" and "willow leaf" type: that is the *finished article*. We have a small number of points of this type, not from the Cape Flats only, but also from elsewhere in the Union, but it is the first time that their workshop has been recorded. The solutrean appearance of these points implies a much higher degree of advance in lithic technique than the state of the unfinished tool indicates. These considerations will be enlarged in a special paper.

Seven panels containing nineteen casts of petroglyphs (rock-gravings), taken in the neighbourhood of Gobabis (South-West Africa), have been placed on exhibition. The contrast in execution with those found in other parts of the Union adds to their interest, the technique on the whole being very inferior. The petroglyphs from Gaub, also in South-West Africa, consist of antelope and zebra hoofs, and occasionally of human feet, the latter diminutive, the former often of natural size. In connection with these images, the Bushman is reputed to have graved these hoofs to show that the animal in this particular locality was his property. In the Gobabis petroglyphs here and there, one or two antelope hoofs are to be found among the figures of animals. On one slab are figured two large, undulating snakes, very realistically executed, the slab bearing also two hoofs. Certainly this does not convey to the mind of the white man an impression of desirable property, assuming that there is reason in the theory of property, but then it is very doubtful if the white man's mind can realise in full that of backward, or rather, undeveloped primitive man. And thus it may be that these property signs are properly interpreted. The triangular marks on animals painted in the caves of France and Spain are now looked upon as being possibly such.

Ethnology.—The removal of the articulated skeletons that were crowding store No. 1 where the ethnographical collection was partially packed or partially hung, has permitted of a beginning of arrangement on scientific lines, of which I hope to tell more in my report for next year. On re-examination, very considerable damage was found to have been caused by this most destructive borer-beetle: *Lyctus africanus*. Nearly all the wooden objects of

which there are so many, were found to be badly attacked and had to be disinfected and poisoned. It is to be hoped that special exhibition cases will be forthcoming to preserve collections dating, so far as South Africa is concerned, from times when the handicraft of the natives had not been influenced from without as it is in so many cases now. That the collection is large is shown by the fact that an iron and wood store, 120 ft. by 20 ft., is not sufficient to permit of more than grouping together objects of the same class.

Paintings.—In a previous report I mentioned the discovery by Dutch Reformed Church Missionaries in Nyassaland, of rock paintings which seem strongly to indicate bushman technique. Ten days ago I was able through the courtesy of the Chief Secretary of the Tanganyika Territory, A. C. Hollis, Esq., to examine a photograph of somewhat similar painting discovered with others in the Waratury District of that territory. Although not very distinct, the figures appear to be of bushman style. Confident as I was that relics of the Bush would be found eventually spanning the gap between South and North Africa, I placed more confidence on finding gravings on rock than rock paintings, the latter being ephemeral in comparison. I have been promised photographs of both finds. I may say, *en passant*, that some of the paintings found in Southern Rhodesia, and of which we have tracings, are mystifying in parts. A Bushman painting a bird perching on a palm tree, the latter quite unmistakable, must have had a somewhat different mentality from that of his congeners in the extreme south.

Sundry.—The late Mr. L. Wiener has bequeathed to the Trustees a collection of modern coins among which are the two gold coronation-jubilee medals of Queen Victoria.

I have the honour to be,

Sir,

Your obedient servant,

L. PERINGUEY.

Director.

DEPARTMENT OF VERTEBRATE ZOOLOGY.

To the Trustees of the South African Museum.

Mammals.—Through the kindness of Dr. L. Reinecke, we have secured the skins of two of the lesser Buffalo of Angola. Curing in the veld skins for ulterior mounting as museum specimens, is attended with great difficulty, and these specimens will have to remain in the study skin-collection, but Dr. Reinecke has promised to replace them by well-cured specimens. He has also presented a skin well prepared for setting up of the West Coast Bush Buck, *Tragelaphus scriptus*. We are indebted to Captain G. C. Shortridge, now Curator of the King William's Town Museum, for a series of small mammal skins, numbering 35 examples, collected by him in the neighbourhood of N'dola, Northern Rhodesia, and sent by him to the British Museum. Captain Shortridge has also promised to let this Museum share in the mammals obtained in another collecting trip in the Union which he has lately taken, in consideration of some small services rendered him by this Museum. The other additions have been: Bats from the Koster Cave (Transvaal); some Jumping Hares, *Petetes caffer*, from the Orange Free State; two Gemsbokken, *Oryx gazella*, from South West Africa; two Whale foetus from Saldanha Bay, and the skins of two White Rhinoceros, together with the skeleton.

Birds.—The birds obtained this year consist of a small collection made by the Assistant Taxidermist at Upington, during the little leisure left him by his training for about six weeks in trapping small Mammals. The comparatively small number of sea birds in the collection prompted me to ask assistance from the owner of some fishing trawlers. In this manner it has been found possible to renovate specimens in our working collection, as well as some species on exhibition, whose very ancient mounting left much to be desired. To shoot birds from deck on the high sea and to secure them after they are shot, is at no time an easy task. Nevertheless, we succeeded in securing fresh examples of seven species, including a fair series of *Diomedea exulans*, which we wanted to endeavour to settle or otherwise the specific identity of its close ally *Diomedea chionoptera*. More collecting of the same kind at other points of the coast of the Union is, however, required before this point can be decided. I have given more details in my Directorial Report. The capture of a White Giant Petrel proves of interest as this white variety was not represented in the collection made by Layard—the first Curator of the South African Museum.

The fact evidently implies that the bird is not as common in Cape waters as it is said to be in Layard and Sharpe's work in South African birds.

The Hon. J. Garlick has presented a collection of birds from the neighbourhood of Potchefstroom, I believe, mounted in a fine show case; and the Museum is indebted to the Hon. W. Ross for a very fine group of a pair of Capercaillie, shot by him at Tullialan, Scotland.

The additions to the collection of birds eggs are very small, twelve in all, thus leaving a certain number of gaps in the working collection.

Two Albatros, two Skua, two Cape Pigeons, one Frigate-bird, one *Abdimia abdimii*, and the beautiful *Musophaga rossae* have been set up in the exhibition series. I have re-arranged the cases containing the *Otidæ*, *Charadriidæ*, *Sternidæ* and *Procellariidæ*, etc., which are now better seen. Many explanatory labels for the different Orders and Families prepared by Mr. Bolus, have been printed and set in their place.

Reptiles and Batrachians.—The acquisitions number forty, representing twenty-two species, one being new to the Collection. With the exception of the latter, they do not deserve special notice; except perhaps that a small *bird* was found in the stomach of a berg-adder.

Your obedient servant,
L. PERINGUEY.

DEPARTMENT OF FISHES AND MARINE INVERTEBRATES.

To the Director, South African Museum.

SIR,—I have the honour to present the following report on this Department for the year.

During the greater part of the year I have been engaged on the normal work of the Department, namely, sorting and registering specimens, mostly from the collections of the "Pieter Faure," in addition to routine work. Special attention has been paid to the Fish collection to which several important additions have been made. Amongst the most important of these is a collection of Fishes from Natal waters presented by Mr. H. W. Bell-Marley; these specimen are in excellent condition both for scientific purposes and for exhibition.

Noteworthy is the acquisition by donation of a carp weighing 18½ lbs., secured at Princes' Vlei, Cape Flats, by Mr. H. R. Baird.

About ten weeks have been spent in the field on collecting trips, namely: two marine trawling trips; general collecting at Montagu and Witte River, Wellington; anthropological excavations at Rooi Els, Ceres, and the Koster Caves. Separate reports on all these trips have been presented.

Exhibits.—Several fishes have been mounted, both to replace old specimens and as additions to the series; the most important being the larger specimens mounted by the taxidermist, e.g., a Leer-visch, Kabeljauw, Spiny Shark, Blaasop and Shovel-nose Skate. A fine specimen of the tuberculate Nautilus, collected on one of the trawling trips, and several other Mollusca and Crustacea have also been added to the series.

The number of specimens received during the year is as follows:—

	Specimens.	Species.	New to Collection.
Fishes	105	85	14
Mollusca	54	13	1
Crustacea	27	6	—
Other Marine Invertebrates	20	9	—
	206	113	15

No reports on the material from this department have been issued during the year.

The thanks of the Trustees are due to the following donors: H. W. Bell-Marley, R. Bigalke, Dr. Cawston, J. Hunter, R. F. Lawrence, H. R. Baird.

I have the honour to be,

Sir,

Your obedient servant,

KEPPEL H. BARNARD.

DEPARTMENT OF ENTOMOLOGY.

To the Trustees of the South African Museum.

The accessions by donation, purchase and collecting by the staff amounted to 4,112 examples representing 2,245 species, of which 516 are looked upon as being new to the collection. The number of examples above mentioned is that of insects pinned, labelled and partly identified. A large number has not been so treated. The divisions of the Order are as follows:—

	Specimens.	Species.	New to Collection.
Coleoptera	2,117	990	69
Hymenoptera	127	84	39
Diptera	299	226	37
Lepidoptera	1,404	622	349
Hemiptera	64	38	19
Neuroptera	43	26	1
Orthoptera	58	49	4

As explained in my Directorial Report, several papers dealing with South African Entomology are now in print and will be issued at the beginning of 1923. Another instalment Part V of Vol. XIV of the Annals of the South African Museum, (Monograph of the Formicidæ of South Africa) has appeared during the year.

The main accessions have been: a collection of Moths (*Rhopalocera*) from North of Salisbury, South Rhodesia, containing rare kinds of *Sphingidæ*, among others, and the majority of which was incorporated in the Cabinet; a collection of Butterflies from Congo and the West Coast of Africa, containing a large proportion of species hitherto unrepresented in the Collection; a fair number of *Coleoptera* from Kenya, collected by R. A. Dummer. I much regret to say that I received news of the death by accident of this Collector.

From Zomba, Nyassaland, we received a certain number of *Coleoptera* and *Diptera*; and a general collection of great interest was made for us in the dry districts of South West Africa.

Collecting, chiefly of *Coleoptera* so far, is being resumed in Zululand and two collecting trips in the districts of Montagu and Wellington were made by two members of the Staff with some satisfactory results.

The work of incorporation is still proceeding and has been this year of considerable importance. The Equatorial African Butterflies (*Rhopalocera*) are now, except the *Lycaenidæ*, arranged in a special Cabinet. The Beetles (*Coleoptera*) from the same locality have also been arranged systematically in 38 large Insect Boxes, and identified for the most part, and it is expected to complete, or at least to add to, the number of identified species in the course of next year. A fair quantity of material sent to specialists for identification and study is being gradually returned, and also gradually incorporated, while new material is sorted for sending afresh to some specialists, or for special study by the Museum Staff. Among these incorporations are: a number of *Micro-Lepidoptera*; the revised series of *Malachiidæ* (*Coleoptera*); the *Mydaiidæ* and *Nemestrinæ*, *Sciaridæ*, *Bibionidæ*, *Culicidæ*, *Oestridæ*, etc. in the *Diptera*; the *Carabidæ* in *Coleoptera*, etc. A fair number of additions has been made to the List of Insects from South West Africa. I expect, provided the weather be favourable, that the collecting journey to Ovamboland by three Members of the Staff will undertake at the beginning of next year, will help greatly towards making this list more complete.

A good number of identifications were made for Museums, Collectors or branches of the Agricultural Department.

The main donors have been: The Rhodesian Museum; the MacGregor Memorial Museum; R. A. Dummer; C. T. Belcher; Monsignor Kolbe; J. S. Brown; W. E. Jones; A. White; D. Gun; Messrs. Barnard and Lawrence; W. H. Bell-Marley; J. A. Knip; Father J. O'Neil; Professor J. C. Faure, Dr. J. G. Melle, and a few others.

DEPARTMENT OF ENTOMOLOGY (INSECTS EXCLUDED).

The Director, South African Museum.

SIR,—I have the honour to submit the following report on this Department. The work from May 15th, has been mainly that of entering and sorting specimens received by the Museum. The Museum's collection of Mallophaga and Anopleura has been arranged under recent systems of classification and additional specimens mounted and incorporated.

Field work was undertaken in October and November when short excursions to Montagu and Bain's Kloof respectively, yielded the majority of Arachnid fauna collected during the year, and the sorting and indexing of this material is completed. The material which was representative of all sections of the Arthropoda, included a number of Myriopoda which await the return of the Museum's collection from Vienna.

No specific work on the Aranae, with the exception of the Palpimanidae, was entered into owing to the presence of other duties, and the category of fresh additions is as follows :—

Aranae	..	..	..	..	..	..	..	650
Scorpionidae	..	..	..	..	..	..	..	83
Myriopoda	..	..	..	..	..	..	..	60
Solifugae	..	..	..	..	..	..	..	34
Acari	..	..	..	..	..	..	..	6
Opiliones	..	..	..	..	..	..	..	3
Pseudo Scorpiones	..	..	..	..	..	..	..	1

I have the honour to be,
Sir,

Your obedient servant,
R. F. LAWRENCE.

DEPARTMENT OF GEOLOGY AND MINERALOGY.

To the Director.

SIR,—I have the honour to submit the Annual Report for 1922, as follows :—

1. *Additions*.—107 Rock specimens, 21 mineral specimens and 5 manufactured articles have been received.

2. *Principal Acquirements*.—The following are the most important donations :—

- (a) A large lump of crocidolite in its matrix—presented by E. G. Bryant, Esq.
- (b) A series of oil shales from the Transvaal, accompanied by descriptive sections.
- (c) Several large lumps of Banded Chrysotile Rock from the Barberton District.
- (d) A comprehensive suite of rocks to illustrate the remarkable marginal phenomena of the Parys granite and the metamorphosed rocks of the Witwatersrand System in the Vredefort Mountain Land.
- (e) A collection of rocks from the basic margin of the Bushveld in the North Eastern Transvaal.
- (f) Specimens to illustrate the Boksburg Brick and Fire Clay Industry.
- (g) A complete set of graded Corundum grain from Bandolier Kop in the Zoutpansberg District.
- (h) Stichtite—a rare and beautiful chromium mineral from the Kaapsche Hoop in the Barberton District, presented by E. J. Dunn, Esq., who was the discoverer of this mineral.
- (i) A large Crystal of Corundum, Namaqualand, presented by Union Corundum, Ltd.
- (j) Lava and Sulphur from Hawaii, presented by J. K. Wiese, Esq.
- (k) Striated Pebbles and Tillite from the Table Mountain Sandstone Series—Mitchell's Pass—presented by Dr. A. L. du Toit.
- (l) Seven small diamonds from Brazil, with predominant cubic face—presented by D. Draper, Esq.

Items (b) to (g) are from the Geological Survey.

Special attention has been devoted to the varied mineral resources of the Union, and for this purpose several cases have been made available in the room set apart for Economic Geology. The special exhibit of Oil Shales, Torbanite and allied materials, should prove of interest in connection with recent discoveries in South African oil shale geology.

The industrial applications of local mineral resources have been illustrated—as far as possible—by means of manufactured articles—shown alongside the raw materials on which they depend; the exhibit of the Boksburg Brick and Fireclay Industry indicates the kind of demonstration aimed at in the section of Economic Geology.

The Stratigraphical Series has been entirely re-arranged by the igneous rocks being put in their proper positions within the sedimentary groups. This change enables the student to appreciate more easily the significance of metamorphic rocks.

I have the honour to be,
Sir,

Your obedient servant,
A. L. HALL.

DEPARTMENT OF PALAEOLOGY.

The Director, South African Museum.

SIR,—I have the honour to present a Report on the working of this Department for the year 1922.

The following additions have been made to the register :—

Invertebrates	..	..	Bokkeveld	..	..	..	35
			Karoo System	..	..	..	6
			Cretaceous	..	..	..	187
			Tertiary	..	..	..	64
Pisces	..	..	Karoo	..	..	..	1
			Tertiary	..	..	..	1
Reptiles	..	..	Karoo	..	..	..	5
Mammals	..	..	Tertiary	..	..	..	2
Plants	..	..	Karoo	..	..	..	1
			Total	..	..	..	302

The chief accessions have been :—

1. A collection of Bokkeveld fossils from Gydo Pass, presented by Dr. A. L. du Toit.
2. A collection of Cretaceous and Tertiary fossils from the Benguella area, Angola, presented by W. J. Reynolds, Esq.
3. A collection of Cretaceous and Tertiary fossils from the Loanda area, Angola, obtained through the good offices of Dr. L. Reinecke. These were presented at the end of the year and have not yet been registered.
4. Plaster casts of the Winnaarsbaaken specimen of *Erythrosuchus africanus*, presented by the Trustees of the British Museum.
5. Three slabs from Tanga, British East Africa, containing remains of an interesting new reptile which has been described in a paper to be published as *Tangasaurus mennelli*. These were generously donated by F. P. Mennell, Esq.,

The collection of Uitenhage invertebrates made at the end of 1921 has been developed, and identification and registration of these will shortly be begun.

Mr. Reynold's Angola fossils were given a preliminary examination. It is hoped that an account of these and of Dr. Reinecke's fossils will be prepared during the present year.

The receipt of the casts of parts of the head and of the hinder portion of the skeleton of the Upper Beaufort reptile *Erythrosuchus africanus* has enabled us to attempt a restoration of the complete skeleton of this animal. The fore-limbs are based upon those already in the Museum collection which belonged to a slightly smaller animal; and the vertebrae have been modelled from isolated examples which we possess. The feet alone are unknown. The skeleton has been placed on exhibition; but the unfortunate lack of space in the Palaeontological section has necessitated this very striking exhibit being placed on the top of a high wall case where it is not displayed to the fullest advantage. Moreover, the skeleton of *Propappus* has had to be removed as a consequence of this new acquisition.

A paper on the series of Gorgonopsian skulls, embodying some new observations on the structure of the palate in this Therspsid group, was prepared and sent for publication. The palate of the type skull of *Aelurosuchus browni* was figured for the first time.

The thanks of the Trustees are due to the following donors, in addition to those already mentioned: Miss M. Wilman, Dr. J. B. Lester, Messrs. C. W. Black, H. H. Curson, L. Laurenson, Roux, the Geological Survey of Southern Rhodesia, and the Executors of the late R. Cane, Esq.

I have the honour to be,

Sir,

Your obedient servant,

SIDNEY H. HAUGHTON.

DEPARTMENT OF ANTHROPOLOGY AND ETHNOLOGY.

To the Trustees of the South African Museum.

SIRS,—I have the honour to submit my report on the Department of Anthropology and Ethnology.

Search for skeletons of natives, presumably Hottentots, on farms granted at an early date of the settlement, but in districts distant from Cape Town where the owners were not likely to have owned Mozambique or Malabar slaves owing to their high cost, has proved

somewhat unsatisfactory, and so has likewise the investigation of a rock-shelter at no great distance from Cape Town; four serviceable skulls only being secured.

Casts of three male Hottentots have been completed, but not painted.

Seven panels of casts of rock-carvings taken by Mr. Drury in South West Africa have been placed on exhibition and there is no room left for additions. Rumour has it that these rock carvings are numerous in South West Africa, and the distribution of these petroglyphs is an interesting subject for research.

Among other stone implements, one "point" chipped on both sides has been received from Okahandja, S. W. Africa, and two from the tin gravels of Swaziland. The importance of these two specimens lies in the fact that these finished points seem to be connected with a palaeolithic industry, and not with a neolithic, as in the case of the finds in the Cape Peninsula.

Two Bush conical pots have been received; one, a very typical one, due to the generosity of Mrs. G. Landall Schreiner, has no history, but is said to have come from "up country"; the other, for which we are indebted to Mr. A. E. Keet, was found buried in the neighbourhood of Vanrhynsdorp, Cape Province. The conical shape has been retained, but there are no ears, and a spout is added. The maker had already come under European technical influence. It was filled when found with specular iron. I have now ascertained that this iron is the base of the red pigment used by Bush and probably also Hottentots, for decorating their body as well as the rocks.

I have been able to obtain through Miss Bleek's agency a series of mantles, bags, aprons, necklaces and other head ornaments from Bush natives in the Western part of the South West Protectorate. Some of these objects have served to clothe some dancing figures placed on exhibition, and an interesting series of similar and other objects, also of Bush manufacture, has been acquired.

Two iron-gads from ancient workings 60 feet in incline East of Messina, Transvaal, were presented. They were found "sticking in the rock and so stained with copper through reaching of the vein that they looked as if made of copper." It will be difficult to persuade me that these particular gads and others said to be equal to the best Swedish iron are of native manufacture.

A donation of interest is a stick of copper, knotted at one end and found while ploughing in Eastern Sekukuniland, S.E. of Pietersburg. Certain copper sticks found there are reputed to be phallic in design and are said to have been used for the purchase of wives. I have not examined these, but the one presented to the Museum by Mr. A. L. Hall, seems to me a stick of copper for barter (the shape being that of a native club) in the same manner as are several short copper assagaias or imitation of battle axes represented in our ethnological collection.

Important as corroborating the evidence I obtained in showing that some African natives were acquainted with the smelting of bronze and brass, is the donation by Mr. J. L. Illingworth, of brass bangles, or rather ingots, heavy and light, hammered beads weighing 3-oz., and more, etc. In these, as in the similar ornaments and ingots from Swaziland, the tenour of zinc is so variable that it clearly points out to native smelting. These brass objects were ploughed in Zululand and are reputed to have been, when made into ornaments such as beads and bracelets, worn by royalty only.

Antiquities—Curios.—The coins on exhibition were burgled, and but for certain precautionary measures the collection of diamonds would have shared the same fate. The coins have been, however, mostly recovered. As a result of this burglary the Public Works Department are calling for tenders for the erection of a strong-room in the main building.

The late Mr. Wiener has bequeathed to the Trustees a number of modern coins and also several gold and silver jubilee coronation medals.

The other specimens received do not call for special remarks.

The main donors are: Messrs. H. D. Bradfield; B. Nicholson; A. E. Keet; Rev. N. Kling; Dr. Stoehr; C. R. Camp; W. Pott; J. L. Illingworth; A. L. Hall; Mrs. G. L. Schreiner; Miss Bleek; Crosby; Mrs. Lightfoot; Rev. P. J. Theunissen; C. van Riet Lowe; A. D. Divine

I have the honour to be,

Sir,

Your obedient servant,

L. PERINGUEY.

DEPARTMENT OF BOTANY.

The Director, South African Museum.

SIR,—I have the honour to report as follows on the work done and contributions received during the year.

Contributions.

- Kew, 62 spp. South African Grasses.
 F'Eyles, 150 spp. Rhodesian plants.
 Bolus. Herb., 150 spp. Knysna and South West African plants.
 K. Barnard, 68 spp. from Montagu and Triangle.
 K. Barnard and C. Thorne, 163 spp. from Bains Kloof.
 White, 13 spp. living plants for Rockery from Uppington.
 Prof. D. Thoday, 18 spp. Passerina representing his work on the Genus which will be published shortly; also some plants collected at Delagoa Bay, among which were two genera new to the Herbarium.
 Miss Welman, 252 spp. South West African plants.
 Miss Stohr, 214 spp. Rhodesian plants.
 T. P. Stokoe, 33 spp. mostly from Caledon District, 6 new to collection.

Exchange

W. Scarfe—New Zealand Algae for Cape Algae.

Specimens Mounted :

- 433 Transvaal plants.
 375 Rhodesian plants.
 34 South African Seaweeds.
 272 South West African Plants.

Specimens Incorporated :

- 181 Rhodesian Plants.
 106 South West African plants.
 424 Transvaal plants.
 18 spp. Passerina, Cape.

Specimens new to Collection.

- 6 Genera.
 56 Species.

General Information.—

Number of Sheets (South African) incorporated in Cabinets	37,643
" " " (Exotic)	18,358
Total	56,001

385 sheets on loan not included in the above, also about 3,500 South West African plants, named and partly mounted, not included.

Catalogue of cabinets has been completed excluding material on loan to British Museums, Kew and Pretoria.

The naming of Dr. Paul Range's South West African collection has been completed, mounting now being proceeded with.

The naming of South West African plants collected by members of the Museum Staff is proceeding.

Plants collected in South West Africa by Miss Welman and Miss Bleek have been listed, all of the above are being incorporated into a collection of South West African plants, a list of which will be published later.

The naming of unnamed spp. in Cabinets is proceeding, the checking of names and naming of old collectors plants also proceeding.

The collection of Ferns and their allies has been rearranged according to Dr. T. R. Gun's latest work.

Dr. Stole's collection of Nyassaland plants has been sorted and arranged into order ready for mounting.

I have the honour to be,

Sir,

Your obedient servant.

D. THODAY.

KOOPMAN'S DE WET HOUSE.

To the Trustees, South African Museum.

The number of accessions is greater than it has been of late. A most important one has been the gift of old silver from the late Mrs. J. Cavanagh, in memory of her son, the late Stephen Cavanagh. The donation comprises: Case of silver knives, forks, spoons, George III, 1798, formerly the property of the Brink and then of the Eldridge family. This accounts for the monogram E. Case of silver, French, circa, middle of the eighteenth century. Punch-ladle. Silver, George III, bearing Royal Arms. Silver Porringer, Queen Anne. Silver Egg-boiler, Early Dutch, movable handle. Cloete crest.

Two large lacquer vases, pedestals with porcelain plaques, deposited by Miss M. Wilman. Large Dutch linen-press presented by Messrs. Robinson Brothers (Ashbey's Art Gallery). Brass candle-stick and snuffers; two ancient brass mortars with iron pestles. One brass kettle. A small fruit basket. One mother-of-pearl box and a tortoise-shell box by Miss Wessels.

Old spectacles by the Revd. Pienaar.

Silk wedding dress, 18th century by Mrs. Rothman.

Old brass key by M. Jordan.

Two religious subjects by Mr. G. Aling. A harness maker's stool, from the farm "Welgelegen" by Mrs. Mostert.

Mr. Crosland Robinson has very kindly undertaken to restore the painting of the wall round the edge of the Purcell Memorial Tablet somewhat abraded by the letting in of the stone.

The two portraits of Rev. le Sueur and his wife, which were somewhat dilapidated, have also received attention.

The loan of the Bebro collection of porcelain furniture and silver is retained for another year and the popularity of the Koopmans de Wet House continues as shewn by the number of visitors: 25,097.

The only purchase has been that of an old Friesian Hanging Clock, ex Cavanagh's sale.

I have the honour to be,

Sirs,

Your obedient servant,

L. PERINGUEY.

THE LIBRARY OF THE
FEB 5 - 1940 SOUTH AFRICAN MUSEUM,
UNIVERSITY OF ILLINOIS

STATEMENT OF INCOME AND EXPENDITURE FOR THE YEAR ENDING 31st DECEMBER, 1922

INCOME.		EXPENDITURE.	
To Balance, 1st January, 1922	£1,306 10 6	By Salaries	£3,313 3 8
— Grants:—		.. Library: Purchases and Subscriptions	211 6 6
Union Government	£6,000 0 0	.. Wages and Expenses: Upkeep of	
Cape Town Corporation	200 0 0	Museum	500 4 1
	6,200 0 0	.. Expenses in Travelling and Collect-	
.. Interest:—		in Specimens	350 17 5
Hadje Suliman Shah		.. Sunday Duty	102 5 0
Mohamed Coin		.. Freight and Railway Charges	18 14 0
Fund	4 10 0	.. Petties, Postage Commission and	
.. Fixed Deposit, Standard Bank	55 0 0	Bank Charges	147 18 1
	59 10 0	.. Publication of Annals	479 3 2
.. Sale of Publications	11 11 11	.. Purchase of Show Cases	527 3 0
.. Sale of Specimens	30 0 0	.. Balance:—	
.. Administrator South-West Africa:		Fixed Deposit—Standard	
Refund of expenses in connection		Bank	£1,500 0 0
with travelling and collecting	24 3 0	Cash in Bank	405 1 1
.. British Museum: Refund of ex-		Petty Cash	2 7 10
penses in connection with despatch		Cash on Hand	89 14 7
of specimen	14 0 0		1,997 3 6
.. Bank Discounts	2 5 0	Includes £56 13s. 4d. appertaining	
		to the Coin Fund	
	£7,648 0 5		£7,648 0 5

Audited and found satisfactory.

J. DE V. ROOS,
Controller and Auditor General

L. PERINGUEY,
Director, South African Museum.

UNION OF SOUTH AFRICA.

REPORT

OF THE

THE LIBRARY OF THE
FEB 5 - 1940
UNIVERSITY OF ILLINOIS

SOUTH AFRICAN MUSEUM

FOR THE

Year ended 31st December, 1923.

*Presented to both Houses of Parliament by Command of His Royal Highness
the Governor-General.*

1924.

CAPE TOWN :
CAPE TIMES LIMITED, GOVERNMENT PRINTERS.

1924.

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Trustees of the South African Museum :

THE RIGHT HON. JOHN X. MERRIMAN, P.C., M.L.A.

SIR THOMAS MUIR, C.M.G., M.A., LL.D., D.Sc., F.R.S.

THE HON. JOHN WILLIAM JAGGER, F.S.S., M.L.A.

Scientific Staff of the South African Museum :

LOUIS ALBERT PÉRINGUEY, D.Sc., Director and Keeper-in-Chief.

KEPPEL HARCOURT BARNARD, M.A., Assistant Director ; in Charge of Fish and Marine Invertebrates.

REGINALD FREDERICK LAWRENCE, B.A., Assistant in Charge of the Arthropoda (Insects excepted).

ALBERT JOHN HESSE, B.Sc., Ph.D., Assistant in the Entomological Department.

STAR GARABEDIAN, B.A., Assistant in charge of the Botanical Department.

ARTHUR LEWIS HALL, B.A., Honorary Keeper of the Geological and Mineralogical Collections.

SIDNEY HENRY HAUGHTON, B.A., D.Sc., Honorary Keeper of the Palæontological Collections.

UNION OF SOUTH AFRICA.

Report of the South African Museum for the Year ended 31st December, 1923.

*Presented to both Houses of Parliament by command of His Royal Highness the
Governor-General.*

REPORT OF THE DIRECTOR FOR THE YEAR ENDED 31ST DECEMBER, 1923.

To the Trustees of the South African Museum.

SIRS,—I have the honour to submit my report on the administration of the Museum for the year 1923.

Visitors.—The number of visitors was 148,055, divided as follows:—

White	..	Adults	..	..	..	..	Males	47,512
							Females	37,698
		Children	..	..	..	..		31,913
Coloured	..	Adults	..	..	..	..	Males	12,242
							Females	9,745
		Children	..	..	..	..		8,945
Number of visitors on Sunday afternoons							..	21,557
Largest number in one day (28th December)							..	1,435
Smallest number in one day (24th August)							..	53

138 school parties and drawing classes, numbering 3,581 pupils, visited or worked at the Museum.

Presents, Purchases, Acquisitions by the Staff:—

	Specimens.	Species.	Approximately new to Collection.
Mammals	77	26	5
Birds and Birds' Eggs	287	218	118
Reptiles and Amphibians	106	68	4
Fishes	172	103	3
Mollusca	175	48	22
Marine and Land Invertebrates	32	6	1
Crustacea	49	13	5
Insects	5,601	2,391	192
Arachnids and Myriapoda	961	113	65
Geology, Mineralogy and Palæontology	656	—	—
Anthropology and Ethnology	174	—	—
Botany	5,809	3,890	541
Antiquities and Curios	26	24	24

Library:—

Books	..	..	..	..	{ Presented or in Exchange 13 { Purchased 22
Pamphlets and Periodicals	..	..	..	..	{ Presented or in Exchange 584 { Purchased 101

Publications.—Three new parts of the *Annals* were published during the year:

Vol. XIII, pt. 7. "The Echinoderm fauna of South Africa," by H. L. Clark, 217 pp., with 16 plates.

"Descriptions of three new fresh-water Fishes from Northern Rhodesia," by G. A. Boulenger, 2 pp.

Vol. XIII, pt. 8. "Diagnoses of new species of marine Fishes from South Africa," by K. H. Barnard, 6 pp.

Vol. XIX, pt. 2. "The Drassidae of South Africa," by R. W. E. Tucker, 196 pp., 4 pls.

"The South and Central African Species of the Genus *Synagris* (Hymenoptera)," by J. Bequaert.

Owing to difficulties with the printer the issue of no less than 8 parts completing 3 volumes has been postponed until 1924.

Collecting Trips by the Staff.—Mr. K. H. Barnard, Assistant Director, and Mr. R. F. Lawrence, Assistant, taking with them the junior Taxidermist, were away for the first four months of the year on a collecting trip in Ovamboland, S.W. Africa. Mr. Lawrence went again towards the end of the present year for a similar search in Portuguese East Africa. Mr. J. Drury proceeded to South West Africa to model some Hottentot and other Natives. Mr. Gevers went on behalf of the Museum to examine certain deposits in Pondoland, and we had a six months' search for fossils in the Karroo.

The interesting journey taken by Messrs. Barnard and Lawrence resulted in a very satisfactory collection. Most important, probably, in number were the Insects. The labelling and sorting is now nearly complete, and the specimens will go far to enlarge not only the list of those occurring in South West Africa, but also the knowledge of the distribution, the aim of our efforts being the Zoological Survey of this territory. Messrs. Barnard and Lawrence are dealing in their Departmental Reports with their respective captures. It is to be regretted that the collection of Mammals and Birds was not more comprehensive or varied. The Plant collection is a valuable addition.

The Building.—In my last year's Report I mentioned that tenders had been called for the erection of sheds to cover the skeletons of the large whales that stood for so long as best they could in the open. As a result a T-shape building of brick, with asbestos roof, 70 feet and 72 feet at its greatest length and 60 feet in width, has been erected which will accommodate most of our specimens. Three of the large whales have been re-articulated, and the collection of toothed-whales set up. Unfortunately, room will have to be found elsewhere for a Fin-whale and a male Sperm whale. A very small addition in the length of the building would have permitted of their inclusion. It is also regrettable that no provision was made for flooring or cementing of the ground. Owing to the great number of visitors the ground would have been trampled into impalpable dust within a week. It was therefore found necessary to have a cemented gangway laid round the animals (cost to be defrayed from the Museum's yearly grant) in order not to exclude the public. It is hoped that this new gallery will be opened early in 1924. All the Cetaceans known to occur along the coast of the Union are represented except two porpoises. But in addition, two of the minor whalebone whales which the Union Waters were not hitherto suspected to harbour (*Balaenoptera rostrata* and *Neobalaena marginata*) have been added to this number. Until a substantial cement flooring is available, it will not be possible to erect show cases where the stuffed specimens of dolphins, porpoises, etc., can be exhibited.

In the Report alluded to (1922) I also mentioned the securing of an old iron and wood building, 100 ft. long by 20 ft. wide, which was to serve for storing some of the skeletal specimens in such a way that they could be made available when wanted. A great deal of work has been devoted to the rearrangement of this gallery. Primarily devoted to skeletons, it now also comprises the collection of foreign and African birds (other than South African) grouped according to their geographical distribution. This extremely valuable and large collection has been disposed in three of the new cases (9 x 15 x 3) which it was found possible to allot to the purpose, but two more are required to display it adequately.

In this room were also erected two cases containing four large fossil skeletons of our typical Karroo forms, and another case removed from the main building has been allotted together with three very handsome, large wooden ones, to the series of vertebrate skeletons.

This year no less than six new exhibition cases have been provided.

Out of the four Museums supported by the Union Government, the South African Museum is the only one enjoying the privilege of having to supply the required exhibition cases from its yearly grant-in-aid. From middle of June, 1921, to middle June, 1923, the Trustees disbursed the sum of £3,175 for their purchase.

It must be obvious that the development of other branches of activity and research suffer from heavy disbursements such as these out of a yearly grant-in-aid. Yet, I estimate that about double this amount is required for accommodating the material lying, hung or unprotected in the two additional sheds if the specimens, especially the ethnological ones, are to be preserved. A Museum without exhibition cases is not a Museum. But the exiguity of these annexes will prove also an obstacle to the admission of the public, even when the contents are under glass.

In 1914 Parliament voted a sum of money (£20,000) to cover the cost of erection of a wing to the Museum for the accommodation of the very specimens I have in sheer desperation exhibited in the iron buildings. There seems at present no prospect of the work being taken in hand. The Art Gallery which occupies, with the consent of the Trustees, one of the wings of the Main building, is in the same plight. The new building assigned to them is left with the basement only completed. The Trustees have called the attention of the Government to the urgency of the resumption by them of the wing thus occupied, but without success. When the time comes, as it must surely come, for the enlargement of the main building of the Museum, all that is needed to fill the two proposed new galleries will be the transfer there of the cases and specimens as now displayed in the iron sheds; but not until then will they be accessible, I fear, to the public.

The Exhibition at Wembley.—The Curators of the Museums in the Union were called together to decide as to the suitability of having a Museum Exhibit at Wembley. They agreed that each Museum should contribute. The contribution of this Museum is: (1) The skins of a group of animals, mostly endemic to the Union, set on a typical Griqualand West kopje; (2) replicas of Post Office Stones; (3) replicas of four of our exhibited Bush figures; (4) a series of replicas of Rock-gravings; (5) a collection of mounted heads of our large Mammals, including several records. The exhibits above mentioned will be the "clou" of the Museums' exhibits, together with the extremely fine series of photographs of Natives and native life taken by Mr. Cronin and shown by the Kimberley Museum and the De Beers Company. This exhibit, however, will be displayed in the "Natives" series. The South African Museum has, in addition, for the Exhibition loaned to the Railway Department the mahogany barrow and the silver-spade, of almost regulation size, used by Sir George Grey to turn the first sod of the Cape Town—Wellington Railway in 1859.

ARRANGEMENT AND CONSERVATION.

Zoology.

Mammals.—The new building for the display of whale-skeletons having been completed in October, it was decided to proceed with the re-articulation of the skeletons, the latter having been taken down at the beginning of the year to allow of the erection of the building. But skeletons of 50 to 75 feet in length do not improve in keeping after having been exposed in the open in some cases for more than 20 years, and it required the great skill of Mr. J. Drury, the Museum Taxidermist, to re-erect in their natural anatomical position specimens that were very badly damaged by exposure. It has been done, however, but there are still two kinds of fin-whales to set up. These exhibits are to be only temporary. A new set must be obtained to replace them in spite of the length of time necessary to rid the bones of the oil. So far the Management of only one whaling company, a foreign one, has proved friendly to us, and if it were not for a gift of a 75-footer by the late Captain Michaelsen and Mr. C. Ellefsen's continuous help, none of the large whales of our littoral would be represented in the National Collection.

Small as was the collection of Mammal skins made on the way to, and on the banks of, the Kunene River, it contained two or three species recorded hitherto from Angola, but not as far as I know, from the South African Zoo-geographical area. No less than nine skeletons of our large Mammals, as well as that of a Tapir were articulated and added to the series, which is getting crowded already. The additional mounting of minor mammals, birds, fishes and reptiles will be taken in hand next year. The setting up of a large showcase (12 x 12 x 9) has permitted of a better grouping in the main building of several foreign and Central African Mammals, including the different types of Antelopes. My endeavours to secure skins and skeletons of full-size examples for two groups of Giraffes (Southern and Central African) have failed once more this year, and the group of South African Elephants, including the Addo Bush race, is kept in limbo, all for want of exhibition room.

Birds.—It was found possible at last, owing to the acquisition of three exhibition cases of our regular pattern (15 in. x 9 x 3) to arrange the fine collection of mounted foreign birds in Zoo-geographical groups. But to display them with full effect three additional cases of the same dimensions are required; two will, it is hoped, be forthcoming this year. It is now possible for the student to realise almost at a glance the regional differences, the more so that at present preference is given to a certain extent to the exhibition of the most distinct kinds.

The acquisition of a collection of birds' skins from Central and East Africa of kinds other than those occurring in South Africa has materially increased the interest and value of our collection. It is my intention to have these mounted for exhibition as soon as space permits in pursuance of the policy to have the fauna, flora, etc., of Africa, South of the Sahara and North of the Zambesi—Kunene limit primarily represented.

The Ovamboland Expedition obtained kinds hitherto unrecorded from South Africa and a more extended stay would in all likelihood have materially increased the number.

Painted Snipe, Rostratula capensis. We had the opportunity of obtaining interesting evidence as to the relation of the sexes of the painted snipe. At breeding time, at least, the female, which is much more brightly coloured than the male, is reputed to do the courting, the male the incubating and perhaps the rearing of the young. Observations were made in India where the bird occurs also (*c.f.* J. O. Beven in *Ibis*, 1923, p. 527) which those made here during the year go to complete and corroborate in parts. The breeding places were found quite close to Cape Town, in some cases among scattered houses. They were kept under observation with the following results:—

Three males shot on the nest (with eggs) or rising from it; one male shot while rushing threateningly to the observer, doubtless to help the fledgelings to escape in the reeds; one male shot rising from a nest with only one egg (set). After the males were shot the eggs were left untouched, as there was a possibility of the female taking her share in the incubation during the night, but the eggs were found to be cold in the morning and the nest abandoned; at dark a bird was caught by hand on the nest, and it was a male; two more males were seen flying from the nest, but escaped being shot, making altogether four males shot on nest, one male caught on nest; two males escaping from nest, but missed. The next point to try and elucidate was whether the females after oviposition congregated at some distance from the breeding places, as is stated to be the case in India. Search made accordingly revealed the presence of only two females, one not far from a nest on which the male was shot, the other a long distance away; both birds were secured. Three fledgelings were captured, but the parent bird was not seen. These observations go far to confirm the alleged incubation and partial rearing of the young by the male bird. The next step is to find whether this species is monogamous or polyandrous. I hope to have these observations continued next season. The nesting time on the Cape Flats seems to begin in September; the last nest containing only one egg (set), but with a male bird rising from it, was found on the 10th of December. At the beginning of January birds were seen or met in parties of five to eight. The eggs found in September and October were much less darkly splashed than the subsequent ones.

I must acknowledge here the much appreciated gratuitous service rendered me in the Ornithological section by F. Bolus, Esq., especially in checking and correcting the somewhat antiquated nomenclature of the collection of foreign birds, and in looking after the ornithological collections generally.

Reptiles.—The collection of Reptiles has been increased by four species, of which one is perhaps new, as a result of the Ovamboland Expedition.

Entomology.—The accessions have been very large, so much so that I am much embarrassed with the arrangement of the new Insect boxes and insect cabinets, which the constantly yearly increase of entomological material demands. The Departmental Report gives an account of the work in this Department. The mounting and labelling of the Insects obtained by the Ovamboland Expedition have all been completed and they are now ready for sorting and identifying. A good deal has already been done, and several groups either taken in hand or sent to specialists. I shall have next year an Assistant to relieve me of part of the onerous work which this Department requires. The work can be gauged by the number of yearly accessions, as seen in the table of acquisitions, when compared with that of all the other Departments or sections taken together. The number of manuscripts in hand or at the printers (eight) is evidence of the progress made in the elucidation of the characters of the Entomological fauna of South Africa.

In the Arachnid and Myriapod section work is also progressing, and the additions from the Ovamboland Expedition are said to be satisfactory, with the exception, I fear, of the Myriapods, due possibly to climatic conditions. One would have hardly expected that so many species would be unrepresented in the Collection as is revealed in Atten's Monograph based on our material, for Myriapods are conspicuous animals. But new efforts are being made to fill up these gaps, and it is expected that the present collecting trip in Mozambique undertaken by the Assistant in charge, Mr. R. F. Lawrence, will fill up these lacunæ.

Geology-Mineralogy.—The additions to this Department are of interest and notable among them is a collection of rocks from South America, which is representative of the Karroo System occurring there. The restriction to Palæontological exhibits of one of the rooms in which the collection of South African Minerals was exhibited, led to the "scrapping" of what was left of the general Mineral Collection—a very extensive one—and its relegation into drawers, so making possible to transfer the South African Minerals into the rows of double desk cases thus liberated.

In the Economic-Geology Section the statement of the Honorary Keeper about oil shale additions is not without interest when he reports on "material demonstrating the undoubtedly great potentialities of the South African Oil Shale Industry."

Palaontology.—But whereas the Geological Mineralogical Room cannot accommodate new cases nor new material, the addition of a new one in one of the rooms now completely devoted to Palaontology, and the removal of the South African Mineralogical Section has permitted of a much more homogeneous and more extensive arrangement of this section, and in addition two cases have been provided in one of the Annexes for displaying three large Pareiasaurian skeletons. Reset in this Annex is also the cast of *Pareiasaurus bairi*, which served for so long as the first restored representative of the large Karroo Fossils.

The results of collecting from the Cretaceous deposits of Pondoland, undertaken by a University Student not without great difficulty, precludes the possibility of sub-dividing the Pondoland Cretaceous into paleontological zones which was at one time thought possible. Not so fertile in tangible result was a search of five months for reptilian fossils in the Karroo, as the material obtained was disappointing, in spite of the assistance that Mr. W. van der Byl so freely accorded us.

Botany.—Special attention was paid to the representation of the flora of South West Africa, and it was possible to add to the collection of 2,500 sheets obtained three years ago another of twice that number and of excellent quality. The Ovamboland Expedition added five hundred species to it, and what with other additions from the same quarter, we have now as complete a herbarium of that part of South Africa as is to be found anywhere. Preparation has been made last year and continued this year to begin publication of the material.

Physical Anthropology.—Mr. J. Drury, our Modeller, brought back from South West Africa 13 casts of natives. Owing to pressure of work in other directions it was not found possible to proceed with the modelling this year. The idea is to reproduce a group of dancing Hottentots in the very postures sketched by Colonel Gordon during his journey to the Orange River in 1779.

An important addition is the presentation by Mr. H. V. Brink of the material on which his paper on the "Osteology of the Griquas" is based; and we have had a very successful year so far as skeletons or skulls of Strand-Looper and Hottentot are concerned. These accessions will prove a valuable adjunct to the considerable material of the same kind that is now being investigated by a specialist.

Stone Implements.—There has come under my notice a stone tool or implement which, so far as I know, is the first discovery of its kind. I assign it to the South African Neolithic period, one that lasted almost to the present time. (Fig. 9.)

It is not a tool for making the skins supple because it has not been smoothed by the process; nor does it seem to be a boundary stone as it differs greatly from those in the collection.

The closely-set picking is evidence that this artefact took a great deal of time and required great skill in the making before it was fashioned into a stone club weighing 7 lbs.; for that is what I take it to be, as evidenced by the thinning of one end on both sides to permit of the grasp of a small hand, a characteristic of the Hottentot-Bush. We know that clubs (Kairie) were in use among the Hottentots. Beaulieu in 1691 describes the Strandlooper as carrying one. We have such a representation on one of our painted funeral stones, and, lastly, we have a club itself (fig. 8). It is a very heavy weapon made of local wood (*Olea*); the handle is likewise thinned for holding.

A wooden club is, however, the weapon of some Kaffir tribes, and the attribution of this weapon to either Kaffir or Hottentot might prove risky were it not for the evidence afforded by a Bush-painted scene from the Cedarbergen (Cape) representing an elephant hunting scene, whose reduction is here given.* (Fig. 7.)

The purpose of the stone artefact is thereby made clearer. It is alleged to have been found near or in an ancient game pit, such as those made by the Hottentots, and of which few still survive in the Humansdorp District of the Cape.

Among additions of importance is an artificially made spherical stone weighing 11½ lbs., 19 cm. in diameter; it is beautifully rounded, and hollowed out to a depth of 6 cm.; having thus the appearance of a hollow mortar. It was found with the boring tool in the hollowed part (but this tool is a short semi-faceted stone totally unlike a boring or picking tool) by Captain A. G. Stigand at Maun in N'Gamiland. "The Maun Natives had never seen anything like it before, and said (as they always say as regards Bushman paintings) that God made

* The faces were originally painted white, the black crescent denoting the line of the hair, but the white clay being less adhesive than the red ochre or the charcoal fell off more readily.

it." writes Captain Stigaud, who presented the find. This specimen may, in view of future discoveries, throw some light on the very large spheres of analogous design but perforated right through and weighing as much as 19 lbs., whose purport is still problematical. They are to be met with in the Northern Transvaal. Dr. G. J. Melle, who is greatly interested in the matter, informs me that a local resident, who understands the Kaffir Natives well, obtained from them the following explanation of these perforated stones: "At the time when their forbears did not yet know the making of hoes—i.e., iron—these stones were fitted on the top of long poles planted in the ground, and when pulled back they acted as levers, the point of the stick bringing up the soil." This account is not borne out by the nature of the bore, which in several instances is not sufficiently straight to allow of the insertion through of a stick or a pole. It is probably due to traditions or legends relating to the use of the T'Kwe as a weight for the digging stick, in the hands of the Hottentot.

Search in some shallow rock-shelters in the Cape Peninsula yielded for the first time to my knowledge three examples of arrow points worked on both sides, that is, with the bulb of percussion removed, but broken in the final stage; other pieces with only one face prepared and a mass of chips were also found at a depth of six feet in the sand of the floor; the upper layers of shells and earth yielded nothing. The importance of the find is not so much that these artefacts were found in a shelter, but that this shelter was in all likelihood used by the Strand-Looper aboriginals, because three-quarters of a mile to the south-west of it were discovered this year a Strand-Looper burial place, from which four skulls were obtained, and the probabilities are thus that the Strand-Looper made these Solutrean points; but more definite evidence is required and it has not been obtained as yet.

Antiquities.—It is a moot question if the extraordinary development of art in Egypt as it stands revealed by the exhumed mobilier of Tut-ankh-Amen's tomb has been evolved in Egypt itself or if it has a Babylonian origin, but one thing may be said, namely, that it has not retained much trace, if any, of negroid origin. Yet that the population of Egypt was negro before the capture of lower Egypt, is borne out by the similarity of relics of primitive, long prehistoric Egypt, excavated, among others, by the British School of Archaeology in Egypt, with some still to be found among certain of our Southern Bantu-speaking tribes, and coinciding in shape and probable use with some of the finds made in Zimbabwe by Bent, whose original finds are in our Collection. Let us as an example take one of the basin-like bowls with flat incised sides (after Capard) found by Petrie at Abydos. This bowl bears as ornamentation the chevron, the unmistakable African (negro) decoration.

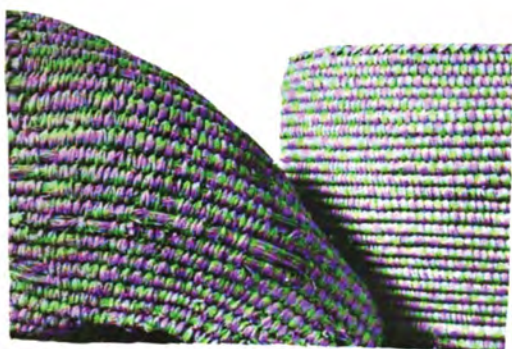
In Zimbabwe there were found bowls similarly shaped, and decorated on the sides; but when the decoration consists of figures of animals, as in the Egyptian, the animals are, naturally enough, those of the respective fauna. The idea and usage are, however, the same. One of our examples is ornamented with a cord-pattern, which proves of special interest because of its similarity with the ancient basket from the excavations at Tarkhan, 35 miles south of Cairo, and attributed to Dynasty I. (fig. 3). The plaiting—and I do not know of any other such, in spite of the great similarity of designs in countries far apart—is the same as the one in vogue among the Shangaans and other natives of to-day in Portuguese East Africa, as can be seen from the figure.

If, on the other hand, we examine the cord pattern on the bowl (fig. 4) found in Zimbabwe, not only is it seen that the style of plaiting is the same, but also that if the strand used as a decorative motive is reversed, the result is the reproduction of the chevron pattern (if on a large scale) or of the herring-bone pattern (if on a smaller scale). This is exactly what happens in fig. 4. This chevron pattern is very noticeable in the Abydos bowl, and the importance of this survival of decoration is not to be easily disposed of.

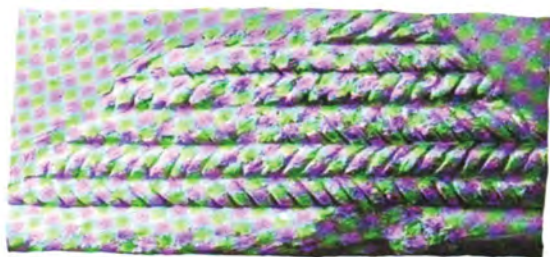
Apart from the Zimbabwe finds, which have caused so much printer's ink to flow uselessly, certain pieces of local pottery are equally convincing as to the survival of traditions implying contact or common origin. I select here certain examples of local pottery.

In primitive Egyptian art, as in all primitive arts, numerous are the representations of animals, modelled mostly in clay, but sometimes also cut in stone. Compare with them the two clay vases found in Mashonaland, Southern Rhodesia. Each is doubtless meant to represent a hippopotamus (as in some Egyptian pieces). One was found in a cave. The history of the other is unknown. There can be little doubt that the conception that led to the form given to these two receptacles is the same as that which prompted early primitive Egyptians in the shaping of similar utensils, and the decoration of fig. 1 (chevron) parallels that of the Abydos bowl. The Basuto, who are kin to the Barotse—the latter so proficient in wood-carving and chevron patterned basket making—occasionally make for their own use pottery of the kind here represented (fig. 2). The prehistoric tradition is there patent.

To me the civilisation and culture of Zimbabwe are negro. If a negro civilisation—i.e., culture—is not accepted, the history of Africa and its races cannot be understood. Thus,



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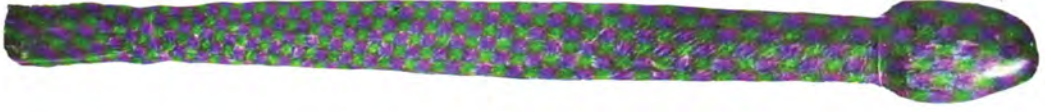


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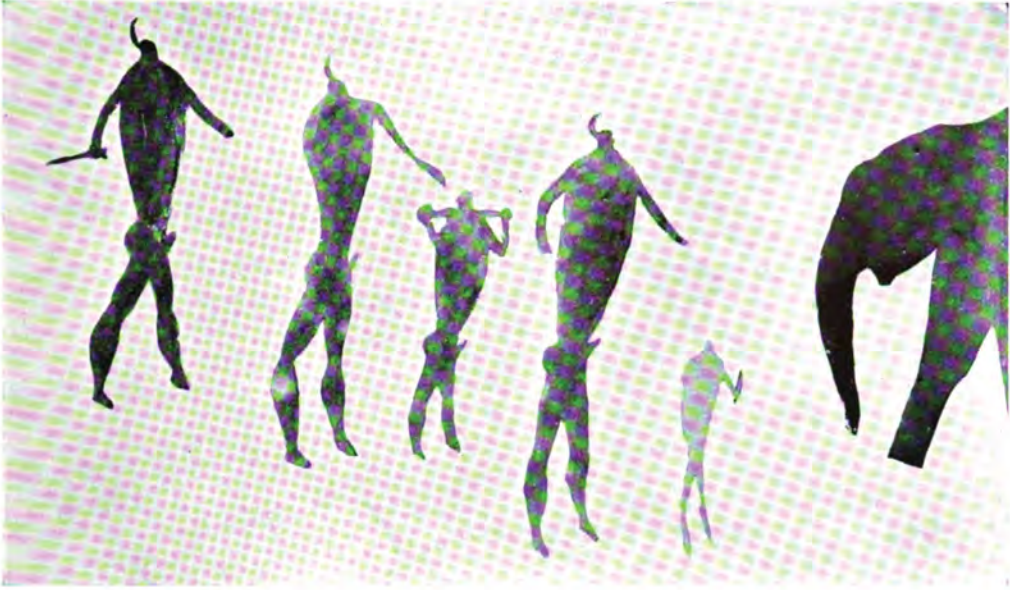
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the soap-stone birds are explained by totemism. One such has been found with the eagle or vulture surmounting the pedestal, but also dominating the figure of a crocodile cut in relief. Read: Vulture; totem of? (Monomotapa) lording over the Bakwena or people of the Crocodile. The crocodile is still the totem or distinction of some of the Basuto Chiefs. This explanation receives corroboration from the discovery of five wood bird-totems mounted on long poles in a deserted native kraal in an isolated part of the Northern Transvaal which we possess. (Fig. 6.)

Difficult of explanation was the presence of the phalli found only in the first Zimbabwe excavations; but it is no longer so, in view of the specimen here figured sent to the Museum by a Missionary in the north of Southern Rhodesia. Shaped by natural causes, this stone suggests at once a phallic emblem. The inference is obvious. (Fig. 5.)

Much more could be added, but these facts indicate cultural contact that could not be other than racial or physical; ascendance or descendance of the negro race occupying Egypt before it lost the Delta to the historic Egyptians under Menes—or perhaps very long before.

Ethnology.—The Ethnological objects acquired are of interest and importance. The collection made in Ovamboland by the Museum Expedition adds much to our series of specimens from that part of the country, some of them dating back to 1860. Another collection from Barotse land, and collected for us by Mons. L. Jalla, has added valuable information on the artistic development of this race of Natives.

Koopmans de Wet.—Nothing of importance happened during the year. The popularity of the Exhibition is shown by the large number of visitors.

Sundry.—The Government of the Union has presented the following articles: Silver spade with ebony handle used by Sir George Grey in turning the first sod of the Cape Town—Wellington Railway in 1859; the silver trowel presented to him by Masons Brotherhood on the occasion of the laying of the foundation stone of the Somerset Hospital with masonic honours in 1859; the trowel used at the foundation of the Simonstown Patent Slip, also in 1859; one china cup and five pieces of broken china from the wreck of the "Harlem," formerly the property of Sir George Grey, a former Governor of the Cape of Good Hope.

I have the honour to be,

Sirs,

Your obedient Servant,

L. PERINGUEY,

Director.

DEPARTMENT OF VERTEBRATE ZOOLOGY.

To the Trustees of the South African Museum.

Mammals.—Order was placed for a pair of the Southern Giraffe skins and one skeleton, of maximum size, if possible, as the solitary mounted example on exhibition is a very poor representation of the species; the order was not executed owing to accident. It was thought also desirable to obtain specimens of the three or four races of Giraffes from Central Africa, which differ so strikingly in marking and on other characteristics from our southern one. Orders of this importance are not easy to fulfil, and this year they had to be held in abeyance. But I am still hopeful for next year.

The main addition has been the collection of skins made by the junior Taxidermist who accompanied Messrs. Barnard and Lawrence in their expedition to the Kunene River. Although unsatisfactory as far as the number of species went and their lack of variety, this collection included 60 skins representing 14 species, of which two species and three races or varieties were not represented.

Ten skeletons have been articulated, *i.e.*, Cape Hartebeest, male and female; Black Wildebeest, Blue Wildebeest, Gemsbok, Springbok, hybrid of sheep and Angora goat, Wart-hog, Bush pig, Hyacna, and Tapir.

The thanks of the Trustees are due to Mr. Vaughan-Kirby, Rev. L. Jalla, the Grootte Schuur Estate, and A. W. Dummer.

Birds.—The main accessions have this year been 101 skins, representing 62 spp. from the South West African Expedition. As stated for the Mammals, this collection was disappointing, the more so that it is not likely to be repeated, and I had great expectations of additions and also novelties, as the country south of the Kunene River which had only

been skimmed by Eriksson. The collection includes *Aethoichla gymnogenys* and *Rhinoptilus sechelmi*, and a form of *Ardesia ralloides* with the straw-coloured feathers with black edges confined to the head and hind-neck.

The observations on the mode of the breeding of *Rostratula capensis*, the painted snipe, resulted in the accession of seven skins and of that of three fledgelings, a couple of days old.

To the Central African collection have been added 179 skins representing 112 species, none of which occur in South Africa. A few more kinds of the same description will be eventually received, which with the addition of our stock of West Coast endemic species makes the work of identification of extraneous kinds into our limit of distribution ever so much easier and reliable.

From various other sources nine skins were obtained and from Inaccessible Island, one of the Tristan d'Acunha group, there has been received through the courtesy of Rev. Rogers, the skin of a small land rail which appears to be peculiar to the Island. It has recently been described as *Atlantisia rogersi*. Lowe. I have had a show case partially set apart for the Fauna and Flora of Tristan d'Acunha. The former being, of course, represented by birds. That they are all but one (*Larus dominicanus*) represented, as the list of the captures by the Quest Expedition, drawn by Captain Wilkins show, is satisfactory; but we had, in addition, two more kinds: 1, a South American Cuckoo (*Coccyzus melanocoryphus*) and 2, the Ringed Plover *Aegialitis hyaticola*, accidental importations no doubt, but also in addition we have two examples of *Porphyrio nesiotis* from Tristan, and now a land rail has been added. But the new species of Bunting recorded from Inaccessible Island by Captain Wilkins—i.e., *Nesospiza wilkinsi*—is not represented.

The great work of the year has been the sorting, cleaning, re-labelling and arranging of the extremely valuable and varied mounted collection of birds other than the South African ones. They have been arranged in three contiguous show cases and make a brave show. The cases are, however, too crowded, and as there are a good many typical birds to add to make the lessons of the geographical distribution more effective, two more cases will, it is hoped, be ordered for the incoming year. The labelling of the birds is obsolete, and requiring as it does a great deal of sifting, will not be brought to date for a little time to come. Some sea-birds were also obtained, but not the white form of the Giant Petrel, which was the main object of the search. Seventeen kinds of South African bird's eggs have been added to the cabinet, three of which were not represented. We had, in addition, 44 specimens belonging to 15 foreign kinds, mostly Australian. Three birds' skeletons have been prepared.

The main donors were R. E. Symons, C. Windham, R. A. Dummer, Dr. J. G. M. Melle, P. W. Phillips, Rev. Rogers, and Captain Hare.

Your obedient Servant,

L. PERINGUEY.

DEPARTMENT OF FISHES AND MARINE INVERTEBRATES.

SIR.—I have the honour to present the following report on this Department for the year 1923.

During the first four months of the year I was away on a collecting trip in Ovamboland, on which I have presented a separate report. So far as this Department is concerned, the results were mostly satisfactory. A large quantity of Freshwater Crustacea was collected, which, judging from what has already been sorted and examined, promises to yield a large number of new species as well as species unrecorded from those regions. Several gaps in the series of Land and Freshwater Mollusca were filled up. The Molluscan and Fish fauna of the Kunene River could not be investigated, unfortunately, owing to the river being in flood at the time of our visit.

While on a visit to the Cedarbergen (Clanwilliam) I took the opportunity of investigating the Crustacean fauna of the streams in that district.

The greater part of my time has been spent in a systematic examination of the marine fish collection, and the preparation of a catalogue based thereon. Several new species have been discovered (described in the Museum Annals, vol. 13, pt. 8) and numerous cases of synonymy have been critically examined.

The collections have been enriched by a large number of Fishes and Molluscs, although only three kinds of Fishes are actually new to the collection. A very curious example of a Deep-sea Angler was cast up on the Atlantic shore of the Peninsula during the winter and appears to belong to the northern genus *Corynelophus*, which has not hitherto been recorded from these waters. A valuable collection of Freshwater Fishes from Lake Ngami has supplied a specimen of Woosnam's Cat-fish (*Synodontis woosnami*) hitherto unrepresented in the collection.

The Molluscan collection has been enriched chiefly with Land and Freshwater species. A considerable number of Uganda shells which were presented last year, and whose identification has been very kindly undertaken by Major Connolly, have now been incorporated and are available for comparison with the South African species.

The only publications issued this year dealing with material from this Department are :

- Clark, H. L. The Echinoderm Fauna of S. Africa. *Annals S.A. Mus.* vol. xiii, pt. 7.
 Boulenger, G. A. New Species of Freshwater Fishes, *ibid.*
 Barnard, K. H. New species of Marine Fishes, *ibid.*, vol. xiii, pt. 8.
 Connolly, M. New species of Terrestrial Molluscs. *Ann. Mag. Nat. Hist.* (9) xii, No. 72.

The additions to the collections received during the year are as follows :—

	Specimens.	Species.	New to Collection.
Fishes	172	103	3
Crustacea	42	13	5
Mollusca	175	48	22
Other marine Invertebrates	32	6	1
	<hr/> 421	<hr/> 170	<hr/> 31

The thanks of the Trustees are due to the following donors : H. J. Anderson, H. W. Bell-Marley, R. Bigalke, J. S. Brown, Dr. Cawston, Major M. Connolly.

I have the honour to be,

Sir,

Your obedient Servant.

KEPPEL H. BARNARD.

DEPARTMENT OF ENTOMOLOGY.

To the Trustees of the South African Museum.

SIRS,—The accessions by donations, purchase and collecting by the Staff amounted to 5,601 examples, representing some 2,391 species and, approximately, 192 species new to the Collection, divided as follows :—

	Specimens.	Species.	New to Collection.
Coleoptera	2,522	1,337	26
Hymenoptera	1,255	505	88
Diptera	814	389	53
Orthoptera	156	53	5
Neuroptera	504	65	14
Hemiptera-Homoptera	350	42	16

In this number are included the captures of the Ovamboland Expedition—*i.e.*, 2,503 specimens, 1,574 examples, and very approximately 95 species new to the Collection. They have all been pinned and labelled, and set when required. They are being sorted in preparation for being forwarded to Specialists for reports, or treated by the Staff.

We have this year had a fairly large number of moths. A fair number of them better set than many in our cabinet, will go there to replace them. A small number of Micro-Lepidoptera were also obtained and among them are a fair number of species new to the Collection and a smaller one of new species. The abundance of these Micro-Lepidoptera in our immediate neighbourhood is really surprising. I may quote : Neighbourhood of Bain's Kloof, 15 kinds captured, 9 novelties ; Cedarbergen, four kinds, two novelties, etc. The Micro-Lepidopterous fauna of South Africa, although running into four figures, can be said to be very little known, for there is no reason to doubt that the mountains of the northern and eastern parts harbour as many as those of the south. But these families are very poorly represented in the dry south-west of our collecting if the collecting made on our behalf is to be a criterion. I have now in manuscript the description of hundred new species collected during the last two years. That good progress is made by us in making known among others, the entomological fauna of South Africa is instanced by the Entomological papers in print which extraordinary circumstances have prevented from being issued this year :

South African Megaloptera.

Some Mosquitoes from Ovamboland, etc.

The South African Nemestrinidæ (Diptera).
 The South African Mydaidæ (Diptera).
 Some South African Parasitic Hymenoptera of the families Evaniidæ, Braconidæ,
 Alysiidæ and Plumariidæ.

I have in manuscript, to be issued in the course of next year, if finances permit:

New South African Micro Lepidoptera.
 South African Rhagionidæ (Diptera).
 Sciaridæ, Mycetophilidæ and Bibionidæ (Diptera).
 The Oedemeridæ of South Africa (Coleoptera).
 On some South African Ichneumonidæ (Hymenoptera).
 The South African Fruit-Flies (Trypaneidæ).
 Monograph of the Formicidæ of South Africa (Appendix).
 A paper on the Geometridæ (Lepidoptera).

The issue of the fifth part of the Monograph of the Formicidæ of South Africa, by Dr. C. Arnold, has been received too late for issue in 1923.

A fair amount of incorporation in the cabinets has been carried, but it is evident that the work in this Department cannot be carried effectively unless more numerous assistance is obtained. It has grown too big even for two specialists. As to the accommodation, the time is drawing near when the Director will have to vacate the room for want of space.

The main donors have been:—Messrs. K. H. Barnard, H. W. Bell-Marley, J. S. Brown; the Bulawayo and Kimberley Museums, Messrs. D. Gunn, H. Feltham, H. K. Jack; W. E. Jones, E. W. Lannin, R. F. Lawrence; Dr. G. J. M. Melle, and R. H. R. Stevenson.

DEPARTMENT OF ENTOMOLOGY (INSECTS EXCLUDED).

The Director, South African Museum.

SIR.—I have the honour to present the following report on this Department for the year.

The first three months, occupied with the expedition to the Kunene River in S.W. Africa, was productive of a considerable amount of new material, which on my return was sorted and registered.

The amount of material taken was too large to allow of specific work being done on all families, and this was limited to the Aviculariidæ, Ammoxenidæ, Zodariidæ, Thomisidæ, Pisauridæ and Oxyopidæ of the Araneæ. Of these families 36 species were examined, of which 19 proved to be new to science.

The Museum's collection of Myriopoda, which had been sent to Austria for identification, was on its return set up and a catalogue, showing the distribution of each species known up to the present, was made out.

The Myriopod material taken in S.W. Africa was then also despatched to Austria for purposes of identification.

A considerable period of time has been spent in correcting and re-writing for publication a work on the Museum's collection of Myriopods.

The Pediculidæ taken in S.W. Africa include Anopleura taken from six Mammalian hosts and Mallophaga from 21 Avian hosts. The former have been mounted and await identification.

Siphonaptera were taken from two Mammalian hosts and have been despatched to England for identification.

The Arachnid material acquired during the year is as follows:—

	No.	Families.	Species.
Araneæ	753	23	91
Myriopoda	70	6	8
Scorpionidæ	42	3	5
Acari	69	3	6
Opiliones	8	1	1
Pseudo Scorpiones	18	1	1
Pedipalpi	1	1	1
	<hr/> 961	<hr/> 38	<hr/> 113

The thanks of the Trustees are due to the following donors:—J. S. Brown, H. W. Bell-Marley, K. H. Barnard, C. Hahn, Dr. J. G. Melle.

I have the honour to be,

Sir,

Your obedient Servant,

REGINALD F. LAWRENCE.

DEPARTMENT OF GEOLOGY AND MINERALOGY.

SIR,—I have the honour to submit my report for the year 1923 as follows :—

Specimens catalogued :—Rocks, 62 ; Minerals, 36 ; total, 98.

Among the more notable additions may be mentioned :—

1. *A collection of Rocks from South America*, collected and presented by Dr. A. L. du Toit. Included in this are glaciated pebbles, tillite, sandstone, etc., from representatives of the Karroo System as it is developed in South America.
2. *A large specimen of Rose Quartz and a series of Copper Minerals* from South West Africa, presented by the Rev. de Witt.
3. *Muscovite from Sinoia, Rhodesia, and Phlogopite from South West Africa*, both in large sheets, the gift of D. R. Ryall, Esq.
4. *So-called South African "Jade,"* presented by the Geological Survey. This comes from the Bushveld, near Rustenburg and is a pale green, very hard, compact rock, which forms an extremely beautiful ornamental stone, taking an excellent polish. It is being exploited and exported to China and Japan.
5. *A series of Oil Shale and Torbanite specimens* from the Oil Shale Beds of the Ermelo District, in the Eastern Transvaal, presented by the Geological Survey.
6. *A collection of Rocks from the Kunene River*, from K. H. Barnard, Esq.
7. *Germanite*, presented by the Directors of the Tsumeb Mine, South West Africa. This is a new and recently discovered zinciferous tennantite, containing several per cent. of the very rare element germanium.
8. *Assorted specimens of Fluorspar* from Ottoshoop, in the Western Transvaal, presented by the Cape Explosives Co., Ltd.

The Minerals (all South African) formerly exhibited in some of the lower cases in the inner room, have been transferred to the General Collection of minerals accommodated in the large room devoted exclusively to this Department, so that the whole of the inner room has become available for the Department of Palaeontology.

The General Collection of Minerals is arranged more or less in accordance with Dana's classification, and the different groups are now to a large extent illustrated by South African occurrences. Where this was not possible, material from well-known foreign localities has been exhibited.

The second room belonging to this Department is devoted to Economic Geology and illustrates the varied mineral resources of South Africa, including, as far as possible, their industrial applications. This branch has been further strengthened by additional material, demonstrating the undoubtedly great potentialities of the South African Oil Shale Industry.

A. L. HALL.

Pretoria, 15th January, 1924.

DEPARTMENT OF PALÆONTOLOGY.

SIR,—I have the honour to submit the following report on the working of this Department for the year 1923.

The following specimens have been registered during the year :—

Karoo Plants	34
Cretaceous and other Invertebrates	509
Karoo Reptilia and Amphibia	12
Mammals	3
<hr/>	<hr/>
Total	558

In addition, a large collection of Cretaceous Invertebrates (excluding Cephalopoda) collected in Pondoland remains to be incorporated in the Collection.

During the year two small Collecting Expeditions have been sent out. Mr. T. W. Gevers spent some weeks on the coast of Pondoland collecting with a view to zoning the Cretaceous deposits ; he brought back a large collection, which has been developed and cleaned, and was sorted by Mr. Gevers before his departure from the country. I have identified the Cephalopoda, and the results of a study of these seem to preclude any possibility of subdividing the Pondoland Cretaceous. Mr. Gevers also made detailed notes of the nature of the sediments comprising the series.

The other Expedition collected vertebrates in the Lower Beaufort Beds.

Among the donations during the year the following are noteworthy :—

- (a) Permian and Triassic fossils from Argentina and Brazil, presented by Dr. A. L. du Toit ;

- (b) A small additional collection of Cretaceous fossils from Angola, presented through Dr. L. Reinecke ;
 (c) Fossils from Aliwal North, from A. W. Higgins, Esq. ;
 (d) A large *Nautilus manuanensis* from Zululand, presented by Colonel the Hon. Denys Reitz, M.L.A.

The cast of the hind foot of a large Triassic Dinosaur from Germany was purchased.

Other donors who deserve the thanks of the Trustees are the Geological Survey, E. Haynes, Esq., P. H. Newcombe, Esq., Dr. A. W. Rogers, and S. Walters, Esq.

Some alterations have taken place in the exhibited Series. The removal of the minerals from the Palaeontological Rooms has given extra space, some of which has been utilised in extending the series of Invertebrates by the incorporation of Angola and Zululand forms, and some by the enlargement of the Reptilian exhibit. Further, the installation of two iron-and-glass cases has enabled us to place the *Struthiocephalus* skeleton in a case and to replace the *Pareiasaurus schwarzi* skeleton—which has done duty for some years—by the less-crushed specimen of *Pareiasaurus bairdi*.

A new case has been installed in the Osteological Store, and three Pareiasaurian skeletons mounted in it.

Development work has proceeded fairly continuously through the year. The Gevers collection of Pondoland fossils was prepared for study ; and three skeletons of Karroo reptiles have been detached from the matrix.

The Pondoland Cephalopods have been named. A descriptive account of the Angola collection is being prepared. A collection of mammalian remains was named for the Rhodesian Geological Survey.

No papers were published in the "Annals," but a description of some fossil woods from the collection by Mr. J. Walton appeared in the "Philosophical Transactions" during the year.

The Department was visited in the first half of the year by Dr. E. C. Case of the University of Michigan, who examined the Karroo collection preparatory to his tour through the Karroo area. Dr. R. Broom has also examined certain of the types of Karroo reptiles.

I have the honour to be,

Sir,

Your obedient Servant.

SIDNEY H. HAUGHTON.

Hon. Curator, Palaeontological Collections.

DEPARTMENT OF ANTHROPOLOGY AND ETHNOLOGY.

To the Trustees of the South African Museum.

SIRS,—I have the honour to submit my report on the Department of Anthropology and Ethnology.

Prominent from the donations is that by Mr. V. H. Brink of the material used by him in his paper on "A preliminary genetic study on the osteology of the Griquas." The material consists of 18 skeletons, two of which are Bush.

The additions to the "San" series of skulls and skeletons have this year been very large, if one remembers the difficulty of obtaining serviceable specimens with a history. No less than 13 Strand-Looper, 10 Hottentot and one dubious race were obtained. A number of calvaria of Ovambo, too incomplete however for study, were also received.

The Trustees' thanks are especially due to Messrs. G. H. Hermon, W. van der Byl, M.A. van Breda, F. Ward-Cox, Dr. Laidler, Dr. S. H. Haughton and M. A. Divine for their donations and help.

Mr. J. Drury succeeded in taking casts of the figures of four Hottentot figures, three Bushmen, two Damara, one Ovambo, and took also the busts of two Hottentots. A figure of a Kalahari Bushman in the act of making string has been completed except for the painting.

Two pots from Bushmanland were donated by Mr. R. A. Good. They are both conical, but the larger of the two has rudimentary unperforated ears : the smaller is of the orthodox shape, and has been very skilfully restored.

Some very thick pot-sherds from South West Africa that had been fixed together with clamps of beaten copper were presented by Lieut.-Colonel Hardy.

A rock-shelter in the Cape Peninsula was investigated to a depth of six feet. Nothing was found in the layers of shells and earth, but in the sandy floor three fragments of lance

or javelin heads (points) worked on each side, together with others partly worked on one face. Dr. Rattray has presented a section of a stone bracelet of very large size found in a large midden in the neighbourhood of East London.

A well-polished dolerite implement with a dense yellowish-brown patina and in the shape of a thick marlin-spike 13 in. long and 2—3 in. in thickness, found in the alluvial gravel, of Bloemhof, Transvaal, is a valuable accession.

Two collections of Ethnological objects, one made by the Museum Collecting Party in Ovamboland, and another made for us in the Ba-Rotse country by Mons. L. Jalla have been added to the Collection.

In addition to the names of donors cited above, the thanks of the Trustees are due to the following :—W. E. Abbott, Dr. E. Ortlepp, J. Gevers, C. L. Biden, R. A. Dummer, Father R. Solier, Rev. H. Kling, G. Reid, Dr. Ashton, R. C. Camp, R. A. Good, and Captain A. G. Stigand.

I have the honour to be,

Sir,

Your obedient Servant,

L. PERINGUEY.

DEPARTMENT OF BOTANY.

To the Trustees of the South African Museum.

SIRS,—In the absence on study leave of the Assistant in this Department, I have the honour to report on the work done and the contributions and acquisition made or received during the year.

As many as possible of the unnamed Monocotyledons in the South African Collection have been named. Many of the names checked, and a great many added.

Among the specimens mounted were :—

63 species of Sea Algæ.

686 South West African Plants.

5,141 sheets of South West African plants were purchased; 688 were donated, and 266 sheets of identified species were sent on loan to several applicants, amongst them being the Division of Botany, Pretoria, and the Natal Herbarium, Durban.

1,298 sheets were sent to our Assistant who has been working at Kew during the whole year. An exchange of New Zealand Algæ was arranged.

The thanks of the Trustees are due to Messrs. J. P. Stokoe, W. Scaife, C. Thorne, Miss Guthrie and the Kimberley Museum. The collection made in Ovamboland amounts to 496 species.

I have the honour to be,

Sir,

Your obedient Servant,

L. PERINGUEY,

Director.

KOOPMANS DE WET ANNEXE.

To the Trustees, South African Museum.

The number of visitors during the year was 23,457.

The following donations have been received :—Old Chair, presented by Mr. Carter. It happened to belong to a set (four) already in the Collection; Floral design Hair-Work, three hair work brooches, pair bracelets, pair of earrings, necklace with Cross, stated to be 150 years old, presented by Mrs. Vos (*nee de Wet*); Glass-bell and silver-mounted stick (modern), presented by Mr. and Mrs. A. de Villiers, Cape Town.

Captain G. Cloete has loaned a small collection of old Dresden, Berlin and Vincennes China.

The Building has been kept in good repair.

I have the honour to be,

Sirs,

Your obedient Servant,

L. PERINGUEY.

SOUTH AFRICAN MUSEUM.

STATEMENT OF INCOME AND EXPENDITURE FOR THE YEAR ENDED 31st DECEMBER, 1923.

INCOME.		EXPENDITURE.	
	£ s. d.		£ s. d.
To Balance, 1st January, 1923	1,997 3 6	By Salaries	3,537 11 4
„ Grants:—		„ Library: Purchases and Subscriptions ..	71 0 3
Union Government .. £6,150 0 0		„ Expenses in Travelling and Collecting	
Cape Town Corporation .. 200 0 0		Specimens	698 13 1
	6,350 0 0	„ Upkeep of Museum	830 15 10
„ Interest:		„ Freight and Railway Charges	61 9 2
Hadjé Suliman Shah		„ Postage and Posties	125 1 3
Mohamed Coin Fund .. 4 15 0		„ Sunday Duty	101 0 0
Fixed Deposit, Standard		„ Purchases of Show Cases	1,952 17 6
Bank	72 10 0	„ Publications	749 11 11
		„ Bank Charges	2 13 6
„ Sale of Publications	33 0 1	„ Undrawn Wages	£7 11 6
„ Refunds:		Less Overdrawn Wages	3 7 6
Administration South			
West Africa in con-		„ Undrawn various	4 10 8
nection with travel-		„ Gardeners' Wages	87 2 6
ling and collecting .. £114 0 10			
K.W.T. Museum	30 5 8	„ Balance:	
Mines Department	9 17 6	Cash in Bank	£324 0 2
B. Lawrence	1 0 0	Petty Cash	0 5 0
	155 4 0	Cash advanced to Director:	
„ Bank Discounts	5 16 9	Extra Work .. £3 7 6	
		Travelling .. 69 7 10	
			£72 15 4
		Less sums due to Director:	
		Gardener's	
		Wages .. £7 11 6	
		Various .. 4 10 8	
		F. C. Wilson .. 3 0 0	
			£15 2 2
			57 13 2
			381 18 4
		Includes £61 8s. 4d. appertaining to	
		the Coin Fund.	
	£8,618 9 4		£8,618 9 4

STATEMENT "A."

HADJE SULIMAN SHAH MOHAMED FUND FOR THE PURCHASE OF COINS.

Amount of Investment with the South African Associations	£100 0 0
Balance of Interest on 31st December, 1922	56 13 4
Interest received during period 1.1.23 to 31.12.23	4 15 0
	£161 8 4

Audited and found satisfactory.

J. DE V. ROOS,

Controller and Auditor-General,

Cape Town, February, 1924.

KEPPEL H. BARNARD,

Acting Director,

South African Museum,

Cape Town, February, 1924.

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UNION OF SOUTH AFRICA.

REPORT

OF THE

SOUTH AFRICAN MUSEUM

FOR THE

Year ended 31st December, 1924.

THE LIBRARY OF THE
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*Presented to both Houses of Parliament by Command of His Excellency
the Governor-General.*

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Trustees of the South African Museum :

THE RIGHT HON. JOHN X. MERRIMAN, P.C.

SIR THOMAS MUIR, C.M.G., M.A., LL.D., D.Sc., F.R.S.

THE HON. JOHN WILLIAM JAGGER, F.S.S., M.L.A.

Staff of the South African Museum :

EDWIN LEONARD GILL, M.Sc., Director and Keeper-in-Chief.

KEPPEL HARCOURT BARNARD, M.A., D.Sc., F.L.S., Assistant Director ; in Charge of Fish and Marine Invertebrates.

REGINALD FREDERICK LAWRENCE, B.A., Assistant in Charge of the Arthropoda (Insects excepted).

ALBERT JOHN HESSE, B.Sc., PH.D., Assistant in the Entomological Department.

MISS STAR GARABEDIAN, B.A., Assistant in Charge of the Botanical Department.

ARTHUR LEWIS HALL, B.A., Honorary Keeper of the Geological and Mineralogical Collections.

SIDNEY HENRY HAUGHTON, B.A., D.Sc., Honorary Keeper of the Palæontological Collections.

J. DRURY, Taxidermist.

C. W. THORNE, Junior Botanical Assistant.

MISS P. EDWARDS, Clerical Assistant.

UNION OF SOUTH AFRICA.

Report of the South African Museum for the Year ended 31st December, 1924.

*Presented to both Houses of Parliament by Command of His Excellency
the Governor-General.*

REPORT OF THE TRUSTEES.

The Trustees of the South African Museum have the honour to present to the Government, in accordance with the provisions of Act No. 17 of 1857, their report for the year 1924.

The outstanding event of the year was the serious blow to the Institution caused by the sudden death, in February, of the Director. Dr. Péringuey became first connected with the Museum in 1882, when he was appointed an honorary assistant for the purpose of arranging the coleoptera, an order of insects to which he had given special study. In 1884 he was placed definitely on the ordinary staff; in 1896 he was made Assistant Director; and in 1906 he rose to be Director. His entrance on office was soon marked by a new line of effort; for, as a consequence of the visit of the British Association in 1905, he had come to realise the great importance of obtaining accurate photographs and casts of the native races, and to this work, previously neglected in South Africa, he devoted himself with all his wonted enthusiasm, the result being that to-day the Cape Town collections of this character are held by anthropologists to be not only pre-eminent but practically unique. While, however, pressing forward this and other departments of Museum work, he never ceased to care for his own special subjects—beetles, bees, and stone implements—his devotion to which is fully evidenced by the numerous papers he published on them. In summing up, it may be truly said that his forty years of connection with our Institution were years of enthusiastic work, and—what the Trustees recall with special pleasure and gratitude—his eighteen years of Directorship were years of constant solicitude for the Museum's welfare.

The vacant post was at once widely advertised in South Africa and in one European journal, with the object of securing a successor who, in addition to a sound general knowledge of science, should have practical training in museum work and experience and skill in museum administration. A good field of applicants in time became available, and, after careful and thorough inquiry, Mr. Gill, the present Director, was appointed to take up work on the 1st of January in the new year.

It will readily be understood that the interregnum has slightly interfered with progress in some directions, and notably of course in projects on which Dr. Péringuey's own mind was engaged. That these were not few may easily be guessed, for he loved to keep a firm grasp on all things, even things of detail. The Trustees were fortunate in having Dr. Barnard in charge as Acting Director, to whom they are indebted for able and loyal service. In a week or two, with his continued assistance, not only will all arrears be overtaken, but the Director's new lines of effort will be opened, and wide and sound progress be once more the order of the day.

THOS. MUIR,
Chairman of Trustees.

DIRECTOR'S REPORT.

To the Trustees of the South African Museum.

SIRS,—I have the honour to present the following report on the administration of this Institution during the year 1924.

Staff.—Early in the year the Museum suffered grievous loss in the death of the Director, Dr. L. Péringuey.

The Assistant Director, Dr. K. H. Barnard, was appointed Acting Director, and has carried on the administration of the Museum for the rest of the year, and is responsible for the present report.

To succeed Dr. Péringuey, the Trustees appointed Mr. E. Leonard Gill, who started his duties on the 1st January, 1925.

At the beginning of the year Dr. A. J. Hesse, Ph.D., Edin., was appointed assistant in charge of the Entomological Department. Dr. Hesse has been chiefly engaged in arranging the collections of Hemiptera (Plant Bugs), and systematically studying this economically important group with a view to publication.

Mr. H. Bolus, who has been Hon. Keeper of the Bird Collection, unfortunately met with an accident early in the year, and has been prevented from continuing his work at the Museum. He has, however, given the Acting Director valuable advice and information connected with this department.

Visitors.—The number of visitors totalled 161,803, divided as follows:—

White .. Adults	Male	41,946
	Female	35,612
	Children	36,536
Coloured .. Adults	Male	18,322
	Female	15,382
	Children	14,005
Largest number in one day (11th January)		2,046
Smallest number in one day (15th August)		35
Number of visitors on Sunday afternoons ..		38,637
Largest number in one Sunday		1,028

118 school parties and drawing classes, numbering 3,067 pupils, visited the Museum.

Acquisitions (presented, purchased, or collected by Staff):—

	Specimens.	Species.	New to collection.
Mammals	77	33	4
Birds and Birds' Eggs	23	14	—
Reptiles and Amphibians	104	32	3
Fishes	50	25	9
Crustacea	110	36	12
Mollusca	84	22	7
Marine Invertebrates	23	5	—
Insects	1,567	564	94
Arachnids and Myriapods	988	126	49
Geology, Mineralogy and Palaeontology ..	530	—	40
Anthropology and Ethnology	30	—	10
Botany	784	388	69
Antiquities and Curios	29	—	14

Library:—

Books .. Presented	3
.. Purchased	14
Pamphlets .. Presented or in exchange ..	777
.. Purchased	114

In addition to the above, 79 books and 606 pamphlets were purchased from the estate of the late Dr. L. Péringuey.

It will be imperative within the next year to find more space for the rapidly increasing general and specialist libraries, which are already severely overcrowded.

Publications.—The following parts of the Annals were published during the year:—

- Vol. XII, pt. 8. "Fauna and Stratigraphy of the Stormberg Series. On some Gorgonopsian Skulls in the South African Museum. By S. H. Haughton, 195 pp.
- Vol. XIV, pt. 6. A monograph of the Formicidae. Pt. 6, by G. Arnold, 91 pp.
- Vol. XIX, pt. 1. Parasitic Hymenoptera, by C. T. Brues. S. African Megaloptera, by P. Esben-Petersen. Mosquitoes from Ovamboland and Cape Province, by F. W. Edwards. S. African Nemestrinid and Mydoid Diptera, by M. Bezzi. S. A. Crustacea, pt. 12, by T. R. R. Stebbing, 248 pp., 7 pls.
- Vol. XIX, pt. 3. S. African Trypanid Diptera, by M. Bezzi, 126 pp., 4 pls.
- Vol. XX, pt. 1. Contributions to S. African Crustacean Fauna, pt 7: Cirripedia, by K. H. Barnard, 103 pp., 1 pl.
- Vol. XX, pt. 2. Fresh-water Entomostraca of the Cape Province, pt. 2, by G. O. Sars, 88 pp., 19 pls.

Vol. XX, pt. 3. Contributions to a Knowledge of the Fauna of S.W. Africa. 1. Crustacea Ostracoda, by G. O. Sars. 2. Crustacea Phyllopora, by K. H. Barnard. 3. Crustacea Isopoda Terrestria, by K. H. Barnard, 41 pp., 6 pls. Title page and index to volumes VIII, XII and XIV.

A second edition of the Guide to the Post Office Stones was issued, including a brief account of certain historical stones, monuments and beacons in the collection.

Collecting Trips by the Staff.—Mr. Lawrence returned early in the year from Portuguese East Africa, whither he had proceeded in October, 1923, on a general collecting trip. The resultant collections comprise a large number of valuable specimens, including many new to the collections and many undescribed species.

Mr. Lawrence, Dr. Hesse and Mr. Thorne (Junior Botanical Assistant) left at the end of December to continue the exploration of South West Africa in conjunction with the S.W. Administration.

It was intended to continue the survey of the mountain ranges in the Cape, but owing to the impossibility of the Assistant Director getting away from office, no further progress in this field has been accomplished.

Wembley Exhibition.—Up to the time of his death, Dr. Péringuey was chairman of the Museums Committee of the British Empire Exhibition Committee (Union of South Africa). Afterwards the Acting Director was appointed acting chairman for the purpose of completing various details connected with the Museum's exhibits and financial matters.

The exhibits contributed to the Exhibition by this Museum comprise, in addition to several skins for the exhibit of buck and other animals, the following replicas of specimens in the Museum: four Bushman casts, Rock-gravings and Post-office stones.

The four Bushman casts have been presented to the Trustees of the British Museum under certain conditions pertaining to copyright.

Broadcasting and Lecturing.—At the invitation of the Cape Peninsula Broadcasting Association, a series of short talks on matters dealing with the Museum and its activities was initiated. Dr. Barnard outlined the history of the Museum since its inception as a semi-private collection about one hundred years ago. Dr. Haughton gave talks on the Fossil Reptiles of the Karroo, and on Bushman Paintings. It is hoped that this series of talks will be continued.

Public lectures on Natural History subjects have been given by Dr. Barnard and Mr. Lawrence.

GENERAL ARRANGEMENT AND CONSERVATION.

Mammals.—The most important event during the year has been the completion of the Whale Shed and re-erection of the Whale skeletons therein. The shed was opened to the public in the early part of the year and has proved a great attraction.

The shed serves its purpose and the skeletons are shown to advantage. Two glass cases have been ordered in which to exhibit specimens of the whale-bone and of the smaller Cetaceans, which cannot be exhibited except under such protection.

In February a very fine bull specimen of the Elephant Seal (*Macrorhinus leoninus*) was killed at Simonstown and secured for the Museum. It has been mounted in the Whale Shed together with its skeleton and also a cow of the same species from Kerguelen Island.

The Museum has been fortunate in securing a fine pair of Giraffes. The skeletons of both bull and cow have been mounted and temporarily erected in the Whale Shed. The mounting of the skins will be proceeded with in 1925.

Excluding specimens prepared as skins, Mr. Drury, the Taxidermist, reports that two animals and five skeletons have been mounted for exhibition.

Birds.—Mr. Drury reports that nine birds and one skeleton have been mounted, exclusive of those prepared as skins. Several of the old specimens have been replaced by new ones. No important additions have been made.

Reptiles and Amphibians.—Accessions in this group have been mainly due to the collecting of Mr. R. F. Lawrence and J. S. Brown. Mr. Hewitt, Director of the Albany Museum, Grahams-town, has had several specimens on loan for comparison in his work of revision. Some of our specimens proved to be wrongly named, and Mr. Hewitt has discovered among them some undescribed species. Specimens have also been loaned for comparison to Mr. J. H. Power at Kimberley.

Fishes.—Several important additions have been made to the exhibited series, including a large devil-fish (*Manta*) from the old Museum Collection, four sharks, two rays, a chimaera, two Josephs, and a fine mirror-carp, caught at Princess Vlei by Mr. H. R. Beard.

The exhibited series of Fishes can now be said to be thoroughly representative of the local fauna, though there are still many gaps to be filled in the study collection.

Entomology.—The task of dealing with the large number of accessions has been a difficult one. Dr. Hesse has taken over the Hemiptera, while the Acting Director has incorporated the specimens in certain groups, e.g., Neuroptera, and has sorted out other groups to send to specialists for report. Lack of cabinet room and space generally is being acutely felt.

Geology and Mineralogy.—Several important additions have been made to the collections. The Arsenical Gold Ores and the large block of Talc referred to in the Hon. Curator's Report, are exhibited in the Economic Room. Both the Talc and the Amethyst Quartz are magnificent exhibition specimens.

Palaeontology.—In the exhibited series a cast and restoration of a very fine skull and horn-cores of the *Bubalus bairdi* has been made and hung on the main stairway. A preliminary exchange of plaster-casts of fossil reptiles has been arranged with the United States National Museum, and it is hoped that further exchanges will be carried out in the future.

Botany.—In the early part of the year Miss E. K. Tredgold acted as temporary Botanical Assistant until the return of Miss Garabedian, who had been on study leave in England. While at Kew Miss Garabedian did a considerable amount of systematic and bibliographical work, chiefly in connection with the flora of South West Africa.

Some important collections, which include many new or rare species, have been received during the year.

Anthropology and Ethnology.—Accessions have not been numerous in this department. Several important additions have been made, the most valuable being a marale stick, from the Transvaal, an object which hitherto has not been represented in the collections. Dr. Stohr has presented an unusual specimen of a 'kwe, made out of soapstone. Reports of local finds of skeletons have been investigated by Mr. Divine, formerly on the staff, on behalf of the Museum; but nothing of particular interest was discovered.

The continuation of the investigation of caves and kitchen-middens has had to be discontinued for the present.

Koopmans de Wet House.—The removal of the loan collection of Chinese porcelain has restored to the House its distinctive character. There have been some minor alterations in the arrangement, and several valuable donations have been received.

KEPPEL H. BARNARD,
Acting Director during 1924.

E. LEONARD GILL,
Director.

REPORTS OF DEPARTMENTS.

(I) DEPARTMENT OF FISHES AND MARINE INVERTEBRATES.

To the Director, South African Museum.

SIR,—I have the honour to present the following report on this Department for the year 1924.

Owing to Dr. Péringuey's death and my appointment as Acting Director from February onwards I have been unable to devote my full time to this Department. I have also been unable to do any field work or continue my observations on the fresh-water fauna of the S.W. mountains.

Some interesting specimens of Sharks and Rays are the most important additions to the collection. These include the 6-gilled and 7-gilled sharks, and two species of Sting-ray. These have all been mounted for exhibition. A chimaera was also obtained and a pair of Josephs (*Callorhynchus*) has been mounted to replace a very old specimen. A Dolphin-fish (*Coryphaena*) was procured through the kindness of Dr. Gilchrist. Mr. Benson, skipper of one of the trawlers, and Mr. Austin, of the Pier, have helped us considerably in obtaining new and interesting specimens.

Several interesting Crustaceans have been received, including a few duplicates of a collection from Portuguese East Africa which were presented by Dr. Gilchrist in return for a report on the collection. An additional specimen of the Giant Crab (*Neolithodes*) has been placed on exhibition.

In Mollusca several novelties have been presented by Dr. Cawston and Mr. Kincaid.

Two reports on the Crustacea collected in South-West Africa have been prepared by myself and a third by Prof. G. O. Sars. I have continued the critical examination of the collection of Marine Fishes with a view to publication. The completion of this work will take at least another year. There are also in hand reports on the Crustacea and Marine Mollusca.

The following reports on material from this Department have been published during the year:—

- G. O. Sars. Ostracods of the Cape Province. *Annals S. Afr. Mus.*
- G. O. Sars. Ostracods of South-West Africa. *Annals S. Afr. Mus.*
- T. R. R. Stebbing. S.A. Crustacea, pt. 12. *Annals S. Afr. Mus.*
- K. H. Barnard. S. African Cirripedia. *Annals S. Afr. Mus.*
- K. H. Barnard. Phyllopods and Terrestrial Isopods of South-West Africa. *Annals S. Afr. Mus.*
- K. H. Barnard. A new genus and species of Bathynomus. *Fish. & Mar. Biol. Survey Reports.*
- K. H. Barnard. The digestive canal of Isopod Crustaceans. *Tr. Roy. Soc. S. Africa.*

The number of accessions during the year is as follows :—

	Specimens.	Species.	New to the Collections.
Fishes	50	25	9
Crustacea	110	36	12
Mollusca	84	22	7
Other Marine Invertebrata	23	5	—

The thanks of the Trustees are due to the following donors and collectors: Mr. A. Austin, Mr. E. Benson, Mr. J. S. Brown, Dr. F. G. Cawston, Major M. Connolly, Dr. J. D. F. Gilchrist, Mr. S. Kincaid, Mr. R. F. Lawrence.

I am, etc.,

KEPPEL H. BARNARD,

Assistant Director.

(2) DEPARTMENT OF INVERTEBRATES (ARACHNIDS AND MYRIAPODS).

To the Director, South African Museum.

SIR,—I have the honour to present the following report on this Department for the year.

The first two months of the year were spent in field collecting work in the districts of Gaza and Inhambane, Portuguese East Africa. On my return at the end of February the Arachnid material obtained was sorted and indexed, and the Myriapods, which comprised a relatively large proportion of the collection, were sent for identification to Count von Attems at Vienna, by whom the previous collections of the Museum had been worked. The Pseudoscorpions were sent to Mr. Hewitt, Albany Museum, Grahamstown, who is working on the Museum's collection there.

The first 10 families of the Araneae, collected by the Museum Expedition to Ovamboland, were arranged and described, the great majority of species (41 out of 50) being new to science.

It is hoped that 1925 will see the completion of the work started on the Araneae as well as the Scorpions and Solifugae, thus completing the Arachnid fauna collected by the Museum Expedition of 1923. The Museum's collection of Acari has been sent to Drs. Brumpt and Larrousse, of the Laboratoire de Parasitologie, Paris, for identification.

The list of additions is as follows :—

Aranæe	717
Myriapoda	194
Scorpiones	19
Solifugæ	3
Acari	28
Opiliones	7
Pseudoscorpiones	20
Total	988

The thanks of the Trustees are due to the following donors: H. K. Munroe, J. S. Brown, C. W. Mally, K. H. Barnard.

I am, etc.,

REGINALD F. LAWRENCE.

(3 a) DEPARTMENT OF ENTOMOLOGY (HEMIPTERA).

To the Director, South African Museum.

SIR,—I have the honour to submit the following report on this Department.

During this year I have been engaged on the classification and arrangement in the cabinets of the Museum's collection of Hemiptera. I have also compiled a list, with descriptions of new species, of the Heteropterous and Homopterous Hemiptera of South-West Africa, which have been obtained by the previous expeditions to that region, and from private collectors in the past. Altogether 58 new species and two new varieties, including 11 new genera, have been described.

The main accessions to the collection of Hemiptera have been: a collection of Psyllidæ, composed of 28 specimens, including six species and all new to the collection, presented by Dr. R. W. Pettey; a collection of both Heteroptera and Homoptera from Portuguese East Africa, as a result of the Museum expedition of 1923-24, and specimens from Zululand and South-West Africa.

No reports on the Hemiptera have been issued during the year.

The thanks of the Trustees are due to the following donors: Dr. F. W. Pettey, R. F. Lawrence, J. S. Brown and W. E. Jones.

I am, etc.,

ALBERT J. HESSE.

(3 b) DEPARTMENT OF ENTOMOLOGY (GENERAL).

To the Director, South African Museum.

SIR,—I have the honour to submit the following report on this Department.

After the death of the late Director I took over the general management of the Entomological Collection exclusive of the Hemiptera, on which group Dr. Hesse has been engaged.

Several collections made by members of the staff and correspondents have been mounted and in part incorporated. The most important collection received this year has been that made by Mr. Lawrence in Portuguese East Africa.

Specimens in those groups on which specialists are now at work have been sorted out and forwarded. The collections are now so large that they are mostly contained in boxes. This method is very inconvenient both to the staff and to students desiring to consult the collections. It will therefore be necessary to obtain at least three new cabinets at the earliest opportunity.

During the year the following Entomological papers have been published on Museum material, in the Museum Annals.

- C. T. Brues. Parasitic Hymenoptera of the families Evaniidæ, Braconidæ, Alysiidæ and Plumariidæ.
 P. Esben Petersen. South African Megaloptera.
 F. W. Edwards. Mosquitoes from Ovamboland and the Cape Province.
 M. Bezzi. South African Nemestrinidæ.
 M. Bezzi. South African Mydaidæ.
 M. Bezzi. South African Trypaneidæ.

The thanks of the Trustees are due to the following donors: J. S. Brown, R. Colson, W. E. Jones, R. F. Lawrence, W. Robertson, R. Stevenson.

I am, etc.,

KEPPEL H. BARNARD,
 Assistant Director.

(4) DEPARTMENT OF GEOLOGY AND MINERALOGY.

To the Director, South African Museum.

SIR,—I have the honour to present my report for the year 1924. The additions to this Department were as follows:—

Rocks	36
Minerals	8
Total	44

1. *Additions to Exhibited Material.*—The collections accommodated in the room set apart for Industrial and Economic Geology have been enriched by the following material, presented by the Geological Survey:—

(a) *Arsenical Gold Ores* from the Maid of De Kaap Mine near Barberton. The reef of this important producer is typical of the class of contact ore deposits found in the metamorphosed belt of shales belonging to Moodies Series of the Swaziland System close to their contact with the intrusive Older Granite of the Crocodile Poort Ranges. This ore is highly refractory owing to the large admixture of metallic sulphides, notably of Arsenic. The latter is recovered in the form of arsenious oxide and thus forms an important by-product used as the basis for the manufacture of sheep dip.

(b) *Talc* from Malelane in the Eastern Transvaal. This material comes from the workings of the Lion Talc Mines which are very favourably situated close to the Eastern Line and yield first grade pale sea green talc said to equal the best Italian variety.

(c) Dr. A. L. du Toit has kindly presented a large specimen of auriferous scheelite from near Leydsdorp in the Eastern Transvaal.

(d) The Department is indebted to Professor Newbery for a fine mass of amethyst quartz from Lake Huron, Canada.

2. *Other Donations.*—Thanks are also due to Messrs. K. Cameron, R. Williams, W. S. Durrant, D. van Niekerk, A. J. Hopper, J. Parry and J. Heiman for various welcome donations.

I am, etc.,

A. L. HALL,
 Hon. Curator.

(5) DEPARTMENT OF PALÆONTOLOGY.

To the Director, South African Museum.

SIR,—I have the honour to present herewith a report on the working of the Department of Palæontology for the year 1924.

Accessions: Invertebrates.	Palæozoic	214
"	Cretaceous	184
"	Tertiary	21
Fish		2
Amphibia		4
Reptiles		54
Mammals		1
Plants		6
Total		486

No alterations have been made in the exhibit d series in the Palæontological Rooms; but through the kindness of Miss Wilman, of the Kimberley Museum, we were able to make a cast and a restoration of the skull and horn-cores of a very fine specimen of the extinct buffalo, *Bubalus bairni*, which has been hung in a prominent position on the main stairway.

A considerable amount of development work has been carried on, chiefly on Pareiasaurian skeletons, with a view to the monographing of the family; and new shelving has been erected to accommodate the material developed. No collecting expeditions were made during the year; but during a tour with Dr. von Huene I was able to collect a number of Karroo reptiles and amphibia, some of which have been developed and placed in the Museum collection.

From the Government Geologist of Nyasaland we have received, for description and report, a number of large Sauropod bones from the north end of Lake Nyasa, which give evidence of the occurrence there of beds of probably similar age to the famous deposits of Tendaguru in Tanganyika Territory. This is the first record of bones of that nature from Nyasaland.

Mr. Higgins, of Aliwal North, has continued his collecting for the Museum, and has obtained, among other things, the almost perfect posterior half of the skeleton of a *Mesosuchus*. By Dr. Nopcsa, of Vienna, we have been given the cast of the type specimen of *Heleosuchus griesbachi* which is in the Vienna Museum. Thanks for donations are also due to the following: The Ven. Archdeacon J. H. Whaits, the Rev. H. Kling, W. van der Bijl, Esq., and Dr. A. L. du Toit. Mr. C. G. D. Groom presented an interesting assemblage of fossils from Tasmania.

An exchange of plaster casts of fossil reptiles has been made with the United States National Museum through which this Museum will become enriched by the acquisition of casts of the skull of *Diplodocus longus*, of the skull of *Brachychampsa montana*, and of the fore-limb and foot of *Antrodemus valens*. It is hoped that this system of exchange will be extended in the future.

The Museum has been visited for study purposes during the year by Dr. F. R. Cowper Reed, of Cambridge University, and Dr. F. von Huene, of Tübingen University. Dr. Reed examined and named the whole collection of Bokkeveld fossils and is engaged on writing a Revision of the fauna for the "Annals"; Dr. von Huene studied the Karroo reptiles, and especially the Stormberg Pseudosuchia.

The following papers dealing with Museum material were published during the year:—

1. S. H. Haughton. On the Fauna and Stratigraphy of the Stormberg Series. *Annals S. Afr. Mus.*
2. S. H. Haughton. On some Gorgonopsian Skulls in the collection of the South African Museum. *Annals S. Afr. Mus.*
3. S. H. Haughton. Reptilian Remains from the Karroo Beds of East Africa. *Q. J. G. Soc.*

A paper entitled "On a Skull and Partial Skeleton of *Mesosuchus browni* Watson," by S. H. Haughton, is in the press; whilst papers by Dr. Reed on Bokkeveld fossils and by Mr. Walton on fossil woods are almost ready for printing.

I am, etc.,

SIDNEY H. HAUGHTON,

Hon. Curator, Palaeontological Collections.

(6) DEPARTMENT OF ANTHROPOLOGY AND ETHNOLOGY.

To the Director, South African Museum.

SIR,—I have the honour to present the following report on this Department for the past year.

It was intended as part of the year's work to continue the investigation of the coastal caves and kitchen-middens, but owing to the resignation of the assistant (Mr. Divine) in this Department, this project has had to be postponed. Mr. Divine has, however, investigated, on the Museum's behalf, one or two reports of the finding of skeletons in the Peninsula.

Interesting and important additions have been made to the collections of utensils, iron and copper work, illustrating the life of the natives; several stone implements, and a 'kwe made out of the unusual medium of soapstone.

Through the intervention of Mr. A. L. Hall, the Museum has been enabled to purchase an excellent specimen of a Marale Stick, which forms a most valuable addition to the collection.

The thanks of the Trustees are due to the following donors: Mr. E. G. Bryant, Mr. Cumming, Mr. D. Foster, Mr. R. A. Good, Mr. A. L. Hall, Mr. G. G. Holmes, Dr. S. H. Haughton, Mr. W. E. Jones, Chief Irnwide Lewanike, Miss Neethling, Mr. G. H. Pretorius, Dr. F. O. Stohr.

I am, etc.,

KEPPEL H. BARNARD,

Assistant Director.

(7) DEPARTMENT OF BOTANY.

To the Director, South African Museum.

SIR,—I have the honour to report as follows on the work done and contributions received during the year.

Contributions.

Archdeacon F. Rogers	..	92	species	from Cape Province.
T. P. Stokoe	..	21	"	mostly from Caledon district.
Mrs. Levyns	..	6	"	from the Peninsula.
K. H. Barnard	..	23	"	from Wellington and Worcester district.
A. Whyte	..	9	"	from Table Mountain.
R. F. Lawrence	..	153	"	from Portuguese E. Africa.
Mrs. Anderson	..	19	"	from Douglas district.
Miss Tredgold	..	26	"	algæ from Kalk Bay.
Various	..	39	"	mostly Cape district.

Exchanges.

Kew. Rhodesian plants for S.W. African.
 Brit. Museum Nat. Hist. 206 Tropical plants for S.W. African.
 O. H. Sargent. 11 spp. W. Australian for Cape.

Specimens mounted.

S.W. African	..	..	..	..	..	..	..	..	751 sheets.
Rhodesian	..	..	..	..	..	..	..	..	248 "
Portuguese E. African	..	..	..	..	..	..	..	..	153 "
Old Collections	..	..	..	..	..	..	..	..	131 "
Cape Province	..	..	..	..	..	..	..	..	267 "
Miscellaneous	..	..	..	..	..	..	..	..	170 "

Specimens incorporated.

1,391 spp. including 4 new genera and 69 new or rare species.

General Information.

Material of a number of genera was sent to various specialists for revision, thus bringing the determination and nomenclature up-to-date. Parcels of identified material were sent to various applicants, amongst them being the Division of Botany, Pretoria, the Albany Museum, Grahamstown, and the Bolus Herbarium, Kirstenbosch. Students from the Peninsula schools have visited very frequently during the year, bringing their collections for identification.

During the early part of the year an expedition was made to Portuguese East Africa by a member of the staff; this resulted in a good addition to our collection of plants from that part.

The collection of plants from S.W. Africa has been dealt with throughout the year. The material is being mounted and put away in alphabetical order preparatory to being listed. A start was made on the grasses, and it was hoped to have the list out towards the end of the year, but there has been an unavoidable delay; meanwhile, other families have been taken in hand, and in due course the whole collection, which is a very fine one, will be worked out and the result published.

I am, etc.,

S. GARABEDIAN,
 Senior Botanical Assistant.

(8) KOOPMANS DE WET HOUSE.

The collection of Chinese porcelain, which has been on loan exhibition, has been removed, thus allowing the House to resume its distinctive character. Some of the smaller exhibits have been periodically changed, as it is impossible to exhibit the whole collection at one and the same time.

Several valuable donations have been received, the thanks of the Trustee being due to the following: The executors of the late Mrs. Volckers (porcelain dishes and vases), Mrs. Fernie (brass plaque from Milnerton Beach), Miss van der Hoeven (spice pot), Mr. and Mrs. van Vuuren (old Dutch Bible), Mr. O. van Blommestein (glass casket, silver pipe top, etc.).

The number of visitors during the year has been 24,692, being an increase of over one thousand on last year's number.

I am, etc.,

KEPPEL H. BARNARD,
 Assistant Director.

SOUTH AFRICAN MUSEUM.

STATEMENT OF INCOME AND EXPENDITURE FOR THE YEAR ENDED 31st DECEMBER, 1924.

INCOME.		EXPENDITURE.	
		£ s. d.	
To Balance, 1st January, 1924:		By Salaries	2,111 1 9
Cash in Bank	£324 0 2	Library: Purchases and Subscriptions	478 1 6
Petty Cash	5 0	Expenses in Travelling and Collecting	
Balance of advance to Director	57 13 2	Specimens	228 4 3
	381 18 4	Upkeep of Museum	1,670 14 8
.. Grants:—		Freight and Railway Charges	71 5 5
Union Government	£6,200 0 0	Postage and Petties	99 2 1
Cape Town Corporation	400 0 0	Sunday Duty	72 6 0
	6,600 0 0	Publications	551 14 2
.. Interest:		Purchases of Show Cases	150 0 0
Hadje Suliman Shah		Bank Charges	8 2
Mohamed Coin Fund	£4 15 0	Balance:	
National General Insurance Co.	2 4	Cash in Bank	£1,539 1 9
	4 17 4	Cash advanced to Director	30 0 0
.. Sale of Publications	29 0 11	Owing by late Director	53 9 11
.. Cheques drawn against Expenditure in 1923, cancelled in 1924	441 13 4	Advance to Neill & Co.	200 0 0
.. Refunds:		" " P. W. M. Trap	300 0 0
R. F. Lawrence's Travelling Expenses	£2 3 0	" " " (1922)	183 3 9
British Empire Exhibition Com.	30 16 3		*2,305 15 5
C. Moore, Balance British Empire Exhibition	39 15 0		
Prov. Administration,			
Curing jackal skin	8 6		
Cowper Reed	18 0		
Cable to Tait	8 0		
South African Railways	1 7		
Travelling Account	1 12 2		
	76 2 6		
.. Bank Discounts	21 17 3		
.. Suspense: P. W. M. Trap 1922, previously treated as outstanding voucher	183 3 9		
	£7,738 13 5		£7,738 13 5

* Includes £66 3s. 4d. appertaining to the Coin Fund.

STATEMENT "A."

HADJE SULIMAN SHAH MOHAMED FUND FOR THE PURCHASE OF COINS.

Amount of Investment with the South African Association	£100 0 0
Balance of Interest on 31st December, 1923	61 8 4
Interest received during period 1.1.24 to 31.12.24	4 15 0
	£166 3 4

Audited and found satisfactory.

J. DE V. ROOS,

Controller and Auditor-General.

Cape Town, February, 1925.

E. LEONARD GILL,

Director,

South African Museum.

Cape Town, February, 1925.

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REPORT

OF THE

SOUTH AFRICAN MUSEUM

FOR THE

Year ended 31st December, 1925.

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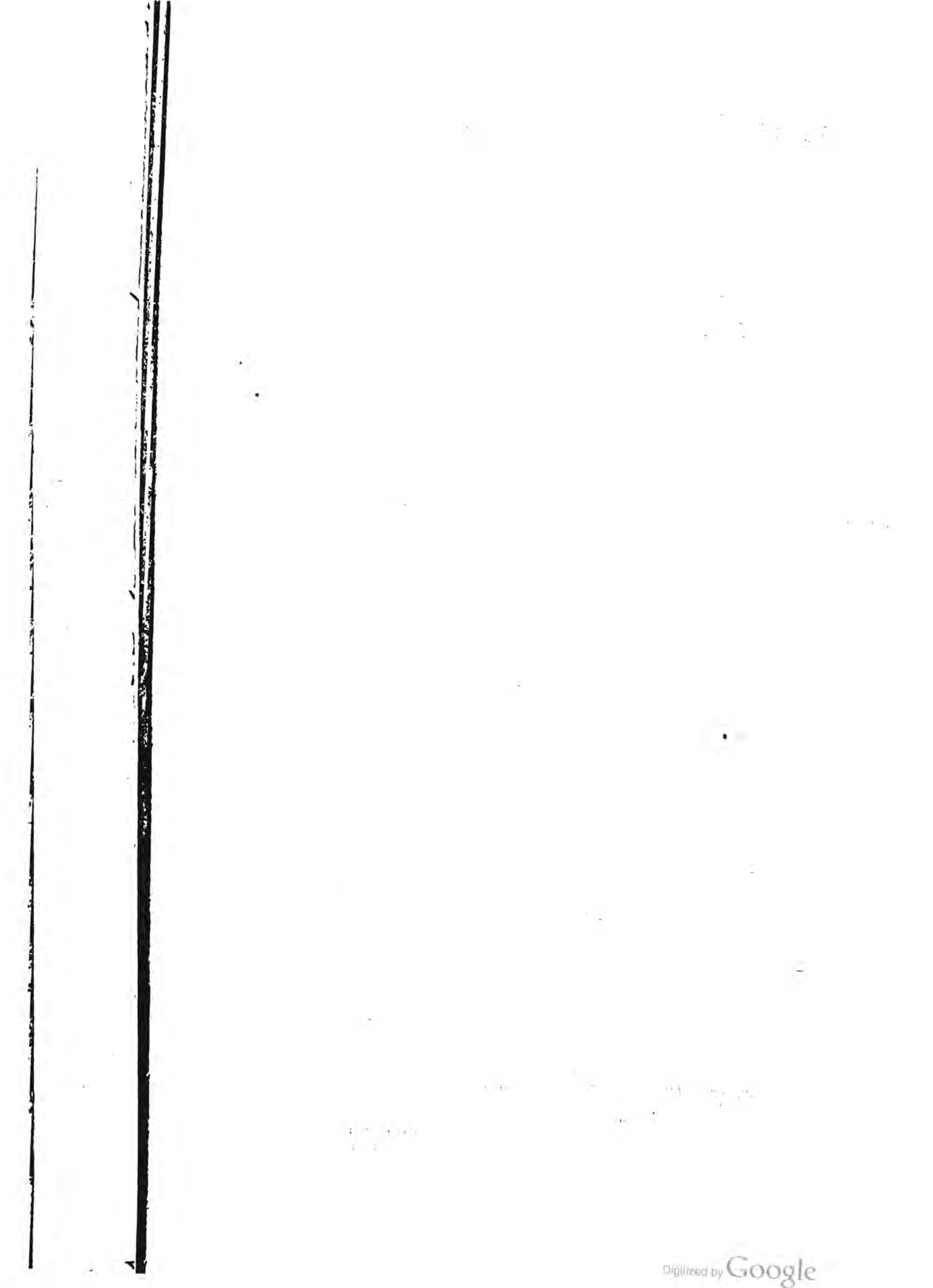
*Presented to both Houses of Parliament by Command of His Excellency
the Governor-General.*

1926.

CAPE TOWN:
CAPE TIMES LIMITED, GOVERNMENT PRINTERS.

1926.

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Trustees of the South African Museum :

- THE RIGHT HON. JOHN X. MERRIMAN, P.C.**
SIR THOMAS MUIR, C.M.G., M.A., LL.D., D.Sc., F.R.S.
THE HON. JOHN WILLIAM JAGGER, F.S.S., M.L.A.
PROF. WILLIAM ADAM JOLLY, M.B., Ch.B., D.Sc., F.R.S.S. Afr.
COUNCILLOR W. F. FISH, J.P. (present Mayor of Capetown).

Staff of the South African Museum :

- EDWIN LEONARD GILL, D.Sc.,** Director and Keeper-in-Chief.
- KEPPEL HARCOURT BARNARD, M.A., D.Sc., F.L.S.,** Assistant Director; in Charge of Fish and Marine Invertebrates.
- REGINALD FREDERICK LAWRENCE, B.A.,** Assistant in Charge of Reptiles and Batrachians, Arachnids and Myriapods.
- ALBERT JOHN HESSE, B.Sc., Ph.D.,** Assistant in Charge of the Entomological Department.
- MISS STAR GARABEDIAN, B.A.,** Assistant in Charge of the Botanical Department.
- ARTHUR LEWIS HALL, M.A., Sc.D.,** Honorary Keeper of the Geological and Mineralogical Collections.
- SIDNEY HENRY HAUGHTON, B.A., D.Sc.,** Honorary Keeper of the Palæontological Collections.
- J. DRURY,** Taxidermist.
- C. W. THORNE,** Junior Botanical Assistant.
- MISS P. EDWARDS,** Clerical Assistant.

UNION OF SOUTH AFRICA.

Report of the South African Museum for the Year ended 31st December, 1925.

*Presented to both Houses of Parliament by Command of His Excellency
the Governor-General.*

REPORT OF THE TRUSTEES.

The Trustees of the South African Museum have the honour to present to the Government, in accordance with the provisions of Act 17 of 1857, their Report for the year 1925.

Early in the Parliamentary session the Amending Bill to the above Act was brought forward by the Hon. J. W. Jagger, and received the assent of His Excellency the Governor-General on 26th May. It now constitutes the South African Museum Act, 1857 (Cape), Amendment Act, 1925—Act No. 10 of 1925. Under its provisions two additional Trustees have been added to the Board: Councillor W. F. Fish, the present Mayor of Capetown, nominated by the City Council, and Prof. W. A. Jolly, D.Sc., nominated by the Royal Society of South Africa. The term of office of the new Trustees is held to date from the signing of the Amending Act, 26th May, 1925.

Under a further provision of the same Act the Trustees are empowered to establish a provident fund for members of the Museum staff. A scheme for this purpose, on a contributory basis, has been drawn up and submitted to the Minister of the Interior.

During the year ill-health has led Sir Thomas Muir to resign the chairmanship of the Trustees. The Hon. J. W. Jagger has been appointed to succeed him, but Sir Thomas Muir has consented to act for the present as Vice-chairman.

The year's work at the Museum is recorded in the following reports by the Director and the members of the staff in charge of the several departments.

J. W. JAGGER,
Chairman of Trustees.

REPORT OF THE DIRECTOR.

To the Trustees of the South African Museum.

SIRS,—I have the honour to present the following report on the administration of this Museum during the year 1925.

In my first Annual Report it may not be out of place to record certain impressions made on my mind by my first inspection of the Museum. The impression which overshadowed all others was that of want of space. On this point I addressed a letter to the Trustees, from which the following is quoted:—

It would be difficult to overstate the case. Most of the museums that I have had to do with were supposed to be short of room, and from Dr. Péringuey's reports I knew that the South African Museum had the same complaint to make; but even those reports had not prepared me for the quite astonishing state of things that I find actually existing. Many museums are cramped for room, but I do not know of anything like a parallel case to that of our museum here.

More space is quite badly needed for many things that we do already show, but the outstanding fact about the Museum is that whole leading sections of it are simply waiting in corrugated iron sheds until show-space and show-cases can be provided for putting them on exhibition. The worst instance is that of the ethnographical collection; the whole collection of weapons, utensils and ornaments of the different native races of South Africa is stored in a shed, where it is impossible to give the public access to it. This would be one of the most generally interesting sections of the Museum, and it is one which visitors would naturally expect to find prominently displayed. Another shed contains a large series of skeletons, some of which should be on view, and a valuable collection of the birds characteristic of different parts of the world. The collection of skins of South African birds is also housed most unsuitably in a shed.

These are the worst results of the straits to which the Museum has been driven through want of room. But the specimens shown in some of the present exhibition rooms are so badly overcrowded that they cannot be seen to any advantage. This is especially the case with the African big-game animals and the Bushman paintings and rock-engravings. Further, a highly desirable development (now being pushed forward in all the leading museums of the world) is in the direction of showing creatures in some suggestion of natural surroundings and in groups; birds at the nest; groups of animals characteristic of different types of country; insects and other animals in relation to disease and in their bearing on agriculture, or as illustrating special biological topics. But all these developments are out of the question until there is room in which to set up the necessary cases.

I have no means of judging of the possibility of remedying this state of affairs, but I have no hesitation in saying that until it is remedied the further development of the South African Museum on the public side of its work must remain almost completely paralysed.

It should be added that the outbuildings of wood and corrugated iron are highly unsafe even as storehouses for the valuable and largely irreplaceable material at present contained in them.

Taking the Museum building as it stands, it may be said that the two large halls upstairs are well lighted and satisfactory as exhibition galleries. But the small upstairs room into which the South African mammals are crowded is so badly lighted as to be practically useless in dull weather; and the space downstairs, though fairly well lighted for the most part, is cut up in such an unfortunate way into small rooms that a good general effect is impossible. When the urgently needed extension is taken in hand I hope it may be possible also to remedy some of these defects in the existing building. The good effect of adequate space in a museum is well illustrated in the whale shed behind the main building. Though it is a shed of undisguised brick, only intended as a temporary expedient, it is striking to find what a relief to the eye is provided by the ample proportions of its interior and how greatly the objects shown in it gain by the sense of space which accompanies the view of them.

Turning to the exhibited collections themselves, perhaps the most satisfactory from an all-round point of view is that of the South African fishes. This is a fine series and well shown. The South African birds are another good section, excellently adapted for assisting visitors to identify birds they have met with. Many of the specimens, however, are old and faded or badly mounted, and they are all rather crowded. The nesting groups are an attractive feature of the gallery, but there is not nearly enough room to show them to advantage. An adequate selection of reptiles is shown, and we shall shortly be in a position to bring the amphibians up to at least the same standard. The South African mammals, and especially the big game, ought to constitute one of the leading features of the public galleries; as it is, they form one of the Museum's most glaring shortcomings. We do show something to represent most of the animals, but many of the specimens are very poor and nearly all are packed into the cases in a way that destroys any effect that they might otherwise produce. One group of gemsbok in a special case is all we have at present to illustrate the way in which the game animals should be treated; it is the only effective way, but it demands ample space and a large expenditure on cases and the mounting of the animals.

The other departments—invertebrate animals, geology and palæontology, ethnology, anthropology and antiquities—suffer in different degrees, but all seriously, from want of space. The fine ethnological collection is not exhibited at all; in the shed where we are forced to keep it, it is exposed to all sorts of risks. The collection of rock engravings and Bushman paintings and the altogether unique series of casts of South African native races are shown in little rooms where it is impossible for them to produce the effect that their interest and importance entitle them to. This is equally true of the Karroo fossil reptiles, which form South Africa's outstanding contribution to the past history of life on the earth; they should—and could—make a striking display, but it is impossible to set them out to good effect in the two little rooms which are all we can spare for them under present conditions.

Any marked improvement in the public side of the Museum's work is out of the question until we have much more space for exhibition. Until then we can only advance in such minor directions as the replacement of poor specimens and poor labels by better ones and the adoption in certain cases of methods of exhibition which give more appearance of style and finish. It is particularly in labelling that there is room for improvement, and during the year I have bought a considerable outfit of new type and accessories for printing, by means of which we are turning out much better finished and more legible labels than were in use previously.

The service rendered by the Museum to the public is at present, as I have pointed out, greatly restricted by want of space. But as regards the scientific side of its functions, I am even more impressed than I expected to be by the fine work the Museum has accomplished and is accomplishing, in collecting, classifying and preserving material for study by specialists, including those on its own staff, and in acting as a centre for investigation and the publication of results in all branches of South African natural history. It is true that in some departments much detailed work is needed before the whole of the accumulated material is readily

available for reference. Progress in this direction is always being made, but the constant influx of new material which has to be prepared and incorporated throws too much work on our small scientific staff to permit of arrears of this kind being easily overtaken.

The further information which I have to place on record can best be given under headings.

Staff.—There has been no change in the Museum staff during the year.

Visitors.—The number of visitors totalled 133,812; considerably less than the total for 1924, which was an exceptional year, but up to the average of recent years. The total was made up as follows:—

White	Adults	Male	33,579
		Female	26,303
	Children		37,435
Coloured	Adults	Male	14,731
		Female	10,410
	Children		11,354
Largest number in one day (28th September)			1,719
Smallest number in one day (23rd July)			55
Total number on Sunday afternoons			29,636
Largest number on one Sunday afternoon			1,285

168 school parties and drawing classes, numbering 4,174 pupils, visited the Museum.

Acquisitions (presented, purchased or collected by staff):—

	Specimens.	Species.	New to Collection.
Mammals	32	22	2
Birds and Birds' Eggs	18	12	—
Reptiles and Amphibians	228	67	23
Fishes	234	40	8
Crustacea	119	24	7
Mollusca	236	29	3
Marine Invertebrates	32	7	1
Insects	9,100 (approx)	—	—
Arachnids and Myriapods	1,000 (approx)	203	80
Botany	1,617	1,293	129
Geology, Mineralogy and Palaeontology	264	—	—
Anthropology, Ethnology and Antiquities	163	—	—

Library:—

Books	Presented or by exchange	9
	Purchased	20
Pamphlets and Serials	Presented or by exchange	858
	Purchased	101

Publications.—The following parts of the *Annals of the South African Museum* were published during the year:—

Vol. XVI, pt. 2. *S. Garabedian.* Contributions to a knowledge of the Flora of South West Africa. 1. List of Grasses. 45 pp., 1 pl.

Vol. XIX, pt. 4. *L. B. Prout.* New Species of Geometridae (Lepidoptera) in the collections of the South African Museum. 31 pp., 2 pls. (coloured).

F. W. Edwards. Mycetophilidae and Bibionidae (Diptera) in the collections of the South African Museum. 16 pp.

Title, Index, etc.

Vol. XX, pt. 4. *H. Watson.* The South African species of the Molluscan Genus *Onchidella*. 71 pp., 6 pls.

J. R. le B. Tomlin. Reports on the Marine Mollusca in the Collections of the South African Museum. 1. Turritellidae. 8 pp.

Vol. XX, pt. 5. *H. L. Clark.* A new Clypeaster from Angola. 2 pp., 1 pl.

K. H. Barnard. Contributions to the Crustacean Fauna of South Africa. 58 pp., 1 pl.

K. H. Barnard. Contributions to the Crustacean Fauna of South Africa. 31 pp.

Vol. XXI, pt. 1. *K. H. Barnard.* A Monograph of the Marine Fishes of South Africa. Part 1. 418 pp., 17 pls.

Vol. XXII, pt. 1. *J. Walton.* On some South African Fossil Woods. 26 pp., 3 pls.

F. R. C. Reed. Revision of the Fauna of the Bokkeveld Beds. 199 pp., 8 pls.

- S. H. Haughton.* Investigations in South African Fossil Reptiles and Amphibia. 13. Descriptive Catalogue of Amphibia of the Karroo System. 35 pp.
- S. H. Haughton.* Notes on some Cretaceous Fossils from Angola; Cephalopoda and Echinoidea. 26 pp., 4 pls.
- Vol. XXIII, pt. 1. *A. J. Hesse.* Contributions to a Knowledge of the Fauna of South West Africa. IV. A List of the Heteropterous and Homopterous Hemiptera of South West Africa. 190 pp., 8 pls.

The large output of the *Annals**, amounting to 1,156 pages with 51 plates, is in part a legacy of the delay in publication caused by the war. Material for further issues was in the printers' hands at the end of the year, and a large amount more was in sight as the result of the work of specialists on Museum collections. The papers in the above list are all of importance in their respective spheres, but one which has found a particularly wide welcome is the first half of Dr. Barnard's monograph of the marine fishes.

Library.—The increasing pressure on the library space, alluded to in last year's report, has naturally become still more difficult to cope with. We have managed to find room for a few feet of additional shelving, but it is already almost impossible to keep the books and serials in systematic order. Sets of a few serials which are frequently handled have been bound during the year.

Among the gifts to the library must be mentioned a series of the Reports of the British Association presented by Sir Thomas Muir, which fills a gap in our set, and a most valuable donation from Dr. A. W. Rogers of classic works of reference, including Sowerby's *Mineral Conchology* (7 vols.) and Ehrenberg's *Mikrogeologie*.

Upkeep of Buildings.—During the year the Public Works Department has carried out certain minor repairs to the roofs of both the Museum and the Koopmans de Wet House: repainted the front of the latter and cleaned and dressed the exposed woodwork; and also dealt with the stonework of the front block of the Museum building. The outer face of this stonework was showing considerable weathering. Some of the stones of the porch and windows were so decayed that they had to be replaced; and when this had been done the whole of the stonework was washed with a preservative dressing.

Collecting Trips.—Mr. Lawrence, Dr. Hesse and C. W. Thorne returned in the middle of April from the Kaokoveld in South West Africa, where they had been continuing the investigations which the Museum has been conducting in recent years with the aid of grants from the Administration. The expedition set out with a donkey waggon from Outjo and got as far as Zesfontein, the settlement of the decaying remnant of the Topnaar Hottentots. The difficulties of transport were considerable, especially in the Hoanib gorge, and the exceptionally heavy rains caused further inconvenience. Very satisfactory work was nevertheless accomplished; large collections, particularly of reptiles, arachnids and insects, were made on the journey and about Zesfontein itself. After the expedition's return the sorting of the material and the setting of the insects was immediately proceeded with; parts of the material have already been worked out and the results prepared for the *Annals*. Another expedition to the Kaokoveld was setting out at the close of the year, the members of it being Dr. Barnard, Mr. Lawrence and Dr. Hesse. They were to start again from Outjo but to follow a different route, with the object of penetrating a good deal further north than Zesfontein. If they succeed their collections will be of great interest, for the natural history of this remote region is largely unknown.

Two shorter expeditions were carried out during the year by Dr. Barnard. He spent July in Gordonia, between Upington and the border of South West Africa; Dr. Haughton was carrying out a geological survey of the district and very kindly arranged for Dr. Barnard to accompany him. The collections which Dr. Barnard brought back and the very interesting report with which he has furnished me provide between them an excellent study of the natural history of this tract of country as it is seen under winter conditions. His second expedition was to the mountains behind Swellendam, the Langebergen. It occupied the last fortnight of October, and was a continuation of the series of expeditions carried out by the Museum for investigating the fauna and flora of the mountain ranges in the south-west of the Cape Province. On this occasion Dr. Barnard, in addition to general collecting, paid special attention to the distribution of the freshwater crustacea, as well as mapping out the district with a view to future work.

This preliminary survey by Dr. Barnard was followed up during the next month by Mr. Lawrence and Dr. Hesse, who continued the same work over the same mountains under a grant from the Research Grant Board.

* See footnote to paragraph on Finances, p. 5.

The remaining expeditions of the year were of less extent and were principally concerned with digging for remains of man and of earlier human occupation. Through Mr. J. C. van der Poll we were enabled to investigate some interesting cave deposits in the Cape Peninsula. Other work of the same kind was done at Hermanus, with much help from Mr. W. H. Paterson. Further particulars will be found in the departmental report on anthropology. I went myself to Hermanus for a preliminary visit to the sites thereabouts, and brought back collections of bones from a cave and from a limestone formation. With help and hospitality from Mr. S. N. Hart, of Cathcart, Mr. Drury went to East London in July and recovered part of the skeleton of a fossil reptile from the shore.

Visits from Specialists.—Dr. Ales Hrdlicka, head of the department of Physical Anthropology in the United States National Museum at Washington, spent several days at the Museum in August in the course of an extensive tour. He took measurements of most of the skulls in our collection and examined the other material bearing on his special lines of study. Two other visitors from American museums have made longer stays in Cape Town during the year. Mr. W. S. Brooks, from the Museum of Comparative Zoology, Cambridge, Mass., made our Museum his headquarters during his travels in South Africa, and towards the end of the year Mr. Herbert Lang, Associate Curator of Mammals at the American Museum of Natural History, New York, did the same. During his stay Mr. Lang worked through our collection of small mammal skins; his primary object was to obtain data of geographical distribution, but he also very kindly re-arranged the collection in systematic order, a much needed job which Mr. Bolus had begun before the accident which has recently deprived us of his help. Dr. R. Broom has also spent some days at the Museum in connection with his studies of Karroo fossil reptiles.

Among others who have given us valuable help from outside I must specially mention Prof. Radcliffe Brown and Mr. A. J. H. Goodwin, of the Department of Social Anthropology, University of Cape Town. Mr. Goodwin, in consultation with Prof. Radcliffe Brown, has worked through our very large collection of stone implements. Two papers on them written by him are already in type for the *Annals*, and a further and more general paper is in preparation.

Finances.—The credit balance* with which the year opened was mainly due, both directly and indirectly, to the interval which elapsed between the death of the late Dr. Péringuey and the entry into office of his successor. A few large expenditures have been incurred during the year on cases and cabinets, and we are committed to a certain amount more in 1926. But I have thought it wise, with the concurrence of the Trustees, to carry over the greater part of the balance, with a view to meeting other large expenditures which are more or less definitely in prospect. Among them are the engaging of another scientific assistant (at least two more are badly needed); the expenses of some rather extensive field expeditions, notably for the collecting of Karroo fossils and for the resumption of the very important work of taking casts of representatives of the native races; the replacement of many of our large animals by fresh and well-mounted specimens—a costly business which can in any case only be carried out gradually; and above all the formation of a reserve fund for the many large outlays that will be involved when the new wing of the Museum is built.

Use of Afrikaans.—So many of our visitors from the country are more familiar with Afrikaans than with English that it is only reasonable to provide Afrikaans versions of the labels wherever possible. We have adopted this as a general principle, and many Afrikaans labels have been printed during the year. Our efforts have been directed in the first place to the Koopmans de Wet House, where practically all the exhibits have been provided with fresh labels in English and Afrikaans. For the South African Museum itself a number of Afrikaans labels have also been printed, particularly descriptive labels of new exhibits, and we shall continue to prepare and put out these labels as rapidly as circumstances will allow. It must be recognised, however, that in many sections of the Museum the duplication of the labels is a very real difficulty. Even where only one language is concerned the labelling often presents a problem, for where the specimens are not large and the type must be legible at some distance it is only too easy to overwhelm the specimens by too great a display of card. With labels of twice the size the difficulty is naturally greater still.

This is not, however, a difficulty that need trouble us much at present. For some little time we shall have all we can do, among all the other essential claims of museum work, to provide Afrikaans versions of the leading descriptive labels and of the labels for large objects, where the question of finding space is less serious. In some such cases, in fact, Dutch labels have long been exhibited, but these old labels were written in Nederlands.

*The figure which appears in the financial statement is swollen by the inclusion of certain sums connected with transactions which at the end of last year were not finally completed for the purposes of the audit. The actual balance with which the year opened was for practical purposes £1,539. For the same reason the sum shown as expended on publications is considerably larger than the actual cost of the *Annals* issued during the year.

GENERAL REVIEW OF MUSEUM WORK.

Apart from some amount of detailed re-arrangement and trimming up designed to improve the general effect of some of the exhibition cases or to accommodate fresh specimens, the chief change in the public section of the Museum has been connected with the transference of the small cetaceans (porpoises, etc.) from their temporary position in the last case of the reptile series to the new cases erected in the Whale Shed. The preparation of some special cases and of two good casts is also noteworthy; and considerable additions have been made to the series of exhibits in economic geology. A large amount of new material has been dealt with and much good systematic work done on the reference collections. The chief features of the year's work in the several departments are noted below under headings.

Special Cases.—Two special cases (i.e. cases illustrating subjects not strictly related to any one systematic section of the collections) have been prepared and placed on view, and a third is in hand. The first two illustrate respectively the animals concerned in spreading plague and the economic value of the barn owl. In the preparation of the plague case I had valuable help from the Department of Public Health, whose officers took a keen interest in it. It shows an enlarged model of the well-known plague-carrying flea of the black rat; two actual fleas taken from veld rodents and seen through magnifying lenses; and mounted examples of the rodents and other mammals concerned in conveying the infection of plague in South Africa. Full descriptive labels, in English and Afrikaans, emphasize the main points which it is important for the public to have in mind in connexion with the danger from plague-infected rodents.

The small case devoted to the barn owl gives a concrete instance of the bird's usefulness. It shows the analysis of a handful of pellets picked up under an owl's roosting-place at Rondebosch; almost entirely the remains of two particularly destructive nocturnal rodents, the bliesmol and the gerbille—the latter the most efficient potential carrier of plague. Here again the facts and the lesson to be learnt from them are brought home by descriptive labels in English and Afrikaans. A third case which is in preparation is to illustrate the South African locust pest. Full material for the life history of the locust has been kindly supplied by Dr. C. W. Mally, of the entomological staff of the Department of Agriculture, and Mr. A. E. Jubb, Magistrate at Prince Albert.

Mammals.—The two wall-cases of steel and plate glass, ordered last year, have been delivered and erected in the Whale Shed, and we have transferred to them the small cetacean specimens which were occupying, for want of accommodation elsewhere, a quite unsuitable position in the last case of the set containing the reptiles. They consist of mounted examples of some of the porpoises and other small whales, reduced models of some larger whales, and samples of whalebone, teeth, etc. In their new quarters in the Whale Shed they are seen to very much greater advantage. The new cases have also provided space for putting behind glass certain mounted porpoises and dolphins which were formerly exposed in the open. Furthermore, they serve the additional purpose of greatly improving the general appearance of the Whale Shed as seen from the entrance.

Another great improvement has been effected in the Whale Shed by a re-arrangement of the skeletons. The skeletons of the toothed whales are now all shown together in one division of the shed, separated from those of the whalebone whales. Incidentally it has been found possible to clear the bay on the right of the entrance and to set it apart as temporary quarters for large mammals for which there is no room in their systematic position in the main building. In this bay are exhibited at present the local examples, male and female, of the elephant seal and the skeleton of one of them; the skeletons of the bull and cow giraffe set up last year; and the bull giraffe itself, mounted this year by Mr. Drury, the Museum modeller.

Among other mammals mounted this year by Mr. Drury or his assistant are a fine male baboon from Groote Schuur and a series of examples of the various races of domestic rats found in South Africa. For the rats and for much help of other kinds we are indebted to Mr. W. Powell, Chief Rodent Officer under the Department of Public Health.

Birds.—Only a few new specimens have been added to the exhibited series this year, though very many of the birds shown must be replaced as soon as circumstances will permit. A fair number of birds sent in by correspondents and some collected by the staff have been made up as skins. The larger birds in our skin collection are at present stored in makeshift boxes where they are by no means safe, and during the year we have ordered three more cabinets which will provide proper storage for some part of these skins.

In his report for 1921 the late Dr. Péringuey mentions a common tern (*Sterna fluviatilis*) shot at the Berg River mouth, which proved to have been ringed in 1913 in Sweden. A parallel instance from the same locality was brought to my notice this year in the form of the leg of a Sandwich tern (*S. sandwicensis*) bearing a ring; the records showed that this bird had been ringed as a nestling on the Farne Islands, Northumberland, in 1919.

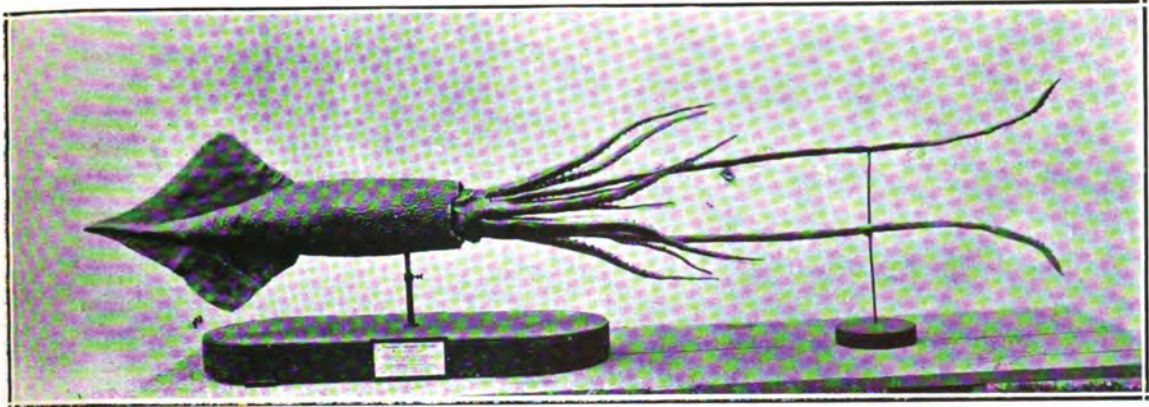


FIG. 1.—Cast of Thorny-armed Squid, *Onychoteuthis* sp., caught off Dassen Island in 200 fathoms. Total length 6 feet. Cast made at the Museum.

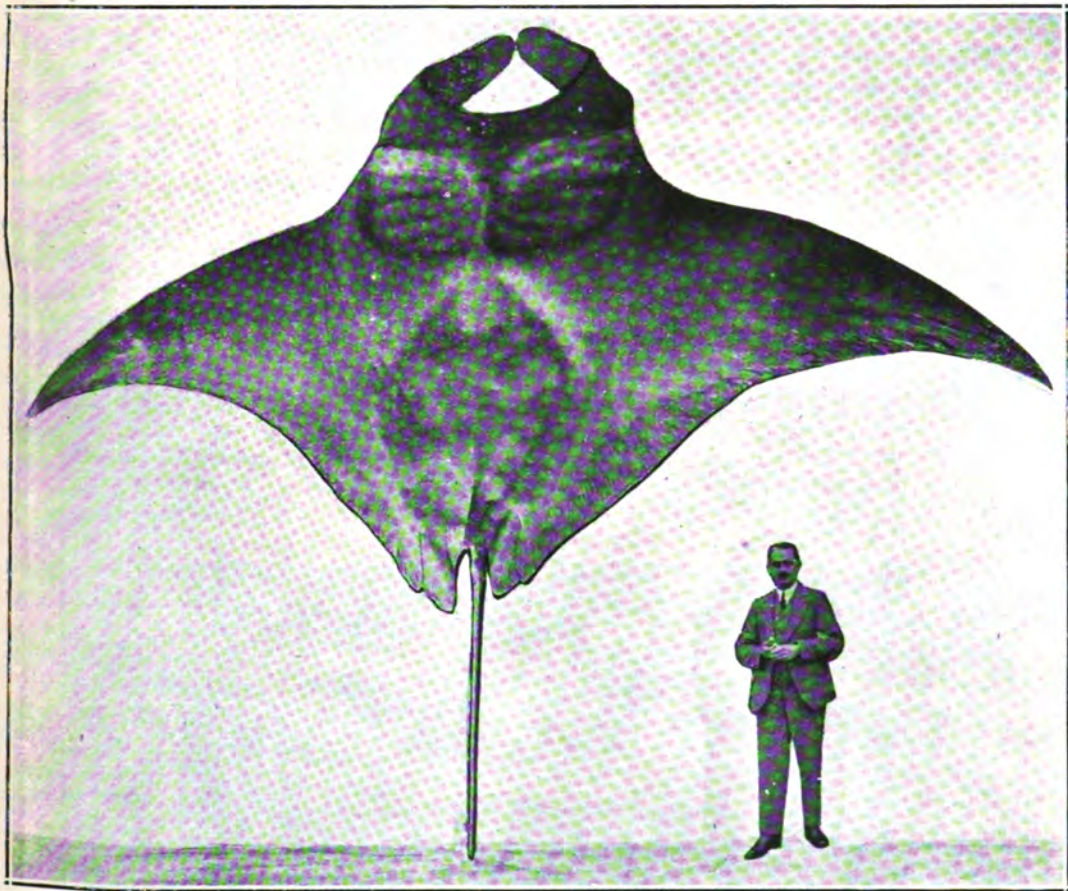


FIG. 2.—Cast of Devil-fish, *Manta ehrenbergi*, captured in March 1925, at East London. Span across 'wings' 18ft. 2in. Cast made at the Museum. (The view is slightly oblique and the figure consequently unsymmetrical.)

SOUTH AFRICAN MUSEUM.

CASTS MADE DURING THE YEAR 1925.



FIG. 3.—Lamp originally on the 'Kat,' the porch of the Governor's quarters at the Castle, Cape Town. It is of brass, copper and iron. (The wall-plate is new.) The lamp is here seen in its present position in the courtyard at the Koopmans de Wet House.



FIG. 4.—Stinkwood Chest with brass lock-plate and clamps, at the Koopmans de Wet House. Bequeathed by the late P. L. du Plessis, of Cradock, 1925.

KOOPMANS DE WET HOUSE.

TWO OF THE ACQUISITIONS OF THE YEAR 1925.

Lower Vertebrates.—The removal of the small cetacean specimens from the case they were temporarily occupying has enabled us to give more room to the exhibited set of reptiles and amphibians. The tortoises and turtles have gained particularly by the re-arrangement; it has given us room also to show some good new specimens, including the gigantic Seychelles tortoise "Peter," who died in 1920, and had been well known to visitors for many years as an inhabitant of the Museum grounds. A further result is that we shall now have space for showing a set of the local frogs and toads which Mr. Walter Rose, who has been so successful a worker in this branch, has been getting together for us.

As the departmental reports show, important additions have been made to the collections in all the lower vertebrate sections—reptiles, batrachians and fishes. These additions are mainly due to the work accomplished by the Museum expedition to the Kaokoveld, but in the case of the fishes we are much indebted to the owners or captains of local trawling vessels. Through them and other donors we have obtained several fishes previously unrecorded from South African waters, and others which appear so far to be very rare. The most striking addition to the exhibited series of fishes is a huge devil-fish, *Manta ehrenbergi*, a specialized member of the ray family. This example was caught at East London, and a successful cast of it was made. For want of space in the Fish Gallery we are compelled for the present to show this cast in the Whale Shed (fig. 2).

Entomology.—The work of the year in this department has for the most part fallen under three heads: collecting in the field, especially during the expedition to the Kaokoveld; relaxing, pinning, setting and sorting the material brought home; and systematic work on the Museum collections. Most of the systematic work must necessarily be done by specialists abroad, since at any time there will only be a very few people in the world competent to deal with any one group of insects; and now, as always, there is a steady flow of material between the Museum and specialists in Europe and America. The current transactions of this kind will be found mentioned in the departmental report on Entomology, together with the subjects of some of the resulting papers for the Museum *Annals*. But a certain amount of this systematic work, in this as in other branches, is always taken in hand by the Museum staff. Last year's work by Dr. Hesse on the Hemiptera of South West Africa has now been published in the *Annals*. This year he has taken in hand the weevils (*Curculionidae*), an enormous group of beetles of great economic importance in South Africa.

Other Invertebrates.—Considerable additions have been made to the collections of molluscs and crustacea, chiefly as a result of Dr. Barnard's trips to Gordonia and the Langebergen. But the most important accessions of the year among the invertebrates other than insects have been the arachnids (spiders, scorpions, pseudoscorpions, etc.) brought back by the Museum expedition to the Kaokoveld. A large collection of Myriapods was also brought back. Mr. Lawrence's systematic work on the material under his charge has resulted in the completion of the first of his papers on the arachnid fauna of South West Africa. In the exhibition cases the chief change is the placing of the larger crustacea on a background which gives them a much more natural and attractive appearance. A highly successful cast of a large squid, *Onychoteuthis* sp. (fig. 1)—a very difficult subject for casting—has been made and placed on exhibition.

Botany.—Large additions have been made to the Herbarium, especially as regards the flora of South West Africa. The acquisitions from this region are partly due to purchase and partly to collecting by the Museum expeditions. The plants collected in the neighbouring territory of Gordonia by Dr. Barnard form another interesting batch of additions. A great amount of preparation and mounting has been got through during the year; and material from the Herbarium has been largely used by the officers of the Department of Agriculture and others. Miss Garabedian is working up the botanical results of the Museum's investigations in South West Africa; her paper on the grasses of that region has already appeared in the *Annals*, and several further instalments are nearly ready for publication.

Palaeontology.—Some good acquisitions have been made during the year, perhaps the most noteworthy being the slabs with remains of *Euparkeria* and *Mesosuchus* sent from Aliwal North by Mr. Higgins, and the type skull of *Dicynodon sollasi* presented by Dr. Broom. Karroo reptilian remains in the rough are being steadily cleared of matrix and prepared for study, and a large amount has now accumulated. As Dr. Haughton points out in his departmental report, there is pressing need for a trained scientific assistant in the Palaeontological Department, so that the study of this material may be overtaken and intensive collecting—which is urgently called for—may be resumed. Dr. Haughton's honorary services to the Museum have been invaluable and there is every reason for wishing them to be long continued, but in view of the enormous field for collecting and research offered by the fossil-bearing deposits of South Africa it is quite impossible for the work of the department to be done by one man, even a man of Dr. Haughton's abilities, as a spare-time job.

Geology and Mineralogy.—Good progress has been made in the section of this department devoted to Economic Geology. Mainly through gifts from the Geological Survey we have been able to put on exhibition a representative series of the newly-discovered platinum ores of the Eastern Transvaal, as well as a set of photographs of the asbestos mines and deposits at Barberton. Other useful gifts and additions are referred to in Dr. Hall's report on the department.

Anthropology, Ethnology and Archaeology.—During a considerable part of the year Mr. A. J. H. Goodwin, of the Department of Social Anthropology in the University of Cape Town, has been devoting some of his time to working through our large collections of South African stone implements. His work has resulted so far in two papers which are already in type for the *Annals*, one describing the Museum's exploration of the Montagu Cave and the implements recovered from it, the other comparing the stone-age cultures of South Africa with the North African culture known as the Capsian. A third and more general paper on the South African stone implements is being prepared by Mr. Goodwin and Prof. Radcliffe Brown.

Considerable additions have been made during the year in some divisions. Interesting stone implements were collected in Gordonia by Dr. Haughton and Dr. Barnard; an unusually fine and highly finished boucher was among them. A good series of Bushman relics from Prieska has been sent by Mr. E. G. Bryant. Skeletons and other remains of "Strandlooper" Bushmen have been recovered by digging from caves and sand dunes at various places on the coast; further particulars of these will be found in the departmental report.

Useful additions have been made to the collection of Bantu implements and ornaments. This great and valuable collection is a constant source of anxiety, exposed as it is to the attacks of moths and beetles and to dust in a shed in the grounds. In spite of frequently repeated inspections and dressings of poison it is impossible under present conditions to keep it safely, quite apart from the fact that it is entirely wasted so long as we have nowhere to exhibit it.

I have made a beginning in getting together samples of objects characteristic of earlier days in Cape Town, of the class liable to become "bygones" without anyone noticing their disappearance. Of this class is one of the conical Malay grass hats still occasionally worn by a few coachmen; the actual example was presented by Omar Berdien, a well-known cab driver, and was brought to this country by his grandfather—a slave. Worth securing for the same reason was a good pair of the old wooden clogs or kaparrings, still worn by a few Malays but rapidly going out of use.

Koopmans de Wet House.—Some general improvements have been effected in the House and its contents, and several noteworthy acquisitions have been made. The chief of the improvements have been the repainting of the front and the dressing of the exposed woodwork by the Public Works Department, and the printing and putting out of new labels in English and Afrikaans throughout almost the whole of the collection of furniture and utensils inside the House. Among the acquisitions are a fine stinkwood kist bequeathed by the late P. L. du Plessis, of Cradock (fig. 4); a Dutch family Bible, published at Leyden in 1718, a fine edition with heavy binding and clasps, formerly in the van Niekerk family and now presented by the Dyer family of Pretoria through Sir David Graaff; and a very interesting bracket lamp presented by the Cape Town School Board. This lamp was originally on the "Kat," the porch of the Governor's residence at the Castle; subsequently for many years it was fixed to a tree at Hope House, Roeland Street. Recently a pair of reproductions of it have been made for the "Kat," and the original lamp is now put up in the courtyard at the Koopmans de Wet House (fig. 3).

I should like in conclusion to make one reference to the Museum staff. In endeavouring to acquaint myself with the duties of the directorship, with the details of administration, the traditions of the institution and the condition and extent of its collections, I was inevitably very largely dependent on the goodwill of my colleagues. It is therefore with special pleasure that I acknowledge their unfailing kindness and helpfulness throughout my first year of office. I am very particularly indebted to the Assistant Director, Dr. Barnard; but every member of the staff has earned my gratitude in the same way.

E. LEONARD GILL,

Director.

REPORTS OF DEPARTMENTS.

DEPARTMENT OF VERTEBRATES (MAMMALS AND BIRDS).

To the Trustees of the South African Museum.

SIRS,—I have the honour to present the following report on this department for the year 1925. The accessions, which have not been very numerous, may be tabulated as follows:—

	Specimens	Species.
Mammals, South African	30	20
Mammals, foreign	2	2
Birds, South African	7	7
Birds, foreign	1	1
Birds' eggs, South African	10	4

Among the acquisitions were several mammals and birds presented by the management of the Groote Schuur estate. These included a fine male baboon and a blue crane in full plumage. Mr. W. Powell, Chief Rodent Officer of the Department of Public Health, obtained for us a good series of the different races of domestic rats, black and brown, found in the Union; some of these were mounted for exhibition. Some very good heads of South African big game animals, presented by Mr. Charles Struben, have been put up on the staircase, where they are seen to great advantage. The largest undertaking in the way of mounting was the bull giraffe, of which the skin and skeleton were recently acquired; other mammals mounted were the baboon (a much better specimen than any previously shown), and the set of rodents and other animals required for the plague case. The large pachyderms which are at present standing in the open near the head of the main staircase have been repaired and renovated.

The re-arrangement of the Whale Shed and the transfer of the smaller cetacean specimens to the new cases have been sufficiently described in my general report. Three early embryos of humpback and blue whales, presented by Prof. R. Drennan and Messrs. Irvin & Johnson, are valuable additions to our collection of foetal whales. Mr. Herbert Lang's systematic re-arrangement of the small mammal skins is another considerable gain, for which we are much indebted to him. A useful piece of work has also been done in the picking out of a reference set of the skulls of small South African mammals. Not included in the statistics given above are collections of animal bones made during the year from several caves. One cave near Fish Hoek and another near Hermanus were evidently old hyaena dens, and these furnished interesting evidence as to the bygone fauna (elephant, hippopotamus, buffalo, etc.) of the Cape Peninsula and the neighbouring districts. Apart from a general tidying-up in the exhibition cases and the routine measures of conservation among the skins, not much has been done during the year in the division of birds. But a few skins of local birds have been made and added to the collection and a few fresh birds mounted for exhibition. I have made a beginning with a set of new labels for the birds, embodying brief notes on occurrence and habits. Those for the wading birds are already printed.

Some of the principal donors of specimens have been mentioned. Others to whom we are similarly indebted are Messrs. A. R. Uijts, C. M. Giffen, W. Hare, H. Dale, J. Neethling, T. S. Dick, P. Molteno, J. S. Brown, R. A. Zeederberg, Mrs. Strangeman, Lieut.-Col. R. A. Lyall, Dr. K. H. Barnard.

I am, etc.,

E. LEONARD GILL,

Director.

DEPARTMENT OF VERTEBRATES (REPTILES AND BATRACHIANS).

To the Director, South African Museum.

SIR,—I have the honour to present the following report on this Department for the year.

Reptilia.—Very considerable additions have been made to the collection of the Museum in this group. A museum expedition undertaken early in the year to the Kaokoveld in the north-western part of South West Africa, by Messrs. Lawrence, Hesse and Thorne of the staff, was productive both of new forms and also of little-known species not represented in the Museum's collection. Part of the material was sent to Mr. Hewitt, Director of the Albany Museum, for identification, and his descriptions of new species will shortly be published in the Museum's *Annals*.

The material thus taken can be tabulated as follows:—

Specimens.	Species.	New to collection.	New to Science.
103	41	7	6

Of other material sent to Mr. Hewitt, taken in previous expeditions, 6 species proved to be new to our collection, while 2 were new species or sub-species; amongst these are some interesting forms including such little-known lizards as *Sepsina weberi*, *Scapteira suborbitalis* and a rare sand-burrowing opisthoglyphous snake, *Xenocalamus pernasuta*, of which a good specimen was obtained at Warmbad in the Kaokoveld.

In August Dr. K. H. Barnard, collecting along the Orange River in the districts of Upington and Gordonia, contributed the large number of 78 specimens to the year's acquisitions, including a snake *Tarbophis beetzi* not previously contained in the Museum's collection.

The total number of additions including other donations is:—

Specimens.	Species.	New to collection.	New to Science.
188	60	14	8

Batrachia.—In this group considerable progress has been made owing to the revision of several genera at the hands of two authorities, Mr. J. Hewitt, Director of the Albany Museum, and Mr. J. H. Power, of Kimberley; the ground has been cleared for further systematic advances, and in this process the Museum has benefitted by the re-arrangement and descriptions of new forms. Owing to this revision the collection has been increased to the extent of 9 species, of which 8 are new to science.

The Batrachian collection can now be said to be very fairly representative of the fauna of Southern Africa, comprising as it does not less than 64 species.

The additions for the year are as follows:—

Specimens.	Species.	New to collection.	New to Science.
40	17	9	8

The thanks of the Trustees are due to the following:—J. S. Brown, W. Rose, Dr. S. H. Haughton, Dr. K. H. Barnard, Dr. A. J. Hesse, W. Thorne.

I am, etc.,

REGINALD F. LAWRENCE.

DEPARTMENT OF FISHES AND MARINE INVERTEBRATES.

To the Director, South African Museum.

SIR,—I have the honour to present the following report on this Department for the year 1925.

The arrears of work due to the causes stated in my report last year have been to a great extent made good. The additions to the collections have been important if not notably numerous. Eight fishes have been received which were not previously in the collections, and three of these were species not hitherto recorded from South African waters.

The outstanding feature of the exhibited series has been the casting of an enormous Devil-fish (*Megachrenbergi*) which was captured at East London and forwarded to the Museum through the agency of the Magistrate, the Cold Storage Coy., and the South African Railways. The cast has been hung in the Window Gallery, and certain interesting portions of the fish itself have been preserved in the spirit collection.

Fine specimens of the Seventy-four, the Escolar, Chimaera, and Rough-skinned Spiny-shark (*Cetoroscymnus*) have been mounted for exhibition. The cases containing the Crayfishes and Crabs have been re-arranged, the specimens being removed from wooden tablets and placed on an artificial representation of the sand and rocks on the sea bottom. This gives a more natural aspect to the specimens, but at the same time allows fewer specimens to be exhibited in the same space. The exhibited series has therefore been restricted to the larger and more striking forms, and those important from an economic point of view.

A very life-like cast of a giant Cuttle-fish (*Onychoteuthis*) has been made by Mr. Drury, the taxidermist, and placed on exhibition. It is hoped to replace the specimens of other species of giant Cuttle-fish and Octopus, now exhibited in unwieldy glass jars, by similar casts.

Lack of space is being felt in the building housing the spirit collections, both the marine collections and the collections of mammals, reptiles and amphibians. The collections are far too crowded as it is and in a few years' time additional space will have to be found.

This year I have been able to extend my researches on the fresh-water fauna by a visit to the Swellendam mountains. The results of this trip, together with those obtained by other members of the staff in the same area, show that the scheme for exploring the mountain ranges along the southern portion of the Cape Province is well worth continuing.

I was enabled to accompany Dr. Haughton on one of his survey expeditions through a portion of the Gardenia. Important collections of land shells and crustacea, as well as other animals and plants, were made. I have presented a separate report on this expedition.

During the year I have continued my work on the Monograph of South African Marine Fishes, of which the first part has been published, and I expect to complete the work during the ensuing year. I have also prepared for Dr. Gilchrist a report on the Barnacles collected by the Marine Survey vessel "Pickering".

The following papers deal either exclusively or partly with material from this Department:—

- K. H. Barnard: S.A. Marine Fishes, Part I. Ann. S.A. Museum.
 K. H. Barnard. New Marine Fishes. Ann. Mag. Nat. Hist.
 K. H. Barnard. A new species of *Gnathia* (Crustacea). Ann. Mag. Nat. Hist.
 K. H. Barnard. Revision of the *Anthuridae* (Crustacea). J. Linn., Soc. Lond.
 M. Connolly. African Non-marine Mollusca. Ann. Mag. Nat. Hist.
 T. Odhner. Monograph of Xanthid Crabs. Med. Goteborg Museum.
 H. Watson. S.A. species of *Onchidella*. Ann. S.A. Museum.
 J. R. le B. Tomlin. S.A. Marine Mollusca, 1. Ann. S.A. Museum.

The additions to the collections in my charge are as follows:—

	Specimens.	Species.	New to collection.
Fishes	234	40	8
Crustacea	119	24	7
Mollusca	236	29	3
Worms, Echinoderms, and other Invertebrates	32	7	1

The thanks of the Trustees are due to the following: Mr. Austin, Mr. Bell-Marley, Dr. Cawston, Mr. Eccles, Rev. Godfrey, Dr. Hesse, Dr. Haughton, Messrs. Irvin & Johnson, Mr. Lawrence, Mr. Pringle and Miss Wilman.

I am, etc.,

KEPPEL H. BARNARD,

Assistant Director.

DEPARTMENT OF ENTOMOLOGY.

To the Director, South African Museum.

SIR,—I have the honour to submit the following report on this Department.

At the beginning of this year Mr. R. F. Lawrance, Mr. C. W. Thorne and I made a collecting trip to the Southern Kaokoveld, where we made extensive collections along the route to Zesfontein. The local centres to which special attention was given were Outjo, Otjikonda, Otjitambi, Kamanyab, Kaross, Cango, Warmbad and Zesfontein. As a result of a three months sojourn in this part of the Kaokoveld we were enabled to obtain a more or less representative collection of the insect fauna. The approximate number of specimens so obtained is 8,000; among which there are without doubt many species new to the collection and some interesting new species.

Most of the orders are represented, but the Hymenoptera and Diptera predominate in number. Among the Coleoptera the Tenebrionidae are richly represented; other families are fairly well represented but not in abundance. The Orthoptera, Hemiptera, Lepidoptera and Neuroptera are of secondary importance in the collection, but the accessions comprise many interesting forms more or less representative of the dry Southern Kaokoveld.

From April to November I was engaged in the arrangement and classification of the Curculionidae in the Museum collection. The following subfamilies: the Brachycerinae, Byrsopinae, Rhityrrhinae, Attelabinae, Otiorrhynchinae, Somatodinae, and Tanyrrhynchinae, as well as the tribe Hipporrhini, have been arranged in systematic order in boxes ready to be transferred to the new cabinets.

I have also described and figured in manuscript form 13 specimens designated as types by the late Dr. L. Péringuey and 17 new species. This manuscript will be held over pending the incorporation of descriptions of any new species that I may find during the continuation of my arrangement of this large family.

During the latter half of November Mr. R. F. Lawrence and I undertook a trip to Swellendam and the Tradouw Pass in the Langebergen, with a view to collecting insects directly associated with the mountains, many species of which may be peculiar or restricted to high altitudes and thus become extinct owing to the recurrence of grass fires. As a result of this trip we obtained about 1,000 insects, which at the time of writing have not yet been pinned.

Apart from the Kaokoveld and Swellendam collections, other accessions to the collection of insects are as follows:—

		Specimens.	Species.	New to collection.
Coleoptera	(Dr. K. H. Barnard)	.. 3	3	1
	(Dr. Andreae)	.. 10	3	3
	(Capt. R. Stevenson)	.. 1	1	0
	(Mr. R. Tucker)	.. 4	1	4
Hymenoptera	(Capt. R. Stevenson)	.. 22	7	2
Diptera	(Dr. C. W. Mally)	.. 2	1	0
Orthoptera	(Mr. A. F. Kreil)	.. 10	4	8
		Total 52	20	18

In addition there is a collection made by Dr. K. H. Barnard in Gordonia, and on the Langebergen, from which latter locality he added a new species of *Colophon* to the collection of Lucanidae. A small collection of Hemiptera was also received during the year from Capt. R. Stevenson.

The following material has been identified and returned, wholly or in part, by specialists abroad:—

A collection of Cerambycidae	by C. Aurivillius.
Some Lepidoptera	.. C. Aurivillius.
.. Gyrinidae	.. G. Ochs.
.. Orthoptera	.. R. Ebner.
.. Diptera (Muscidae)	.. W. Patton.
.. Diopsidae & Stratiomyidae	.. E. Brunetti.

The following material has been sent out this year and is still in the hands of specialists:—

Some Stratiomyidae	to E. Brunetti.
.. Tipulidae	.. C. P. Alexander.
.. Buprestidae	.. J. Obenberger.

The following entomological papers have been printed for the Annals of the S.A. Museum:—

Ants (appendix to monograph)	By G. Arnold.	} Vol. XXIII, pt. 2.
Oedimeridae	.. K. G. Blair.	
Rhagionidae	.. M. Bezzi.	
Dolichopodidae	.. C. H. Curran.	
Microlepidoptera	.. E. Meyrick.	
Hemiptera of S.W. Africa	.. A. J. Hesse.	Vol. XXIII, pt. 1., pp.1-190, pls. 1-8.

In connection with material forwarded to specialists, Dr. J. Obenberger has published a paper on Buprestidae in the Bulletin of the Entom. Sect. of the National Mus. Prague, II. 1924, pp. 7-83, to which study of our material also contributed.

The following papers are in manuscript form:—

On Eumenes	By B. Bequaert.
.. Allodape (Hymenoptera)	.. H. Brauns.
.. Ichneumonidae	.. C. Morley.
.. Carabidae	.. L. Péringuey.

The thanks of the Trustees are due to the following donors and collectors: Dr. Andreae, Dr. K. H. Barnard, Mr. A. F. Kreil, Mr. R. F. Lawrence, Dr. C. W. Mally, Capt. R. Stevenson, Mr. R. Tucker.

I am, etc.,

ALBERT J. HESSE.

DEPARTMENT OF INVERTEBRATES (ARACHNIDS AND MYRIAPODS).

To the Director, South African Museum.

SIR,—I have the honour to present the following report of this Department for the year.

The first four months of this year were occupied with the Museum's expedition to the Kaokoveld, S.W. Africa. A large number of new and interesting forms were acquired, which together with the results of another impending expedition over the same ground early in 1926 will constitute the material for a paper to be published, it is hoped, next year. A feature of the collection is the large number of Pseudoscorpions obtained owing to the rocky nature of the ground which seems to favour their mode of existence. Thirteen species of scorpions were obtained of which 2 are new species and 2 new varieties. The other groups have not yet been dealt with specifically.

The resulting material can be tabulated as follows:—

Araneae	..	..	..	..	..	..	..	..	..	245
Scorpiones	..	..	..	..	..	..	..	..	..	86
Myriopoda	..	..	..	..	..	..	..	..	..	99
Solifugae	..	..	..	..	..	..	..	..	..	61
Pseudoscorpiones	..	..	..	..	..	..	..	..	..	98
Acari	..	..	..	..	..	..	..	..	..	13
Opiliones	..	..	..	..	..	..	..	..	..	1

On returning in April this material was labelled and incorporated; the work on the Arachnids of Ovamboland which had been only half finished the previous year was then resumed and completed and it is hoped will be published shortly.

The results can be briefly tabulated as follows:—

	Species.	New species.	New varieties.
Araneae	100	78	1
Solifugae	4	2	—
Scorpiones	8	—	—

In August Dr. K. H. Barnard collected along the Orange River, and a large number of additions, including two new species of scorpions, resulted from this expedition. In November of this year an expedition to Swellendam was undertaken by three members of the staff with a view to ascertaining the nature of the fauna of the mountain peaks. The results were as follows:—

	No. of species.
Araneae	45
Solifugae	3
Scorpionidae	3
Pseudoscorpiones	1
Opiliones	2
Peripatidae	1

Although this material has as yet not been properly treated the incorporation reveals several new species of Araneae and some interesting records of Solifugae, of which one species, *Solpuga maraisi*, is little known and was not previously contained in the Museum's collection.

The thanks of the Trustees are due to the following donors: J. S. Brown, Dr. E. L. Gill, Dr. K. H. Barnard, Dr. A. J. Hesse, R. Anderson, W. L. Miller, E. Dale, W. Thorne.

I am, etc.,

REGINALD F. LAWRENCE.

DEPARTMENT OF BOTANY.

To the Director, South African Museum.

SIR,—I have the honour to present herewith a report on the working of this Department for the past year.

Accessions.

Prof. R. Adamson.	10 S.W.A. plants.
Dr. K. H. Barnard	350 Wellington, Upington and Swellendam plants.
Bolus Herbarium	113 Rhodesian plants.
Bolus Herbarium	50 Cape Province plants.
K. Dinter	423 S.W.A. plants.
W. Gilchrist	6 European sea weeds.
Mrs. Levyns	6 Cape Province plants.
R. Primos	200 Swellendam plants.
Mrs. Robertson (per J. Drury)	21 New Zealand Ferns.
T. P. Stokoe	24 Cape Province plants.
C. Thorne	300 S.W.A. plants.
Various	54 Cape Province plants.

Exchanges.

British Museum of Natural History Herbarium; Royal Botanic Gardens Herbarium at Kew; W. Scarfe in New Zealand. Various small donations of desiderata were made to the Kew Herbarium and the Division of Botany of Pretoria.

Specimens mounted.

S.W. African	..	..	..	..	..	..	..	..	1,061
Rhodesian	..	..	..	..	..	..	..	..	282
Miscellaneous	..	..	..	..	..	..	..	..	801

Specimens incorporated.

1,293 including 129 new species and 28 new genera.

General information.

During the year the Herbarium was visited by a large number of students from the schools and University. Over 200 specimens were identified for visitors and residents interested in the Cape Flora. Parcels

of material were sent out on loan to specialists revising or monographing various genera. Expeditions were made by members of the Museum staff to S.W. Africa, and to the Swellendam and Upington districts, and large collections of plants were made from those parts. The first instalment of "Contributions to a Knowledge of the Flora of South West Africa," was published in April, and consisted of a List of Grasses; I hope to follow this up with papers on the Composites and other important families this year.

I am, etc.,

S. GARABEDIAN,

Senior Botanical Assistant.

DEPARTMENT OF PALAEOLOGY.

To the Director, South African Museum.

SIR,—I have the honour to present herewith a report on the Department of Palaeontology for the year 1925.

Accessions.—The accessions to the register number 198, divided as follows:—

Invertebrates,	Bokkeveld	..	..	..	..	..	7
"	Cretaceous	..	..	..	..	..	20
"	Tertiary	..	..	..	..	..	101
Vertebrates,	Karoo	..	..	..	..	..	43
"	Tertiary	..	..	..	..	..	15
Plants,	Karoo	..	..	..	..	..	12
Total							198

For these accessions we have been entirely dependent on the generosity of donors, no collecting expeditions having been undertaken during the year. Among the most important additions are a collection of *Euparkeria* and *Mesosuchus* material made at Aliwal North by Mr. A. W. Higgins; the type skull of *Dicynodon sollasi*, presented by Dr. R. Broom, F.R.S.; casts of the skulls of *Diplodocus longus* and *Brachychampsa montana* and of the fore-limb of the carnivorous Dinosaur *Anrodemus talens*, obtained by exchange with the United States National Museum; a collection of Cretaceous and Tertiary invertebrates from Portuguese East Africa, presented by W. J. Wright, Esq.; and a collection of Tertiary invertebrates given by A. V. Krige, Esq.

Exhibition.—The lack of further accommodation has prevented the display of more large skeletons. Room has, however, been found for the restored skull of the amphibian *Kestrosaurus dreyeri*, for a slab of sandstone from Aliwal North showing three skeletons of *Euparkeria* and two of *Mesosuchus*, and for a small skeleton of a *Dicynodon* mounted in plaster in the posture in which it was found. Polished sections of the stem of the Karroo plant *Rhexoxylon* have also been exhibited. The casts of Dinosaurs obtained from the United States National Museum have been displayed for comparative purposes, accompanied by pictures of the complete animals.

Preparation.—The work of development of the accumulated vertebrate material has gone on steadily throughout the year, and a large amount of material now awaits detailed investigation. This fact, and the need for enriching the Department's collections by a resumption of the intensive collecting which has been in abeyance for five years, lead me to draw attention to the urgent need for a qualified assistant who can undertake both collecting and descriptive work. Such an assistant must be appointed if the scientific value of the Department is to be maintained and further developed.

Publications.—The following papers dealing with material in the collections have been published during the year:—

Walton, J. On some South African Fossil Woods. 26 pp., 3 plates.

Reed, F. R. C. Revision of the Fauna of the Bokkeveld Beds. 199 pp., 8 plates.

Haughton, S. H. Descriptive Catalogue of the Amphibia of the Karroo System. 35 pp., 19 text figures.

Haughton, S. H. Notes on some Cretaceous Fossils from Angola (Cephalopoda and Echinoidea). 26 pp., 4 plates.

One paper entitled "On some New Mollusca from Tertiary Beds in the West of the Cape Province" by S. H. Haughton, and one on the "Description of a New Species of *Calliostoma* from a Raised Beach at Klein Brak River" by J. R. le B. Tomlin are in the printers' hands. Dr. von Huene and Dr. Broom have also given further descriptions of material examined by them. Dr. Broom is to incorporate his observations on the Titanosuchid material in a forthcoming paper.

Examination of certain of our specimens has made been by Professor S. H. Reynolds, Sir Edgeworth David, and Dr. R. Broom during the year.

Donors.—In addition to those mentioned thanks for donations are also due to Dr. F. Dixey, W. H. Sobeys Esq., G. H. M. Barrell Esq., H. Sandwith Esq., Professor Dart, W. Olwagen Esq., and the Queens-town Municipality.

I am, etc.,

SIDNEY H. HAUGHTON,

Hon. Keeper, Palaeontological Collections.

DEPARTMENT OF GEOLOGY AND MINERALOGY.

To the Director, South African Museum.

SIR,—I have the honour to present my report for the year 1925:

The additions to this Department were as follows:—

Rocks	..	..	..	..	..	..	..	..	56
Minerals	..	..	..	..	..	..	..	..	10
Total	..	..	..	..	..	..	..	..	66

1. *Additions to Exhibited Material.*—The collections accommodated in the room devoted to Industrial and Economic Geology have been considerably increased through the following additions:—

(a) *Platinum-bearing and associated rocks.* The sensational recent discovery of platiniferous deposits in the Lydenburg District of the Eastern Transvaal belonging to the Bushveld Igneous Complex is now illustrated by a comprehensive suite of the various ores and their accompanying formations; included in this exhibit are typical examples of both the remarkable dunite from Onverwacht and the important Upper or Merensky Reef, a variety of diallage norite, which has been shown to possess remarkable persistence for many miles in the Lydenburg district. Complete and representative sections across the reef horizon in some of the most important mines have thus been made available for study. The peculiar siliceous platinum ore found near Naboomspruit is also well illustrated. These additions form a most welcome novel feature of this Department.

(b) *Copper Ores from Namaqualand.* The exhibition of this instructive material has been made possible through the provision of an additional wooden show case, required for the platiniferous rocks.

(c) *Phosphate Deposits.* A beginning has been made to demonstrate the South African phosphate resources, including the recent discoveries of apatite rocks near Bandolier Kop in the northern Transvaal, now in process of development.

(d) *Monazite Deposits.* The well-known monazite ore from Houtenbeck, north-east of Pretoria, is now also displayed, together with a complete range of samples illustrating the famous monazite sands of Travancore in India, an important source of the thorium compounds required in the incandescent mantle and other chemical industries.

(e) *Asbestos.* Through the generosity of Bells United Asbestos Company the Department has been enabled to exhibit a representative collection of manufactured asbestos goods.

(f) *Photographic Material.* A series of photographic enlargements to illustrate the mode of occurrence and market preparation of asbestos at the New Amianthus Mines, Limited, near Barberton, has been displayed in the Economic Geology Room and forms an instructive as well as artistic feature; one particularly fine view of the Premier Diamond Mine has also been added.

The bulk of the above additions are due to the Geological Survey.

2. *Other Donations.*—Thanks are specially due to Miss Wilman for a specimen of the new mineral Awillite, from Kimberley, and to J. Peniston, Esq. and Mr. Nieuwenhuis, M.L.A. for various donations.

I am, etc.,

A. L. HALL,
Hon. Curator.

DEPARTMENT OF ANTHROPOLOGY AND ETHNOLOGY.

To the Trustees of the South African Museum.

SIRS,—I have the honour to present the following report on the above department.

Some of the main facts have already been set out in my general report, under the headings of "Collecting Trips" and "Anthropology, etc." Here I need add little more than some details of the various diggings that we have undertaken. With the help of Mr. J. C. van der Poll we have investigated three sites in the Cape Peninsula, respectively at Fish Hook, Noordhoek and Witsands. The first was an old hyaena den with no trace of human occupation, though it furnished most interesting information as to the original fauna of the Peninsula. At Noordhoek we dug up a well-preserved Bushman skeleton which Mr. van der Poll had discovered; it was that of a man about 5 ft. 7 ins. in height. The Witsands site was a rock shelter facing the Atlantic. It was very carefully dug out, and yielded among other remains some small bone implements of unusual types.

The cave at Hermanus, to which our attention was called by Mr. W. H. Paterson, is situated in a picturesque koppie behind the village. So far as our excavation went it provided proofs of long occupation but yielded little in the way of implements or human remains. Geologically it was of considerable interest. In the same neighbourhood, at Hawston, Mr. Paterson took us to an old hyaena den from which we obtained a good collection of bones. Through Mr. F. S. Hart and the Magistrate at Mossel Bay we obtained from a sand dune in that locality incomplete skeletons of a Bushwoman and very young child.

Our collections of stone implements and Bushman pottery have been added to by Messrs. E. G. Bryant, C. J. French, C. Wilmot, J. C. van der Poll, W. H. Paterson, Drs. E. A. Nobbs, Barnard and Haughton. For gifts of ethnographical objects representative of present-day races we are indebted to Mrs. Robertson (Muizenberg), Mr. G. Dubois, Rev. H. Kling, the S.A. Police, and Mr. W. Blenkins. The last-named has presented us with a collection of particularly good specimens of native work from the Basutoland border; it includes a specially fine example of the dolls compulsorily carried by young Basuto women after marriage.

I am, etc.,

E. LEONARD GILL,
Director.

KOOPMANS DE WET HOUSE.

To the Trustees of the South African Museum.

SIRs.—I have the honour to present the following report for the year 1925 on this Annexe to the Museum.

As indicated in my general report, the front of the House has been painted and the roof repaired by the Public Works Department; the outer walls at the back and some interior walls have been whitewashed by our own men. The general report has also referred to the almost complete re-labelling, in English and Afrikaans, of the furniture and other contents of the House. Both in legibility and finish the new labels are a great improvement on the old, apart from the fact that most of the old labels had become shabby and that the Dutch, where it was given previously, was chiefly Nederlands. The history of several unlabelled objects has been ascertained and labels provided for them.

Some of the chief acquisitions of the year have also been noted in the general report. Of historical and artistic interest is a set of medals commemorating three of the Boer generals who fought in the South African War. The medals, which are fine pieces of work, had been designed in Europe but never struck, and these copies were specially taken for us by the Consul General for Belgium. These and many other things already in the Koopmans de Wet House are objects of the "historical museum" class, and I take it that we must look forward to making before long a quite sharp division in the contents of the House, most of the rooms being furnished as living-rooms of the period on the "Volksmuseum" principle, and one or two others set aside for historical objects which could not find a place in the ordinary scheme of an inhabited house.

The total number of visitors for the year was 25,264, which again marks an increase. Of this number only 2½ per cent. were coloured people. Parties of children from twelve schools were brought to the House; the average number in a party was 38, and several of these parties were from schools at a considerable distance from Cape Town.

I am, etc.,

E. LEONARD GILL,

Director.

A. L. HILL
Et

E. LEONARD GILL

SOUTH AFRICAN MUSEUM.

STATEMENT OF INCOME AND EXPENDITURE FOR THE YEAR ENDED 31st DECEMBER, 1925.

INCOME.			EXPENDITURE.		
	£.	s. d.		£.	s. d.
To balance, 1st January, 1925	2,305	15 5	By Salaries	2,782	1 10
„ Grants :—			„ Sunday Duty	71	10 0
„ Union Government .. £6,200	0 0		„ Upkeep of Museum :—		
„ Cape Town Corporation .. 400	0 0		Wages	£1,316	5 0
		6,600 0 0	Uniforms	48	14 9
„ Interest :—			Tools	31	6 0
„ Hadje Suliman Shah			Audit	5	5 0
Mohamed Coin Fund .. 6	17 6		Water	60	11 10
Fixed Deposit Stand-			Insurance	11	9 1
ard Bank	7	10 0	Miscellaneous	476	10 11
		14 7 6			1,950 2 7
„ Sale of Publications		21 18 4	„ Library, Purchases and Subscriptions		198 0 8
„ Sale of Tank		1 0 0	„ Expenses in Travelling and Collecting		
„ Refunds :—			Specimens		165 10 10
Geological Survey	110	0 0	„ Freight and Railway Charges		85 7 4
British Empire Exhibi-			„ Postages and Petties		81 2 4
tion	75	0 0	„ Publications		1,716 18 3
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*Includes £173 0s. 10d. appertaining to the
Coin Fund.

STATEMENT "A."

HADJE SULIMAN SHAH MOHAMED FUND FOR THE PURCHASE OF COINS.

Amount of Investment with the South African Association	£100	0 0
Balance of Interest on 31st December, 1924	66	3 4
Interest received during period 1.1.25 to 31.12.25	6	17 6
	£173	0 10

Audited and found satisfactory.

J. DE V. ROOS,

Controller and Auditor-General.

Cape Town, 5th February, 1926.

E. LEONARD GILL,

Director,

South African Museum.

Cape Town, 4th February, 1926.

* See remarks on *Finances*, p. 5.

UNION OF SOUTH AFRICA

REPORT

OF THE

SOUTH AFRICAN MUSEUM

FOR THE

Year ended 31st December, 1926

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*Presented to both Houses of Parliament by Command of His Excellency
the Governor-General*

1927

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CAPE TIMES LIMITED.

1927

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C.T. Ltd.—B4532.

UNION OF SOUTH AFRICA.

Report of the South African Museum, for the Year ended 31st December, 1926.

*Presented to both Houses of Parliament by Command of His Excellency
the Governor-General.*

REPORT OF THE TRUSTEES.

The Trustees of the South African Museum have the honour to present to the Government, in accordance with the provisions of Act 17 of 1857, their Report for the year 1926.

The Right Hon. John X. Merriman, whose death occurred during the year, was the senior member of the Board of Trustees, his period of service dating from so long ago as 1875. In spite of the many other calls upon him as a leading public man, he had always (until his health broke down a few years ago) taken an active share in promoting the development of the Museum. He had known it almost in its infancy and had seen it through many important stages in its history.

To fill the vacant Trusteeship, the Governor-General, at the suggestion of the remaining Trustees, appointed Mr. J. G. van der Horst, who has acted since September and has already proved a helpful member of the Board.

Early in the last Parliamentary session the Trustees were granted an interview with the Minister of the Interior in regard to the need for an extension of the Museum building. The Minister received their representations sympathetically and acknowledged the urgency and long-standing of the need; he further stated that provision for the work had been made in his Department's estimates for the current year. Subsequently the circumstances were looked into personally also by the Minister for Public Works. During the past session of Parliament these movements did not lead to any tangible result, but the Trustees earnestly hope that something will be done during the coming session to relieve a situation which may fairly be said to have strangled nearly all progress in the Museum on its public side for more than fifteen years.

Among other matters which have engaged the attention of the Trustees during the year are some which may be mentioned here. It has been thought well to increase the fire insurance on the contents of the Museum, for though there is much in the collections which could not be replaced at any cost, the policy previously held did not by any means cover even such replaceable property as furniture and books. In this and other connexions the general financial position of the Museum has been closely reviewed; and though there is some uncertainty as to the possibility of maintaining the post permanently, it has been decided to appoint an assistant in palaeontology as soon as a suitable candidate is met with. The possibility of making this appointment has been repeatedly considered during the last two years; the deciding factor in leading to the action now being taken is the great accumulation of remains of South African fossil vertebrates, waiting in the Museum storerooms for systematic examination and description.

Another proposal which has been before the Trustees for a considerable time has been acted upon, in the appointment of an Advisory Committee for the Koopmans de Wet House. The Committee consists at present of two of the Trustees (Mr. Jagger and Prof. Jolly) and three co-opted members, Mr. Frank Cartwright, Mr. J. R. Finch (the Town Clerk) and Major W. Jardine. One meeting of this Committee has been held, and regular quarterly meetings have been decided upon.

Details of the work of the Museum during the past year are given below in the reports presented by the Director and other members of the scientific staff.

J. W. JAGGER,
Chairman of the Trustees.

REPORT OF THE DIRECTOR.

To the Trustees of the South African Museum.

SIRS,—I have the honour to present my report on the work of the Museum for the year 1926.

In my last report I reviewed the general state of the Museum and its collections, and emphasised, as I was bound to do, the pressing need of increased exhibition space. It cannot yet be said that this need is much if any nearer to being met, though it has had during the year the sympathetic personal consideration of the Minister of the Interior and the Minister of Public Works. It is most earnestly to be hoped that the coming session of Parliament will see the necessary provision made for an extension of the building. Until we have this extension (and this is the point that I wish specially to urge) we are unable to give the public anything approaching the value which it might otherwise secure for our grant.

The usual statistical information as to staff, visitors, acquisitions, publications, etc., follows here.

Staff.—There has been no change in the Museum staff this year.

Visitors.—The total number of visitors to the Museum during 1926 was 146,758—nearly 13,000 more than in the previous year. The total was made up as follows:—

White	..	Adults	..	..	..	Male	38,717
						Female	33,505
		Children	..	..	..		34,991
Coloured	..	Adults	..	..	..	Male	15,127
						Female	12,706
		Children	..	..	..		11,712
							<u>146,758</u>

Largest number in one day (2nd January)	..	1,479
Smallest number in one day (26th May)	..	73
Total number on Sunday afternoons	..	30,789
Largest number on one Sunday afternoon	..	850

The Museum was visited by 170 school parties, numbering in all 4,709 pupils.

Acquisitions (presented, purchased or collected by staff):—

	Specimens.	Species.	New to the collection.
Mammals	20	14	1
Birds and Birds' Eggs	23	20	1
Reptiles and Amphibians	200	77	5
Fishes	38	24	2
Crustacea	80	13	5
Insects	7,000	—	—
Arachnids and Myriapods	506	95	38
Mollusca	220	21	7
Other Invertebrates	45	5	2
Plants	1,044	1,379*	301
Geology, Mineralogy and Palaeontology	324	—	—
Anthropology, Ethnology and Antiquities	561	—	—

Library:—

Books	..	Presented or by exchange	..	6
		Purchased	..	13
Pamphlets and Serials	..	Presented or by exchange	..	656
		Purchased	..	117

Publications.—The following parts of the *Annals of the South African Museum* have been published during the year:—

Vol. XX., pt. 6 (80 pp. 11 pls.) ; containing:—

New Lizards and Batrachians	..	..	By	J. Hewitt.
Field Notes on Cape Batrachia	..	..	..	W. Rose.
Revision of the genus <i>Breviceps</i>	..	..	..	J. H. Power.
New Reptiles and Batrachia	..	..	..	J. Hewitt.
Notes on Cape Lizards	..	..	..	W. Rose.

* Number incorporated during the year.

Vol. XXIII., pt. 2 (225 pp. 2 pls.) ; containing :—

Monograph of the Formicidae, appendix ..	By	<i>G. Arnold.</i>
South African Rhagionidae (Diptera) ..	"	<i>M. Bezzi.</i>
South African Micro-Lepidoptera	"	<i>E. Meyrick.</i>
Oedemeridae of South Africa (Coleoptera) ..	"	<i>E. G. Blair.</i>
Dolichopodidae of South Africa (Diptera) ..	"	<i>C. H. Curran.</i>

Vol. XXIII., pt. 3. (242 pp. 2 pls.) ; containing :—

The Genus <i>Allodape</i> (Hymenoptera)	By	<i>H. Brauns.</i>
South African Ichneumonidae. Part 3	"	<i>C. Morley.</i>
The Genus <i>Eumenes</i> (Hymenoptera)	"	<i>J. Bequaert.</i>
New Carabidae (Coleoptera)	"	the late <i>L. Péringuey.</i>

This represents a total of 547 pages and 15 plates ; and to this must be added the title-page and index for each of the two completed volumes, XX and XXIII.

Museum Buildings.—Some important internal improvements have been made during the year by the Public Works Department. A complete installation of electric light has been put in ; gangways of linoleum have been laid between the cases in all the exhibition galleries ; the stairs have been laid with rubber ; and the concreting of the floor of the Whale Shed has been completed. Electric light fittings have improved so much in recent years that we have perhaps gained after all by waiting so long for our installation. The rubber treads and cappings on the stairs have done a great deal to lessen noise ; the linoleum gangways have had the same effect, as well as giving the whole Museum a more "furnished" appearance.

Collecting Trips.—As stated in the last report, a second expedition to the Kaokoveld, the most remote quarter of South West Africa, had set out at the close of 1925. Like several previous expeditions in South West Africa, it was carried out with the help of a grant from the Administration. The members of this expedition were Dr. Barnard, Mr. Lawrence and Dr. Hesse. They set out, as did the previous year's party, from the railhead at Outjo, and travelled northwest with a donkey wagon through Ombombo to Kaoko Otavi. The travelling was easier than it had been the year before, because the Hoanib gorge was avoided and there was practically no rain. From Kaoko Otavi, where three weeks were spent in camp, a separate shorter journey with an ox cart was made to the Hoarusib River thirty miles to the westward. On the return journey from Kaoko Otavi a detour to the northward through Otjinjerese was made, bringing the expedition within about sixty miles of the Kunene and the Angola border. Systematic collecting was carried out, first at Outjo, then throughout the journey, and especially from the camp at Kaoko Otavi. As on previous expeditions, collecting was done in all branches except the large mammals, but special attention was paid to reptiles, insects, arachnids, crustacea, shells, botany and geology. A large amount of material was brought home, most of it naturally requiring a great deal of detailed work before it could be put to systematic use ; and much of this work has subsequently been carried out or is now in hand.

In October Dr. Barnard made a short trip of a fortnight to the Langeberg range in the neighbourhood of Riversdale. He had a grant for the purpose from the Research Grant Board, but he was accompanied by the Junior Botanical Assistant, C. W. Thorne, on the Museum's behalf. The object of this trip was a continuation of the investigation of the Cape mountain ranges, which has already yielded most interesting results as regards the more obscure fauna. Good work was accomplished, in spite of bad luck in the matter of weather.

Museum Guides.—Three guides have been issued during the year. Previously we were in the position of having only one guide, and that one relating only to the inscribed stones. The issue of a general guide has been delayed partly through the uncertainty of the prospects of an extension of the building, with the complete re-arrangement that it will involve. That uncertainty still remains, and makes a detailed guide, such as ought to hold good for a number of years, a probable waste of money ; but as we could not well go on longer without a general guide at all, I have prepared a quite short one, with a few illustrations, which is being sold at threepence and appears to be serving its purpose. It aims only at giving visitors an idea of the contents of each room and directing their attention to some of the objects likely to prove of most interest. An Afrikaans version of this guide has been prepared by Dr. Hesse, and has further been very kindly revised by Prof. J. J. Smith, a leading authority on the language.

The two other guides, both sectional, are considerably longer and are priced at sixpence. One is a "Handbook to the Collections of Stone Implements," written by Mr. Goodwin in connexion with his work on our stone implements referred to later. The other is a guide to the new geological relief-map which is described below. It is written by Dr. Haughton, and studied with the map itself it provides an admirable introduction to the geology of the Cape Province.

Use of Afrikaans.—Nearly all the labels and notices put out during the year have been printed in both English and Afrikaans. As we have only one printer, much of whose time is taken up by work other than actual printing, the change brought about in any one year

may not be very impressive ; but our present policy is to print all new labels, wherever there is room enough, in both languages, and at the same time to reprint existing labels in batches, with Afrikaans versions, beginning with sections of the Museum which are of special interest to country visitors. (See later notes on labels for stone implements and big game animals.) Dr. Hesse continues to provide me with the necessary translations.

As stated above, we now have on sale a short general guide in Afrikaans.

Museum Grounds.—From the beginning of September the care of the grounds was handed over, by arrangement with the City Council, to the Parks and Gardens department of the Municipality. As the headquarters of the municipal gardening staff is close at hand, with motor lawn mower and other appliances, this arrangement obviously gives opportunity for economies, and the grounds are, in fact, at little increase in cost, being kept in decidedly better order than before and with much more show of flowers.

Finances.—As stated in the Trustees' report, the financial position of the Museum has been carefully considered during the year, in connexion with insurance, the payment of attendants and other members of the staff, and the larger expenditures that were in sight or were desirable. One leading question involved was the treatment of the credit balance which accumulated chiefly during the vacancy in the directorship in the year 1924. It had been provisionally decided, as I stated last year, to carry this balance forward as a fund towards providing cases for the hoped-for new wing of the Museum ; but this plan has now been abandoned in favour of laying-out the balance on more immediate objects—certain cabinets that are needed at once, some lines of work involving expense, and above all on making it possible to engage an assistant to deal with the accumulated material in the department of palaeontology.

It may be noted here that two circumstances have combined to make the balance at the close of the year larger by nearly £600 than it was expected to be. A consignment of cabinets was lost in the wreck of the "Cawdor Castle," and an account for the printing of the *Annals*, properly belonging to the year, was not received in time to be included in the year's payments.

GENERAL REVIEW OF MUSEUM WORK.

The general appearance of the exhibition rooms has been considerably improved by the linoleum gangways laid for us by the Public Works Department, and by the repair and repainting of the walls. Similarly in the Whale Shed, the completion of the concrete flooring, replacing gravel on the area underneath the skeletons, is another great improvement, further helped by the substitution of stout posts of teak for the make-shift iron posts previously used for the barrier.

Turning to the exhibited material itself, two additions call for special mention. The first is a geological relief-map of the south-western quarter of the Cape Province. It is on a scale of about four miles to the inch (the scale of the published sheets of the Geological Survey Map) and measures roughly five feet each way. Dr. Haughton was responsible for the idea of constructing it, and he superintended its preparation throughout and wrote the explanatory guide to it. The actual work of laying out and building up the model and of making and colouring the final cast was done by Mr. James Drury, the Museum taxidermist and modeller, to whose skill and care the finished result is a striking testimony. This portion of South Africa is particularly well adapted to representation in such a model, for the scenic features are so clearly related to the geological structure. Over and above its value as a visual lesson in geology, the model is thus of great general interest, as well as being an attractive object in itself. It is a most valuable and pleasing addition to the Museum, and in its present position in the middle of the Economic Geology room it is so lighted as to bring out the mountain ranges and other features very happily. (See Fig. 1.)

The other specially noteworthy addition to the exhibition galleries is a series of the frogs and toads of the Cape Peninsula, collected and presented by Mr. Walter Rose. The series not only represents all the known species (nineteen in number, about as many as are to be found in the whole of Europe), but it represents them by carefully selected examples showing wherever possible all stages of the life history. Moreover Mr. Rose gave us at the same time a set of notes and a fine series of photographs from life. Both notes and photographs have been embodied in an explanatory chart, which hangs just outside the case containing the specimens. Reference from the specimens to the chart is made easy in two ways ; the chart is at right-angles to the plane of the specimens, so that the visitor can look comfortably from one to the other, and the explanatory matter is arranged in compartments corresponding in position to the jars containing the specimens referred to. The whole exhibit is an admirable illustration of the sort of service that can be rendered to a museum by a local worker who takes up any such subject as a spare-time hobby. (See Fig. 2.)

Another considerable change, though it involves more subtraction than addition, is the installation of a systematic series of South African stone implements. A large quantity of stone implements was shown in the same cases before, but it is only within the last year or two that the study of the South African Stone Ages has reached a point at which something like a definite classification is possible, and it was desirable that our exhibited set of implements should reflect the present state of knowledge in regard to them. It was fortunate that we were able to secure this result quite readily through the help of Mr. A. J. H. Goodwin, M.A., of the Department of Social Anthropology, University of Cape Town. Mr. Goodwin has recently worked through the whole of our very large collection of stone implements (mostly, of course, kept in storerooms), and on the basis of this and other material he has himself had a large share in formulating and establishing the accepted scheme of "cultures" to which the various groups of implements are assigned.

Fewer implements are now shown than before, but those that are shown are carefully selected to represent the different cultures and where possible the stages of manufacture. They are also much more attractively mounted and labelled, and Mr. Goodwin has provided maps showing the geographical distribution of the different types. The handbook to the stone implements, published during the year, was also written and illustrated by him. The new labels in this section are all printed in both languages. A good deal remains to be done in the room before the best is made of even its present overcrowded state, but this piece of work on the stone implements is a very useful step in the right direction.

New mounted specimens have been added to the collections in various departments. Some of the big game animals mounted for the South African section at Wembley have been returned during the year, and as most of them were much better specimens than their existing representatives in our show-cases they have been substituted for these wherever possible. This change for the better only makes the necessity for replacing many of the other old specimens of big game animals more glaring: some of them were exceptionally fine examples of the living species, but they were mounted at a time when the art of taxidermy as applied to large mammals was at a primitive stage as compared with the best work done in that line at the present day. A certain amount of taxidermy has been done at the Museum during the year. Several large fishes have been skinned and mounted for the show-cases, chiefly to replace less satisfactory examples in jars. Two other specimens that have been mounted are of rather special interest. One is a tropic-bird (*Phuethon rubricauda*) from Dyers Island, the other a leathery turtle from False Bay. Both are very rare wanderers from tropical seas to South African waters, and both were obtained during the same week-end in February off the same part of the coast. It is perhaps significant that for some days at that time the water in False Bay was exceptionally warm. The tropic-bird, the first specimen actually secured in South Africa, was a gift from Mr. W. R. Zeederberg, the Superintendent of the Government Guano Islands.

Many new labels have been printed during the year. Apart from the labels for the stone implements, the most important set taken in hand is that for the large mammals. These were chosen partly because some of the existing labels were shabby and all needed revision, and also because the animals themselves are among the objects which most generally appeal to visitors from the country and thus presented a particularly strong case for labelling in Afrikaans. This batch of labels is still in hand, but about a third of them are already finished and in place.

What has been said so far refers entirely to the exhibited collections. But in this Museum, as in most others, a great proportion of the work done in an average year does not report itself in the exhibited collections. The members of the scientific staff are engaged for most of their time in work on the collections kept for reference, and it may be added that such is rather specially the case in this Museum, where the public side of our duties has been kept within narrow limits for many years by lack of room for exhibition. Particulars of this work on the reference collections will be found in the separate reports of the departments; Dr. Barnard's work on the marine fishes, Mr. Lawrence's on the spiders and other arachnids, Dr. Hesse's on the weevils, Miss Garabedian's on the botanical material in the Herbarium. Much other material is in the hands of specialists, chiefly in Europe and America. The results of all these different lines of work, by members of the staff and by outside specialists, are appearing as usual in the Museum *Annals*.

The separate departmental reports are appended.

E. LEONARD GILL,

Director.

DEPARTMENT OF VERTEBRATES (MAMMALS AND BIRDS).

To the Trustees of the South African Museum.

SIRS.—I have the honour to present the following report on this department for the year 1926.

The chief change in the department has been the replacement of some of the old examples of big game animals by much better specimens mounted for the British Empire Exhibition and returned during the year. There are still many poorly mounted specimens that should be replaced as soon as circumstances permit. It is true that even the finest specimens are largely thrown away when they are put into the crowded and badly lighted little room where our South African mammals have to be shown at present; but as this is one of the sections of the Museum that will be completely transformed when the new wing is at last built, it is important that we should be ready with good material when that long-awaited time does arrive.

Several of the other acquisitions are of interest. They include small collections of mammals and birds brought back from the Kaokoveld by the Museum expedition—among them several examples of the newly-described black meerkat, *Helogale brunetta*. A further specimen of this meerkat was sent us by the children of a German farmer near Outjo. A particularly interesting little specimen was presented by Mr. Walter Rose, a spiny mouse, *Acomys subspinosus*, found by the donor in August on the top of the Devil's Peak. Only two examples of this mouse were known previously—the type specimen in the British Museum (dating from 1837 and of unknown locality) and one caught on the top of Table Mountain in 1900.* Mr. Rose's example had apparently just been dropped by a hawk. Through Dr. Mossop we obtained a fine example of the brown hyæna or strand-wolf from near Vryburg. A remarkably fine series of photographs of big game taken by Col. F. R. G. Hoare in the Kruger National Park has been presented by him to the Museum. A further gift in the same line is that of two striking photographs of "white" or square-lipped rhinoceros taken in the Umfolosi Reserve in Zululand by Mr. Herbert Lang, of the American Museum of Natural History, to whom we were already indebted for prints of many fine photographs taken during his travels in South Africa. Mr. W. Powell, Chief Rodent Officer of the Union, has given us an excellent series of photographs of the smaller mammals.

The most interesting single bird received during the year was the tropic-bird from Dyers Island presented by Mr. Zeederberg and referred to on p. 5. Through Miss M. Wilman, of the McGregor Museum, Kimberley, we obtained specimens of the little Indian swift (the African race, *Micropus affinis abyssinicus*), till recently supposed to be rare but now known to be abundant in some places on the Karroo and further north. A European cuckoo (*Cuculus canorus*) obtained at George in November and presented by the Rev. Canon B. Price, is another most interesting acquisition; the species very rarely extends its migration southwards of the Transvaal.

The year's acquisitions may be tabulated as follows:—

	Specimens.	Species.	New to the collection.
Mammals	20	14	1
Birds	23	17	2

Some of the donors have been mentioned already. Others are Boswell's Circus, Rev. Canon Orford, Mr. W. van der Byl, K. and R. Weimann (Outjo), Col. J. Stevenson-Hamilton, Mr. J. G. Bridger and the Public Works Department, per Mr. J. H. Wollheim (mammals and birds from Groote Schuur).

I am, etc.,

E. LEONARD GILL,
Director.

DEPARTMENT OF REPTILES AND BATRACHIANS.

The Director.

SIR.—I have the honour to submit the following report on this department for the year, 1926.

The department owes the main accessions made during the year to an expedition to the Kaokoveld, South-West Africa, by the Museum staff, which resulted in securing 157 specimens for the collection, representing 26 species of lizards, 16 species of snakes, and 6 species of frogs. Of these several are new to the Museum's collection and two at least, a *Sepsina* and a *Pachydactylus*, are new to science and will be described by Mr. Hewitt of the Albany Museum.

The Museum is indebted to Mr. V. S. Peers of Cape Town for a small but useful collection of 15 beautifully preserved specimens from the Cape Province, Orange Free State, and Southern Rhodesia; a collection such as this is of more than usual interest in view of the wide distances between the various sources from which the material is derived.

In October, Dr. K. H. Barnard undertook an expedition to the Riversdale mountains, resulting in the addition of 15 specimens comprising 7 species, including a fine example of the mountainous digging-frog *Breviceps montanus*.

During the year a fine representative collection of Cape Peninsula frogs presented to the Museum by Mr. Walter Rose was set up for exhibition in the Reptile Section. This exhibit comprises 19 species of frogs and toads illustrating the rich and varied nature of our Peninsula fauna, and includes such recent discoveries as the new clawed frog *Xenopus gilli* and the small Cape toad *Bufo rosei*. Wherever possible the developing stages were set up together with the adults, and a splendid collection of photographs also presented by Mr. Rose is placed on an adjacent wall showing the living specimens in natural surroundings.

In May, on the return of the expedition from the Kaokoveld, a paper was prepared by myself for the Windhoek branch of the South African Society for the Advancement of Science, giving as far as possible a résumé of the knowledge of the South-West African fauna gained during the three previous expeditions in Ovamboland and the Kaokoveld. An endeavour was made to give as much information as possible regarding observations made by members of the staff on the habits, colour adaptations, diet etc., of the fauna met with, as well as the bare lists of species and records of distribution. A review of the results of

*I learn from Mr. Austin Roberts, of the Transvaal Museum, Pretoria, that he has received several examples in recent years from up-country localities.—E.L.G.

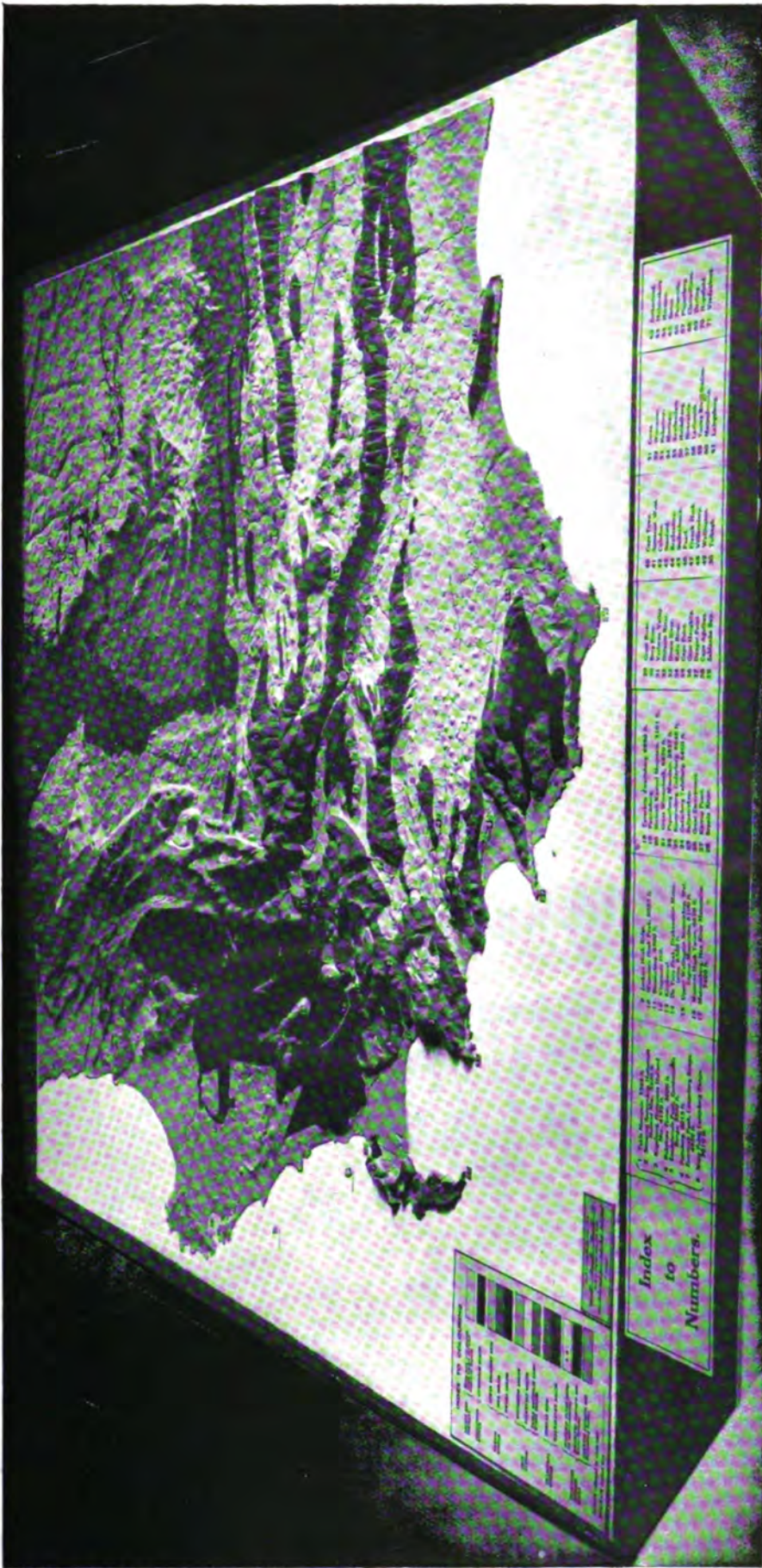


FIG. 1.—General view of the Geological Relief Map of the S.W. portion of the Cape Province.

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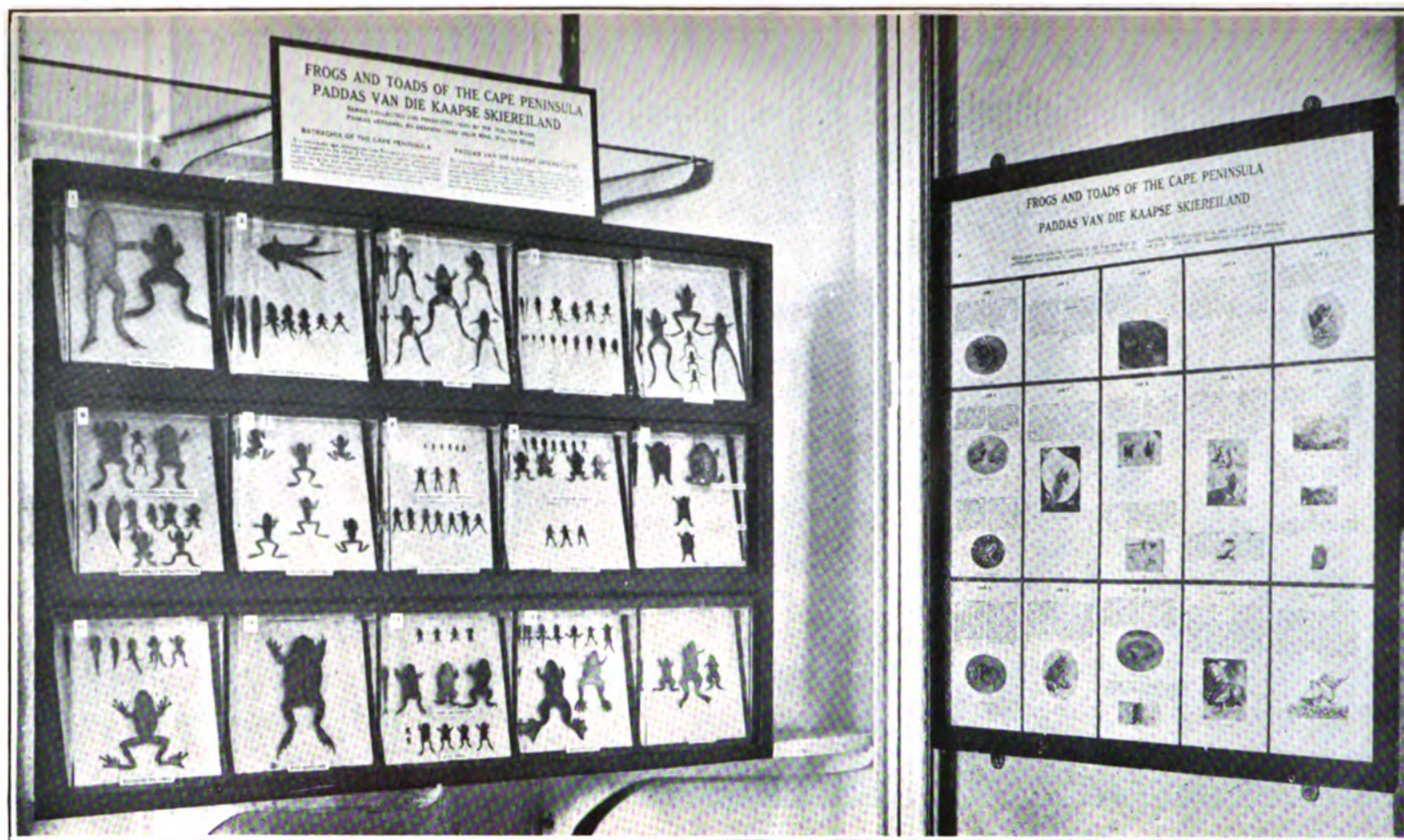


Photo Walter Rose.

FIG. 2.—Mr. Walter Rose's series of the Frogs and Toads of the Cape Peninsula, with his notes and photographs, as installed in the Museum.

the three expeditions conducted in South-West Africa brings out the fact that the importance of careful and systematic collecting cannot be overestimated, and even then it cannot be certain that there remain no forms as yet undiscovered. In certain obscure and rare types only one or two specimens have been captured and these may be damaged or not fully grown; in such cases it is highly desirable that further collecting should be undertaken to ensure a complete series of the fauna.

It is regrettable that on account of the cramped conditions due to the present serious lack of housing room, makeshifts have to be made year by year in order to accommodate the rapidly growing reptile collections which are increasing on an average by 200 additions every year.

The additions in this department for the year can be tabulated as follows:—

Specimens.	Species.	New to the collection.	New to Science.
200	77	5	2

The thanks of the Trustees are due to the following donors: D. C. van Niekerk, Messrs. Kannemeyer, H. M. Harris, J. S. Brown, S. H. Beuthin, W. A. Smith, V. S. Peers, W. Rose, Dr. K. H. Barnard, Messrs. Cressy and Brimacombe.

I am, etc.,

REGINALD F. LAWRENCE,
Assistant in Charge of the Department.

DEPARTMENT OF FISHES AND MARINE INVERTEBRATES.

To the Director, South African Museum.

SIR,—I have the honour to present the following report on this department for the year 1926.

For the first four months of the year I was in the field in connection with the Zoological and Botanical Survey of South West Africa. A separate report on this expedition embodying the observations and preliminary results of myself and my colleagues has been presented to you. In October I visited the Riversdale mountains in continuation of my researches on the fauna of the mountain ranges of the Cape, for which purpose I had received a grant from the Research Grant Board. The results of both these field expeditions were especially satisfactory as regards the Crustacea and Mollusca.

For the greater part of the year most of my time has been occupied with the completion of the Monograph of Marine Fishes, the letterpress of which is now ready for the printer; the plates will be completed early next year.

In the exhibition galleries little work has been done. The completion of the Crab case will be undertaken shortly. A moderately large example of the Mud Barbel or Plattekop (*Clarias*) has been mounted and placed on exhibit. Two or three large specimens of marine fishes are being taken in hand in the taxidermist's department and will be incorporated in the exhibited series next year.

A further batch of marine shells has been identified and returned by Mr. J. R. le B. Tomlin, and Major Connolly has reported on all the land and freshwater Mollusca collected during the year. A number of unidentified earthworms collected in past years, as well as all the material collected this year, has been sent to Mrs. Hutchinson at the Witwatersrand University. Several papers dealing with material from this department are in the press and will be issued early next year in the Museum Annals.

The following are the additions to the collections during the year:—

	Specimens.	Species.	Species new to collection.
Fishes	38	24	2
Mollusca	220	21	7
Crustacea	80	13	5
Other marine Invertebrates and Earthworms.	45	5	2

In connection with the housing of the spirit collections, it may be mentioned that the time is approaching when an extension of the spirit building will be essential. The collections of marine and freshwater fishes and crustacea are too crowded already for purposes of convenient reference. There is no room to set out the collection of echinoderms properly. Thus even at the present time, if the collection is to serve one of its main purposes, viz., to be consulted as the means of quick and ready identification of the specimens which are from time to time sent in by correspondents and others desiring information, an extension is highly desirable.

The thanks of the Trustees are due to the following donors:—C. L. Biden, J. S. Brown, Major Connolly, P. Ross-Frames, Dr. S. H. Haughton, Dr. A. J. Hesse, Messrs. Irvin & Johnson, R. F. Lawrence.

I am, etc.,

K. H. BARNARD,
Assistant Director.

DEPARTMENT OF ENTOMOLOGY.

To the Director, South African Museum.

SIR,—I have the honour to submit the following report on this department for 1926.

At the beginning of this year Dr. K. H. Barnard, Mr. R. F. Lawrence and I undertook a collecting trip to the Kaokoveld with a view to collect specimens in the hilly country north of Kaross and Zesfontein. We took the north-western road skirting the mountains, and made extensive collections along the route in January and February on the journey up and at the end of March and beginning of April on the return journey. The chief centres along the route to which special attention was paid were Goabendes, Kowares, Otjitunduo, Ombombo and Kaoko-Otavi. We made Kaoko-Otavi our headquarters and made a very extensive and representative collection of the insect fauna of this place, both on the rocky hills, and on the plains and around the two large waterholes. From Kaoko-Otavi we penetrated the mountainous country

south-westwards to Utju on the Hoarusib River, where a few days were spent in collecting insects along the wooded and reedgrown banks of its dry bed. On the return journey we touched at Okorosavi a little to the north of Kaoko-Otavi and did some collecting there. Skirting the Omaheke Sandveld we touched at the Otjitoko spring, where some collecting was also done before once more joining the old route at Otjitunduo.

As a result of the three months' trip to that little-known part of South West Africa we acquired quite a good representative collection of insects comprising a few thousand specimens. Owing to the prolonged drought during the entire trip the accessions are fewer both in numbers and species than that of the previous expedition in 1925 to the Southern Kaokoveld, when we encountered heavy rains and thunder storms. Most of the specimens acquired are representative of semi-arid conditions, and were obtained along the tree-grown banks of dried up omurambas, in the neighbourhood of springs and waterholes, on the rank vegetation of the valleys, and (by far the greater number) under or among stones. The collection is consequently rich in *Coleoptera*, comprising, in order of their importance, *Tenebrionidae*, *Carabidae*, *Curculionidae*, *Eurychoridae*, *Cicindelidae* and representatives of many other smaller families. Among the *Hymenoptera*, the *Eumenidae*, *Vespidae*, *Scolidae*, *Sphegidae* and *Chrysididae* preponderate in numbers rather than species. Other Orders of insects are poorly represented, and in order of their abundance are *Diptera*, *Orthoptera*, *Lepidoptera*, *Neuroptera* and *Hemiptera*. As this large collection of insects has not yet been pinned it is at present impossible to state correctly whether it includes many forms not obtained on the previous expeditions. With respect to the insects there is however without doubt very little difference faunistically between the Southern and Northern Kaokoveld and Ovamboland within the spheres represented by our collections. It may however safely be stated that the Museum collections have been considerably enriched both in new genera and new species from the Kaokoveld as a whole.

From April to December I was engaged in completing the arrangement and classification of the *Curculionidae* in the Museum collection. The entire collection has now been arranged and transferred to one of the new cabinets, and is accessible to entomologists. Among this large collection there are many new species and some new genera. I have described and figured in manuscript form 64 new species in these subfamilies to which I had reliable references in literature and of which I was certain. The rest of this undetermined material is now ready for future study or for specialists in the respective divisions of the family.

I regret to state that even this large collection of South African forms has many common and well-known genera and species missing, which gaps we have to fill up in future by collecting within the Union. Apart from the Kaokoveld collection, other accessions to the collection of insects are as follows:—

- (a) A small box of unpinned insects containing *Microlepidoptera*, *Hemiptera*, *Nemopteridae*, etc., from South West Africa, presented by Mr. J. S. Brown, Kiries West, Keetmanshoop.
- (b) A box of pinned and named *Hymenoptera* and *Coleoptera* from Rhodesia, presented by Captain R. H. Stevenson, Bulawayo.
- (c) A small collection of insects collected by Dr. K. H. Barnard on the Riversdale mountains.
- (d) A small tube of Psocoptera in spirit, containing one species found in tealeaves; presented by Dr. Marloth, Cape Town.

			Specimens.	Species.	New to collection.
Coleoptera	(Scarabaeidae)	(Mr. H. Eaton, Rondebosch) ..	8	1	0
"	(Scarabaeidae)	(Dr. Pettey, Elsenberg) ..	3	2	0
"	(Curculionidae)	(Dr. Andreae, Cape Town) ..	15	8	7
"	(Buprestidae)	(Mr. C. Théry, Rabat, Morocco) ..	46	17	13
"	(Eurychoridae)	(Miss. C. Hanekom, Fraserburg) ..	1	1	0
"	(Brenthidae)	(Mr. R. Tucker, Cape Town) ..	3	1	0
Hemiptera	(Reduviidae)	(Mr. D. Thwaites, Rhodesia) ..	8	1	1
"	(Cicadidae)	(Capt. R. Stevenson, Rhodesia) ..	1	1	0
Lepidoptera	(Lycaenidae)	(Mr. P. R. Robertson, Muisenberg) ..	1 and pupa	1	pupa new
Hymenoptera	(Chrysididae)	(Mr. C. G. Stone, Cape Town) ..	1 and mud nest	1	0
Total ..			87	34	22

The following material has been purchased:—

From Mr. A. Dummer, a collection of insects containing Central African *Hemiptera*, *Hymenoptera*, *Diptera* and *Neuroptera*.

The following material has been exchanged for North African and other exotic African forms:—

A small collection of *Buprestidae* comprising 43 species for 33 species from Mr. C. Théry's collection.

The following material has been sent out this year and is still in the hands of specialists:—

- (a) Some *Tipulidae* to Mr. C. P. Alexander.
- (b) Some *Notonectidae*, *Corixidae* and *Naucoridae* to Mr. G. E. Hutchinson.

The following material has been identified and returned:—

- Some *Diptera* by M. Bezzi identified by D. Duda.
Some *Eumenidae* by Dr. J. Bequaert.

The following material is still outstanding and in the hands of specialists:—

Some <i>Orthoptera</i>	in the care of	J. A. G. Rehn.
" <i>Acridiidae</i>	" "	R. Ebner.
" <i>Psyllidae</i>	" "	G. Enderlein.
" <i>Jassidae</i>	" "	C. Naude.
" <i>Muscidae</i>	" "	W. Patton.
" <i>Stratiomyidae</i>	" "	E. Brunetti.

The following entomological papers have been printed for the Annals of the S.A. Museum:—

The genus <i>Eumenes</i> in South Africa	By J. Bequaert.	} Vol. XXIII, pt. 3. pp. 483, 417, 435 & 579
The genus <i>Allodape</i> (Hymenoptera)	.. H. Brauns.	
South African Ichneumonidae	.. C. Morley.	
Carabidae	.. L. Péringuey.	

The thanks of the Trustees are due to the donors and especially to the following:—Dr. Andreae, Dr. K. H. Barnard, Mr. J. S. Brown, Mr. R. F. Lawrence and Capt. R. Stevenson.

I am, etc.,

ALBERT J. HESSE,

Assistant in Charge of the
Department of Entomology.

DEPARTMENT OF ARACHNIDS AND MYRIOPODS.

To the Director, South African Museum.

SIR,—I have the honour to present the following report on this department for the year 1926.

On the return of the Museum's expedition to the Kaokoveld at the beginning of the year the material was sorted and tabulated as follows:—

	Specimens.	Species.
Araneae	255	66
Solfugae	54	6
Scorpionidae	77	10
Myriopoda	98	8
Pseudoscorpiones	16	2
Acari	6	3
Total	506	95

The material obtained on a collecting trip to Swellendam by Messrs. Barnard, Hesse and Lawrence in November, 1925, was then worked out, and a full report drawn up, consisting of a list of the Arachnid fauna obtained together with notes and observations made. This report was then sent to the Research Grant Board at Pretoria and an acknowledgment was in due course received.

The remainder of the year has been devoted to work on the material obtained in the two previous Museum expeditions to the Kaokoveld, and it is hoped that this will be completed and ready for publication early next year.

A small collection of Arachnids from Dassen Island and Dyers Island captured by Dr. E. L. Gill and A. White was of interest in showing that the fauna of these islands differs little from that of the mainland except as regards colour variations; a large number of ticks, *Argas* sp., were found under stones, the hosts being in all probability sea-birds such as the penguin which live there in large numbers.

Ticks of considerable interest were found during the last Kaokoveld expedition on the black-necked cobra, *Naia nigricollis*, and the legavaan, *Varanus albigularis*; both these proved to be beautifully marked *Aponomma* species, while the common fowl tick *Argas persicus* was found free-living under flakes of rock near krantzies inhabited by starlings and parakeets.

Dr. K. H. Barnard made a good collection of Arachnida in the Riversdale Mountains in October, which included a new mountain variety of the scorpion *Opisthophthalmus karrooensis*.

The thanks of the Trustees are due to the following donors: H. Boehmke, F. Merrington, V. S. Peers, J. S. Brown, A. G. Winterbottom, Dr. K. H. Barnard, Dr. E. L. Gill, Dr. A. J. Hesse, A. White.

I am, etc.,

REGINALD F. LAWRENCE,

Assistant in Charge of the Department.

DEPARTMENT OF BOTANY.

To the Director, South African Museum.

SIR,—I have the honour to present herewith a report on the Department of Botany for the year 1926.

Accessions.

Prof. R. Adamson	75	Cape Province specimens.
Prof. R. Adamson	18	S.W. Africa specimens.
Dr. K. H. Barnard	322	S.W. Africa specimens.
Dr. K. H. Barnard	28	Cape Province (mosses).
Bolus Herbarium	12	Cape Province specimens.
Miss A. V. Duthie	8	Stellenbosch specimens.
H. Lang	28	Knysna and Swellendam plants.
E. B. Lefson	10	Cape Province (mosses).
Mrs. Levyns	12	Cape Province plants.
Miss M. A. Pocock	95	Angola plants
T. P. Stokoe	36	Cape Province plants.
C. Thorne	295	Riversdale plants
Various donors	105	Plants from various localities.

Exchanges.

Bolus Herbarium, Kirstenbosch; Herbarium of the British Museum of Natural History; National Herbarium, Pretoria.

Specimens mounted.

S.W. African	993 sheets.
Angolan and Rhodesian	269 sheets.
Cape Province	680 sheets.

Specimens incorporated.

1,379 including 301 new species and 12 new genera.

General Report.

A great deal of time was spent in going through the cabinets for the purpose of labelling and numbering those sheets which bore no Museum label; the work is still going on. At the same time, type specimens are being conspicuously marked as such.

Several hundred plants were identified for students and other interested, and from time to time reports were furnished to various Administrations on suspected noxious weeds.

There were two Museum expeditions during the year; the first to the Kaokoveld resulted in an accession of some hundreds of plants, some of which were new to the S.W. African collection. The Bryophyta, which were examined by Dr. T. R. Sim, proved specially interesting from the point of view of distribution. The second expedition was to Riversdale, and here again new records of localities were made for mosses.

The thanks of the Trustees are due to various donors, especially to Prof. Adamson, Dr. K. H. Barnard and Miss M. A. Pocock.

I am, etc.,

S. GARABEDIAN,

Senior Botanical Assistant.

DEPARTMENT OF PALAEOLOGY.

To the Director, South African Museum.

SIR,—I have the honour to present herewith a report on the working of the Department of Palaeontology for the year 1926.

Additions.—The number of additions to the register was 212, made up of 179 Invertebrates and 33 Vertebrates. Among the former the most important accessions were 22 specimens of Bokkeveld fossils described and figured by Dr. F. R. C. Reed, and presented by the University of Cape Town; a collection of Tertiary fossils from Portuguese East Africa, and another collection of Jurassic and Cretaceous shells from Madagascar, both presented by Dr. W. J. Wright; Tertiary shells from raised beaches, presented by Dr. A. V. Krige; and a shell of the land-snail *Achatina* from the bottom of the Taungs limestone, presented by Mr. Spiers.

Among the vertebrate accessions must be mentioned the type skulls of two species of *Dicynodon*, presented by Dr. R. Broom, Karroo reptiles donated by Mr. Olwagen and by Dr. Luckhoff; a specimen of *Mesosaurus* from Brazil, obtained by exchange with the University of Tübingen; and a collection of Karroo reptiles from Nyasaland, presented by Dr. F. Dixey. In addition, Dr. Dixey forwarded for examination and report a large collection of Dinosaur bones from Upper Jurassic or Lower Cretaceous Beds in Nyasaland.

Exhibition Series.—Lack of space has prevented the addition of any notable exhibits, save that of the *Mesosaurus* from Brazil. It has been found necessary to remove into store the mounted skeleton of *Pareiasuchus peringueyi*, which was ill-displayed on the top of a wall-case and was partly disintegrating in the open. A number of new labels have been printed. It is proposed to issue a short Guide to the exhibition of fossils; but more space is urgently needed in order to make the display both attractive and educational.

Publications.—No papers have been published this year in the "Annals" of the Museum, but the following papers contain descriptions of fossils now in the Museum collection:

Haughton, S. H. On some New Mollusca from Tertiary Beds in the West of the Cape Province. Trans. Roy. Soc. S.Afr., 13, 1926, pp. 159-162.

Haughton, S. H. Notes sur quelques Fossiles crétacés de l'Angola. Com. Commiss. serv. geol. Portugal, 15, 1926, pp. 1-32.

Haughton, S. H. On Karroo Vertebrates from Nyasaland. Trans. Geol. Soc. S.Afr., 29, 1926, pp. 69-83.

I am, etc.,

SIDNEY H. HAUGHTON,

Hon. Curator, Palaeontological Collections.

DEPARTMENT OF GEOLOGY AND MINERALOGY.

To the Director, South African Museum.

SIR,—I have the honour to present my report for the year 1926:

Additions:

Rocks	95
Minerals	15
Meteorites	2
Total	112

The principal donors were: The Geological Survey, Miss Wilman, Dr. K. H. Barnard, Dr. A. L. du Toit and R. Primos, Esq.

Additions to Exhibits :

(a) The section illustrating the mineral resources of South Africa has been strengthened by a special exhibit showing the recently discovered manganese occurrences in Griqualand West, which are likely to lead to an important new development in the South African base metal industry.

(b) A geological relief model of the western part of the Cape Province is exhibited in the room devoted to Economic Geology, where it occupies the space formerly given up to the old gold mine model. The relief model demonstrates very clearly the nature and distribution of various formations making up this section of the Province and also shows their influence on the scenery. The model was made at the suggestion of Dr. S. H. Haughton and completed under his supervision. Mr. James Drury, the Museum taxidermist and modeller, undertook the execution, including the modelling, casting, colouring, etc.; the result is a conspicuous monument to his skill. Valuable assistance in connection with the topography was given by the Mountain Club of South Africa.

A special guide is available, prepared by Dr. S. H. Haughton.

(c) A panorama of the magnificent view obtained from the edge of the Great Eastern Escarpment of the Drakensberg at the Devils Kantoer in the Eastern Transvaal has been added to the photographic exhibits of the Department, and is built up from a series of professional photographs specially taken by Mr. A. Yates, in Pretoria; this panorama is justly famous as one of the most striking and instructive geological views in South Africa.

(d) The Economic Geology room now also displays a copy of the Geological Map of the Union on the scale of One in a Million, prepared and presented by the Geological Survey. Apart from its high value to the student of geology, such a map—the first of its kind to be published—is of great practical use in a country so richly endowed with mineral resources, and forms a pleasing and instructive addition to this Department.

I am, etc.,

A. I. HALL,

Hon. Keeper.

DEPARTMENT OF ETHNOLOGY AND ARCHAEOLOGY.

To the Trustees of the South African Museum.

SIRs,—I have the honour to present herewith a report on the work of this Department for the year 1926.

An important event in the archaeological section has been the overhauling of the collection of stone implements by Mr. A. J. H. Goodwin, and the installation of a new exhibited series which is in accordance with the results of recent work. Further details are given on p. 5. Some good additions have been made to the reference collection of stone implements; they include batches brought back from the Kaokoveld by our expedition and from the southern parts of South West Africa by Dr. Haughton; others from Wolmaransstad sent by Dr. A. W. Rogers, together with one of the beautiful stone rings, as perfectly finished as though turned on a lathe, which are among the most puzzling of worked stone objects found in South Africa. Another interesting acquisition in this section is a model of one of the hemispherical stone huts found in the eastern part of the Free State; the model was made by Mr. C. van Riet Lowe, who has investigated these huts and has presented with the model copies of his plans and maps bearing on their probable history.

In the Kaokoveld Dr. Barnard secured a good impression in plaster of a rock engraving of a giraffe. From this a cast has been made and is now added to the collection shown on the walls of Room VII. The really fine engravings in this collection do not happen to include a giraffe, but this one comes nearer to being a good figure of it than any other that we have.

An interesting and rather puzzling local antiquity has been obtained through the good offices of the Town Clerk. It is a short wooden post with a human head carved on one end. The carving is done in large free cuts, giving the impression of the work of a metal tool, and the style is more European than native. Yet the object was found near Maitland at a depth of eleven feet in apparently undisturbed ground, six feet below a thick surface bed of ironstone gravel.

In the anthropological section a considerable haul of new material has been made from Colesberg. Here an outbreak of smallpox resulted in many deaths in 1866, and I was told that more than fifty Bushmen were buried in an improvised cemetery outside the town. Inquiry showed that the site was known, and with the help of the Magistrate I was able to arrange for Mr. Drury to go over and dig up the remains. My rather faint hope of securing a haul of pure Bush skeletons was not realized; the skulls (54 in number) have not yet been studied in detail, but it is evident that they represent a mixed population of Bush, Hottentot, Kaffir and half-bred people, though with a number of typical Bush skulls included. Some of the skulls promise to be of great interest. Many of them are accompanied by more or less complete skeletons, but in other cases a large part of the skeleton had crumbled away. Other skulls or skeletons have been presented by Mr. C. van Riet Lowe and Mr. C. P. Immelman.

Among the ethnographical objects acquired by purchase are some interesting articles of Bushman manufacture from the Kalahari, and a Bechuana grain-pounder. Miss M. Wilman has presented a water vessel made by Bushmen in the Barkly West district—hartebeest skin moulded over a lump of clay and bound with basketwork round the top; a method presumably learnt from some Bantu tribe. A large accession has been made through the Rev. A. Lageard, a missionary at Sesheke, Northern Rhodesia, who has obtained for us a well selected set of objects illustrating the various handicrafts of the Barotse. Included with them, and perhaps the best of all, is an old ebony chair presented to the Museum by the Barotse queen; there is also a particularly fine example of basketwork as a gift from her daughter.

Other donors not yet mentioned are the Rev. H. Kling (Bushman beads); Mr. H. Nash-Webber (tracings of cave paintings from mountains near Naauwpoort); Mr. S. C. Cronwright, Capt. G. Crossland Robinson, Dr. C. G. Seligman, Mrs. J. A. Moroney, Capt. Graves, Dr. K. H. Barnard, Messrs. R. F. Lawrence, H. F. Eastman, E. G. Bryant, E. R. Scully (stone implements); Mr. W. H. Paterson (cave remains from Hermanus); Col. Colnaghi (Egyptian scarabs); Messrs. Malcolm Taylor, S. Chenker and Mrs. L. Dymott (coins and medals); Mr. E. F. Oettlé (old Cape powder horn, etc.); Mr. A. E. Richards (Free State Republican flag); Robben Island Boy Scouts (old naval tombstone).

I am, etc.,

E. LEONARD GILL,

Director.

KOOPMANS DE WET HOUSE.

To the Trustees of the South African Museum.

SIRS,—I have the honour to present the following report on this Annexe to the Museum for the year 1926 :

The appointment of the Advisory Committee is a step which I welcome. It is often necessary for me to ask advice on particular questions or to get expert opinion on articles of furniture or other objects, and the existence of a properly constituted Committee, meeting regularly, will make all this much easier. The lines on which the House is to develop in the future will also be a matter in which the Committee's guidance will be valuable.

The attendance of visitors has been well maintained. The total for the year is 25,685, the highest figure recorded since 1919. Coloured people seem to take little interest in the House; they represent only 2 per cent of the year's visitors. Parties from 25 schools visited the House during the year, as against 12 in 1925. Some were from quite distant places—Robertson, Cradock, Graaff-Reinet. The average number in a party was 27.

Among the year's acquisitions are a bequest of furniture and other articles by the late Melt J. Brink, and a number of pieces of china, old Capetown pictures and antiquarian or historical objects deposited on loan by the executors of the late Jan H. Hofmeyr. Donors of other additions are Mrs. Dürr, senr. (Dutch family Bible of 1741); Capetown Corporation (medals struck for Prince of Wales's visit).

The picturesque yard at the back of the House has been attended to: the walls repaired and white-washed, the spouting cleaned and painted and the woodwork oiled.

I am, etc.,

E. LEONARD GILL,

Director.

SOUTH AFRICAN MUSEUM.

STATEMENT OF INCOME AND EXPENDITURE FOR THE YEAR ENDED 31st DECEMBER, 1926.

INCOME.			EXPENDITURE.		
	£.	s. d.		£.	s. d.
To balance, 1st January, 1926	1,385	1 4	By Salaries (including staff contributions to Provident Fund £239 13 9)	4,065	19 2
.. Grants :—			.. Sunday Duty	72	8 0
.. Union Government .. £6,200 0 0			.. Upkeep of Museum :—		
.. Cape Town Corporation .. 400 0 0	6,600	0 0	Wages £197 7 6		
.. Interest :—			Uniforms 48 11 0		
.. Hadje Suliman Shah			Tools 18 0		
.. Mohamed Coin Fund .. 4 10 0			Audit 5 5 0		
.. Fixed Deposit Stand-			Water and Electric		
.. ard Bank 20 0 0			Light 42 14 9		
	24	10 0	Insurance 56 18 6		
.. Sale of Publications ..	22	1 5	Cases 23 10 0		
.. Sale of Cast of Relief Map	5	0 0	Maintenance of Grounds		
.. Sale of Wood 0 8 0			(City Corporation) ..	75	0 0
.. Refunds :—			Miscellaneous	383	19 11
.. South African Railways	1	9		834	4 7
.. Colombo Museum ..	9	16 0	.. Library, Purchases and Subscriptions	178	8 3
.. Insurance 1 15 0			.. Expenses in Travelling and Collecting	229	16 3
.. Geological Survey ..	5	3	.. Freight and Railway Charges ..	51	10 10
.. Travelling and Col-			.. Postages and Petties	73	5 1
.. lecting 62 5 4			.. Publications	524	10 10
	74	3 4	.. Trustees Proportion of		
			.. Provident Fund	239	13 9
			.. Coins	7	10 0
			.. Bank Charges	5	1 7
			.. Balance :—		
			.. Cash in Bank £1,304 6 3		
			.. Cash on hand 24 9 6		
			.. Fixed Deposit Stand-		
			.. ard Bank 500 0 0		
				1,828	15 9
	£8,111	4 1		£8,111	4 1

*Includes £77 10s. 10d. appertaining to the Coin Fund.

STATEMENT "A."

HADJE SULIMAN SHAH MOHAMED FUND FOR THE PURCHASE OF COINS.

Amount of Investment with the South African Association	£100	0 0
Balance of Interest on 31st December, 1925	73	0 10
Interest received during the period 1.1.26 to 31.12.26	4	10 0
	£177	10 10

Audited and found satisfactory.

J. DE V. ROOS,

Controller and Auditor-General.

Cape Town, 17th March, 1927

E. LEONARD GILL,

Director,

South African Museum.

Cape Town, 17th February, 1927.

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REPORT

OF THE

SOUTH AFRICAN MUSEUM

FOR THE

Year ended 31st December, 1927

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the Governor-General*

1928

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Trustees of the South African Museum :

THE HON. JOHN WILLIAM JAGGER, F.S.S., M.L.A. (*Chairman*).
 SIR THOMAS MUIR, C.M.G., M.A., LL.D., D.Sc., F.R.S. (*Vice-Chairman*).
 PROF. WILLIAM ADAM JOLLY, M.B., Ch.B., D.Sc., F.R.S.S. Afr.
 COUNCILLOR W. F. FISH, J.P.
 J. G. VAN DER HORST, ESQ.

Advisory Committee for Koopmans de Wet House :

J. R. FINCH, ESQ. (*Chairman*). PROF. W. A. JOLLY.
 HON. J. W. JAGGER. FRANK E. CARTWRIGHT, ESQ.
 MAJOR W. JARDINE.

Staff of the South African Museum :

EDWIN LEONARD GILL, D.Sc., Director and Keeper-in-Chief.
 KEPPEL HARCOURT BARNARD, M.A., D.Sc., F.L.S., Assistant Director ; in Charge of Fish and Marine Invertebrates.
 REGINALD FREDERICK LAWRENCE, B.A., Assistant in Charge of Reptiles and Batrachians, Arachnids and Myriopods.
 ALBERT JOHN HESSE, B.Sc., Ph.D., Assistant in Charge of the Entomological Department.
 MISS STAR GARABEDIAN, B.A., Assistant in Charge of the Botanical Department.
 LIEUWE DIRK BOONSTRA, B.Sc., Assistant in Palæontology.
 ARTHUR LEWIS HALL, M.A., Sc.D., Honorary Keeper of the Geological and Mineralogical Collections.
 SIDNEY HENRY HAUGHTON, B.A., D.Sc., Honorary Keeper of the Palæontological Collections.
 J. DRURY, Taxidermist and Modeller. J. LE ROUX, Printer.
 MISS P. EDWARDS, Clerical Assistant. B. OLLEY, Head Attendant.
 C. W. THORNE, Junior Botanical Assistant. N. HERBERT }
 A. G. WHITE, Junior Taxidermist. C. LOMBARD } Attendants.

UNION OF SOUTH AFRICA.

Report of the South African Museum for the Year ended 31st December, 1927.

*Presented to both Houses of Parliament by Command of His Excellency
the Governor-General.*

REPORT OF THE TRUSTEES.

The Trustees of the South African Museum have the honour to present to the Government, in accordance with the provisions of Act 17 of 1857, their Report for the year 1927.

The year's work of the Museum is dealt with by the Director and other members of the scientific staff in the pages which follow. The Trustees have here to remark only on a few matters with which they have been specially concerned, and above all to record their disappointment that the extension of the building, so long and urgently needed, has been still further postponed. At an interview granted to the Trustees on 31st January, 1927, the Minister of the Interior held out some hope of the necessary provision being made during that session, but his warning that he was bound to treat certain other objects as having a prior claim proved only too prophetic of the eventual result. The Trustees are assured of the Government's sympathy with their claim, but they fear it is impossible to convey any real sense of its urgency to those who have not had a long and intimate knowledge of the Museum, its growth and its difficulties. They would point out once more that it is mainly the public which suffers by the continuance of the present conditions.

In the previous year's Report the contemplated appointment of an Assistant in Palaeontology was alluded to. The appointment was made early in 1927, and the selected candidate, Mr. L. D. Boonstra, has been at work since the beginning of April. It will be a matter of regret if it should prove necessary to treat this assistantship as merely temporary, but it is the fact that funds are not at present in sight for continuing it beyond the three years agreed upon in the first instance.

The regulations for the Provident Fund, instituted for the benefit of the Museum staff, have received the approval of the Minister of the Interior. The present annual charge to meet the Trustee's contribution to the Fund amounts to about £275. In consequence of this new charge on income, together with necessary increments of salary, a point has been reached where the normal expenditure and income are equal, independently of the new assistant's salary and without allowing anything for such large occasional outlays as the purchase of new show-cases. Unless some relief can be found, this position is likely to enforce undesirable economies on field collecting and on publication.

The Advisory Committee for the Koopmans de Wet House has met a number of times and has made important recommendations for the better keeping of the House and its contents. Some of its suggestions have already been carried out and others are under consideration. As was to be expected, the recommendations involve increased expenditure, which would add still further to the difficulties which the Trustees have to face.

J. W. JAGGER,
Chairman of the Trustees.

REPORT OF THE DIRECTOR.

To the Trustees of the South African Museum.

SIRS,—I have the honour to submit a report on the work of the Museum for the year 1927.

The year has again brought a disappointment in that it appears to have left us little if any nearer to a provision for our greatest need, namely an extension of the Museum building. Without greatly increased show-space most of the work that we ought to be doing for the public must remain in the state of paralysis in which lack of room has kept it now for many years. The existing building was never intended to be more than the beginning of a museum, and until it is substantially enlarged we can never have a museum in any way worthy of the city or the country.

Staff.—The staff has remained the same except for the addition of Mr. L. D. Boonstra as Assistant in Palaeontology. The appointment has been made for three years, and the financial outlook does not justify much hope of continuing it longer, but it will be regrettable from the point of view both of the Museum and of South African palaeontology if it does prove to be only temporary.

Visitors.—The total number of visitors recorded during 1927 was 141,734. This is about 5,000 less than the previous year's total but considerably more than the total for 1925. The slight reduction this year seems to be due to a smaller number of emigrant ships calling at the Cape. The year's total was made up as follows:—

White	..	Adults	..	..	..	..	Male	35,421
							Female	32,567
		Children	..	..	..	..		32,119
Coloured	..	Adults	..	..	..	..	Male	14,275
							Female	12,132
		Children	..	..	..	..		11,642
Native	..	Adults	..	..	..	..	Male	2,714
							Female	864
								141,734
Largest number in one day (24th May)								1,388
Smallest number in one day (5th August)								58
Total number on Sunday afternoons								27,510
Largest number on one Sunday afternoon (10th July)								934

The Museum was visited by 173 school parties and drawing classes, numbering in all 5,051 pupils.

The year's visitors have included several large parties of American tourists and a number of well-known naturalists and men of science. Among these were Colonel Stevenson-Hamilton, Warden of the Kruger National Park; Mr. R. E. Turner, who has spent many seasons in collecting insects in South Africa for the British Museum and has this year presented us with a most valuable series of his duplicates; Professor Lotsy, whose famous studies of hybrids were extended to include the half-breeds represented among our life-casts of natives; Mr. M. C. Burkitt, the Cambridge archaeologist; Dr. Linton, an anthropologist from the Field Museum, Chicago, who called on his way home after two fruitful years of travel in Madagascar; Dr. Chapin, of the American Museum of Natural History, New York, an authority on Central African birds; and two other well-known ornithologists, Admiral Lynes and Mr. B. B. Osmaston, who began here their field studies of the African grass-warblers (*Cisticolæ*).

It may be mentioned also that the annual conference of the Directors of the four Union Museums (the museums supported by grants from the central Government) was held in Cape Town in October. These conferences were instituted at the suggestion of the Minister of the Interior, this year's meeting being the second of the series.

Acquisitions (presented, purchased, or collected by staff):—

	Specimens.	Species.	New to the collection
Mammals	14	9	—
Birds	65	42	1
Reptiles and Amphibians	74	24	3
Fishes	117	80	4
Insects	1,300+	—	90+
Crustacea	376	64	8
Arachnids and Myriopods	118	50	—
Mollusca	339	60	6
Other Invertebrates	15	5	—
Plants	895	—	—
Geology, Mineralogy and Palaeontology	905	—	—
Ethnology and Antiquities	3,000	—	—

Library:—

Books	..	Presented	..	..	2
		Purchased	..	..	7
Pamphlets and Serials	..	Presented or by exchange	..	..	839
		Purchased	..	..	154

Publications.—The following parts of the *Annals of the South African Museum* have been published during the year :—

Vol. XXI., pt. 2 (647 pp. 20 pls.)				
Monograph of the Marine Fishes of South Africa	..	By	K. H. Barnard.	
Vol. XXII., pt. 2. (132 pp. 17 pls.)				
The Fossil Flora of the Upper Karroo Beds	..	..	..	A. L. du Toit.
Vol. XXV., pt. 1. (215 pp. 20 pls.)				
Arachnida of South West Africa	..	..	..	R. F. Lawrence.
Reports on Marine Mollusca, 2.	..	..	..	J. R. le B. Tomlin.
Freshwater Entomostraca, 3. Copepoda	..	..	..	G. O. Sars.
Cephalopoda of South African Museum	..	..	..	Miss A. L. Massy.
Freshwater Bryozoa of South West Africa	..	..	..	K. H. Barnard.
South African Nudibranch Mollusca	..	..	..	K. H. Barnard.

Material from our collections is dealt with also in a paper by Mr. J. Hewitt on South African Reptiles and Batrachians published in the Records of the Albany Museum, Vol. III, part 5.

The publication of these papers and of the large and important monograph of South African Myriopods by Dr. von Attems, which is already in type, will clear off our accumulated commitments and enable us after 1928 to reduce our printing bill to more normal proportions. It is only by making use of the credit balance which we originally intended to earmark for new showcases that we have been able to issue so large a bulk of matter recently. But so much work is being done on Museum material at the present time that there is still a prospect of the resulting papers continuing to strain our resources for publication.

The two largest works issued as parts of the *Annals* during the year are the second half of Dr. Barnard's "Monograph of the Marine Fishes of South Africa" and Dr. A. L. du Toit's "Fossil Flora of the Upper Karroo Beds." Both are important contributions to South African science.

Museum Buildings.—Though our greatest want—more exhibition space—is still unmet, a piece of work carried out during the year by the Public Works Department has eased another of our difficulties most satisfactorily. For some years the pressure on our library space has been getting increasingly hard to cope with. A waste space in the roof has now been floored and provided with shelving; access to it is given by a spiral stair in one corner of the library, and we have thus gained a very useful annexe which we are using for the storage of copies of our own *Annals* and for sections of the regular library which are not in constant demand for reference. The Public Works Department has also turned our makeshift photographic dark-room into a reasonably well equipped one by converting the window into a ventilator and putting in a water supply and sink. The Department has further supplied us with six solidly made teak seats for the use of visitors and with two new teak notice boards which are erected at the entrances to the grounds. For these services, and for the trouble which was taken to meet our requirements, we are greatly indebted to the Public Works Department and its local officers.

Collecting.—Much less collecting in the field has been done than usual during the year. I had arranged to go myself on an ornithological expedition to Ovamboland, but owing to financial difficulties in South West Africa the Administration's help had to be withdrawn and the plans fell through. Mr. Boonstra collected fossil reptiles in the neighbourhood of Graaff-Reinet; thanks to the hospitality and helpfulness of the farmers and other people, he had a successful trip at small expense to the Museum. The chief object of his collecting was to obtain further specimens of Pareiasaurians to help out the Museum material which he was working upon specially. During a short visit to the Sabi River section of the Kruger National Park I was able to do a certain amount of general collecting, enough to show that systematic collecting in the Low Veld would be very profitable.

Nearer home, Dr. Barnard has made some short expeditions into the Hottentots Hollands and the Langeberge; these are referred to in his sectional report. I have devoted odd days to local birds, chiefly waders and grass-warblers, and have been able to add some interesting specimens to the collection. I was five days at sea in a trawler during May to find out what opportunities a trawler afforded for collecting sea-bottom animals from deep water and also to see something of the rather astonishing bird-life at 50-80 miles from land. During the coming year we intend, in addition to more distant field work, to do some intensive collecting nearer home than usual—in the Cape Peninsula itself, which has been somewhat neglected by the Museum in recent times. Sir Drummond Chaplin has kindly given us leave to explore the natural history of some patches of indigenous bush and other promising ground on his property at Noordhoek, and we hope to investigate it at every season of the year.

Picture Postcards.—We have made a beginning this year with the issue of picture postcards. Only four have been put on sale so far; a view of the Museum and three photographs of Bushman figures. These are reproduced in monochrome by photo-lithography. They have sold quite well enough to justify us in bringing out a further batch and to suggest that we should not be taking an undue risk in producing the next set in colour.

Finances.—The introductory remarks by the Trustees have stated the main fact of our financial position, namely, that we are now living so fully up to our income that no margin is left for the occasional larger outlays and enterprises. Our staff is small in relation to the work we try to do but large in proportion to our income (our general scale of salaries being low); but to cut down the staff would be a regrettable and retrograde step. What the prospects of a larger income may be I am not in a position to say, but I know that a Government-supported institution never finds it easy to get its income supplemented by private subscriptions. There are other directions, however, in which people of the necessary means and generosity might help us very materially, by meeting the cost of definite objects or pieces of work which are beyond our ordinary resources. In the hope that suggestions of this sort may bear fruit I give here a short list of possible benefactions which would be particularly welcome at the present moment. There is no reason why noteworthy services of this kind should not be permanently recorded in some form in the Museum.

- (1) Presenting a new showcase or cases.
- (2) Defraying the cost of mounting some big game animals to replace the worst of those at present exhibited.
- (3) Presenting some form of motor car or small lorry, the need for which is constantly felt when field work is being planned and carried out.
- (4) Defraying the cost of engaging some form of sea-going craft for periodical trips to the open sea off the Peninsula to investigate the oceanic bird life at different times of the year—a study of great interest on which there is a remarkable lack of exact information.
- (5) Providing funds for a collecting expedition to some particular part of the country.

GENERAL REVIEW OF MUSEUM WORK.

The most conspicuous change that has taken place during the year in any part of the Museum is due to the removal of the large case containing the group of Cape seals (or sea-lions) from the entrance hall. This case blocked the entrance too much and its contents were never well seen owing to poor lighting and the strong reflection from the glass. In its new position in the whale shed—in the recess set aside for large animals other than whales—it is seen to much better advantage. A new centre-piece for the entrance hall has been formed from the replica of Diogo Cao's pillar from Cape Cross and a group of fragments of other memorials left by the early Portuguese explorers. These objects need no glass and there is consequently no trouble with reflected light; they are sufficiently protected by a stout kerb of wood. They are also in harmony with the other contents of the entrance hall, which are nearly all relics of early Cape history. As Portuguese visitors regularly call at the Museum to see Cao's pillar, the earliest memorial left by Europeans in South Africa, I have provided it with a descriptive label in Portuguese as well as in English and Afrikaans.

Among the new exhibits are a few that call for special mention. In the small room (Room II.) devoted to antiquities we have put up a very interesting set of firearms. They have been selected from the large stock in our storerooms by Capt. G. Tylden (of Commissie Poort, O.F.S.), who has a specialist's knowledge of firearms, and the set is designed to illustrate the weapons used for hunting and war in every period of the European occupation of South Africa. Capt. Tylden not only selected the specimens but also drafted a label for each giving the necessary technical and historical details. We are indebted to Mr. R. H. Struben, M.L.A., for examples of two modern rifles to complete the set. Several fresh examples of Mr. Drury's skill in casting and modelling have been placed in the cases. Two of them are coloured casts of squids of the genera *Thysanoteuthis* and *Loligo* and another is a life-sized model of the sword-fish, *Xiphias gladius*. In connexion with the past history of the elephant in South Africa a tusk presented by Mr. M. J. van Breda is of great interest. It is a weathered but nearly complete tusk of the largest size and was found in a sandhill on the donor's farm not far from Cape Agulhas. It is now shown near the head of the main staircase. The discovery of this tusk seems good evidence that the elephants of the extreme southern extremity of the continent once carried ivory as fine as any known even from the Congo.

Progress has been made during the year in mounting fresh birds to replace faded and badly stuffed specimens in the Bird Gallery. Particular attention has been paid to the wading birds, and our knowledge of the local waders has been considerably extended incidentally. In several other departments cases have been overhauled and re-labelled, with great gain in improved appearance. Instances in point are the cases containing the Bokkeveld fossils and the case of tin ores. A label holder which is better than anything I have yet seen for its purpose has been invented by the Taxidermist and is being used with excellent effect. Labels in all parts of the Museum have been reprinted in better type and better style, wherever practicable in Afrikaans as well as in English. The re-labelling of everything in the Museum, at the rate at which we are able to do it, is a task that will take some years to accomplish, and as a general principle, where the use of Afrikaans is concerned, I am aiming at taking the objects and their labels in the order in which they are likely to interest our up-country visitors.

One of the subjects on which we most frequently have inquiries is that of coins and tokens. Since our exhibited coins were stolen some years ago we have had none on show in the Museum, and no comprehensive series has ever been on exhibition here. We have excellent material, however, for making up a practically complete set of the coins that have been current in South Africa from the earliest colonial times. I have now got a local expert, Mr. A. R. N. Hayne, to work through the material and select and annotate a series for exhibition, and we only need a suitable show-case to make this valuable and instructive series available to the public. The provision of this case for the coins would be most welcome as one of the benefactions which I have suggested earlier.

I am glad to report an extension of our co-operation with departments of the University of Cape Town. For two years we have had the great benefit of Mr. Goodwin's work on our collection of stone implements, and now we have enlisted the help of the Anatomy Department to deal with the skeletons dug up in 1926 at Colesberg (see last report). Professor M. R. Drennan, the head of the Department, has reported on the dentition of the Bushmen represented by these skeletons, and Mr. D. Slome, of the same Department, has reported on their general osteology. Both reports have involved a great deal of detailed work and will form valuable contributions to a forthcoming anthropological volume of the *Annals*. Incidentally, Professor Drennan and Mr. Slome have shown that the Colesberg skeletons are much more largely those of a Bushman tribe, with less admixture of other stocks, than we thought on a first inspection.

Those who are acquainted with the nature of systematic work in any branch of natural history will see, from the departmental reports which follow, that a large amount of such work has been accomplished during the year at the Museum. Work of this kind may make little appeal to the public in general, but in a country like South Africa, where the systematic study of animal and vegetable life has had such a late start, it is one of the essential duties of a museum which aims at making its contents really available for reference. In the course of this work interesting new forms of life are frequently coming to light, together with equally interesting new facts relating to the distribution of different groups of animals and plants in southern Africa. Along with work on our own collections a good deal has been done for other museums in examining and identifying batches of specimens submitted by them. We ourselves benefit in the same way by getting certain groups of insects and other classes of specimens identified by members of other museum staffs. In this way the special knowledge represented among the different staffs is to a great extent pooled, to the advantage of everyone concerned.

LEONARD GILL,
Director.

DEPARTMENTAL REPORTS.

DEPARTMENT OF MAMMALS AND BIRDS.

To the Trustees of the South African Museum.

SIRS,—I have the honour to present the following report on this department for the year 1927.

Though the accessions to the department are not numerous they are of more account than usual, because, in the case of the birds at least, they are largely the result of deliberate collecting instead of being only casual acquisitions. I have aimed at replacing some of the old and badly mounted specimens shown in the Bird Gallery, and to this end we have done a certain amount of collecting locally. We have paid most attention to the waders and to the grass-warblers (*Cisticolae*)—to the former because Cape Town is specially well situated for their study, and to the latter because Admiral Lynes was working on them and required some fresh material. The most valuable single bird added to the collection is a specimen of the Chestnut-banded Plover (or Fischer's Plover), *Charadrius venustus*, a very rare bird in collections. It was obtained for us by Mr. H. J. Joubert, who first detected its presence on one of the local vleis. Other interesting waders obtained and mounted were examples of the curlew, greenshank and curlew sandpiper shot in mid-winter, that is, in the middle of their northern breeding season. During the few days that I spent at sea in a trawler, I was impressed with how little we know of the oceanic bird life of the Cape seas. If only we could obtain the use of some kind of craft suited to the purpose, we could explore a much neglected and particularly interesting field of South African ornithology.

Among the mammals also a few old specimens are being replaced by new and better-mounted ones, as in the case of local examples of the genet and the sand-mole (*Bathyergus*).

The year's acquisitions may be tabulated as follows:—

	Specimens.	Species.	New to the collection.
Mammals	14	9	—
Birds	60	41	1

Most of the birds we collected ourselves, but others were presented by Messrs. J. S. Brown, H. J. Joubert, C. Pendecos, Capt. Taylor, F. J. Lawrence, E. A. Hopkins, R. North, Col. Stevenson-Hamilton, Dr. J. V. Phillips. For mammals we are indebted to Miss M. Wilman, the Groote Schuur Estate, Lady Smith, Messrs. R. Müller, E. Roux, C. L. Biden.

I am, etc.,

LEONARD GILL,

Director.

DEPARTMENT OF REPTILES AND BATRACHIANS.

To the Director, South African Museum.

SIR,—I have the honour to present the following report on this department for the year 1927.

The work done in this department during the year has been mainly that of reorganising and improving the collections as they stand; it has been found that many specimens have been wrongly named and indexed by previous workers and in this respect Mr. J. H. Power of the McGregor Museum, Kimberley, has done valuable work for us in resorting and correctly naming the large genus of Pachydactylid lizards; Mr. J. Hewitt has also put the genus on a firm systematic basis in his key and descriptions of new forms in the Records of the Albany Museum; for this work our collections have been available to him.

Mr. Hewitt in turning his attention to the mountain-living fauna of South Africa has revised the genus *Tropidosaura* and described a new species *T. montana* from Table Mountain; it is hoped that in a short time a good series of the new form will take its place in the collection. Mr. V. Peers has made another important contribution of lizards from Little Namaqualand and the Albany district, including three species of *Zonurus*, a genus which is poorly represented in the Museum's collection.

Mr. J. S. Brown, Boring Engineer at Aus, has been an untiring and regular contributor of reptiles and it is due to his efforts that the Museum has acquired many new or little-known species from the Southern portion of the Protectorate; he has amongst his latest sending included a rare and little-known snake, *Boodon mentalis*, which is new to the Museum's collection.

The acquisitions for the year can be tabulated as follows:—

	Specimens	Species	New species.
Snakes	3	2	1
Lizards	56	17	1
Batrachia	15	5	1
Total	74	24	3

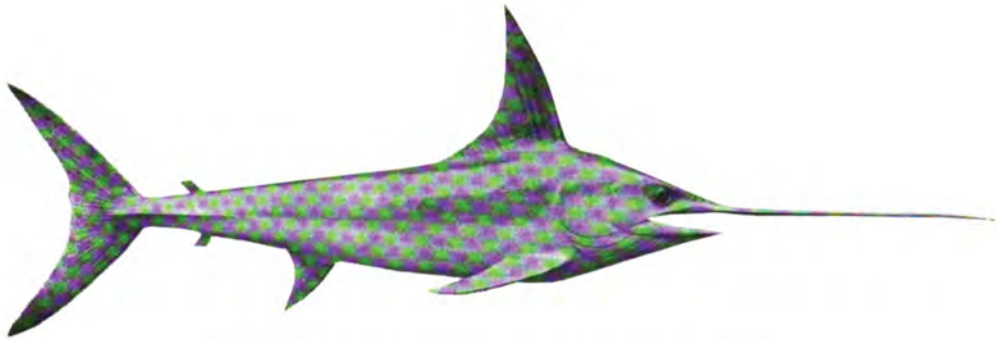
The thanks of the Trustees are due to the following donors: Mrs. H. H. Bright, J. S. Brown, F. Perry, V. Peers, Dr. K. H. Barnard, Dr. E. L. Gill.

I am, etc.,

REGINALD F. LAWRENCE,
Assistant in Charge of the Department.



HENDRIK PRINSLOO'S PIPE. (See p. 12.)



MODEL OF SWORDFISH, *Xiphias gladius*. (See p. 4.)



CHESTNUT-BANDED PLOVER, *Charadrius venustus*,
FROM NEAR CAPE TOWN. (See p. 6.)

LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

DEPARTMENT OF FISHES AND MARINE INVERTEBRATES.

SIR,—I have the honour to present the following report on this department for the year 1927.

The greater part of the year has been spent in office and routine work. The study collection of marine fishes has been labelled in conformity with the monograph on this group. The exhibition case of Crabs has been completed and labelled, and certain alterations in other exhibition cases carried out.

In connection with the survey of the Cape mountains I have visited the Palmiet River Mountains (Kleinmond), the Mitchell's Pass area, and the Langebergen north of Heidelberg (Cape). The latter trip linked up the results obtained at Swellendam and Riversdale. In the Mitchell's Pass area I discovered a new locality for a rare Pulmonate shell which previously had only been found in the Winterhoek mountains north of Tulbagh. A small colony in the latter area was discovered in 1916, but on a later visit in 1924 was found to have been extinguished as a result of local bush fires. The discovery of a further colony is therefore all the more valuable.

A considerable amount of material of non-marine Mollusca has come to hand during the year, amongst which are several rare and new species. In this connection special mention should be made of the collecting by Dr. S. H. Haughton and other members of the staff of the Geological Survey in areas which are difficult of access and very seldom visited.

As regards marine fishes, the publication of the Monograph has not been without influence on several members of the local angling fraternity, and several correspondents have contributed useful specimens. Special mention must be made of the interest and enthusiasm displayed by Mr. C. L. Biden, whose efforts to secure uncommon fishes and to clear up certain doubtful points have been of immense value to me in the writing of the Monograph.

Mention should also be made of an interesting deep-sea angler secured through the interest of Mr. van der Horst. This is an example of *Cryptopsaras couesi*, and constitutes a new record for the South African fauna. It serves to show that our knowledge of the fauna of the deeper waters around the coast is still far from complete.

The following papers dealing with the material of this department have been published during the year :—

Monograph of the Marine Fishes, Pt. 2 ..	By K. H. Barnard.	Annals, S.A. Mus.	XXI, 2.
Reports on Marine Mollusca, 2 ..	.. J. R. le B. Tomlin.	<i>ibid.</i>	XXV, 1.
Freshwater Entomostraca, 3. Copepoda ..	.. G. O. Sars.	<i>ibid.</i>	XXV, 1.
Cephalopoda of S. A. Museum ..	.. A. L. Massy.	<i>ibid.</i>	XXV, 1.
Freshwater Bryozoa of S. W. Africa ..	.. K. H. Barnard	<i>ibid.</i>	XXV, 1.
South African Nudibranch Mollusca ..	.. K. H. Barnard.	<i>ibid.</i>	XXV, 1.

The number of acquisitions during the year is as follows :—

	Specimens.	Species.	New to the collections.
Fishes	117	80	4
Crustacea	376	64	8
Mollusca	339	60	6
Other Invertebrates (Marine)	15	5	—

The thanks of the Trustees are due to the following donors : C. L. Biden, Dr. Cawston, Major Connolly ; H. F. Frommurze, Dr. E. L. Gill, Dr. S. H. Haughton, G. E. Hutchinson, H. W. Bell Marley, Dr. J. Muir, J. H. Power, T. Smith, E. J. Steer, J. G. van der Horst.

I am, etc.,

K. H. BARNARD,
Assistant Director.

DEPARTMENT OF ENTOMOLOGY.

To the Director, South African Museum.

SIR,—I have the honour to submit the following report on this department for 1927.

During the greater part of this year I was engaged in the arrangement and classification of the *Tenebrionidae* in the Museum collections. This family of beetles, second only to the *Scarabaeidae* in species and numbers, was contained in the miscellaneous collections in wooden boxes on the shelves and was inaccessible for purposes of determination and comparison. It may safely be stated that the family is very richly represented in this collection, and, with the exception of a few sub-families, only little-known or comparatively uncommon species are wanting. On the contrary numerous species have been found which could not be identified and which are in all probability new to science. This undetermined material was largely contained in the collections from South-West Africa, Namaqualand, the South-West coastal regions of the Cape Province or from Rhodesia. The entire collection has now been arranged systematically in one of the new cabinets, and (together with the duplicates in thirteen large wooden boxes) is easily accessible to entomologists for purposes of comparison or study.

During this year I have also determined and classified, where possible, the entire Tenebrionid collection of the Transvaal Museum submitted to me. A small collection of the Rhodesia Museum and some belonging to Capt. R. Stevenson have also been successfully identified. I have also revised and completed my two manuscripts in which new species of *Curculionidae* from South Africa and South-West Africa have been described. Both manuscripts are fully illustrated and now in the press ; one will be published in the *Annals of the South African Museum* and the other in the *Transactions of the Royal Society of South Africa*.

The latter part of the year was occupied in arranging the species of *Eumenes* which have been identified and described by Dr. J. Bequaert ; and a beginning has also been made with arranging and attempting to determine the rest of the *Eumenidae* which are totally unarranged at present.

This year has also been unprecedented in the history of the Museum in the demand for material for study by specialists abroad and at home, and the following material has been sent out during 1927 :—

- (a) To Dr. G. Arnold (Rhodesia Museum) all the *Orybelinae*, the unnamed species of *Bembex*, *Stizus*, *Gorytes*, etc., and all the species of *Sphex*, to contribute towards a monograph.
- (b) To Dr. Babi (Cornell University) 5 specimens of *Ceropales* for use in a revision of the genus.
- (c) To Prof. J. C. Bradley (Cornell University) 719 specimens of *Scolia* and *Campaomeris* to contribute towards a monograph.
- (d) To M. Antoine Ball (Brussels), 33 specimens of *Hydrophilidae*, including two types, for determination and special study.
- (e) To Dr. H. Brauns (Willowmore) a collection of unnamed species of *Cerceris* and new species of *Musaris*, for use in preparing an appendix to his previous work on these groups.
- (f) To Mr. W. China (British Museum), 233 specimens of *Hemiptera* for determination.
- (g) To Dr. H. Karny (Buitenzorg, Java), all the types of the late Dr. L. Péringuey and eighty other specimens of *Stenopelmatinae* to contribute towards a monograph.
- (h) To Dr. Guy A. K. Marshall (British Museum) five types and one cotype of my new species of *Curculionidae*, for use in a revision of the genera *Derelomus* and *Hypsomus*.
- (i) To Mr. H. Munro (Pretoria) all the types and the entire collection of *Trypetidae* to contribute towards a revision of the family in South Africa.
- (j) To Dr. B. Uvarov (British Museum) all the types of *Orthoptera* of Dr. L. Péringuey for a revision and 618 specimens of *Acridiidae* and some *Locustidae* in the Kaokoveld and South-West African collections to contribute towards a special paper.

The following material has been identified and returned during this year :—

- (a) The greater part of the *Buprestidae*, including many new types, submitted to Dr. J. Obenberger (Prague).
- (b) All the species of *Notonectidae* and *Corixidae*, including the types of new species, by Mr. G. E. Hutchinson (Witwatersrand University).
- (c) The collection of *Orybelinae* and species of *Sphex*, and the greater part of those of *Bembex* and *Stizus*, including types of new species, by Dr. G. Arnold (Rhodesia Museum).
- (d) All the types of *Orthoptera* submitted to Dr. B. Uvarov for revision.
- (e) The *Stratiomyidae* submitted to the late Dr. E. Brunetti.

The following material is outstanding from previous years and still in the hands of specialists :—

Some <i>Orthoptera</i>	in the care of	J. A. Rehn.
„ <i>Acridiidae</i>	„ „	R. Ebner.
„ <i>Psyllidae</i>	„ „	G. Enderlein.
„ <i>Muscidae</i>	„ „	W. Patton.
„ <i>Tipulidae</i>	„ „	C. P. Alexander.
„ <i>Jassidae</i>	„ „	C. Naude.
„ <i>Cicindelidae</i>	„ „	W. Horn.

Among the accessions to the collection of insects are the following :—

- (a) A small collection of *Tipulidae* and *Coleoptera* collected by Dr. K. H. Barnard on the mountains at Heidelberg, Cape Province.
- (b) A small box of unpinned insects from Aus, South-West Africa, presented by Mr. J. S. Brown.
- (c) A small collection of *Coleoptera* and *Orthoptera* collected by Dr. E. L. Gill in the Sabie Reserve.
- (d) A box of unpinned *Coleoptera* and *Hemiptera* collected by Mr. J. A. Hesse, Snr., at Somerset West.
- (e) A very good collection of South African insects, comprising 643 specimens of which 67 are new to the collection, by Mr. R. E. Turner, who was collecting in this country for the British Museum.
- (f) A small box of *Coleoptera* presented by Capt. R. Stevenson.
- (g) A box containing about 55 specimens of *Coleoptera* and *Diptera* from Penkrige, Melssetter, Rhodesia, presented by Capt. R. Stevenson.
- (h) A small collection of unpinned beetles from the South Coast of Natal, presented by Mr. Bell Marley.

Other accessions are :—

	Specimens.	Species.	New to the collection.
<i>Coleoptera</i> (<i>Curculionidae</i>) (Dr. H. Andreae, Cape Town), ..	3	2	1
<i>Hymenoptera</i> (<i>Eumenidae</i>) (Mr. Bryant, Prieska)	7	1	0
„ (<i>Braconidae</i>) (Mr. W. Jones, Zululand),	1	1	0
„ (Capt. R. Stevenson, Bulawayo).	9	8	0
<i>Hemiptera</i> (<i>Fulgoridae</i>) (Dr. H. Brauns, Willowmore), ..	17	8	5
(<i>Cercopidae</i>)			
(<i>Cicadidae</i>)			
Total number of specimens	37	20	6
Total number of specimens together with the collection of Mr. Turner	680		73

The following accessions were obtained by exchange :—

		Specimens.	Species.	New to the collection.
<i>Coloptera</i>	(<i>Tenebrionidae</i>)	15	10	1
<i>Diptera</i>	(<i>Bombyliidae</i>) Australian	15	12	12
Total		30	22	13

The following entomological papers are at present in hand for publication :—

(a) For the *Museum Annals* :

(1) Notes on the types of Orthoptera described by Dr. L. Péringuey, by Dr. B. Uvarov.

(2) Some new species of Curculionidae from South and South-West Africa ; by Dr. A. J. Hesse

(b) For the *Transactions of the Royal Society of South Africa* :

(1) Some new species of Curculionidae from South and South-West Africa ; by Dr. A. J. Hesse.

Mr. G. E. Hutchinson's manuscript on the *Notonectidae* and *Corixidae* is not ready yet and Dr. J. Obenberger (Prague) is still preparing a paper based on the Museum material for foreign publication.

The thanks of the Trustees are due to the donors and especially to the following : Dr. K. H. Barnard, Dr. H. Brauns, Mr. J. S. Brown, Mr. J. A. Hesse, Sr., Capt. R. Stevenson and Mr. R. E. Turner.

I am, etc.,

ALBERT J. HESSE.

Assistant in Charge of the
Department of Entomology.

DEPARTMENT OF ARACHNIDS AND MYRIOPODS.

To the Director, South African Museum.

SIR,—I have the honour to present the following report for this department for the year 1927.

The first part of the year was spent in further study of the material obtained in the Museum's expeditions to South West Africa in the years 1924–1925, and the work done represents the second part and conclusion of the publications dealing with the Arachnid fauna of these regions. An examination of these forms reveals the fact that the desert conditions of the Kaokoveld support a fauna which is, in some of its representatives at least, peculiar to it alone, and which differs markedly from that of such closely situated provinces as Ovamboland ; the Museum staff has been privileged in being able to study and describe the animal life of a region which is, faunistically speaking, the last unexplored portion of Southern Africa.

A substantial part of the year has been devoted to the working out of a large amount of material which has accumulated in the Solpugid and Scorpionid groups. This material, numbering some hundreds of specimens, was identified and incorporated in the Museum's study collections and in the process many gaps were filled, bringing the Museum's collections in these groups to the forefront of those in South Africa with regard to range of distribution and completeness of the series ; several new and interesting forms are being described, especially among the Solpugids, from the mountain ranges of the South-Western Cape, where at an altitude above 4,000 feet a peculiar and specialised fauna is found to exist differing from that of the low-lying flats and plains. It is hoped that the description of these new forms will be published at the beginning of the ensuing year.

The study of South African Myriopods by Graf von Attems based on the collections of the Museum will shortly be available in print and this extensive and important work will form the basis of our knowledge in this group for some time to come ; it will form an excellent starting-off point for future South African workers in the group and is of more than ordinary interest in view of the rôle which Myriopods play in economic zoology. Further material is being sent to the author as it accumulates from time to time so as to keep our knowledge of the group up to date.

It is intended that a start will shortly be made with the systematic collection of free-living mites, especially Oribatidae, in the Cape Peninsula, a class of Arachnida which has up to the present been much neglected in our collecting expeditions and which also has an economic bearing in regard to plant pathology.

The acquisitions in this department during the year have been meagre owing to the absence of any prolonged collecting expeditions ; small but interesting collections have been made by members of the Museum staff at the Sabie Reserve, Heidelberg and Fraserburg.

The material received during the year can be tabulated as follows :—

	Specimens.	Species.
Araneae	40	25
Scorpions	19	13
Solifugae	2	2
Pseudoscorpions	14	3
Acari	30	1
Myriopods	13	6
Total	118	50

The thanks of the Trustees are due to the following donors : Dr. K. H. Barnard, H. W. Bell-Marley, H. Boemke, J. S. Brown, M. Giffen, Dr. E. L. Gill, Dr. A. J. Hesse, Dr. Kolbe, V. S. Peers.

I am, etc.,

REGINALD F. LAWRENCE,

Assistant in Charge of the Department.

DEPARTMENT OF BOTANY.

To the Director, South African Museum,

SIR,—I have the honour to present the following report on this department for the year 1927.

Accessions.

Prof. R. Adamson	.. .. .	15 specimens from	S.W. Africa.
Dr. K. H. Barnard	.. .. .	80	Cape Province.
S. J. Dix	.. .. .	8	Bredasdorp.
Dr. C. Impey	.. .. .	3	Rhodesia.
Royal Botanic Gardens, Kew	.. .. .	17	S.W. Africa.
Mrs. Levyns	.. .. .	24	Cape Province.
Dr. A. O. D. Mogg	.. .. .	195	Transvaal.
Dr. S. Schonland	.. .. .	12	Cape Province.
Miss E. L. Stephens.	.. .. .	3	Rhodesia.
T. P. Stokoe	.. .. .	6	Cape Province.
C. Thorne	.. .. .	105	Cape Province.
University of Central Asia, Tashkent	.. .. .	325	Central Asia.
K. White	.. .. .	3	Cape Province.
Various Donors	.. .. .	99	Various localities.

Exchanges.

Albany Museum, Grahamstown; Royal Botanic Gardens, Kew; Bolus Herbarium, Kirstenbosch; Division of Botany, Pretoria.

Specimens mounted.

S.W. Africa	.. .. .	145 sheets.
Rhodesia	.. .. .	42 sheets.
Cape Province	.. .. .	871 sheets.

Specimens incorporated.

1,058, including 104 new species and 9 new genera.

General Report.

The work, begun last year, of labelling and numbering each herbarium sheet was continued at intervals throughout the year, and is now complete, while the marking out of type specimens in the collection has been carried out for half the cabinets. Several genera have been rearranged according to new schemes of classification and a number have been critically examined by expert monographers who in some cases reported new species among hitherto unnamed plants.

A large number of plants were identified during the year for students. Visitors to the Peninsula showed a keen interest in the flora and frequently brought in collections of plants to be named.

There was a Museum expedition made to the mountains round Heidelberg, C.P. A number of plants were collected and proved interesting as showing marked relationship with the flora of the Riversdale and Swellendam Mountains. Mosses collected from there have been identified by Dr. Pim; his report showed one moss as being very rare.

I am, etc.,

S. GARABEDIAN,

Assistant in Charge of the Department of Botany.

DEPARTMENT OF PALAEOLOGY.

The Director, South African Museum,

Sir,—I have the honour to present herewith a report on the working of the Department of Palaeontology for the year 1927.

Accessions.—The following additions have been made to the register of acquisitions:—

Bokkeveld Invertebrates	.. .. .	1
Karoo Plants	.. .. .	175
" Invertebrates	.. .. .	18
" Reptiles	.. .. .	75
Cretaceous Invertebrates	.. .. .	339
" Reptiles	.. .. .	2
Tertiary Invertebrates	.. .. .	214
" Vertebrates	.. .. .	5
Total	.. .. .	829

Among the more important of these accessions may be mentioned shells from raised beaches presented by Dr. A. V. Krige; shells from the diamondiferous deposits of Namaqualand, presented by Dr. A. W. Rogers, Dr. P. A. Wagner, and Dr. J. B. Celliers; a small collection of South American fossils presented by Dr. A. L. du Toit; and a collection of Karroo reptiles from the Graaff-Reinet area made by Mr. L. D. Boonstra. Our thanks are also due to Professor Dart, Dr. L. J. Krige, Dr. F. Dixey, and the Geological Survey of Southern Rhodesia.

Exhibition.—It has not been possible to make any additions to the exhibited material other than to place bones of the Elephant, the largest living land mammal, for comparison alongside the corresponding bones of the enormous East African Dinosaur, *Brachiosaurus brancai*.

The collection of Bokkeveld invertebrates has been re-mounted with new labels, and now makes a far neater exhibit than heretofore. It is proposed, in view of the publication of Dr. du Toit's monograph, to revise the exhibition of fossil plants. New labels have been printed for the whole series of Karroo vertebrate skulls and skeletons.

Research.—Dr. du Toit's revision of the Upper Karroo Flora has been completed, and his paper published during the year.

Mr. Boonstra, in addition to making a short visit for collecting purposes, to the *Cistecephalus* beds of the Graaff-Reinet area, has been engaged upon the development and examination of the very valuable collection of Pareiasauria. Considerable progress has been made in the study of the group through his work; but the proper development of these large skeletons from a fairly intractable matrix is a laborious process, and the Department should have more mechanical assistance.

The study of fossil shells from the Namaqualand Diamond Fields has led to some interesting paleogeographic conclusions. A paper embodying the results obtained is in the press and awaits publication.

Another paper, describing Sauropodous Dinosaurs and a Chelonian from the Jura-Cretaceous boundary near Lake Nyasa, is also in the press, as are two short papers on Karroo Reptiles, by Dr. R. Broom, F.R.S.

I am, etc.,

SIDNEY H. HAUGHTON,

Hon. Curator, Palaeontological Collections.

DEPARTMENT OF GEOLOGY AND MINERALOGY.

To the Director, South African Museum, Cape Town.

SIR,—I have the honour to present my report for the year 1927.

Rocks received..	..	..	..	..	..	46
Minerals received	..	..	..	..	..	30
						76

Among the more important donations are the following:—

Manganese ores from Postmasburg and tin-bearing pegmatite from Portuguese East Africa, presented by Miss Wilman; gypsum from Riverton Road, presented by J. Havenga, Esq., and corundum from Namaqualand, presented by L. Rabinowitz, Esq. An interesting suite of South American rocks has been donated by Dr. A. L. du Toit, while Dr. P. A. Wagner has sent various rocks from Alexander Bay in Namaqualand.

From the Union Geological Survey the Department has received: (a) a complete range of specimens to illustrate the new talc industry near Kaapmuiden in the Eastern Transvaal, including both the raw material and the various grades of the commercial article; (b) a series of rocks from the Rustenburg district of the Western Bushveld, to extend the platinum exhibit, including a polished borehole core of anorthosite; and (c) a collection of various surface deposits, forms of weathering, etc., to form the foundation for a new exhibit illustrating Geological Processes.

Additions to Exhibits.

(a) The Section illustrating the mineral resources of South Africa has been enlarged by the addition of a special exhibit to illustrate the newly arrived talc industry near Kaapmuiden in the Eastern Transvaal.

(b) Substantial additions have also been made to the exhibits dealing with the platinum occurrences in the Transvaal Bushveld, notably from the Rustenburg area.

(c) The case hitherto devoted to crystal models is now applied to a series of exhibits illustrating forms of weathering, the work of ice, rain and other agents of denudation; it was decided that a special exhibit to demonstrate the effects of geological processes would make a more widespread appeal to those for whom the Museum is primarily intended. The crystal models remain available to students and others specially interested in crystallography.

(d) Recent work in South West Africa has made it desirable to rearrange the tin exhibit, which has also been provided with new labels.

(e) The Economic Geology Room now also displays a mounted copy of the map covering the country round Vredefort in the northern portion of the Orange Free State; this illustrates the complex magmatic and tectonic history associated with the Vredefort Granite Dome. The survey of this area was carried out by Mr. L. T. Nel, M.Sc., Geologist of the Geological Survey.

Descriptive Labels.—A beginning has been made in providing descriptive labels in Afrikaans as well as in English.

I am, etc.,

Pretoria,
9th January, 1928.

A. L. HALL,
Hon. Keeper.

DEPARTMENT OF ETHNOLOGY AND ARCHAEOLOGY.

To the Trustees of the South African Museum.

SIRS,—I have the honour to present herewith a report on the work of this Department for the year 1927.

The year has been chiefly notable for the large accessions to the collection of stone implements. These have been mainly due to Mr. A. J. H. Goodwin, and are the result of field work done by him, sometimes in the company of other South African archaeologists or during an extensive tour with Mr. M. C. Burkitt of Cambridge. Large further accessions have been due to Mr. C. van Riet Lowe, who has studied the archaeology of the Free State so successfully. The actual figures are unsuitable for tabulation, but it may be stated that at least 150 different sites are represented among the newly acquired implements. The Museum now contains a collection of stone implements which makes it possible to survey in detail within four walls the products of the stone ages of the greater part of South Africa.

Turning to historical (as distinct from prehistoric) objects, the series of South African firearms already referred to is a very interesting addition to the exhibition galleries. Two other objects of considerable historic interest have been acquired during the year. Mgr. Kolbe has presented the seal of the first Roman Catholic Bishop in South Africa—Bishop Slater, 1820—dating from the time when the Catholic Church at the Cape was an appendage of Mauritius. The other object is a memento of an incident of bitter memory, the Slachters Nek rising of 1816. It is a beautifully made tobacco pipe of green soapstone, once the property of Hendrik Prinsloo who was hanged for his part in the rising. It has been handed down among his descendants and is now presented to the Museum by one of them, Mr. J. L. Venter.

Some valuable donations have also been made to the anthropological and ethnological collections. The most important is a large consignment of objects of native workmanship collected by Mr. P. Ross-Frames among the Barotse, Shangaan, Basuto and other tribes. It includes some exceptionally fine basketwork, wooden vessels, drums, etc. Mrs. M. Tomkinson has given us three very interesting modern "dragons" modelled and painted by a Basuto—one at least evidently inspired by a figure in a stained glass window. Mr. J. G. Graaff has presented a Bushman water vessel dug up in the Carnarvon district—an ostrich egg shell with scratched ornament. Unbroken shells such as this, actually used for the purpose, are hard to obtain. Of foreign ethnological objects the most notable acquired during the year are a group from New Guinea presented by Mrs. Basil Tatham. Prof. Jolly has given us some very good Bushman skulls which he has obtained in various districts—Upington, Darling, George and elsewhere.

Thanks for donations are due to Messrs. C. O. Payne, G. H. Herman, Rev. Mr. Breedt, R. J. van Schalkwyk, C. van Riet Lowe, M. C. Burkitt, A. J. H. Goodwin, Prof. R. A. Dart, E. G. Bryant, P. Kriel, C. Oberholzer, Dr. A. W. Rogers, Dr. S. H. Haughton, W. W. Lidbetter, P. Ross-Frames, Rev. Mgr. Kolbe, R. H. Struben, Mrs. Tomkinson, Prof. W. A. Jolly, J. L. Venter, G. W. Herdman, J. E. Graaff, Mrs. Basil Tatham, Lady Smith.

I am, etc.,

LEONARD GILL,
Director.

 KOOPMANS DE WET HOUSE.

To the Trustees of the South African Museum.

SIRS,—I have the honour to present the following report on this annexe to the Museum for the year 1927:

The attendance of visitors to the House again shows an increase. The total for the year is 26,452, as against 25,685 for 1926 and 25,264 for 1925. January, as usual, showed the largest attendance. The number of coloured people was again only 2 per cent. of the total. Twenty-two school parties visited the House during the year. The average number in a party was 24, but a party from the Northern Transvaal numbered 116.

The Advisory Committee has met four times. Its chief concern has been to find some means of raising a fund for the purchase of additional articles but it has also gone into the question of insurance, the preparation of an annotated inventory, and various details relating to the objects exhibited in the rooms.

I am, etc.,

LEONARD GILL,
Director.

SOUTH AFRICAN MUSEUM.

STATEMENT OF RECEIPTS AND PAYMENTS FOR THE YEAR ENDED 31ST DECEMBER, 1927.

RECEIPTS.		PAYMENTS.	
	£ s. d.		£ s. d.
To balance, 1st January, 1927	1,828 15 9	By Salaries (including staff contributions to Provident Fund £284 19 4)	4,496 14 0
Grants:—		„ Sunday Duty	74 9 0
„ Union Government ..	£8,200 0 0	„ Upkeep of Museum:—	
„ Cape Town Corporation	400 0 0	Wages ..	£117 15 0
	6,600 0 0	Uniforms ..	35 17 6
Interest:—		Tools ..	19 9 8
Hadje Suliman Shah Mohamed Coin Fund	2 5 0	Audit ..	5 5 0
Fixed Deposit Standard Bank ..	20 0 0	Water and Electric Light ..	105 11 3
	22 5 0	Insurance ..	47 6 3
„ Sale of Publications ..	56 13 5	Cases ..	464 10 1
„ Sale of Relief Map ..	5 0 0	Maintenance of Grounds (City Corporation) ..	150 0 0
„ Sale of Tank ..	1 4 6	Miscellaneous ..	377 17 10
Refunds:—			1,323 12 7
Secretary for Mines and Industries ..	220 0 0	„ Library: Purchases and Subscriptions	103 11 3
Stellenbosch University	13 7	„ Expenses in Travelling and Collecting	123 14 2
Cape Times ..	1 17 6	„ Freight and Railway Charges ..	139 19 0
Dickinson and Co. ..	4 5 3	„ Postages and Petties ..	80 7 9
Dr. Gill ..	1 7 8	„ Publications ..	978 14 10
Education Department	3 13 4	„ Trustees' Proportion of Provident Fund ..	264 19 4
E. Alfred Jones (Photos of silver) ..	1 5 0	„ Bank Charges ..	8 8 5
South African Railways	1 11	„ Balance:—	
	233 4 3	Cash in Bank ..	£610 0 6
		Cash on hand ..	33 12 1
		Fixed Deposit Standard Bank ..	500 0 0
			*1,143 12 7
	£8,747 2 11		£8,747 2 11

*Includes £79 15s. 10d. appertaining to the Coin Fund.

STATEMENT "A."

HADJE SULIMAN SHAH MOHAMED FUND FOR THE PURCHASE OF COINS.

Amount of Investment with the South African Association	£100 0 0
Balance of Interest on 31st December, 1926	77 10 10
Interest received during the period 1.1.27 to 31.12.27	2 5 0
	£179 15 10

Audited and found satisfactory.

J. DE V. ROOS,

Controller and Auditor-General.

Cape Town, February, 1928.

LEONARD GILL,

Director, South African Museum.

Cape Town, 10th February, 1928.

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REPORT

OF THE

SOUTH AFRICAN MUSEUM

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UNIVERSITY OF ILLINOIS

FOR THE

Year ended 31st December, 1928

*Presented to both Houses of Parliament by Command of His Excellency
the Governor-General*

1929

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CAPE TIMES LIMITED.

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1929

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Trustees of the South African Museum :

THE HON. JOHN WILLIAM JAGGER, F.S.S., M.L.A. (*Chairman*).
 SIR THOMAS MUIR, C.M.G., M.A., LL.D., D.Sc., F.R.S. (*Vice-Chairman*).
 PROF. WILLIAM ADAM JOLLY, M.B., CH.B., D.Sc., F.R.S.S. Afr.
 COUNCILLOR W. F. FISH, J.P.
 J. G. VAN DER HORST, Esq.

Advisory Committee for Koopmans de Wet House :

J. R. FINCH, Esq. (*Chairman*). PROF. W. A. JOLLY.
 HON. J. W. JAGGER. FRANK E. CARTWRIGHT, Esq.
 MAJOR W. JARDINE.

Staff of the South African Museum :

EDWIN LEONARD GILL, D.Sc., Director and Keeper-in-Chief.
 KEPPEL HARCOURT BARNARD, M.A., D.Sc., F.L.S., Assistant Director ; in Charge of Fish and Marine Invertebrates.
 REGINALD FREDERICK LAWRENCE, B.A., PH.D., Assistant in Charge of Reptiles and Batrachians,
 ALBERT JOHN HESSE, B.Sc., PH.D., Assistant in Charge of the Entomological Department.
 MISS STAR GARABEDIAN, B.A., Assistant in Charge of the Botanical Department.
 LIEUWE DIRK BOONSTRA, M.Sc., Assistant in Palaeontology.
 ARTHUR LEWIS HALL, M.A., Sc.D., Honorary Keeper of the Geological and Mineralogical Collections.
 SIDNEY HENRY HAUGHTON, B.A., D.Sc., Honorary Keeper of the Palaeontological Collections.

J. DRURY, Taxidermist and Modeller.
 MISS P. EDWARDS, Clerical Assistant.
 C. W. THORNE, Junior Botanical Assistant.

J. LE ROUX, Printer.
 B. OLLEY, Head Attendant.
 N. HERBERT }
 C. LOMBARD } Attendants.

UNION OF SOUTH AFRICA.

Report of the South African Museum for the Year ended 31st December, 1928.

*Presented to both Houses of Parliament by Command of His Excellency
the Governor-General.*

REPORT OF THE TRUSTEES.

The Trustees of the South African Museum have the honour to present to the Government, in accordance with the provisions of Act No. 17 of 1857 (Cape), their Report for the year 1928. During the year, all the members of the Board have been reappointed for a period of three years, as provided under the new Amending Act, No. 10 of 1925.

It is with great satisfaction that the Trustees are able to record that the estimates passed by Parliament in the session of 1928 included a sum of £5,000 to provide a beginning of the extension of the Museum building. The utilisation of this sum has been discussed with the architects of the Public Works Department, and it has been decided to devote it to the building of a hall for anthropology and ethnology; this hall to form the ground floor of the first portion of a new wing running parallel with the Government Avenue. The Trustees venture to express the hope that before the hall is finished and provided with a temporary roof it may be found possible for Parliament to vote a further sum for proceeding with the upper storey. This is urgently needed for the collection of big game and other mammals of South Africa.

A tablet in memory of the late Dr. Péringuey has been erected in the entrance hall of the Museum. It is the work of Mrs. Marion Walgate, and consists of a portrait medallion and an inscription, the whole enclosed in a marble frame. It was unveiled on the 9th March, before a large gathering, by Dr. D. F. Malan, Minister of the Interior. Both Dr. Malan and Sir Thomas Muir emphasised the devoted character of the late Director's services to his adopted country and to the two institutions with which he was most closely identified, the Museum and the Royal Society of South Africa. The cost of the memorial was shared between the Trustees, the Council of the Royal Society, and a number of private subscribers.

Naturally the most serious practical responsibility of the Trustees is that of finance. It has frequently been considered in both general and particular aspects, and there is one general aspect which the Trustees feel they should press upon the attention of the Government. It is this: that though the grant may remain constant, the cost of services has naturally a tendency to rise. The grant has remained the same for five years—practically the same for seven years. Taking one of the chief heads of expenditure, that of salaries and wages, the books show that in 1921 (with a Government grant of £6,000 and a scientific staff of four) the amount paid out under this head was £3,711. In 1923-24, with the scientific staff raised to five, the amount was £4,077. In 1928, with the same staff, and in spite of a saving of £140 on one of the offices, the corresponding amount had risen to £4,290. This does not include the salary of the temporary assistant in palaeontology, which is being met from an accumulated surplus; nor does it take account of the need for increasing one or more of the other salaries now paid. The institution of the Provident Fund has also involved a new annual charge on income which is about equivalent to the cost of engaging an additional scientific assistant. The result of this and other unavoidable rises in the cost of services is that, even when all exceptional expenditures are removed from the reckoning, the maintenance of the Museum is now exceeding income each year. The accumulated balance, brought about by the prolonged vacancy following Dr. Péringuey's death, will soon be exhausted, and unless the Government can see their way to making some addition to the annual grant there will be an enforced and most regrettable reduction in some of the activities of the institution.

The past year's work of the Museum is described in succeeding sections of this Report by the Director and other members of the scientific staff.

J. W. JAGGER,
Chairman of the Trustees.

January, 1929.

REPORT OF THE DIRECTOR.

To the Trustees of the South African Museum.

SIRS,—I have the honour to present my report on the work of the Museum for the year 1928.

In the general history of the Museum the year will be notable for the grant of £5,000 made by Parliament to provide the first instalment of the new wing for which, with alternate hopes and disappointments, we have been waiting so long. There could be little question as to the purpose to which the grant should be devoted. Nearly all sections of the Museum are cramped and overcrowded, some of them almost farcically so, but there is one which, as far as the public is concerned, does not exist at all. For in spite of possessing a particularly fine ethnographical collection we have never yet been able to put any part of it on exhibition, and it was plainly our duty to take the first opportunity of remedying this position. The grant is therefore to be applied to providing a hall of about 90 x 35 feet, in which we shall put before the public a selection of the objects of native workmanship still stored away in a shed. In the same room we hope to find a better setting for the unique series of life casts of Bushmen and other native races. A further hope, embodying that form of gratitude which issues in a sense of favours to come, is that the Government may find it possible, by additional grants, to continue the construction of the new wing; and especially to provide for the upper storey of this first block before the point is reached where a temporary roof has to be put on the ground-floor portion, and before we have installed our exhibits in it.

Staff.—The only change in the Museum staff is due to the resignation of A. G. White, the junior taxidermist. He left at the beginning of the year to take up a similar position in the Transvaal Museum, Pretoria, and the vacancy has not yet been filled. The Assistant Director, Dr. K. H. Barnard, was absent on leave for six months of the year. At the Koopmans de Wet House, changes in the staff have occurred for the first time since the House was opened to the public. The attendant, J. P. Volkwyn, died in July, and his death was followed three months later by that of J. McLean, the relief attendant. Godfrey Binedell has been appointed as attendant.

Visitors.—The total number of visitors recorded during 1928 was 147,667, which is the largest number since 1924. The total was made up as follows:—

White	..	Adults	..	..	..	..	Male	39,644
							Female	34,559
		Children	..	..	..	..	..	32,387
Coloured	..	Adults	..	..	..	..	Male	13,840
							Female	12,963
		Children	..	..	..	..	..	10,753
Native	..	Adults	..	..	..	..	Male	2,700
							Female	821
								147,667
		Largest number in one day (26th May)	..					1,509
		Smallest number in one day (22nd June)	..					95
		Largest number on a Sunday afternoon (22nd July)						1,040
		Smallest number on a Sunday afternoon (10th June)						139

The Museum was visited by 139 school parties and drawing classes, numbering in all 4,094 pupils.

Among the visitors of the year were several well-known men of science: Dr. E. Meinhof, of Hamburg, the leading authority on African languages; Dr. Leo Frobenius, of Frankfurt-am-Main, with a party of assistants, on the way to excavate ruins in the neighbourhood of Zimbabwe; Dr. Malcolm Burr, entomologist and all-round naturalist; Mr. Collingwood Ingram, ornithologist; and others whose visits are more or less periodic, such as Mr. R. E. Turner of the British Museum, Dr. H. Brauns and Dr. R. Broom. The last-named spent some considerable time at the Museum towards the end of the year in work for a systematic revision of the Karroo fossil reptiles.

Acquisitions (presented, purchased, or collected by staff :—

	Specimens.	Species.	New to the collection.
Mammals	49	37	2
Birds	15	13	—
Reptiles and Amphibians	112	49	2
Fishes	62	30	3
Insects	3,500 +	—	60 +
Crustacea	161	26	3
Arachnids and Myriopods	504	147	—
Mollusca	152	34	1
Other Invertebrates	78	6	—
Plants	380 +	—	—
Geology, Mineralogy and Palaeontology	120	—	—
Ethnology and Antiquities	230	—	—

Library :—

Books presented	10
„ purchased	10
Pamphlets and Serials presented	807
„ „ purchased	143

Publications.—The following parts of the *Annals of the South African Museum* have been published during the year :—

Vol. XXII., pt. 3 (xiii and 24 pp.).	
Three New Species of <i>Dicynodon</i>	By <i>R. Broom.</i>
On <i>Tapinocephalus</i> , . . .etc.	„ <i>R. Broom.</i>
New Mammals from Diamond Gravels	„ <i>R. Broom.</i>
Vol. XXV., pt. 2 (141 pp., 6 pls.).	
Arachnida of South West Africa (II.)	„ <i>R. F. Lawrence.</i>
Marine Mollusca (III.)	„ <i>J. R. le B. Tomlin.</i>
South African Onychophora	„ <i>G. E. Hutchinson.</i>
Dr. Péringuey's Types of Orthoptera	„ <i>B. P. Uvarov.</i>
Vol. XXVI. (431 pp., 26 pls.).	
Myriopoda of South Africa	„ <i>C. von Attems.</i>

Our position in regard to the publication of the *Annals* was stated in last year's report, and the statement still holds good. Dr. von Attems's large volume on the South African Myriopods was a very expensive production, but it is issued and paid for now. It is a fine piece of work which will bring credit to the Museum, and moreover it represents the last of the accumulated material left over from the after-war period. We now have nothing but current matter in hand.

Collecting Trips.—In view of our heavy commitments for publication, expenditure on collecting has been kept down this year, and such trips as have been undertaken have been rather opportunist in character. Thus Mr. (now Dr.) Lawrence's collecting in the Zoutpansberg was an extension of a holiday visit to some friends. Mr. Boonstra's tour in search of Karroo fossils began by his accompanying Mr. J. V. L. Rennie on a trip which the latter had arranged, and Dr. Barnard's short trip to the Zondereind Mountains was carried out with the aid of a grant from the Research Grant Board. These trips have cost the Museum very little in relation to the results achieved. Still less costly has been the collecting done near at hand, in the Cape Peninsula. We have paid a number of visits to the wooded kloofs and indigenous scrub on Sir Drummond Chaplin's estate at Noordhoek and on the Wynberg Municipality's ground in Orange Kloof. These are two of the best-preserved tracts of natural ground left in the Peninsula, and by collecting on them at intervals all round the year we are gradually removing the reproach that the country at our doors is less fully represented in our collections than some regions many hundred miles away.

Another very satisfactory opening in local natural history has been provided for me by Mr. Will G. Hare, of Kalk Bay. In my last report I mentioned, as a desideratum apparently out of our reach, some opportunity for periodically seeing and collecting sea-birds off the Peninsula. Mr. Hare has put an ideal arrangement at my disposal; he is prepared to take me out at any time of year for a long day's run in his motor fishing-boat; out to sea, for example, off Cape Point, which is a very good locality for sea-birds. The two trips which I have made so far have proved extremely interesting, and a continuation of them will do much to remove the vagueness that characterises our present knowledge of the bird-life of the Cape seas. Another result already apparent is a great improvement in the representation of these birds in the show cases.

At the end of July I paid a three days' visit, with Mr. Drury, to Messrs. Irvin & Johnson's whaling station on Saldanha Bay. We were most generously treated by the Company, who made us their guests from the moment of leaving Cape Town (by sea) to that of arriving back again (by road). Whales were coming in briskly during our visit, and we had the opportunity of examining a good selection, including a blue whale of 94½ feet and a fin whale of 72 feet. We brought back a series of bones (breastbones, pelvics, chevrons) for use as keys in identifying skeletons, and also some examples of skin parasites, facial bristles, etc.

Donations.—An outstanding feature of the year has been the generosity of some of the donations. An appeal which I made through the medium of the press induced Mr. W. A. Philip to purchase for us a fine male okapi as an addition to our limited series of the more remarkable forms of life from Central Africa, and also to defray the cost of mounting a particularly good lion's skin from the Kruger National Park. With the expenses of packing and transport, which Mr. Philip also took upon himself, this represented a gift of the value of well over £500. It was thus far beyond our present unaided resources, and it has added to our exhibition galleries two specimens which could hardly be surpassed in general interest. A third highly interesting specimen has been purchased for us by an anonymous donor. It is a fine male of the newly discovered Rhodesian cheeta or hunting leopard—a striking animal, of which the recent recognition caused almost as much surprise as the discovery of the okapi in 1901. We have secured the skeleton as well as the skin; the mounted animal will be on view during the coming year.

The improvement in the keeping of the Museum grounds in the hands of the Municipal gardening staff continues. Through the generosity of Mr. Jagger we have been able to extend the improvement to a neglected strip of ground along the side of the Government Avenue.

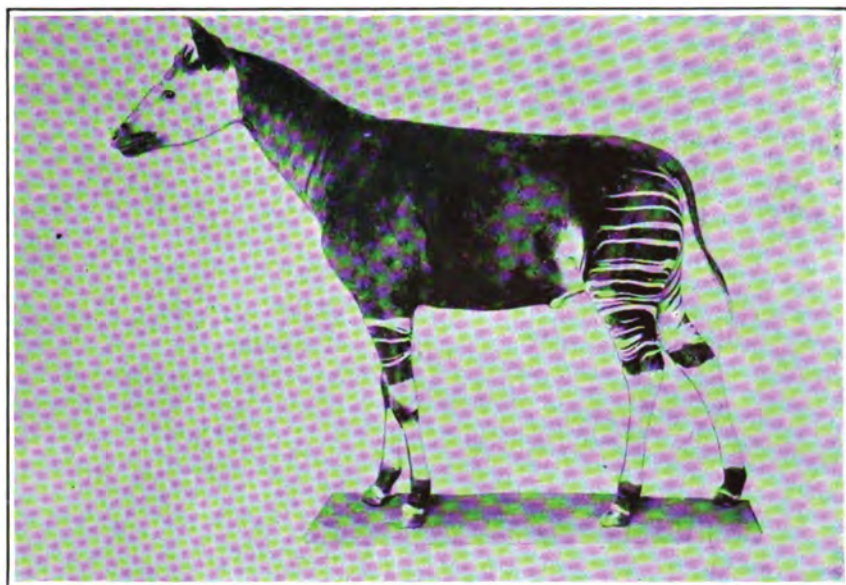
Finances.—To what is said about finance in the Trustees' Report I should like to add that there are a number of heavy outlays in sight for which we ought, if it had been possible, to be making provision in advance. The two chief heads under which these fall are (1) show cases for the rooms we shall be taking over shortly in the old Art Gallery premises and in the new wing; and (2) the mounting of a number of big-game animals to replace some of the really deplorable examples that we have on view at present. Though we are still showing a credit balance we are actually living beyond our income, and the balance is already earmarked and rapidly dwindling. There is therefore in prospect a disquieting choice between monetary difficulties and the holding-up of progress.

GENERAL REVIEW OF MUSEUM WORK.

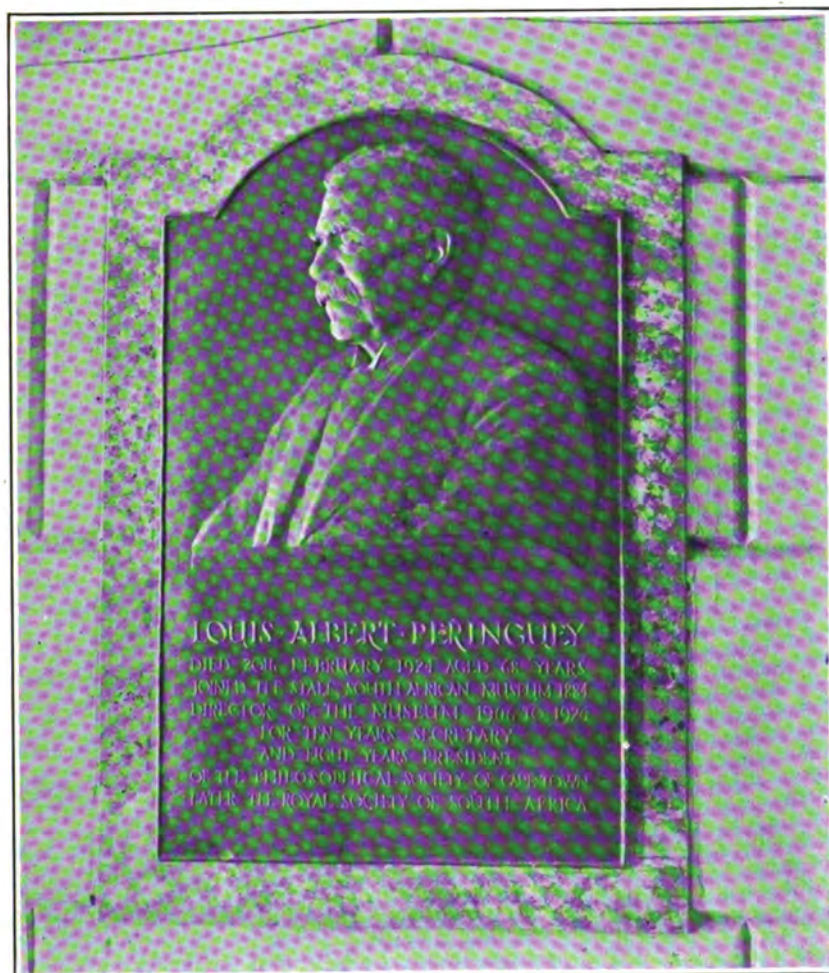
Much of the time of the scientific staff, as in all museums where large collections have been brought together, is taken up in systematic work; necessarily very largely original, for very few groups have yet been monographed with anything approaching finality, if at all. The attempt to identify and arrange the contents of almost any section of our reference collections is confronted by the difficulties of scattered literature, inaccessible type-specimens and the presence of undescribed new species. It thus leads at once either to original scientific work by a member of the staff or to the despatch of a part of the collection to some specialist who is better situated to do the work. As will be seen from the departmental reports which follow, many parts of the collections are systematically worked out by our own staff; but portions are in the hands of specialists (most but not all museum officials) in many countries: South Africa, Rhodesia, England, Germany, Holland, France, Austria, the United States. Our own staff reciprocates by serving other museums in the same way. We have worked out batches of material this year for several of the other museums of South Africa, for the British Museum, and for other correspondents who have contributed to our collections.

This systematic work is essential, since until the collections have been submitted to it they are merely so much raw material. But it shows for nothing as far as the public is concerned, and I will now briefly review that part of the year's work which does directly affect the public. An important part of it is the provision of improved labels. The printer is now kept pretty constantly engaged in this work and, where space allows, all the labels likely to be of interest to non-technical visitors are printed in both English and Afrikaans. The "post-office stones" and other early inscribed stones in the entrance hall have all been re-labelled; their old labels were badly in need of revision and reprinting. A large section of the Geology Room has also been re-labelled and so have several sections of the Invertebrate Room and a number of single objects or smaller groups in other parts of the Museum.

Among other improvements in the show cases are the complete remounting and re-labelling of the arachnids and echinoderms; the continued replacement of poor specimens of the birds by freshly mounted ones; the addition to the fish gallery of a number of excellent casts of local sharks and other fishes, and that of casts of two more species of squid in the Inverte-



THE OKAPI PRESENTED BY MR. W. A. PHILIP—FROM THE ITURI FOREST, BELGIAN CONGO. (See p. 4.)



MEMORIAL TO THE LATE DIRECTOR, DR. PERINGUEY, ERECTED IN THE VESTIBULE OF THE MUSEUM. (See p. 1.)

brate Room; and the replacement of some of the spirit specimens of the commoner snakes by lifelike mounted specimens. Our modeller, Mr. Drury, is to be congratulated on the successful work he has put into the preparation of these new specimens, many of which presented special difficulties. The new series of snakes is being prepared by a combination of casting and taxidermy which in skilful hands gives beautiful results, and the specimens done by it are incomparably better for public exhibition than snakes coiled up in glass jars. One good addition to the set has been made by Mr. B. Peers, who has himself mounted and presented an egg-eating snake (*Dasypeltis*) shown in the act of swallowing an egg.

A case for exhibiting the South African coins is just being completed, and I hope to have it in use during the next few months. We have again employed Mr. Hayne's services, this time to put in order the Gother Mann collection of classical coins.

In the last few days of the year we were much occupied with a large herd of False Killer Whales, *Pseudorca crassidens*, which came ashore, to the number of over a hundred, on the Atlantic coast of the Peninsula near Kommetje. The occurrence is especially noteworthy for two reasons: firstly, that until very recently the False Killer was one of the least known, and supposed to be one of the rarest, of the whales; and secondly, that a little more than a year previously this impression was startlingly upset by the stranding of a large herd in Dornoch Firth, on the north-east coast of Scotland. The repetition of the occurrence so soon afterwards and at such a distant spot is quite extraordinary. So far as I can ascertain there was no previous record of the species from African waters. Through the kindness of the Divisional Council we have secured the skeleton of one of the largest males, together with a foetus and skulls and other parts of further specimens.

I must again direct attention to the fact that half the members of the staff are working under great difficulties owing to the lack of workrooms. Our makeshift arrangements will be to some extent improved when we get the use of the rooms at present occupied by the Art Gallery, but this will only be at the cost of commandeering space intended for the public.

LEONARD GILL,
Director.

DEPARTMENTAL REPORTS.

DEPARTMENT OF MAMMALS AND BIRDS.

To the Trustees of the South African Museum.

SIRS,—I have the honour to present my report on this department for the year 1928.

The year has been notable for the extent to which this department has benefited by the generosity of donors. In the general part of my report I have already referred to this: to the splendid specimens of the okapi and the lion which we owe to Mr. W. A. Philip, and the anonymous gift of an example of the newly-discovered Rhodesian cheeta (*Acinonyx rex*). I have also referred to the valuable service which Mr. W. G. Hare is rendering in taking me out to sea periodically to study the local oceanic birds. Apart from this, we are also indebted to Mr. Hare for some sea-birds obtained for us on other occasions, particularly for a fine adult specimen of the shy mollymawk (*Thalassarche cauta*) from False Bay. Thirty-one pairs of big game horns, including some specially good trophies, have been presented by Mrs. Truter. They were collected by her late husband, Mr. Peter Truter, formerly Magistrate of Worcester. As soon as our new Mammal Hall materializes these horns will be very useful, both as decorations and as a supplement to the mounted animals.

A fair number of newly-mounted birds have been put into the show-cases, replacing old and poor specimens; but some hundreds of such replacements are needed before we can be really satisfied with our bird gallery, and the shortcomings of some of our big-game animals are still more glaring and much more obvious to visitors.

The year's acquisitions may be tabulated as follows:—

	Specimens.	Species.	New to the collection.
Mammals	49	37	2
Birds	15	13	—

Our thanks for donations are due to Messrs. W. A. Philip, Will G. Hare, W. E. Visser, Dr. A. C. Neethling, E. Frappier, H. A. Dumbledon, J. G. Hallack, V. Ellenberger, B. van Riet, O. Enderstein, F. J. Duckett, Messrs. Irvin & Johnson, Mrs. E. W. McL. Thomas, Mrs. Truter, Groote Schuur Estate, Cape Divisional Council.

I am, etc.,
LEONARD GILL,
Director.

DEPARTMENT OF REPTILES AND AMPHIBIA.

To the Director, South African Museum.

SIR,—I have the honour to present the following report on this department for the year 1928.

The chief contributors during the year were Mr. Peers, Miss Walton, and Dr. K. H. Barnard. Mr. Peers collected in Namaqualand near Garies and has made a very useful contribution of snakes and lizards, two species at least being new to the collection, if not new to science. Miss Walton, collecting near Grahams-town during November, has sent among other reptiles two specimens of *Scelotes caffer* which has been hitherto represented in the collection by one rather poor example. A collection of 27 reptiles was made by myself in the Zoutpansberg, N.E. Transvaal, including one little-known species. Dr. K. H. Barnard collected in the River Zonder End mountains, obtaining a fine specimen of the large rock lizard *Pseudocordylus microlepidotus* and seven specimens of the frog *Heleophryne*. The process of replacing the spirit specimens on exhibition in the reptile section by casts of freshly killed snakes has been continued and a number of species of snakes have been realistically mounted in a suitable environment by the Museum taxidermist, Mr. J. Drury.

The acquisitions during the year can be tabulated as follows:—

	Specimens.	Species.	New to the collection.
Reptiles	104	43	2
Amphibia	8	6	—
	112	49	2

The thanks of the Trustees are due to the following donors: Miss Walton, Mr. Peers, Mr. Hogan, Mr. J. S. Brown, Dr. K. H. Barnard.

I am, etc.,
REGINALD F. LAWRENCE,
Assistant in Charge of the Department.

DEPARTMENT OF FISHES AND MARINE INVERTEBRATES.

To the Director, South African Museum.

SIR,—I have the honour to present the following report on this department for the year 1928.

From 1st April to 30th September I was on leave in England, and the opportunity was taken to work at the British Museum, examining type specimens and reading up literature not available in this country.

The rest of the year has been occupied mostly in routine work. An endeavour has been made to get a little more space in the spirit room by rebottling certain groups, transferring the bulk of the Mollusca to the drawers in the exhibition galleries, and preserving most of the Echinoderms in a dry state.

The exhibition group of Echinoderms has been re-arranged and re-labelled. Casts of Blue Shark, Porbeagle, Hound, Seven-gilled Shark, and Diamond Squid have been made and placed on exhibition.

Collecting.—I have taken part in several visits to the Noordhoek Forest and Orange Kloof areas in the Cape Peninsula. In February I visited the mountains east of Citrusdal, mainly to investigate with Mr. Goodwin a cave in that district. At the end of November and beginning of December I revisited the River Zonderend district in connection with my researches on the fauna of the high peaks.

The following are the acquisitions for the year:

	Specimens.	Species.	New to the collection.
Fishes	62	30	3
Crustacea	161	26	3
Mollusca	152	34	1
Other Invertebrates (including non-marine worms)	78	6	—

No papers on material from this department have been issued during the year. Certain marine fishes have been submitted to the Paris Museum for critical study, with consequent changes in nomenclature. I have completed a Revision of the South African Phyllopod Crustacea.

The thanks of the Trustees are due to the following donors: C. L. Biden, G. E. Hutchinson, R. F. Lawrence, Dr. J. Muir, J. H. Power, R. Primos, W. Rose, Capt. W. Taylor.

I am, etc.,
KEPPEL H. BARNARD,
Assistant Director.

DEPARTMENT OF ENTOMOLOGY.

To the Director, South African Museum.

SIR,—I have the honour to submit the following report on this department for the year 1928.

During this year I was engaged in completing the arrangement of the unnamed *Eumenidae* begun at the end of 1927, and also in the arrangement of the *Vespidae*. Of the former family we possess many species of *Odynerus* undeterminable at present owing to the lack of compared material and the inadequate descriptions of the older authors. The *Vespidae* are well represented in the collection and are now better classified. I have also undertaken the arrangement and identification of the *Mutillidae* according to the monograph

of Bischoff on the Ethiopian species. This family also is well represented and many of the species absent in the old collection were found in our extensive insect collections from S.W. Africa. The comprehensive monograph of Dr. G. Arnold on the *Sphegidae* as well as the large number of species determined by him enabled me to arrange this family in proper order. Among the Orthoptera I also arranged and classified the family *Mantidae* which is now fairly representative of South Africa, most of the genera and species being represented. The Hemipterous families *Cicadidae*, *Fulgoridae*, *Cercopidae* and *Membracidae*, which were arranged in 1925, were also pinned in the new cabinet drawers and are now easily accessible.

Small collections of *Coleoptera* were compared and determined during the course of the year for private collectors, such as Dr. H. Brauns, Dr. C. Grobbelaar and Capt. R. Stevenson, who have presented and are still presenting insects to the Museum. *Tenebrionidae* belonging to the genus *Psammodes* have also from time to time been forwarded in small batches from the British Museum for comparison with the types of the late Dr. L. Péringuey.

Several collecting trips have also been made during this year in connection with a scheme for the faunistic survey of the Cape Peninsula in collaboration with Drs. Gill, Barnard and Lawrence. Many duplicates of both common and uncommon insects have thus been obtained. Special attention was paid to forms living in and under damp leaves, rotten wood and under stones in the bush in the kloofs of Noordhoek and Orange Kloof composed of indigenous trees and undergrowth. Many specimens of *Notiophygus* were obtained, some of which have been incorporated in a paper by an assistant of Dr. Walter Horn, by which he was enabled to increase the number of known species from 6 to 70, and to state that the S.A. Museum collection of *Notiophygus* is now the richest in the world. During the latter part of the year Dr. H. Andreae of Cape Town was engaged in the determination of our species of *Criocerinae* with the object in view of ultimately writing a short paper on this sub-family. At his request the Directors of the Transvaal, Albany, Natal and Rhodesian Museums have kindly placed their material at his disposal.

This year, like the previous one, is characterised by the rapid progress the Museum is making with respect to the demand for material from its rich and valuable insect collections, without which any serious study of South African forms undertaken by specialists would hardly be possible. The following material has been sent out to specialists and workers this year:—

- (1) To Dr. G. Arnold, Bulawayo, 1,073 specimens of *Psammocharidae*, including four types, to contribute towards a monograph of the family.
- (2) To Miss D. Aubertin, seven types of *Stratiomyidae* to contribute towards the publication of a monograph by the late Dr. E. Brunetti.
- (3) To Dr. Max Bernhauer, Horn, N. Austria, 1,448 specimens of *Staphylinidae*, including 37 types and cotypes for study and a revision.
- (4) To M. Louis Burgeon, Musée du Congo, Tervueren, 535 specimens of *Graphipterus* and *Piezia*, including many types, to contribute towards a revision of the genera.
- (5) To Mr. Korschefsky, Deut. Entom. Inst., Berlin, 825 specimens of *Coccinellidae* for determination and description.
- (6) To Dr. J. Obenberger, Prague, 244 specimens of *Buprestidae* for study.
- (7) To M. Guido Paoli, Genoa, nine specimens of *Chalcidae* for study.
- (8) To Mr. Wilkinson, British Museum, 179 specimens of *Microgasterinae* (*Apanteles* spp.), including three types, for study and to contribute towards a paper.
- (9) To Dr. Tillyard, Canberra, Australia, a small collection of *Perlidae*.
- (10) To Dr. B. Uvarov, British Museum, 125 specimens of *Conocephalinae* for determination and study.

The following material has been identified and returned during this year:—

- (1) The rest of the *Sphegidae*, including types of new species, submitted to Dr. G. Arnold, Rhodesia Museum.
- (2) The entire collection of *Trypetidae*, including the types of Bezzi as well as many of new species, by Mr. H. Munro, Pretoria.
- (3) All the types of Péringuey, and also new types, of *Gryllacridae* (*Stenopelmatinae*) by Dr. H. Karny, Buitenzorg, Java.
- (4) 33 specimens of *Hydrophilidae*, including the types of Péringuey and new types, by M. Antoine Ball, Brussels.
- (5) The collection of *Notiophygus* spp., including the large number of new types, by Dr. Walter Horn, Berlin-Dahlem.

The following material is still in the care of specialists:—

- (1) Five specimens of *Ceropales*, including one type, in the care of Dr. Babiy (Cornell University).
- (2) 719 specimens of *Scoliidae*, including one type, in the care of Dr. J. Bradley (Cornell University).
- (3) 618 specimens of *Acridiidae* in the care of Dr. B. Uvarov (British Museum).
- (4) A collection of unnamed species of *Cerceris* in the care of Dr. H. Brauns (Willowmore).
- (5) 233 specimens of *Hemiptera* in the care of Mr. W. China (British Museum).
- (6) The types of four spp. of *Derolemus* and one cotype of *Hypsomus* in the care of Dr. G. Marshall (British Museum).

The following material is still outstanding from previous years:—

Some <i>Tipulidae</i>	in the care of	C. P. Alexander.
.. <i>Buprestidae</i>	.. ..	J. Obenberger.
.. <i>Jassidae</i>	.. ..	C. Naude.
.. <i>Blattidae</i>	.. ..	J. A. Rehn.

Among the accessions to the collection of insects are the following :—

- (1) Three lots of miscellaneous insects, comprising *Coleoptera*, *Orthoptera*, *Hymenoptera*, etc., from Capt. R. Stevenson, Penkridge, Melsetter, S. Rhodesia.
- (2) A fairly large collection of *Lepidoptera*, *Neuroptera*, *Orthoptera*, *Diptera*, *Coleoptera* and *Hymenoptera* from Miss Walton, Resolution, Grahamstown.
- (3) Some more miscellanea (as yet unpinned), from Miss Walton.
- (4) One large box of insects, chiefly *Coleoptera*, from Somerset West by Mr. J. A. Hesse, Sen.
- (5) A small collection of miscellaneous insects from Mr. J. Frampton, Abenab, Grootfontein, S.W. Africa.
- (6) A miscellaneous collection, mostly *Coleoptera*, from Mr. Dendy, Stellenbosch.
- (7) A small miscellaneous collection of Cape insects, mostly *Coleoptera*, collected at Noordhoek and Orange Kloof during the course of the year by the Museum staff, Drs. Gill, Barnard, Lawrence and Hesse.
- (8) A large and valuable collection of insects collected by Dr. R. F. Lawrence at Louis Trichardt and Zoutpansberg at the beginning of this year.
- (9) A collection of miscellaneous insects from the River Zonder Eind mountains collected by Dr. K. H. Barnard and Messrs. Thorne and Versfeld.

Other accessions are :—

	Specimens.	Species.	New to the collection.
<i>Hemiptera</i> , Mr. G. E. Hutchinson, including 42 types and allotypes, spirit specimens and mounted preparations	1,295	38	26
<i>Orthoptera</i> (<i>Homoeogrillus reticulatus</i>), Mr. J. Power, Kimberley.	1	1	1
<i>Diptera</i> , pupal cases and specimens of <i>Dacus</i> , by Mr. J. Power.	5	1	0
<i>Coleoptera</i> (<i>Dynastinae</i>), Mr. J. Power	2	1	1
<i>Coleoptera</i> (<i>Scarabaeidae</i>)	1	1	0
<i>Lepidoptera</i> (<i>Sphingidae</i>), Dr. Melle, Natal	2	1	0
<i>Hymenoptera</i> (<i>Eumenidae</i>)	2	1	0
<i>Diptera</i> (<i>Anchmeromyia luteola</i>) Mr. W. E. Jones, Zululand.	2	1	0
<i>Coleoptera</i> (<i>Curculionidae</i>) Dr. Brauns, Stellenbosch	1	1	1
<i>Lepidoptera</i> (<i>Nymphalidae</i>) Mr. P. A. Sheppard, Umtali.	2	1	1
<i>Hymenoptera</i> (<i>Sphegidae</i>) Dr. G. Arnold, Rhodesia Museum.	1	1	1
<i>Lepidoptera</i> (Larval case of <i>Gymnelema vinctus</i>) Mr. H. Hofmeyr, Petersburg.	1	1	0
<i>Coleoptera</i> (<i>Trogosilidae</i>) Mr. J. Hewitt, Albany Museum.	2	1	0
Total	1,317	50	30

The following MSS. of entomological papers for the *Annals* of the S.A. Museum are at present in the press, in hand or ready for publication :—

- (1) A Revision of the South African *Gryllacridae*, by Dr. H. Karny (MS.).
- (2) A Revision of the *Trypidae* by Mr. H. Munro (MS.).
- (3) A Revision of the *Notonectidae* and *Corixidae* of S. Africa, by G. E. Hutchinson (in print).
- (4) Notes on Péringuey's types of *Orthoptera*, by Dr. B. Uvarov (in print).
- (5) Some new species of *Curculionidae* from S. Africa and S.W. Africa, by Dr. A. J. Hesse (MS.).

The following papers dealing with material of the S.A. Museum have appeared in other publications or are in the press :—

- (1) A monograph of the *Sphegidae* (some parts and appendix) by Dr. G. Arnold, in the "Annals of the Transvaal Museum" (published).
- (2) A paper dealing with our *Notiophygus* spp., appearing in the "Entomologische Mitteilungen," by Dr. W. Horn and Herrn H. John.
- (3) Some new species of *Curculionidae* from S. Africa and S.W. Africa, by Dr. A. J. Hesse, in the Transactions of the Royal Society of S. Africa, Vol. XVI, part 2, 1928, p. 131 (published).

The thanks of the Trustees are due to all the donors and especially to the following :—Dr. K. H. Barnard, Mr. Dendy, Mr. J. Frampton, Mr. J. A. Hesse, Sen., Mr. G. E. Hutchinson, Dr. R. F. Lawrence, Capt. R. Stevenson, and Miss Walton.

I am, etc.,

ALBERT J. HESSE,

Assistant in Charge of the
Entomological Department.

DEPARTMENT OF ARACHNIDS AND MYRIOPODS.

To the Director, South African Museum.

SIR,—I have the honour to present the following report on this department for the year 1928.

With regard to systematic arrangement and classification, the work done on the various groups is as follows:—The fauna of the Solpugid group has been brought up to date by a paper commenced last year on various undescribed forms in South Africa, especially those inhabiting the little-known higher altitudes of the Cape mountain system; the opportunity was taken at the same time to rearrange the collection so as to render it easy to undertake exchanges with other Museums with a view to filling up any gaps which may still exist in the series. A monograph on the little-known group of harvest spiders (Phalangids) has been commenced, and with the help of collectors at other Museums throughout South Africa it is hoped to give a comprehensive account of the group for the whole of the South African region.

The Arachnid and Myriopid collections in the exhibition cases of the Arthropod section have been almost entirely replaced by a larger and more complete series of specimens, special attention being paid to the rich local fauna which is represented almost in detail. Space has been left for further additions which are shortly to be made.

With regard to field collecting, a short stay was made by myself in the North-Eastern Transvaal at Louis Trichardt; some valuable and little-known specimens were obtained in the natural forest of the upper slopes of the Zoutspansberg north of Louis Trichardt. The Museum is indebted to Miss Walton, of Resolution Halt, near Grahamstown, for the field collecting work she has done in this group; the specimens sent by her, comprising all the groups of Arachnids, were in all cases carefully preserved and in beautiful condition; many are new to our collections. Dr. K. H. Barnard made collections at two localities, the River Zonder End mountains and the Seven-weeks Poort Berg near Ladismith. Single-day collecting trips have been made in the Peninsula to Noordhoek and Orange Kloof which have resulted in considerable additions to the local fauna, special attention having been paid to the Myriopods and Phalangids, the Cape fauna of which is not as well known as the other groups.

The additions for the year are represented by the following table:—

	Specimens.	Species.
Araneae	152	52
Myriopods	138	45
Scorpions	74	18
Solifugae	18	3
Pseudoscorpions	10	2
Peripatidae	6	1
Phalangids	53	19
Acari	53	7
Total	504	147

The thanks of the Trustees are due to the following donors: Miss V. Duthie, Miss Walton, Prof. L. Hogben, Mr. Peers, Mr. J. S. Brown, Dr. E. L. Gill, Dr. A. J. Hesse, Dr. K. H. Barnard.

I am, etc.,

REGINALD F. LAWRENCE,

Assistant in Charge of the Department.

DEPARTMENT OF BOTANY.

To the Director, South African Museum.

SIR,—I have the honour to present the following report on this department for the year 1928.

Accessions.

Prof. R. Adamson	6 specimens from Cape Province.
Dr. K. H. Barnard	73 " " Cape Province.
A. G. Howard	3 books, drawings of Cape Flowers.
Mrs. Levyns	4 specimens from Cape Province.
R. Primos	41 " " Citrusdal.
F. L. Rothmann	mangroves from Lourenço Marques.
T. P. Stokoe	9 specimens from Cape Province.
C. Thorne	159 " " "
Prof. van der Bijl	12 " " "
Mr. Walsh	1 " " "
K. White	12 " " "
Various donors	34 " " various localities.

Exchanges.

Albany Museum, Grahamstown; Bolus Herbarium, Kirstenbosch; Division of Botany, Pretoria;
Royal Botanic Gardens, Kew University of Stellenbosch.

Specimens mounted.

S.W. Africa	1,400 sheets.
Tropical Africa	693 sheets.
Europe	352 sheets.
Cape Province	301 sheets.
Purcell Collection	1,823 sheets.

Specimens incorporated.

1,592 sheets, including 231 species and 27 genera new to the Herbarium.

General Report.

The usual routine work of mounting, determining and incorporating specimens was carried out during the year. The Purcell collection of over 2,000 sheets, presented to us by Mr. Purcell several years ago, has been mounted and arranged in cabinets according to the scheme of the general collection. This collection should be of great value to students, as the specimens are particularly well preserved and pressed, with copious notes attached, and there are several specimens of each species showing various stages of development of flower and fruit. A Museum expedition was made to the Zonder Einde mountains where a good collection of plants, amongst them several Restionaceae, was made. Thanks to the continued energies of Dr. Barnard the Herbarium is gaining a good number of alpine plants and mosses, the latter being identified by Dr. T. R. Sim.

The work on the S.W. African flora was continued throughout the year, and a good headway has been made.

I am, etc.

S. GARABEDIAN,

Assistant in Charge of the Department of Botany.

DEPARTMENT OF PALAEOLOGY.

The Director, South African Museum.

SIR,—I have the honour to present my report on the working of this department for the year 1928.

The following additions to the register of acquisitions have been made during the year :—

Fossil Invertebrates	..	..	..	..	..	..	..	45
Fossil Plants	..	..	..	..	..	..	..	7
Fossil Vertebrates	..	..	..	..	..	..	..	39
								—
								91
								—

The chief donors have been :—Dr. F. Dixey, the Geological Survey of the Union, the Academy of Sciences at Leningrad, C. Mühlenbruck, Esq., and F. G. Watermeyer, Esq.; and to all these our thanks are due.

Exhibition.—For some years now it has been impossible to make any considerable additions to the exhibited collections owing to lack of space. The publication of Dr. du Toit's paper on the Upper Karroo Flora rendered it necessary, however, to rearrange the exhibit of fossil plants. An entirely new selection of specimens for exhibit was therefore made, and almost the whole of two wall cases were devoted to their display. The exhibit is arranged in stratigraphical sequence, and a new set of labels has been printed.

This rearrangement gave opportunity for remounting the Cretaceous and post-Cretaceous Invertebrates, for which also new labels were prepared.

Among the fossil reptiles no changes have been made. A large amount of material should be exhibited and is ready for exhibition; but lack of space prevents us from adequately displaying even a fairly representative part of our unique collection.

Research.—Messrs. J. V. L. Rennie and L. D. Boonstra collected Bokkeveld invertebrates from Ganka Poort, and Mr. Boonstra made an expedition into the Gouph to collect Karroo reptiles, obtaining there some good Pareiasaurian material and some strikingly new Therapsid types.

Throughout the year the development of the Pareiasaurian material has progressed steadily; almost the whole of this collection is available for study and a beginning has been made with the preparation of a series of descriptive papers. These will be published during the coming year. The various papers on invertebrates and reptiles mentioned in last year's report have been published; and the two papers on Cretaceous and Tertiary Invertebrates by Mr. J. V. L. Rennie are in the press.

In the latter part of the year Dr. Broom re-examined all the type reptilian material.

Whilst on leave in Europe I was able to arrange a series of exchanges with several of the leading museums, and thus to acquire material which will be of considerable value for comparative purposes.

I am, etc.,

SIDNEY H. HAUGHTON,

Hon. Curator.

DEPARTMENT OF GEOLOGY AND MINERALOGY.

To the Director, South African Museum.

SIR,—I have the honour to present my report for the year 1928, as follows :—

The most interesting addition during the year has been a series of rocks illustrating the Karroo succession in the Wankie Basin, presented by the Geological Survey of Southern Rhodesia. On the other hand, a considerable amount of material was collected to demonstrate the recent developments in the South African Asbestos industry, but this could not be sorted out in time to be available to the department this year.

Lack of space has prevented adding to the exhibited material to any extent, but many new printed labels have been added, most of which are now displayed in specially made metal stands, the effect greatly improving the neatness of the collections. Further effect has been given to the policy of supplying explanatory labels in both official languages, *e.g.*, the large meteorites, the diamondiferous and allied rocks, etc.

No change has been made in the exhibits of Economic Geology.

The Guide to the Relief Model of the Western District of the Cape Province now includes a photograph of this model.

I am, etc.,

A. L. HALL,
Hon. Keeper.

Pretoria,
February 4th, 1929.

DEPARTMENT OF ETHNOLOGY AND ARCHAEOLOGY.

To the Trustees of the South African Museum.

SIRS,—I have the honour to present my report on this department for the year 1928.

There has been less activity in this section than was the case in the two preceding years, chiefly because Mr. Goodwin (of the Department of Anthropology of the University of Cape Town) has not been able to give so much time to it. But there are some good acquisitions to record. Mr. Langham Dale has presented to the Museum the stone implements collected, chiefly on the Cape Flats, by his father, the late Sir Langham Dale. They are of special interest as being apparently the first stone implements recognised and collected by any European in South Africa. A good collection of implements of the Stellenbosch Culture from Calitzdorp has been presented by Mr. L. L. Wahl. Mr. F. L. Rothmann has given us a well-finished pendant in mother-of-pearl, which he picked up at the mouth of the Breede River. Other stone implements have been added to our collection by Mr. Norrie, Mr. G. H. Herman, Mr. G. Seubring and Mr. P. S. Stewart.

In the way of the ethnography of living peoples, the largest addition is a series of objects representing various races of Madagascar. They were collected on a recent expedition by Dr. Linton, of the Field Museum, Chicago, and have been obtained by exchange with that institution. From Miss M. Wilman, of the McGregor Museum, Kimberley, we have received examples of the Swazi grass dresses which show such interesting workmanship, and of the Bushman rattles made from springbuck ears. Other "native curios" have been presented by Mr. G. H. Herman. Through Mr. C. Graham Botha we have received a couple of interesting objects dug up during the recent dismantling of Fort Knokke: a pair of four-pronged iron caltrops such as used to be thrown down to impede the movements of cavalry.

I am, etc.,

LEONARD GILL,
Director.

KOOPMANS DE WET HOUSE.

To the Trustees of the South African Museum.

SIRS,—I have the honour to present a report on this annexe to the Museum for the year 1928.

The total of visitors for the year again shows an increase: the number for 1928 being 27,063. Only 2½ per cent. of these were coloured people. Thirty school classes, totalling 848 pupils, visited the House during the year; most were from local schools, but there were parties also from places as distant as Prince Albert, Beaufort West and Burgersdorp.

Owing to the difficulty of finding the means for the staffing and upkeep, not to speak of the improvement, of the House, various plans for saving expense or increasing income have been discussed—among them the daily closing of the House during the lunch hour, and the charging of an entrance fee on two days of the week. Neither of these plans has yet been definitely recommended by the Advisory Committee. On the other hand, some relief has been obtained through a grant of £20 from the National Society; and the City Council has made a further annual grant of £100, to be earmarked for the purchase of additional objects or for the better display of those already exhibited.

Among the improvements brought about on the recommendation of the Advisory Committee and under their supervision are the glazing of a wall-cupboard door in one of the back rooms so as to bring the cupboard into use for the display of china, and the overhaul and putting into running order of three interesting clocks—a fine Friesland wall clock, a bracket clock with verge movement, and a long-cased clock formerly in the Krynauw family.

Three things particularly needed for the House and not yet obtained in suitable examples are a dining-room table, a built-in china cupboard, and hangings for the four-poster bed. It is also most desirable that the two black museum cases on the landing should be replaced by pieces of furniture in keeping with the House and its other contents.

I am, etc.,

LEONARD GILL,
Director.

SOUTH AFRICAN MUSEUM.

STATEMENT OF RECEIPTS AND PAYMENTS FOR THE YEAR ENDED 31ST DECEMBER, 1928.

RECEIPTS.			PAYMENTS.		
	£	s. d.		£	s. d.
To Balance as at 1st January, 1928	1,143	12 7	By Salaries (including Staff contributions to Provident Fund)	4,532	1 6
Grants:—			.. Sunday Duty	73	12 0
.. Union Government .. £8,200 0 0	8,200	0 0	.. Upkeep of Museum:—		
.. Cape Town Corporation .. 500 0 0	500	0 0	.. Honorarium	£50	0 0
.. National Society 20 0 0	20	0 0	.. Wages	121	14 0
	8,720	0 0	.. Uniforms	45	1 2
.. Interest:—			.. Tools	19	19 6
.. Hajee Sullaiman Shamahomed Coin Fund	6	15 0	.. Audit	5	5 0
.. Fixed Deposit	20	0 0	.. Water and Electric Light	89	4 6
		26 15 0	.. Insurance	47	6 3
.. Sales of Publications:			.. Hydrant	7	10 0
.. Annals	16	12 4	.. Cases	40	0 0
.. Guides	30	15 0	.. Maintenance of Grounds	150	0 0
		47 7 4	.. Work on Coins	31	16 0
.. Donation for purchase of Specimen	60	0 0	.. Miscellaneous	249	13 6
.. Refunds:—			.. Péringuey Memorial	45	0 0
.. Royal Society (Péringuey Memorial)	20	0 0			902 9 11
.. E. A. Jones: Photographs of silver	1	0 0	.. Library: Purchases and Subscriptions	135	5 2
.. Geological Survey (Annals)	129	14 6	.. Expenses: Travelling and Collecting	152	12 0
.. Transvaal Museum	2	16 8	.. Freight and Railway Charges	57	17 5
.. J. F. Lawrence—Cartridge adaptor	1	13 0	.. Coins	32	1 0
.. Kaffrarian Museum—Cartridge adaptor	1	13 0	.. Postages and Petties	83	10 2
.. W. A. Philip	32	10 10	.. Koopmans de Wet House: Special Grant	13	10 0
.. C. G. S. de Villiers	0	13 0	.. Publications	1,082	12 1
.. Postage	0	2 2	.. Trustees' contribution to Provident Fund	266	15 8
.. Dr. Gevers	0	12 7	.. Bank Charges	9	14 10
.. South African Railways	0	3 7	.. Overpayments to be refunded in 1929:		
.. Peabody Museum	3	1 5	.. Sundries	0	3 9
.. Petty Cash unexpended	0	4 1	.. Petty Cash	0	0 2
.. Marloth's Flora of S.A.	4	4 0	.. Salaries	0	14 5
		198 8 10	.. Stamps	1	0 0
					1 18 4
			.. Balances 31st December, 1928:—		
			.. Stamps	5	19 9
			.. Travelling and Collecting	45	4 6
			.. Bank	800	19 5*
					852 3 8
					£8,196 3 9
					£8,196 3 9

*Includes £34 9s. 10d. pertaining to the Coin Fund.

STATEMENT "A."

HAJEE SULAIMAN SHAHMAHOMED FUND FOR THE PURCHASE OF COINS.

INCOME.			EXPENDITURE.		
To Amount invested with the South African Association	£100	0 0	By Purchase of Coins	£32	1 0
.. Accumulated Interest, 1st January, 1928	79	15 10	.. Half share of Coin Case	20	0 0
.. Interest received 1928	6	15 0	.. Balance of Fund	134	9 10
	£186	10 10			£186 10 10

Audited and found correct.

(Sgd.) J. DE V. ROOS,
Controller and Auditor-General.(Sgd.) LEONARD GILL,
Director, South African Museum.

Cape Town, February, 1929.



UNION OF SOUTH AFRICA.

REPORT

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FEB 5 - 1940
UNIVERSITY OF ILLINOIS

OF THE

SOUTH AFRICAN MUSEUM

FOR THE

YEAR ENDED 31st DECEMBER, 1929

*Presented to both Houses of Parliament by Command of His Excellency
the Governor-General
1930*

PRETORIA
THE GOVERNMENT PRINTER
1930

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Trustees of the South African Museum :

THE HON. JOHN WILLIAM JAGGER, F.S.S. (*Chairman*).
 SIR THOMAS MUIR, C.M.G., M.A., LL.D., D.Sc., F.R.S. (*Vice-Chairman*).
 PROF. WILLIAM ADAM JOLLY, M.B., CH.B., D.Sc., F.R.S.S.Afr.
 COUNCILLOR W. F. FISH, J.P.
 J. G. VAN DER HORST, ESQ.

Advisory Committee for Koopmans de Wet House :

J. R. FINCH, ESQ. (*Chairman*). PROF. W. A. JOLLY.
 HON. J. W. JAGGER. FRANK E. CARTWRIGHT, ESQ.
 MAJOR W. JARDINE.

Staff of the South African Museum :

EDWIN LEONARD GILL, D.Sc., Director and Keeper-in-Chief.	
KEPPEL HARCOURT BARNARD, M.A., D.Sc., F.L.S., Assistant Director; in Charge of Fish and Marine Invertebrates.	
REGINALD FREDERICK LAWRENCE, B.A., PH.D., Assistant in Charge of Reptiles, Batrachians, and Arachnids.	
ALBERT JOHN HESSE, B.Sc., PH.D., Assistant in Charge of the Entomological Department.	
MISS STAR GARABEDIAN, B.A., Assistant in Charge of the Botanical Department.	
LIEUWE DIRK BOONSTRA, M.Sc., Assistant in Palæontology.	
ARTHUR LEWIS HALL, M.A., Sc.D., Honorary Keeper of the Geological and Mineralogical Collections.	
SIDNEY HENRY HAUGHTON, B.A., D.Sc., Honorary Keeper of the Palæontological Collections.	
J. DRURY, Taxidermist and Modeller.	J. LE ROUX, Printer.
MISS P. EDWARDS, Clerical Assistant.	B. OLLEY, Head Attendant.
C. W. THORNE, Junior Botanical Assistant.	N. HERBERT } Attendants.
	C. LOMBARD }

UNION OF SOUTH AFRICA.

Report of the South African Museum for the Year 1929.

REPORT OF THE TRUSTEES.

The Trustees of the South African Museum have the honour to present to the Government, in accordance with the provisions of Act No. 17 of 1857 (Cape), their Report for the year 1929.

No outstanding event has distinguished this year in the Museum's history. The extension of the building, for which provision was made in the Parliamentary session of 1928, has not yet begun to take shape, though detailed plans have been prepared by the Government architects. Meanwhile, the valuable ethnological collections are still stored away under extremely unsatisfactory conditions in a shed, and partly with a view to saving some of the best of the objects from further deterioration they have been deposited on loan in the museum of the Department of Anthropology at the University of Capetown.

In another direction, also dwelt upon by the Trustees in their last report, namely, that of the financial position of the Museum, there is similarly no improvement to be recorded up to the present. The Minister of the Interior, however, granted an interview to the Trustees during the year, and promised, after hearing a statement of the position, that he would consider what could be done to improve it.

The Trustees earnestly hope that at least in these two matters, of exhibition space and annual grant-in-aid, there will be a more satisfactory position to report by the end of another year. In the meantime the regular work of the Museum is being carried on as well as circumstances permit, and is recorded in the following pages by the Director and members of the scientific staff.

J. W. JAGGER,
Chairman of the Trustees.

REPORT OF THE DIRECTOR.

TO THE TRUSTEES OF THE SOUTH AFRICAN MUSEUM.

SIRS.—I have the honour to present my report on the work of the Museum for the year 1929.

Staff.—The position of junior taxidermist still remains unfilled, and the means that would be necessary to fill it are not at present in sight. The only change in the staff is one that was pending at the end of the year, namely, the resignation of Miss P. Edwards from the position of clerical assistant. Miss Edwards had acted in this capacity for more than eight years, and her general ability and intimate knowledge of the business side of the Museum's activities had made her services so valuable that we are very sorry to lose them. Miss A. Parker has been appointed to take her place.

Visitors.—The total number of visitors recorded during 1929 was 147,881. This is curiously close to the total for 1928, which was 147,667. Both are well above the average of recent years. The total was made up as follows:—

White.....	Adults.....	Male	42,394
		Female	37,095
	Children.....		28,181
Coloured.....	Adults.....	Male	13,548
		Female	13,317
	Children.....		9,763
Native.....	Adults.....	Male	2,600
		Female	983
			147,881

Largest number in one day (14th October).....	1,923
Smallest number in one day (10th July).....	76
Total for Sunday afternoons.....	35,237
Largest number on a Sunday afternoon (6th November)..	1,176
Parties from schools numbered 113, with a total of 3,420 pupils.	

The South African meeting of the British Association for the Advancement of Science brought many interesting visitors to the Museum. Some of them spent a considerable time in examining or working upon our collections; among them Prof. O. Abel, of Vienna, Prof. D. M. S. Watson and Dr. Guy A. K. Marshall, of London, Dr. Th. Mortensen, of Copenhagen, and others who are mentioned in subsequent departmental reports. Through the kindness of Mr. Jagger we were able to give an informal reception to members of the Association at the Museum on the first afternoon of the meeting. Among other visitors in the course of the year were Prof. Harvey Johnston and Mr. R. A. Falla, members of the Australian Antarctic Expedition under Sir Douglas Mawson.

Acquisitions (presented, purchased, or collected by staff):—

	<i>Specimens.</i>	<i>Species.</i>
Mammals.....	12	10
Birds.....	14	11
Reptiles and Amphibians.....	60	30
Fishes.....	22	16
Insects.....	3,000 (about)	—
Crustacea.....	106	23
Arachnids and Myriopods.....	782	97
Mollusca.....	151	44
Other Invertebrates.....	67	5
Plants.....	2,000 (about)	—
Geology, Mineralogy, and Palæontology.....	1,364	—
Ethnology and Antiquities.....	850 (about)	—
Library:—		
Books presented.....		6
Books purchased.....		13
Pamphlets and serials presented.....		848
Pamphlets and serials purchased.....		182

Publications.—The following parts of the *Annals of the South African Museum* have been published during the year:—

- Vol. XXV, part III (177 pp., 17 pls., Tpi.).
 Notonectidae and Corixidae of South Africa..... By *G. E. Hutchinson*.
 New South African Curculionidae..... „ *A. J. Hesse*.
- Vol. XXVII (289 pp., 45 pls., Tpi.).
 Stone Age Cultures of South Africa..... „ *A. J. H. Goodwin* and
C. van Riet Lowe.
- Vol. XXVIII, part I (129 pp., 12 pls.).
 Cretaceous Fossils from Angola..... „ *J. V. L. Rennie*.
 New Therapsid Genera..... „ *S. H. Haughton*.
 Pareiasaurian Studies. 1-4..... „ *S. H. Haughton* and *L. D.*
Boonstra.
 A Tabulate Coral from South Africa..... „ *T. W. Gevers*.
- Vol. XXIX, Part I (275 pp., 2 pls.).
 Additional Trypetid Material..... „ *H. K. Munro*.
 Descriptions of Acrididae from S.W. Africa.. „ *B. P. Uvarov*.
 Revision of South African Gryllacridae..... „ *H. H. Karny*.
 New South African Solifugae..... „ *R. F. Lawrence*.
 South African Branchiopoda..... „ *K. H. Barnard*.
 Note on *Speleiacris tubulue*..... „ *A. J. Hesse*.

In spite of the fact that we have now caught up with current matter, so much work is being done on our collections, both by the staff and by specialists in other parts of the world, that it is difficult to keep expenditure on publications down to what we have come to consider a standard figure. If the results of researches on Museum material continue to come in at the same rate we shall have to be content to see a larger proportion of them published elsewhere than in the *Annals*. Of the year's issues, the widest appeal is made by Vol. XXVII, a complete survey of the present state of our knowledge of the Stone Ages of South Africa, written and illustrated by two authors who have taken a leading part in the recent great advances in South African archæology, Messrs. A. J. H. Goodwin and C. van Riet Lowe.

Collecting.—We have done less than usual in this direction during the year. Odd days have been spent in collecting in the Cape Peninsula, and Dr. Lawrence collected arachnids and myriopods during a short visit to the Knysna Forests, but the only extensive trip was one made by Mr. Boonstra to collect fossil reptiles in the Gouph. Dr. Hesse accompanied Mr. Boonstra for part of the time, and brought back a good collection of insects.

Donations.—As is always the case, many donations have been made during the year which amount in the aggregate to a substantial enrichment of the collections. But there is one donation received in the past year which calls for very special mention. Mr. Alfred A. de Pass had noticed that in our small antiquities room we exhibited a few Greek and Egyptian vessels and other objects, but as he did not consider them fair samples of the art of these two civilizations at their best he offered to give us some better examples from his own collection. In the end he has done much more even than he led us to expect. He has not only given us a really magnificent series of Greek vases of all the standard forms, some beautiful Tanagra terra-cotta figures, and a choice selection of Egyptian work in bronze, faience, and alabaster, but he has accompanied the gift by two excellent cases to contain the exhibits. He has thus put us in a position to fulfil his wish that Cape Town should be able to show some really fine examples of the artistic handicrafts of Greece and Egypt.

Another welcome gift has been received through Prof. Charles Absolon from the Moravian National Museum, Brünn. It consists of casts of the skull and brain-cavity of two representatives, male and female, of the Predmost Race of man, whose remains have become so widely known through Dr. Absolon's own work. We already have a good series of casts of the more important types of fossil man, and recent discoveries have revealed so many "European" elements in the prehistoric population of Africa that it is becoming important to make the series as complete as possible.

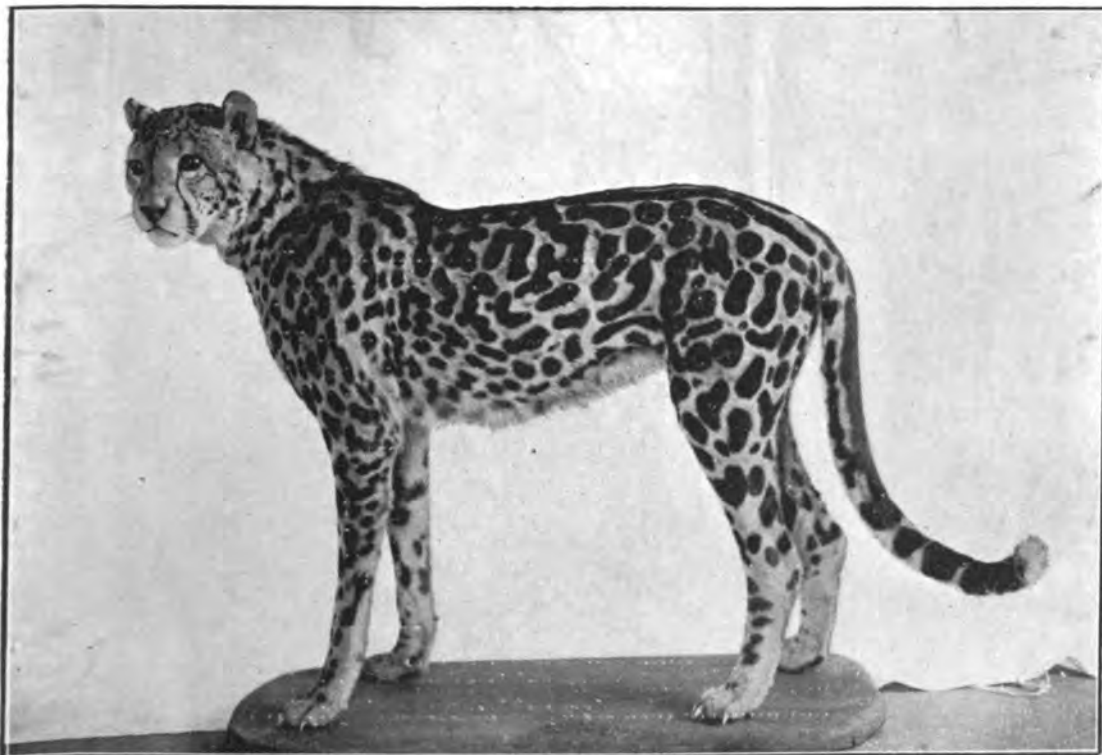
Special Needs.—I have mentioned in previous reports the pressing need for replacing or remounting a number of our old specimens of big-game animals. It has now become a still more pressing matter, for during the year we have taken advantage of an opportunity provided by Mr. Wm. A. Campbell, by arrangement with the Durban Museum, of obtaining fresh specimens of a number of the animals from Mr. Campbell's farm in the Eastern Transvaal. We should now be in a position to make a very good start with the replacement of the decrepit-looking old specimens if only the means were in sight for paying for the work. But the mounting of large animals is a very special job and is necessarily costly. The work that is needed will cost £500 or £600 before it is all finished, and we have no prospect of finding any such sum for the purpose in the near future. Here is an opening for a benefaction which not only the Museum but the public would greatly appreciate.



Lotus Cup in blue faience, found at Tunch. Egyptian work of 28th Dynasty; formerly in the MacGregor Collection. From the collection of Greek and Egyptian objects of art presented by Mr. Alfred A. de Pass, 1929.



Casts of living Bull Frogs made at the Museum.



The newly-acquired example of the King Cheetah from Southern Rhodesia, purchased for the Museum by an anonymous donor in 1928, mounted and placed on exhibition in 1929.

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GENERAL REVIEW OF MUSEUM WORK.

The research work which various members of the staff have in hand is referred to later in the departmental reports. Here I will only touch briefly on some of the work which directly affects the public galleries.

As has been usual in recent years, an important part of it has been the printing of labels. Old labels in nearly all sections of the Museum have been revised and reprinted, and in most cases set out in the new stands invented by the Museum taxidermist. Even this alone (new well-printed labelling uniformly set out) greatly improves the general appearance of a case of specimens; it has done so this year, for instance, in the half of the "stone implement room" which still retained its old labels, and in the cases containing Zimbabwe relics and other antiquities downstairs. But more often the specimens themselves are rearranged and remounted at the same time as the labels are being reprinted, and the change that is brought about is then naturally more striking still. Examples from this year's work are the minerals—which have been labelled and remounted throughout on a different system—and the set of cases illustrating insect life-histories. This latter set occupies a prominent position in the Invertebrate Room. It contains an extremely interesting collection, showing not only some typical insect life-histories, but also illustrating the topics of parasitism, damage to timber, and different sorts of insect homes, all by examples from South Africa. Such a collection would be difficult to bring together a second time. But in spite of its value and interest it had gradually become dingy and unattractive. It has now been entirely renovated and provided with fresh revised labels, and the change in its appearance and attractiveness is remarkable. In this and other cases, wherever space allows, the labels are printed in both English and Afrikaans.

Some striking new specimens have been set out during the year in the show cases. Perhaps the most valuable and generally interesting of them is the "king cheetah," purchased for us last year by an anonymous donor and now very finely mounted by the firm of Rowland Ward in London. So few examples of this Rhodesian form of cheetah or hunting leopard are available for study that it is still doubtful whether it is a distinct species or a remarkable colour-variety; in any case we now have on exhibition what is probably the finest mounted specimen of it. Another large carnivore added during the year is a lioness; it now accompanies the maned lion from the Sabi which was put on exhibition last year. The skin was that of an animal which died at Grootte Schuur. A few more of the old and bad specimens of sea-birds have been replaced by freshly mounted birds, mostly collected by me off Cape Point from the motor fishing boat in which Mr. W. G. Hare takes me out from time to time. Wherever possible we are mounting these fresh birds in flying position, the only position in which they are ordinarily seen and consequently the one in which they ought to be shown.

Several snakes have been added to the new series which is replacing the old specimens in jars of fluid. For public exhibition these lifelike mounted specimens are altogether better; I do not, as a matter of fact, remember seeing quite such good reproductions of living snakes in any other museum. Among the best added to the series this year are a green mamba, a large mole snake, and a berg-adder. An interesting experiment which gave a brilliant result was tried by the taxidermist. To preserve frogs in any way to resemble life is well known to be almost impossible, because the characteristic localized distensions of the soft skin collapse on death. Mr. Drury has succeeded in obtaining two really perfect casts of living bull-frogs, with every feature of life exactly reproduced.

DEPARTMENT OF MAMMALS AND BIRDS.

TO THE TRUSTEES OF THE SOUTH AFRICAN MUSEUM.

SIRS.—I have the honour to present my report on this department for 1920.

Two striking additions have been made to the exhibition cases in the mammal gallery: a Rhodesian "king cheetah" and a lioness (see general report above). In the bird gallery we have continued to replace old specimens of sea-birds by fresh and well-mounted ones and a great improvement is already apparent; but there are many more to be replaced before our sea-birds are as good a series as they ought to be. For the opportunity of collecting the fresh specimens we are indebted almost entirely to Mr. W. G. Hare.

The year's acquisitions, which have been few in number in this department, are tabulated below:—

	<i>Specimens.</i>	<i>Species.</i>
Mammals.....	12	10
Birds.....	14	11

The potentially important acquisition of fresh skins of big-game animals from Mr. Wm. A. Campbell's farms in the Transvaal Low Veld is referred to on page 8. For this acquisition we are indebted to the Durban Museum jointly with Mr. Campbell, and our side of the bargain has yet to be fulfilled.

Our thanks for donations are due to Mr. W. G. Hare, Mr. Wm. A. Campbell, Mr. B. van Riet, Mr. B. Peers, Mrs. Barker, Mrs. A. F. Williams, Mr. W. Mitchell, the Grootte Schuur Estate.

I am, etc.,

LEONARD GILL,

Director.

DEPARTMENT OF REPTILIA AND AMPHIBIA.

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to present the following report on this department for the year 1929. The chief contributors in this group were Mr. Peers and Dr. Barnard, who collected in Little Namaqualand and on the Ladismith mountains respectively. Mr. Peers was able to present to the department a series of fine specimens of a new lizard (*Zonurus*) which had been discovered the previous year by himself in Little Namaqualand; we have also received from Mr. Brown, collecting in South West Africa, a snake new to the collection which was found by him at Lake N'gami. Considerable progress has been made during the year in the work of replacing spirit specimens of snakes by more life-like casts and mounted specimens for exhibition, and it is hoped that in time the entire collection will be replaced by this method, in which there are great opportunities for providing the exhibits with their suitable environmental backgrounds. Among the well-known snakes mounted this year by Mr. Drury are the black-necked cobra (*Naja nigricollis*) from Natal, a very large specimen of the harmless mole-snake (*Pseudaspis*), the small house snake (*Boddon*), and the true spitting-snake or ringhals (*Sepeidon*); it is hoped that by using a method of wax infiltration it will be possible to treat the lizards and smaller snakes in the same way, and the unsightly spirit collection will be done away with. Mr. Drury also attempted casting from life two specimens of the Transvaal bull-frog (*Pyxicephalus adspersus*) with excellent results. Mr. Peers has contributed an artistic mounted exhibit of two snakes which are on view in the reptile section.

The acquisitions during the year are as follows:—

	Number.	Species.
Amphibia.....	27	7
Lacertilia.....	29	19
Ophidia.....	4	4
TOTAL.....	60	30

The thanks of the Trustees are due to the following donors: Mr. Peers, Mr. F. Casey, Mr. J. S. Brown, Mr. R. Primos, Drs. Hesse and Barnard.

I am, etc.,

REGINALD F. LAWRENCE,
Assistant in Charge of the Department.

DEPARTMENT OF FISHES AND MARINE INVERTEBRATES.

TO THE DIRECTOR.

SIR,—I have the honour to present the following report on this department for the year 1929.

Exhibition Galleries.—A certain number of marine shells were added to the representative series, and some poor specimens of fishes in jars were replaced by better mounted specimens.

A special exhibit representing graphically the main features of the distribution of land-snails, crustacea, and the fauna of the mountain ranges of the Cape Province was prepared in connection with the visit of the British Association. This exhibit also shows some of the results of recent Museum field-work, and has been left on view for the remainder of the year.

Field-work.—I have carried out field-work in connection with the investigations of the fauna of Table Mountain, Noordhoek Forest, and the mountain ranges of the Cape Province. I also acted as one of the guides to a party of British Association scientists along the shore at Sea Point and St. James.

Research Work.—At the request of the British Museum I undertook to report on the collection of Amphipoda made by the "Terra Nova" in Antarctic waters. The report is completed, and in return the South African Museum will receive a representative series of Antarctic Amphipod Crustacea.

I have also been working up the material collected on my expeditions to the Cape mountain ranges.

Accessions.—The following accessions have been made during the year to the study collections:—

	Number of Specimens.	Number of Species.	New to Collection.
Fishes.....	22	16	2
Crustacea.....	106	23	1
Mollusca.....	151	44	10
Other Marine Invertebrates.....	67	5	—

Publications.—The following publications dealing with Museum material in this department have appeared during the year:—

Barnard, K. H.: Revision of S.A. Phyllopod Crustacea. Ann. S. Afr. Mus., Vol. XXIX.
Connolly, M.: S. African Non-marine Mollusca. Ann. Natal Mus., Vol. VI.

The thanks of the Trustees are due to the following donors and collectors: C. L. Biden, M. Connolly, J. Copenhagen, A. C. Harrison, Dr. A. J. Hesse, Dr. R. F. Lawrence, S. Lewis, H. W. Bell Marley, H. J. Puzey, Miss Schuurman, Capt. G. Shortridge, Miss Walton, Miss Wilman.

I am, etc.,

KEPPEL H. BARNARD,
Assistant Director.

DEPARTMENT OF ENTOMOLOGY.

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to submit the following report on this department for the year 1929.

At the beginning of this year I was engaged in completing the arrangement of the *Sphingidae* which have now been properly pinned out and labelled and are accessible for comparison. Owing to the confused state of the *Orthoptera* in the Museum collections, I was occupied the greater part of this

year in arranging and determining the numerous representatives of the two important families the *Acrididae* and *Locustidae*. They are now properly arranged, and very many genera and species have been successfully determined and labelled. The collection as a whole, although poor in the condition and number of many specimens, is fairly representative of the Union, the common locusts and grasshoppers being present, although the absence of many quite well-known forms needs attention. As a basis for the comparison and determination of many of its important members the collection can, however, hold its own with any at present in South Africa. Many specimens have, however, been left undetermined owing to their damaged condition, the lack of a good series, or to the inadequacy of the descriptions by orthopterists in general.

During the course of the year I was also engaged in the determination and comparison of the material of other museums and private collectors who have directly or indirectly contributed to our collections. The most important of these have been a collection of *Curculionidae* in the Entomologisches und Zoologisches Museum, Hamburg; some representatives of *Tenebrionidae*, chiefly for comparison, from the British Museum; some butterflies collected by Mr. P. Sheppard; some material from Capt. R. Stevenson, and some *Orthoptera* for the Agricultural Department of the University of Stellenbosch.

During March and the beginning of April a collecting trip was made to the Prince Albert District, and although the climatic conditions were unfavourable for insects, a fairly representative collection for that time of the year was made, comprising about 2,000 insects, mostly *Coleoptera*, *Hymenoptera*, *Lepidoptera*, and *Diptera*.

A few trips were also made, together with Drs. Gill, Barnard, and Lawrence, to Noordhoek and Orange Kloof, and one to Zeekoe Vlei. No new or important material was obtained from the two former localities, but quite an interesting and representative collection of *Hymenoptera*, *Diptera*, and *Orthoptera* was obtained at Zeekoe Vlei for one day's collecting.

The investigation of a small cave in a private garden in Oranjezicht by Dr. Barnard and myself resulted in the acquisition of a good series of the unique and interesting cave insect *Spheciacris tubulae*, which up to now has been represented only by a few and much-damaged type specimens.

The request for South African material from the Museum collections as a basis for study by specialists abroad and in South Africa continues, and the following material has been sent out this year:—

- (1) To Dr. Walter Horn, Deut. Entom. Inst., Berlin, 5 specimens of *Cicindelidae*, including one type specimen for study.
- (2) To Dr. Jeannel, Paris Museum, 124 specimens (*Trechinae*), including types, to contribute towards a revision of the subfamily.
- (3) To Mr. G. von Son, Transvaal Museum, 51 specimens of *Nolini* (*Arclidae*) for determination and description.
- (4) To Dr. P. Lesne, Mus. d'Hist. Nat., Paris, 11 specimens (*Bostrichidae*) for determination and study.
- (5) To Dr. Borchmann, Ent. und Zool. Mus., Hamburg, 98 specimens of *Ectenostonia* to contribute towards a revision of the genus.
- (6) To Dr. B. Uvarov, British Museum, 152 specimens of *Oedipodinae* and one type for determination and comparison.

The following material has been identified and returned this year:—

- (1) The collection of *Coccinellidae* submitted to Mr. Korschefsky.
- (2) The Chalcids loaned to M. Guido Paoli, Genoa, for study.
- (3) The collection of *Graphipterus* and *Piezia*, including new types, by M. Louis Burgeon, Tervueren.
- (4) The large collection of *Staphylinidae*, including new types, by Dr. M. Bernhauer, Horn, N. Austria.
- (5) The types of four species of *Derolemus* and one co-type of *Hypsomus*, by Dr. G. A. K. Marshall, British Museum.
- (6) The *Conocephalinae*, in part, by Dr. B. Uvarov, British Museum.
- (7) Some *Psammocharidae* and types submitted to Dr. G. Arnold, Rhodesia Museum.
- (8) Seven types of *Stratiomyidae*, by Miss D. Aubertin, British Museum.
- (9) The collection of unnamed *Cerceris* and *Masaris* submitted to the late Dr. H. Brauns, Willowmore.

The following material is still in the care of specialists:—

- (1) A collection of *Buprestidae* in the care of Dr. J. Obenberger, Prague.
- (2) A collection of *Microgasterinae* (*Apanteles* spp.) in the care of Mr. Wilkinson, British Museum.
- (3) A collection of *Hemiptera* in the care of Mr. W. China, British Museum.
- (4) A collection of *Psammocharidae* in the care of Dr. G. Arnold, Rhodesia Museum.
- (5) A collection of *Acrididae* in the care of Dr. B. Uvarov, British Museum.
- (6) A small collection of *Perlidae* in the care of Dr. Tillyard, Canberra, Australia.
- (7) The collection of *Scolidae* in the care of Dr. J. Bradley, Cornell University.
- (8) Five specimens of *Ceropales* in the care of Dr. Baby, Cornell University.

Among the accessions to the collection of insects are the following:—

- (1) A small miscellaneous collection of *Coleoptera*, *Hemiptera*, *Orthoptera*, *Hymenoptera*, and *Neuroptera* from Capt. R. Stevenson, Umtali, S. Rhodesia.
- (2) About 60 specimens of *Spheciacris tubulae* from a cave in Oranjezicht, collected by Dr. Barnard and myself; and a smaller collection from the Wynberg cave collected by Drs. Barnard and Lawrence.
- (3) A small collection of insects from Tsintabis, South West Africa, from Mr. J. S. Brown.
- (4) A good collection of miscellanea from Mr. J. Frampton, Abenab, Grootfontein, South West Africa.
- (5) A small collection from Miss Walton, Resolution, Grahamstown.
- (6) Several duplicates of butterflies, a few new to the collection, and 30 specimens of *Sphingidae* from Mr. P. A. Sheppard, Umtali.
- (7) A small collection, mostly *Coleoptera*, from Mr. J. Dendy, Stellenbosch.

- (8) A few specimens of a *Julodis* sp. (poorly represented in the Museum), from Mrs. Botes, Fraserburg.
- (9) A small collection of *Hymenoptera*, *Diptera*, *Orthoptera*, and *Coleoptera*, collected by Drs. Gill, Barnard, Lawrence, and myself at Noordhoek, Orange Kloof and Zeekoe Vlei.
- (10) A small collection of insects, chiefly *Coleoptera*, collected by Dr. K. H. Barnard on his short mountain trips during the year and chiefly from Seven Weeks Poort, Table Mountain, the Cedarbergen, Cango Caves, etc.
- (11) A collection of insects, *Hymenoptera*, *Diptera*, *Lepidoptera*, and *Coleoptera*, collected by myself in the Prince Albert District, Cape Province.
- (12) A small collection of butterflies from Miss M. Williamson, Rhodesia.
- (13) A small collection of insects from Mr. F. C. Truter, N'Changa, Northern Rhodesia.

The following entomological papers and monographs have appeared in the *Annals of the South African Museum* during this year:—

- (1) A Revision of the South African *Gryllacridae*, by Dr. H. H. Karny. Vol. XXIX, Part I.
- (2) Contributions to a Knowledge of the Fauna of South West Africa; Records and Descriptions of *Acrididae*, by Dr. B. Uvarov. Vol. XXIX, Part I.
- (3) Additional Trypetid Material in the Collection of the South African Museum, by H. K. Munro. Vol. XXIX, Part I.
- (4) A Revision of the *Notonectidae* and *Corixidae* of South Africa, by G. E. Hutchinson. Vol. XXV, Part III.
- (5) Some New Species of *Curculionidae* from South West Africa, by Dr. A. J. Hesse. Vol. XXV, Part III.

The thanks of the Trustees are due to all the donors and especially to the following: Dr. K. H. Barnard, Mrs. Botes, Mr. J. Frampton, Mr. F. C. Truter, Mr. P. A. Sheppard, Miss M. Williamson, and Miss Walton.

I am, etc.,

ALBERT J. HESSE,

Assistant in Charge of the
Entomological Department.

DEPARTMENT OF ARACHNIDA AND MYRIOPODA.

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to present the following report on this department for the year 1929.

Though no expeditions on a large scale have been undertaken during the year, a number of shorter ones have been of value in adding to the collections. I myself collected a large number of Myriopoda and Phalangids at Knysna during February, obtaining a good series in a number of species which had hitherto not been represented, or only poorly, in the study collections; small collections were made at Bredasdorp, Hermanus, Kleinmond and Ceres by myself, at Prince Albert by Dr. Hesse, at Worcester and Clanwilliam by Dr. Barnard, at Fraserburg by Mr. Boonstra, and at Kamies, Little Namaqualand, by Mr. Peers. Special attention has been paid to the Myriopod and Opilionid collections; to the latter group most of the work done during the year has been directed, and the South African forms and their distribution are being worked out in a monograph of the group. A considerable amount of literature dealing with various orders of Arachnida has been acquired for the Library during the year. The Mallophaga and Anoplura (bird and animal lice) have been entrusted to Mr. G. A. H. Bedford at Onderstepoort, and a paper dealing chiefly with the material collected in S. W. Africa by the various Museum expeditions there has been published in the *Veterinary Report* for 1929.

The acquisitions to the Museum during the year are as follows:—

	Number.	Species.
Myriopods.....	230	25
Opiliones.....	261	20
Aranææ.....	110	23
Acari.....	103	11
Scorpions.....	28	8
Solifugæ.....	10	3
Pseudoscorpions.....	35	5
Onychophora.....	5	2
Total.....	782	97

The thanks of the Trustees are due to the following donors: Messrs. Low, Rose, Peers, Boonstra, Dr. Hesse, Dr. C. Akermann, Dr. van Zyl, Dr. C. de Villiers, Dr. Barnard.

I am, etc.,

REGINALD F. LAWRENCE,

Assistant in Charge of the Department.

DEPARTMENT OF BOTANY.

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to present the following report on this department for the year 1929.

Accessions.

K. H. Barnard.....	96	specimens from Cape Province.
A. V. Duthie.....	6	" " " "
H. G. Fourcade.....	47	" " " "
S. Garside.....	8	" " " "
Royal Botanic Gardens, Kew.....	34	" " Tropical Africa.
R. M. Laing.....	60	" " New Zealand.
Mrs. Levyns.....	6	" " Cape Province.
J. H. Marais.....	18	" " " "
R. Primos.....	5	" " " "
W. Scarfe.....	92	" " New Zealand.
T. P. Stokoe.....	7	" " Cape Province.
University of Tashkent.....	82	" " Europe.
C. Thorne.....	102	" " Cape Province.
T. Ward-Cox.....	6	" " " "
K. White.....	6	" " " "
Various donors.....	59	" " various localities.

Exchanges.

Bolus Herbarium, Kirstenbosch; Royal Botanic Gardens, Kew; W. Scarfe, New Zealand; R. Laing, New Zealand; University of Tashkent.

Specimens Mounted.

S. W. Africa.....	1,094	sheets.
Tropical Africa.....	821	"
Cape Province.....	909	"
New Zealand.....	152	"
Europe.....	802	"

Specimens Incorporated.

1,439 sheets, including 43 genera and 197 species new to the Herbarium.

General Report.

The accessions this year have been markedly interesting, those from Tropical Africa yielding a very large number of genera new to our Herbarium. The collection of Marine Algae has been considerably augmented through exchanges with New Zealand correspondents. The Lichen collection has been gone through carefully, the specimens being cleaned and mounted and put into order; the European ones are kept separate from the African, and we hope to increase the number of the latter this year by systematic collecting.

As in previous years, much material has been named for students in the Peninsula schools, interested visitors, and amateur collectors.

I am, etc.,

S. GARABEDIAN,

Assistant in Charge of the Department.

DEPARTMENT OF PALÆONTOLOGY.

THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to present my report on the working of this department for the year 1929.

Accessions.

The following additions have been made to the register of acquisitions:—

Bokkeveld Invertebrates.....	3
Karoo Plants.....	132
Karoo Vertebrates.....	110
Cretaceous Invertebrates.....	391
Cretaceous Vertebrates.....	10
Cretaceous Plants.....	1
Tertiary Invertebrates.....	241
Tertiary Vertebrates.....	17
Madagascar Fossils.....	297
European Fossils.....	68
South American Fossils.....	12

Total..... 1,282

The chief donors—to whom our best thanks are due—have been: Mr. G. Pyke, Dr. H. Besairie, Dr. H. Lotz, Sir T. Edgeworth David, Dr. A. L. du Toit, Dr. D. M. S. Watson, the Trustees of the British Museum, the Director of the Palæontological Institute of Berlin, and the Academy of Sciences at Leningrad.

Exhibition.

In spite of the large number of accessions, it has been impossible to add anything of importance to the exhibited series on account of lack of space. This condition of affairs has been maintained now for several years, so that the visiting public and visiting scientists obtain a very inadequate idea of the riches of the departmental collection. The need for room in which to expand becomes more and more pressing. The collections in the Department are undoubtedly the most important collections of fossils in Southern Africa; and their importance ought to be reflected by a far bigger display of material than is at present possible in the two small rooms that are allotted to the Department.

Research.

The visits of the International Geological Congress and of the British Association to South Africa during the year enabled visiting palæontologists to do a considerable amount of research work and collecting; and the majority of these workers made the Department their chief place of study. Dr. Walkom, Mr. T. N. Edwards, Dr. Hoeg, and Dr. Seward all spent some time in working over the fossil plant collections; Dr. W. Janensch, Dr. D. M. S. Watson, Professor Abel, and Dr. A. S. Romer studied

Karoo vertebrates; and advice was given to several of these as to collecting in the field. Dr. Hoeg, Mr. Edwards, Dr. Janensch, Dr. Watson, Professor Abel, and Dr. Romer each ran collecting expeditions, and took back with them to their respective homes considerable quantities of material which, when worked up, will certainly yield valuable additions to our knowledge of the fossil fauna and flora of South Africa.

Departmentally, Mr. Boonstra spent three months in the Gouph, and brought back a large amount of Pareiasaurian and Dinocephalian material. He has been working at the development and description of the Pareiasauria for the remainder of the year.

Dr. R. Broom has visited the Department for study on various occasions.

Mr. J. V. L. Rennie, having finished his work upon the Cretaceous Invertebrates, has been engaged on a study of the Bokkeveld Trilobites. We are grateful to him for the interest he has displayed; and our thanks are due to the curators of the Albany and McGregor Museums for assistance in kindly loaning types from their collections.

Miss H. Wilman, of the McGregor Museum, has forwarded from time to time a large amount of Tertiary and Recent Mammalian material for identification. The working out of this entailed the re-study of the fossil horses and elephants of South Africa; and, with the assistance of material loaned by the Rhodesia Museum, Mr. A. J. H. Goodwin, and Mr. C. van Riet Lowe, I have been enabled to arrive at results which await publication, and which have an interesting bearing on the archaeology of Southern Africa.

The following papers wholly or partly on material in the Department have been published during the year:—

Boonstra, L. D.—

1. On the Pareiasaurian Mamis.
2. On the Pareiasaurian Pes.

Broom, R.—

On the Carnivorous Mammal-like Reptiles of the Family Titanosuchidae.

Chapman, F.—

On a Foraminiferal Limestone of Upper Eocene Age from the Alexandria Formation, South Africa.

Gevers, T. W.—

A Tabulate Coral from the Bokkeveld Beds of South Africa.

Haughton, S. H.—

1. On Some New Therapsid Genera.
2. Notes on Some Pareiasaurian Brain-cases.

Haughton, S. H., and Boonstra, L. D.—

1. An Attempt at a Classification of the Pareiasauria based on Skull Features.
2. On the Pareiasaurian Mandible.

Rennie, J. V. L.—

1. Cretaceous Fossils from Angola (Lamellibranchia and Gastropoda).
2. New Lamellibranchia and Gastropoda from the Upper Cretaceous of Pondoland.

Spath, L. F.—

On the Cephalopoda of the Uitenhage Beds.

Exchanges.

Exchanges of fossils have been effected with the British Museum, the Berlin Museum, and Professor A. Morley Davies; and exchanges have been arranged with Dr. D. M. S. Watson, Professor Abel of Vienna, Professor Jacob of Paris, Professor Fallot of Nancy, and Dr. Broili of Munich.

General.

The year has been one of very considerable progress from the points of view of acquisition of material and of research; and the position of the Department as the most important palæontological department in South Africa has been not only maintained but strengthened. This has been to a large extent due to the eager ability which Mr. L. D. Boonstra has shewn in his work as assistant, and to the manner in which visiting scientists have helped by gifts and by arranging exchanges to add to its collections.

It is necessary, however, to draw attention to the lack of adequate facilities for the proper storage of the larger reptilian specimens. The time and money spent on the collection and proper development of these is considerable; their value as a study collection depends on their easy accessibility and freedom from the possibility of serious damage. The shed which to-day forms the store, workshop, and assistant's office is quite unsuited for either a store or an office. Another firmly-constructed building, with properly-designed storage drawers, is urgently needed.

I am, etc.,

SIDNEY H. HAUGHTON,
Hon. Curator of the Department.

DEPARTMENT OF GEOLOGY AND MINERALOGY.

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM, CAPE TOWN.

SIR,—I have the honour to present my report for the year 1929, as follows:—

Accessions.

Rocks.....	24
Minerals.....	57
Meteorite.....	1
Total.....	82

Among the above, the following deserve special mention:—

3-carat diamond in matrix, Alexander Bay.....	Dr. H. Merensky.
Siderolite, said to have fallen at Muizenberg.....	E. J. Dunn, Esq.
Collection of Minerals from Madagascar.....	Dr. H. Besairie.
Collection of Volcanic Rocks from Heard Island.....	Mons. E. de la Rue.
Manganese Ores from Postmasburg.....	Capt. T. Shone.
Asbestos from N. Transvaal.....	Geological Survey.
Small Collection of Rare Minerals from Katanga.....	By exchange.

Exhibition.

The provision of an additional wall-case necessitated the partial rearrangement of the stratigraphical series of rocks, which has been given a new set of labels. This permitted the transfer of a large iron desk case to the Economic Geology section, and allowed of some rearrangement and expansion there. The series of Manganese ores has been placed alongside the mounted geological map of the Postmasburg area.

The diamond donated by Dr. Merensky and the meteorite given by Mr. Dunn have been placed on exhibition.

I am, etc.,

A. L. HALL,

Hon. Keeper.

Pretoria,

21st January, 1930.

 DEPARTMENT OF ETHNOLOGY AND ARCHÆOLOGY.

TO THE TRUSTEES OF THE SOUTH AFRICAN MUSEUM.

SIRS,—I have the honour to present my report on this department for the year 1929.

The chief event of the year affecting this department has been the visit of the European archaeologists attending the South African meeting of the British Association. The visitor who spent the longest time both at the Museum and in the country was the Abbé Breuil, and his contact with our own archaeologists has given a marked stimulus to the further and deeper study of the Stone Ages of South Africa. This year has also seen the issue, after various delays, of the volume on this subject by Messrs. A. J. H. Goodwin and C. van Riet Lowe. It forms Vol. XXVII of the *Museum Annals*. Since the issue, eighteen years earlier, of the late Dr. Péringuey's "Stone Ages of South Africa" (*Annals*, Vol. VIII), our ideas on South African pre-history have undergone a very great development—a development in which Messrs. Goodwin and Lowe have played a leading part. This new volume will serve as a fresh starting-point for further work, and we may congratulate ourselves on having been able to give it to the world. There has already been a considerable demand for copies.

Practically no field-work in archaeology has been undertaken this year by the staff, but implements from various sites have been presented by other collectors, among them the Abbé Breuil, Mr. W. Norrie, and Mr. G. H. Herman. Some of the fruits of expeditions by Mr. Goodwin have also come to the Museum. In the section of antiquities of the historical period, a particularly notable and generous gift is that of the two cases filled with choice examples of the art of Greece and Egypt, presented by Mr. Alfred A. de Pass. This is referred to in my general report (p. 8). It is one of the most valuable donations ever made to the Museum.

In the section of ethnology the chief thing to report this year is that, in consequence of the extremely unsatisfactory conditions under which our line collection is stored away (pending the provision of a hall for its exhibition), we have agreed to lend some of the best of the objects for a time to the Museum of the Department of Anthropology of the University of Capetown. There they will be available for study by the advanced students and staff, and it is part of the arrangement that they shall be classified and labelled in such a way as to facilitate their arrangement when we are at last ready to take them over again and put them on permanent exhibition.

I am, etc.,

LEONARD GILL,

Director.

 KOOPMANS DE WET HOUSE.

TO THE TRUSTEES OF THE SOUTH AFRICAN MUSEUM.

SIRS,—I have the honour to present a report on this annexe to the Museum for the year 1929.

The total number of visitors for the year shows a slight falling-off as compared with that for 1928: namely, 25,928, as against 27,063—a decrease of 1,135. Fluctuations of this magnitude fall within the experience of recent years, and cannot as a rule be accounted for. Coloured people made up nearly 3 per cent. of the total. Among the visitors were 25 school classes, totalling 590 pupils. Namaqualand and the Transvaal were represented among the schools which sent these classes.

The Advisory Committee has continued, so far without success, its efforts to obtain the three things mentioned in the last report as particularly needed for an advance in the direction of making the House more habitable-looking—namely, a dining-room table, hangings for a four-poster bed, and a wall-cabinet to replace the makeshift case near the kitchen which contains the Chinese blue Delft table service. For the last-mentioned purpose it has been finally resolved to fall back upon a copy of another wall-cabinet. There is now some prospect of obtaining a genuine "period" dining table, but the bed hangings will evidently present many difficulties.

By the generosity of Dr. F. V. Engelenburg, the magnificent famille-rose vase is now enclosed in a strong but unobtrusive case, and is once more exhibited on the landing in its former position on the centre table. The donor to whom the House has been most largely indebted during the year is Mr. B. I. C. van Eeden, lately of Camps Bay. His gifts include a very good stinkwood chair, a large stinkwood cabinet, and one of the brass-bound teak bowls in which the lady of the house used to wash up her more precious china after a meal. Purchases made with the special grant from the City Council include a fine pair of gueridons and a rusbank and five chairs. An improvement has been made in the dining-room by putting up a combined picture rail and china shelf; at present the shelf is being used for the display of the blue Delft ware.

I am, etc.,

LEONARD GILL,

Director.

SOUTH AFRICAN MUSEUM.
STATEMENT OF RECEIPTS AND PAYMENTS FOR THE YEAR ENDED 31st DECEMBER, 1929.

RECEIPTS.			PAYMENTS.		
	£	s. d.		£	s. d.
To Balance, 1st January, 1929.....	852	3 8	By Salaries, Wages, and Sunday Time.....	4,881	15 9
„ Grants :—			„ Trustees' Contributions to Provident Fund.....	274	12 0
Union Government.....	£6,200	0 0	„ Upkeep of Museum.....	228	16 8
Cape Town Corporation.....	500	0 0	„ Upkeep of Grounds.....	150	0 0
	6,700	0 0	„ Publications.....	1,168	6 2
„ Interest :—			„ Travelling and Collecting.....	234	14 2
Hajee Sullaiman Shamahomed Coin Fund.....		2 5 0	„ Library.....	136	16 4
„ Sale of Publications :—			„ Cases.....	134	4 0
Annals.....	80	18 8	„ Water and Light.....	111	2 6
Guides.....	40	9 4	„ Dock Charges, Cartage, and Freight.....	96	3 2
	121	8 0	„ Insurance.....	47	6 3
„ Contributions towards Cost of Annals :—			„ Uniforms.....	32	0 6
University of Cape Town.....	100	0 0	„ Koopmans de Wet (Furniture).....	53	10 10
Geological Survey, Mines Department.....	120	0 0	„ Posts, Telegraphs, and Telephones.....	64	10 4
„ „ „.....	108	9 6	„ Audit.....	5	5 0
	328	9 6	„ Coins.....	2	10 0
„ Sale of Specimens.....	84	3 9	„ Bank Charges.....	10	7 1
„ Miscellaneous Revenue (Refunds of Expenditure incurred in previous years).....	28	8 1	„ Petties.....	27	5 5
	£8,116	18 0	„ Suspense Payments—to be recovered.....	2	5 1
			„ Overpayments—to be recovered.....	1	8 3
			„ Balance, 31st December, 1929 :—		
			Bank.....	£433	1 3
			In hand :		
			Travelling and Collecting.....	£4	6 6
			Stamps.....	6	10 9
			Cash.....	10	0 0
				20	17 3
				453	18 6
				£8,116	18 0

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STATEMENT "A."
*HAJEE SULLAIMAN SHAMAHOMED FUND FOR THE PURCHASE OF COINS.

INCOME.		EXPENDITURE.			
	£	s. d.		£	s. d.
To Accumulated Interest, 1/1/1929.....	34	9 10	„ Purchase of Coin.....	2	10 0
„ Interest received, 1929.....	2	5 0	„ Balance.....	†34	4 10
	£36	14 10		£36	14 10

* As the capital sum of £100 was invested with the South African Association by the estate of Hadjee Sullaiman Shamahomed, and interest only is payable to the Museum, the capital sum of £100 has been omitted from this statement.

† Included in Bank Balance of £433 1s. 3d.
Audited and found correct,
(Sgd.) T. SCOTT,
for Controller and Auditor-General.
Pretoria, 26th February, 1930.

(Sgd.) LEONARD GILL,
Director, South African Museum.



UNION OF SOUTH AFRICA.

REPORT

OF THE

SOUTH AFRICAN MUSEUM

FOR THE

THE LIBRARY OF THE
FEB 5 - 1940
UNIVERSITY OF ILLINOIS

YEAR ENDED 31st DECEMBER, 1930

Published by Authority

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1931.

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Trustees of the South African Museum :

SIR THOMAS MUIR, C.M.G., M.A., LL.D., D.Sc., F.R.S. (*Chairman*).
J. G. VAN DER HORST, ESQ. (*Vice-Chairman*).
PROF. WILLIAM ADAM JOLLY, M.B., CH.B., D.Sc., F.R.S.S.AFR.
W. J. THORNE, ESQ.
COUNCILLOR S. J. HENDRIKSZ.

Advisory Committee for Koopmans de Wet House :

J. R. FINCH, ESQ. (*Chairman*). PROF. W. A. JOLLY.
W. J. THORNE, ESQ. FRANK E. CARTWRIGHT, ESQ.
MAJOR W. JARDINE.

Staff of the South African Museum :

EDWIN LEONARD GILL, D.Sc., Director and Keeper-in-Chief.
KEPPEL HARCOURT BARNARD, M.A., D.Sc., F.L.S., Assistant Director; in Charge of Fish and Marine Invertebrates.
REGINALD FREDERICK LAWRENCE, B.A., PH.D., Assistant in Charge of Reptiles, Batrachians, and Arachnids.
ALBERT JOHN HESSE, B.Sc., PH.D., Assistant in Charge of the Entomological Department.
MISS STAR GARABEDIAN, B.A., Assistant in Charge of the Botanical Department.
LIEUWE DIRK BOONSTRA, D.Sc., Assistant in Palaeontology.
SIDNEY HENRY HAUGHTON, B.A., D.Sc., Honorary Keeper of the Geological and Palaeontological Collections.
A. J. H. GOODWIN, M.A., Honorary Keeper of the Ethnological and Archaeological Collections.
J. DRURY, Taxidermist and Modeller. J. LE ROUX, Printer.
MISS B. K. FERGUSON, Clerical Assistant. B. OLLEY, Head Attendant.
C. W. THORNE, Junior Botanical Assistant. N. HERBERT } Attendants.
C. LOMBARD } Attendants.

SOUTH AFRICAN MUSEUM.

REPORT OF THE TRUSTEES FOR 1930.

The Trustees of the South African Museum have the honour to present to the Government, in accordance with the provisions of Act No. 17 of 1857 (Cape), their report for the year 1930.

It has been a notable year in the Museum's history. In the previous report the Trustees referred with regret to the fact that there was still no actual advance in the two vital directions of an extension of the Museum building and an increased income. They expressed the earnest hope "that at least in these two matters, of exhibition space and annual grant-in-aid, there will be a more satisfactory position to report by the end of another year." This hope was realized almost before the report was published; the contractors began work on the foundations of the new wing, and intimation was received that the annual grant (in common with that of the other three Union Museums supported by Government) was to be raised.* The new building was almost ready for occupation by the end of the year. A further increase of exhibition space has been obtained by taking over the rooms occupied till this year by the Art Gallery. Thus a sufficient measure of relief for present needs has at last been obtained from the pressure on exhibition space which has so largely blocked the progress of the Museum for nearly twenty years. A scheme of re-arrangement designed to make the best use of the additional space has been prepared; it naturally depends in large part on the provision of the necessary new cases, and the Trustees hope that these will be forthcoming without much delay. In the meantime they take this opportunity of expressing their thanks to the Government for what it has done in the past year, in circumstances of some difficulty, towards removing the chief disabilities under which the Museum has for so long been carrying on its work.

The Board of Trustees has suffered the loss of its Chairman, the Hon. J. W. Jagger, who had served as a Trustee for eighteen years and as Chairman for five. His sound judgment and his administrative and business experience were of constant use in the affairs of the institution, and he also from time to time made contributions to the cost of special undertakings which aroused his interest, such as the collecting of life-casts of Bushmen. Since Mr. Jagger's death the chairmanship has been resumed, at the request of his colleagues, by Sir Thomas Muir; and Mr. J. G. van der Horst has been appointed as Vice-Chairman. The Board has also, to the regret of the remaining members, lost the services of Mr. W. F. Fish, who has left the district. In accordance with a recommendation from the remaining Trustees, Mr. W. J. Thorne has been appointed by the Government to fill the vacancy caused by Mr. Jagger's death; and the City Council has nominated Mr S. J. Hendriksz in place of Mr. Fish.

The Museum staff now has before it a period of considerable upheaval while the re-arrangement of the collections is being carried out. The duration of the transitional period will depend on the supply of new cases, but in so far as it concerns the moving of existing cases and their contents it has already set in. Details of this and of the other work which has engaged the staff during the year will be found in the Director's report which follows.

THOS. MUIR,
Chairman of the Trustees.

* Unfortunately, since this was written, we have been notified that almost the whole of the increase will have to be withdrawn after 31st March, 1931, owing to the general financial stringency.

REPORT OF THE DIRECTOR.

TO THE TRUSTEES OF THE SOUTH AFRICAN MUSEUM.

SIRS,—I have the honour to present my report on the work of the Museum for the year 1930.

Staff.—The only changes have been in the position of clerical assistant. Miss P. Edwards, who had occupied the position for more than eight years, left at the beginning of the year. Her place was taken by Miss A. Parker, but she in turn had to leave unexpectedly in August. Her sister, Miss L. Parker, took over the duties for three months, and at the beginning of December was succeeded by Miss B. Ferguson.

Visitors.—The total number of visitors recorded during 1929 was 145,317. This is about two thousand less than the numbers for the two preceding years, but is about equal to the recent average. The year's total was made up as follows:—

White.....	Adults.....	Male.....	38,413
		Female.....	33,052
	Children.....		31,801
Coloured	Adults.....	Male.....	13,800
		Female.....	13,609
	Children.....		10,607
Native	Adults.....	Male.....	3,040
		Female.....	995
			145,317

Largest number in one day (2nd January)	2,592
Smallest number in one day (17th October)	69
Total for Sunday afternoons	35,706
Largest number on a single Sunday afternoon (5th January)	1,395

Parties from schools numbered 104, with a total of 2,983 pupils. Among the year's visitors were the scientific staff of the Danish research ship "Dana." While the ship was in Capetown we saw a good deal, in particular, of Dr. Johs. Schmidt, the leader of the expedition, and Dr. Taning.

Acquisitions (presented, purchased or collected by staff):—

	<i>Specimens.</i>	<i>Species.</i>
Mammals	9	9
Birds	38	22
Reptiles and Amphibians	174	58
Fishes	45	21
Insects	4,000 (approx.)	—
Crustacea	194	11
Arachnids and Myriopods	769	173
Mollusca	162	29
Other Invertebrates	27	5
Botany	406	—
Geology, Mineralogy, and Palæontology	584	—
Ethnology and Antiquities	450 (approx.)	—

Library:—

	<i>By Exchange or Donation.</i>	<i>By Purchase.</i>
Pamphlets and serials	921	144
Books	6	16

Publications.—The following parts of the *Annals of the South African Museum* have been published during the year:—

Vol. XXVIII, part II (165 pp., 25 pls.).	
Cephalopoda of the Uitenhage Beds	By <i>L. F. Spath.</i>
Upper Cretaceous Mollusca	,, <i>J. V. L. Rennie.</i>
Pareiasaurian Studies. 5	,, <i>S. H. Haughton and L. D. Boonstra.</i>
Eocene Foraminiferal Limestone	,, <i>F. Chapman.</i>
Vol. XXVIII, part III (70 pp., 1 pl.).	
Pareiasaurian Studies. 6	,, <i>S. H. Haughton and L. D. Boonstra.</i>

Our expenditure on publishing the *Annals* has been less than for a good many years past. It has amounted to hardly more than £400. The pressure due to the holding back of material during the war and shortly after it has at last been worked off, and it may be expected that our yearly output of the *Annals* will now fluctuate about an amount represented by a cost of £500 or £600, which we look upon as the normal. A considerable bulk of material was in the printer's hands at the end of the year, including the final proofs of the second half of Vol. XXIX.

Collecting.—There has been no extensive expedition this year for collecting fossils, though with Dr. Reuning's help we have obtained some very interesting fossils from Namaqualand, as will be seen from Dr. Houghton's report on the Department of Palaeontology. Namaqualand was also the scene of our chief collecting this year in zoology and botany. A preliminary visit was paid at the end of June by Dr. Hesse and C. W. Thorne, who worked the country round Garies. The time proved to be too early in the year for really fruitful collecting, and the visit was therefore cut short. Towards the end of September we arranged a more extensive trip, using Kamieskroon, in the Kamiesberg district to the north of Garies, as a centre. The bulk of the collecting was again done by Dr. Hesse and Mr. Thorne. I joined them myself for a week, chiefly to study the bird life, and Dr. Lawrence also joined the party for the last few days. The country was at its very best. Many tracts were a blaze of flowers; insects, arachnids, reptiles and birds were abundant, and the expedition was exceedingly productive. We had one stroke of bad luck, however, in the shape of an abnormal turn of the weather: three days out of the middle of our time were rendered blank by heavy rain and bitterly cold winds. Even so the trip was highly successful: it was also long overdue, for though the Kamiesberg country is barely 300 miles from Capetown its natural history has hardly been touched, and it provides a most interesting link between the Cape and the semi-desert country north of the lower course of the Orange River.

Our future field work is likely to be greatly facilitated by the possession of our own motor transport. When Dr. Reuning was leaving the country he offered us his Ford motor lorry on very favourable terms, and we were eventually able to secure it through the kindness of Mr. W. A. Philip, who has made us a present of it—another notable act of generosity added to those for which we have been indebted to him in the past. The lack of motor transport has put us at a great disadvantage in recent years as compared with the fully equipped collecting expeditions which now so frequently visit the country. We have known for a long time that a light motor lorry would add very much to the efficiency of our field work, and Mr. Philip may be assured that the members of the scientific staff of the Museum are most grateful to him for this important addition to their equipment.

Donations.—As will appear from the reports of the separate departments, we have again been indebted to many old and new friends of the Museum for valuable donations. In marine zoology, for example, Mr. H. W. Bell-Marley and Mr. C. L. Biden have continued to send us such rare or otherwise interesting finds as came into their hands. Very useful batches of Rhodesian insects have again been contributed by Capt. R. Stevenson; and our collections of Tertiary fossils from the coastal regions of Namaqualand, which are beginning to prove of great interest, have been enlarged by important contributions from Dr. E. Reuning and Mr. H. S. Harger. From Mrs. Purcell we have received a large and very useful assortment of apparatus, notes and reprints left by the late Dr. W. F. Purcell, as well as several gifts to the Koopmans de Wet House.

Of special interest and value, though in quite a different direction, is a further gift from Mr. Alfred A. de Pass. It may be remembered that last year Mr. de Pass presented us with two cases containing extremely choice collections of Greek and Egyptian objects respectively. A further gift this year was the result of a suggestion from me that it would be useful if we could show one or two complete examples of mediæval Persian and Chinese pottery for comparison with the fragments from Zimbabwe. Mr. de Pass agreed, and in characteristic fashion was much better than his word. He gave us examples of a number of different types of Persian bowls, vases, plates and tiles, and further supplemented them with some good Roman glass and an exceptionally fine set of Babylonian and Assyrian cylinder seals. Nor did he forget the Chinese pottery. On the last day of the year there arrived a really splendid collection of between thirty and forty pieces of early Chinese wares and jade, which with Mr. de Pass's personal help were arranged in a fourth case in the same room with his other gifts. The collection includes a fine series of Lung-chuan celadon dishes and vases of the Sung and Ming dynasties, equally good examples of the Ying-Ch'ing and

Kuan wares of the Sung dynasty, some excellent figures of earlier date (T'ang and Wei) in unglazed pottery, and a fine Han wine jar. The jades include some very early (Chou Dynasty) and very fine pieces formerly in the well-known Wong Collection, several of them originally in the Summer Palace at Peking; there are also some wonderfully carved jade vessels of the 18th century.

Financial and General Position.—The Trustees' introduction to this report has stated the main facts of the very welcome change in the Museum's fortunes. Something will be said in the next section regarding the additional exhibition space and its utilization. Here a word may be said as to the increased annual grant-in-aid. The increase is of sufficient amount to ease the strain which was becoming critical in our financial position, and a certain portion of the new income has already been assigned to different purposes. But the Trustees have agreed upon a cautious policy in dealing with it, in view especially of the (largely unknown) expenses that will inevitably be incurred in fitting up the new exhibition rooms and in maintaining them later. It is felt that the only wise policy is to accumulate, if possible, a certain balance in hand, and to hold it until it can be seen what added expenditure the new circumstances will involve.*

GENERAL REVIEW OF MUSEUM WORK.

Building operations and changes (all in the right direction) have affected much of the year's work in the Museum, and will affect still more the work of next year. The exact extent to which the near future is dominated by this year's changes will depend upon the supply of new cases; but before that stage is reached there is much to be done in moving existing cases and their contents to the positions they are to occupy under the scheme of re-arrangement that we have adopted. In the course of thirty odd years the Museum building had become so overcrowded that rooms not intended for public galleries had had to be taken over and systematic order in the broad plan of the Museum had been seriously dislocated. Now we have a chance to restore it. It is a laborious business, for it means taking down and re-erecting many heavy cases built of steel and plate glass. But it would be almost criminal to let the opportunity slip, and in the perspective of the Museum's history the actual labour is not so great a matter after all.

One considerable section of the removal was practically completed by the end of the year. It was the removal of the palæontological collections from the two little west rooms to the two much larger rooms used till last winter as the Art Gallery. Here the much-needed expansion of the department has been possible. The upper room is now devoted to vertebrate fossils, especially to the fossil reptiles and amphibians from the Karroo beds. A striking selection of these can at last be shown in a manner worthy of their interest and importance. The ground-floor room will now house the fossil invertebrates and plants, and will also contain special cases and charts serving as an introduction to the study of fossils in general. The next step in the re-arrangement will be the removal of the mammals and their cases from the inadequate "buck-room" to the new mammal gallery on the upper floor of the new wing. The old "buck-room," after its lighting has been improved, will then become the new geological room, and will communicate with the vertebrate fossil room (upper floor of former Art Gallery) by a new passage in the corner. Subsequent changes will bring (1) invertebrate zoology into the three rooms on the west of the entrance hall, where considerable and very desirable expansion will be possible; (2) archaeology and ethnology in one orderly flow from the east of the entrance hall through the smaller rooms into the large new ethnology gallery on the ground floor of the new wing; (3) vertebrate zoology in a similar orderly flow (at present wanting altogether) from fishes through amphibians, reptiles, and birds to the mammals in their new gallery.

Apart from the extension of our exhibition space we have been given this year an addition to our storage and workroom accommodation which has long been a pressing need. By an enlargement of the "spirit block" we have secured much more room for the reference collections in spirit, and also two additional workrooms. One has been assigned to Dr. Hesse, who has for some time been obliged to carry on his entomological work under great difficulties in the taxidermist's shop; the other is reserved for the use of visiting specialists who come to work on our material.

As far as the routine work of the Museum is concerned, it is the department of palæontology that has so far been most affected by the general upheaval, and I cannot speak too highly of the work which Dr. Haughton has

* The later regrettable setback has already been noted.

done, with Dr. Boonstra's help, in planning and superintending the complicated operations involved in the removal of this department to its new quarters. But it was only in the latter part of the year that this break in routine was called for; much research work was accomplished during the year, for example on the Paracriasaurian skeleton, the fossil frogs from Namaqualand, and the shells from the West Coast Tertiary beds. In recent reports I have not laid emphasis on the systematic research work done by members of the staff, chiefly perhaps because its detailed results can hardly be of general interest; but this Museum has a record for such work of which we have every reason to be proud, and the tradition is being vigorously carried on at the present day. As the members of the scientific staff have not, in their own departmental reports, laid much emphasis on it either, I should like just to state that the total amount of systematic research accomplished during this year alone—represented by Dr. Barnard's work on the "Discovery" amphipods, Dr. Lawrence's on the South African harvest-spiders, Dr. Hesse's on the South African bees and other groups of insects, Miss Garabedian's on the plants of the genus *Aspalathus*, and the work on various groups of fossils by Dr. Haughton and Dr. Boonstra—is such as few museums except the largest and wealthiest are putting forth; and in this respect 1930 has not been in any way an exceptional year.

Additions and improvements in the exhibited collections have proceeded normally in spite of the disturbed character of the year. A very large programme of label printing has been carried out, especially in the department of palaeontology. A special feature of it is the great number of new guiding and descriptive labels of a popular character, printed in both official languages. In the modeller's shop Mr. Drury has been kept very busy. Restoring and repairing the skeletons of fossil reptiles has occupied much of his time, but there have been many other calls upon him and he has turned out a large amount of excellent work in such lines as mounting birds, casting fish, and casting and mounting snakes. The series of lifelike mounted snakes, replacing spirit specimens in the exhibition cases, is steadily growing. Five new ones have been prepared and added during the year, including both the ringhals and the banded cobra.

I should not like to close this report without expressing my personal thanks to the officers of the Public Works Department. In the course of the very important work which the Department has been carrying out for us this year I have come in contact with most of the officers of both the headquarters and local staffs, and I have reason to be most grateful to all of them for the way in which they have consulted our wishes and our convenience at every stage.

I am etc.,

LEONARD GILL,

Director.

DEPARTMENTAL REPORTS.

DEPARTMENT OF MAMMALS AND BIRDS.

TO THE TRUSTEES OF THE SOUTH AFRICAN MUSEUM.

SIRS.—I have the honour to present my report on this department for 1930.

Though there is much that needs doing in the exhibited collections of both mammals and birds, we are not in a position to deal with it on any satisfactory scale at present. A good deal of re-labelling has been done among the mammals; ten fresh birds have been mounted to replace old specimens. The labelling of the collections in the whale shed has been completed; and as evidence that it is of value to visitors it may be mentioned that such an authority on whaling as the leader of the "Norwegia" Expedition, Capt. Gunnar Isaksen, specially asked for a complete duplicate set of our whale labels. An interesting addition in the whale section is the head of a full-grown pigmy sperm-whale (*Kogia*). The animal came ashore at Milnerton in Table Bay, and we owe the securing of the specimen to the kindness of Mr. L. Michell.

Otherwise, the chief activity in this department has been in the direction of acquiring and preparing skins for the study series or for future mounting, and as far as mammals are concerned but little has been possible even here. Five mammal skins, including those of a golden mongoose, a lion and an albino grysbok, have been prepared. A roan antelope's skin has been added by the Durban Museum to the set of big game animals which we are getting from them by exchange, and a Cape hartebeest's skin from the Okavango district has been presented by Capt. Shortridge through the Kimberley Museum. These are both specimens which we specially need to have mounted to replace badly stuffed animals at present on exhibition.

A particularly fine specimen among the birds mounted for exhibition is a young black eagle presented in the flesh by Mr. J. G. van der Horst; it is in an interesting transitional stage of plumage. To Mr. B. van Riet we have been indebted for a number of waxbills and other small birds which have been mounted to replace poorer specimens in the show cases. He has also given us, among other things, a good series showing the variation in captivity of the Australian budgerigar. The chief accession to the study collection of birds is the batch of skins which I brought back with me from Namaqualand. To my great regret, no further opportunities for studying and collecting sea birds have come my way.

The year's acquisitions in this department number as follows:—

	Specimens.	Species.
Mammals	9	9
Birds	38	22

Our thanks are due to the following donors: Capt. G. C. Shortridge, Miss M. Wilman, Mr. J. G. van der Horst, Mr. B. van Riet, the Groote Schuur Zoo, Mr. Wm. A. Campbell, Mr. L. Michell, Mr. Jas Murray, Dr. K. H. Barnard, Mr. A. S. Vernay, Sergt. Barker (S.A. Police), Mr. A. Kennedy, Mr. G. A. Leuwendaal, Mr. G. Roux.

I am, etc.,

LEONARD GILL,
Director.

DEPARTMENT OF REPTILES AND BATRACHIA.

TO THE DIRECTOR.

SIR.—I have the honour to present the following report on this Department for the year 1930.

The main additions during the year were acquired during a Museum Expedition to Kamieskroon, Namaqualand. A large number of little-known reptiles were collected, especially rock-living lizards; and a good series of two recently discovered reptiles were obtained, namely, *Zonurus peersi* and *Pachydactylus ueheri quiescens*. The small Namaqualand frog *Cacosternum namaquense* was also collected. Dr. K. H. Barnard collected during December in the Knysna district, obtaining a good series of frogs. The collection of tortoises has been sent to Mr. Hewitt, Albany Museum, Grahamstown, for further systematic work.

During the year papers containing descriptions of new reptiles by V. Fitzsimons and J. H. Power have been received.

The material acquired during the year from various sources has been entered and incorporated as follows:—

	No. of Species.	No. of Specimens.
Snakes	11	13
Lizards	35	114
Frogs	8	42
Tortoises	4	5
TOTAL	<u>58</u>	<u>174</u>

The thanks of the Trustees are due to the following donors: Messrs. B. Peers, T. W. Timmers, W. Thorne, Miss Walton, Drs. Barnard, Boonstra, Gill and Hesse.

I am, etc.,

REGINALD F. LAWRENCE,
Assistant in Charge of the Department.

DEPARTMENT OF FISHES AND MARINE INVERTEBRATES.

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR.—I have the honour to present the following report on the work of this Department during the year 1930.

Building.—The much-needed extension of the spirit-room was carried out in the early part of the year. The building, as now constructed, provides considerably more room for the storage of the study collections which need to be kept in preserving fluids. There are also four work rooms, three of which are occupied by members of the staff; the fourth is available for the use of visiting scientists, for whom there was formerly no provision. Thus Dr. Mortensen, the Danish zoologist, who last year examined our collection of Echinoderms, had to be accommodated in the same room as myself, to the inconvenience of us both.

Research.—The greater part of the year has been occupied by my work on the Amphipod Crustaceans of the "Discovery" (1925-1927) Expedition. This report is finished, and in due course the Museum will receive a series of specimens suitable for exhibition and study purposes.

Collecting.—In connection with my work on the fauna of the south-west Cape mountains, I have undertaken several short collecting trips, with satisfactory results. A third systematic paper on this subject has been read this year to the Royal Society of South Africa, and will be published shortly.

Fishes.—Three very fine casts have been made during the year by Mr. Drury, and are on exhibition. One is a 6-foot Conger-pike (*Muraenesox*), brought in by Skipper McGill from a trawler; another is a Conger-eel secured for us by Mr. Biden, and the third is a Blaasop forwarded for identification by Mr. Black.

Mr. Chaplin, of the Jonkershoek Trout Hatchery, and Mr. Harrison have contributed some specimens of fresh-water fishes, which will be useful both for a revision of the Cape fauna and for determining the distribution of the species. I may also refer to the work which Dr. Smith, of Grahamstown, is carrying out in his spare time. His collecting along the Eastern Province coast has already extended our knowledge of the distribution of several species, and has resulted in the rediscovery of *Hippocampus capensis*, which has not been captured since the early days of the Cape Government Marine Survey.

Dr. J. Schmidt, of the "Dana" exploring vessel, has presented a series illustrating the life-history of the European eel.

Mollusca.—Major Connolly and Mr. Tomlin continue to give us the benefit of their specialist knowledge in identifying our Land and Marine Mollusca respectively. Our collection will eventually be a standard source of reference for conchologists in South Africa. Major Connolly's paper on the Non-marine Mollusca of South-West Africa is the outcome of the survey of that territory undertaken by the Museum with the assistance of the S.W.A. Administration.

Crustacea.—Several interesting specimens have been received from Mr. Bell-Marley, including new records and even undescribed species. But Mr. Bell-Marley's chief donation has been three very fine specimens of Natal crayfish and crabs, which were received in fresh condition, and have been mounted for exhibition.

Publications.—The following papers on Museum material from this Department have been published during the year:—

Connolly, M.: Non-marine Mollusca of South-West Africa. Ann. S. Afr. Mus. xxix.
Tomlin, J. R. le B.: South African Marine Mollusca. 5. *ibid.* xxix.

Accessions.—The following accessions have been registered during the year.

	Specimens.	Species.	New to the Collection.
Fishes	45	21	—
Mollusca	162	29	7
Crustacea	194	11	4
Other	27	5	—

The thanks of the Trustees are due to the following donors and collectors: H. W. Bell-Marley, C. L. Biden, C. W. Black, F. Chaplin, Major M. Connolly, A. C. Harrison, Dr. S. H. Haughton, Dr. A. J. Hesse, Dr. R. F. Lawrence, Skipper McGill, Dr. J. Muir, R. Primos, H. J. Puzey, Dr. J. Schmidt, J. L. B. Smith, Skipper Taylor, J. R. le B. Tomlin.

I am, etc.,

KEPPEL H. BARNARD,

Assistant Director.

DEPARTMENT OF ENTOMOLOGY.

REPORT, YEAR 1930.

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR.—I have the honour to present the following report on this Department for the year 1930.

Owing to the extensive unclassified material in the general collections of the Museum and the poor arrangement and labelling of certain orders of insects in the cabinet drawers, attention is being devoted and will be centred for some considerable time in the systematic study and determination of the innumerable families and groups of the various orders represented in South Africa. During the course of this year I was engaged in the determination and systematic arrangement of the large family of bees (Apidae) in the Museum collections. As a result of this study the number of species present in the entire collection was found to be about double that formerly exhibited in the cabinets. A large number of species were however undeterminable owing to the unreliable and inadequate descriptions of some hymenopterists. The family is now properly labelled and arranged in 13 cabinet drawers, and is easily accessible for purposes of reference and future study. Some considerable hymenopterous and coleopterous material was and is being determined for the Agricultural Department of the University of Stellenbosch and certain amateur collectors.

The reports of copious rains in Namaqualand, that interesting zoo-geographical division of South Africa, led to two successful trips during this year. The first trip, lasting ten days, was undertaken by Mr. C. Thorne and myself to Garies and its mountainous environment in June-July. The second trip, made in September, in company with Dr. L. Gill, Dr. R. Lawrence and Mr. C. Thorne, had Kamieskroon in the Kamies Mountains as headquarters. From an entomologist's point of view the combined results of both trips were most successful, and may be considered as representative for Namaqualand during the seasons and under the favourable faunistic conditions prevailing there at the time. A complete faunistic survey would, however, demand regular seasonal visits. The accessions accrued to the Museum collections as a result of these two visits may be roughly estimated as comprising some 2,000-3,000 specimens, consisting mainly of Diptera, Hymenoptera, Orthoptera and Coleoptera. Many species represented are new to the collection and some are evidently new to science. Among the Diptera acquired, the family *Bombiliidae* especially is worthy of mention and more or less representative for Namaqualand.

The following material has been identified and returned this year:—

- (1) Some determined species and types of *Psammocharidae* forwarded to Dr. G. Arnold, Rhodesia Museum.
- (2) Species of *Ectenostoma* submitted to Dr. F. Borchmann, Ent. u. Zoo. Mus., Hamburg.
- (3) Five specimens of *Cicindelidae* sent to Dr. W. Horn, Berlin-Dahlem.
- (4) The 17 types and other *Trechinur* submitted to Dr. Jeannel, Paris Museum.

The list of the material still outstanding and in the hands of specialists abroad remains the same as in the Museum report for 1929.

The following material has been sent out this year:—

Six specimens of *Scotophilinus* for study to Dr. Jeannel, Paris Museum.

Among the accessions to the collection of insects are the following:—

- (1) A large collection of Rhodesian *Psammocharidae* from Capt. R. Stevenson, Bulawayo.
- (2) A collection of 112 specimens of *Sphingidae* (45 species new to the collection) from Capt. R. Stevenson, Bulawayo.
- (3) A small miscellaneous collection of *Coleoptera*, *Hemiptera*, *Neuroptera*, etc., from Capt. R. Stevenson, Bulawayo.
- (4) A miscellaneous collection of *Coleoptera*, *Hymenoptera*, etc., collected at Vryburg by Mr. C. G. Stone, Capetown.
- (5) A small collection of insects from Fraserburg and Somerset West collected by myself.
- (6) Some specimens of *Lepidoptera* from Mr. P. Sheppard, "The Haven," Umtali, S. Rhodesia.
- (7) A small collection of *Coleoptera*, etc., from Mr. J. Joubert, c/o Standard Bank, Potchefstroom.
- (8) A large collection of insects from Garies and Kamieskroon collected by Dr. R. Lawrence, Mr. C. Thorne and myself.
- (9) A small collection of *Coleoptera* from the Huguenot Mountains and other mountains in the Cape Province collected by Dr. K. H. Barnard.
- (10) Some *Orthoptera* collected by Mr. K. W. Key, Capetown.
- (11) A good miscellaneous collection from Miss Walton, Grahamstown.

The following entomological papers and monographs based on Museum material have appeared in foreign and South African journals:—

- (1) Die Gattung *Ectenostoma*, in *Revue d. Zool. et Bot. Afr.*, by Dr. F. Borchmann.
- (2) Monographie du genre *Graphipterus*, in *Bull. et Ann. d. l. Soc. Ent. d. Belg.* X-XI, by M. L. Burgeon.
- (3) On the Geographical Distribution of the Indo-African and Mediterranean Gryllacrids, in the *Tr. Royal Soc. S. Afr.*, by Dr. H. Karny, Buitenzorg, Java.

The thanks of the Trustees are due to the following donors and collectors: Dr. K. H. Barnard, Mr. K. W. Key, Mr. J. Joubert, Dr. R. Lawrence, Mr. P. Sheppard, Capt. R. Stevenson, Mr. C. G. Stone, Mr. C. Thorne, and Miss Walton.

I am, etc.,

ALBERT J. HESSE,

Assistant in Charge of the Insects.

DEPARTMENT OF ARACHNIDS AND MYRIOPODS.

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR.—I have the honour to present the following report on this Department for the year 1930.

In spite of there being no collecting work undertaken on a large scale, the additions to the collection of the Museum for the year were quite up to standard of previous years. Most of the material acquired was derived from a short Museum expedition to Kamieskroon, Namaqualand, by Messrs. Gill, Hesse, Lawrence and Thorne. This exceptionally interesting locality has always been a source of interest on account of the peculiar and archaic nature of its fauna. The ground was very carefully worked over, special attention being paid to the cryptic drought-resisting forms hiding under stones.

Dr. K. H. Barnard spent some weeks at Keurbooms River and made a valuable and comprehensive contribution of Arachnids from the Kuysna region, which includes some five specimens of *Peripatopsis sodgiriaki* and some new harvest spiders. The Museum expedition in Namaqualand was fortunate in securing a very interesting and primitive form of tick which is quite unknown to science; it forms a link between the two large families of *Ixodidae* and *Argasidae* and has been adequately described by Mr. G. H. Bedford, of Onderstepoort, Pretoria. Another valuable addition to the Museum's collection of ticks is the presentation of several full-grown specimens of the bat tick, *Argas vespertilionis*, by the Department of Public Health. This rare species is not often met with and is new to the Museum's collection.

As will be noticed, the largest addition comes under the heading of the Opiliones. These arachnids have been assiduously collected with a view to making the monograph on the group as comprehensive as possible. This has now been completed, together with an appendix on material acquired after the paper had been sent to the printers for the first time. In addition a paper has been completed on a new blind and unpigmented *Peripatus* occurring in the Table Mountain caves, with brief notes on the fauna of the cave.

Numerous pamphlets have been received from various authors on all the Arachnid groups during the year.

In December assistance was rendered the Municipal Council in identifying and prescribing remedial measures for the attacks of a mite which was causing great inconvenience to the staff of the Roads and Drainage Department. The mite was identified as *Dermanyssus*, the common fowl mite, which had probably migrated from pigeons nesting in the roof of the City Hall.

The following constitute the additions to the collections of this Department during the year 1930:—

	<i>No. of Species.</i>	<i>No. of Specimens.</i>
Araneae	76	151
Scorpions	9	53
Solifugae	7	52
Acari	9	74
Opiliones	23	226
Pseudoscorpions	9	35
Onychophora	1	4
Myriopoda	38	172
Pedipalpi	1	2
TOTAL	173	769

The thanks of the Trustees are due to the following donors: Drs. E. L. Gill, K. H. Barnard, A. J. Hesse, C. G. S. de Villiers, Messrs. B. J. van Zyl, Thorne, Prof. C. Fr. Roewer, the Department of Public Health.

I am, etc.,

REGINALD F. LAWRENCE,
Assistant in Charge of the Department.

DEPARTMENT OF BOTANY.

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to present the following report on this Department for the year 1930.

Accessions.

K. H. Barnard	50 specimens from	Cape Province.
Bolus Herbarium	25	" "
S. Garabedian	50	" Southern Rhodesia.
E. L. Gill	7	" Cape Province.
J. Henderson	15	" Southern Rhodesia.
M. R. Levyns	5	" Cape Province.
Royal Botanic Gardens, Kew ...	10	" Tropical Africa.
T. P. Stokoe	41	" Cape Province.
C. Thorne	160	" "
Various donors	83	" various localities.

Exchanges.

Bolus Herbarium, Kirstenbosch; Royal Botanic Gardens, Kew; University of Stellenbosch; Division of Botany, Pretoria; University of Johannesburg.

Specimens Mounted.

South-West Africa	903 sheets.
Tropical Africa	637 "
Lourenço Marques	100 "
Cape Province and Transvaal ...	1,401 "
Europe	109 "

Specimens Incorporated.

1,192 sheets, including 37 genera and 184 species new to the Herbarium.

General Report.—The usual routine work was carried on throughout the year. At the same time the material in the workroom was systematically sorted out, cleaned and stacked up, and a certain number of sheets were mounted for incorporation in the general collection.

A very large number of plants was named for visitors from overseas and South Africa, and for school children. These collections increase yearly and there is a very marked improvement in the quality of the collections presented by the scholars.

Material of certain genera has been sent out on loan to specialists for examination and determination.

A good beginning has been made on a monograph of the genus *Aspalathus*, a genus comprising over 160 species; we hope to complete this for publication in our *Annals* during 1931.

I am, etc.,

S. GARABEDIAN,
Assistant in Charge of the Department.

DEPARTMENT OF PALÆONTOLOGY.

THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to submit a report on the working of this Department for the year 1930.

Accessions.—During the year the following accessions were registered.

<i>Vertebrates.</i>	
Tertiary	36
Karoo	4
<i>Invertebrates.</i>	
Tertiary	227
Cretaceous	73
Foreign Triassic	10
Foreign Permian	52
Bokkeveld	134
Tracks	15
<i>Plants</i>	15
TOTAL	566

Among these the following are worthy of mention:—

- (1) A unique collection of fossil frogs and plants, from clays filling a pipe in Namaqualand, partly presented by Dr. E. Reuning and partly collected by Drs. Reuning and Boonstra.
- (2) Two collections of carefully-documented Tertiary Invertebrates from the deposits of the Van Rhyns Dorp coast, presented by Dr. Reuning and Mr. H. S. Harger respectively.
- (3) A suite of fossils from the Permian of Durham and another from the Triassic of New Zealand, both generously donated by Dr. C. T. Trechmann.
- (4) A collection of Cretaceous invertebrates from Angola, donated by Dr. F. Mouta.
- (5) Tertiary and Devonian fossils from the Gold Coast, presented by Dr. A. Morley Davies.
- (6) Tertiary invertebrates from Penba Island and Mombasa, given by G. M. Stockley, Esq.
- (7) A suite of plaster casts of the various types of mammoth teeth found in South Africa, which were made in the Museum by the kind consent of Miss M. Wilman, of the Kimberley Museum, to which institution most of the described types belong.

Exhibition Collection.—The transfer of the exhibition collection to the new quarters provided for it began in the latter half of the year. The two rooms formerly occupied by the Art Gallery will now be devoted to paleontology—the lower room to invertebrates and plants, the upper to vertebrates. The old cases have been utilized in their entirety and, in addition, three new cases have been built—one for the skeleton of the Dinosaur *Massospondylus harriesi*, which is now displayed to full advantage; one for the cast of the large Labyrinthodont skeleton which formerly hung on the wall; and one for a display of Dicynodont remains. An entire re-arrangement and re-labelling of the exhibited vertebrates has been carried out, and restorations made of the feet of several skeletons in order to obtain completeness. In connection with this, attention should be drawn to the enthusiasm and skilful care displayed by Mr. J. Drury, the Museum Taxidermist, in carrying out restoration, mounting, and modelling work for this Department. He, too, is responsible for the very fine series of casts of mammoth teeth mentioned earlier in this report.

The new exhibits are intended mainly to have a popular educational value; and to that end a number of scientifically valuable specimens have been removed to the study collection, while additional explanatory labels in simple language have been printed. The extra space granted to the Department has resulted in a much more attractive arrangement of what is at the best but a small proportion of the Department's collections.

Research.—Work on the Pareiasaurian collection has proceeded steadily. The collection of fossil frogs from Namaqualand has been studied and described. The entire collection of shells from the Tertiary deposits of the West Coast has been reviewed and the results of their study have been incorporated in a paper dealing with those deposits.

Dr. J. V. L. Rennie has used the facilities offered by the Museum for research work upon the Senonian fauna of Angola. Professor R. Adamson has worked upon a collection of Tertiary fossil woods, and Dr. A. L. du Toit has had for examination a collection of Lower Beaufort and Ecca plants. Bokkeveld plants have been sent for examination to Dr. Høeg of Trondhjem. Thanks are due to Mr. J. R. le B. Tomlin and to Major Connolly for the identification of certain Tertiary marine and non-marine mollusca.

Identifications of specimens have been made for the McGregor Museum, Kimberley, the Geological Survey of Southern Rhodesia, the Geological Survey of Tanganyika, for Dr. J. V. Douglas of the Northern Rhodesia copper fields, and of Pareiasaurian and Dicynodont material from the Karroo for the Department of Geology, Stellenbosch University.

The following papers dealing wholly or partly with Museum material have appeared during the year:—

- (1) *L. F. Spath*: On the Cephalopoda of the Uitenhage Beds.
- (2) *J. V. L. Rennie*: New Lamellibranchia and Gastropoda from the Upper Cretaceous of Pondoland (with an Appendix on some Species from the Cretaceous of Zululand).
- (3) *S. H. Haughton* and *L. D. Boonstra*: On the Parciasaurian Mandible.
- (4) *F. Chapman*: On a Foraminiferous Limestone of Upper Eocene Age from the Alexandria Formation, South Africa.
- (5) *S. H. Haughton* and *L. D. Boonstra*: The Osteology and Myology of the Locomotor Apparatus of the Parciasauria. A Hind Limb.
- (6) *J. V. L. Rennie*: Some Phacopidae from the Bokkeveld Series.
- (7) *S. H. Haughton*: On the Occurrence of Upper Cretaceous Marine Fossils near Bogenfels, South-West Africa.
- (8) *L. R. Cox*: On an Abnormal *Natica* from South Africa.

Collecting.—There has been a considerable curtailment of expenditure in this direction. Dr. Boonstra visited Namaqualand, in company with Dr. Reuning, for the purpose of collecting fossil frogs, and he also visited Clanwilliam to obtain Bokkeveld specimens. No collecting has been done in the Karroo.

Donations.—In addition to those named in the preceding paragraphs, the thanks of the Trustees are due to the following for donating specimens: The Geological Department, Otago University, New Zealand; the Geological Survey of the Union; Professor O. Abel of Vienna; Dr. Nortier of Clanwilliam; C. H. McKay, Esq.; Mrs. T. V. Paterson and S. van Ellewee, Esq. Especial thanks are due to the Department of Geology, Stellenbosch University, for the loan of a magnificent skull of the largest *Dicynodont* known.

I am, etc.,

SIDNEY H. HAUGHTON,
Honorary Keeper of the Department.

DEPARTMENT OF GEOLOGY.

THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to present a Report on this Department for the year 1930.

During the year Dr. A. L. Hall resigned his position as Honorary Curator, and I was appointed—with the consent of the Geological Survey—to succeed him.

Very few additions to the collection have been made during the year. To the Geological Survey we are indebted for a polished core of Bushveld Granite, for specimens of the new mineral Arandisite from South-West Africa, for a large piece of Apatite from Palabora, and for further Asbestos specimens. A large crystal of Beryl from Namaqualand was given by Mr. D. J. van Niekerk; plates of Ruby Mica from Northern Rhodesia by Mr. V. Kotzé; a mass of salt crystals from M'Karri-Karri Pan by Dr. A. W. Rogers; and Bismuth ore from Namaqualand by Mr. M. Caplan. From Dr. T. W. Gevers we obtained a large mass of Cassiterite from South-West Africa.

In view of the imminent transfer of the collection to another part of the Museum building, no alterations were made to the exhibited series; and the construction of the new wing to the building necessitated the closing to the public for the latter part of the year of the room devoted to Economic Geology.

I am, etc.,

SIDNEY H. HAUGHTON,
Honorary Keeper of the Department.

DEPARTMENT OF ETHNOLOGY AND ARCHAEOLOGY.

TO THE TRUSTEES OF THE SOUTH AFRICAN MUSEUM.

SIRS,—I have the honour to present my report on this Department for the year 1930.

Partly owing to Mr. Goodwin's absence on a European tour, there has been less activity in the Department than in recent years. But Mr. Goodwin's tour seems likely to bring us substantial gains in the long run, as he is visiting most of the classic archaeological sites in Western Europe and is meeting with generous treatment in the matter of material from the excavations, so that we may hope for a great improvement in our representation of the European stone ages for comparison with those of South Africa.

During a considerable part of the year our collection of relics from Zimbabwe was dismantled for loan to the Zimbabwe Exhibition arranged at the British Museum under the auspices of the British Association for the Advancement of Science. The exhibits have been returned intact, together with casts of several interesting objects preserved elsewhere.

Among the year's acquisitions are: in archaeology, a collection of stone implements from the well-known site Grosser Spitzkop in South-West Africa, presented by Mr. J. V. L. Rennie; in ethnology, complete sets of both Mashona and Shangaan witch doctor's bones, obtained through an Officer of the Native Commissioner's Department. The Shangaan "bones" are very difficult to get.

I am, etc.,

LEONARD GILL,
Director.

KOOPMANS DE WET HOUSE.

TO THE TRUSTEES OF THE SOUTH AFRICAN MUSEUM.

SIRS,—I have the honour to present my report on this annexe to the Museum for the year 1930.

The total number of visitors for the year is 28,131, a rather larger number than usual and an advance of 2,203 on the figure for the previous year. Coloured people represented 3.2 per cent. of the year's total. The house was visited by 24 school parties, totalling 633 pupils.

The activities of the Advisory Committee have again resulted in some decided improvements. The four-poster bed has been provided with a canopy and hangings, which show it off to much better advantage than before. The approach to the kitchen was always a rather unsatisfactory part of the house, largely because of the makeshift arrangement for showing the fine set of Chinese blue "delft" tableware. A stinkwood wall cabinet—a reproduction of another fine example—has now been fitted into the wall, and most of the delft is exhibited in it. A neighbouring unused doorway has also been converted into a display cupboard and houses the rest of the delft that was formerly stored away. The resulting improvement is striking, as regards both the display of the ware and the general appearance of this portion of the house.

A brass urn with tray and brazier is the chief addition by purchase. A large brown-glazed Chinese jar has been presented by Mrs. Purcell, who has also given us what may prove to be the beginning of a historical costume collection—an early Victorian silk dress and a Masonic apron of similar date.

I am, etc.,

LEONARD GILL,
Director.

STATEMENT OF RECEIPTS AND PAYMENTS FOR THE YEAR ENDED 31st DECEMBER, 1930.

RECEIPTS.		£	s.	d.	PAYMENTS.		£	s.	d.
To Balance, 1st January, 1930		433	1	3	By Salaries, Wages and Sunday Time		5,009	12	10
„ Grants:—					„ Trustees' Contributions to Provident Fund		280	14	2
Union Government	£6,800 0 0				„ Upkeep of Museum		223	3	6
Capetown Corporation	500 0 0	7,300	0	0	„ Upkeep of Grounds		155	3	6
„ Interest:—					„ Publications		421	9	3
Hajee Sullaiman Shamahomed Coin Fund			6	15	„ Travelling and Collecting		145	14	8
„ Sale of Publications:—					„ Library		199	18	2
Annals	109 7 9				„ New Show Cases		128	2	0
Guides and postcards	24 6 6	133	14	3	„ Water and Light		58	2	6
„ Contributions towards cost of Annals:—					„ Dock Charges, Cartage and Freight		52	12	3
Geological Survey, Mines Department		111	3	6	„ Insurance		48	7	3
„ Sale of Specimens			0	15	„ Uniforms		32	4	6
„ Refunds of Expenditure			49	5	„ Koopmans de Wet Furniture		110	12	0
					„ Posts, Telegraphs and Telephones		60	13	9
					„ Petties, etc.		37	18	11
					„ Bank Charges		4	17	11
					„ Tools, etc.		2	7	10
					„ Cash in hand:—				
					Petty Cash	24	6	6	
					Stamps	11	0	3	
					Interest, Coin Fund	2	5	0	
					Cash at Bankers	1,025	7	10	
							1,062	19	7
							£8,034	14	7

HAJEE SULLAIMAN SHAMAHOMED COIN FUND.

INCOME.		£	s.	d.	EXPENDITURE.		£	s.	d.
To Balance 1st January, 1930		34	4	10	By Purchases		14	11	0
„ Interest			6	15	„ Balance		26	8	10
		£40	19	10			£40	19	10

Audited and found correct.
(Sgd.) C. J. SCHMIDT,
Controller and Auditor-General.

(Sgd.) LEONARD GILL,
Director.

Control and Audit Office,
Capetown, February, 1931.



UNION OF SOUTH AFRICA

REPORT

OF THE

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SOUTH AFRICAN MUSEUM

FOR THE

YEAR ENDED 31st DECEMBER, 1931

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1932

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Trustees of the South African Museum :

SIR THOMAS MUIR, C.M.G., M.A., LL.D., D.Sc., F.R.S. (*Chairman*).
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 COUNCILLOR S. J. HENDRIKSZ.

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 W. J. THORNE, Esq. FRANK E. CARTWRIGHT, Esq.
 MAJOR W. JARDINE.

Staff of the South African Museum :

EDWIN LEONARD GILL, D.Sc., Director and Keeper-in-Chief.
 KEPPEL HARCOURT BARNARD, M.A., D.Sc., F.L.S., Assistant Director ; in Charge of Fish and Marine Invertebrates.
 REGINALD FREDERICK LAWRENCE, B.A., PH.D., Assistant in Charge of Reptiles, Batrachians, and Arachnids.
 ALBERT JOHN HESSE, B.Sc., PH.D., Assistant in Charge of the Entomological Department.
 MISS STAR GARABEDIAN, B.A., Assistant in Charge of the Botanical Department.
 LIEUWE DIRK BOONSTRA, D.Sc., Assistant in Palæontology.
 SIDNEY HENRY HAUGHTON, B.A., D.Sc., Honorary Keeper of the Geological and Palæontological Collections.
 A. J. H. GOODWIN, M.A., Honorary Keeper of the Ethnological and Archæological Collections.
 J. DRURY, Taxidermist and Modeller J. LE ROUX, Printer.
 MISS B. K. FERGUSON, Clerical Assistant. B. OLLEY, Head Attendant.
 C. W. THORNE, Junior Botanical Assis- N. HERBERT } Attendants.
 C. LOMBARD }

Koopmans de Wet House :

MISS M. NOTHLING, Resident Caretaker. G. BINEDELI, Attendant.
 D. B. ZINN, Relief Attendant.

SOUTH AFRICAN MUSEUM.

REPORT OF THE TRUSTEES FOR 1931.

The Trustees of the South African Museum have the honour to present to the Government, in accordance with the provisions of Act. No. 17 of 1857 (Cape), their report for the year 1931.

The difficult times through which the world is passing have inevitably had reactions on the Museum. A direct effect is the reduction of the Government's maintenance grant. Indirectly the Museum is affected by the severe curtailment of the resources of the Public Works Department; as a result of this the transitional period in the rearrangement of the collections has been prolonged, and the opening of several of the principal rooms delayed. This in turn has no doubt contributed to the fall in the attendance of visitors. The effects might have been more serious still but for the goodwill of the officers of the Public Works Department, to whom our thanks are due for their efforts to minimise the inconvenience caused by the reduction of their funds and personnel.

In view of the uncertainty of the general outlook a cautious policy is being followed in the matter of expenditure. The outlay on publications and on collecting expeditions has been kept down, though with much regret; projects that were desirable in themselves have been dropped, and the vacant position of taxidermist's assistant has again been left unfilled. That these economies have kept the cash position in a satisfactory state is shown by a slightly increased credit balance, which the Trustees consider it advisable to hold for the present. As far as possible they will defer to a more normal time the projects for which the money is destined.

In spite of the difficulties under which the work has been carried on, there is a creditable record of progress for the year. Decided improvements in the exhibition cases in several sections of the public galleries have been made; the year's donations include some of exceptional value and interest; the collecting trips which did take place were very fruitful; and good systematising work on the reference collections continues to be done by the staff. Fuller details of these and other features of the year's working of the institution are given in the Director's report which follows.

THOS. MUIR,

Chairman of the Trustees.

REPORT OF THE DIRECTOR.

TO THE TRUSTEES OF THE SOUTH AFRICAN MUSEUM.

SIRS,—I have the honour to present my report on the work of the Museum for the year 1931. It is here set out under the usual headings.

Attendance of Visitors.—The fall in the attendance of visitors was not unexpected. It was due to two causes: the reduced number of visitors to the Peninsula, from abroad, from up-country and from emigrant ships calling at Table Bay; and the fact that alterations and re-arrangements have made it necessary to keep considerable parts of the Museum closed to the public.

The total recorded for 1931 was 108,103. The previous year's total was 145,317, which was about the average figure. The total for 1931 was made up as follows:—

European.....	Adults.....	Male.....	28,137
		Female.....	23,590
	Children.....		24,380
Coloured.....	Adults.....	Male.....	10,362
		Female.....	10,061
	Children.....		8,088
Native.....	Adults.....	Male.....	2,604
		Female.....	881
			108,103

Largest number in one day (5th October).....	1,296
Smallest number in one day (31st July).....	60
Total for Sunday afternoons.....	26,738
Largest number on a single Sunday afternoon (5th July)....	925

Parties from schools numbered 103, with a total of 2,773 pupils (corresponding figures for previous year 104 and 2,983).

Accessions. The following is a summary of the year's accessions to the different departments, and includes donations, purchases and material collected by the staff.

	<i>Specimens.</i>
Mammals.....	7
Birds.....	22
Reptiles and Amphibians.....	68
Fishes.....	87
Insects.....	12,000 (approx.)
Crustacea.....	352
Arachnids and Myriopods.....	336
Mollusca.....	219
Other Invertebrates.....	54
Botany.....	660
Geology, Mineralogy, and Palaeontology.....	978
Ethnology and Archaeology.....	1,100 (approx.)

Library:—

Pamphlets and serials:

By donation and exchange.....	156
By purchase.....	977

Books:

By donation.....	—
By purchase.....	23

Publications.—The call for economy has led to a considerable slowing down in our issue of the *Museum Annals*. Two parts have appeared during the year, but the first of them was practically ready for issue at the end of the previous year. Their contents were as follows:—

Vol. XXIX, part II (231 pp., 2 pls., title-page and index).

Non-marine Mollusca of South West Africa.....	By M. Connolly.
Marine Mollusca: No. 5, Scaphopoda.....	,, J. R. le B. Tomlin.
Harvest-Spiders (Opiliones) of South Africa.....	,, R. F. Lawrence.

Vol. XXX, part I (150 pp., 13 pls.).

South African Chitons.....	By Edwin Ashby.
South African Japygidae.....	,, F. Silverstri.
South African Protura.....	,, H. Womersley.
New Solifuge and Scorpion from South West Africa.....	,, R. F. Lawrence.
New Peripatus from Table Mountain Caves....	,, R. F. Lawrence.
Stone-flies (Perlaria) from South Africa.....	,, R. J. Tillyard.
New South African Solifugae.....	,, R. F. Lawrence.
Collembola (Sminthuridae) from South Africa..	,, H. Womersley.

Collecting.—Though our expenditure on collecting has been kept down, circumstances have made it possible for various members of the staff to do a fair amount of field work during the year. The possession of a motor lorry (given to us last year by Mr. W. A. Philip), by saving railway and hotel expenses and facilitating camping and frequent change of ground, has enabled us to carry out two successful expeditions, one on the Karoo and the other in Namaqualand. In addition, two members of the staff have combined collecting with a part of their summer holidays—Dr. Barnard in the Knysna district and Dr. Boonstra in Natal and the Free State. By invitation of Dr. Haughton, furthermore, Mr. Thorne accompanied him on a survey in the district of George and the Outeniquas, where he made useful collections of plants and insects. The total gain to the Museum collections, especially in relation to the cost involved, is very satisfactory.

Donations.—Several donations received this year are of outstanding value and interest. One is the unique collection of diamonds presented by Mr P. Ross Frames, the result of many years of collecting and of altogether exceptional opportunities. It is not a collection of diamonds as gems; its object is a scientific one, to illustrate what may be called the natural history of diamonds, and it is safe to say that there is nowhere else a collection which does this so completely. Another specially noteworthy gift is that of George Stow's copies of rock paintings, presented by Miss D. F. Bleek. Stow was a pioneer not only in South African geology and the recording of native history, but also in discovering and copying rock paintings. His collection of copies is all the more valuable in that Miss Bleek has used many of them to illustrate her recent book, "Rock Paintings from South Africa," and has toured the country with the special object of comparing as many as possible of Stow's copies with the originals.

A further very important acquisition of the same kind is the Frobenius collection of copies of rock paintings from the Union and Rhodesia. The first consignment of these had arrived before the end of the year. They are presented to the Union Government by Dr Leo Frobenius in return for the support given to his expedition of 1929-1930, and the Government has deposited them with us. They are supplemented by a particularly valuable card catalogue, in which reduced photographs of all the paintings studied by the expedition are mounted with the geographical and other data. Other important donations are referred to later in the departmental reports. Special attention may be called to the fine series of stone implements from the classic sites of France and Spain described in the report from Mr. Goodwin (p. 14).

GENERAL REVIEW OF MUSEUM WORK.

In many ways this has been a year of difficulty, in some respects of disappointment. The depression may be said to have caught us almost at the beginning of the upheaval occasioned by the re-arrangement of the exhibited collections. For all the heavier parts of the work—removing and rebuilding show-cases, repairing, altering and redecorating the rooms—we were dependent on the Public Works Department, and the sudden drastic cutting-down of the Department's resources was naturally reflected here. The officers of the Department have done all they could to soften the blow, and we have been fortunate in getting so much done as we have, but many parts of the programme have inevitably had to stand over, with the regrettable result that considerable sections of the Museum have perforce remained closed to visitors.

As far as the general run of visitors is concerned the most unfortunate result of this check has been that the life-casts of natives and the whole mammal collection have been withdrawn from public exhibition—the native casts for most of the time and the mammals for the whole time. The native casts will soon be on view again, but the prospects for the mammal collection are still obscure. The new mammal gallery still lacks a considerable length of wall casing (for which case fronts in the form of spare doors are available), and until this casing is completed it is not only impossible to arrange the collection, but we are also compelled to leave many valuable specimens standing in the open and suffering several sorts of damage.* For purposes of record, as well as to show the scope of the re-arrangement that we have in hand, outline plans of the Museum before and after the extension are given here, with indications of the purposes served by the different rooms before the change and those which they are now serving—or are destined to serve as soon as show-cases are available (see p. 19).

One structural alteration which will quite change the interior aspect of the centre of the upper floor was nearly completed at the end of the year. It consists in removing the internal wall that faced the visitor at the top of the staircase. The effect is to throw open the room opposite the stairhead and bring it into series with the larger rooms (the fish and bird galleries) on either side of it; a change which will be of great value when we have the necessary cases for installing the amphibians and reptiles in this room. Apart from this it introduces an effect of space and light into a central but formerly cramped spot. The lighting of another part of the building, namely the old mammal room (now devoted to geology), has also been strikingly improved; in this case by enlarging both the roof lights and the ceiling light.

* Before this report went to the printers the Public Works Department had put in hand the reconstruction of these mammal cases.

The removal of whole sections of the collections from one part of the building to another has naturally involved a great amount of work, apart from the heavy work of taking down, transporting, and rebuilding the cases. To a considerable extent it has been necessary, for the time being, to replace the specimens practically as they were, but in many instances the opportunity is being taken of re-installing them altogether on improved lines. This is notably the case in many sections of the geological department (see Dr. Haughton's report, pp. 13, 14) and in the collection of objects from Zimbabwe. Another section which has gained very much by the removal is that of the "stone age" relics—stone implements and pottery, burials, rock engravings, and rock paintings. Though no great change has yet been made in the method of exhibiting them, the gain in space and the better proportions of their new quarters have set them off to far greater advantage.

One most regrettable result of the curtailment of our funds and the need for caution is that we have felt obliged to defer again the replacement or remounting of a number of our big-game animals. A year ago some steps in this direction seemed to be coming within the range of possibility, and I was particularly anxious not to allow the worst of our old specimens to disfigure the new mammal gallery. But in the present position of affairs it seems necessary to wait yet longer for this badly needed improvement.

Two new features were introduced in the latter half of the year, partly by way of compensation for the closing of parts of the Museum. For five months we have kept up a display of fresh wild flowers on the counter in the entrance hall. The main object is to help visitors to identify the more conspicuous wild flowers that happen to be in bloom week by week in the district. Large numbers of people have welcomed the innovation and made more or less regular use of it, but it is by no means easy to keep up a representative display, and the continuance of the exhibit is always rather precarious.* The other innovation (neither, of course, is an altogether original idea) is a "recent acquisitions" case, in which newly acquired specimens can be shown for a time before being incorporated in the general collection. It gives an opportunity of calling attention to particularly interesting additions, and of labelling and describing them more fully than is possible after they have been distributed to their permanent places.

A new series of picture postcards is in the printers' hands at the end of the year. It consists of two sets of half-a-dozen each, one set depicting some of the native models, the other some of the big-game animals. It is hoped that the demand for these will be good enough to justify the preparation of a few further series, two of which—birds and rock paintings—should be in colour.

As usual, a large amount of classificatory work has been carried out by the scientific staff, all of it involving extensive original research. Dr. Barnard has prepared reports on the amphipods of the Great Barrier Reef Expedition and on the crustacea of the Vernay-Lang Expedition to the Kalahari; he has produced a monograph of the South African woodlice, and in continuation of his work on the Cape mountain fauna he is making a study of the mayflies of the mountain streams. Dr. Lawrence has completed his work on the South African harvest-spiders, and has described some new solifuges and a new blind peripatus. Dr. Hesse's work has included systematic studies and reports on several large groups of insects collected by the Vernay-Lang Kalahari Expedition, as well as further work on our mosquitoes and bee-flies (Bombyliidae). In the Department of Palæontology, as will be seen from Dr. Haughton's report, the work on the Karoo fossil reptiles is being continued by himself and Dr. Boonstra, and much further work has been done on other groups, notably on the fossil elephants and fossil horses.

In the taxidermist's department, Mr. Drury's time has been so largely taken up in large-scale re-arrangements in the public galleries that he has been unable to do as much work as usual on individual specimens. He has, however, turned out some remarkably successful plaster reproductions of various objects, notably of a water-tortoise, a young crocodile, and of the famous "zodiac bowl" from the Zimbabwe district. The original of the young crocodile was a gift from Mr. Walter Rose; the "zodiac bowl" was lent to us by the Prime Minister from the Rhodes Collection at Groote Schuur.

Further details of the year's work will be found in the separate departmental reports which follow.

I am, etc.,

LEONARD GILL,

Director.

* We have had welcome contributions of flowers from several friends, including Dr. Penfold, Capt. Salter, Mrs. Bolus, Mr. Donald Bain, and Miss Bunty and Master John Skaife. Miss Garabedian has collected for the exhibit on various occasions, but the bulk of the collecting has so far been done by my sister and me, and it is unlikely that we can continue to give up so many week-ends to it.

DEPARTMENTAL REPORTS.

DEPARTMENT OF MAMMALS AND BIRDS.

TO THE TRUSTEES OF THE SOUTH AFRICAN MUSEUM.

SIRS.—I have the honour to present the following report on this department for the year 1931.

There have been practically no opportunities for field work during the year, and there has consequently been little activity in the acquisition of fresh material. The acquisitions may be tabulated as under:—

	Specimens.	Species.
Mammals.....	7	5
Birds.....	22	13

Most of the birds are from two sources: either casualties from the aviaries of Mr. B. van Riet, or sea-birds collected by me. Mr. van Riet's birds included some specimens in particularly good plumage. The sea-birds were the fruits of a trip off Cape Point in August, when I was taken out by Mr. W. G. Hare. As it happened that Mr. Drury was absent on holiday, I mounted three of the birds in flying positions myself (sooty shearwater, whalebird and common tern). But the most notable accessions to the bird collection are four grey phalaropes (*Phalaropus fulicarius*) from Fish Hoek. Phalaropes—sub-arctic waders which spend most of their life on the open ocean—are almost unknown from the South Atlantic, and though there were two casual records from South West Africa there were none from the Union. That they do sometimes visit the Cape Seas in numbers is suggested, however, by what happened during the great south-east gale in October, when large numbers of them were driven into False Bay and these four specimens were picked up by Mr. B. Peers.

The public collection of mammals has had a troubled time and has not been on view for most of the year. Its removal from the old "buck room" to its new quarters in the upper floor of the new wing was complicated by the necessity of moving the cases too, which involved not only dismantling and rebuilding, but making some difficult alterations as well. Owing to shortage of funds a considerable length of wall casing, which had to be largely reconstructed, remained unfinished, and the year ended with many specimens standing out in the open, the casing incomplete, and the gallery still closed to the public.

I am, etc.,

LEONARD GILL,
Director.

DEPARTMENT OF REPTILES AND BATRACHIANS.

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR.—I have the honour to present the following report on this Department for the year 1931.

In the taxidermist's department plaster casts of a young crocodile and of a common Cape water-tortoise (*Platemys galbana*) were made for exhibition by the Museum modeller. A fine collection of frogs from the district of the N'Kana Mine, Rhodesia, was presented to the Department by Mr. S. Tapscott, many of the specimens being rare and poorly represented in the Museum's collection. Mr. Tapscott is making a further collection on behalf of the Museum. Dr. Barnard contributed a number of lizards from the Knysna region, including some little-known mountain forms.

The additions during the year are as follows:—

Lizards.....	9
Snakes.....	1
Frogs.....	58
	—
	68
	—

The thanks of the Trustees are due to the following donors: Messrs. S. Tapscott, W. Rose, C. W. Thorne, Dr. Barnard, Dr. Hesse, and the University of Stellenbosch.

I am, etc.,

REGINALD F. LAWRENCE,
Assistant in Charge of the Department.

DEPARTMENT OF FISHES AND MARINE INVERTEBRATES.

TO THE DIRECTOR.

SIR.—I have the honour to present the following report on this department for the year 1931.

Exhibition Gallery.—The change-over of the exhibited series of Crustacea, Mollusca and other Invertebrates from one room to another was effected without undue difficulty or damage. A fine example of one of the Natal crayfishes has been added to the series, and some of the crabs have been replaced by larger and better specimens.

Alterations to the building have necessitated a slight rearrangement of the cases containing the sharks and skates. A general rearrangement and relabelling of the fish collection, however, is not yet possible.

Collecting.—During the month of January I was collecting in the Keurbooms River and George districts; the results were of considerable interest, especially as regards land-shells and Terrestrial Crustacea. A large series of Marine Crustacea and Mollusca was also collected. I was in the field also for a part of September in connection with my research work on the mountain fauna.

Publications.—The following papers dealing with material from this department have been published during the year :—

Ashby : South African Chitons. Ann. S. Afr. Mus. vol. 30, pt. 1.

Connolly : New non-marine Mollusca from Africa. Ann. Mag. Nat. Hist. (10), viii.

Accessions.—During the year the following numbers of specimens have been added to the collections :—

	Specimens.	Species.	New to the Collection.
Fishes.....	87	33	—
Crustacea.....	352	74	27
Mollusca.....	219	49	8
Other Marine Invertebrates.....	54	5	1
	<hr/>	<hr/>	<hr/>
	712	161	36
	<hr/>	<hr/>	<hr/>

The thanks of the Trustees are due to the following donors: H. W. Bell-Marley, C. L. Biden, F. Chaplin, Fisheries and Marine Biological Survey, A. C. Harrison, Kimberley Museum, Mr. J. Muir, Dr. J. L. B. Smith, and to the members of the staff who have collected specimens for this department.

I am, etc.,

KEPPEL H. BARNARD,
Assistant Director.

DEPARTMENT OF ENTOMOLOGY.

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to present the following report on this Department for the year 1931.

During the greater part of this year I was engaged in the study and determination of certain groups out of the extensive collections of insects from North Bechuanaland and the Kalahari in the Transvaal Museum, collected by the Vernay-Lang Kalahari Expedition in 1930. The several thousands of insects submitted comprised all the representatives of the *Matillidae*, *Hemiptera-Heteroptera*, *Tricubronidae* and *Curculionidae* obtained on this trip. As a result of this work, four manuscripts, including classified lists and the descriptions and text-figures of numerous new species, have been handed in for publication to the Transvaal Museum. The permission to retain duplicate specimens has also enriched our cabinet collections by over 400 specimens, many of them new to the collection. The South African Museum collections in certain groups of material from South West Africa, the Kalahari and Bechuanaland are now extensive and fairly representative. The latter part of the year was occupied in the systematic arrangement and classification of the *Culicidae* (Mosquitoes) and the family *Bombyliidae* as represented in the general collections. As was the case in other groups, the number of species in the cabinet drawers has practically been doubled. This marks the beginning of the arrangement of our *Diptera*, to which much time will have to be devoted in future.

Owing to facilities granted to one member of the staff in conjunction with the trips of other departments and also to a trip organised by this department, a considerable amount of collecting in the field was done during this year. At the beginning of the year, during February and March, Mr. C. Thorne accompanied Dr. L. D. Boonstra on his palaeontological survey for six weeks in the Beaufort West, Murraysburg, Richmond and Victoria West districts, where representative material from the Karoo was obtained. Again, during August and September, Dr. S. Haughton was kind enough to accommodate Mr. Thorne for another month's collecting at the Wilderness, Forest Plantations, the Brak River and Mossel Bay. Field work was consummated in October and November, when, with Dr. Boonstra and Mr. Thorne, I undertook a three weeks' trip to the Olifants River Valley and Namaqualand. Collecting was mainly confined to three sites along this route, namely at Bowsdorp, at Klipplei between Kamieskroon and Garies in Namaqualand, and lastly at a point along the Olifants River between Clanwilliam and Citrusdal. In addition, Dr. K. H. Barnard made a good collection on the Keurbooms River and at George during December 1930, and January 1931. These trips have numerically enriched the collections by 10,000–12,000 insects, many species of which are new to the collection and several new to science.

Other accessions to the collection of insects are the following :—

- (1) A small miscellaneous collection from Capt. R. Stevenson, Bulawayo.
- (2) Some duplicates of Rhodesian *Coleoptera* and some *Hymenoptera* from Madagascar; from Dr. G. Arnold, the Rhodesian Museum.
- (3) A few Cape Butterflies from Mr. P. R. Robertson, Muizenberg.
- (4) A few specimens of *Musaridae* and *Scarabaeidae* new to the collection, presented by Mr. R. Turner.
- (5) Some small moths and flies hatched from galls, presented by Mr. E. G. Bryant, Prieska.
- (6) Two specimens (type material) of new Protura collected in South Africa and presented by Mr. H. Womersley, Perth, Australia.

The following material has been identified by specialists and returned to us during this year :—

- (1) Some *Bostrichidae* forwarded to Dr. P. Lesne, Paris Museum.
- (2) Some moths (*Nolini*) sent to Mr. G. von Son, Transvaal Museum.
- (3) *Buprestidae* forwarded to Dr. J. Obenberger, Prague.
- (4) Specimens of *Diptera* (*Hinea*) sent to M. Pargon, Musé d' Congo, Tervuren.
- (5) Some *Japygidae* sent to Prof. F. Silvestri, Italy.
- (6) Some Stone-flies sent to Dr. R. Tillyard, Canberra, Australia.
- (7) Some *Collembola* sent to Mr. H. Womersley, Perth, Australia.

The following material has been sent out this year :—

- 1,021 Geometrid moths sent for study to Dr. A. J. Janse, Pretoria.

The list of material still outstanding and in the hands of specialists abroad remains the same as detailed in the Museum report for 1929, with the exception of the material returned by Dr. J. Obenberger, Prague and Dr. R. Tillyard, Canberra, Australia.

The following entomological papers based on Museum material have appeared in:—

(A) The Annals of the South African Museum, Volume XXX.

- (1) "A contribution to a knowledge of the South African Japygidae (*Insecta Thysanura*)," by F. Silvestri, p. 61.
- (2) "A South African species of Protura," by H. Womersley, p. 89.
- (3) "Some Collembola of the Family Sminthuridae from South Africa," by H. Womersley, p. 137.
- (4) "On a collection of Stone-flies (Perlaria) from South Africa," R. J. Tillyard, p. 109.

(B) The Transactions of the Royal Society of South Africa, Volume XIX.

- (1) "The Cape Alder-Flies (Neuroptera Megaloptera)," by Dr. K. H. Barnard, p. 169.

The thanks of the Trustees are due to the following donors and collectors:—Dr. G. Arnold, Dr. K. H. Barnard, Mr. E. G. Bryant, Dr. L. D. Boonstra, Mr. P. R. Robertson, Capt. R. Stevenson, Mr. C. W. Thorne, Mr. R. Turner and Mr. H. Womersley.

I am, etc.,

ALBERT J. HESSE,
Assistant in Charge of the Insects.

DEPARTMENT OF ARACHNIDS AND MYRIPODS.

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to present the following report on this Department for the year 1931.

Six months of the year having been spent on long leave in Europe, the additions to the collections of this Department have been more meagre than in other years. Before departure a Monograph on the Opiliones of South Africa was completed, together with two other small papers on new Solifugae and a new Cape Peripatus.

In London some time was spent at the British Museum comparing types and making drawings of these for future reference. Literature was also collected in England and on the Continent dealing with Myriopods and Opiliones.

Considerable and valuable material was obtained in several smaller expeditions undertaken by other members of the Staff. Among these were one to Knysna by Dr. K. H. Barnard, one to the Outeniqua district by Dr. S. H. Haughton and Mr. Thorne, and one to Namaqualand by Dr. Hesse and Mr. Thorne. Towards the end of the year the material of the family Lycosidae (Araneae) was worked through, the greater part being identified and the new forms set aside.

The additions for the year are as follows:—

Araneae.....	54
Opiliones.....	65
Scorpions.....	10
Solifugae.....	6
Acari.....	15
Pseudoscorpions.....	17
Onychophora.....	5
Myriopoda.....	164
	—
	336

The thanks of the Trustees are due to the following donors: Dr. S. H. Haughton, Dr. Hesse, Dr. K. H. Barnard, Messrs. B. J. van Zijl, B. Peers, C. W. Thorne; Department of Public Health, Rhodesia; Stellenbosch University.

I am, etc.,

REGINALD F. LAWRENCE,
Assistant in Charge of the Department.

DEPARTMENT OF BOTANY.

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to present the following report on the work of this Department during 1931.

Accessions.

K. H. Barnard.....	102	specimens from Cape Province.
Bolus Herbarium.....	25	" "
H. G. Fourcade.....	20	" "
S. Garabedian.....	52	" "
A. S. Hitchcock.....	30	" East Africa.
A. J. Middlemost.....	35	" Cape Province.
J. Muir.....	15	" "
Royal Botanic Gardens, Kew..	16	" "
T. M. Salter.....	23	" "
T. P. Stokoe.....	32	" "
C. Thorne.....	203	" "
Various donors.....	107	" Africa, Australia and New Zealand.

Exchanges.

Bolus Herbarium, Kirstenbosch; Division of Botany, Pretoria; University of Witwatersrand; University of Stellenbosch; Royal Botanic Gardens, Kew; Smithsonian Institution, Washington; University of Lund, Sweden.

Specimens Mounted and Incorporated.

987 sheets, including 29 genera and 91 species new to the Herbarium.

General Report.—Three collecting trips were made during the year, to the Beaufort West, Namaqualand, and the George and Knysna Districts; these resulted in good additions, especially to the Bryophyte and Monocotyledon sections of our collection.

The mounting of specimens has been set back this year owing to the services of the Junior Assistant being required for the Entomological Department, mounting section, in the absence of a necessary assistant in that Department.

Work was continued on the collecting and examination of material of the genus *Aspalathus* with a view to the monographing of that genus.

Examination and identification work was carried out for various institutions and Government Departments, including that of the School of Agriculture at Stellenbosch, and in connection with the prevention of the sale of protected wild flowers.

I am, etc.,

S. GARABEDIAN,

Assistant in Charge of the Department.

 DEPARTMENT OF PALAEOLOGY.

THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to submit a report on the working of this Department for the year 1931.

Accessions.—During the year the following accessions were registered:—

<i>Vertebrates.</i>	
Karoo.....	350
Tertiary.....	10
<i>Invertebrates.</i>	
Bokkeveld.....	95
Cretaceous.....	34
Tertiary.....	20
European.....	15
Madagascar.....	4
<i>Plants</i>	15
TOTAL.....	543

Exhibition Collection.—The work of transferring the collection to the new quarters provided for it and of preparing the specimens chosen for exhibit was completed during the year. The collection now occupies the two rooms formerly devoted to the Art Gallery. In the downstairs room are displayed the South African invertebrates and plants. A centre case has been arranged to show the fundamentals of the science of palaeontology—the nature of fossils, the modes of fossilisation, and the major divisions of the animal kingdom. By arrangement with the American Museum of Natural History, to whose President the thanks of the Department are due, it will be possible to show a series of specimens and casts illustrating one of the classic examples of an evolutionary series of fossils. This will be placed in the upper portion of the wall-cases, which is unsuitable for the display of small invertebrates.

The vertebrate fossils are housed in the upper gallery and the exhibited portion of it is far more effective there than it was in its old quarters. With the exception of the skeleton of *Melanorosaurus* and some wall exhibits, all the important specimens are now under glass. The gallery is, however, already full and it will be impossible to add to the number of exhibits here.

Research.—The complete collection of Pareiasaurian material has now been developed, and the study of it has reached an advanced state. A commencement has been made with the development of a number of Dinocephalian skulls and limb-bones, but the intractable material in which these are usually preserved makes this process a slow one.

The Geological Survey of Tanganyika Territory sent to the Museum for study a collection of Karroo reptiles from the Ruhuhu coal-bearing area. The results of this study proved of great interest and were incorporated in a paper which is in the press. Thanks are due to the Director of that Survey and to Mr. G. H. Stockley for presenting the types and figured specimens of the collection to this Museum.

From material supplied by the McGregor Museum, Kimberley, by Mr. C. van Riet Lowe, and from that in this Museum, it has been possible to make a critical study of the fossil Horses of South Africa, and to add further information on the subject of the fossil Proboscidea. Both of these groups will be of value in elucidating the late Tertiary and Recent history of the inland regions.

No material has been sent overseas for study.

The following papers dealing with Museum material have appeared during the year:—

- (1) *R. Adamson*: Note on some Petrified Wood from Banke, Namaqualand.
- (2) *S. H. Haughton*: On a Collection of Fossil Frogs from the Clays at Banke.
- (3) *J. V. L. Rennie*: Note on Fossil Leaves from the Banke Clays.

In addition, there are in the press two papers by L. D. Boonstra, two by A. L. du Toit, and two by S. H. Haughton.

Collecting.—Dr. L. D. Boonstra has made two collecting expeditions during the year. By means of the motor lorry he was able to cover a large area occupied by the *Cistecephalus* zone in the Divisions of Murraysburg, Richmond, Victoria West and Beaufort West, and to add very considerably to the number of specimens which the Museum possesses from that zone. Mention should be made of the advantages which transport by motor lorry has over the methods previously employed. The possibilities of an area are more quickly ascertained, as is the passage from one collecting ground to another; and the total monetary cost is actually less than the cost of hiring animal transport for the same length of time. In discovering for itself these advantages, the Museum is adding to the evidence produced by other institutions which have for a much longer time adopted the mechanical method of transport for their field expeditions.

Dr. Boonstra, at the end of a period of leave, also paid a series of visits for collecting purposes to Estcourt, Harrismith, Ficksburg and Ferrerocks, from the last place obtaining a desirable collection of *Proeolophon* specimens.

Donations.—In addition to the donors of specimens already named, the thanks of the Trustees are due to Mrs. T. V. Paterson, Dr. A. L. du Toit, F. P. Mennell, Esq., and P. Ross Frames, Esq.

I am, etc.,

SIDNEY H. HAUGHTON,
Honorary Keeper of the Department.

DEPARTMENT OF GEOLOGY.

THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to submit a report on the working of this Department for the year 1931.

The chief event of the year has been the installation of the collection in the new galleries allotted to it. These consist of a small room in the south-west wing, which has been converted into a map room, and the gallery on the first floor of the main building formerly occupied by the South African mammals. Structural alterations now permit free access from the geological gallery to those devoted to palaeontology.

A complete re-arrangement of the exhibits has been carried out, resulting, it is believed, in greater attractiveness to the ordinary public. The introductory series has been kept intact, and the meteorites are displayed as before. The stratigraphical series of rocks has been cut down in numbers, but it is essentially the same. The mineral specimens are now, however, arranged entirely on an economic basis, and explanatory labels have been printed giving the salient geological and economic facts about the South African occurrences of each group of minerals. As far as possible, these groups have been arranged alphabetically, ranging from antimony to zinc. There are special exhibits in single cases illustrating gold and quartz; platinum, mica, asbestos, iron, copper and corundum are also rather fully illustrated.

Especial mention should be made of the new diamond exhibit. The munificent gift of his entire collection of diamonds by Mr. P. Ross Frames has permitted the display of a collection unrivalled for scientific interest. Much thought was given to the manner of exhibit that was the best within the compass of the Department's power; and a scheme has been evolved which, although by no means ideal, permits each of the specimens to offer for inspection some of that individuality which it possesses. It is hoped that the Department may be able to obtain a representative collection of gem-stones other than diamonds, which can be placed alongside the Ross-Frames collection.

A new geological exhibit illustrating the deposits of the various Glacial periods in South Africa has been placed in two upright cases and illustrated by photographs and explanatory labels. For photographs and specimens thanks are due to Dr. T. W. Gevers.

The collection of building-stones has been withdrawn temporarily from exhibition until a new stand for its display can be made.

Apart from the diamonds already mentioned, the number of accessions has been small, and for most of them we are indebted to the Geological Survey.

I am, etc.,

SIDNEY H. HAUGHTON,
Honorary Keeper of the Department.

DEPARTMENT OF ARCHAEOLOGY AND ETHNOLOGY.

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to present the following report on the Archaeological section of this department for 1931.

As a result of my visit to Europe the Museum has now an excellent series of European stone-implements, covering the entire Palaeolithic and Mesolithic periods, and part of the Neolithic. The thanks of the museum are due to M. l'Abbé Breuil for his generosity in the presentation of specimens from the Somme Gravels, many from type-sites as Chelles and Acheul, and from elsewhere, and for his help in organising and aiding my visits to France and Spain. A considerable number of implements were presented by Mr. Harper Kelly, mainly from Levallois sites at Montières, and elsewhere. Specimens from the type site of Le Moustier and from other sites in the Les Eyzies valley were presented by M. Peyrony. Two very fine series, one from the La Quina site and one from the Le Roc site (the latter including exceptionally fine Solutrean types), were given by M. Henri Martin, together with some Neolithic cores from Grande Pressigny. A series representing typical specimens from all five layers at the Combe-Capelle site was presented by Dr. Ami of the Canadian School of Prehistory, very shortly before his death.

From various sites in North Africa material was obtained through the kindness of M. E. Gobert and M. Reygasse, and in Spain through Dr. Obermaier and Dr. Perrez de Barrados.

Since my return, the Museum has also received a valuable type-series representing Dr. L. S. B. Leakey's work in Kenya.

The thanks of the Museum are also due to Mr. Henry Field, of the Field Museum, Chicago, for help and specimens given by him, and to Mr. Harper Kelley for his help throughout the visit. Thanks are also due to the Carnegie Corporation for their generous aid.

Apart from these series, material has been collected from several Stellenbosch sites in the Villiersdorp district, and from Swellendam. Implements have also been presented by the Rev. Sharples from Victoria West, Mr. Norrie from Fish Hoek and other Peninsula sites, by Mr. van Alphen from Worcester, by Mr. Paterson from Hermanus, by Mr. G. H. Herman from Hout Bay, by Mr. Charles Stow from Christiana, and by H. W. Seton-Karr from Somaliland.

The sympathy of the Department is extended to Mrs. Hoernlé and Mr. C. van Riet Lowe in their losses through the fire at the Witwatersrand University.

I am, etc.,

A. J. H. GOODWIN,

Honorary Keeper of the Department.

TO THE TRUSTEES OF THE SOUTH AFRICAN MUSEUM.

SIRS.—I have the honour to present the following report on the Anthropological section as a supplement to Mr. Goodwin's report on the Archaeological side.

We are a step nearer to being able to put our ethnological material on exhibition, since we now have a fine hall for its display. But the range of wall casing which is to contain it does not yet exist, so in actual fact all the valuable material (with the exception of some on loan to the University) is still in store and exposed to all kinds of damage. The three large stand cases containing the life-casts of Bushmen and other natives are in position down the centre of the floor, and by way of making temporary use of the wall space we have covered it with canvas for the display of copies of rock paintings. The important acquisitions of this nature, namely Stow's collection presented by Miss Bleek and the Frobenius collection presented by the Union Government, have been referred to in my general report.

Other valuable donations to the department have been made. Col. Deneys Reitz has given us an example of the exceedingly rare Zulu arm ornament known as the *ingrada*, a heavy brass sleeve granted by the king to specially distinguished warriors and highly prized as a mark of favour. From a missionary in Northern Rhodesia, Mr. Königsmacher, we have received the complete and very interesting outfit of a Mawiko witch doctor, comprising basket, skin mats, and ninety assorted objects for divination. Another good acquisition is a Bakgatla warrior's cloak from the Bechuanaland Protectorate, a gift from Dr. I. Shapira, to whom it was presented by the chief; these cloaks, made of civet (*tschijja*) skins, were all owned by the chief and were worn only by veterans and on ceremonial occasions. To the Oriental art section, Mr. Alfred A. de Pass has made a further gift of two large and fine Rhodian ware plates; and Capt. W. F. Collins has presented an early Chinese (T'ang) pot and a set of grave pottery of the Sung dynasty. Among the few acquisitions by purchase, Ovamboland is well represented by a fine example of the maternity doll and two musical instruments—a one-stringed bow with gourd resonator and striker, and a seven-stringed "harp" with hollowed wooden body. In this connexion it may be mentioned that Prof. P. R. Kirby, of the University of the Witwatersrand, has spent a good deal of time in working through our collection of native musical instruments, to the advantage both of his own studies and of our knowledge of our material.

I am, etc.,

LEONARD GILL,

Director.

KOOPMANS DE WET HOUSE.

TO THE TRUSTEES OF THE SOUTH AFRICAN MUSEUM.

SIRS.—I have the honour to present my report on this annexe to the Museum for the year 1931.

With the help of the special annual grant of £100 from the City Council, the Advisory Committee has been able during the last three years to add a number of desirable objects to the collection shown in the House and to make many improvements in methods of exhibition. These processes have been continued during the past year. A number of purchases were made at the sale of the estate of the late Miss Dorothea Fairbridge; they include a pair of brass hanging lanterns, a very fine brass-bound deed box, and some good engravings and aquatints which have greatly improved the appearance of several of the rooms. Other purchases for which the grant has been used are the provision of two small stinkwood wall cabinets for the display of some of the small pieces of silver and china, and the purchase of three handsome old churns which were discovered in the Swellendam district and are now in part serving as plant stands.

By bringing the wall cabinets into use and re-arranging the contents of other cabinets, it has been possible at last to dispense with two of the three black museum cases which have always somewhat disfigured the interior, and we hope that it will not be much longer before the last of them will be set free and removed.

Some valuable donations have also been received during the year. Mr. J. R. Finch has presented a fine old lessenaar or Bible-desk of yellow-wood, beef-wood and teak, which will serve as a memento of his long connexion with the House, first as honorary secretary and treasurer of the original Acquisition Committee of 1913, and later as chairman of the Advisory Committee. Mr. Alfred A. de Pass has presented a number of Chinese and Japanese objects, including fine Lungchuan celadon and blue-and-white Ming dishes and a Japanese lacquered picnic set. Further additions to the growing collection of old costumes have been made by Dr. C. C. Elliott.

An interesting addition to our collection of local "by-gones" is one of the old shop signs from Adlderby Street. It is the painted wooden figure of an admiral using a sextant, and was once a familiar landmark above the door of the firm of Burmester, clockmakers and opticians. It is the gift of Miss Burmester.

The attendance of visitors shows a fall, as was only to be expected, but the fall is by no means so marked as in the case of the main Museum. The total recorded for 1931 is 21,531, as compared with 28,131 for 1930 and 25,928 for 1929. Coloured people represented nearly 5 per cent. of this total, a higher proportion than usual. Twenty parties of school children visited the House, with an average of 23 in a party.

Our very special thanks are due to Mr. J. R. Finch for the time and trouble he has devoted during the year to carrying out the various changes that have been made and to the tasteful incorporation of the additions.

I am, etc.,

LEONARD GILL,
Director.

SOUTH AFRICAN MUSEUM.
STATEMENT OF INCOME AND EXPENDITURE FOR THE YEAR ENDED 31st DECEMBER, 1931.

To Charges :—	£	s.	d.	By Grants :—	£	s.	d.	£	s.	d.
Salaries, Wages and Sunday time	5,108	15	6	Union Government	6,475	0	0			
Library and Publications	490	9	11	Cape Town Corporation	400	0	0			
Travelling and Collecting	225	15	11	Cape Town Corporation (Special Grant, Koopmans de Wet)....	100	0	0	6,975	0	0
General Upkeep	479	4	1	Sale of Publications	24	15	1			
Upkeep of Grounds	172	17	9	Sale of Guides and Postcards	20	9	10	45	4	11
Railage, Dock and Postal charges	80	18	8	Interest received and accrued :—						
Koopmans de Wet Fund purchases	97	2	4	Union Government Stock	36	5	1			
Insurance	50	11	3	Cape of Good Hope Savings Bank	23	8	7			
Water and Light	82	11	7	S.A. Milling Co., Ltd.	9	9	8			
Uniforms	51	19	3	S.A. Association—Coin Fund	4	10	0	73	13	4
Tools	20	11	5					£7,093	18	3
Bank charges	4	11	8							
Interest credited	69	3	4							
Balance, Income over Expenditure	159	5	7							
	<u>£7,093</u>	<u>18</u>	<u>3</u>							

STATEMENT OF BALANCES FOR THE YEAR ENDED 31st DECEMBER, 1931.

To Provident Fund	£	s.	d.	By Union Government Stocks	£	s.	d.	£	s.	d.
Koopmans de Wet Special Grant Fund	1,695	6	11	Cape of Good Hope Savings Bank Deposit				1,470	0	0
Hajee Sullaiman Shamahomed Coin Fund	133	0	8	Interest due but not paid				214	14	10
Balance at 31st December, 1931	0	19	4	Cash at Bank	1,187	1	1	10	9	5
	1,079	19	5	Petty Cash and Stamps	27	1	0	1,214	2	1
	<u>£2,909</u>	<u>6</u>	<u>4</u>					£2,909	6	4

Audited and found correct,

C. S. SCHMIDT,
Controller and Auditor-General.

Control and Audit Office,
Cape Town, February, 1932.

E. L. GILL,
Director.

SOUTH AFRICAN MUSEUM.
HAJEE SULLAIMAN SHAMAHOMED COIN FUND.

	£	s.	d.		£	s.	d.
To Balance, 1st January, 1931.....	26	8	10	By Purchases.....	29	19	6
.. Interest.....	4	10	0	.. Balance, 31st December, 1931.....	0	19	4
	<u>£30</u>	<u>18</u>	<u>10</u>		<u>£30</u>	<u>18</u>	<u>10</u>

KOOPMANS DE WET SPECIAL GRANT FUND.

	£	s.	d.		£	s.	d.
To Balance, 1st January, 1931.....	130	3	0	By Purchases.....	97	2	4
.. Grant.....	100	0	0	.. Balance, 31st December, 1931.....	133	0	8
	<u>£230</u>	<u>3</u>	<u>0</u>		<u>£230</u>	<u>3</u>	<u>0</u>

STAFF PROVIDENT FUND.

	£	s.	d.		£	s.	d.
To Balance, 1st January, 1931 :—				By Insurance Payments.....	315	11	9
Cape of Good Hope Savings Bank.....	936	14	11	.. Repaid to Members.....	0	3	11
S.A. Milling Co.....	432	13	0	.. Accrued Interest.....	10	9	5
.. Trustees Contribution.....	286	5	8	.. Balance :—			
.. Members Contributions.....	286	5	8	Government Stock.....	1,470	0	0
.. Interest, Cape of Good Hope Savings Bank.....	23	8	7	Cape of Good Hope Savings Bank.....	214	14	10
.. S.A. Milling Co.....	9	9	8	Cash on hand.....	0	2	8
.. Government Stocks.....	36	5	1				
	<u>£2,011</u>	<u>2</u>	<u>7</u>		<u>£2,011</u>	<u>2</u>	<u>7</u>

Audited and found correct,
C. S. SCHMIDT,
Controller and Auditor-General.
Control and Audit Office,
Cape Town, February, 1932.

E. L. GILL,
Director.



A. Ground Floor before the change.

B. Ground Floor after the change.

C. Upper Floor before the change.

D. Upper Floor after the change.

OUTLINE PLAN3 SHOWING ADDITIONS AND RE-ARRANGEMENTS.

Approximate Scale, 1 inch = 60 feet ; 1 cur = 24 feet.

THE LIBRARY OF THE
FEB 5 - 1940
UNIVERSITY OF ILLINOIS



UNION OF SOUTH AFRICA

REPORT

OF THE

SOUTH AFRICAN MUSEUM

FOR THE

THE LIBRARY OF THE
FEB 5 - 1940
UNIVERSITY OF WILMINGTON

YEAR ENDED 31st DECEMBER, 1932

Published by Authority

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1933

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Trustees of the South African Museum :

SIR THOMAS MUIR, C.M.G., M.A., LL.D., D.Sc., F.R.S. (*Chairman*).

J. G. VAN DER HORST, ESQ. (*Vice-Chairman*).

PROF. WILLIAM ADAM JOLLY, M.B., CH.B., D.Sc., F.R.S.S.AFR.

W. J. THORNE, ESQ.

COUNCILLOR W. BRINTON.

Advisory Committee for Koopmans de Wet House :

J. R. FINCH, ESQ., O.B.E. (*Chairman*). PROF. W. A. JOLLY.

W. J. THORNE, ESQ.

FRANK E. CARTWRIGHT, ESQ.

MAJOR W. JARDINE.

Staff of the South African Museum :

EDWIN LEONARD GILL, D.Sc., Director and Keeper-in-Chief.

KEPPEL HARCOURT BARNARD, M.A., D.Sc., F.L.S., Assistant Director; in Charge of Fish and Marine Invertebrates, and of the Library.

REGINALD FREDERICK LAWRENCE, B.A., PH.D., Assistant in Charge of Reptiles, Batrachians, and Arachnids.

ALBERT JOHN HESSE, B.Sc., PH.D., Assistant in Charge of the Entomological Department.

MISS STAR GARABEDIAN, B.A., F.L.A., Assistant in Charge of the Botanical Department; Assistant Librarian.

LIEUWE DIRK BOONSTRA, D.Sc., Assistant in Palæontology.

SIDNEY HENRY HAUGHTON, B.A., D.Sc., Honorary Keeper of the Geological and Palæontological Collections.

A. J. H. GOODWIN, M.A., Honorary Keeper of the Ethnological and Archæological Collections.

J. DRURY, Taxidermist and Modeller. J. LE ROUX, PRINTER.

MISS B. K. FERGUSON, B.A., Clerical Assistant. B. OLLEY, Head Attendant.

C. W. THORNE, Junior Botanical Assistant. N. HERBERT } Attendants.
C. LOMBARD }

Koopmans de Wet House :

MISS M. NOTHLING, Resident Caretaker, Jan.-Sept.

MRS. A. LAWTON, Resident Caretaker, Oct.-Dec.

G. BINEDELL, Attendant. D. B. ZINN, Relief Attendant.

REPORT OF THE TRUSTEES FOR 1932.

The Trustees of the South African Museum have the honour to present to the Government, in accordance with the provisions of Act No. 17 of 1857 (Cape), their report for the year 1932.

What was said in the last report as to the effect of the present difficult times on the working of the Museum applies with the same force still, but that is by no means the keynote of the year under review. The year 1932 will be memorable as marking the consummation of a long series of events, leading, with many setbacks, to the satisfying of a long-standing need, the substantial increase of the Museum's exhibition space. This landmark in the institution's history was fittingly celebrated on the morning of 1st June, when before a large and representative audience the new galleries were formally opened by His Excellency the Governor-General, supported by the Honourable the Minister of the Interior, Dr. D. F. Malan.

The additions—the new wing on the one side and the former Art Gallery rooms on the other—have together resulted in a museum that is half as large again as it was before. A carefully planned scheme of re-arrangement has been carried out by the Director and staff, with the help of the Public Works Department, taking advantage of the added space to bring the various sections of the Museum into a systematic order that is likely to be permanent. As was only to be expected under present economic conditions, the new show-cases needed for such a sudden expansion were not immediately forthcoming, and the re-arrangement consequently remains in many details incomplete. The provision of these show-cases is now the greatest need of the Museum, and the Trustees hope that it will be met as rapidly as circumstances permit. In the meantime they wish to express to the Government their warm appreciation of its sympathy with the aims and needs of the Museum, and of the practical evidence of that sympathy embodied in the recent extension. To the Public Works Department they offer special thanks for its indispensable help in the complicated process of re-arranging the Museum, with all the structural alterations and other heavy tasks which it involved.

A word as to the financial position of the Museum is called for. Owing to the reduction of the grant-in-aid the income for the year has fallen short of the expenditure by about £200. If the normal amount had been spent on collecting and on publication the deficit would have been at least £300 greater. Money saved for definite objects in recent years is enabling the institution still to show a credit balance, but its present position is essentially unsatisfactory. It is greatly to be hoped that it will be possible for the Government to restore the former grant before the Trustees are compelled to impose further regrettable restrictions on the Museum's activities.

One change in the personnel of the Board has occurred during the year; Councillor W. Brinton has been appointed to succeed Councillor S. J. Hendrikz as the representative of the City Council of Capetown.

In the following pages detailed reports on the year's work at the Museum are given by the Director and the members of the staff in charge of the various departments.

THOS. MUIR,

Chairman of the Trustees.

REPORT OF THE DIRECTOR.

TO THE TRUSTEES OF THE SOUTH AFRICAN MUSEUM.

SIRS,—I have the honour to present my report on the work of the Museum for the year 1932. It is here set out under the usual headings.

Attendance of Visitors.—Though still reflecting the economic depression in remaining far below normal, the attendance is an improvement on that of last year. The figures show a rise of about 5,000: a total for 1932 of 113,072 as compared with 108,103 in 1931. The total was made up as follows:—

European	Adults	Male	31,500	
		Female	26,174	
	Children		25,163	
Coloured	Adults	Male	9,965	
		Female	9,458	
	Children		7,531	
Native	Adults	Male	2,435	
		Female	846	
			113,072	
Largest number in one day (27th December)			1,404	
Smallest number in one day (25th May)			43	
Total number for Sunday afternoons			29,642	
Largest number on a single Sunday afternoon (10th July)			1,171	

Parties from schools numbered 87, with a total of 2,340 pupils (corresponding figures for previous year 103 and 2,773).

Accessions.—The total accession of specimens is much below the average; not because there has been any falling off in gifts from outside but because there have been no collecting expeditions this year by the staff. In ordinary course the expeditions sent out by the Museum are by far the most important source of new material.

The following summary shows the year's accessions to the different departments:—

	<i>Specimens.</i>
Mammals	5
Birds	9
Reptiles and Amphibians	41
Fishes	33
Insects	500 (approx.)
Crustacea	47
Arachnids and Myriopods	2,128
Mollusca	63
Other Invertebrates	45
Botany	1,510
Geology, Mineralogy, and Palaeontology	96
Ethnology and Archaeology	900 (approx.)

Library.—All classes of matter—books, pamphlets and serials—continue to increase, and the problem of shelving-space will soon become acute again. Before long the existing shelves in the attic extension will have been filled up with periodicals and the stock of our own Annals, and the joists are not strong enough to carry shelving and books in the middle of the floor. Possibly some way may be found of getting over this difficulty and utilizing the space.

Requests for obtaining our Annals by exchange are continually being received, but our exchange list is already so large that additions to it can as a rule only be agreed to in cases where the Museum would benefit substantially. Subscriptions to indispensable oversea periodicals have been maintained. To avoid overlapping we make a practice of consulting the Librarian of the South African Public Library before purchasing books on such subjects as African anthropology or such large serial works as the reports of scientific expeditions.

Books are frequently lent to other museums and institutions and to Government departments, both in this country and in Rhodesia. The binding of important and frequently consulted serials has been maintained, but very much more binding would be done if it were possible to allocate the money to it.

The year's accessions to the library are tabulated below:—

Pamphlets and Serials:	
By donation and exchange	859
By purchase	153
Books:	
By donation	14
By purchase	29

Publications.—The issue of the *Museum Annals* has been cut down even more drastically than last year. One result is a large accumulation of matter which urgently calls for publication. Two parts of the *Annals* have appeared during the year, as follows:—

Vol. XXVIII, part 4 (134 pp., 3 pls., title-page and index).

Karoo Fossil Plants	By A. L. du Toit.
Fossil Plants from Uganda	„ A. L. du Toit.
Fossil Equidae of South Africa	„ S. H. Haughton.
Pareiasaurian Studies	„ L. D. Boonstra.

Vol. XXX, part 2 (231 pp.).

Reports on Marine Molluscs	By J. R. le B. Tomlin.
South African Machilidae	„ H. Womersley.
Terrestrial Isopoda	„ K. H. Barnard.

Collecting.—Under this head there is perhaps less to record this year than ever before in the Museum's history. The need for economy has led to our arranging no collecting expeditions, and except for a few odd days in the immediate neighbourhood and for Dr. Barnard's short trips (made under the Research Grant Board) to continue his studies of the mountain-top fauna, there has been no collecting by the staff.

Donations.—Some of the donations of the year call for special mention. A collection of gem stones, raw and cut, presented by Mrs. Goodban, filled one of the immediate needs of our exhibited collection of minerals. Captain Taylor, of one of Messrs. Irvin and Johnson's trawlers, has presented two rare fishes; and a "long-finned tunny", the first complete example received at the Museum, was presented by the Fisheries Survey. A fine male leopard killed on the Helderberg behind Somerset West, presented by Mr. Hennie Roux, is being mounted for exhibition. Mr. W. A. Philip has again done us a service, this time in presenting us with an example of a celebrated freak coin of South Africa, the "Sammy Marks gold tickety", hitherto representing one of the very few gaps in our collection. From Mr. W. Rawbone we have received a most interesting donation of firearms. It comprises twenty weapons which he had collected in the course of his business, all noteworthy historically or as embodying peculiarities of construction or design. Early in the year we received the remainder of the Frobenius collection of copies of rock paintings. These finely executed copies are thoroughly representative, and together with the photographic card catalogue they constitute a most important acquisition, both for reference and for public exhibition. They are a gift to the Museum from the Union Government.

GENERAL REVIEW OF MUSEUM WORK.

The year has fallen into two contrasted portions, the first dominated by the necessity for bringing the enlarged and re-arranged Museum into sufficiently presentable order for the reopening ceremony, the second devoted to consolidating some of the hastily won ground and taking up the threads of normal work again. The new mammal gallery (the upper floor of the new wing) was the part of the Museum which occasioned us the most anxiety and the most fevered work, for the range of wall casing was only completed a short time before the date fixed for the opening, and there was barely time to arrange the specimens and get the large area of glass cleaned and the floor prepared and polished. In other rooms, too, there was a good deal that had to be done in more or less haste during the last weeks or days: two stand cases in the Zimbabwe room, another in the stone implement room, a case of coins and a reproduction of a rock pool were among the jobs that kept us busy till almost the last moment.

The ceremony itself was held in the room opposite the head of the main staircase. This room had recently been opened up by the removal of the doorway and wall that cut it off from the stairhead, and it served the purpose very well. The walls were lined with a selection of Stow's copies of rock paintings (the gift of Miss Bleek); platform, seats and ceremonial chairs were lent to us by the Universities of South Africa and Capetown and by the Art Gallery, and palms and other decorative plants were lent from the Municipal Gardens.

Many new features, some temporary but most of them permanent, were put on view on this occasion. The mammal gallery, though still too small to hold all our mounted mammals, even when crowded together, at least

provides the great majority of them with dignified quarters—which could not be said of the old mammal room. The chief new feature here is a free-standing case (purchased second-hand some years ago but erected now for the first time) containing a group of springbok. The animals are admittedly crowded, but individually they are beautifully mounted and they fall into a very pleasing group. In the invertebrate room the most striking new exhibit is the rock pool. It is on the lines of one that I made many years ago for an English museum. We collected the material, both “scenery” and inhabitants, from tide pools at Sea Point and Glencairn, and built it up into as natural a reproduction as we could, fitting it into a large accumulator jar given to us by Mr. E. J. Steer. The whole was then mounted at eye-level on a pedestal, enclosed in a wooden screen and lighted from above by a mirror, with key-chart and lists of names shown on the screen round the opening through which the pool is viewed. As it was so nearly a “last-minute job” the seaweeds and animals had lost little of their natural colour, and the pool looked prettier on the opening day than it ever will again.

The geological department in its new quarters—the old mammal room, now with excellent top-lighting—had several interesting new sections to show, notably the Ross-Frames collection of diamonds and two cases illustrating past ice ages in South Africa. Of the departments which are not completely held up (on their public side) by want of show-cases the geological department is suffering the most from lack of new ones. The room it now occupies offers the possibility of a very good display, but it is at present filled, and that only partially, with a curious assortment of ancient and modern cases of very various patterns. The department of palaeontology now occupies the former art gallery rooms, connected by a newly-cut passage with the geology room. On the upper floor, devoted to fossil vertebrates, the Karroo fossil reptiles now make a much more striking show than they have done hitherto. This room is probably in almost its final form, but the ground-floor room below it, devoted to invertebrate fossils and general palaeontology, has still to undergo a good deal of development. Indeed, since the opening, two particularly pleasing cases have been added to it; both are evolutionary, illustrating respectively the evolution of the ammonites and the horses. A third smaller case illustrates the theory of the evolution of teeth. Finally, a small room on the ground floor has been turned into a map room. It is lined with geological maps of South Africa, while the centre of the floor is occupied by our fine geological relief map of the south-western Cape.

The wholesale re-arrangement of the Museum has brought anthropology and everything connected with man, early or contemporary, into one range of rooms, those to the east of the main entrance on the ground floor. This result would alone have justified the upheaval. In this section of the Museum there were several new features set out for the opening. The Zimbabwe collection as now displayed constituted one of them. First made in the early 'nineties by Theodore Bent and added to by Cecil Rhodes and others, it includes nearly all the more striking objects recovered from the ruins, but it had never been shown in such a way as it deserved. We have now installed it in two large wall-cases on an original plan, and we are, I think justifiably, proud of the result. One of the “last-minute” additions was a very perfect replica of the famous “Zodiac bowl”, now known to be a witch-doctor's divining bowl. The replica was made by Mr. Drury; the original, in the Rhodes' collection at Groote Schuur, was lent for the purpose by the Prime Minister.

In an adjoining small room our excellent collection of coins of South African interest was set out for temporary exhibition by Mr. A. N. Hayne. Arrangements for setting it out in finished form are complete and it will soon be on permanent exhibition. Apart from the large free-standing cases containing the life-casts of Bushmen and other natives, the main new ethnology gallery is still altogether without show-cases. It is designed to be furnished with a continuous range of wall-cases for the display of the ethnographical collections (and as these unique collections have for many years been suffering from exposure, the provision of cases is a very urgent need), but in the absence of cases we have lined the walls with canvas and are using them for showing drawings and photographs. During March and April (when the gallery was temporarily thrown open) the space was occupied by Brother Otto's remarkable collection of copies of rock paintings from the Kei River valley, lent by the Research Grant Board. For the opening ceremony we replaced them by a selection from the copies of paintings collected in the Union and Rhodesia by the Frobenius Expedition of 1929-30, and these paintings are still on exhibition. We have thus been able during the year to show selections from the three most famous collections of copies of rock paintings: those of Stow, Brother Otto and Dr. Frobenius.

It will be seen that in spite of the temporary shortage of cases we have managed to bring nearly all our exhibition space, old and new, into commission. There remain, however, three of the smaller rooms that are, for the time being, practically out of use. One is the central front room upstairs opposite the stairhead—the room in which the opening ceremony was staged. This is destined for the reptiles and amphibians, but we have so far no

cases for it at all. In the meantime it is being used for the display of some of Stow's copies of rock paintings, and it also provides a temporary position for the "Recent Acquisitions" case. The other two unused rooms are the small west rooms on the ground floor. One of them is likely to be taken over for a time by the Government Forest Department for an exhibit illustrating certain timbers and their application. The other we are now preparing to fit up as an insect room; the cases that will be finally needed are not yet forthcoming, but we are making a start with two old stand-cases brought back from the Koopmans de Wet House and a not-too-suitable case made for the projected war museum.

Among other items of the preparations carried out by the Public Works Department before the reopening was the supply of two massive teak double-bench seats for the new ethnology gallery and a large and handsome teak bench with stepped top for the display of the South African building stones. The bench was made to fit into the side of one of the short corridors leading past the stairhead and into the new geology room. The corresponding corridor on the opposite side is now used for the meteorites and some other massive geological specimens.

Routine work has naturally been interfered with to some extent through the exceptional character of the year, but, as the separate departmental reports will show, a large amount of systematic work on the collections has been accomplished. The running exhibit of fresh wild flowers on the entrance counter has been kept up without a break, and there has often been a fine and representative display. For contributions to it we have been indebted to various outside friends, including Mrs. Solly, Mrs. Earp and Mr. V. S. Peers. Miss Garabedian has collected for it on various occasions, but special mention must be made of one of the attendants, C. Lombard, whose expeditions in his spare time have been the principal source of our supply this year.

A large amount of label printing has been done during the year. All departments have been concerned in it, but those of geology and palaeontology have claimed the largest share. Our old printing press finally became too shaky for further use, and we have replaced it by another second-hand platen press of practically the same size and pattern.

Further details of the year's work will be found in the separate departmental reports which follow.

I am, etc.,

LEONARD GILL,
Director.

DEPARTMENTAL REPORTS.

DEPARTMENT OF MAMMALS AND BIRDS.

TO THE TRUSTEES OF THE SOUTH AFRICAN MUSEUM.

SIRS,—I have the honour to present my report on this department of the Museum for the year 1932.

The new public exhibition gallery for the mammals has been the main scene of activity as far as this department is concerned. At the beginning of the year this gallery was still in a half-finished condition, closed to the public and with many specimens standing in the open. A considerable length of the wall-casing was incomplete: we had the doors that were to form the fronts, but the bodies of the cases had yet to be built. It was only just in time that the Public Works Department succeeded in finding means to put this work in hand. The final arrangement of the gallery in readiness for the opening ceremony was a hurried affair, but the general effect when it was done was better than I expected—in view of the crowding that is still unavoidable. One definite addition has been made in the course of transferring the mammals to their new quarters. This is a special case containing a group of springbok, and considering that the case is really too small for the group it is surprisingly successful.

Though there has been less than usual going on in the department beyond the work in the gallery, we have had some valuable donations. The National Parks Board decided to weed out three old bontebok rams from the herd in the Bredasdorp reserve; we took the animals over and prepared the skins—one for ourselves and two for other museums. From Mr. Hennie Roux we received a fine male leopard killed on his farm Keerweder, on the Helderberg behind Somerset West. This was a most welcome gift; we have long needed a really good leopard, and I particularly wanted to fill the need with an example from as near Capetown as possible. The distance in this case was 28 miles, which is about as near as we are likely to get leopards nowadays—though they are holding their own in the mountains at that radius and beyond quite successfully still, to the annoyance of stock farmers.

In the bird section a particularly valuable donation was that of two of the rare little flightless rails (*Atlantisia rogersi*) from Inaccessible Island. They were a gift from the Rev. A. G. Partridge, and they were brought for us by Mr. J. W. Copenhagen when he accompanied the party who visited Tristan d'Acunha with H.M.S. Carlisle in January. Other birds have been presented by Mr. B. van Riet and Mr. E. L. Shelton; and nests and eggs by Major Grover, Mr. Handel Hamer and Mr. C. Wyndham.

I am, etc.,

E. L. GILL,
Director.

DEPARTMENT OF REPTILES AND AMPHIBIANS.

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to present the following report on this department for the year 1932.

Collecting was done at Leliefontein, Namaqualand, where several little known and poorly represented species were added to the collections.

Six specimens of the comparatively rare mountain lizard *Pseudocordylus* were shot at Kleinmond, near Hermanus, showing considerable variations of colour pattern. One series of specimens was sent to Mr. Hewitt, of Grahamstown, for description.

The additions to the collections are as follows:—

Snakes	4
Lizards	14
Frogs	23
TOTAL	41

The thanks of the Trustees are due to the following donors: Dr. K. H. Barnard, P. B. de Villiers, R. B. Woosnam, Stellenbosch University.

I am, etc.,

REGINALD F. LAWRENCE,
Assistant in Charge of the Department.

DEPARTMENT OF FISHES AND MARINE INVERTEBRATES.

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to present the following report on this department for the year 1932.

Exhibition Gallery.—At the suggestion of the Director a reproduction of a rock-pool has been constructed and set up in the Marine Invertebrate Room.

The most important specimen received this year and placed on exhibition is a large gastropod shell obtained and presented by the Fisheries Survey. Only one other

specimen is known, which was also obtained by the Survey and is now in the Durban Museum. This shell is a *Pleurotomaria*, one of a genus of deep-water and very rare shells. The present specimen is in good condition, but unfortunately lacks the operculum and also the animal, which apparently were not preserved.

Collecting.—Day visits to several localities in the Peninsula have been made for purposes of shore-collecting, both for the study collections and the above-mentioned reproduction of a rock-pool. I have also made several visits to the Cape mountain ranges in connection with my research work, in the course of which a considerable amount of material, insects and other invertebrates, was obtained.

Publications.—The following papers dealing with material from this department have been published during the year:—

Barnard: South African Woodlice. Ann. S. Afr. Mus. vol. 30, pt. 2.

Barnard: Note on *Doris kalkensis*. J. Conch. vol. 19, pt. 8.

Accessions.—During the year the following numbers of specimens have been added to the collections:—

	Specimens.	Species.	New to Collection.
Fishes	33	21	1
Crustacea	47	13	1
Mollusca	63	15	2

A number of other Invertebrates have been received, but have not been classified and registered.

The thanks of the Trustees are due to the following donors: H. W. Bell-Marley, C. L. Biden, E. G. Bryant, Major M. Connolly, Fisheries Survey, Dr. J. Muir, Dr. J. L. B. Smith, C. Sibbet, Capt. Taylor, Miss Wilman, and to members of the staff who have collected specimens for this department.

I have the honour to be,
Sir,
Your obedient servant,

KEPPEL H. BARNARD,
Assistant Director.

DEPARTMENT OF ENTOMOLOGY.

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to present the following report on this department for the year 1932.

During the first half of the year I was engaged in studying the various insects associated with or dependent upon the plant *Gnidia (Arthroseton) laxa* in the Western Province. This biocoenotic study is now in manuscript form and will be published in the Annals of this Museum during the course of 1933. In this paper the life histories, larval stages and pupae of several insects have been described and figured for the first time. Some new species, including new dipterous and hymenopterous parasites, have also been described and figured.

The latter part of the year was chiefly devoted to a study of the *Bombyliidae*, a revision of the South African species, which I have now begun and which will engage most of my time during the coming year, 1933. The genus *Bombylius* has been completed and for this genus alone about 40 new species from Southern Africa have been described in manuscript form. This revision is essential, and will prove to be of great value and of more importance than the previous monograph of Bezzi in the Annals of this Museum, in that a considerable number of new species will be incorporated and the male genital structures of most of the forms will be studied. For this purpose the Directors of the Transvaal, Rhodesia and Albany Museums have kindly placed all the material in their collections at my disposal.

A beginning has also been made at the end of this year with the drafting and printing of labels, notes and descriptions for species, genera and families of South African insects, with a view to setting out exhibits of local insects, with educational and economic sections and illustrations of various aspects of insect life, during the coming year. For this purpose a few suitable cases are now being prepared, and a very fine collection of Peninsula butterflies has already been obtained.

Owing to the economic position no organized collecting trips have been undertaken during this year, and apart from some insects obtained by Dr. K. H. Barnard and Mr. C. Thorne at Fransch Hoek and Naudesberg, no other insects have been acquired by members of the staff.

Accessions to the collection, about 500 specimens (approximately) are as follows:—

- (1) A small collection of insects, mostly beetles, from Capt. R. Stevenson, Bulawayo.
- (2) Some Peninsula and Cape Butterflies from Mr. P. R. Robertson, Muizenberg.
- (3) A few species of *Hemiptera* from Dr. Andreae (collected by H. Hauser), Capetown.
- (4) A few specimens of *Trissoclunna* from Prof. T. A. Stephenson, Capetown.
- (5) Miscellaneous insects collected by Dr. K. H. Barnard and Mr. C. Thorne at Naudesberg, Steenbras and Tulbagh.
- (6) Miscellaneous insects collected by Dr. K. H. Barnard and Mr. H. G. Wood at Fransch Hoek and Palmiet River.
- (7) Some insects collected by Dr. R. Lawrence in Namaqualand.
- (8) A representative collection of Peninsula butterflies purchased from Dr. Lunt.
- (9) A few insects presented by Mr. K. H. Key, Newlands.

The following material has been identified by specialists and returned to us this year:—

- (1) Some of the *Geometridae* sent to Dr. A. J. T. Janse, Pretoria.
- (2) *Psammocharidae* sent to Dr. G. Arnold, Rhodesia Museum.
- (3) Some South African *Hispinae* sent to Mr. E. Uhmann, Stollberg im Erzgebirge.

The following material has been sent out to specialists for study:—

- (1) Four specimens of *Hydracna (Gyrinidae)* to Dr. d'Orchymont, Brussels.
- (2) Some South African *Steninae (Staphylinidae)* to Dr. L. Benick, Lübeck.
- (3) Some more *Geometridae* to Dr. A. J. T. Janse, Pretoria.

The material still outstanding and in the care of specialists abroad remains the same as detailed in the reports for 1929 and 1930.

The following papers dealing with Museum material have appeared in:—

- (A) Transactions of the Royal Soc. of South Africa, Vol. XX.
 - (a) "South African May-flies (Ephemeroptera)", by Dr. K. H. Barnard.
- (B) Stylops, Vol. I, part 8.
 - (a) "The rediscovery of *Colophon thumbergi* Westw. with descriptions of further new species of the genus (Col., Lucanidae)", by Dr. K. H. Barnard.
- (C) Annals of the Transvaal Museum, where new species are described from South African Museum material by Dr. G. Arnold in parts of his monograph on the *Psammocharidae*.

The thanks of the Trustees are due to the following donors and collectors: Dr. Andreae, Dr. K. H. Barnard, Mr. K. H. Key, Dr. R. F. Lawrence, Mr. P. R. Robertson, Prof. T. A. Stephenson, Capt. R. Stevenson, Mr. C. Thorne and Mr. H. G. Wood.

I am, etc.,

ALBERT J. HESSE,

Assistant in Charge of the Insects.

DEPARTMENT OF ARACHNIDA AND MYRIOPODA.

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to present the following report on this department for the year 1932.

Owing to economic circumstances there has been little field work and collecting has therefore been sporadic; no long expeditions have been undertaken but collecting was done by different members of the Museum staff at various places near Capetown, among others Leliefontein in Namaqualand, Hermanus, Clanwilliam, Meirings Poort, Olifants Mountains and Table Mountain. A number of arachnids collected by Mr. Giffen at Mafeking in September have also been presented to the Museum.

A paper has been completed on the harvest spiders of Natal based on material sent to the Museum by Dr. E. Warren of the Natal Museum, who collected a large amount of material in the neighbourhood of Durban and Pietermaritzburg. This paper is appearing in the Annals of the Natal Museum.

The greater part of the year has been devoted to a study of the Acaris parasites of lizards, and for this purpose mites have been extensively collected. The work is still in progress; as the group is little known it is hoped that the study of these parasites will assist in throwing some light on the phylogeny of lizard families.

The arachnid and myriopod collections have been equipped with jars provided with tightly fitting glass stoppers to obviate the loss of type specimens through desiccation, which may inadvertently occur in a hot climate with a large spirit collection.

The material received during the past year from various sources which has been tabulated and incorporated in the collections is as follows:—

Araneae	65
Myriopods	92
Solifugae	2
Scorpions	13
Pseudoscorpions	10
Opiliones	101
Acari	1,845

TOTAL 2,128

The thanks of the Trustees are due to the following donors: Dr. E. Warren, Dr. Barnard, Dr. Hesse, Prof. C. de Villiers, Messrs. M. Giffen, G. V. Jackson, B. Peers, W. G. Rump, de Toit, W. Shepherd, Mr. Joubert, Miss Garabedian and Miss Pocock.

I am, etc.,

REGINALD F. LAWRENCE,

Assistant in Charge of the Department.

DEPARTMENT OF BOTANY.

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to present the following report on the work of this department for the year 1932.

Accessions.

Bolus Herbarium	20	specimens from the Cape Province.
K. H. Barnard	59	" "
H. G. Foucade	12	" Humansdorp.
Prof. Compton	8	" the Cape Province.
S. Garabedian	30	" Katberg, C.P.
S. Garabedian	39	" the Cape Province.
A. S. Hitchcock	86	" East Africa.
J. D. Lamb	1,030	" the Cape Province.
T. P. Stokoe	45	" "
Capt. T. Salter	50	" "
Various donors	131	" South Africa.

Exchanges.

Bolus Herbarium, Kirstenbosch; University of Stellenbosch; Smithsonian Institute, Washington, U.S.A.; Royal Botanic Gardens, Kew; University of Lund, Sweden.

Specimens Mounted and Incorporated.

954, including 27 genera and 88 species new to the Herbarium.

General Report.—Some good collections were made during trips taken in the Seven Weeks Poort, Meirings Poort, Worcester and Sneeuwgat areas. Dr. T. R. Sim rendered great assistance in the naming of the interesting collections of mosses made in the above districts and elsewhere.

We were fortunate in having presented to us by Mr. J. D. C. Lamb his entire collection of well over 1,000 plants, most of which were named. These are being mounted and will in due course be incorporated in the general collection.

Material of various genera, which was sent out on loan for purposes of revision, was returned, having been examined and where necessary redetermined according to the new arrangements within the genera.

Very great interest has been shown by visitors in the continued display of wild flowers in the Museum. Teachers have taken the opportunity of bringing parties of school children round to study the seasonal change of flora, and to become better acquainted with those flowers which are protected.

Determination of plants was carried out during the year for various institutions and assistance given regarding the economic values of certain plants.

I am, etc.,

S. GARABEDIAN,

Assistant in Charge of the Department.

DEPARTMENT OF PALAEOLOGY.

THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to submit a report on the working of this Department for the year 1932.

Accessions.—Owing to the fact that no money has been available for the purpose of undertaking collecting expeditions, the number of accessions has fallen far short of that of normal years. Additions to the collection have been entirely gifts from interested friends of the Museum. Among them ought to be mentioned two collections of fossil plants from the Wankie coalfields, one presented by A. R. Thomas, Esq., General Manager of the Wankie Collieries, and the other by B. Levy, Esq. To the Trustees of the American Museum of Natural History, New York, we are indebted for a useful and valuable collection of original material designed to illustrate stages in the evolutionary history of the horse. The total number of accessions is 82.

Exhibition Collection.—Considerable attention has been given to improvements in the method of display and to the provision of additional exhibits in the lower gallery. By the use of an even neutral-toned base the fossil invertebrates are now shown to better advantage than heretofore and it has become possible to dispense with the use of black trays.

From the gift-material donated by the American Museum, with the addition of certain plaster-casts of classic fossils purchased specially, it has been possible to arrange a special exhibit illustrating the stages in the evolution of the skull, teeth and limbs within the Horse family. A new wall-case was built to house this exhibit.

Another display of an evolutionary series is devoted to the Ammonites, specimens of which have been selected and treated with a view to showing the wide range in form in this group and the evolutionary trends within it. A third, smaller, case has been set up with plaster-casts of type teeth to illustrate the radial changes in the ungulate mammals since the early part of the Tertiary Period.

Research.—Dr. Boonstra has continued his intensive work on the Pareiasauria.

The following papers on material now incorporated in the collections have appeared during the year:—

- (1) *L. D. Boonstra*: On the Hind Limb of the two little-known Pareiasaurian Genera *Anthodon* and *Pareiasaurus*.
- (2) *L. D. Boonstra*: The Osteology and Myology of the Locomotor Apparatus of the Pareiasauria. B.—Fore Limb.

- (3) *L. D. Boonstra*: The Phylogenesis of the *Pareiasauridae*.
- (4) *L. D. Boonstra*: Paleobiologische Beskouinge oor 'n uitgestorwe Reptiel-groep (*Pareiasauridae*).
- (5) *L. D. Boonstra*: A Note on the Hyoid Apparatus of two Permian Reptiles (*Pareiasaurians*).
- (6) *A. L. du Toit*: Some Fossil Plants from the Karroo System of South Africa.
- (7) *A. L. du Toit*: Some Fossil Plants from the Gondwana Beds of Uganda.
- (8) *S. H. Haughton*: The late Tertiary and Recent Deposits of the West Coast of South Africa.
- (9) *S. H. Haughton*: The Fossil Equidae of South Africa.
- (10) *S. H. Haughton*: On Some South African Fossil Proboscidea.
- (11) *S. H. Haughton*: On a Collection of Karroo Vertebrates from Tanganyika Territory.
- (12) *A. C. Seward*: Fossil Plants from the Bokkeveld and Witteberg Beds of South Africa.

I am, etc.,

SIDNEY H. HAUGHTON,
Honorary Keeper of the Department.

DEPARTMENT OF GEOLOGY.

THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to present a report on the working of this Department for the year 1932.

Apart from a large piece of scheelite from Namaqualand presented by Mr. Rabinowitz, a specimen of the new mineral Bultfonteinite presented by Miss M. Wilman, tillite from Uganda presented by E. J. Wayland, Esq., and some rock specimens donated by the Geological Survey, there have been no noteworthy accessions to the collection.

The provision of a handsome stand made by the Public Works Department has enabled the somewhat inadequate collection of South African building stones to be re-exhibited.

Much new labelling has been done during the year.

The Director of the Trigonometrical Survey has very kindly presented the Department with an advance copy of the new topographical map of the northern half of the Cape Peninsula. This has been used as a basis for the construction of a geological relief model of the Cape Peninsula on a horizontal scale of 1:25,000. Data for the southern half of the Peninsula have been kindly supplied by the Surveyor-General of the Cape Province; and it is hoped to have the finished model on exhibition during the current year.

I am, etc.,

SIDNEY H. HAUGHTON,
Honorary Keeper of the Department.

DEPARTMENT OF ETHNOLOGY AND ARCHAEOLOGY.

TO THE TRUSTEES OF THE SOUTH AFRICAN MUSEUM.

SIRS,—I have the honour to present my report on this department for the year 1932.

So far as the public exhibition galleries are concerned, the recent changes and the present position are sufficiently indicated in my general review. The ethnographical collections, pending the provision of wall-cases for the new gallery, are still unprotected and continue to suffer from dust and damage by insects. Such objects as would stand the treatment have been given a prolonged bath this year in paraffin, as a check to the attacks of boring beetles.

Two valuable groups of objects have been presented; one representing a Bechuana tribe, from Dr. I. Shapira; the other representing various tribes of Nigeria and French Equatorial Africa, from Dr. Stanley Jackson. Dr. Shapira has been continuing his study of the Bakxatla tribe of Bechuanaland, and the present donation consists of various utensils (basket, wood and metal work) formerly in general use in the tribe and now disappearing under European influence. Among them is a war whistle, a rain-maker's horn containing a magic paste, and a complete outfit of divining bones given to Dr. Shapira by the same rain-maker. Dr. Jackson's donation includes a remarkable series of the dresses worn by the women of various Nigerian tribes, and among other objects a peculiarly shaped iron throwing-knife which actually functions as a boomerang.

In the archaeological section the chief acquisitions have been the implements and other remains collected by Mr. A. J. H. Goodwin (Honorary Keeper of the Department), with the help of Mr. Malan, from a cave near George and from the well-known cave at Cape St. Blaize, Mossel Bay. We are very greatly indebted to Mr. R. E. Dumbleton for putting us on the track of his cave near George and for the kind hospitality and help that he extended to the excavators. For other additions to the stone implement collection we have to thank Messrs. W. Norrie, J. Midgley and J. Hewitt,

and Dr. J. B. Lester. From the Magistrate of Ceres we have received a particularly fine Bushman cooking pot discovered in a cave in the mountains in his district; it is complete, measures 14 inches in depth and the same in diameter, and is unusually finely shaped. Dr. Petronella van Heerden has made further additions to the series of choice specimens which she has deposited with us on loan. Among those which she has added this year are a Still Bay "laurel-leaf" in fine quartzite from the Cape Flats, unusually long and narrow for this type of implement and unusually perfect in workmanship; and a replica of the celebrated "Willendorf Venus", one of the Aurignacian carved figures which represent the earliest known art work by any branch of the human race.

I am, etc.,

E. L. GILL,
Director.

KOOPMANS DE WET HOUSE.

TO THE TRUSTEES OF THE SOUTH AFRICAN MUSEUM.

SIRS,—I have the honour to present my report on this branch of the Museum for 1932.

Some important acquisitions were made early in the year, when the collection of Advocate R. P. Davis was put up for sale. With the help of the City Council's special grant (which was temporarily exhausted for the occasion) we made a number of purchases from this collection. Among them were a stinkwood display cabinet, a stinkwood christening table or dooptafeltje, three of the rare large plates with the V.O.C. monogram of the Dutch East India Company, and a Famille Rose plate with the arms of the Ahrens family. The display cabinet, which is of very graceful design, now stands on the landing upstairs; it not only adds an attractive feature as a piece of furniture, but also, by taking a quantity of valuable glassware, has enabled us to dispense with the last of the black museum cases which till now have spoilt the effect of the landing. The dooptafeltje is a good example of its kind, now very rare; and as we already possessed a fine christening bowl and ewer we now have a family christening outfit complete.

A few articles have been received by donation, among them a Dutch Bible with gold clasps from Mrs. A. Mostert, and a number of Dutch tiles of good quality decorated with biblical scenes, taken from an old house in Long Street and presented by Mr. W. Rawhone. The Misses Buys-kes, whose gifts and loans figure in all parts of the house, have deposited on loan a large collection of samples of old needlework, dating from the early years of the nineteenth century and earlier still, together with some interesting glass, pottery and kitchen ware.

The total number of visitors recorded for the year is 18,699. The average number in recent years has been about 26,000. The reduction in the number of visitors to the town has been longer in showing itself at the Koopmans de Wet House than at the Museum, but it has made itself felt this year in unmistakable fashion. The number of coloured people visiting the house has remained practically unchanged, with the result that their proportionate representation in the total attendance has risen to 6 per cent.

A break with the past has been caused by the resignation, from the end of September, of the resident caretaker, Miss M. Nothling. She left to get married, and as Mrs. Brand she takes with her the best wishes of all who knew her in her former post. She had lived at the House for thirty years, first with Mrs. Koopmans, then as caretaker from the opening of the House as a public Museum in 1913 down to September, 1932. It has been a fortunate thing that for practically the first twenty years of its existence as a public institution the House should have been in the care of one who knew it and its traditions so intimately and was so thoroughly devoted to its interests. The vacancy was advertised, and from the 150 applicants, a number of whom were interviewed by the Advisory Committee, Mrs. A. Lawton was selected as Miss Nothling's successor.

I am, etc.,

E. L. GILL,
Director.

SOUTH AFRICAN MUSEUM.
STATEMENT OF INCOME AND EXPENDITURE FOR THE YEAR ENDED 31st DECEMBER, 1932.

To Charges:—	£	s.	d.	By Grants:—	£	s.	d.	£	s.	d.
Salaries, Wages and Sunday time	5,231	13	11	Union Government				6,300	0	0
Library and Publications	597	1	5	Capetown Corporation: General	400	0	0			
Travelling and Collecting	45	9	10	Koopmans de Wet	100	0	0	500	0	0
Upkeep and Maintenance	530	11	6	Geological Survey, Share of Publications				105	10	10
Railage, Dock and Postal charges	114	6	10	Donation, Coin Fund				9	9	0
Koopmans de Wet Fund purchases	140	19	3	Exchange and Discount				107	15	6
Insurance	57	15	2	Interest received and accrued:—						
Water and Light	84	2	1	Union Government	81	14	5			
Uniforms	53	19	11	Savings Bank	16	7	0			
Apparatus	59	10	6	S.A. Association	4	10	0	102	11	5
Audit Fee	5	5	0	Sale of Publications	36	5	5			
Bank Charges	2	1	3	Sale of Guides	12	1	7	48	7	0
Interest credited	92	2	0	Balance, Excess Expenditure over Income				196	4	3
Provident Fund—Trustees' contribution	292	13	0					£7,369	18	0
Provident Fund—Adjustment	0	2	8							
Specimens	62	3	8							
	<u>£7,369</u>	<u>18</u>	<u>0</u>							

STATEMENT OF BALANCES AS AT 31st DECEMBER, 1932.

To Provident Fund	£	s.	d.	By Union Government Stocks (at cost)	£	s.	d.	£	s.	d.
Koopmans de Wet Special Grant Fund	1,998	8	6	Savings Bank Account				1,470	0	0
Hajee Sullaiman Shamahomed Coin Fund	92	1	5	Interest due but not paid				517	19	1
Balance at 31st December, 1932	1	10	4	Cash at Bank	984	17	5	10	9	5
	953	11	6	Petty Cash and Stamps	62	5	10	1,047	3	3
	<u>£3,045</u>	<u>11</u>	<u>9</u>					£3,045	11	9

Audited and found correct,
C. S. SCHMIDT,
Controller and Auditor-General.
Control and Audit Office,
Capetown, January, 1933.

E. L. GILL,
Director.

SOUTH AFRICAN MUSEUM.
HAJEE SULLAIMAN SHA MAHOMED COIN FUND.

	£	s.	d.		£	s.	d.
To Balance, 1st January, 1932	0	19	4	By Purchases	13	8	0
„ Interest	4	10	0	„ Balance	1	10	4
„ Donation, Mr. W. A. Philip	9	9	0				
	<u>£14</u>	<u>18</u>	<u>4</u>		<u>£14</u>	<u>18</u>	<u>4</u>

KOOPMANS DE WET S PECIAL GRANT FUND.

	£	s.	d.		£	s.	d.
To Balance, 1st January, 1932	133	0	8	By Purchases	140	19	3
„ Grant	100	0	0	„ Balance	92	1	5
	<u>£233</u>	<u>0</u>	<u>8</u>		<u>£233</u>	<u>0</u>	<u>8</u>

STAFF PROVIDENT FUND.

	£	s.	d.		£	s.	d.
To Balance, 1st January, 1932	1,695	6	11	By Insurance Payments	369	16	5
„ Trustee's Contribution	292	13	0	„ Accrued Interest	10	9	5
„ Members' Contribution	292	13	0	„ Balance :—			
„ Interest credited	87	12	0	Government Stocks	1,470	0	0
	<u>£2,368</u>	<u>4</u>	<u>11</u>	Savings Bank	517	19	1
					<u>£2,368</u>	<u>4</u>	<u>11</u>

THE LIBRARY OF THE
 UNIVERSITY OF ILLINOIS
 FEB 5 - 1940

Audited and found correct,

C. S. SCHMIDT,
Controller and Auditor-General.
Control and Audit Office,
Capetown, January, 1933.

E. L. GILL,
Director.



UNION OF SOUTH AFRICA

REPORT

OF THE

THE LIBRARY OF THE
FEB 5 - 1940
UNIVERSITY OF ILLINOIS

South African Museum

FOR THE

YEAR ENDED 31st DECEMBER, 1933

Published by Authority

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Trustees of the South African Museum :

SIR THOMAS MUIR, C.M.G., M.A., LL.D., D.Sc., F.R.S. (*Chairman*).
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W. J. THORNE, Esq.
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Advisory Committee for Koopmans de Wet House :

J. R. FINCH, Esq., O.B.E. (*Chairman*). PROF. W. A. JOLLY.
W. J. THORNE, Esq. FRANK E. CARTWRIGHT, Esq.
MAJOR W. JARDINE.

Staff of the South African Museum :

EDWIN LEONARD GILL, D.Sc., Director and Keeper-in-Chief.
KEPPEL HARCOURT BARNARD, M.A., D.Sc., F.L.S., Assistant Director; in Charge of Fish and Marine Invertebrates, and of the Library.
REGINALD FREDERICK LAWRENCE, B.A., Ph.D., Assistant in Charge of Reptiles, Batrachians, and Arachnids.
ALBERT JOHN HESSE, B.Sc., Ph.D., Assistant in Charge of the Entomological Department.
MISS STAR GARABEDIAN, B.A., F.L.A., Assistant in Charge of the Botanical Department; Assistant Librarian.
LIEUWE DIRK BOONSTRA, D.Sc., Assistant in Palæontology.
SIDNEY HENRY HAUGHTON, B.A., D.Sc., Honorary Keeper of the Geological and Palæontological Collections.
A. J. H. GOODWIN, M.A., Honorary Keeper of the Ethnological and Archæological Collections.
J. DRURY, Taxidermist and Modeller. J. LE ROUX, PRINTER.
MISS B. K. FERGUSON, B.A., Clerical Assistant. B. OLLEY, Head Attendant.
C. W. THORNE, Junior Botanical Assistant. N. HERBERT } Attendants.
 C. LOMBARD }

Koopmans de Wet House :

MRS. A. LAWTON, Resident Caretaker.
G. BINEDELL, Attendant. D. B. ZINN, Relief Attendant.

REPORT OF THE TRUSTEES FOR 1933

The Trustees of the South African Museum have the honour to present to the Government, in accordance with the provisions of Act No. 17 of 1857 (Cape), their report for the year 1933.

The year 1933 has presented a contrast with the two years preceding it. The extension of the building, with all the fundamental re-arrangements that it involved and the memorable ceremony in which it culminated, served to make those two years a period of upheaval and change. The past year has brought no such departure from the normal. Though by no means a year of marking time, as later sections of this report will show, it has not been a year of general progress so far as the public galleries are concerned, and for a sufficient reason. The Government has not yet been able to follow up the provision of the large additional floor and wall space by the corresponding equipment of show-cases. The Director and staff have done what was possible in the way of bringing old cases into use and adopting various other temporary measures. But the resumption of visible progress and the proper use of the extended space must necessarily depend almost entirely on the provision of the intended outfit of cases. The Trustees have been assured by the Government that the position is fully realized and that a beginning will be made towards rectifying it at the earliest moment possible.

The Government grant, almost the sole source of income for the Museum, still remains at the reduced level. The year's finances have in consequence presented the same picture as in the two preceding years, namely a continued raiding of the credit balance which had been built up before the depression to meet certain contemplated expenditures, and this raiding—representing an excess of expenditure over income of about £300—being called for in spite of a check in the publication of the *Annals* and an almost entire cessation of collecting work in the field. With the present signs of an easier financial position for the Union the Trustees look forward hopefully to a restoration of the Government's former grant.

Two of the benefactors to the Museum, Mr. Alfred A. de Pass and Mr. J. F. Minicki, have been specially thanked by the Trustees during the year for their gifts and services. To all the other donors who are mentioned later in this report the Trustees now offer their thanks. Details of the year's work in all the different departments will be found in the appended reports of the Director and members of his staff.

THOS. MUIR,
Chairman of the Trustees.

REPORT OF THE DIRECTOR

TO THE TRUSTEES OF THE SOUTH AFRICAN MUSEUM.

SIRS,—I have the honour to present my report on the work of the Museum for the year 1933. It is here set out under the usual headings.

Staff.—No member of the regular staff has left the Museum service, but two members have gone on long leave during the year. The Senior Botanist, Miss Garabedian, who left in May, has been granted an extension of leave to enable her to finish at Kew a piece of work—the revision of the leguminous genus *Aspalathus*—on which she has been occupied for some time in our herbarium. Dr. Boonstra, the Assistant in Palæontology, has gone to Europe on two years' study leave, with the help of a bursary from the University of Stellenbosch. At present he is working at the British Museum and under Prof. D. M. S. Watson at University College, London. A temporary addition to the staff is that of a lady, Miss Margaret Shaw, who has been engaged since the beginning of May in overhauling our ethnological material; a much-needed piece of work to which further reference will be made. Miss Ferguson resigned the position of Clerical Assistant in September, but having returned a little later as Mrs. O'Dowd to continue her work for a few months, she is not here reckoned as having actually left the staff. When she does leave her going will be greatly regretted.

One definite and serious loss, however, has befallen us at the very end of the year. A well-earned promotion has taken Dr. S. H. Haughton to Pretoria as Director of the Geological Survey. First as a scientific assistant in palæontology, and later, after he had joined the Geological Survey, as Honorary Keeper of the same department and finally of general geology as well, he had been connected with the Museum for over twenty-two years. The wide range and precision of his knowledge, always at the service of the Museum, would alone have made him a valuable colleague; but at least as valuable was his sound and balanced judgment in affairs. I personally feel his departure as a great loss.

Attendance of Visitors.—In normal years our attendance of visitors used to total 130,000 to 140,000. The depression brought it down markedly; in 1931 to as low a figure as 108,103. In 1932 it rose by 5,000; in 1933 it was again down a little, the year's total being 110,536.

This total was made up as follows:—

European	Adults	Male	29,422
		Female	26,033
	Children		25,257
Coloured	Adults	Male	9,418
		Female	9,413
	Children		8,022
Natives	Adults	Male	2,146
		Female	825
			110,536

Largest number on one day (2nd January)	1,762
Smallest number on one day (29th July)	44
Total number for Sunday afternoons	32,397
Largest number on a single Sunday afternoon (14th May)	1,757

Parties from schools numbered 139, with a total of 3,276 pupils (corresponding figures for previous year 87 and 2,340).

Accessions.—The remarks made under this heading in last year's report, as to the effect of the virtual suspension of field work on the number of specimens acquired, apply again this year. The following table shows the year's accessions in the various departments:—

	<i>Specimens.</i>
Mammals and Birds	16
Reptiles and Amphibians	136
Fishes	104
Insects	1,000 (approx.)
Crustacea	87
Arachnids and Myriopods	5,013
Mollusca	224
Botany	215
Geology, Mineralogy, Palæontology	327
Ethnology and Archaeology	350 (approx.)

Library.—The library continues to grow, and another critical period in the housing of the serials is not far off. The year's accessions numerically are shown below:—

Pamphlets and Serials:

By donation and exchange	733
By purchase	18

Books:

By donation	3
By purchase	18

Publications.—The reduction of our grant has continued to put a brake on scientific publication, and only one part of the *Annals* has actually been issued during the year. But the restriction is not quite so severe as it appears, since two other parts, one palæontological and the other zoological, were on the point of being issued when the year ended. The part actually published forms the conclusion of a botanical volume (Vol. XVI) which has long been in arrear. It consists of three papers by the Misses Pocock and Rich on the genus *Volvox* in South Africa, and it makes a noteworthy contribution to the biology of these curious and lowly aquatic organisms.

A publication of a very different sort is that of a set of picture postcards of the *Koopmans de Wet House*. There are twelve cards in the set, bound together in booklet form; we are able to sell them at one shilling the set, and they are selling very well.

Collecting.—Once more, owing to restricted funds, no major collecting expedition has been attempted during the year. Various members of the staff have, however, made short trips; to the River Zonder End and Hex River districts for instance, and in the case of Dr. Lawrence to some of the nearer districts of the Eastern Province. Considering the small scale of these expeditions their results have been very good.

Donations.—Donations of all kinds are pretty constantly being received by the different departments, but only a few of the larger ones are here referred to. An important addition to our historical relics is a series of fragments of Jan van Riebeeck's tombstone. We already possessed a small portion of the inscription; it was obtained for us a good many years ago from Batavia through the kind offices of Mr. J. de V. Roos. For the stimulus which has led to our receiving the remaining known fragments we are indebted to Mr. J. G. Gubbins. They are a gift from the Royal Batavian Society of Arts and Sciences with the concurrence of the Batavian Government. The manner in which they are being dealt with is described later.

Mr. Alfred A. de Pass has continued to make additions to what we must now call the *De Pass Room*—the room in which are shown his choice representative collections of art objects from Egypt, Greece, China, Persia and other parts. He has given us four Moorish copper bowls, finely engraved and inscribed, and two corner cases, specially made to his order, for the two well lighted corners of the room. These corner cases have enabled us to relieve the overcrowding in some of the other cases; the Chinese pottery and jade, in particular, are now much better shown than before. Mr. de Pass has also bought for us (the consignment was on the way at the close of the year) a collection of early Israelite pottery from the recent excavations on the site of Jericho, and has ordered a case to contain it.

Other notable donations, which are mentioned later, are the additions to the fish collection by Mr. C. L. Biden, the birds presented by Mr. B. van Riet, and the regular supplies of fresh wild flowers from Mr. J. F. Minicki.

GENERAL REVIEW OF MUSEUM WORK.

The time of most members of the Museum staff is divided in some proportion or other between research work on the collections under their charge and work on the exhibition cases for the special benefit of the public. The proportion of time spent in either direction varies from year to year. The amount devoted to research is nearly always large, because so much is still unknown about most groups of the animal and vegetable kingdoms in South Africa that any attempt to classify the collections necessarily leads into systematic research. In the year that has just passed there has been perhaps less show-case work than usual, for we are now definitely held up by lack of new cases for the exhibition work that we want to do. Our exhibition space has been greatly extended and we have no new cases yet to fill it. We have disguised the consequent emptiness as well as we can by using old cases from storerooms and other sources, by covering bare walls with pictures, and by closing certain parts of the Museum to the public. But on the public side of our work we can make no considerable advance now until the Government finds it possible to begin supplying cases to equip the added space that we have been so fortunate as to secure.

It must not be understood, however, that no "show-case work" has been done this year. Dr. Barnard's introductory exhibit to the shell collection and Dr. Hesse's beautiful case of Peninsula insects are excellent examples of such work—though the insect case in its present temporary position is so badly lighted and cramped that it is largely wasted. (It is designed for the new insect room, which is one of the parts we have had to close.) A good deal has been added also to the exhibits in the fossil rooms and the geology room. Further additions have been rendered possible, too, by the purchase of some old desk cases from the Publicity Association. These have been adapted to our purposes, and five of them have been ranged under the windows of the Stone Age room to house a most valuable series of implements from the classic Stone Age sites of Europe. This series was collected for us by Mr. Goodwin, and he has arranged and labelled it for comparison with the corresponding Stone Age types of South Africa.

The three remaining cases of this set, one a double desk-case, are being utilized by Miss Shaw for the exhibition of a little of our ethnological material—chiefly the smaller objects of Bushman workmanship. This is a notable event in that it will constitute the first public exhibition of any part of our large and very valuable collection of ethnological material. In comparison with what we have to show as soon as our new ethnology gallery is equipped with cases it is a drop in the bucket, but at least it is a beginning.

When the new cases do arrive we shall be ready to fill them at once, for Miss Shaw's work has been thorough and successful, and the masses of specimens which she has sorted out and treated are now in condition for immediate exhibition. On the whole they have survived their long period of storage and exposure to destructive agencies a good deal better than we had any right to expect. But it is all the more to be hoped that their final housing in good show-cases will not be much longer delayed. It will be more than a pity if we are compelled to see them lapse again into the state from which they have just been so happily rescued.

Two of the many jobs that Mr. Drury has had in hand call for particular mention. One is the mounting of a skeleton of the false killer whale (*Pseudorca*). It is the skeleton of an old bull whale, nearly 20 feet long, from the herd of about a hundred that came ashore on the Cape Peninsula at Kommetje at Christmas of 1928; the first known occurrence of this erratic whale in African waters. We prepared the skeleton mainly by burial in sand. Though not quite the first complete *Pseudorca* skeleton to be mounted, it is very nearly the first and is pretty certainly the best. It is shown in the whale shed suspended from the roof above the skeleton of its nearest relative the true killer. Another and still more valuable whale skeleton has been dealt with during the year, namely that of the pigmy whale, *Neobalaena*. Our Simonstown specimen of this very rare and peculiarly interesting whale has been standing in the open in the whale shed for ten years or more and was beginning to suffer from exposure. We have now put it into perfect order again and enclosed it in a glass case made to fit it.

The other of Mr. Drury's jobs referred to above concerns the van Riebeeck tombstone. The gift of the further fragments from Batavia has already been noted. Though they comprise only a small area of this very large stone, it happens that they give us (together with the known wording of the inscription) enough to go upon to make a complete reconstruction possible, and it is this reconstruction that Mr. Drury has carried out with much ingenuity and complete success. It embodies all the actual fragments that carry anything in the way of lettering and decoration. The final colouring and mounting still remain to be done, but the reconstructed tombstone will be built up in place before next April, when, on van Riebeeck's Day, it is to be unveiled by the Netherlands Minister, Dr. Lorentz, who on behalf of the Batavian Government will formally hand over the remains of the tombstone to the Union of South Africa.

The running exhibit of fresh wild flowers on the entrance counter has been maintained throughout the year. We have in fact been enabled to keep up a particularly good display with a minimum of trouble to ourselves through the extraordinary kindness of Mr. J. F. Minicki, a progressive farmer of the Cape Point area, who has sent us every week a large supply of flowers, in excellent condition, from the varied types of ground on his farm. Mr. Minicki has protected his veld energetically for some time against fires and pickers, and his sustained generosity in giving us and our visitors the benefit of this protection deserves wide recognition.

More detailed information as to the acquisitions made and the work done (both scientific work and work for exhibition) in the different departments will be found in the sectional reports which follow.

I am, etc.,

LEONARD GILL,
Director.

DEPARTMENTAL REPORTS

DEPARTMENT OF MAMMALS AND BIRDS.

TO THE TRUSTEES OF THE SOUTH AFRICAN MUSEUM.

SIRS,—I have the honour to present the following report for the year 1933 on the Department of Mammals and Birds.

There has been practically no collecting by the staff for this department. I collected and mounted a few malachite sunbirds (from Mr. van der Horst's farm at Kommetje), but otherwise the birds added to the collection this year have been presented, the chief donors being Mr. B. van Riet, Capt. C. W. R. Knight and Dr. E. E. Mossop. Captain Knight's gift was that of a fine adult female Verraux's eagle (*dassievanger*) killed by a farm hand near Stellenbosch.

In the Mammal section the most important work carried out has been the mounting of the skeleton of the false-killer whale (*Pseudorca*) and the remounting and casing of the skeleton of the pigmy whale (*Neobalaena*). These have been referred to in my general report.

I am, etc.,

E. L. GILL,
Director.

DEPARTMENT OF REPTILES AND AMPHIBIANS.

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to present the following report on this department for the year 1933.

Though no long expeditions were undertaken for the purpose of collecting reptiles, considerable additions were made in this department by various collectors, many not on the Museum staff.

Several species new to the collections were contributed during the year, notably from Hogsback, Amatola Mts., and Montagu Pass. Although attempts are being made every year to fill up the gaps, there are still many important and rare species of lizards not in the possession of the Museum, especially those from the Northern Transvaal and Zululand. It is hoped to rectify this by an exchange of reptiles shortly to be undertaken with the Transvaal Museum at Pretoria, which will be greatly to the benefit of the South African Museum. A general improvement in preservation methods has been effected by using better stoppered jars for preventing the large-scale evaporation of spirit which is so prevalent in study collections.

The following acquisitions have been made during the year:—

	<i>No. of Specimens.</i>	<i>No. of Species.</i>
Frogs	61	11
Lizards	72	21
Snakes	3	3
TOTALS	136	35

The thanks of the Trustees are due to the following donors: Wilmot; K. Tasman; C. Hahn; C. Wood; W. Thorne; B. Peers; K. H. Barnard; A. J. Hesse; R. A. Cook; B. Levy; H. E. Lomborg.

I am, etc.,

REGINALD F. LAWRENCE,
Assistant in Charge of the Department.

DEPARTMENT OF FISHES AND MARINE INVERTEBRATES.

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to present the following report on this department for the year 1933.

Exhibition Galleries.—A fine specimen of the Yellow-tail (*Seriola lalandei*) weighing 47 lb., and a specimen of the Moon-fish (*Trachynotus russellii*) have been mounted. Casts have been made of the Common Sting-ray (*Dasybatis pastinaca*), and of another species which seems to be the Purple Sting-ray (*D. purpurea*). The latter species is only known from a drawing made by Dr. A. Smith in 1833, since when no specimen has come under the observation of scientists or museum officials. Its deep purple colour distinguishes it from other South African species. The Museum is indebted to Mr. C. L. Biden for this very interesting specimen.

The exhibited series of South African Land and Marine Shells has been re-arranged and relabelled. An introductory series of specimens showing the general structure and the names of the various parts of the shell used in classification has been included. A certain number of specimens has been withdrawn from exhibition pending the construction of further wall-cases.

<i>Accessions.</i>	<i>Specimens.</i>	<i>Species.</i>	<i>New to Collection.</i>
Fishes	104	65	4
Crustacea	87	16	3
Mollusca	224	43	5

Other invertebrates have not yet been identified and registered.

The additions to the fish collection include a very valuable series of Natal fishes obtained by Mr. C. L. Biden. Mr. Biden has also contributed numerous specimens from False Bay, some of which constitute new records for this locality; and also a series of the Panga (*Pagrus lanuarius*) exhibiting in varying degree a malformation of the head known as Pug-nose (simocephaly).

Mr. Bell-Marley continues to forward from time to time examples of Natal Crustacea, several of which prove to be undescribed species or new records for South African waters.

In addition to collecting by the staff, Dr. J. L. B. Smith, of Grahamstown, has interested himself in the collection of small shells of the genus *Gulella*, and has submitted a large number for identification, permitting the Museum to retain a series.

Mr. Marshall presented a rare fish and a sample of the "krill" or whale-food (*Euphausia superba*), obtained during a visit to South Georgia.

Collecting and Research.—In response to a request to examine the organisms on ships' bottoms in connection with fouling, I examined a small yacht in Table Bay and the S.A.T.S. "General Botha" at Simonstown. The latter, after lying at anchor in one locality for three years, was particularly interesting, and the specimens collected included a new species of Blenny.

In collaboration with Mr. W. J. Copenhagen and Mr. E. J. Steer I have undertaken to examine and report on the zoo-plankton of a series of plankton catches which are being taken regularly in Table Bay. Research of this nature has not previously been done in South Africa, and Mr. Copenhagen, who is organizing the investigation, anticipates that the results will be of great importance from several points of view. Already from the point of view of the museum collections material of great value for the working out of the life-histories of local marine organisms has been obtained.

I have made several visits to the mountains of the S.W. Cape in connection with my researches on the terrestrial and aquatic fauna.

Publications.—The following papers deal with material from this department:—

A new *Theutacera* (Nudibranchiata). *J. Conch.* xix. K. H. Barnard.

S. African Echinoderms. *Vidensk. Medd. Dansk. Foren.* xciii. Th. Mortensen.

Dr. Mortensen's paper deals mainly with his own collections, but during his visit here in 1929 he examined the S.A. Museum collection, and since then several specimens have been sent to him for critical study.

The thanks of the Trustees are due to the following donors: H. W. Bell-Marley, C. L. Biden, W. J. Copenhagen, Dr. E. L. Gill, A. C. Harrison, Messrs. Irvin & Johnson, Dr. R. F. Lawrence, B. C. Marshall, Dr. J. Muir, Dr. J. L. B. Smith, Captain Taylor, J. Tyers.

I have the honour to be,

Sir,

Your obedient servant,

KEPPEL H. BARNARD,
Assistant Director.

DEPARTMENT OF ENTOMOLOGY.

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR.—I have the honour to present the following report on this department for the year 1933.

The greater part of this year was devoted to a continuation of the revision of the South African *Bombyliidae*, a study which is progressing very slowly owing to the numerous species which have to be examined, studied and figured. During the course of the year I was also engaged in a study of the biology and developmental stages in the life histories of our two known marine Chironomids. Several trips were undertaken to Mouille Point and St. James and the results of these investigations will be published during the course of 1934. A short collecting trip to Oudebesch at Rivier Zonder End, for the purpose of collecting some forest insects and especially for obtaining the early stages and adults of certain Tipulids, was undertaken by Messrs. Wood, Thorne, Dr. Lawrence and myself. Dr. Lawrence collected some insects in the Eastern Province during the year and Dr. Barnard, in company with Mr. Wood and Mr. Thorne, obtained some insects on the Hottentots Holland Mountains, Groot Winterhoek Mountains, Hex River Mountains, and Groot Drakenstein. On the whole, however, comparatively little collecting was done during this year and no extensive trips were undertaken.

Mr. H. G. Wood has been carrying on important investigations in the Museum during the year in connection with the early stages and adults of South African *Tipulidae*, a family which he is attempting to revise on more scientific lines. Dr. K. H. Barnard is also contributing to this department by arranging and studying certain important aquatic insects, such as the *Odonata*, *Perlaria* and *Ephemeroptera*. During the year I have also pinned out, arranged and labelled a fairly representative collection of Peninsula insects, which include a very comprehensive collection of endemic butterflies. This collection, suitably displayed in a glass case, is now an attractive feature in one of the exhibition rooms.

Accessions to the collection, comprising 1,000 specimens (approx.), are as follows:—

- (1) Miscellaneous insects collected by Mr. A. Cuthbertson, Salisbury.
- (2) A few named Hymenoptera from Mr. R. Turner.
- (3) Some Cape butterflies from Mr. P. Robertson, Muizenberg.
- (4) Miscellaneous insects collected by Drs. Barnard, Lawrence, Mr. Wood and Mr. Thorne.
- (5) A small collection of forest insects from Oudebosch, collected by the Museum staff.
- (6) Various insects from Prof. Barnard, Mr. R. Dekenah, Dr. Nellie Paterson and Mr. Whitworth.

The following material has been identified and returned by specialists during this year:—

- (1) Some South African *Hispanae* (Col., *Chrysomelidae*) sent to Dr. E. Uhmann, Stollberg-Erzg.
- (2) A few specimens of *Gyrinidae* sent to Dr. d'Orchymont, Brussels.
- (3) *Cicindelidae* sent to Dr. Walther Horn, Berlin-Dahlem.
- (4) Some *Geometridae* sent to Dr. A. J. T. Janse, Pretoria.

The following material has been returned unnamed:—

- (1) A miscellaneous collection of *Hemiptera* returned by Mr. W. E. China, British Museum.
- (2) A collection of *Acridiidae* (Locusts) returned by Dr. B. Uvarov, Imperial Bureau of Entomology.

The following material has been sent out to specialists on request:—

- (1) Some unnamed Aretiid-moths to Mr. G. van Son, Transvaal Museum.
- (2) A batch of unnamed Geometrid-moths to Dr. A. Janse, Pretoria.
- (3) Most of our unnamed Eumenid-wasps to Dr. A. Soika, Venice.
- (4) Some unnamed *Nothiophygus*-beetlers to Dr. Walther Horn, Berlin-Dahlem.

The material still outstanding and in the care of specialists abroad remains the same as detailed in the report for 1930 except for the *Hemiptera* returned by Mr. W. China and the *Orthoptera* returned by Dr. Uvarov.

The following papers dealing with Museum material or to which Museum material contributed have appeared in print:—

- (1) "A New Genus of Corduline Dragonfly from South Africa (*Odonata*)" *Stylops*, Vol. 2, part 7, p. 165; by K. H. Barnard.
- (2) "Weitere Steninen Sudafrikas (Col. *Staph.*)" *Stell. Entom. Zeit.* Heft 11, P. 300, 1933; by L. Benick.
- (3) "The Moths of South Africa", Vol. II, part 1; by A. J. T. Janse.
- (4) "Two new South African species of *Dixa* (*Diptera*)."
The Entomologist, Vol. LXVI, p. 154; by H. G. Wood.
- (5) "Notes on the South African *Bittacidae* (*Mecoptera*)."
Ann. Mag. Nat. Hist. Vol. XII, Ser. 10, p. 508; by H. G. Wood.
- (6) "A revision of South African Moths of the Tribe *Nolini*".
Ann. Tvl. Museum, Vol. XV, part 11, p. 181; by G. van Son.

The thanks of the Trustees are due to the following donors and collectors: Dr. K. H. Barnard, Prof. T. T. Barnard, Mr. A. Cuthbertson, Mr. R. Dekenah, Dr. R. F. Lawrence, Dr. Nellie Paterson, Mr. P. Robertson, Mr. C. Thorne, Mr. R. Turner, Mr. Whitworth and Mr. H. G. Wood.

I am, etc.,

ALBERT J. HESSE,

Assistant in Charge of the Insects.

DEPARTMENT OF ARACHNIDA AND MYRIOPODA.

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to present the following report on this department for the year 1933.

A large part of the Arachnid and Myriopod collection has been transferred to glass-stoppered jars during the course of the year, so that at least all types and rare species are much less liable to suffer damage from dessication than formerly.

The acquisitions to the collections show a large increase in two groups, the Acari and Myriopoda, special attention being paid to these two orders. A large number of mites parasitic on lizards have been collected, and for this purpose special visits were made to the Museums at Grahamstown and Pretoria where the large reptile collections proved a rich storehouse of material. In addition ordinary collecting in the field was carried out at Hogsback, Amatola Mountains, certain areas round Grahamstown and van Haven's River. Towards the end of the year a short expedition by members of the Museum staff was unfortunately cut short by rain, but some interesting forms of Peripatidae and Myriopoda were obtained. At the beginning of the year a paper on

the Harvest Spiders of Natal was published in the Annals of the Natal Museum; but the main work of the year has been the systematic study of the parasitic mites of South African lizards; for this study the requisite material has now been brought together and it is hoped that the first section of the work on the mites of the lizard families Zouroidae and Gerrhosauridae will shortly be published.

The following table represents the acquisitions made during the year:—

	<i>No. of Specimens.</i>	<i>No. of Species</i>
Acari	3,580	217
Myriopoda	653	78
Opiliones	433	41
Araneae	221	67
Pseudoscorpions	60	3
Peripatidae	37	4
Scorpiones	25	4
Solifugae	4	2
TOTAL	5,013	416

The thanks of the Trustees are due to the following donors: K. H. Barnard, A. J. Hesse, W. C. Thorne, C. Hall, M. Oosthuizen, B. Peers, V. FitzSimons, J. H. Power, W. A. Keeley; R. Stalker, R. Jurisch, J. Drury, H. Wood, the Rev. K. Tasman, Miss S. Manton, Miss J. Eyre.

I am, etc.,

REGINALD F. LAWRENCE,
Assistant in Charge of the Department.

DEPARTMENT OF BOTANY.

TO THE TRUSTEES OF THE SOUTH AFRICAN MUSEUM.

SIRS,—In the absence of the Senior Botanist, Miss Garabedian, I am reporting briefly on this department, chiefly from information supplied by the Junior Botanical Assistant, C. Thorne.

Miss Garabedian has been away on long leave for the latter half of the year. During the earlier half she was largely occupied in her revision of the difficult leguminous genus *Aspalathus*. She has been granted an extension of leave to enable her to continue and complete this revision at the Kew Herbarium.

The following is a list of the principal donors and accessions:—

Dr. K. H. Barnard	18 specimens, Cape Province.
Capt. T. M. Salter	13 specimens, Cape Province.
Mr. W. Jacobson	8 specimens, Cape Province.
C. Thorne	94 specimens, Cape Province.
Miss Wilman	46 specimens, Rhodesia, S.W. Africa.
Various donors	36 specimens, Cape, S.W. Africa.

Specimens mounted and incorporated numbered 390; they included 9 genera and 46 species new to the Herbarium.

During the short collecting trips made by members of the staff for other purposes some good collections of mosses were made, especially in the Oudebosch (River Zonderend) and the Hottentot's Holland Mountains. Dr. T. R. Sim has again very kindly named the mosses for us.

As in previous years, a large number of plants have been identified for visitors and for municipal and Government departments. A good deal of material has also been sent out on loan to specialists for study and determination.

Our very special thanks are due—and have been expressed by the Trustees—to Mr. J. F. Minicki for his weekly supplies of fresh wild flowers for our flower counter (see p. 9). We are also much indebted to Miss W. Wilson, who in Miss Garabedian's absence has given us any assistance that was needed in the naming of the flowers.

I am, etc.,

E. L. GILL,
Director.

DEPARTMENTS OF GEOLOGY AND PALAEOLOGY.

THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to submit reports upon the working of these two departments for the year ending 31st December, 1933.

Geology.—This Department has remained in the same condition throughout the year, the only additions of note being some beautiful specimens of "leaf" or "tree" gold donated by the Central Mining and Investment Corporation. These were obtained from a secondarily filled fissure in the City Deep Mine, Johannesburg. We are also indebted for various specimens of rocks and minerals to the Geological Survey, Miss M. Wilman, and W. J. Copenhagen, Esq.

During the year a paper by Professor L. Cayeux on "Phosphatic Nodules from the Agulhas Bank" was translated and sent for publication in the Annals of the Museum.

Palaentology.—The accessions during the year are classified as under:—

Invertebrates:	
Bokkeveld	50
Cretaceous	145
Tertiary and Recent	7
Vertebrates:	
Karoo	3
Tertiary	26
Plants:	
Bokkeveld and Witteberg	17
Karoo	33
TOTAL	281

All of these have been added to the collection by donation, since it has been impossible for financial reasons to undertake any collecting expedition during the year. The thanks of the Trustees are due to the following for increasing the value of the collections at a time when the department was unable to assist in this direction: Col. R. W. Hallack, Drs. T. F. Dreyer, A. L. du Toit, T. W. Gevers, A. Morley Davies, L. J. Krige, E. Reuning, Messrs. J. Burmester, H. F. Frommurze, L. Laurensen, B. Levy, J. Trotskie, C. van Riet Lowe, J. F. van Wyk, F. A. Venter.

On the exhibition side no changes of moment have taken place. By gift of the Geological Survey, it will be possible to exhibit a number of large and medium-sized ammonites from the Cretaceous beds of Zululand, when these have been prepared and critically examined.

Dr. L. D. Boonstra was granted two years' study leave by the Trustees, and left for England during the latter half of the year. Before going, he prepared the skeletons of several *Gorgonopsia* previously collected by him and made ready for the press a paper describing their post-cranial skeletons, which represents a considerable increase in our knowledge of this very interesting group of fossil reptiles.

The following papers either appeared during the year or were on the point of publication at the end of the year:—

- R. S. Adamson:* Fossil Plants from Fort Grey.
L. D. Boonstra: Pareiasaurian Studies: IX. Cranial Osteology; X. Dermal Armour; XI. Vertebral Column and Ribs.
L. D. Boonstra: The Geographical Distribution of the Pareiasauria within the Karroo Basin.
L. D. Boonstra: 'n Metode in Gebruik vir die Opgraving van die Pareiasauriërs.
I. Cayeux: Phosphatic Nodules from the Agulhas Bank.
S. H. Houghton: Karroo Fishes from Central Africa.

I am, etc.,

SIDNEY H. HAUGHTON,
Honorary Keeper of the Department.

DEPARTMENT OF ETHNOLOGY AND ARCHAEOLOGY.

TO THE TRUSTEES OF THE SOUTH AFRICAN MUSEUM.

SIRS,—I have the honour to present a report on these departments for the year 1933.

It has been an important year for the Department of Ethnology; for though we are still waiting for the cases in which to exhibit the collection, we are at last relieved of the long-standing anxiety as to the fate of the material composing it. In the shed in which it has been stored for many years the ethnological collection has been exposed to so many risks of damage or destruction (risks that we were only able in part to guard against) that we had cause to fear considerable losses. During this year we have been able to secure the temporary services of a well qualified lady, Miss Margaret Shaw, and to get her to overhaul the entire collection, removing it, in the process, from the old store shed to the comparative safety of a space partitioned off from the inner end of the new ethnology gallery. I am happy to be able to report that the objects in general prove to have suffered comparatively little damage. Many have been attacked by boring beetles, the worst agent of destruction among such objects in this country, but cases of irreparable damage are very few, and the collection in general looks encouragingly fresh after Miss Shaw's sorting and cleaning.

The great thing now is to get the best of the objects housed and displayed as soon as possible. They are in good order again now, but even in their present quarters we have no means of keeping them so for very long. Good exhibition cases are the only permanent safeguard. We are therefore anxiously awaiting news of the Government's intention to equip the new gallery with the outfit of wall cases for which it was designed. We are ready to fill the cases at once, for Miss Shaw has investigated the history of the specimens while she was handling them, and they are all classified and prepared for labelling.

As already stated (p. 9), a small number of selected objects are already set out for temporary exhibition in some of the desk cases purchased from the Publicity Association.

The rest of these desk cases have been adopted by Mr. Goodwin for the archaeological section. He has set out in them a most valuable series of implements from the classic Stone Age sites of Europe and North Africa, for comparison with the closely corresponding types of implements from South and East Africa. The Palaeolithic implements were collected by Mr. Goodwin during his recent archaeological tour in Europe, and he has continued the series to later ages by drawing upon our pre-existing stock of Neolithic and Bronze Age material. This set of cases forms an important addition to our exhibited archaeological collection.

The only considerable piece of archaeological field work has also been, and still is, in Mr. Goodwin's hands. It is the continuation of the work in the cave on Mr. R. E. Dumbleton's property near George. The excavation of this cave is proving very profitable, both in skeletons and implements, and there is still much evidence to be gathered from it. Mr. Dumbleton continues to extend the greatest kindness and hospitality to the excavators.

Mr. W. Norrie has again presented implements and flakes from the Fish Hoek and Groot Schuur areas, and Dr. Petronella van Heerden has added further to her loan series of picked local implements of Stellenbosch types.

I am, etc.,

E. L. GILL,
Director.

KOOPMANS DE WET HOUSE.

TO THE TRUSTEES OF THE SOUTH AFRICAN MUSEUM.

SIRS,—I have the honour to present herewith the report for 1933 on the Koopmans de Wet House, the Strand Street annexe to the Museum.

The figures for the attendance of visitors show a slight gain on those of 1932—18,801 as compared with 18,699. School parties numbered 25, with an average of 25 pupils per party. Some of the parties were from a distance—Clanwilliam, Lainsburg, Bloemfontein, Pretoria. The year's total included 6·5 per cent. of coloured people, as compared with 6 per cent. for the previous year.

Among the additions made during the year were a number of excellent pieces of pewter, acquired by purchase, together with some old brass-ware, several good rose-wood miniature frames and other articles. A very good silver tessee, the work of a Capetown silversmith, was presented by Mr. Alfred A. de Pass, who also presented an attractive Japanese lacquer picnic box. A beautifully made carpenter's plane, bearing the date 1720, has been deposited on loan by Dr. Domnisse.

Members of the Advisory Committee have sorted through the material in the store-room, one result being that several old prints (coloured and plain aquatints, etc.), have been cleaned and framed and put on exhibition. An original plan of the Castle dating from 1843, very neatly executed on a large scale, was also brought to light, and is now exhibited at the head of the staircase.

During the year we have issued a set of picture postcards of the House and its contents. There are a dozen cards in the set, bound together in booklet form and perforated for tearing off; and we are able to sell the sets at a shilling each. The fact that they are selling rapidly shows that they are not only satisfactory to us but that they also please the public—which does not necessarily follow. At the end of the year another desideratum was about to be supplied, in the form of an illustrated pocket guide. The guide was prepared by Mr. J. R. Finch, and the final proofs had been passed during December. This is only one of the services that Mr. Finch has rendered during the year; he took a great deal of trouble to get good photographs for the postcards and the guide; he negotiated all the purchases made for the collection, and he does much of the curatorial work in re-arranging and displaying the objects.

By way of helping to pick out the House in its present-day commercial surroundings I have got two palms in tubs placed on the stoep. The tubs were a gift from Messrs. Sedgwick & Co., and the palms and soil were kindly supplied by the Director of the Municipal Gardens.

I am, etc.,

E. L. GILL,
Director.

SOUTH AFRICAN MUSEUM.
STATEMENT OF INCOME AND EXPENDITURE FOR THE YEAR ENDED 31st DECEMBER, 1933.

<i>Expenditure.</i>			<i>Receipts.</i>								
			£	s.	d.	£	s.	d.	£	s.	d.
To	Salaries, Wages and Sunday Time		5,315	4	3						
	Library		147	7	8						
	Publications		581	13	7						
	Travelling and Collecting		53	15	4						
	Upkeep of Grounds		150	0	0						
	General Upkeep		175	9	11						
	Railage, Dock charges, etc.		62	3	5						
	Postal charges and Telephones		58	12	10						
	Koopmans purchases		38	19	6						
	Insurance		55	3	11						
	Water, Light and Current		112	13	0						
	Uniforms		30	13	1						
	Apparatus and Show cases		86	11	3						
	Audit Fee		5	5	0						
	Bank Charges		5	2	3						
	Interest credited		71	5	0						
	Interest adjustment		2	1	8						
	Provident Fund		289	10	10						
	Pension		30	0	0						
	Building alterations		5	10	0						
	Savings Bank withdrawal		160	3	0						
	Purchase of Municipal Stock		506	11	5						
			£7,943	16	11						
									£7,943	16	11

STATEMENT OF BALANCES AS AT 31st DECEMBER, 1933.

To	Provident Fund		2,148	0	2						
	Koopmans de Wet Special Grant Fund		153	1	11						
	Hajee Sullaiman Shamahomed Coin Fund		3	10	4						
	Balance at 31st December, 1933		556	7	10						
			£2,861	0	3						
									£2,861	0	3
									£2,861	0	3

This account has been examined under my directions and, subject to the remarks contained in paragraphs 2 (b) and 3 (b) of the accompanying report, it is correct.

W. H. CALDERWOOD,
Controller and Auditor-General.
Control and Audit Office,
Pretoria, March, 1934.

E. L. GILL,
Director.

HAJEE SULLAIMAN SHAMAHOMED COIN FUND.

	£	s.	d.		£	s.	d.
To Balance, 1st January, 1933	1	10	4	By Purchases	2	10	0
„ Interest	2	5	0	„ Balance	1	5	4
	£3	15	4		£3	15	4

KOOPMANS DE WET SPECIAL GRANT FUND.

	£	s.	d.		£	s.	d.
To Balance, 1st January, 1933	92	1	5	By Purchases	38	19	6
„ Grant	100	0	0	„ Balance	153	1	11
	£192	1	5		£192	1	5

STAFF PROVIDENT FUND.

	£	s.	d.		£	s.	d.
To Balance, 1st January, 1933	1,838	5	6	By Insurance Payments	362	19	8
„ Trustees' contribution	289	10	10	„ Accrued Interest	10	9	5
„ Members' contribution	289	10	10	„ Balances:—			
„ Interest credited... ..	83	16	0	Government Stocks	1,470	0	0
	£2,501	3	2	Municipal Stock	506	11	5
				Savings Bank	151	2	8
	£2,501	3	2		£2,501	3	2

Audited and found correct,

W. H. CALDERWOOD,

Controller and Auditor-General.

Control and Audit Office,
Pretoria, March, 1934.

E. L. GILL,

Director.

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UNION OF SOUTH AFRICA.

REPORT

OF THE

South African Museum

FOR THE

Year ended 31st December, 1934.

Published by Authority.

THE GOVERNMENT PRINTER, PRETORIA
1935.

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Trustees of the South African Museum :

- J. G. VAN DER HORST, ESQ. (*Chairman*).
- PROF. WILLIAM ADAM JOLLY, M.B., CH.B., D.SC., F.R.S.S.AFR.
- W. J. THORNE, ESQ.
- COUNCILLOR D. F. BOSMAN.
- PROF. C. G. S. DE VILLIERS, M.A., PH.D.

Advisory Committee for Koopmans de Wet House :

- | | |
|--|---------------------------|
| J. R. FINCH, ESQ., O.B.E. (<i>Chairman</i>). | |
| W. J. THORNE, ESQ. | PROF. W. A. JOLLY. |
| MAJOR W. JARDINE. | FRANK E. CARTWRIGHT, ESQ. |
-

Staff of the South African Museum :

- EDWIN LEONARD GILL, D.Sc., Director and Keeper-in-Chief.
- KEPPEL HARCOURT BARNARD, M.A., D.Sc., F.L.S., Assistant Director; in Charge of Fish and Marine Invertebrates, and of the Library.
- REGINALD FREDERICK LAWRENCE, B.A., PH.D., Assistant in Charge of Reptiles, Batrachians, and Arachnids.
- ALBERT JOHN HESSE, B.Sc., PH.D., Assistant in Charge of the Entomological Department.
- MISS STAR GARABEDIAN, B.A., F.L.A., Assistant in Charge of the Botanical Department; Assistant Librarian.
- LIEUWE DIRK BOONSTA, D.Sc., Assistant in Palæontology.
- SIDNEY HENRY HAUGHTON, B.A., D.Sc., Honorary Keeper of the Geological and Palæontological Collections.
- A. J. H. GOODWIN, M.A., Honorary Keeper of the Ethnological and Archæological Collections.
- J. DRURY, Taxidermist and Modeller.
- J. LE ROUX, PRINTER.
- MISS D. SUTTON, Clerical Assistant.
- B. OLLEY, Head Attendant.
- C. W. THORNE, Junior Botanical Assistant.
- | | | |
|------------|---|-------------|
| N. HERBERT | } | Attendants. |
| C. LOMBARD | | |
-

Koopmans de Wet House :

- MRS. A. LAWTON, Resident Caretaker.
- | | |
|-------------------------|-------------------------------|
| G. BINEDELL, Attendant. | D. B. ZINN, Relief Attendant. |
|-------------------------|-------------------------------|

SOUTH AFRICAN MUSEUM

REPORT OF THE TRUSTEES FOR 1934

This year has seen the breaking of a link with the past, in the death of the senior member of the Board of Trustees, Sir Thomas Muir. His connection with the Museum dated back to the days when the collections were housed in a wing of the Public Library. The following record is quoted from the minute book of the Trustees' meetings:

" Sir Thomas (then Dr. Muir, Superintendent General of Education at the Cape) joined the Board of Trustees in September, 1893, in succession to Charles Aken Fairbridge. He had thus served for forty years, and his interest in the Museum was shown in the fact that he agreed to remain a member and chairman of the Board after he had resigned all his other public offices. Throughout his connection with the Museum he had always stood strongly for solid work and for achieving a high standing for the Museum in the scientific world. It was his support that made possible the launching of the series of Museum "Annals". In all other matters of policy also his administrative experience, his sound judgment and his determination to maintain the good standing of the Museum were of constant service, and the loss of this guidance and of his presence at their meetings will be much felt by his colleagues on the Board."

At the suggestion of the remaining Trustees, the Governor-General has appointed Professor C. G. S. de Villiers, of the University of Stellenbosch, to fill the vacancy on the Board. There has been one further change, the City Council having appointed Councillor D. F. Bosman as its representative in succession to Councillor W. Brinton.

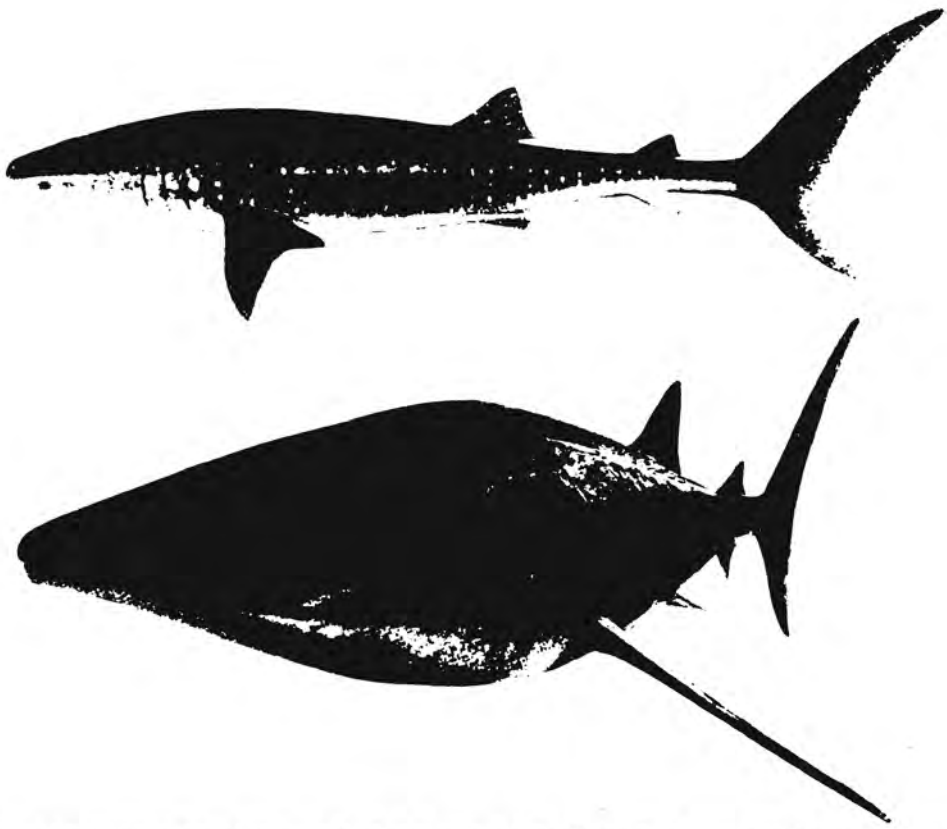
An interesting ceremony took place at the Museum on Van Riebeeck's Day, 6th April, when the restored tombstone of Jan van Riebeeck was unveiled and formally presented to the Union of South Africa by Dr. H. A. Lorentz, the Netherlands Minister, acting on behalf of the Batavian Government. The Minister of the Interior, the Hon. J. H. Hofmeyr, accepted the gift on behalf of the Government of the Union of South Africa. Some account of the work of restoration and of the original portions of the stone embodied in it was given in last year's report.

In two directions at least the circumstances of the Museum have improved during the year. The Government has restored the annual grant-in-aid to the former amount of £7,000; and the attendance of visitors has risen substantially towards the average figure recorded for normal years. The number of visitors during 1934 was 127,143. As compared with the previous year this represents a rise of nearly 17,000, and a further rise of about the same amount would bring the attendance back to the normal level. In addition to restoring the annual grant, the Government has found it possible to allot a sum of £2,000 to the provision of new show-cases for the extended exhibition space. The actual expenditure is deferred to 1935; it is hoped that that year will see at least the new ethnology gallery equipped with the range of wall-cases for which it was designed. For what the Government has done during the year to promote the interests of the Museum the thanks of the Trustees are here offered, together with an expression of their hope that it may soon be found possible to provide the other cases needed to bring the remaining unfurnished rooms into full use.

The Trustees wish to place on record their appreciation of the efficient and willing service constantly devoted by the Director and Staff to both the scientific and administrative work of the Museum.

J. G. VAN DER HORST,

Chairman of the Trustees.



Side and three-quarter front views of the $\frac{1}{2}$ -scale model of the Whale-shark, constructed in the Museum. (Photos, Cape Times).



Jan van Riebeeck's tombstone, as reconstructed in the Museum. (Photo: Arnold Keyzer, Cape Town).

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REPORT OF THE DIRECTOR.

TO THE TRUSTEES OF THE SOUTH AFRICAN MUSEUM.

SIRS,—I have the honour to present my report on the work and progress of the Museum for the year 1934. It is here set out under the accustomed headings.

Staff.—Mrs. O'Dowd has been succeeded by Miss Dorothy Sutton as Clerical Assistant, but there has been no other change in the staff. Dr. L. D. Boonstra, the Assistant in Palæontology, has been absent on study leave throughout the year, but is expected to resume work at the Museum in the early part of 1935. Miss Shaw's temporary appointment in the ethnological department has been continued in the hope that it will be possible to have her help when the wall-cases in the new gallery are ready to receive the collections that she has been overhauling. Dr. Lawrence spent some time in Pretoria early in the year, in order to work on the scale-parasites of the lizards in the Transvaal Museum.

Attendance of Visitors.—The considerable increase shown this year in the number of visitors has been referred to in the Trustees' report. The total was made up as follows:—

European.....	Adults.....	Male.....	32,807
		Female.....	30,549
	Children.....		29,048
Coloured.....	Adults.....	Male.....	11,100
		Female.....	10,538
	Children.....		8,659
Natives.....	Adults.....	Male.....	2,484
		Female.....	1,958
TOTAL.....			127,143
Largest number on one day (January 1st).....			2,851
Smallest number on one day (August 14th).....			36
Total number for Sunday afternoons.....			31,264
Largest number on a single Sunday afternoon (July 15th).....			1,202

The Museum was visited by 131 school parties numbering in all 3,860 pupils.

Accessions.—The following table shows the number of accessions for the year in the various departments. Explanatory information will be found in the separate departmental reports:—

	<i>Specimens.</i>
Mammals and Birds	106
Reptiles and Amphibians	89
Fishes	78
Insects	5,500 (approx.)
Crustacea	239
Arachnids and Myriopods	767
Mollusca	47
Botany	384

Library.—The number of accessions is an increase on last year's figures:—

Pamphlets and Serials:

By donation and exchange	857
By purchase	159

Books:

By donation	22
By purchase	22

Publications.—The following parts of the Annals have been published during the year: Volume XXX, parts 3 and 4, comprising papers on Insects, Arachnids and Marine Mollusca; Volume XXXI, parts 1 and 2, containing Geological, Palæozoological and Palæobotanical studies.

Collecting.—No expedition on any considerable scale was arranged this year, but members of the staff have made various short collecting trips into the Cape mountains (see their departmental reports), and Dr. Lawrence took advantage of the chance of joining a small party visiting the Aughrabies Falls on the Orange River. In proportion to their trifling cost and the time they occupied, these minor expeditions were very fruitful. I have been out on a few occasions to collect birds for my special case or for Admiral Lynes' work on the grass-warblers.

Donations.—Among the more notable donations of the year are some sea birds from Bouvet Island, collected when the island was visited early in the year by a naval party in the sloop "Milford" and presented by Admiral Sir E. R. G. R. Evans (who also brought some sooty terns from Ascension in December). The monster freshwater eels presented by Mr. C. L. Biden are a striking addition to the fish collection; and here it may

be mentioned that we have to lament Mr. Biden's departure from the district, through his transference to Pretoria. For many years Mr. Biden has been in close touch with the doings and captures of the fishermen and anglers of False Bay, and the Museum has benefited largely through his enthusiasm. Another noteworthy addition to the fish collection may be referred to here, though it is not exactly a donation. It is a young 20-foot example of *Rhincodon*, the Whale-shark, which was found by our chairman, Mr. J. G. van der Horst, cast up by a storm and nearly buried in the sand at Chapman's Bay, near Noordhoek. The manner in which it was dealt with is described later. Our collection of local rodents, which is far from being as representative as we should like, has been augmented very usefully through some rodent destruction work carried out by the Cape Explosive Works staff on ground belonging to the Dynamite Factory near Somerset West. Most of the captures were naturally of the common mice and rats of the veld and vleis, but they included also such rarities as the grey tree-mouse (*Dendromys melanotis*) and the Cape Flats fat-mouse (*Steatomys pentonyx*), the latter a species of which nothing has been seen since its first discovery nearly forty years ago. Another remarkable South African mouse, always regarded as very rare, the Cape spiny mouse, has been found in some numbers in the Cedarberg by a rodent-destruction gang under the Health Department, and we have been enabled through Dr. F. C. Willmot to add a female with two young to our exhibited set of rodents. Other notable donations, those of further examples of early Oriental pottery from Mr. Alfred A. de Pass, are referred to in the next section of the report.

GENERAL REVIEW OF MUSEUM WORK.

There have been no large changes in the exhibition cases during the past year, though fresh specimens have been set out here and there in many sections. In the Invertebrate Room, however, the provision of a new run of wall casing has made it possible to re-arrange the collection of mollusca (including the large squids and other cephalopods) and to secure a great improvement thereby. Incidentally it has enabled us to do away with the long centre-cases that formerly stood on top of the double desk-cases in this room. They were cases of a makeshift sort at the best, and they to some extent spoilt the lighting and general effect of the room.

The reconstruction of the Van Riebeeck tombstone (Illustration) was briefly described in my last report, and the ceremony connected with it is referred to in the Trustees' report above (p. 5). By arrangement with Mr. J. G. Gubbins we supplied him with a cast of the completed restoration for his new museum in Johannesburg. The making of this cast was one of the two larger jobs that Mr. Drury has carried out during the year. The other was also a reconstruction, though of a very different kind. It consisted in building a half-sized model of the whale-shark referred to above. The specimen itself was so far decayed that it could not be preserved by ordinary taxidermy. It was found possible, however, to remove and preserve the skin of the back and head-top and the fins, thus securing a permanent record of the curious colour pattern, and enabling Mr. Drury to reproduce it exactly on the model. The half-scale was decided upon because it allowed of the model being housed inside one of the cases in the fish gallery; because, too, there was no particular significance in the actual size (20 feet), since this shark measures at least 50 feet when full-grown. Very careful measurements, sketches and notes had been made before the fish was skinned, and these have been faithfully followed by Mr. Drury. The resulting model (Illustration), apart from its scale, we believe to be much the most accurate representation of this extraordinary shark that is so far to be seen anywhere. Examination of the specimen, moreover, has enabled Dr. Barnard to clear up certain questions about the anatomy of the fish, which competent ichthyologists rarely get a chance to study in the flesh.

Rather more taxidermy than usual has been done during the year. Mr. Drury has mounted a few fishes, including one of Mr. Biden's giant eels; several of the Admiral's sea birds; some mice and rats and three mus-hounds. I have made a good start with a special set of the commoner local birds, which I am collecting and mounting myself. We have also purchased a few mounted small mammals and a steenbok, samples of the talented work of Mr. J. K. Turnbull, of Kingwilliamstown. Such new specimens, replacing some of the old stock at the rate of a dozen or two year by year, are gradually raising the general level of the taxidermy shown in our cases. They are much better than nothing, but they are far from constituting the campaign of replacement that is really needed.

An addition to the De Pass Room, which was spoken of as in prospect in the last report, has since materialized. It is a case of early Palestine pottery, the gift of Mr. de Pass; chiefly Canaanite pottery of different periods but mostly dating from 1600-1400 B.C. The later pieces thus represent the period when Palestine was first coming into Israelite hands. The collection makes an attractive exhibit, well set off by the finely finished case (the work of a local firm) which Mr. de Pass provided for it. A further instance of Mr. de Pass's generosity is concerned with one of the pieces in his collection of early Chinese pottery. A very attractive Kuan Ware dish

was discovered to have been re-glazed since it was dug up. It was thus not considered worthy to stand with the other pieces in this choice collection, and Mr. de Pass has replaced it by one of the rare and costly Imperial Chün bulb bowls of the same (Sung) dynasty.

Mr. J. F. Minicki has continued without a break the fine service that he renders to the Museum and the public in supplying us week by week with a consignment of wild flowers from his farm near Cape Point. Members of the staff and a few other people have contributed from time to time, but Mr. Minicki's supply has throughout the year been the mainstay of our exhibit of fresh wild flowers.

In these reports I say little of the systematic scientific work done by the members of the staff on the collections under their charge. The results of this work appear in our own *Annals* and in other technical publications in South Africa or elsewhere. Original work of this kind always occupies the greater part of the time of the scientific staff, and their current researches, together with other details of the year's work, will be found briefly described in the departmental reports which follow.

I am, etc.,

LEONARD GILL,
Director.

DEPARTMENTAL REPORTS

DEPARTMENT OF MAMMALS AND BIRDS.

TO THE TRUSTEES OF THE SOUTH AFRICAN MUSEUM.

SIRS,—I have the honour to present the following report on this Department for the year 1934.

In respect of both mammals and birds there has been more activity during the past year than in most years lately. Some rodent destruction carried out in fields attached to the Dynamite Factory near Somerset West by members of the Cape Explosive Works staff brought us not only a good selection of the common veld rats and mice but also several rarities (see under "Donations", p. 7). The spiny mice (*Acornys subspinosus*) obtained through Dr. F. C. Willmot, of the Union Department of Health, were equally notable accessions. Both skin cabinets and show cases have benefited by these new specimens. In addition to the rodents, too, we have put on exhibition some good local specimens of muishonds (mongooses) mounted by Mr. Drury, replacing some very poor and ancient stock. By purchase we have added a few further mounted small mammals, the work of Mr. J. K. Turnbull of Kingwilliamstown, and a beautifully mounted steenbok by the same talented young taxidermist. Mr. J. A. van Schoor, of Pearston, near Graaff-Reinet, has presented the skin of an albino vervet monkey (blou-aap); though the skin is incomplete we hope to make a presentable specimen of it. A collection of Nyasaland rodents in spirit, presented by Dr. J. M. S. Gericke of Worcester, will provide useful material for comparison with South African forms.

In the bird section the increased activity has been due to the fact that I have been doing some amount of collecting myself; partly to secure some local grass warblers (*Cisticola* spp.) for Admiral Lyne's work on the group, and partly to obtain specimens for a little enterprise of my own. I have left examples of my own taxidermy in each of the museums with which I have been associated in the past, and I am now preparing a case showing, for the benefit of visitors and beginners, good specimens of the really common local birds. During the year I have collected and mounted rather more than half of the birds that are to figure in the case. The *Cisticolae* that I collected for Admiral Lynes are now in our reference cabinets, for he very kindly returned them when he had got from them the information (regarding moults, etc.) that he required.

Other welcome additions to the skin collection have been made by Mr. H. J. Joubert, Mr. G. Zuidmeer (Noorder Paarl), the staff of the Municipal Gardens, Mr. B. van Riet, and Dr. A. Neethling (Calvinia). A specially interesting further donation is that of some antarctic sea birds from Admiral Sir Edward Evans. They were collected at Bouvet Island in the South Atlantic when the island was visited at the beginning of the year by H.M.S. *Milford*. We were particularly glad to get several good examples of the silver-grey petrel (*Priocella antarctica*), a bird that was badly represented in our collection.

The year's accessions to the Department are shown statistically in the following table:—

	Specimens.	Species.
Mammals	59	26
Birds	47	25

I am, etc.,

E. L. GILL,
Director.

DEPARTMENT OF REPTILES AND AMPHIBIANS.

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to present the following report on this Department for the year 1934.

Unfortunately very little field collecting has been undertaken in this Department during the year which accounts for the somewhat meagre total of acquisitions. One small but useful expedition was undertaken to the Anghrabies Falls on the Orange River when a good series of *Platysaurus capensis* (15 females and 19 males) was collected from the type locality. Two specimens of the rare rock living lizard *Zonurus robertsi* were obtained at Van Rhynsdorp, a species which has long been desired and is new to the collection. On this expedition a fine collection of photographs of living reptiles was obtained, including those of *Pachydactylus bibronii*, *Ptenopus garrulus*, *Chameleon namaquensis*, and the sand viper *Bifis caudalis*. These should prove of value when the present rather inadequate collection of spirit specimens is enlarged and improved. A portion of the tortoise collection has been sent to Mr. Hewitt of the Albany Museum, Grahamstown, for systematic revision.

A scheme of exchange for reptiles and amphibians has been inaugurated between this Museum and the Harvard Museum of Comparative Zoology and the Transvaal Museum.

The following table represents the acquisitions to the Department during the year 1934:—

	No. of Specimens.	No. of Species.
Snakes	3	2
Frogs	15	4
Lizards	70	23
Tortoises	1	1
TOTALS	89	30

The thanks of the Trustees are due to the following donors: Messrs. B. Peers, J. Hewitt, A. Wilmot, C. W. Thorne, H. G. Wood, T. Atkinson, R. A. Cook, Dr. K. H. Barnard.

I am, etc.,

REGINALD F. LAWRENCE,

Assistant in Charge of the Department.

DEPARTMENT OF FISHES AND MARINE INVERTEBRATES.

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to present the following report on this Department for the year 1934.

Exhibition Galleries.—Among the Fishes, the 10-foot model of the Whale-shark (*Rhineodon*), and the Giant Eel (*Anguilla*) are the most important additions. A fine specimen of the "Blue-fish" (*Pachymetopon*), a fish allied to the Hottentot, was secured by Mr. Biden from Natal, and has also been mounted.

The collection of Cuttle-fishes, Squids and Octopi has been rearranged in a portion of the new wall-case in the Invertebrate room. The rest of this wall-case will contain the Marine Worms, Sponges, Corals, etc., the arrangement of which will be continued in the coming year.

Notable Specimens.—The model constructed from the stranded Whale-shark is certainly one of the most important exhibits added for many years. It is a great pity that the whole skin of the shark could not be preserved and mounted. *Rhineodon typus* was first described in 1828 by Dr. Andrew Smith from a specimen caught in Table Bay. Although several specimens have been recorded from other parts of the world, this is only the second record from South African waters. Portions of the skin showing the markings were preserved, and also certain parts of the fins, jaws, etc. From these a description has been drawn up, which will be published in the *Museum Annals*, elucidating some of the anatomical features of this shark which hitherto have been imperfectly known.

The second important accession is a pair of giant fresh-water Eels (*Anguilla mossambica*), captured in the East London District and presented by Mr. C. L. Biden; and an elver of the same species received through the kind offices of Mr. A. C. Harrison from Natal.

It is now known that only this one species of fresh-water Eel, which varies much in coloration, occurs in the South and East African rivers. Although often stated to grow to a very large size, actual measurements are not given, and it is believed that the larger of Mr. Biden's pair is the largest specimen to be recorded in print. It measures 60 inches in length.

In contrast with these giants, the little elver from Natal is the smallest example of this eel yet recorded. It measures just under 2 inches in length (49 mm.). Elver is the name given to the very young eel when it has changed from the transparent larval form, which lives in the sea, and has assumed a cylindrical eel-like shape and a pigmented skin. At this stage it enters the mouths of rivers and makes its way upstream. Although Mr. Harrison's correspondent says the elvers are very common in the estuaries on the Natal coast, this specimen is the first to come under scientific observation and examination.

It would be very interesting if observers in Natal and other localities on the south and east coasts, would keep a lookout for these elvers, with a view not only of securing more specimens, but also of finding out whether the elvers ascend the rivers at a particular season of the year. It is important to find out also whether the mature eels descend the rivers to their breeding grounds in the deep water off the south-east coast of Africa at a definite season.

Accessions.—The following table shows the number of accessions during the past year:—

	<i>No. of Specimens.</i>	<i>Species.</i>	<i>New to the Collections.</i>
Fishes	78	35	7
Crustacea	239	58	19
Mollusca	47	12	3
Other Invertebrates	30	7	1

Research Work.—During the year I have been engaged on systematic descriptions of several fishes and Crustacea which have been obtained in recent years; and also on the collections obtained in connection with my researches on the fauna of the Cape mountain ranges.

I have also identified a collection of Amphipoda for the Indian Museum. This work has been very useful in connection with the study of the South African fauna, which may be said to be an extension of the Indian fauna and shows many similarities.

Publications.—The following papers published during the year deal partly or exclusively with material from this Department:—

- K. H. Barnard. A New *Goniodoris* (Mollusca). *J. Conchology*, Vol. 20.
 K. H. Barnard. Cephalopods from the Cape. *J. Conchology*, Vol. 20.
 K. H. Barnard. Descriptions of Fishes. *Ann. Mag. Nat. Hist.*, Ser. 10, Vol. 13.
 J. L. B. Smith. Butterfly-rays (Pteroplatea). *Trans. Roy. Soc. S. Afr.*, Vol. 22.
 J. L. B. Smith. South African Triglidae. *Trans. Roy. Soc. S. Afr.*, Vol. 22.

Field Work.—I have made several short trips to the south-western Cape mountains in connection with my researches on the fauna, paying special attention to the aquatic fauna and its bearing on the food supply for trout and other introduced angling fishes. In this work Mr. C. W. Thorne of the Museum staff has given me much assistance; and I am under great obligations to Mr. H. G. Wood who has provided motor transport and helped me in the field.

Thanks.—The thanks of the Trustees are due to the following donors and collectors: H. W. Bell-Marley, C. L. Biden, Dr. Bohn (of the s.s. "Tafelberg"), Major M. Connolly, W. J. Copenhagen, A. C. Harrison, Dr. R. F. Lawrence, Dr. Nanni, A. P. C. Nieuwoudt, W. H. Pahl, J. H. Power, Dr. J. L. B. Smith, Prof. T. A. Stephenson, Dr. C. J. van der Horst, H. G. Wood, W. L. Wright.

I am, etc.,

KEPPEL H. BARNARD,
Assistant Director.

DEPARTMENT OF ARACHNIDA AND MYRIOPODA.

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to present the following report on this Department for the year 1934.

The greater part of the research work undertaken during the year has been applied to studies of the parasitic mites of South African lizards; most of this material was collected at the end of 1933 and the beginning of 1934. The first part of the work dealing with the parasites of two families of lizards has been sent to press and should appear in the journal "Parasitology" at Cambridge before the end of the year. A second paper is being sent to the same journal before the end of December, 1934. Four other shorter papers have been sent to various journals during the year, two on new Solifugid material in the Museum's collection, one on new South African Harvest Spiders, and one on a new cave-living False Scorpion found in the Wynberg Caves of Table Mountain.

Identification of Arachnid material has been undertaken for the Transvaal Museum, Albany Museum, Natal Museum and McGregor Museum, as well as of specimens sent in by private collectors.

Collecting has been carried out by various members of the staff throughout the year, yielding specimens which though not large in numbers have been of considerable systematic interest. I was able to collect for ten days near Kakamas and the Aughrabies Falls in February, securing a number of the less well known deserticolous Arachnids. Dr. K. H. Barnard, Dr. A. J. Hesse, and C. W. Thorne have collected in the Cape Peninsula and the Winterhoek Mountains, Tulbagh. Considerable literature has been sent to the Museum by workers abroad, including a new Monograph on the Solifugae of the World by Dr. C. F. Roewer of Bremen, for which work cotypes and other material loaned by the Museum have been of considerable assistance. Other specialists who have worked during the year on Museum material or have sent papers on Arachnids to the *Annals* are: Dr. K. W. Verhoeff (Munich) on "A new genus of Colobognatha from Table Mountain"; Dr. F. Werner (Vienna), "A description of two new South African Scorpions".

The following table represents the acquisitions made during the year in this Department:—

	<i>No. of Specimens.</i>	<i>No. of Species.</i>
Araneae	55	24
Scorpiones	11	8
Solifugae	2	2
Opiliones	30	7
Acari	493	20
Myriopoda	40	11
Pseudoscorpions	131	8
Peripatidae	5	1
TOTAL	767	81

The thanks of the Trustees are due to the following donors: Drs. K. H. Barnard, E. L. Gill, A. J. Hesse; Messrs. V. Fitzsimons, G. A. H. Bedford, C. Hall, J. Oosthuizen, C. W. Thorne, G. Mathie, H. G. Wood, W. A. Keeley, B. Peers, the Rev. Tasman, Miss A. Lyle.

I am, etc.,

REGINALD F. LAWRENCE,
Assistant in Charge of the Department.

DEPARTMENT OF ENTOMOLOGY.

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to present the following report on this Department for the year 1934.

During this year most of my time was devoted to a study of the South African *Bombyliidae*, continued from previous years. In addition to the extensive collections from institutions in the Union, I have also been able to obtain, thanks to the British Museum authorities and to Sir Guy A. K. Marshall, a very large number of unnamed South African species, collected by various people and especially by Mr. R. Turner, from the British Museum and Imperial Institute respectively. The incorporation of these species has necessitated a complete revision of much of the work already done and has consequently delayed the progress of my revision.

No long and extensive trips for collecting insects have been organised this year. Several short or week-end trips have, however, been undertaken by Dr. K. H. Barnard and Messrs. H. G. Wood and C. Thorne to Kirstenbosch, Table Mountain and other localities in the mountains in the Western Province. A slightly longer trip was made by Messrs. H. G. Wood and C. Thorne, Dr. M. Versfeld and myself to the Sneeuwgat Valley and Michel's Pass in the Tulbagh area during October and some private collecting was also done by Dr. M. Versfeld in the Cold Bokkeveld.

Some time still continues to be devoted to the determination of material for private collectors, for schools and for some agricultural and university departments. Owing to the importance of and the time given to the *Bombyliidae* and also to the greater need for attention to exhibitions in other sections of the Museum at present, we have not been able to continue with our plan of adding more exhibition cases for a special Insect Room.

During this year Dr. K. H. Barnard has also continued his researches and studies on some of our aquatic insects, and Mr. H. G. Wood, as an external worker, still continues to pursue his studies of our *Tipulidae*, the life history and various stages of which it would not have been possible to follow out if Mr. C. Thorne had not been so enthusiastic in his observations and his rearing experiments in the Museum.

The accessions to our general collections comprise about 5,000-6,000 (approx.) specimens, belonging to most of the Orders and from the following sources:—

- (1) A large and fine collection of moths from Nkana, Northern Rhodesia, by Mr. Tapscott.
- (2) A collection of *Staphylinidae* and some other beetles from the British Museum.
- (3) Various insects collected by the Museum staff as a result of short trips to the mountains of the Western Province.
- (4) Some butterflies from Messrs. P. Robertson and Dickson, Capetown.
- (5) Some stick-insects from Dr. W. le Feuvre, Kenilworth.
- (6) Some *Diptera* and other insects from Mr. A. Cuthbertson, Salisbury.
- (7) Some *Orthoptera* from Mr. J. Power, McGregor Museum, Kimberley.
- (8) Various insects collected by Dr. M. Versfeld in the Cold Bokkeveld.
- (9) A large collection of miscellaneous insects from Mr. W. Jones of Mfongosi in Zululand.
- (10) A few kinds of *Hymenoptera* from Mr. R. Turner, Mossel Bay.
- (11) Some insects presented by Mr. R. Dekenah and Mr. G. Atkinson, Capetown.

The following material has been sent out to, or has been returned by specialists during this year:—

- (1) Some Geometrid-moths sent to Dr. J. T. Janse, Pretoria.
- (2) Some unnamed Noctuid-moths sent to Mr. G. van Son, Pretoria.
- (3) Masarid-wasps sent out to and returned by Mr. R. Turner, British Museum.
- (4) A small collection of *Staphylinidae* (*Steninae*) returned by Mr. L. Benick, Lübeck.
- (5) A collection of *Microgasterinae* (*Apanteles*) returned by Dr. D. Wilkinson, Imperial Institute.
- (6) Some Eumenine-wasps returned in part by Dr. A. G. Soika, Venice.

The following papers dealing with or incorporating Museum material, have appeared in print:—

- A. In the Ann. S. Afr. Mus., Vol. XXX, Pt. 3.
 - (i) "South African *Hispiinae* from the S. African Museum" on p. 389 by E. Uhmann.
 - (ii) "On some *Collembola-Arthropleona* from S. Africa and S. Rhodesia" on p. 441 by H. Womersley.
 - (iii) "Some insects associated with the plant *Gnidia (Arthrosolen) laza*" on p. 397 by A. J. Hesse.

- B. In the *Trans. Roy. Soc. S. Afr.*, Vol. XXI, p. 291, "South African Caddisflies" by K. H. Barnard.
- C. In *Stylops*, Vol. 3, Pt. 9, p. 205, "Notes on the Life History of *Dixa bicolor* Wood (Dipt.)" by H. G. Wood.
- D. In the *Ann. d. Mus. Civ. di Stor. Nat. d. Genova*, Vol. LVII, Pt. 1, pp. 1-61, "Monografia degli *Adynerus* Etiopici" by A. G. Soika.
- E. In the *Ann. Trans. Mus.*, Vol. XV, Pt. 3, p. 283, "Psammocharidae of the Ethiopian Region" (continued from previous years) by G. Arnold.
- F. In the *Trans. Roy. Ent. Soc. Lond.*, Vol. LXXXII, p. 27, "Contributions to a knowledge of S. African Clunionine Chironomids" by A. J. Hesse.

The thanks of the Trustees are due to the following donors: Mr. G. Atkinson, Dr. K. H. Barnard, the British Museum, Mr. A. Cuthbertson, Mr. R. Dekenah, Mr. Dickson, Dr. W. le Feuvre, Mr. J. Power, Mr. P. Robertson, Mr. Tapscott, Mr. C. Thorne, Mr. R. Turner, Dr. M. Versfeld and Mr. H. Wood.

I am, etc.,

ALBERT J. HESSE.

Assistant in Charge of the Insects.

DEPARTMENT OF BOTANY.

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to present the following report on the work of this Department for the year 1934:—

Accessions:—

Bolus Herbarium	25 specimens from the Cape Province.
Dr. K. H. Barnard	14 specimens from the Cape Province.
Prof. R. H. Compton	20 specimens from the Cape Province.
Dr. H. G. Fourcade	15 specimens from the Cape Province.
Miss S. Garabedian	42 specimens from the Cape Province.
Prof. S. Garside	16 specimens from the Cape Province.
Mrs. H. S. Henderson	22 specimens from Southern Rhodesia.
Kew Gardens	32 specimens from the Cape Province.
Mrs. Levyns	10 specimens from the Cape Province.
Mr. Meebold	12 specimens from the Cape Province.
Capt. T. M. Salter	42 specimens from the Cape Province.
T. P. Stokoe	38 specimens from the Cape Province.
C. Thorne	52 specimens from the Cape Province.
Various	44 specimens from the Cape Province.

Exchanges.—Bolus Herbarium, Kirstenbosch; University of Stellenbosch; Royal Botanic Garden, Kew; National Herbarium, Pretoria; Transvaal Museum, Pretoria; Smithsonian Institution, Washington, U.S.A.

Specimens Mounted and Incorporated.—751 including 12 genera and 72 species new to the Herbarium.

General Report.—A short excursion was made early in the year to the River Zonder Einde, and another later to the Sneeuwgat, Tulbagh, and to Banhoek. Apart from these, day visits to various localities in the Peninsula were made for the purpose of obtaining better material of several genera which were poorly represented in the Herbarium.

A good beginning has been made with the collecting and mounting for exhibition purposes of certain well or little known poisonous and edible fungi which occur in the Peninsula.

During the latter part of 1933, and the early part of 1934, I worked at the Herbarium of the Royal Botanic Gardens, Kew. Over 150 plants which had hitherto not been determined were examined and compared with the type material; these will be incorporated during the course of this year. Profitable exchanges were made especially in regard to certain type specimens. I had hoped to complete and publish in our *Annals* during 1934, the revision of the genus *Aspalathus*. It is a large and difficult genus, and I have spent much time at it when I could spare it from the ordinary routine work, and over 3,000 sheets have been examined apart from fresh material in many districts. And although, through the courtesy of the Director at Kew, most of the types were obtained from the various continental herbaria, there remain a few which it would now seem impossible to trace, and the revision is thus held up, though the bulk of the work is ready.

The routine work of determining plants for the Herbarium continues, also assistance to the general public who call with enquiries, and to schools and public bodies. The thanks of the Trustees are due to the various donors whose names appear under the heading of accessions, and especially to Mr. J. F. Minicki of Cape Point for his weekly supplies of fresh wild flowers for our flower counter.

During the year, Part 3 of Volume XVI of the *Annals* was published, thus completing the volume. This was written and contributed partly by Miss M. A. Pocock of the University of Capetown, and partly by Miss F. Rich of the University of London, the subject being the genus *Volvox* in Africa.

I am, etc.,

S. GARABEDIAN,

Assistant in Charge of the Department.

DEPARTMENT OF ETHNOLOGY AND ARCHAEOLOGY.

TO THE TRUSTEES OF THE SOUTH AFRICAN MUSEUM.

SIRS,—I have the honour to present a report on these Departments for the year 1934.

Miss Shaw's services in charge of the ethnological collections have been retained during the year in the hope that it may be possible to have her help in fitting up the new cases in the ethnology gallery when they arrive. As they are not yet supplied, part of her time has been devoted to a study of the native snuff boxes, of which we have a good series, and the results are embodied in an illustrated paper for the *Annals*. Miss Shaw has given me the following report:—

"There have been very few additions to the collection during the year, the most notable being by purchase of an axe and a musical instrument, both very fine specimens, which were collected from a tribe in the south-west corner of the Congo. The axe was used for executions, and is of the same type as found among the *Basonge* further north. The large crescentic iron blade is beautifully worked and the actual cutting edge is supported by five columns, each decorated on both sides with human heads. The musical instrument is of the mandoline variety, very similar to those in use right across the northern Congo, but not found in the South. The arc is of ivory ending in a carved human head, and the sound box is a boat-shaped bowl of wood, covered with lizard skin.

"At the end of the year Mr. Hugh Tracey deposited on loan his collection of Karanga drums and other musical instruments. Part of the collection that has been on loan at the University of Capetown since 1929 has been returned and the remainder will follow shortly.

"There has been no further exhibition of specimens owing to the lack of cases. In the early part of the year the selection of the Frobenius collection of rock-paintings from the Union and Rhodesia was taken down and replaced by another representative selection, arranged as far as possible to illustrate the theories set forth in Frobenius' book 'Erythraea'. The selection of Stow's copies of rock-paintings was removed from the room opposite the head of the main staircase and replaced by two very large paintings from the Frobenius collection, each running almost the entire length of the wall.

"A paper was completed on the South African snuff-boxes in the collection."

In the section of archaeology there is little this year to report. Mr. Goodwin has continued the excavation of the cave on Mr. R. E. Dumbleton's property near George, and is working at the Museum on the material collected. Stone implements from various sites have been presented by Mr. W. Norrie and others. Mr. G. E. Leipoldt, of Cedarberg, has deposited with us on loan a very fine Bushman pot found by him in the Whupperthal district; and we have made a replica of another good Bushman pot lent for the purpose by Mr. van der Byl of the City Hall staff, who found it in the neighbourhood of the Steenbras River.

Our thanks for gifts to both sections are due to Messrs. G. H. Herman, C. M. Bleach, Abbot, W. Norrie, and the Durban Museum per Mr. E. C. Chubb.

I am, etc.,

E. L. GILL,
Director.

—

KOOPMANS DE WET HOUSE.

—

TO THE TRUSTEES OF THE SOUTH AFRICAN MUSEUM.

SIRS,—I have the honour to present herewith a report on the Koopmans de Wet House for 1934.

The figures for the attendance of visitors show a decided recovery. The total for the year was 21,255, as compared with 18,801 for 1933. Coloured people represented about 5 per cent. of the total. The number of school parties was 48—a large increase. The average number of pupils in a party was 33.

The chief additions to the contents of the house were a beautifully finished miniature cabinet in coromandel wood and a bureau cabinet in stinkwood, both purchased. Some better means of displaying the pewter was needed, and after much consideration the Advisory Committee has had a kitchen dresser in stinkwood made, which meets the purpose well. The dresser also gives the kitchen a much better furnished appearance. A tea set of an early Crown Derby pattern, presented by Miss Sprigg, is an interesting addition to the collection of china.

Mr. Finch's guide to the House was issued early in the year and has sold well. The picture postcards issued in 1933 were sold out and a further batch has been ordered and supplied.

I am, etc.,

E. L. GILL,
Director.

SOUTH AFRICAN MUSEUM.
STATEMENT OF RECEIPTS AND PAYMENTS FOR THE YEAR ENDED 31st DECEMBER, 1934.

<i>Receipts.</i>				<i>Payments.</i>			
	£	s.	d.		£	s.	d.
To Balance, 1st January, 1934			655 2 11	By Salaries, Wages and Sunday Time			5,024 10 0
„ Grants:—				„ Library			176 11 10
Union Government			6,825 0 0	„ Publications			513 10 4
Capetown Corporation, General	400	0	0	„ Travelling and Collecting			83 19 4
Capetown Corporation, Koopmans de Wet	100	0	0	„ Upkeep of Grounds (by Municipality)			150 0 0
„ Refunds and Discount			18 18 4	„ General Upkeep of Museum			284 2 11
„ Interest Received:—				„ Railage, Cartage and Dock Charges			34 7 0
Provident Fund Investments:—				„ Postal and Telephone Charges			52 6 9
Union Government	71	5	0	„ Koopmans Purchases			93 12 4
Capetown Corporation	20	14	6	„ Insurance			54 2 11
Coin Fund Investment:—				„ Water, Light and Current			142 17 7
S.A. Association	6	15	0	„ Audit Fee			5 5 0
„ Sale of Guides and Postcards			70 12 3	„ Bank Charges			6 1 3
„ Sale of Annals			27 3 7	„ Provident Fund			273 18 2
				„ Interest on Provident Fund Investments:—			
				Interest on 5 per cent. Government Stock	37	10	0
				Interest on 4½ per cent. Government Stock	33	15	0
				Interest on 4 per cent. Municipal Stock	20	14	6
				„ Mrs. Brand's Pension			24 0 0
				„ Honoraria			100 0 0
				„ Purchase of Coin			0 5 0
				„ Balance, 31st December, 1934			1,084 1 8
			<u>£8,195 11 7</u>				<u>£8,195 11 7</u>

This account has been examined under my directions and, subject to the remarks contained in paragraphs 3 (b) and (c) of the accompanying report, it is correct.

C. S. SCHMIDT,

Controller and Auditor-General.

Control and Audit Office,
Pretoria, March, 1935.

E. L. GILL,

Director.

KOOPMANS DE WET SPECIAL GRANT FUND.

	£	s.	d.		£	s.	d.
To Balance, 1st January, 1934	153	1	11	By Purchases	93	12	4
„ City Council Grant	100	0	0	„ Balance, 31st December, 1934	164	9	7
„ Ashbey's Galleries	5	0	0				
	<u>£258</u>	<u>1</u>	<u>11</u>		<u>£258</u>	<u>1</u>	<u>11</u>

STAFF PROVIDENT FUND.

	£	s.	d.		£	s.	d.
To Balance, 1st January, 1934	2,148	0	2	By Insurance Payments	342	1	3
„ Trustees' Contribution	273	18	2	„ Interest Accrued	22	12	4
„ Members' Contribution	273	18	2	„ Balances:—			
„ Interest Credited	101	18	10	Government Stocks	1,470	0	0
				Municipal Stock	506	11	5
				Cape of Good Hope Savings Bank	267	14	4
				Union Loan Certificates	188	16	0
	<u>£2,797</u>	<u>15</u>	<u>4</u>		<u>£2,797</u>	<u>15</u>	<u>4</u>

Audited and found correct.

C. S. SCHMIDT,
Controller and Auditor-General.

Control and Audit Office,
Pretoria, March, 1935.

F. L. GILL,
Director.

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UNION OF SOUTH AFRICA

REPORT

OF THE

South African Museum

FOR THE

Year ended 31st December, 1935

Published by Authority

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Trustees of the South African Museum:

J. G. VAN DER HORST, ESQ. (*Chairman*).

PROF. WILLIAM ADAM JOLLY, M.B., CH.B., D.Sc., F.R.S.S.AFR.

W. J. THORNE, ESQ.

D. F. BOSMAN, ESQ.

PROF. C. G. S. DE VILLIERS, M.A., PH.D.

Advisory Committee for Koopmans de Wet House:

J. R. FINCH, ESQ., O.B.E. (*Chairman*).

W. J. THORNE, ESQ.

PROF. W. A. JOLLY.

MAJOR W. JARDINE.

FRANK E. CARTWRIGHT, ESQ.

Staff of the South African Museum:

EDWIN LEONARD GILL, D.Sc., Director and Keeper-in-Chief.

KEPPEL HARCOURT BARNARD, M.A., D.Sc., F.L.S., Assistant Director; in Charge of Fish and Marine Invertebrates, and of the Library.

REGINALD FREDERICK LAWRENCE, B.A., PH.D., Assistant in Charge of Reptiles, Batrachians, and Arachnids (left in June).

ALBERT JOHN HESSE, B.Sc., PH.D., Assistant in Charge of the Entomological Department.

MISS STAR GARABEDIAN, B.A., F.L.A., Assistant in Charge of the Botanical Department; Assistant Librarian.

LIEUWE DIRK BOONSTRA, D.Sc., Assistant in Charge of the Palæontological Department.

A. J. H. GOODWIN, M.A., Honorary Keeper of the Ethnological and Archæological Collections.

MISS E. MARGARET SHAW, B.A., Temporary Assistant in Charge of the Ethnological Collections.

J. DRURY, Taxidermist and Modeller.

C. W. THORNE, Junior Botanical Assistant.

J. LE ROUX, Handyman-Printer (left in August).

D. B. ZINN, Handyman-Printer (from September).

MISS D. SUTTON, Clerical Assistant (left in November).

MISS D. KRIGE, Clerical Assistant (November and December).

B. OLLEY, Head Attendant.

N. HERBERT

C. LOMBARD (died in September) } Attendants.

G. W. VENNER (from October) }

Koopmans de Wet House:

MRS. A. LAWTON, Resident Caretaker.

G. BINEDELL, Attendant.

D. B. ZINN, Relief Attendant.

SOUTH AFRICAN MUSEUM

REPORT OF THE TRUSTEES FOR 1935

THE TRUSTEES of the South African Museum have the honour to present to the Government, in accordance with the provisions of Act No. 17 of 1857 (Cape), their report for the calendar year 1935.

A satisfactory feature of the year has been the arrival and erection of the first consignment of new show-cases. Since the enlargement of the Museum was completed, more than three years ago, it has been possible to make only partial use of much of the added exhibition space owing to the lack of cases. This state of things will apparently have to continue for a time in several sections of the Museum, but the cases that have now been supplied will bring the new ethnology gallery into nearly full use. The Trustees hope the Government will be able to proceed steadily with the supply of cases, so that the equipment of the ethnology gallery may be completed and the arrested scheme of re-arrangement in other parts of the Museum carried out.

Another cause for satisfaction is that it has been found possible to resume field work on something like the usual scale; during the years of depression field work was necessarily very restricted. On the other hand the staff has been below full strength during most of the year. The Director was absent on long leave for five months (in part on a visit to American museums under the Carnegie Corporation Visitors' Grant scheme); Dr. Boonstra was still away on study leave for the first three months; and at the half-year Dr. Lawrence left to take up the appointment of Director of the Natal Museum at Pietermaritzburg. Fundamental questions regarding the staffing of the Museum were raised and have been referred by the Minister to a Standing Advisory Committee on State-aided Institutions which he has recently appointed. Hence the making of fresh appointments has had to be deferred.

A grant of £300 by the Carnegie Corporation is being devoted to the inauguration of a service of travelling cases of specimens for Western Province schools. An extension of the work and influence of the Museum on these lines was mooted several times in recent years, but came to nothing owing to the lack of staff and funds. These difficulties have now been removed by the Carnegie Corporation's grant.

Details of the year's work at the Museum are given in the Director's report which follows.

J. G. VAN DER HORST,
Chairman of the Trustees.

REPORT OF THE DIRECTOR

TO THE TRUSTEES OF THE SOUTH AFRICAN MUSEUM.

SIRS,—I have the honour to present my report on the work of the Museum for the year 1935. It is set out below under the usual headings.

Staff.—For many years changes in the staff have been very few. The year 1935 has brought an exceptional number of them. Dr. Reginald F. Lawrence, who joined the staff in 1922, left at the end of June on his appointment as Director of the Natal Museum at Pietermaritzburg. Miss Dorothy Sutton, who had filled the post of clerical assistant very efficiently for nearly two years, had to leave in November to move with her relatives to Durban. Our handyman-printer, J. le Roux, left after thirteen years' service in July; and C. J. Lombard, who had been an attendant for fifteen years, died in September.

Dr. Lawrence was in charge of two departments, those of arachnids and myriopods on the one hand, and of reptiles and batrachians on the other. Through his own field work he had added very largely to the collections in all these classes, and had done excellent systematic work on several groups of arachnids. His position has not yet been filled, for reasons stated in the report of the Trustees, and it is not even clear that we shall be able to fill it. In any case his departure leaves a serious gap in our resources as an institution.

Miss Sutton's post has been filled by the appointment of Miss D. Krige. D. B. Zinn, formerly relief attendant at the Koopmans de Wet House, succeeds J. le Roux as handyman-printer; and G. W. Venner has taken the late C. J. Lombard's place as museum attendant.

I was absent myself for five months (February to July) on my first long leave, and took the opportunity of visiting a number of the leading museums of the United States with the help of the Carnegie Corporation Visitors' Grants Committee. Dr. Boonstra returned from study leave in May after an absence of nearly two years. He has devoted the time to an exhaustive study of practically all the material representing the South African fossil reptiles in the museums of Europe and America, and has thus placed himself in a position of probably unique advantage for continuing his work on the fossil reptiles in this country.

Attendance of Visitors.—After a decided rise in the number of visitors in 1934 it is disappointing to have to record that the number has fallen again for the past year. Not all the ground gained in 1934 has been lost. The rise that year was of nearly 17,000; the fall this year has amounted to just over 11,000. It is not difficult to account for it. I attribute it to two things: that we have had no very outstanding changes or accessions to give us publicity, and that it was unfortunately necessary to close the "Bushman room", the most popular section of the Museum, during some of the busiest weeks of the year. The attendance was made up as follows:—

European	Adults	Male	30,742
		Female	27,808
	Children		26,150
Coloured	Adults	Male	10,495
		Female	9,458
	Children		8,417
Natives	Adults	Male	2,070
		Female	824
	TOTAL		115,964
Largest number on one day (October 7th) 1,525			
Smallest number on one day (August 23rd) 64			
Total number for Sunday afternoons 32,365			
Largest number on a single Sunday afternoon (February 17th) 1,250			

The Museum was visited by 139 school parties, numbering in all 5,315 pupils—an increase of eight parties and 1,455 pupils as compared with the previous year. In a few instances by special request I gave short talks to small parties of school children.

Accessions.—The following table shows the number of accessions for the year in the various departments. Explanatory information will be found in the separate departmental reports:—

	<i>Specimens.</i>
Mammals and Birds	19
Reptiles and Amphibians	102
Fishes	56
Insects	15,000 (approx.)
Crustacea	48
Arachnids and Myriopods	207
Mollusca	18
Botany	900

Library.—Accessions to the library numbered as follows:—

Pamphlets and Serials:	
By donation and exchange	872
By purchase	149
Books:	
By donation	3
By purchase	8

The overcrowding of the library, eased to some extent a few years ago by bringing into use a space under the roof, has again become a serious difficulty, and it is with satisfaction that we learn that there is a good prospect of gaining substantial relief next year. The Public Works Department proposes to extend the room serving as library and office outwards to the line of the old art gallery wing, thus doubling its size. When this has been done we should have space to meet the normal growth of the library for a considerable period, and at the same time to improve the accommodation for clerical work.

Publications.—Three volumes of the *Museum Annals* have been continued or started during the year, as follows:—

Volume XXIV, Part 2.	Anthropology, S.W. Africa; J. Drury, 21 pp., 11 pls.
Part 3.	Archaeology, Mossel Bay Cave; A. J. H. Goodwin, 30 pp., 1 pl. Snuff-boxes; Miss M. Shaw, 21 pp., 8 pls.
Volume XXX, Part 5.	Mugilidae; J. L. B. Smith, 57 pp., 8 pls. S.A. Marine Fishes; K. H. Barnard, 13 pp., 3 pls. Title-page and Index to Volume.
Volume XXXII, Part 1.	New Giant Starfish; Th. Mortensen, 4 pp., 1 pl. Sea Breems; J. R. Norman, 18 pp., 1 pl.

Collecting.—During 1935 we have at last been able to resume field work on a normal scale. The main expedition of the year was a two-months' trip through many parts of the Karoo, carried out by Dr. Boonstra, Dr. Hesse and Mr. Thorne. Its primary object was to search for fossil reptiles, but a large amount of entomological and botanical material was collected at the same time. This expedition was greatly helped by the use of our new motor transport. We have traded in our old Ford lorry, which was too heavy for most of our work, and bought instead a Ford delivery van; and the new van proves to serve our purposes very satisfactorily. Two smaller expeditions were made earlier in the year. In January, Dr. Barnard, Dr. Hesse and Mr. Thorne were taken by Mr. H. Wood to several of the well-known passes through the Swartberg and Langeberg ranges; and in March Dr. Lawrence, Dr. Hesse and Mr. Thorne carried out a fourteen-day trip in Namaqualand and the Richtersveld. Several departments of the Museum have been enriched by a large amount of valuable material as a result of these expeditions.

Donations.—Specially important or striking donations have not been a feature of the year, but there are several gifts that call for mention. In the course of a journey by car through the least accessible parts of Namaqualand and the Richtersveld, Mr. Reay Smithers made an excellent collection of lizards and snakes for the Museum. He also presented us with an ingeniously preserved small show-specimen of the celebrated plant known as the "halfmens" (*Pachypodium namaquense*) from the same region. We were indebted to Mr. Smithers, too, for valuable help in obtaining specimens from the herd of false killer whales, mentioned later, that came ashore near Mamre. Mr. Alfred de Pass has made a further addition to his case of Greek art objects: a small set of very choice silver and gold coins. A few more rodents sent from the Dynamite Factory near Somerset West included a pair of the white-tailed rat, a rarity in these parts. A large model of the Capetown Docks was presented by the Publicity Association. It was made in 1880 for exhibition at the Imperial Institute in London, but it shows the harbour not as it was then but as it was intended to be—and subsequently became. Perhaps the most interesting feature of it is the shipping. Contemporary sailing ships of many types are shown, including a number with auxiliary steam. As the room facing the stairhead is waiting for cases, we have space for the present to exhibit the model, and it has aroused a good deal of interest.

We have once again to thank Mr. J. F. Minicki for his weekly supply of fresh wild flowers from his very productive farm near Cape Point. The more we come to take Mr. Minicki's splendid weekly sendings for granted the more remarkable in reality is their continuance and their regularity. The resulting exhibit of the season's wild flowers on our entrance counter is an established feature of the Museum which we could now ill afford to lose.

Carnegie Corporation Grant.—Out of the general grant made to the museums of South Africa by the Carnegie Corporation a sum of £300 was assigned to this Museum. A choice of ways of expending it was given, and we were much tempted to adopt the one chosen by most or all of the other institutions, namely, the appointment of guide-lecturers. This is not only a sound choice, but it happens to be the easiest to arrange and to bring into immediate operation. We have abandoned it, however, in favour of a much more difficult, but more widely and lastingly useful undertaking: the preparation of a series of travelling museum cases for the use of schools. A scheme of this nature has been under discussion with Education Department officials for some time, but the discussion has not borne fruit hitherto because of the lack of funds to meet the considerable expenditure involved. The Carnegie Corporation's grant has provided funds for a good start with the scheme and has decided us to adopt it as our choice in preference to instituting guide-lectures.

Time is required to get a series of cases prepared and the system started, and there has been additional delay in this case, first owing to my absence on leave, and then owing to the need for finding someone to carry out the technical work. It is to be put into Mr. Thorne's hands, and before he could be taken from his regular work it was necessary for him to deal with a mass of material, both botanical and entomological, collected on this year's expeditions, and then to train an understudy. In the meantime we have worked out the design of a suitable standard case, carrying its own explanatory labels, English and Afrikaans, mounted in sliding panels, and a consignment of these cases was nearly ready at the end of the year.

GENERAL REVIEW OF MUSEUM WORK

Two decided improvements in the main building have been made during the year by the Public Works Department. They have done for the old upper art gallery room (now devoted to fossil vertebrates) what they did a year or two before for the adjoining geology room: they have enlarged the ceiling light. Both rooms were insufficiently lit, and in both cases the alteration has been entirely successful. The second structural change has been carried out above the main staircase. The well formed by this staircase was bounded at the two sides by open arcades on the upper floor, but at the back, opposite the stairhead, was a solid wall (at one stage of the building an outside wall). This has now been pierced by arches, corresponding with those at the sides. The effect has been to open up this rather confined-looking quarter and give a pleasant impression of light and air. It completes the transformation begun four years ago with the removal of the opposite wall that used to confront the visitor arriving at the top of the stairs. It is difficult now to imagine the stairhead so shut in and dark as it used to be.

The range of new wall-cases for the ethnology gallery arrived towards the end of the year. The erection, glazing and painting of them was actually completed and passed as satisfactory on the last day of December. The only disappointing feature about them is their extent. We hoped the grant providing for them would not only line the ethnology gallery with cases but might leave a certain surplus for a few cases to give us a start with our projected insect-room. In actual fact it has only given us two-thirds of the cases needed for the walls of the ethnology gallery. Apart from this fly in the ointment, the cases, standing finished but empty as they are at the close of the year, look very pleasing and serviceable. In their main lines they conform to our own specification. The whole range is seven feet high, fitting under the windows. Below the windows themselves they are shallow from front to back, but between the windows they are deeper, so that a series of rectangular salients stands out, breaking the monotony of the long line and providing accommodation for bulky exhibits.

The year's work has naturally been affected to some extent by the reduction of the staff. I should like in this connexion to express my indebtedness to Dr. Barnard for the efficient way in which he carried on my duties during my absence on leave. With the staff as it stood for the latter half of the year we were hampered by the lack of specialists in several important branches: reptiles and amphibians, arachnids, general geology and mineralogy. These gaps are due to the departure of Dr. Lawrence and Dr. Haughton. It was many years since Dr. Haughton had left the Museum staff and joined the Geological Survey, but until his final appointment two years ago as Director of the Survey his office was in the Museum grounds and he was nearly always available for consultation. For the present the Survey Office is unoccupied, and we have no one to refer to for the more critical questions in geology and mineralogy. If we were not so fortunate as to have pretty frequent visits from Dr. A. W. Rogers, who is always willing to give us the benefit of his unique knowledge of South African geology, we should be in a worse position still.

Among the new specimens put on exhibition during the year are the head of the huge basking shark referred to in Dr. Barnard's departmental report, and a fine adult example of the black-headed heron excellently mounted by Mr. Drury.

Another large herd of false-killer whales (*Pseudorca crassidens*) came ashore towards the end of the year; this time in the neighbourhood of Mamre, about fifty miles north of Capetown. Seven years previously about a hundred of these whales were stranded in a sandy bay at Kommetjie, sixteen miles south of Capetown—the first recorded occurrence in African waters. The Mamre herd was larger still, numbering about three hundred, and it came ashore not on sand but on jagged rock. From the Kommetjie herd we had the complete mounted skeleton of an old bull and several detached skulls of different ages. But when another herd of this remarkable whale delivered itself so nearly at our door it seemed wrong not to take some advantage of the opportunity, and with the capable help of Mr. Reay Smithers we retrieved four more skeletons and five additional skulls. These are now undergoing dry maceration in our sand heap. One of the skeletons is destined eventually for the British Museum, for which it was obtained in response to a cabled request.

In view of rather loose statements that have been published it may be well to put on record that no example of *Pseudorca* in either herd reached a length of 20 feet. Anything over 19 feet is a very large size for the species. The Mamre stranding threw no fresh light on the puzzle of these wholesale suicides, unless there is a hint in an observation by Mr. Smithers: that the stretch of coast along which this herd drove ashore is largely locked in by offshore sandbanks with narrow channels between them. Entering by these channels and then feeling themselves trapped, the animals may have been seized with infectious panic. In any case the apparent extreme liability of *Pseudorca* to mass panic may conceivably account for its sudden rise from the greatest obscurity to remarkable prominence. If all the large herds sooner or later destroyed themselves in this fashion, the species might exist in cycles of abundance and scarcity; a rough parallel to the supposed swarm phase and solitary phase of the plague locusts.

The remainder of the information that seems called for regarding the year's work at the Museum is of a more technical or detailed nature, and is dealt with more appropriately in the departmental reports which follow.

I am, etc.,

LEONARD GILL,
Director.

DEPARTMENTAL REPORTS

DEPARTMENT OF MAMMALS AND BIRDS.

TO THE TRUSTEES OF THE SOUTH AFRICAN MUSEUM.

SIRS,—I have the honour to present the following report on this Department for 1935.

The chief event of the year was the stranding of about three hundred false killer whales on the coast near Mamre, but this has already been described in my general report. Otherwise, largely owing to my absence, the Department has had a quiet year. No collecting has been done for it, though some welcome additions have been made by donation. Among the small mammals a good acquisition is a local pair of white-tailed rats (*Mystromys albicaudatus*) sent from the Dynamite Factory near Somerset West. Like most of the rodents from the same source these were sent to us alive, and were kept for a few days and watched; the result, as in other cases, being a good study from life by Mr. Drury. A few birds, sent in by various donors, have been mounted, others made up as skins. I have not made much progress during the year with my set of common local birds, as the breeding season was in full swing when I returned from leave and it was followed by the moult; but I hope to finish the set next year.

Among the donors were the Cape Explosives Works, the Municipal Gardens staff, the *Cape Argus*, Mr. B. van Riet, the City Health Department.

I am, etc.,

E. L. GILL,
Director.

DEPARTMENT OF FISHES AND MARINE INVERTEBRATES.

TO THE DIRECTOR.

SIR,—I have the honour to present the following report on this Department for the year 1935.

The usual routine work has been carried on, but owing to administrative duties during the absence on leave of the Director, less time has been available for research work than in other years. Field work has been confined to two short collecting trips in January and September in connection with my work on the Mountain Fauna.

Exhibition Galleries.—The head of the 28-foot Basking Shark, which was captured at Hout Bay and exhibited on Capetown pier in January, has been mounted and placed on the stairway. This is the third record of this shark in South African waters,

and so far the only adult one, the previous ones being juveniles. The head was presented to the Museum, but it is much to be regretted that the Pier authorities cut up and dumped the animal back into the sea without advising the Museum, in consequence of which certain parts of considerable scientific interest were lost.

A cast of the Lesser Tiger-shark (*Stegostoma*) has been made. This is one of the few remaining species required to complete the Museum's collection of South African sharks. The most important one still not represented is the true Tiger-shark (*Galeocerdo*).

Two brightly-coloured species of Trigger-fish have also been mounted.

Minor alterations and additions have been made in the Invertebrate series.

Accessions.—The following specimens have been incorporated in the collections:—

	<i>Specimens.</i>	<i>Species.</i>	<i>New to the Collection.</i>
Fishes	56	36	3
Crustacea	48	8	1
Mollusca	18	8	—
Other Invertebrates	40	10	—

Publications.—The following papers, published during the year, deal wholly or partly with material from this Department:—

- C. J. Shen. A new Charybdis (Crustacea). *Ann. Mag. Nat. Hist.* (10), XV.
 J. L. B. Smith. Revision of Mugilidae } *Ann. S. Afr. Mus.*, XXX, 5.
 K. H. Barnard. Notes on S.A. Fishes }
 T. Mortensen. A new giant Starfish } *Ann. S. Afr. Mus.*, XXXII, 1.
 J. R. Norman. Revision of Sea-breams }
 J. L. B. Smith. Galjoen Fishes. *Tr. Roy. Soc. S. Afr.*, XXIII.

Acknowledgments.—The thanks of the Trustees are due to the following donors and collectors: H. W. Bell-Marley, C. W. Black, E. C. Chubb, Major M. Connolly, A. C. Harrison, Dr. A. J. Hesse, Messrs. Irvin & Johnson, Dr. R. F. Lawrence, Capt. McGill, Dr. Nanni, Prof. T. A. Stephenson, C. W. Thorne, Dr. C. J. van der Horst.

I am, etc.,

KEPPEL H. BARNARD.

DEPARTMENT OF ENTOMOLOGY.

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to present the following report on this Department for the year 1935.

Research Work.—The task of revising the *Bombyliidae* of South Africa has proved to be greater than was anticipated and the greater part of my time was again devoted to the study of some more genera. Unnamed material of this family is now at my disposal from all the Museums in the Union, the British Museum and the Imperial Institute of Entomology. In addition to this material quite 2,000-3,000 specimens have been collected during this year by members of the staff. During the course of the year I have also worked out the life history of a *Lasiocampid*-moth, the caterpillars of which feed on *Passerina vulgaris*. Some time has also been devoted to the determination of material for schools, Agricultural and University Departments, and some comparison and identification of species have also been made for some institutions abroad.

Field Work.—Several collecting trips have been organised during this year, resulting in the acquisition of much material. During January Dr. K. H. Barnard, Messrs. H. Wood, C. Thorne and I made a short trip to the Swartbergen, Meiringspoort, Seweweekspoort and Kogmanskloof. In March Dr. R. Lawrence, Mr. C. Thorne and I organised a fourteen-days' trip to Namaqualand, Little Bushmanland and the Richtersveld where collections were made at Violsdrift, Lekkersing, Steinkopf and Kleinzee. A more extensive collecting trip was, however, undertaken by Dr. L. Boonstra, Mr. Thorne and myself during October and November. Representative collections were made at various localities in the Karoo; the chief localities being the Gouph-Karoo, the Swartbergen (Prince Albert and Ladismith Districts), Beaufort West District in the Nieuwveld, the Frasersburg District in the Nieuwveld, in Victoria West District, at Aberdeen, in the Murraysburg District, Middelburg District, Naauwpoort Region, in the Colesberg and Venterstad Districts, in the Zuurberg Region of Steynsburg, and near Bethulie, in the Orange Free State.

Accessions.—As the result of our own collecting trips, the donations of private persons and material purchased, the number of specimens acquired must be approximately 15,000-16,000. Among the private donations the following need reference:—

- (1) A miscellaneous collection from Mr. H. Bell-Marley, Durban.
- (2) Various kinds of insects from Mr. A. Cuthbertson, Salisbury.
- (3) A few Butterflies from Mr. Dickson, Capetown.
- (4) Some insects from Mr. Redmond Orpen, Kleinzee.
- (5) Some Butterflies from Mr. P. Robertson, Muizenberg.
- (6) Some *Diptera* and *Hymenoptera* from Capt. R. Stevenson, Rhodesia.

Material Sent out to Specialists:

- (1) Some Noctuid-moths to Dr. A. J. T. Janse, Pretoria.
- (2) Species of *Anthidium*-bees to Mr. G. Mavromoustakis, Cyprus.
- (3) Species of *Scaratina* (*Curabidae*) to Mr. M. Bänninger, Germany.

Publications:

- (1) The *Notiophygus*-material of our Museum contributed largely to Mr. H. John's monograph of this genus in the "Arbeiten über morphologische und taxonomische Entomologie aus Berlin-Dahlem", Band 2, Nr. 1, pp. 1-28.
- (2) Our Geometrid-moths contributed to the second volume of Dr. Janse's "The Moths of South Africa".

- (3) My papers on the *Mutillidae*, *Tenebrionidae*, *Hemiptera-Heteroptera* and *Curculionidae* of the Vernay-Lang Kalahari Expedition have all been published during the course of this year in the "Annals of the Transvaal Museum", Volumes XVI and XVII, pp. 507-603 and pp. 49-62.

Thanks.—The thanks of the Trustees are due to the following donors: Dr. K. H. Barnard, Mr. H. Bell Marley, Mr. A. Cuthbertson, Mr. Dickson, Dr. R. Lawrence, Mr. Redmond Orpen, Mr. P. Robertson, Capt. R. Stevenson, Mr. C. Thorne and Mr. H. Wood.

I am, etc.,

ALBERT J. HESSE,
Assistant in Charge of the Insects.

DEPARTMENT OF BOTANY.

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to present the following report on the work of this Department for the year 1935:—

Accessions:—

Prof. R. Adamson	30 specimens from the Cape Province.
Prof. R. H. Compton	28 specimens from the Cape Province.
Dr. H. G. Foucade	18 specimens from the Cape Province.
Miss S. Garabedian	33 specimens from the Cape Province.
Mrs. H. S. Henderson	15 specimens from the Cape Province.
M. Robison	204 specimens from California.
Capt. T. M. Salter	197 specimens from California.
T. P. Stokoe	25 specimens from California.
University of Tashkent	76 specimens from Central Asia.
C. Thorne	174 specimens from the Cape Province.
Various	95 specimens from the Cape Province.

Exchanges.—Bolus Herbarium; Kirstenbosch; University of Stellenbosch; Royal Botanic Gardens, Kew; Botanic Gardens, Cairo; National Herbarium, Pretoria; University of Tashkent; Transvaal Museum, Pretoria; Botanic Gardens, Berlin.

Specimens Mounted and Incorporated.—1,015, including 9 genera and 84 species new to the Herbarium.

General Report.—Excursions were made in January to Meirings Poort, in March to the Richtersveld, in April to the Palmiet River, and during October and November to the Karroo. Very good collections of plants were made round these centres and most of the material has been incorporated in the general collection. Several day-excursions in the Peninsula and to outlying districts gave good results.

Material has been sent out during the year on loan to various accredited institutions for the purpose of study and critical examination, and material of several genera has been borrowed by us for the same purpose. In this way our collection is kept up to date with the newest ideas in classification and nomenclature as conceived by specialists in each branch.

The Department continues to serve the general public in replying to varied inquiries on matters pertaining to plant life. Material is frequently sent in from government institutions for critical examination and determination, and reports made thereon.

Mr. Minicki's weekly supply of fresh flowers for our display still continues, and is greatly appreciated by local and oversea visitors, while scholars find the exhibition very useful. The thanks of the Trustees are due to Mr. Minicki and to the donors mentioned above.

I am, etc.,

S. GARABEDIAN,
Assistant in Charge of the Department.

AFDELING PALEONTOLOGIE.

DIE DIREKTEUR, SUID-APRIKAANSE MUSEUM.

MENEER.—Dit is my voorreg om die volgende rapport aan u voor te lê. Aangesien daar deur my afwesigheid in die Buiteland en die vertrek van Dr. Haughton na Pretoria g'n verslag gelewer is in die jaar 1934 nie sal hierdie verslag die werksaamhede van die afdeling vir beide 1934 en 1935 insluit.

Aan die end van 1933 is die hooggewaardeerde medewerking van Dr. S. H. Haughton ons ontnoem. Dit is 'n groot verlies vir hierdie afdeling. Dr. Haughton was oor die 20 jaar in een of ander hoedanigheid verbonde aan die werksaamhede van die afdeling en aan sy ywer en entoesiasme is byna alle vooruitgang gedurende die periode te danke. Ons stel sy medewerking des te meer op prys omdat dit in die laatste jare heelwat opoffering gekos het. Graag wil ons hierdie geleentheid te baat neem om Dr. Haughton alle sukses toe te wens in sy nuwe betrekking as Direkteur van die Geologiese Opname.

Aan die einde van 1933 het ek verlof van die Museum verkry en met behulp van 'n stipendium van die Universiteit van Stellenbosch is ek in staat gestel om meeste van die groot Paleontologiese inrigtings in die Buiteland te besoek. Die doel van hierdie studiereis was om soveel moontlik van die verwante werwelid-fossiele van die Perm en Trias van ander werelddede te bestudeer, en tweedens om al die Suid-Afrikaanse Karofossiele in Buitelandse inrigtings grondig te ondersoek. Vir verlof om die versamelings te ondersoek en ook vir al die geriewe tot my beskikking gestel is ek dank verskuldig aan die hoofde van die volgende inrigtings: British Museum (Natural History); Zoological Laboratory, University College, London; Museum of Comparative Anatomy, Cambridge; Royal Scottish Museum, Edinburgh; Museum voor Natuurhistorie, Brussel; Naturhistorisches Museum, Mainz a. M.; Naturaliensammlung, Stuttgart; Geologisches Institut der Universität, Freiburg; Geologisch-Paläontologisches Institut der Universität, Tübingen; Alte-Akademie, München; Museum für Natur-

kunde, Berlin; Paläontologisch-Paläobiologisches Institut der Universität, Wien; Narodni Museum, Praha; American Museum of Natural History, New York; United States National Museum, Washington en Peabody Museum, New Haven.

In besonder is ek dank verskuldig aan die kuratore van die Geologiese afdeling van die British Museum en veral aan Dr. W. E. Swinton vir al die fasiliteite tot my beskikking gestel gedurende die ag maande wat ek daar werksaam was, as ook aan die kuratore van die Paleontologiese afdeling van die American Museum, en veral aan Dr. W. Granger vir al die tegemoetkominge tydens my verblyf van ses maande, en ook vir die publikasie van my ondersoekings aldaar. Alles te same het ek dertien wetenskaplike referate geskrywe wat deel van die resultate van my ondersoek oor die Suid-Afrikaanse fossiele wat in Buitelandse inrigtings gehuisves is beslaan. Tien is al gepubliseer en drie is nog op die pers. Iedere tipe van die Karofossiele in die Buiteland is deur my ondersoek, sodat my verdere studie van die Karofauna baie vergemaklik sal wees, want dit is duidelik dat die Suid-Afrikaanse Paleontoloog geen omvattende werk oor die Karofauna kan onderneem nie tensy hy die tipes wat in die Buiteland verkeer, kan besigtig. Ongelukkig beland daar vandag nog baie tipes in die Buiteland. By die jongste vergadering van die Suid-Afrikaanse Genootskap ter Bevordering van die Wetenskap het ek sekere voorstelle gemaak om die uitvoer van fossiele te kontroleer. Hierdie voorstelle is sonder teenstem aangeneem en aan die betrokke Minister voorgelê.

Met Freiherr von Huene van Tübingen en Dr. Gregory van die American Museum het ek 'n ooreenkoms aangegaan om duplikaateksemplare uit te ruil. Ek is daarvan oortuig, dat die ondersoek van ons Karofossiele baie beter op hierdie manier sal vorder. Die ondervinding het geleer dat deur die huidige metode van ongekoördineerde versameling deur Buitelandse inrigtings die tipes so versprei word dat deeglike ondersoek onmoontlik word.

Sedert my terugkoms het ek 'n versameltog na die Karo onderneem vergesel deur Dr. A. J. Hesse en Mnr. C. W. Thorne. Aan albei here is die afdeling Beaufort-Wes, Fraserburg, Victoria-Wes, Murraysburg, Colesberg, Venterstad, Albert, Steynsburg, Graaff-Reinet, Rouxville, Smithfield en Bethulie. Die Museum is baie dank verskuldig aan die eienaars van grond vir hul welwillendheid en gasvryheid. Dis verblydend om te sien hoeveel van ons boere die wetenskaplike waarde van fossiele besef en boonop dat hul graag die vondse wat op hul grond gemaak word in 'n Suid-Afrikaanse Museum wil sien. Aan die volgende eienaars is die Museum spesiale dank verskuldig: A. Grimbeek, W. H. Torr, A. van Zyl, D. Smith, A. Kruger, H. Coetzee, P. Bekker, S. W. van der Walt, J. A. Victor, C. Bussiahn, J. McLeod en C. Maddison.

Die versameling wat ongeveer 300 Karofossiele bedra is nog nie gekatalogiseer nie en die onderstaande tabel van aanwinste sluit hul nie in nie:—

Invertebrata.

Bokkeveld	0
Karo	1
Kryt	1
Tersiër en Resent	0

Vertebrata.

Karo	1
Kryt	0
Tersiër en Resent	0

Plantae.

Bokkeveld en Witteberg	0
Karo	0
Kryt	0
Tersiër en Resent	0

TOTAAL

3

Bostaande eksemplare is deur skenking verkry tydens my afwesigheid in die Buiteland. Dit is dus duidelik dat, as die Museum personeel nie self versameltogte onderneem nie, die jaarlikse aanwinste maar baie skraal sal wees.

Ek het onlangs die geluk gehad om Mnr. Gilles du Plessis te ontmoet en as gevolg van die ontmoeting het ons saam 'n begin gemaak om modelle van sommige van ons meer indrukwekkende Karodiëre te maak. Twee is al voltooi en tentoongestel. Ons hoop om aanstaande jaar nog 'n paar voorbeelde van Mnr. du Plessis se vaardigheid te vertoon. Sulke modelle het 'n baie hoë opvoedkundige waarde aangesien die meeste besoekers en veral skoolkinders nie die gawe het om van 'n geraamte 'n beeld te vorm van die lewende diere nie. Om by ons jeug 'n belangstelling op te wek vir ons Karofossiele het ek, bygestaan deur Mevr. Boonstra, ook 'n reeks van twaalf geïllustreerde artikels vir die Jongspan geskrywe. Verder het ek ook twee lesings oor Paleontologie uitgesaai.

Die uitstalling van die reusebene van die Oos-Afrikaanse Dinosauriërs is onder glas gebring omdat hul te erg beskadig word deur besoekers. Verder is daar aan die uitstalling niks gedoen nie. 'n Addisionele kamer is tydelik aan die afdeling afgestaan en daar sal aanstaande jaar 'n uitstalling gerangskik word van Vergelykende Anatomie en die Ontwikkelingsleer. Sommige van die modelle is in ruil verkry van die American Museum.

Die volgende publikasies het gedurende die periode Januarie 1934-Desember 1935 verskyn:—

BOONSTRA, L. D.

1. A Contribution to the Morphology of the Gorgonopsia. Ann. S.A. Museum.
2. Additions to our Knowledge of the South African Gorgonopsia preserved in the British Museum (Natural History). Ann. S.A. Museum.
3. A Contribution to the Morphology of the Mammal-like Reptiles of the Sub-order Therocephalia. Ann. S.A. Museum.
4. On an Aberrant Gorgonopsian *Burnetia mirabilis* Broom. S.A. Journ. Sc.
5. The Cervical Vertebrae of a Gorgonopsian (*Aelurognathus tigriceps*). Ann. Mag. Nat. Hist.
6. On a Pareiasaurian Reptile from South Africa, *Bradysaurus whaitsi*. Am. Mus. Novitates.
7. On some South African Reptiles of the Sub-order Therocephalia, preserved in the American Museum of Natural History. Am. Mus. Novitates.

8. On the South African Gorgonopsian Reptiles preserved in the American Museum of Natural History. *Am. Mus. Novitates.*
9. A Note on the Cynodont *Glochiodontoides gracilis* Haughton. *Am. Mus. Novitates.*
10. A Note on the Synonymy of the two Deinocephalians, *Dinophoneus ingens* Broom and *Jonkeria pugnar* Broom. *S.A. Journ. Sc.*
11. Die Versamelings van Fossiele as Basis vir die Paleontologiese Studie. *S. Afr. Journ. Sc.*

REED, F. R. C.

1. A New Lamellibranch from the Upper Dwyka Beds of South West Africa. *Trans. Roy. Soc. S. Afr.*

Die uwe,

L. D. BOONSTRA.

DEPARTMENT OF ETHNOLOGY AND ARCHAEOLOGY.

TO THE TRUSTEES OF THE SOUTH AFRICAN MUSEUM.

SIRS,—I have the honour to present the following report on these Departments for 1935.

The arrival of the new cases (or two-thirds of them) for the ethnology gallery brings to an end the long period of waiting during which Miss Shaw has been overhauling and preparing the material which the cases are designed to contain. Miss Shaw has handed me the following report on the ethnological department:—

"There has been a marked increase in the number of accessions during this year, as compared with last, the total numbering 130 articles. The most outstanding have been by gift, firstly from Mr. Daly, of three remarkable earthenware figures, excavated in Ashanti, West Africa, and said to have been connected with ancestor worship; and secondly from Mr. F. Corner, of St. Cuthbert's Mission, Tsolo, of a very fine representative collection of beadwork, from the Pondomisi, Fingo and Tembu tribes of that district. Another notable accession was by purchase of an Ashanti gold-smith's outfit, with brass scales, scoops, spoon, and weights, used for measuring gold-dust. Mr. Mansergh has presented a miscellaneous collection made by his father, the late Mr. Lewis Mansergh; and Mr. P. R. Malleson, of Stellenbosch, has placed on loan a collection of articles from Portuguese East Africa and the Transvaal.

"An attempt has been made to interest missionaries in the collection of specimens for the Museum, from the tribes among whom they work, but up to the present, with one or two exceptions, has met with little response.

"The exhibition of Frobenius' copies of rock-paintings had to be removed to allow for the painting of the gallery, and towards the end of the year the Department was further disorganised by the erection, part of the way round the gallery, of the long-awaited wall-cases, the arrangement of specimens in which will start immediately and will form the most important part of the new year's work.

"I was granted two weeks extension of leave in the early part of the year to go through the ethnological literature in the Transvaal Museum, in connection with my work on the identification and description of specimens, and have completed a paper on Orambo Knives.

"The thanks of the Trustees are due, in addition to those mentioned above, to the following donors: Dr. K. H. Barnard, Messrs. D. Bremmer, R. Davies, G. E. Leipoldt, R. Lindsay, Miss M. Wilman, and the Cape Peninsula Publicity Association."

Mr. Goodwin reports as follows on the Department of Archaeology:—

"During the early part of the year a considerable amount of additional material was obtained from the Oakhurst cave, George District. This is still being sorted by Mr. Goodwin and Professor Drennan, and a full report should be ready by the end of the year.

"A useful representative collection of stone implements was received from Dr. Dreyer of Bloemfontein, typifying the deposits excavated by him at Floris' Bad, Hagenstad.

"The Department of Archaeology is still suffering from overcrowding, and the condition of the present wood and iron shed does not allow for the reasonable storage of further material."

The last sentence of Mr. Goodwin's report should be emphasized. Under present conditions it is almost impossible for him or anyone else to work systematically or in any comfort on our collections of stone implements. A permanent and properly planned store and workroom (which might be of very simple construction) are urgently needed.

I am, etc.,

E. L. GILL,
Director.

KOOPMANS DE WET HOUSE.

TO THE TRUSTEES OF THE SOUTH AFRICAN MUSEUM.

SIRS,—I have the honour to present herewith a report on the Koopmans de Wet House for the year 1935.

The recovery shown in 1934 in the number of visitors was continued in 1935, the total of 23,701 representing a further increase of 2,446. Over 7 per cent. were coloured people, as against the usual proportion of only 5 per cent. Parties from 26 schools visited the House; some of them came from country schools, e.g. French Hoek and Clanwilliam. The average size of the parties was 24.

No articles of furniture have been added during the year (the House is now furnished to a point where only very special articles can be added to advantage), but a good many minor improvements have been made and some suitable early prints have been purchased for the decoration of the walls. The show of pewter on the dresser in the kitchen has been made much more striking by the addition of a number of good pieces lent by Mr. Finch. He has also set out in the Van Eeden cabinet a very attractive loan collection of Chinese pottery.

A number of small articles have been presented during the year, among them a gold snuff-box, gold pendant, ivory card case and fan given by Mrs. G. A. Reynolds (*née* Overbeck), and one of the old gold watch keys with a large disc of hair, given by the Misses Ebeling. The purchases include a few pewter plates and some good pieces of blue-and-white china.

Professor Pearse, of the University of the Witwatersrand, assisted by a party of his students, has spent much time in a study of the furniture in the collection.

I am, etc.,

E. L. GILL,
Director.

SOUTH AFRICAN MUSEUM.
STATEMENT OF RECEIPTS AND PAYMENTS FOR THE YEAR ENDED 31st DECEMBER, 1935.

<i>Receipts.</i>				<i>Payments.</i>			
	£	s.	d.		£	s.	d.
To Balance, 1st January, 1935			1,084 1 8	By Salaries, Wages and Sunday Time			5,067 9 3
„ Grants:—				„ Library			161 16 9
Union Government	*5,250	0	0	„ Publications			443 18 6
Capetown Corporation	500	0	0	„ Travelling and Collecting			125 6 4
Carnegie Corporation, Special Grant	300	0	0	„ Upkeep of Grounds (by Municipality)			167 13 0
			6,050 0 0	„ General Upkeep of Museum (including £10 from Carnegie Grant)			445 7 10
„ Refunds and Discount			20 7 11	„ Railage, Cartage and Dock Charges			50 15 5
„ Interest Received:—				„ Postal and Telephone Charges			58 13 7
<i>Provident Fund Investments:—</i>				„ Purchases for Koopmans de Wet House			40 2 0
Union Government	£71	5	0	„ Insurance			81 15 7
Capetown Corporation	20	0	0	„ Water, Light and Electricity			139 14 1
			91 5 0	„ Audit Fee			5 5 0
<i>Coin Fund Investment:—</i>				„ Bank Charges			1 14 0
S.A. Association			4 2 6	„ Provident Fund, Trustees' Contributions			275 7 9
			95 7 6	„ <i>Interest on Provident Fund Investments:—</i>			
„ Sale of Guides and Postcards			79 14 0	Interest on 5 per cent. Government Stock	37	10	0
„ Sale of Annals			25 12 6	Interest on 4½ per cent. Government Stock	33	15	0
„ <i>Provident Fund:—</i>				Interest on 4 per cent. Municipal Stock	20	0	0
Withdrawal from Cape of Good Hope Savings Bank to purchase Union Loan Certificates	244	6	11				91 5 0
Withdrawal to pay out	£56	3	1	„ Provident Fund Withdrawals			563 1 8
Withdrawal to pay out	32	16	1	„ Pension			24 0 0
			88 19 2	„ Honorarium			50 0 0
Sale of Union Loan Certificates to pay				„ Coin Fund Purchases			6 11 2
Provident Fund claims	265	13	9	„ Purchase of Motor Van			174 7 6
	208	8	9	„ Purchase of Union Loan Certificates			244 6 11
			474 2 6	„ Uniforms			35 14 1
„ Geological Survey, share of publications (two years)			807 8 7	„ Furniture			57 0 0
„ Royal Automobile Club, cost of relief map			138 8 0	„ Balance, 31st December, 1935			*4 14 9
			15 0 0				
			£8,316 0 2				£8,316 0 2

* £1,750 Government Grant for Fourth Quarter, 1935, was passed through the books in January, 1936.

This account has been examined under my directions and, subject to the remarks contained in paragraphs 4 (b), (d) and 5 of the accompanying report, it is correct.

H. P. SMIT,

Capetown, 15th April, 1936.

Controller and Auditor-General.

E. L. GILL,
Director.

KOOPMANS DE WET SPECIAL GRANT FUND.

	£	s.	d.		£	s.	d.
To Balance, 1st January, 1935	164	9	7	By Purchases	40	2	0
„ City Council Grant	100	0	0	„ Balance, 31st December, 1935	224	7	7
	<u>£264</u>	<u>9</u>	<u>7</u>		<u>£264</u>	<u>9</u>	<u>7</u>

* HAJEE SULLAIMAN SHAMAHOMED COIN FUND.

	£	s.	d.		£	s.	d.
To Balance, 1st January, 1935	7	15	4	By Purchases	6	11	2
„ Interest	4	2	6	„ Balance, 31st December, 1935	5	6	8
	<u>£11</u>	<u>17</u>	<u>10</u>		<u>£11</u>	<u>17</u>	<u>10</u>

* As the capital sum of £100 was invested with the South African Association by the estate of Hajee Sullaiman Shamahomed, and interest only is payable to the Museum, the capital sum of £100 has been omitted from this statement.

CARNEGIE GRANT FUND.

	£	s.	d.		£	s.	d.
To Grant from Carnegie Trust, 5th March, 1935	300	0	0	By Purchases (cases)	10	0	0
	<u>£300</u>	<u>0</u>	<u>0</u>	„ Balance	290	0	0
					<u>£300</u>	<u>0</u>	<u>0</u>

Audited and found correct.

Capetown, 15th April, 1936.

H. P. SMIT,
Controller and Auditor-General.

E. L. GILL,
Director.

THE LIBRARY OF THE
UNIVERSITY OF ILLINOIS
JUL 1 - 1936



UNION OF SOUTH AFRICA

REPORT

OF THE

South African Museum

FOR THE

THE LIBRARY OF THE
JUL 13 1937
UNIVERSITY OF ILLINOIS

Year ended 31st December, 1936

Published by Authority

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FERDINAND BOSMAN, Esq.

PROF. C. G. S. DE VILLIERS, M.A., PH.D. (resigned in November).

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W. J. THORNE, Esq.

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N. HERBERT }
G. W. VENNER } Attendants.

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G. BINEDELL, Attendant (resigned in October).

J. THOMAS, Attendant (from October).



SOUTH AFRICAN MUSEUM

REPORT OF THE TRUSTEES FOR THE YEAR 1936

The Trustees of the South African Museum have the honour to present to the Government, in accordance with the provisions of Act No. 17 of 1857 (Cape), their report for the calendar year 1936.

A matter which has been repeatedly and carefully considered during the year is the staffing of the various departments of the Museum and the remuneration of the scientific staff. It has long been recognized that in proportion to its income (though not in proportion to the demands of the work) the Museum employs a rather large scientific staff, and that this has only been rendered possible by a low scale of salaries. The question of filling Dr. Lawrence's vacant post served to bring the matter to a head, and it was regretfully decided that for the present the post must remain unfilled in order that certain other members of the staff might receive more adequate remuneration.

The general position in regard to staff and salary scales was discussed with the Minister of the Interior, then Mr. J. H. Hofmeyr, in an interview which he granted in May. The outcome, a probable increase of £300 per annum in the Government grant in recognition of the service rendered in maintaining the Koopmans de Wet House, is gratifying so far as it goes, but it does not solve the main difficulties connected with the staff. At the suggestion of the Minister, however, some temporary appointments have been made with the object of at least postponing the worst effects of a shortage of personnel. The balance of about £1,900, which was being held in the hope of using it for certain permanent ends, has had to be mortgaged to meet the commitments in the matter of salaries and staff. It is hoped that the Government will soon find it possible to put the whole position on a more secure footing.

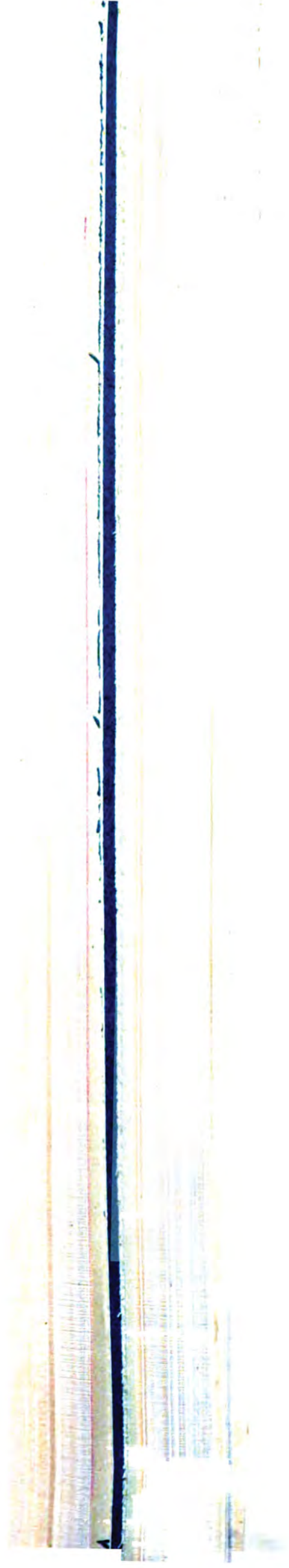
The Trustees welcome the formation of a Museums Association for South Africa, and hope that it will do as much for the museums of this country as the older associations in Britain and America have done for the museums which they respectively represent. Warm thanks are due to the Carnegie Corporation for the practical help which it is giving towards setting the new Association on its feet.

Another enterprise supported by the Carnegie Corporation, namely the preparation of travelling cases for Western Province schools, is making steady progress. Half-a-dozen cases prepared at this Museum were sent by the Cape Education Department to the Exhibition in Johannesburg, where they are reported to have made a very favourable impression.

It is with pleasure that the Trustees see the new ethnology gallery taking shape and the fine collection representative of South African native life at last being made available to the public. They would urge upon the Government that there should be as little delay as possible in completing the supply of show-cases, not only for this gallery but also for the insect room, the reptile room and the other parts of the Museum which have been waiting for cases since the building was enlarged five years ago.

Some of the matters touched upon here are dealt with in more detail in the course of the Director's report which follows.

J. G. VAN DER HORST,
Chairman of the Trustees.



REPORT OF THE DIRECTOR

TO THE TRUSTEES OF THE SOUTH AFRICAN MUSEUM.

SIRS,—I have the honour to present my report on the work of the Museum for the year 1936.

Staff.—No further changes have taken place through death or resignation, and the vacancy on the scientific staff left by Dr. Lawrence's departure has remained unfilled. Questions connected with the staff have been repeatedly under consideration by the Trustees and formed the subject of an interview with the Minister of the Interior. The decision not to fill Dr. Lawrence's post for the present is one upshot; others are the temporary engagement of Mr. Reay Smithers as a technical assistant, and a three-year appointment to the scientific staff for Miss E. M. Shaw, who has been in efficient charge of the ethnology department for several years.

The temporary nature of these arrangements is due to the fact that they depend upon an accumulated credit balance of nearly £2,000—a consequence of saving on salaries during study-leave and vacancies, and also of an attempt to amass enough money for the replacement of badly mounted big-game animals. The balance will be exhausted on the present basis in about five years unless the Government finds it possible to improve our position. This would mean not only that our unsightly specimens of big game would continue to disgrace the Museum, but that we should be forced to discharge valued members of the staff.

Mr. Smithers has already proved himself a useful recruit. His first duty was to put into safe order the reference collections of reptiles, amphibians and arachnids formerly under Dr. Lawrence's charge, but he is doing good work too in the exhibition cases and in the preparation of travelling cases for schools. As we knew before he joined the staff, he is a good collector in the field.

Attendance of Visitors.—The total recorded for the year is 109,706. This represents a fall of rather more than 6,000 as compared with the previous year. Fluctuations of this kind, up or down, are always going on, and the downward ones are always disappointing, but we can usually only guess at the causes. The year's total was made up as follows:—

European.....	Adults.....	Male.....	29,267
		Female	25,235
	Children.....		24,493
Coloured.....	Adults.....	Male.....	7,485
		Female	9,186
	Children.....		10,891
Natives.....	Adults.....	Male.....	2,178
		Female	971
			109,706
Largest number on one day (2nd January).....			1,594
Smallest number on one day (4th August).....			67
Largest number on a single Sunday afternoon (28th June).....			1,135
Smallest number on a single Sunday afternoon (29th February).....			226

The Museum was visited by 131 school parties, numbering in all 3,629 pupils.

Accessions.—Though mere statistics are not necessarily of much significance, the number of accessions for the year in different departments is set out in the following table:—

Mammals and Birds	47
Reptiles and Amphibians	238
Fishes	1,712
Insects (approximately)	4,000
Arachnids	292
Crustaceans	113
Plants	800
Fossils	239

Library.—Accessions to the library numbered as follows:—

Books:

By donation	6
By purchase	9

Pamphlets and Serials:

By donation and exchange	980
By purchase	206

To our great disappointment the projected extension to the library has not yet materialized. It is now, of course, more urgently needed than ever, and no attempt to put our extremely valuable library into the order it deserves can be made until the extension is carried out.

Publications.—Two parts of the *Annals* have been published during the year:—

Volume XXIV, part 4. A. J. H. Goodwin, The Vosburg Petroglyphs, 48 pp., 29 pls.

Volume XXXI, part 3. J. V. L. Rennie, on Placostyella, 7 pp., 1 pl.
J. V. L. Rennie, Zululand Cretaceous Fossils, 116 pp., 19 pls.

We expected to publish this year Major Connolly's comprehensive monograph of the Non-Marine Mollusca. It has been practically all in type for some time, but the author has held it back because of the amount of new material continually coming into his hands, adding new localities and information which he is reluctant to omit.

Collecting.—Several expeditions were made during the year by different members of the staff, in most cases with the help of grants from the Research Grant Board. Dr. Barnard and Mr. Thorne worked the rivers for freshwater fishes from French Hoek northward to Clanwilliam, Calvinia and Nieuwoudtville, doing some good general collecting as well. A short expedition to the Robertson district, by Dr. Barnard, Dr. Hesse and Mr. Thorne, was also productive. Another and longer expedition was less so: Dr. Boonstra and Mr. Thorne joined an expedition to the Kalahari organized by students of the University of Capetown, and though it gave them the chance of seeing a great deal of country where good work could be done, it was not planned for museum purposes and gave them little opportunity for collecting.

A more productive trip in somewhat similar country was made towards the end of the year by Dr. Hesse and Mr. Thorne, who went up to the Great Karas Mountains in South West Africa. These mountains had suffered too long a drought to yield really good results, but large and interesting collections were made en route, both on the Orange River and in Little Namaqualand. All these expeditions were made with the motor van purchased in the previous year.

Donations.—Though of a transitory nature, Mr. J. F. Minicki's weekly supply of fresh wild flowers for our flower counter constitutes year by year one of the outstanding donations to the Museum. It is not altogether transitory either, for it has from time to time furnished many good specimens for the herbarium. Among donations of the more usual type may be mentioned fresh skins of hyaena and two wild dogs presented by Mr. Wm. A. Campbell through the Durban Museum (these are now being mounted); skin and horns of blesbok from Capt. G. C. Shortridge; a number of the rarer local butterflies from Mr. Chas. Dickson; specimens of the Namaqualand species of blaasop toads (*Breviceps*) from Father Veillet of Port Nolloth; a fine example of the strange plant known as the "halfmens" (*Pachypodium namaquense*) in leaf and flower, collected for us by Mr. Smithers before he joined the staff. Mr. Chaplin's gift of a seine net has been the means of adding some valuable hauls of river fish to our collection.

GENERAL REVIEW OF MUSEUM WORK.

The new ethnology gallery has been the scene of the chief advance of the year so far as public exhibition is concerned. We began the year with a range of empty wall-cases, just erected, extending round two-thirds of the wall space of this gallery. By the end of the year Miss Shaw had installed exhibits in almost the entire range of these cases, except for a few that are for the moment behind a temporary partition which cuts off one end of the gallery to serve as a store and workroom. It is a source of great satisfaction that we are at length and for the first time able to put before the public a representative series from our rich store of objects illustrating the life and crafts of the native races of South Africa. Miss Shaw is to be congratulated, too, on her arrangement of the cases. She has adopted a number of different styles of installation, suited to the different assortment of objects to be exhibited in each case, and the total effect in the gallery as a whole is harmonious without being monotonous. The tribal groups represented in the cases so far installed are those of the Bushmen and Hottentots, the Herero, Bechuana, Basuto, Ovambo, Barotse, and in part the Zulu. The wall at the north end of the gallery is still without cases, and on it we are showing at present a selection from Stow's copies of rock paintings, recently presented to the Museum by Miss Bleek.

Further good work in the exhibition cases has been carried out by Mr. Smithers. He has overhauled the cases of reptiles, doing what was necessary to put the specimens into good order and to show them to better

advantage. More recently he has turned his attention to the spiders and other arachnids, and here he is enhancing the interest of the exhibited series by adding a number of examples of spiders' webs and nests.

The preparation of travelling cases for schools has occupied a good deal of time during the year. All the members of the staff have had a hand in planning them, fitting them up and labelling them (for one of them, a case showing ten common Cape birds, I did all the work myself), but the chief burden of the work has fallen on Mr. C. W. Thorne, who deserves much credit for the care, thoroughness and enthusiasm which he has put into it. Six of the cases were exhibited at the Empire Exhibition in Johannesburg by the Cape Education authorities, and we are told that they attracted much interest and praise.

Good progress has been made by Dr. Boonstra or under his supervision with the room which is to be devoted to illustrations of comparative anatomy and theories of evolution. It is not yet ready to be opened, but most of the more important sets of objects are now in position, and the completed room promises to be interesting and attractive to the public as well as of great value to students.

A large amount of good modelling has been carried out by Mr. Drury. He was away on long leave for six months in the middle of the year, but before he left he had completed the modelling of a relief map of the strip of country from about Mossel Bay to near Port Elizabeth—extending in a north-and-south direction from the mid-Karoo to the coast. This is a continuation of the relief map, made nine years ago, of the south-western corner of the Cape. Its construction was instigated by the Cape Publicity Association, who showed the complete map, coloured to bring out the roads and natural features, at the Empire Exhibition. Another copy will be used in the Museum as an extension of the geological relief map of nine years ago. The difficulties of working out the topography and elevations were formidable, but Mr. Drury was greatly helped by data supplied by the Trigonometrical Survey.

After his return Mr. Drury entered upon the construction of a series of models of the skulls of Karroo reptiles; a series planned by Dr. Boonstra to illustrate relationships and apparent lines of descent in the remarkable succession of reptilian faunas that inhabited the area of South Africa when the Karroo beds were being formed. The series is destined for one of the large cases in the new evolutionary room.

Much of the time of the scientific staff is always occupied in such work as sorting and identifying batches of specimens newly acquired or awaiting study, or in identifying and reporting upon collections submitted by other museums or institutions in the Union or abroad. In most branches such work almost inevitably leads to original study of some group, large or small, and to the publication of a systematic paper, often embodying descriptions of new species. Current work of this kind is briefly referred to in some of the departmental reports which follow: Dr. Barnard's on fishes, crustaceans, etc.; Dr. Hesse's very comprehensive work on the Bombyliid flies; Dr. Boonstra's on the collection of fossil reptiles brought by Dr. Dixey from a remote locality on the Nyasaland border of Northern Rhodesia. Work of this kind, important as it is in the economy of a living museum, does not as a rule report itself in the exhibition galleries. The chief witnesses to it are the reference collections and the volumes of the *Museum Annals*.

It may not be too much out of place here to mention another piece of work which has no direct connexion with the Museum, namely the publication of a popular book on birds, written by me and illustrated by me and my sister. It has at least this much connexion with the Museum, that the stimulus to it was provided by the constant enquiry of visitors for such a book, and the fact that it would have been impossible to produce it without access to the Museum library and the Museum bird collection. Apart from three weeks' special leave, however, its preparation has been a spare-time occupation. The chief feature of the book is its series of twenty plates, all but two in colour, each figuring about twenty species of birds.

Two other matters may be briefly referred to in this general summary. One is a record of disappointment—over the postponement of certain structural additions and alterations that we hoped to see carried out during the year: the extension of the library and the construction of an outbuilding to provide office, workshop and store for the department of palaeontology. The other is of the opposite nature: to record our appreciation of the great improvements made by the municipal gardening staff in the Museum grounds.

I am, etc.,

LEONARD GILL,

Director.

DEPARTMENTAL REPORTS

DEPARTMENT OF MAMMALS AND BIRDS

TO THE TRUSTEES OF THE SOUTH AFRICAN MUSEUM.

SIRS,—I have the honour to present the following report on this Department for the year 1936.

There has been little activity in the Department during the past year, chiefly owing to the fact that I have been unable to give time to it myself, and that Mr. Drury has been absent for half the year and fully occupied otherwise for the other half. To my great regret I have not even been able to make progress with my set of common local birds. This is necessarily almost entirely a spare-time job, and my spare time has been fully taken up in the preparation of my "First Guide to South African Birds".

A number of birds casually acquired have been made into good cabinet skins by our native skinner Ali Safi. A considerable number of veld mice and rats have been similarly dealt with. Most of them were sent in alive from the Piquetberg District by Mr. T. Muller, of the Government rodent-control staff, and they included such species as the spiny mouse, *Acomys subspinosus*, and the Cape fat-mouse, *Steatomys pentonyx*, till recently considered very rare. Several bontebok rams ordered to be shot off from the two herds at Bredasdorp were also dealt with at the Museum on behalf of the National Parks Board and the Provincial Administration. The handling of these valuable buck was greatly facilitated by the kindness of Messrs. Verster, who kept the carcasses in good condition for us in their chill-rooms.

As a side-line in this Department I fitted up one of the school travelling cases to show ten of the commonest birds of the Western Cape Province.

I am, etc.,

LEONARD GILL,
Director.

DEPARTMENT OF REPTILES AND AMPHIBIANS.

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to present the following report on this Department for the year 1936.

Owing to the fact that no systematic work was undertaken in this Department from the time that Dr. R. F. Lawrence left in June, 1935, until I joined the staff in August, 1936, a large amount of material had accumulated, awaiting classification. The major portion of this has now been labelled and added to the collection.

The additions are as follows:—

Snakes	12
Lizards	168
Frogs	58
	—
	238

Collecting.—Valuable specimens of lizards were collected both by Dr. L. D. Boonstra and Mr. C. W. Thorne on their expedition to the Kalahari, and by Dr. A. J. Hesse and Mr. C. W. Thorne on a four weeks' trip to the Karasberg Mountains, South West Africa. Early in 1936 I had the opportunity of spending a few weeks in the Richtersveld, and managed to secure some eighty specimens, comprising nine genera and seventeen species.

Forty-four of the fifty-eight frogs received were obtained in exchange from the Congo Museum.

Exhibition Gallery.—Many of the lizard specimens in spirit had to be withdrawn from this collection owing to the jars being cracked; these are being replaced gradually as new specimens are brought in. The snake case was cleaned up and many of the old labels reprinted.

The reference collection of snakes and lizards was cleaned up, new spirit added and, in many cases, the labels replaced.

I am, etc.,

REAY H. N. SMITHERS,
Technical Assistant in Charge of the Department.

DEPARTMENT OF FISHES AND MARINE INVERTEBRATES.

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to present the following report on this Department for the year 1936.

Exhibition Galleries.—Two large fishes were received during the year, and after Mr. Drury's return from leave, these were mounted and placed on exhibition.

One of these fishes is a marine species, *Etelis carbunculus*, which is a well-known edible fish in Mauritius, the Seychelles, and the Hawaiian Islands. This is the first record of its occurrence in South African waters, and the Museum is indebted to Mr. Chubb of the Durban Museum for his kindness in obtaining this fine specimen, which measures 36 inches in length.

The second fish is an example of the fresh water Witvis (*Barbus capensis*), measuring 30 inches in length. Although known to grow to a large size, this specimen is far and away the largest actually recorded in scientific works. This is no doubt due to the difficulty of preserving and transporting these large fishes to museums. In this instance the Museum is very much indebted to the enthusiasm and energy of Mr. Manley, a keen angler stationed on the Olifants River in the Clanwilliam District.

As regards the Invertebrate cases, barring the addition of some fine examples of Sponges, little has been done beyond setting aside suitable material for the completion of the wall-cases (Sponges, Coelenterates, Sea-slugs). The unsuitability of specimens in liquid in jars for exhibition purposes is continually borne in on one, and experiments are being conducted, in collaboration with Mr. Reay Smithers, with a view to making dry mounts.

School Travelling Cases.—Material from this Department was used in making up a case illustrating Common Objects of the Seashore.

Study Collections.—Dr. Carlgren, the Swedish authority on Sea-anemones, paid a visit to South Africa, and during his stay in Cape Town very kindly examined and identified our collection. A few specimens appeared to be specially interesting, and on these Dr. Carlgren will report later.

I have been engaged on our collection of fishes and Crustacea; and have identified collections of Crustacea from Delagoa Bay for Dr. C. J. van der Horst of the Witwatersrand University, and from Port Elizabeth and Cape Town for Prof. T. A. Stephenson of the University of Cape Town. In both cases the collection has benefited by the presentation of duplicate specimens.

Dr. Lawrence, Director of the Natal Museum, submitted for identification his collections of Isopods and Amphipods from Mauritius and from Natal. My report on the former collection has been published in the Annals of the Natal Museum, and the report on the latter is in the Press. Of the Mauritius species this Museum possesses a full set, and of the Natal specimens Dr. Lawrence has allowed us to retain certain duplicates.

I have also reported on collections of Isopods and Amphipods from the Indian Museum, the study of which has been of considerable help in connection with my work on these groups in South African waters.

Field Work.—I have made two trips in connection with my research work on the mountain fauna, both of which, especially the one to the Clanwilliam-Calvinia Districts, have yielded interesting and important material.

Accessions.—Very few marine invertebrates have been received or collected during the year, and as these have not been registered, it is not thought worth while including them here. In the case of Land-shells, all specimens received during the year have been promptly forwarded to Major Connolly so that the localities may be included in his forthcoming monograph. These also, therefore, are not included.

The large number of fishes added to the collection is mainly due to the kindness of Mr. Chaplin, Jonkershoek Trout Hatcheries, in constructing a seine-net.

	Specimens.	Species.	New to the Collection.
Fishes	1,712	21	4
Crustacea	113	35	3

Publications.—No paper dealing with material from this Department has been published during the year, either by myself or other workers. Four papers on various marine animals, however, are in Press, and will be issued early in 1937.

The Museum's collection of Fishes, and the Library, have been utilized by Dr. J. L. B. Smith in the preparation of papers on Fishes, three of which were published during the year (*Tr. Roy. Soc. S. Afr.*, XXIII and XXIV).

Thanks.—The thanks of the Trustees are due to the following donors and helpers:—H. W. Bell-Marley, C. L. Biden, Dr. Carlgren, Capt. Collett, Major M. Connolly, W. J. Copenhagen, Fred Bowker, E. C. Chubb, Dr. A. J. Hesse, Dr. R. F. Lawrence, A. E. Manley, Dr. J. L. B. Smith, Reay Smithers, Prof. T. A. Stephenson, the Rev. and Mrs. Strassburger, C. W. Thorne, Dr. C. J. van der Horst.

I am, etc.,

KEPPEL H. BARNARD,
Assistant Director.

DEPARTMENT OF ENTOMOLOGY.

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to present the following report on this Department for the year 1936.

Research Work.—My studies on the genera and species of the *Bombyliidae* again occupied most of my time during the course of this year. The first part of this revision, which includes a very large number of genera and species, is now practically complete and will be ready for publication during the early part of 1937. The Bombyliid-material obtained by the Vernay-Lang Kalahari Expedition has also been classified and described separately. The determination of some of the insects, belonging chiefly to the University of Witwatersrand and the Port Elizabeth Museum, was also undertaken during this year. A beginning has also been made in the writing up of the classificatory and biological notes for the Insect and Arachnid school cases now being arranged and set up by Mr. C. Thorne.

Field Work.—Several trips were undertaken in connection with this and other departments. The first big collecting trip, during September and October, was conducted by Dr. K. H. Barnard and accompanied by Mr. C. Thorne. Insects were chiefly collected at Clanwilliam, Calvinia, Nieuwoudtville, French Hoek and Villiersdorp. Another extensive trip, during October and November, was undertaken by Mr. C. Thorne and myself and had as its objective the Great Karas Mountains in South West Africa. Organized collecting was done at two separate localities on the western front of the Karas; and a representative collection of insects and fish was also made at Aiais on the Aub or Great Fish River in South West Africa. On the return journey a very large number of insects and Bombyliid-flies was collected at Goodhouse on the Orange River, at Kamieskroon and in the Kneegsvlakte respectively. Dr. L. Boonstra and Mr. C. Thorne also accompanied the Capetown University Expedition to the Kalahari in July. At the beginning of the year, in January, Dr. K. H. Barnard, Mr. C. Thorne and I spent a few days collecting on the Dassieberg at Robertson. A good number of specimens has been added to the general collections of the Museum as a result of all these trips.

Accessions.—As a result of the field work by the Museum during the year the number of acquired specimens must be approximately 3,000 to 4,000. In addition to these the Museum is also indebted to Mr. Dickson of Capetown for a number of Cape butterflies which are new to the collection, and to Mr. C. Thorne for a number of miscellaneous insects, chiefly butterflies and moths, which he reared and bred from their larvae and pupae in the Museum during his spare time. To Prof. J. Potgieter and Mr. Joubert of the University of Stellenbosch the Museum is indebted for a few duplicate specimens of *Coleoptera* and *Hymenoptera*.

Material returned during 1936.—

- (1) The *Psammocharidae* sent to Dr. G. Arnold, Bulawayo.
- (2) The collection of *Scaratina* (Carabidae) sent to Mr. M. Bänninger, Germany.
- (3) The *Geometridae* and some *Noctuidae* sent to Dr. A. J. T. Janse, Pretoria.
- (4) Some *Notiophygus*-beetles sent to Mr. H. John, Berlin.
- (5) Some *Acridiidae* (*Orthoptera*) studied and described by Dr. K. H. Key, Australia.
- (6) The collection of *Anthidium*-bees sent to Mr. M. Mavromoustakis, Cyprus.

Publications.—

- (1) Notes and Observations on an interesting Lasiocampid Moth; pp. 404-413. *S. Afr. Journ. Sc.*, Vol. XXXII, 1935, by A. J. Hesse.
- (2) Scientific Results of the Vernay-Lang Kalahari Expedition, *Bombyliidae* (Diptera), pp. 161-184, *Ann. Transv. Mus.*, Vol. XVII, 1936, by A. J. Hesse.

Thanks.—The thanks of the Trustees are due to the following donors and collectors:—Dr. K. H. Barnard, Dr. L. Boonstra, Mr. Dickson, Mr. Joubert, Prof. J. Potgieter and Mr. C. Thorne.

I am, etc.,

ALBERT J. HESSE,

Assistant in Charge of the Insects.

DEPARTMENT OF ARACHNIDA AND MYRIOPODA.

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to present the following report on this Department for the year 1936.

No systematic work was undertaken in this Department between the months of June, 1935, and August, 1936, when I joined the staff. As a consequence a large amount of material awaited classification and labelling. A portion of this work has now been completed, and it is hoped that the Department will be brought up to date during the early months of 1937.

Dr. L. D. Boonstra and Mr. C. W. Thorne brought back a collection of scorpions, 102 in all, from their expedition to the Kalahari; these were forwarded to Dr. R. F. Lawrence for identification. They have been returned recently, and contain species hitherto poorly represented in our collection, and one new species of *Opisthophthalmus*.

Dr. A. J. Hesse and Mr. C. W. Thorne brought back from the Karas Mountains, South West Africa, a large number of Solifugae which have been labelled pending their identification.

The work of changing the specimens from cork-stoppered bottles to jars with ground-glass stoppers, started by Dr. R. F. Lawrence, was continued, some 300 jars being used. This change-over is held up until the arrival of a further 400 glass-stoppered

jars which are on order. It is most necessary that the collection should be housed as soon as possible in these new jars, as the wall against which the shelves stand becomes very hot in the summer and without frequent attention the corked bottles are very liable to dry up.

The additions are as follows:—

Araneae	118
Solifugae	50
Scorpions	116
Pseudoscorpions	13
	<u>292</u>

Special thanks are due to Dr. Findlayson, of the Union Health Department, for a collection of some 200 spiders of the genus *Latrodectus* (the poisonous "button spiders") from various localities, also to the following for various other contributions to the Department:—Dr. A. J. Hesse, Dr. L. D. Boonstra, Dr. K. H. Barnard, Mr. C. W. Thorne, Mr. J. F. Cloete of St. Helena Bay, Mr. J. Kavanagh and Mr. V. Peers.

Exhibition Gallery.—The cases in the Exhibition Gallery were repainted, and the jars containing specimens resealed and relabelled. A few spiders' nests were put on show, and other spiders were induced to construct their nests on artificial surroundings for exhibit. The Myriopoda received during the year have been numbered and labelled pending classification.

I am, etc.,

REAY H. N. SMITHERS,

Technical Assistant in Charge of the Department.

AFDELING PALEONTOLOGIE.

DIE DIREKTEUR, SUID-APRIKAANSE MUSEUM.

MENEER,—Dit is my voorreg om die onderstaande rapport oor die werk van hierdie Afdeling aan u voor te lê.

Die vernaamste stuk werk wat hierdie jaar afgemaak is, is die preparering, bestudering en beskrywing van die versameling fossiele deur dr. F. Dixey verkry in die Luangwa Vallei, Noord Rhodesië, en aan my toevertrou vir studie. Die materiaal was in 'n baie moeilike rots bevat en die preparering het baie tyd in beslag geneem. Die beskrywing is egter nou agter die rug en sal eersdaags ten perse gaan. Ons is dr. Dixey baie dank verskuldig vir die geleentheid om hierdie fauna, wat in noue verband staan met die fauna van ons Karorotse, te bestudeer.

In die nuwe uitstallingskamer, wat gewei word aan Vergelykende Anatomie en die Ontwikkelingsleer, is heelwat vordering gemaak en dit sal hopelik vroeg aanstaande jaar gereed wees vir vertoning aan die publiek.

Gedurende die jaar was ek ses weke van kantoor as leier van die Museum-afdeling wat deelgeneem het aan die „University of Capetown Kalahari Expedition”. Ongelukkig het die organisasie van hierdie tog baie te wense oorgelaat en het ons slegs 'n karige versameling vir die Museum bymekaar gebring.

Andermaal het ek van tyd tot tyd populêre praatjies oor die Radio uitgesaai en populêre artikels geskrywe oor onderwerpe in direkte verband met die aktiwiteite van die Museum.

Andermaal moet ek ook my teleurstelling uitspreek dat daar hierdie jaar ook nog nie 'n begin gemaak is met die bou van die nuwe paleontologiese laboratorium en stookkamer nie. Die tekeninge en bestekke is al oor die twee jaar goedgekeur.

Die volgende publikasies het gedurende 1936 die lig gesien:—

Boonstra, L. D.:

Some Features of the Cranial Morphology of the Tapinocephalid Deinocephalians. *Bull. Amer. Mus. Nat. Hist.*, Vol. LXXII, pp. 73-98.

The Cranial Morphology of some Titanosuchid Deinocephalians. *Bull. Amer. Mus. Nat. Hist.*, Vol. LXXII, pp. 99-116.

Rennie, J. V. L.:

On *Placocystella*, a New Genus of Cystids from the Lower Devonian of South Africa. *Ann. S. Afr. Mus.*, Vol. XXXI, pp. 269-277.

Lower Cretaceous Lamellibranchia from Northern Zululand. Together with an Account of the Geology of the Cretaceous Beds and a Preliminary Analysis of the Associated Ammonite Fauna by Dr. S. H. Haughton, B.A., D.Sc., Director of the Geological Survey of the Union of South Africa. *Ann. S. Afr. Mus.*, Vol. XXXI, pp. 277-391.

Tabel van Nuwe Aanwinste:

Bokkeveld Invertebrata	3
Karo Invertebrata	14
Karo Vertebrata	221
Kryt Invertebrata	1
	<u>239</u>

Die uwe,

L. D. BOONSTRA,

Hoof van die Afdeling.

DEPARTMENT OF BOTANY.

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to present the following report on the work of the Department for the year 1936.

Accessions:—

Prof. P. v. d. Byl	12 specimens from the Cape Province.
Dr. H. G. Fourcade	25 specimens from the Cape Province.
Dr. H. G. Fourcade	12 specimens from Europe.
Miss S. Garabedian	54 specimens from the Cape Province.
Mrs. H. S. Henderson	42 specimens from S. Rhodesia.
Mrs. M. R. Levyns	12 specimens from the Cape Province.
J. Minicki	41 specimens from the Cape Province.
O. Penfold	22 specimens from the Cape Province.
M. Robison	102 specimens from California.
Capt. T. M. Salter	39 specimens from the Cape Province.
R. Smithers	12 specimens from Namaqualand.
T. P. Stokoe	89 specimens from the Cape Province.
C. Thorne	193 specimens from the Cape Province.
M. Versfeld	13 specimens from the Cape Province.
Miss M. Wilman	121 specimens from the Cape Province, Transvaal, and O.F.S.

Exchanges.—Bolus Herbarium, Kirstenbosch; University of Stellenbosch; Witwatersrand University; Royal Botanic Gardens, Kew; British Museum (Natural History); National Herbarium, Pretoria; Transvaal Museum, Pretoria; Botanical Museum, Lund.

Specimens Mounted and Incorporated.—674, including 4 genera and 62 species new to the Herbarium. The number of specimens mounted shows a considerable decrease this year owing to the fact that we have not had the full time service of the Junior Botanist. The material has accumulated, and consequently there has been a setback to the work of incorporation. We have latterly, however, obtained the services of a full-time assistant, and work is now going on rapidly.

General Report.—Excursions were made by Mr. Thorne in January to Dassiesberg, Robertson; in March to Hexberg, Cold Bokkeveld; in July to the Kalahari in connection with the University of Capetown Expedition; in September to the Cedarberg, Clanwilliam; and in October to the Great Karas Mountains, South West Africa. Very satisfactory material was collected from each district. In addition a number of day excursions in the Cape Peninsula and country districts were made; the material collected is being mounted and will be incorporated during the year. The ever-increasing number of inquiries from the general public, students, Government and private institutions have been attended to during the year, and assistance given in the identification of plants suspected of being in the "Protected List".

The thanks of the Trustees are due to the donors mentioned above, and especially to Mr. J. Minicki whose generous weekly sendings of fresh wild flowers give such pleasure and instructive help to visitors and students. Also to Mr. R. Smithers to whose enthusiasm and energy we owe the gift of a handsome mounted specimen of a full grown *Pachypodium namaquense* (half-mens) which he brought from the Richtersveld. It caused great interest to the general public during the week it was exhibited in the "live state".

I am, etc.,

S. GARABEDIAN,

Assistant in Charge of the Department.

DEPARTMENT OF ETHNOLOGY.

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to present the following report on this Department for the year 1936.

The main work of the year has been the arrangement of specimens in the newly erected show cases in the ethnology gallery. About two-thirds of them have been filled. Several more tribes might be represented if the cases filled all four walls of the gallery as was originally intended, and it is hoped that this will soon be made possible.

There has been a very satisfactory increase in the number of new specimens received, 310 in all. Mr. Frank Cornner has again made generous gifts of bead-work and basketry from the Tsolo District, Transkei. Two outstanding collections were purchased during the year, one from Basutoland and the other from a hitherto unrepresented tribe, the Mampukushu, of the Okavango River, and we are indebted to the Rev. Fathers Paquet and Froelich respectively, for the trouble they took in making the collections. Mr. R. C. Camp has not only made several gifts, but has very kindly given me access to his own excellent collection, where I have done considerable work and have completed a paper describing his snuff-boxes.

The thanks of the Trustees are due to the following donors:—Dr. K. H. Barnard, Messrs. F. Cornner, R. C. Camp, P. Ross Frames, Maurice Green, Dame Alice Godman, Mr. F. G. Hosking, the McGregor Memorial Museum, Kimberley, Colonel Denys Reitz, Mr. J. F. Schofield, and Mr. R. Smithers.

I am, etc.,

E. M. SHAW,

Assistant in Charge of the Department.

KOOPMANS DE WET HOUSE.

TO THE TRUSTEES OF THE SOUTH AFRICAN MUSEUM.

SIRS,—I have the honour to present herewith a report on the Koopmans de Wet House for the year 1936.

The attendance of visitors again shows an increase. The total of 25,450 represents a gain of 1,749 over the figure for 1935. The proportion of coloured people among the visitors was the highest so far recorded, reaching nearly 9 per cent. Twenty-five school parties visited the House: some came from so far away as the Transvaal and the Free State, and the average number in a party was twenty.

A small teak cabinet, purchased from a dealer, is the only piece of furniture added during the year. It has been placed on the landing upstairs. Other purchases include some prints and a number of good pewter plates. Among the year's donations are a pair of Sheffield-plate candlesticks from Mrs. J. J. C. Pickard, and the silver helmet worn by the late Ryk Fischer Le Sueur as commander of the old Capetown Cavalry—remembered by many Capetonians as "the Sparklers".

The "Sparkler's" helmet is one of a number of articles recently accepted which have no connection with the furnishing of a dwelling-house but are on the other hand well worth preserving as relics of Cape history. We already had in store a considerable quantity of material of this nature, including costumes and needlework lent or presented by the Misses Buyskes and others, and during the year it has been largely added to: e.g. by further costumes from Miss Sinclair-Stevenson; the red waistcoat worn at Waterloo by Capt. William Cornelius van Ryneveld of the 93rd (Scottish) Regiment (presented by Mr. J. de V. van Ryneveld); a small folding table formerly belonging to the explorer-navigator Captain Cook, and given by him to ancestors of Miss Buyskes (lent by her); an old apothecary's shop-sign, a leaden angel, presented by Dr. Juritz. The offer and acceptance of such objects have been considerably stimulated by the knowledge of a project for establishing a historical museum in Capetown. The proposal is to house such a museum in what is left of the Old Supreme Court after the impending demolition, and to put it under the supervision of the Trustees of the South African Museum. The Government has looked favourably on the scheme, and in the hope that it will come to fruition within the next two or three years we are beginning to accumulate these relics of bygone times. It is particularly urgent that typical old costumes should be saved. Many old Cape families have preserved them through several generations, but the present-day representatives of such families take little interest in them and they are now rapidly disappearing.

By the end of the year the pocket guide to the House was sold out. Its author, Mr. J. R. Finch (Chairman of the Advisory Committee), has prepared a revised edition with a greatly improved set of illustrations; the new booklet is also a little larger, better in shape and set in better type. We are much indebted to Mr. Finch for the amount of time and trouble which he has expended on this new guide. There is a steady demand for guides and postcards at the Koopmans de Wet House; during the past year 973 guides and nearly nine thousand postcards were bought—the latter chiefly in books of a dozen.

Mr. G. Binedell, the head attendant at the House, has been compelled by failing health to retire. We lose his services with great regret; it would be difficult to imagine anyone better fitted for the position or more devoted to its duties.

I am, etc.,

LEONARD GILL,

Director.

SOUTH AFRICAN MUSEUM.

STATEMENT OF REVENUE AND EXPENDITURE FOR THE YEAR ENDED 31st DECEMBER, 1936.

<i>Expenditure.</i>	£ s. d.	<i>Revenue.</i>	£ s. d.	£ s. d.
To Salaries, Wages and Allowances	5,362 19 5	By Grants:		
„ Trustees' Contributions to Provident Fund	289 3 2	Union Government	*8,750 0 0	
„ Library	152 2 6	Capetown Corporation	400 0 0	
„ Publications	452 3 6			9,150 0 0
„ Travelling and Collecting	106 8 0	„ Refunds and Discounts		26 8 10
„ Upkeep of Grounds (by Municipality)	150 0 0	„ Sale of Guides and Postcards		84 4 0
„ General Upkeep of Museum	398 9 8	„ Sale of Annals		23 0 2
„ Railage, Cartage and Dock Charges	38 6 9	„ Geological Survey, refund, share of publications		67 19 2
„ Postal and Telephone Charges	57 14 4	„ Western Province Exhibition Committee, cost of Relief Map		50 0 0
„ Insurance	73 5 11			
„ Water, Light and Electricity	153 3 0			
„ Uniforms	44 5 6			
„ Show Cases	100 0 4			
„ Honoraria	50 0 0			
„ Grant to Capt. Shortridge's Expedition	50 0 0			
„ Pension	24 0 0			
„ Audit Fee	5 5 0			
„ Bank Charges	4 12 0			
„ Balance, Excess Income over Expenditure	*1,889 13 1			
	£9,401 12 2			£9,401 12 2

This account has been examined under my directions and, subject to the remarks contained in paragraphs 4 and 9 of the accompanying report, it is correct.

(Sgd.) H. P. SMIT,
Controller and Auditor-General.

E. L. GILL,
Director.

* Includes grant for last quarter of 1935.

THE LIBRARY OF THE
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STATEMENTS OF ASSETS AND LIABILITIES AS AT 31st DECEMBER, 1936.

	£	s.	d.		£	s.	d.
Liabilities.							
To Provident Fund:							
Balance at 31st December, 1935	2,205	6	4				
Balance for 1936	203	10	0		2,408	16	4
Koopmans de Wet House:							
Balance at 31st December, 1935	224	7	7				
Dr. Balance for 1936	0	15	0		223	12	7
Shahmahomed Coin Fund:							
Balance at 31st December, 1935	5	6	8				
Dr. Balance for 1936	0	10	0		4	16	8
Carnegie Grant Fund:							
Balance at 31st December, 1935	290	0	0				
Cr. Balance for 1936	134	13	0		424	13	0
Museum Funds:							
Cr. Balance for 1936	1,889	13	1				
Less Excess Expenditure over Income up to 31st December, 1935	459	19	6		1,429	13	7
					<u>£4,491</u>	<u>12</u>	<u>2</u>
Assets.							
By Government Stocks (at cost)	1,470	0	0				
Municipal Stock (at cost)	506	11	5				
Savings Bank Account	73	6	5				
Union Loan Certificates	79	5	9				
Interest accrued	19	12	9				
Xmas Advances 1936 outstanding	30	0	0				
Cash at Bank	2,237	15	10				
Petty Cash	75	0	0		<u>£4,491</u>	<u>12</u>	<u>2</u>

Audited and found correct.

(Sgd.) H. P. SMIT,
Controller and Auditor-General.

E. L. GILL,
Director.



UNION OF SOUTH AFRICA

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AUG 20 1938
UNIVERSITY OF ILLINOIS

REPORT

OF THE

South African Museum

FOR THE

Year ended 31st December 1937

Published by Authority

PRINTED IN THE UNION OF SOUTH AFRICA BY THE GOVERNMENT PRINTER, PRETORIA
1938

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Trustees of the South African Museum:

J. G. VAN DER HORST, Esq. (*Chairman*).
PROF. WILLIAM ADAM JOLLY, M.B., CH.B., D.SC., F.R.S.S.AFR., LL.D.
W. J. THORNE, Esq.
A. J. MACCALLUM, Esq.
PROF. D. L. SCHOLTZ.

Advisory Committee for Koopmans de Wet House:

J. R. FINCH, Esq., O.B.E. (*Chairman*).
FRANK E. CARTWRIGHT, Esq.
MAJOR W. JARDINE.
PROF W. A. JOLLY.
W. J. THORNE, Esq.

Staff of the South African Museum:

EDWIN LEONARD GILL, D.Sc., Director and Keeper-in-Chief.
KEPPEL HARCOURT BARNARD, M.A., D.Sc., F.L.S., Assistant Director in Charge of Fish and Marine Invertebrates, and of the Library.
ALBERT JOHN HESSE, B.Sc., Ph.D., Assistant in charge of the Entomological Department.
MISS STAR GARABEDIAN, B.A., F.L.A., Assistant in Charge of the Botanical Department; Assistant Librarian. (Resigned.)
LIEUWE DIRK BOONSTRA, D.Sc., Assistant in Charge of the Palæontological Department.
A. J. H. GOODWIN, M.A., Honorary Keeper of the Ethnological and Archaeological Collections.
MISS E. MARGARET SHAW, B.A., Assistant in Charge of the Ethnological Collections.
JAMES DRURY, Taxidermist and Modeller.
REAY H. N. SMITHERS } Technical Assistants.
C. W. THORNE }
MISS D. KRIGE, Clerical Assistant.
D. B. ZINN, Handyman-Printer.
B. OLLEY, Head Attendant.
N. HERBERT } Attendants.
G. W. VENNER }

Koopmans de Wet House:

MRS. A. LAWTON, Resident Caretaker.
J. THOMAS, Attendant.

SOUTH AFRICAN MUSEUM

REPORT OF THE TRUSTEES FOR THE YEAR 1937

The Trustees of the South African Museum have the honour to present to the Government, in accordance with the provisions of Act No. 17 of 1857 (Cape), their report for the calendar year 1937.

Two changes in the Board of Trustees have occurred during the year: Prof. C. G. S. de Villiers has resigned, his place being taken by Prof. D. L. Scholtz, of the University of Stellenbosch; and Mr. A. J. MacCallum has replaced Mr. Ferdinand Bosman as the representative of the City Council.

The two new Trustees, together with Mr. J. G. van der Horst, Prof. W. A. Jolly and Mr. W. J. Thorne, have been gazetted as constituting the Board for a period of three years from 27th May, 1937.

The scientific staff has remained unaltered except for a resignation taking effect at the end of the year—that of Miss S. Garabedian, who has been in charge of the botanical department for seventeen years. She resigned on medical advice, much to everyone's regret, while on leave in England. Miss G. J. Lewis, of the Bolus Herbarium, has been appointed to take her place and is expected to enter upon her duties at the beginning of February. The Trustees wish to record their appreciation of Miss Garabedian's long and efficient service, which often covered more than the duties of her own department.

Though no further extension of the exhibition space of the Museum has been provided during the year, it is understood that plans for adding a further length to the new wing beside the Avenue are in preparation; and considerable additions to the working quarters have actually been erected during 1937. The room serving as library and general office has been doubled in size, and a large outbuilding, continuing the line of the herbarium to the top of the grounds, has been erected to provide storage and working quarters for the departments of palæontology and archaeology. The building itself was practically finished by the end of the year, but the internal fittings were still to be installed.

No more show-cases have been received through the Public Works Department during the year, and except for a number of wooden cases made locally to our order for special purposes and paid for out of general funds, no further progress has been made towards overtaking the shortage of cases which has been an obstacle to progress ever since the Museum was enlarged six years ago. But some improvement will result during the coming year from a grant voted on the current estimates for the supply of new cases to all the Union museums.

The grant from the Carnegie Corporation was renewed for a third year, and was mainly applied, as before, to the cost of preparing travelling cases for the Western Province schools. This year, however, for the first time, a certain proportion of it was spent in another of the ways contemplated by the administrators of the fund, namely on the expenses of some public lectures. A series of lectures on the ethnology collections was given by Miss Shaw, and two on the De Pass collection by the Director. No lecturers' fees were involved, but the cost of advertising the lectures was charged to the Carnegie grant.

The year's work in the various departments of the Museum, the collecting expeditions and other activities, and the principal acquisitions, are dealt with in the following sections of this report by the Director and members of the staff.

J. G. VAN DER HORST,
Chairman.

REPORT OF THE DIRECTOR

TO THE TRUSTEES OF THE SOUTH AFRICAN MUSEUM.

SIRS,—I have the honour to present my report on the work and circumstances of the Museum for the year 1937.

Staff.—Only one change has occurred in the staff during the year, but it is one that we greatly regret: the resignation of Miss S. Garabedian after seventeen years' service as senior botanist. Miss Garabedian went on leave to England in August, partly on account of her health, and it was from England and on medical advice that she resigned. Under her charge the herbarium has been excellently kept and has grown very largely. Being also a qualified librarian she was able to supervise the work of the library very efficiently when Dr. Barnard was away.

The vacancy was advertised, and from a large number of applicants (of whom at least five appeared to have all the necessary qualifications) the Trustees have selected Miss G. J. Lewis, B.A., of the Bolus Herbarium and the botanical department of the University of Capetown. She will take up her duties early in 1938.

Attendance of Visitors.—The year's total amounts to 107,991. As compared with last year this represents a fall of 1,715—not a large fall but disappointing nevertheless. In part at least it was due to the Empire Exhibition in Johannesburg and to the Coronation. We hope to have some new features to show during the coming year, and these may be expected to bring an increased attendance of local people. The year's total was made up as follows:—

European—Adults—Male	28,787
Female	23,927
Children	23,182
Coloured—Adults—Male	9,194
Female	8,736
Children	11,101
Natives—Adults—Male	2,232
Female	852
	<hr/>
	107,991
	<hr/>
Largest number on one day (January 1)	1,446
Smallest number on one day (July 24th)	52
Largest number on a single Sunday afternoon (July 4th)	987
Smallest number on a single Sunday afternoon (August 8th)	121

The Museum was visited by 162 school parties, numbering in all 4,498 pupils.

Library.—A long-needed improvement in the condition of the library has at last taken shape this year. The inadequate room serving as library and general office has been rather more than doubled in size. This has been accomplished by carrying its outer wall and window forward to the line of the next block of the building, that of the former art gallery. The window has at the same time been enlarged, making the added section a very pleasant and useful room. We have lined the walls of the new portion with shelves, and the most-used sections of the library have been moved into them. Stacks of shelves standing on the floor of the room will be added as they are needed.

The year's accessions to the library numbered as follows:—

Books added:

By donation	6
By purchase	17

Pamphlets and Serials added:

By donation and exchange	1,013
By purchase	184

Publications.—Two parts of the *Annals* have been published during the year:—

Volume XXXII, part 2 (Marine Zoology). Containing papers on—

Marine Mollusca (Tomlin)	2 pp.
Marine Crustaceans (Schmitt)	5 pp. 1 pl.
Holothurian (Heding)	11 pp. 2 pls.
Marine Fishes (Barnard)	28 pp. 3 pls.
Balanoglossus (V. d. Horst)	25 pp.
	<hr/>
	71 pp. 6 pls.

Volume XXXII, part 3 (Entomology). Containing papers on—

Myriopods (3 papers) (Verhoeff)	40 pp. 4 pls.
Acrididae (Key)	34 pp. 5 pls.
Dragonflies (Barnard)	92 pp.
Diptera (De Meillon)	4 pp.
Anthidiine Bees (Mavromoustakis)	4 pp.
A new Mite (Lawrence)	11 pp.
	<hr/>
	185 pp. 9 pls.

Vol. XXXIII consists of Major Connolly's monograph of the Land and Freshwater Shells of South Africa. It has been in type for more than a year, but its appearance is still delayed in order to incorporate the latest researches on certain difficult genera.

Vol. XXXIV, containing the first half of Dr. Hesse's monograph of the South African Bombyliidae or Bee-Flies, was also in type by the end of the year, when the last proofs were being corrected. It will appear early in 1938.

Collecting.—Expeditions have been fairly numerous but of short duration. The longest in point of time was a visit in March to the Gouph and the Laingsburg Karoo by Dr. Boonstra and Mr. Thorne. Its primary object was to look for fossil reptiles (Deinocephalia), but insects and plants were also collected. The main purpose of several shorter trips was to collect the fishes of the various river systems of the South-Western Cape—and to collect them, as Dr. Barnard explains later, before they are exterminated by introduced sporting fishes. Dr. Barnard and Mr. Thorne constituted the personnel of these expeditions, and they were accompanied by Dr. Hesse on their longest trip, which extended to Meirings Poort. Dr. Hesse naturally devoted himself to insects, but both insects and plants were also collected, in addition to fishes, on all the expeditions. Shorter trips still, usually only day-trips, were made by Mr. Smithers, chiefly with the object of tracing the distribution and investigating points in the biology of the poisonous button-spiders, *Latrodectus* spp. Mr. Smithers also accompanied Admiral Lynes on daily outings when the Admiral was here in August at the end of his recent African journey—one of a long series he has made while studying the difficult group of the grass warblers (*Cisticolae*).

Buildings.—The extension to the library has been described already, and something has been said in the Trustees' introduction about the new block for the departments of palaeontology and stone-age archaeology. The reference material in both is bulky and extremely heavy, two qualities which have made it impossible to store and handle in any proper fashion, or to arrange for ready reference (quite apart from providing for the constant additions), in the makeshift sheds of wood and corrugated iron which we have had to use for the purpose hitherto. For the palaeontology department the new block provides a large store (where the bulky remains of the Karoo fossil reptiles can at last be suitably housed), a workshop and an office. For the archaeology department, where the reference material, though bulky enough, is still considerably less in total amount, a smaller portion of the same block is provided; it is not sub-divided, but one end is set aside and fitted as a working space, while the rest is being fitted with the maximum of storage accommodation that it will carry.

Both departments have long been hampered almost beyond endurance by the total inadequacy of their working quarters. The importance of this addition and the welcome it receives from the people most concerned are correspondingly great.

Little can be said at this stage about any further enlargement of the main building. From the sum voted on the last estimates for additions, however, a considerable amount is still unspent, and we have asked to have this placed towards a continuation of the new wing beside the Avenue. In the hope that the further sum needed may be forthcoming we have gone some way with the preliminary plans, and it is likely that the next section of the wing to be built will be considerably wider than the existing one. The special purpose of this is to give us a new hall on the upper floor where the big game animals of South Africa can be shown in a more worthy setting than is possible in the much narrower space of their present gallery.

Burglary.—During the night of April 21st-22nd, the case containing the Ross Frames collection of diamonds was broken into and 44 stones were taken. The collection was formed by Mr. P. Ross Frames during his long connexion with the De Beers Company at Kimberley. It was not a collection of diamonds as gems, but rather a collection, entirely unique of its kind, illustrating the natural history of the diamond, its varieties of form, colour, texture and occurrence. The stones composing it were mostly small, and the burglars only secured about an eighth of the total, but even so the loss is a serious and annoying one, and quite irreplaceable.

The only real protection against such occurrences is a staff of night-watchmen. Failing this, there are only two courses: not to show such valuable objects at all, or to remove them every night to a strongroom. It is this second plan that we are trying next.

Donations.—Though not in the strict sense a donation, since it was in part the outcome of a subscription from the Museum funds, the consignment of mammals collected in Namaqualand by Captain G. C. Shortridge constitutes one of the most important acquisitions of the year. The mammal fauna of Namaqualand, rather curiously, was less known than that of any other part of the Union. There were grounds for supposing that it might prove of special interest, and the supposition is fully borne out by Captain Shortridge's results. The making of a representative collection of the

mammals of any district is a considerable undertaking. It involves, in such country as Namaqualand, a series of stationary camps, a good many weeks or months spent in the field, and the training of a party of helpers. Captain Shortridge has specialised for many years in this work, and we are fortunate to be able to take advantage of his exceptional experience, zeal and opportunities.

Among the principal donations that may be mentioned here are examples of certain rare or newly discovered species and races of local butterflies presented by Mr. P. R. Robertson and Mr. C. Dixon; birds' nests of special interest presented by Mr. Robertson and Mr. R. Hazel; local birds (one a new record for the South-west Cape) obtained for us by Mr. H. J. Joubert; aviary birds from East Africa and elsewhere presented by Mr. C. N. Abrahams; interesting fishes brought in by the skippers of local trawlers. Mr. J. F. Minicki's regular weekly consignments of flowers from his farm near Cape Point have again continued throughout the year, and we find it hard now to imagine how we could keep up our wild flower counter without this source of supply. The service rendered so unfailingly by Mr. Minicki and his family is gratefully recognized by many of our visitors as well as by ourselves. A gift of an unusual character, which will find a place in the historical section when that can be established, is a good figurehead from a sailing ship. It is the gift of Mrs. Korsten Philpott.

School Cases.—The preparation of travelling cases for circulation among the Western Province schools is steadily proceeding, the progress made depending mainly on the amount of time that Mr. Thorne, who actually carries out the work, is able to give to it. The cases continue to maintain a high level, both as teaching material and technically as examples of museum workmanship. Final arrangements have now been made by the Education Department for the circulation of the cases. It is to be supervised by a specially qualified teacher of biology, who will devote one day a week to this work and to receiving school classes in the Museum.

Finances.—The balance sheet shows that expenditure has exceeded income by about £174. This is likely to be the case now year by year, only in an increasing degree, until our credit balance is exhausted—unless the Government can see its way to raise our grant sufficiently to meet the increased salary bill which (as explained in last year's report) has been forced upon us. Unless relief of this sort is soon forthcoming the prospect is decidedly depressing: the exhaustion of the reserve that we had built up with difficulty, the failure of the main purpose for which we had built it up—namely the replacement of the worst of our big game animals—and finally the dismissal of some valued member of the staff.

GENERAL REVIEW OF MUSEUM WORK.

The time of most members of the scientific staff, as is necessarily the case in all the larger and more active museums, is much taken up with systematic work—with what is generally understood by the term "classifying" the material under their charge. A good deal of work in and for the public galleries has, however, been done during the year. In the ethnology gallery Miss Shaw has finished the arrangement of the objects in all the cases so far provided (about two-thirds of the total outfit), and the effect, both detailed and general, is very good. The label printing has not yet caught up with the installation, but it is following it up steadily. Towards the end of the year I got Miss Shaw to take over another job, the setting out of the coin collection, and with this she is still occupied.

The corner room which Dr. Boonstra is fitting up to illustrate comparative skeletal anatomy and vertebrate evolution is nearly ready to be opened to the public. For students in particular it promises to be an exceedingly interesting and valuable section of the Museum. For this room a large amount of good modelling has been done by Mr. Drury; he has made, for example, careful restorations of twenty-three skulls of Karoo fossil reptiles for incorporation in a genealogical tree, designed to trace lines of evolution through the Karoo period from primitive reptiles towards the mammals. His tour-de-force in modelling, however, is the complete restoration of the skeleton of a small gorgonopsian reptile. It is certainly one of the most perfect pieces of work of its kind to be seen in any museum. It is mounted in the "evolution room" in a special case, together with the original slab of scattered fossil bones on which it is founded, and with a suggested restoration of the animal in the flesh.

A few fishes and birds have been mounted by Mr. Drury, and during the last month or two of the year he was preparing casts of his relief map of the South-West Cape; one each, by arrangement, for the Mountain Club and the Royal Automobile Club, and finally the copy which he is finishing and colouring geologically for the Museum, to be joined on to the existing geological relief map of which it forms the eastward extension.

In the invertebrate room a considerable improvement has been made by Mr. Smithers through transferring the spiders, scorpions, and other arachnids to a new upright wall case, made locally, where the jars containing them

stand vertically. Previously, for many years, these jars have been lying on a low slope in a desk case; the effect would have been good if it were humanly possible to seal the jars perfectly, but in practice the exhibit was always spoiled by slight leakage of spirit from the lids. The desk cases are now being used to good purpose for the exhibition of webs, nests and other features of the life of the animals.

I have often had to refer in these reports to the urgent need for replacing many of the specimens in the mammal gallery. Some of the large antelopes are the worst cases, and these unhappily still remain. But during the past year we have at least been able to replace some very bad old specimens of carnivores. As mentioned in the last report, a hyaena and two wild dogs, obtained through the kindness of Mr. Wm. A. Campell and the Durban Museum, were being mounted for us by Messrs. Rowland Ward. These have been received, and prove to be excellent pieces of work; their substitution for the specimens that were doing duty previously has removed one bad blot from our mammal gallery.

Further particulars of the year's work are given in the departmental reports which follow.

I am, etc.,

LEONARD GILL,

Director.

DEPARTMENTAL REPORTS

DEPARTMENT OF MAMMALS AND BIRDS

TO THE TRUSTEES OF THE SOUTH AFRICAN MUSEUM.

SIRS,—I have the honour to present my report on this Department for the year 1937.

The Department has been more active this year than for some time past. The chief event has been the receipt of our share of the mammals collected in Namaqualand in 1936 by Capt. G. C. Shortridge. It is a remarkably interesting assemblage, representing much the most thorough sampling of the mammal fauna of this peculiar region that has yet been made (or is likely ever to be made), and including a number of new or specially noteworthy forms—particularly among the rodents, the golden moles and the bats. Some interesting rodents have also been received from other sources, especially from Mr. T. Muller, the Government rodent officer working in the Piquetberg District. It may be mentioned too that one further specimen and some sight-records have confirmed the fact that the bushy-tailed meerkat (*Cynictis*) has now extended its range from the High Veld and the Karoo down to Malmesbury and the Cape Flats.

A much-needed replacement has been made in the public mammal gallery: the very bad old specimens of spotted hyaena and wild dog have at last gone, their place being taken by examples finely mounted by Messrs. Rowland Ward—a hyaena and two wild dogs, all obtained for us in the Eastern Transvaal by Mr. Wm. A. Campbell with the co-operation of the Durban Museum.

In the bird section, I have mounted a number of additional representatives of common local species for my special case, and among other accessions are batches of birds collected by Mr. Smithers and Ali Safi in the Districts of Saldanha Bay and Piquetberg. These birds were a by-product of a short expedition to examine yet another wholesale stranding of false-killer whales (*Pseudorca*), this time on the coast just south of the Berg River mouth. A full report of the stranding, prepared by Mr. Smithers, is to appear in the Transactions of the Royal Society of South Africa.

Donors to the Department to whom our thanks are due are Mr. C. N. Abrahams, Mr. van den Houten, Mr. T. Muller, Mr. H. J. Joubert, Mr. R. H. N. Smithers.

I am, etc.,

LEONARD GILL,
Director.

DEPARTMENT OF REPTILES AND AMPHIBIANS

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to submit the following report for the year 1937.

Very little collecting was undertaken by this Department during the period under review, which accounts for the small number of acquisitions. Dr. L. D. Boonstra and Mr. C. W. Thorne brought back several interesting specimens of lizards from the Laingsberg District, and Dr. K. H. Barnard toads and Typhlopidae from various localities. Among the other specimens received there are several noteworthy additions to the collection, among which may be specially mentioned several specimens of *Breviceps montanus* and *Breviceps gibbosus* under the heading Amphibia; a specimen of *Typhlops braminus* and several *Typhlops delalandi* under Ophidia; and an *Acontias meleagris* under Lacertilia, the latter from the Gardens, Capetown.

Under the scheme of exchange, for reptiles and amphibians, a topotype of *Natalobatrachus bonebergi* was received from the Museum of Comparative Anatomy, Harvard, to whom, during the year, specimens of Ophidia were lent for purposes of examination.

Early in the year I had the opportunity of visiting the Sutherland District for a few days, when a number of specimens of lizards and amphibians were secured.

Exhibition Gallery.—During 1936 many of the lizard specimens in spirit had to be withdrawn owing to the jars being damaged. These were gradually replaced during the early part of 1937 as new specimens were available. This method of exhibition has never proved satisfactory or pleasing, and as I have now had the opportunity of working out a system of preservation by impregnation with paraffin wax, it is hoped as further fresh specimens become available to replace the spirit specimens with examples treated by this process.

The labels in the snake case were reprinted, a more suitable background prepared, the whole repainted inside and new spirit added.

The following table represents the acquisitions to the Department during the year 1937:—

Lacertilia	30	Species	8
Ophidia	5	Species	3
Amphibia	21	Species	8
TOTAL	56		

The thanks of the Trustees are due to the following donors:—Mr. E. Atkinson, Capt. J. P. Marais, Mr. H. G. Wood, Miss Bogenham, Dr. K. H. Barnard, Dr. L. D. Boonstra, Mr. C. W. Thorne, Mr. Henry Hope.

REAY H. N. SMITHERS,
In charge of the Department.

DEPARTMENT OF FISHES AND MARINE INVERTEBRATES

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to present the following report on this Department for the year 1937.

Exhibition Galleries.—Two fishes were mounted and placed on exhibition, and minor alterations were carried out in the series of Invertebrates. One of the fishes is a large Remora caught adhering to a large Devil-fish (*Manta*) at Hout Bay. The other is a good example of the White-fish common in the Berg River (*Barbus andrewi*). Some of the specimens of Crabs have been replaced by better ones.

The experiments in making dry mounts of Invertebrates (Report 1936) have been continued, but most of the resulting specimens have so far been incorporated in the school travelling cases.

Study Collections.—In addition to work on our own collections, collections have been identified for Prof. Stephenson (University of Capetown), Prof. C. J. van der Horst (Witwatersrand University), and the Natal and Transvaal Museums. Exchanges have been made with the British Museum, the Amsterdam Museum, and M. H. Melbourne Ward, of Sydney, Australia.

One very interesting addition to the Fish Collection constitutes a new faunal record for South African waters. This is a Black-banded Trumpet—or Bellows-fish (*Centriscoops obliquus*), which is figured on Plate It agrees very closely with the New Zealand specimen figured by Waite (1911, Rec. Canterbury Mus. I, p. 170, pl. 26), and measures 230 mm. in length from tip of snout to end of tail. In the same locality: W.N.W. of Table Bay, in 220 fathoms, there was captured a Long-snouted Bellows-fish (*Notopogon macrosolen*), measuring 345 mm. in length; this is the largest known specimen of this species, and is figured on Plate On the same plate is also figured for comparison a young specimen of *Notopogon natalensis*, showing the much greater relative length of the dorsal spine in young fishes of this family.

Publications.—Five papers, including one by myself, on various marine animals, based wholly or in part on material in this Department, have been published in *Ann. S. Afr. Mus.*, Vol. 32, Pt. 2. I also published a short note on one of our fresh-water fishes in *Ann. Mag. Nat. Hist.* (10), xix; a report on new Woodlice (Natal and Cape) in *Ann. Natal Mus.*, Vol. 8; and a report on the Amphipod Crustaceans of the *John Murray Expedition* (Arabian and Indian Oceans). For the latter considerable use was made of our collection, and the report contains descriptions and figures of certain South African species.

Field Work.—Several short collecting trips have been made in the south-western districts of the Cape Province, which have yielded much valuable material. Research work on the Mountain Fauna has been continued.

The increase of interest in angling and the stocking of our rivers with the introduced Black Bass has shown the necessity of intensive collecting of the indigenous river fishes. It is perhaps not an exaggeration to say that in another decade, or two, the indigenous fishes will be to a large extent exterminated; and it thus behoves all museums to concentrate on securing long series of all species from as many rivers as possible.

In spite of an apparent conflict of interests implied in the preceding words, I would like to record my appreciation of the active and enthusiastic co-operation of Mr. A. C. Harrison, Hon. Secretary of the Cape Piscatorial Society, in the investigation of the fresh-water fishes and the river-fauna.

Thanks to the courtesy of Messrs. Irvin & Johnson, and the National Trawling Coy., visits to their trawlers in Capetown Docks have been made to inspect rare or supposedly unusual specimens. The most noteworthy of these this year was a 25-foot female Basking Shark, caught outside Table Bay.

Accessions.—The land shells which have been collected will not be registered and incorporated until they have been identified.

	Specimens.	Species.	New to the Collections.
Fishes	7,795	24	3
Crustacea	228	42	11

Thanks.—The thanks of the Trustees are due to the following donors and helpers: H. W. Bell-Marley, Major M. Connolly, H. Fleck, L. C. Gay (Mayor of Simonstown), Capt. J. T. R. Gibson, A. C. Harrison, Messrs. Irvin & Johnson, Dr. R. F. Lawrence, A. E. Manley, National Trawling Coy., A. T. Packham, Dr. J. L. B. Smith, Prof. T. A. Stephenson, Prof. C. J. van der Horst, H. G. Wood; and the members of the staff. Mr. C. W. Thorne's energetic help has been invaluable in collecting.

I have the honour to be,

Sir,

Your obedient servant,

KEPPEL H. BARNARD.

19th January, 1938.

DEPARTMENT OF ENTOMOLOGY

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to present the following report on this Department for the year 1937.

Research Work.—The first part of my revision of the genera and species of South African Bombyliidae was completed during the course of this year and is now in the hands of the printers. Most of my time during the rest of the year was devoted to a study of genera and species belonging to the second division of the Bombyliidae. As a large number of genera and species is included in this second division, this study will continue throughout the forthcoming year. Some determinations of insects belonging to the University of Stellenbosch and other institutions were also done, and a new species of marine Chironomid from Natal was described in a short paper. During the course of this year biological notes and Afrikaans translations were also written up for some of the school cases, arranged and set up by Messrs. C. Thorne and R. Smithers during the year.

Field Work.—In conjunction with this and other departments some collecting in the field was also done. Some insects were obtained by Dr. K. H. Barnard and Mr. C. Thorne on several short trips to the Olifants River and its tributary valleys to Genadendal and to some of the mountain streams in the Western Province. During March, Dr. L. Boonstra and Mr. C. Thorne collected some insects in the Gough and Laingsburg Karoo while on a trip which was mainly palaeontological. During October a slightly longer collecting trip was undertaken by Dr. K. H. Barnard, Mr. C. Thorne and myself to Verkeerde Vlei, Rooinek Pass, Seven Week's Poort, Gamka's Poort, Meiring's Poort, Cloete's Pass, the Little Karoo and along the Touws River, and quite a representative collection of various insects was obtained.

Accessions.—As the short trips during the year were chiefly undertaken in connection with the aims of other Departments, insect collecting was subsidiary, and fewer specimens, altogether approximately 600, were so obtained. In addition the Museum is also indebted to Dr. R. F. Lawrence for miscellaneous insects from Natal, to Miss A. Whaits, of Lusaka, for a small collection of North Rhodesian moths collected by her, and to Messrs. Dickson and Robertson for some Peninsula butterflies which they have kindly given to us. To Mr. H. Munro, of the Agricultural Department, the Museum is indebted for some specimens of new Trypetid flies described by him.

Material sent out to Specialists.—During the course of this year some *Trypetidae* were forwarded to Mr. Munro, of Pretoria, some Noctuid-moths to Dr. A. J. T. Janse, of Pretoria, and a small collection of unnamed *Anthidium*-Bees to Mr. G. Mavromoustakis in Cyprus.

Publications of interest to the Museum or based on Museum material, which have appeared during the year are:—

- (1) Notes on Dragon-flies (Odonata) of the S.W. Cape; pp. 169-260, *Ann. S. Afr. Mus.*, XXXI, 1937, by K. H. Barnard.
- (2) A new species of Clunione-Chironomid from the coast of Southern Africa; pp. 165-168, *Proc. R. Ent. Soc. London*, Vol. 6, 1937, by A. J. Hesse.
- (3) New Acrididae from South Africa; pp. 135-167, *Ann. S. Afr. Mus.*, XXXII, 1937, by K. H. L. Key.
- (4) Report on some Anthidiine Bees (Apoidea) in the South African Museum; pp. 265-267, *Ann. S. Afr. Mus.*, XXXII, 1937, by G. A. Mavromoustakis.

Thanks.—The thanks of the Trustees are due to the following donors and collectors: Dr. K. H. Barnard, Dr. L. Boonstra, Dr. R. F. Lawrence, Mr. C. Dickson, Mr. H. Munro, Mr. P. Robertson, Mr. C. Thorne and Miss A. Whaits.

I am, etc..

ALBERT J. HESSE.

Assistant in Charge of the Insects.

DEPARTMENT OF ARACHNIDA AND MYRIOPODA

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to submit the following report for the year 1937.

While no expeditions on a large scale have been undertaken during the year by this Department, extensive local collecting has been carried out. The main work of the year, as far as collecting is concerned, has been an enquiry into the distribution of species of the genus *Latrodectus*. Collecting for this purpose has at the same time allowed us to make large additions to the existing collections of other families of Arachnids. In this work I have been ably assisted by Mr. C. W. Thorne and by Dr. K. H. Barnard and Mr. C. W. Thorne together, who gathered much valuable information and specimens on short expeditions to the Bredasdorp District and to River Zonder End. Personally, I have had the opportunity of systematically collecting at different times of the year over an area approximately within a sixty mile radius of Capetown.

Outside collectors have been active throughout the year, and special thanks are due again to the Health Department for specimens from the Eendekuil District, and to Dr. R. F. Lawrence and Mr. Peers for material from various widely separated localities. As a result of the collecting being mainly local, there is a falling off in the numbers of Solifugae and Scorpions recorded. All Opiliones and Acari have been passed on to Dr. R. F. Lawrence, of Natal, for identification.

Several exchanges have been arranged during the year with the Museum of Comparative Anatomy, Harvard, and the British Museum (Nat. Hist.) and others, resulting in valuable additions to the collection here.

Identification of Arachnid material has been undertaken from time to time for private individuals, the principals of various schools and others. Examination of material from the Hope Museum, Oxford, resulted in the rediscovery, through the specimens bearing South African Museum numbers, of seventeen types and a genotype described by Octavius Pickard-Cambridge and sent to him by the late Dr. Purcell in 1899.

The rebottling of the Arachnid collection started in 1936 was continued, a further four hundred jars being added to replace the corked bottles. It is hoped that the arrival of a further four hundred jars from overseas early in 1938 will allow this work to be completed. The condition of the collection at present has fully warranted the expenditure involved in importing this glassware, as much valuable time and alcohol is saved through not having to be continually filling up the jars as previously; not to mention the fact that the collection (which is an exceedingly valuable one, containing as it does many type specimens) can, with the elimination of the corked bottles, be considered safe from the danger of drying up.

The Myriopods received during the year have been numbered and labelled pending classification.

Exhibition Gallery.—The spider collection, formerly housed in desk cases in the Invertebrate Room, has now been moved to a wall case which was constructed locally early in 1937. The jars now stand upright and there is no further sign of leakage of spirit. The desk cases are being utilised for the exhibition of spider nests and scorpions against natural backgrounds, three of the four up to the present having been used for this purpose, the fourth being in process of construction.

The following table represents the acquisitions to the Department during the year 1937:—

Araneae	433
Scorpiones	61
Solifugae	6
Pseudoscorpiones	14
Myriopoda	17
Total	531

Araneae of special interest were male specimens of *Latrodectus indistinctus*, previously unknown; several specimens of a species of *Theridion* from the bottom of a mine shaft in Johannesburg, from the Chamber of Mines; and an interesting tailed spider of the genus *Arachnura* from the suburbs of Capetown.

The thanks of the Trustees are due to the following donors and collectors: Dr. Findlayson, Union Health Department; Mr. Brian T. Mennell, Dr. S. H. Skaife, Miss Orpen, Mr. T. P. Stokoe, Dr. K. H. Barnard, Mr. C. W. Thorne, Mr. Peers, Dr. L. D. Boonstra, Mr. G. W. Venner, Miss Johns, Mr. Barwick.

From 3rd December, 1937, until 7th February, 1938, I was absent overseas, during which time I was able to collect photographically many useful references from serial publications and works not available to us in South Africa, from the libraries at the British Museum, the Royal Society of Edinburgh, the National Library of Scotland, the University of Edinburgh Library and others. At the same time much useful information as to methods and display was gathered which will be of assistance in the work of 1938.

REAY H. N. SMITHERS,

In charge of the Department.

AFDELING PALEONTOLOGIE

DIE DIREKTEUR, SUID-AFRIKAANSE MUSEUM.

MENEER. — Dit is my voorreg om die onderstaande verslag oor die werk van hierdie afdeling aan u voor te lê.

Gedurende die jaar is heelwat tyd bestee aan die preparering van ons Deinocephaliër materiaal met die oog op die publikasie van 'n referaat oor die groep. Die bene kom almal voor in die uiters harde moddersteen van die Tapinocephalus-zone, sodat die preparering maar langzaam vorder.

Om die Deinocephaliër materiaal aan te vul het ek, vergesel van mnr. C. Thorne, 'n kort versameltog na die Koup en die Moordenaars Karo onderneem. Twee van die Deinocephaliër skedels wat gevind is is tans klaar voorberei en gereed vir beskrywing.

Ek moes ook heelwat aandag skenk aan die nuwe uitstallingskamer vir Vergelykende Anatomie en die Ontwikkelingsleer. Tans is die volgende uitstallings gereed:—

- Muurkas met die Stamboom van ons Soogdieragtige Reptiele van die Karo.
- Muurkas met die Stamboom van die Mens.
- Muurkas met geraamtes wat die Reeks Vis tot Mens daarstel, en in die lessenaars daaronder 'n reeks van voorste ledemate van die Werweldiere.
- Muurkas met 'n reeks modelletjies van al die bekende Olifantsoorte.
- Muurkas met die Stamboom van die Perd.
- Muurkas met die Geraamte van 'n Mens en 'n Gorilla langs mekaar.
- Twee Muurkaste wat die Skedels in die Reeks Vis tot Mens daarstel.
- Lessenaarkas wat die Ontwikkeling van die Ammoniete daarstel.
- Kas in die middel van die kamer om aan te toon hoe 'n fossiele Reptiel reconstrueer word.

Vir die modelleerwerk het die afdeling beskik oor die vaardigheid en vindingrykheid van mnr. J. Drury, modelleerder aan die Museum.

Andermaal het ek van tyd tot tyd populêre praatjies oor die Radio uitgesaai, en artikels geskrywe oor onderwerpe in direkte verband met die werksaamhede van die Museum.

Vir die Rondreisende Skoolmuseum is 'n paar kaste, wat die elementêre beginsels van die Paleontologie en Geologie weergee, opgestel. Hierby is die afdeling dank verskuldig aan mnr. R. Smithers, tegniese assistent aan die Museum.

Die werk aan die nuwe paleontologiese laboratorium en pakkamer is al ver gevorder, en vroeg aanstaande jaar sal die afdeling kan intrek. Dit sal 'n heuglike gebeurtenis wees, want alhoewel die afdeling al in die vorige eeu geskep is, het dit nog altyd rondgeswerwe van een ongeskikte huisvesting tot 'n ander ewe ongeskikte.

Tabel van Aanwinste:—

Bokkeveld Invertebrata	5
Karo Vertebrata	26
Tersiër Vertebrata	1
TOTAAL	32

Die uwe,

L. D. BOONSTRA,

Hoof van die Afdeling.

DEPARTMENT OF ETHNOLOGY

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to present the following report on the work of this Department for the year 1937.

The arrangement of specimens in the existing wall-cases of the Ethnology gallery has been completed, and the wooden partition which separates my temporary workroom from the public gallery has been moved back so as to let all these cases be seen. At the beginning of the year I began a series of weekly talks to illustrate the specimens in the cases. These were well attended for the first eight months of the year, but by the end of October the attendance had gone down considerably, and it was decided to discontinue the talks until the New Year.

I have again to thank Mr. R. C. Camp, of Plumstead, for his kindness in giving me access to his collection, where I have made a study of the pipes, for incorporation in a paper on South African native pipes.

During the first four months of the year I had voluntary assistance in the Department from Miss Marjorie Lismar, of Toronto, who wished to learn something of South African ethnography and museum methods. She did a considerable amount of work in describing specimens for the card index, and I greatly appreciated her help. For a short period later in the year I had further help in the same work from Miss M. Courtenay Latimer, of East London Museum.

This year's accessions number 112. An interesting purchase was a complete outfit of fibre netting tights and jersey, and a carved and decorated wooden mask, for a Kishi dancer of the Mampukushu tribe, Okavango River. Kishi dances take place at the time of the boys' initiation.

The thanks of the Trustees are due to the following donors: E. Atkinson, Donald Bain, E. G. Bryant, R. C. Camp, F. Cornner, Miss A. Currie, A. J. H. Goodwin, Mrs. Gobert, Mrs. C. Harries, P. Hendriks, Mrs. Huggins, E. Knowles Jordan, Mrs. Le Francois, P. R. Malleon, and J. F. Schofield.

I am, etc.,

E. M. SHAW,

Assistant in charge of the Department.

KOOPMANS DE WET HOUSE

TO THE TRUSTEES OF THE SOUTH AFRICAN MUSEUM.

SIRS.—I have the honour to present herewith a report on the Koopmans de Wet House for 1937.

Some decided improvements to the property have been carried out, at the request of the Advisory Committee, by the Public Works Department. Most of them affect the courtyard: the window shutters have been repaired, and two of the courtyard windows which lacked shutters have been fitted with them. Old teak panels, stored in the back premises, have been adapted for these shutters with excellent effect. Some very handsome old wrought iron posts and rails, removed years ago from the neighbouring White House, have been adapted to provide handrails for two flights of steps leading from the courtyard up to the back rooms. Their effect is very pleasing and they look as though they had always been there. A few dark places indoors, in the kitchen and elsewhere, have been provided with electric lighting.

The building and contents of the House have, as was generally recognized, never been adequately covered by fire insurance. During the year an entire revaluation has been carried out by Mr. J. R. Finch, in conjunction with Mr. Knox, of the London and Lancashire Insurance Co., and as a result a new policy has been taken out which provides cover for upwards of £20,000.

The revised guide booklet, prepared by Mr. Finch, has been selling well, and an Afrikaans version based upon it was about to be issued at the end of the year.

The most important addition made by purchase this year was a set of five early Delft vases. Among the year's donations may be mentioned a large watercolour drawing of Capetown from Oranjezicht at the end of the 18th century, the gift of Mr. W. A. Russell; two Sheffield plate candelabra from Mr. J. Pickard, of East London; and an important collection of Dutch tiles brought out from Holland by Mr. J. M. Prillewitz as a gift from his friend, Mr. Willem van Vliet, of Gouda. As the tiles had barely been unpacked at the end of the year, a fuller account of them will appear more fittingly in next year's report.

As in the case of the Museum itself, and for the same reasons, the number of visitors to the Koopmans de Wet House shows a certain decrease: 22,489 for 1937 as compared with 25,450 for 1936. The rise in the proportion of coloured visitors, which has been noticed over a period of several years, has continued; the proportion in 1937 was practically 10 per cent. of the total. School parties visiting the House numbered 28, the average size of the parties 24.

Our special thanks are due to Mr. J. R. Finch, the chairman of the Advisory Committee, for the great interest that he takes in everything connected with the House and for the time that he gives to practical work on the premises.

I am, etc.,

LEONARD GILL,
Director.

SOUTH AFRICAN MUSEUM.

STATEMENT OF REVENUE AND EXPENDITURE FOR THE YEAR ENDED 31st DECEMBER, 1937.

<i>Expenditure.</i>		<i>Revenue.</i>			
	£ s. d.		£ s. d.	£ s. d.	
To Salaries, Wages and Allowances	5,740 17 8	By Grants:			
„ Trustees' Contributions to Provident Fund	339 0 9	Union Government	7,225 0 0		
„ Library	114 18 4	Capetown Corporation	400 0 0		
„ Publications	565 14 6			7,025 0 0	
„ Travelling and Collecting	62 1 11	„ Refunds and Discounts		3 12 2	
„ Upkeep of Grounds (by Municipality)	128 13 6	„ Sale of Guides and Postcards		74 18 0	
„ Removal of Trees (by Municipality)	15 3 7	„ Sale of Annals		91 1 8	
„ General Upkeep of Museum	400 1 2	„ Royal Automobile Club, Relief Map		15 0 0	
„ Railage, Cartage and Dock Charges	37 16 4	„ Balance, Excess Expenditure over Income		174 1 11	
„ Postal and Telephone Charges	61 16 3				
„ Insurance	82 18 1				
„ Water, Light and Electricity	123 11 0				
„ Uniforms	59 14 4				
„ Show Cases	123 16 6				
„ Furniture and Fittings	91 17 9				
„ Pension	24 0 0				
„ Audit Fee	5 5 0				
„ Bank Charges	6 7 1				
	<u>£7,983 13 9</u>				<u>£7,983 13 9</u>

This account has been examined under my directions and is correct.

W. M. S. HOPE,
for Controller and Auditor-General.

E. L. GILL,
Director, South African Museum.

16th March, 1938.

STATEMENT OF REVENUE AND EXPENDITURE OF THE STAFF PROVIDENT FUND FOR THE YEAR ENDED 31st DECEMBER, 1937.

<i>Expenditure.</i>		<i>Revenue.</i>			
	£ s. d.		£ s. d.	£ s. d.	£ s. d.
To Insurance Payments	379 5 3	By Members' Contributions		339 0 9	
„ Balance, Excess Income over Expenditure	415 13 11	„ Trustees' Contributions		339 0 9	
		„ Members' Weekly Contributions		0 10 0	
		„ Refund Insurance (by Dr. Boonstra)		1 1 8	
		„ Interest on Investments:			
		Union Government Stock	71 5 0		
		Capetown Municipal Stock	26 0 0		
		Cape of Good Hope Savings Bank	6 1 0		
			103 6 0		
		Less accrued interest 1936	19 12 9		
		„ Accrued Interest 1937		83 13 3	
				31 12 9	
	<u>£794 19 2</u>			<u>£794 19 2</u>	

STATEMENT OF REVENUE AND EXPENDITURE OF KOOPMANS DE WET, SHAHMAHOMED COIN, AND CARNEGIE GRANT FUNDS FOR THE YEAR ENDED 31st DECEMBER, 1937.

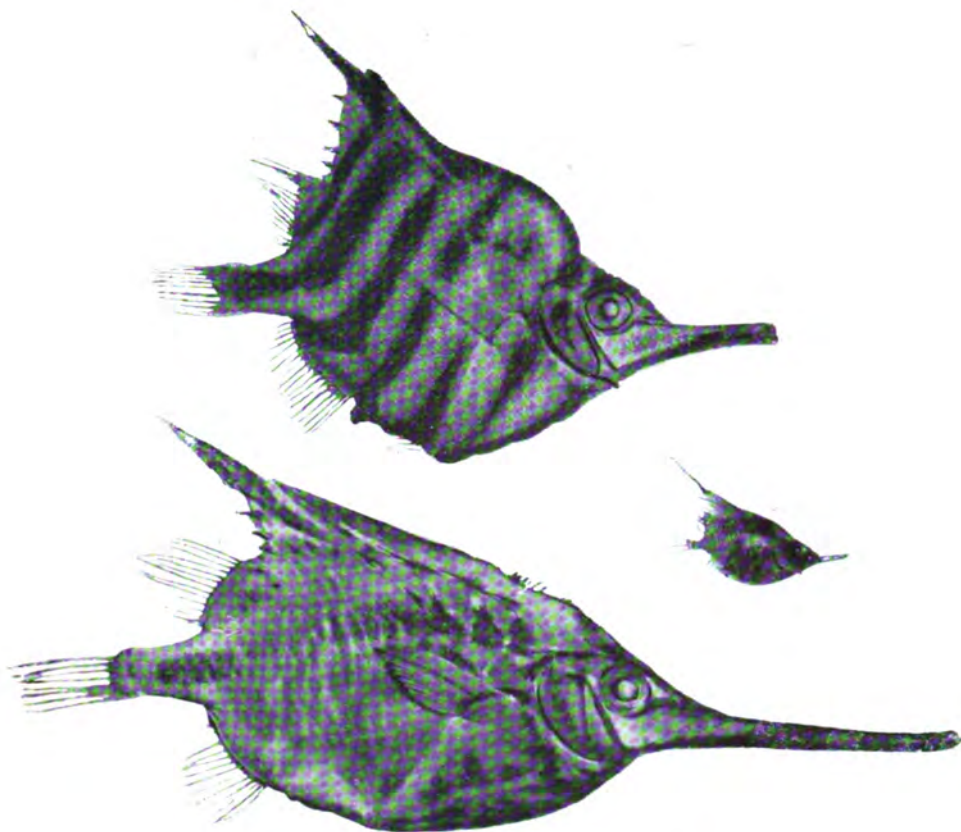
<i>Expenditure.</i>		<i>Revenue.</i>			
	£ s. d.		£ s. d.	£ s. d.	£ s. d.
To Purchases, Koopmans de Wet House	63 14 9	By Capetown Corporation for Koopmans de Wet House		100 0 0	
„ Purchases and Salaries, Carnegie Fund	231 17 0	„ S.A. Association, Coin Fund Interest		4 0 0	
„ Balance, Excess Income over Expenditure	108 8 3	„ Carnegie Grant		300 0 0	
	<u>£404 0 0</u>			<u>£404 0 0</u>	
Balance of £108. 8s. 3d. made up as follows:—					
	£ s. d.				
Koopmans de Wet, Cr. Balance	36 5 3				
Shahmahomed Coin Fund, Cr. Balance	4 0 0				
Carnegie Grant Fund, Cr. Balance	68 3 0				

This account has been examined under my directions and is correct.

W. M. S. HOPE,
for Controller and Auditor-General.

E. L. GILL,
Director, South African Museum.

16th March, 1938.

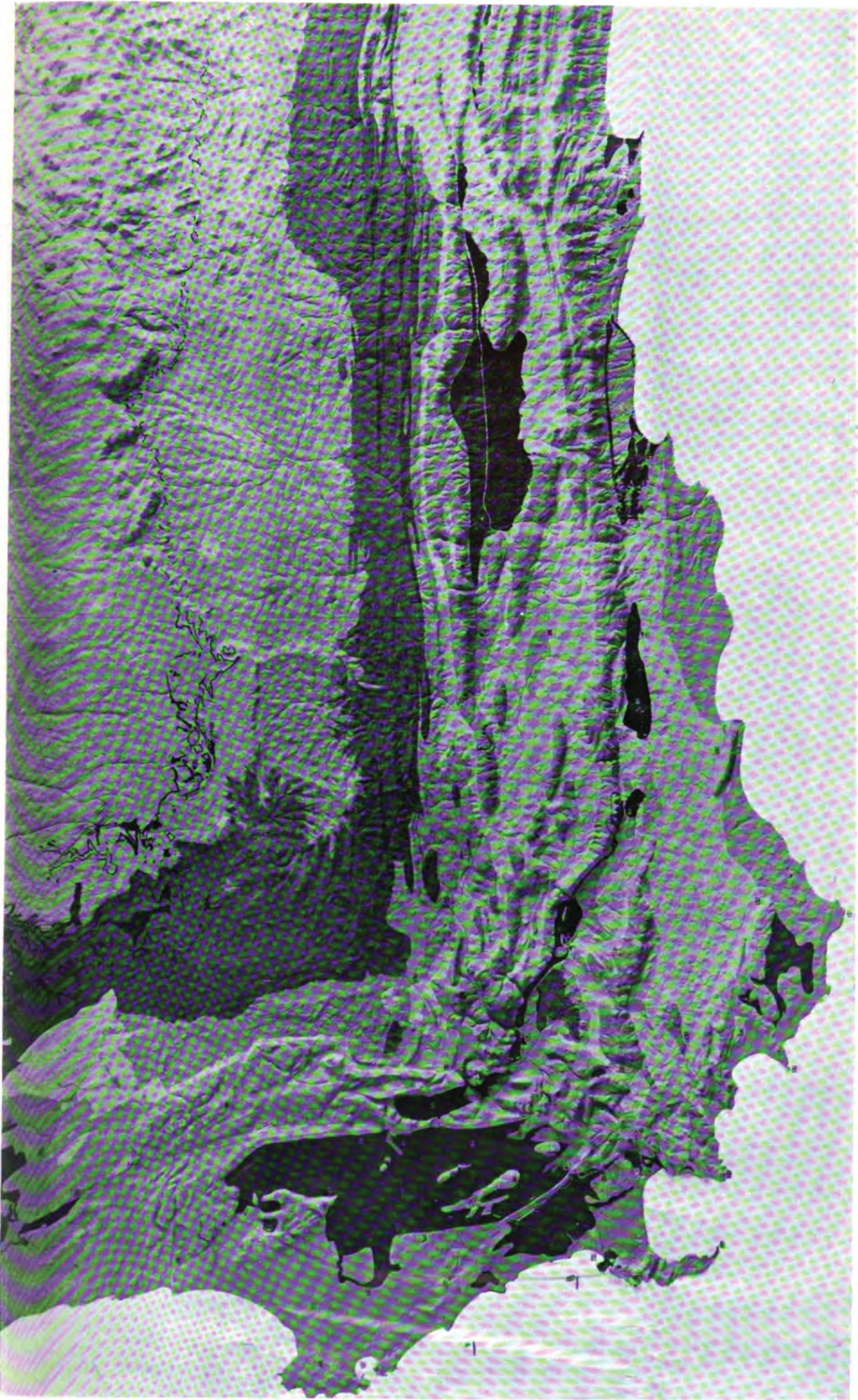


Black-banded Bellows-fish (*Centriscops obliquus*).
Long-snouted Bellows-fish (*Notopogon macrosolen*).
A young Bellows-fish (*Notopogon natalensis*).



Restoration of the skeleton of a fossil Gorgonopsian Reptile (one of the mammal-like reptiles) from the Karroo beds, and a restoration of the whole animal.

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The Geological Relief Map of the South-western Cape. (Photograph taken before labelling.)

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UNION OF SOUTH AFRICA

REPORT

OF THE

South African Museum

FOR THE

Year ended 31st December, 1938.

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 H. ZINN, Junior Technical Assistant.
 D. B. ZINN, Handyman-Printer (died, October).
 B. OLLEY, Head Attendant.
 N. HERBERT
 G. W. VENNER } Attendants.

Koopmans de Wet House :

MRS. A. LAWTON, Resident Caretaker.
 J. THOMAS, Attendant.
 R. NEL, Relief Attendant.

SOUTH AFRICAN MUSEUM

REPORT OF THE TRUSTEES FOR THE YEAR 1938

The Trustees of the South African Museum have the honour to present to the Government, in accordance with the provisions of Act No. 17 of 1857 (Cape), their report for the calendar year 1938.

The only change in the constitution of the Board during the year is one affecting the representation of the City Council, Mr. Ferdinand Bosman, who had previously been the Council's representative, succeeding Mr. A. J. MacCallum.

The scientific staff has remained unaltered since Miss G. J. Lewis took over the charge of the botanical department, in succession to Miss S. Garabedian, in February.

The further extension of the new wing has not yet been begun, but it is hoped that the necessary provision will be made in the forthcoming estimates. During the year, however, the internal fittings and furniture have been put into the new store and workrooms for fossils and stone implements; the equipment is excellent, and it finally removes the obstacles which have so seriously hampered the work of these two departments for many years. In the exhibition galleries there is a further step to be recorded towards overtaking the shortage of showcases which dates from the last extension of the building in 1931; the range of wall cases in the new ethnology gallery has been completed, and the wall cases needed to equip the insect room have been supplied and erected. These are welcome contributions towards the relief of the long-standing shortage of cases.

The direct educational service of the Museum, in the form of specially prepared cases for circulation among the Western Province schools, has been in operation throughout the year. As an experiment it has been highly successful; the heads of many schools have written in grateful praise of the cases sent to them, and the preparation of further cases will be carried on as long, at any rate, as the funds derived from the Carnegie Corporation's grants hold out.

Another satisfactory feature of the year has been a substantial rise in the attendance of visitors, both at the main Museum and at the Koopmans de Wet House. After the downward tendency in the number of visitors for several years, the present increase is reassuring.

Nothing has yet resulted from representations made to the Government as to the need of an increased grant to avert the necessity—already in not-distant prospect—of reducing the staff and generally curtailing some of the most fruitful activities of the institution.

The year's work in the various departments of the Museum, the collecting expeditions and other activities, and the principal acquisitions, are dealt with in the following sections of this report by the Director and members of the staff.

J. G. VAN DER HORST,
Chairman.

REPORT OF THE DIRECTOR

TO THE TRUSTEES OF THE SOUTH AFRICAN MUSEUM.

SIRS.—I have the honour to present my report on the work of the Museum for the year 1938.

Staff.—There has been no change in the scientific staff other than that referred to in the last annual report, namely the appointment of Miss G. J. Lewis to succeed Miss Garabedian in the charge of the botanical department. Miss Lewis took up her duties in February, and it can already be said that she fulfils all the expectations that we had been led to form of her.

Among members of the non-scientific staff the Museum suffered a serious loss in the sudden death in October of the handyman-printer D. B. Zinn. He was not only a capable printer; he took a keen interest in his work, and by his good taste and ingenuity brought the printing of the Museum labels, large and small, up to a high level of excellence. After an interval he was succeeded by R. Nel, who, like Zinn himself, first came into contact with the Museum through acting as relief attendant at the Koopmans de Wet House.

Attendance of Visitors.—Considerable fluctuations in the number of visitors have marked the last few years, and on the whole we had regretfully to record a decline. It is all the pleasanter, therefore, to be able this year to point to a decided recovery. The total attendance for the year was 121,027, representing an increase of 13,036 over the figure for 1937. The total for 1938 was made up as follows:—

European—Adults—Male	31,912
Female	26,888
Children	26,328
Coloured—Adults—Male	10,167
Female	9,311
Children	12,856
Natives—Adults—Male	2,722
Female	843
	121,027
Largest number on one day (January 3)	1,462
Smallest number on one day (August 11th)	78
Largest number on a single Sunday afternoon (April 4th)	1,132
Smallest number on a single Sunday afternoon (September 4th)	286

The Museum was visited by 161 school parties, numbering in all 4,574 pupils.

Library.—The extension of the library space brought about by last year's building operations has been made the occasion of a general overhaul of the library, a considerable undertaking which has occupied much of Dr. Barnard's time. The greater part of the serials has been checked and put in order. Most of the more important serials (*i.e.* those most often consulted by the members of the staff) are kept downstairs in the old room and its new extension; discontinued series and periodicals only occasionally consulted are kept upstairs. A completely orderly arrangement, according to countries or subjects, is impossible without a great deal of shifting; but most of the entomological periodicals, for example, are easily available in the entomologist's room. Certain periodicals of only ephemeral interest, or useless for the purposes of this Museum, have been discarded or presented to other institutions.

Another piece of library work devolving upon Dr. Barnard and taking much time was the preparation of the cards giving this Museum's holdings for incorporation in the proposed new edition of "Lloyd's List" of scientific periodicals.

The year's accessions are as follows:—

Books added:	
By donation	3
By purchase	11
Pamphlets and Serials added:	
By donations and exchange	991
By purchase	196

Publications.—One whole volume and two other parts of the *Annals*, and a special Index to the first 30 volumes, have been published during the year:

Volume XXIV, part 5 (Anthropology and Ethnology), containing papers on:—

Hermanus Cave (Goodwin)	9 pp. 2 pls.
Snuff-boxes	
Ovambo Knives } (Shaw)	80 pp. 37 pls.
Native Pipes	

and Title-page and Index to the volume.

Volume XXXII, part 4 (Zoology), containing:—

New Mammals from N.W. Cape (Shortridge)	11 pp.
---	--------

Volume XXXIV (Entomology), complete, containing:—

1st part of Monograph of Bombyliid Flies (Hesse)	1,053 pp.
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The Index to Volumes I-XXX (56 pp.) gives a list of papers in each volume, the prices of the parts (if not out of print), and an index to authors and subjects. Such an index has been much needed, by us as well as by our correspondents.

Dr. Hesse's bulky volume on the Bombyliid Flies (Vol. XXXIV) is the outcome of years of close and difficult work. It is based not only upon our own very large collection of these flies (which are a special feature of the insect fauna of the drier parts of Africa), but also upon very large collections of unnamed material from the British Museum and the Imperial Entomological Institute, and other collections from Berlin, from the Transvaal Museum, and from most of the museums of the Union and Rhodesia. The cost of publishing the volume has been heavy and will entail restrictions on our printing bill for some time to come, but it has always been our policy to publish in our own *Annals*, wherever possible, the results of scientific work done at the Museum by members of the staff, and the claims of this great piece of work by Dr. Hesse were exceptionally strong.

Collecting.—Expeditions for collecting in the field have been fairly numerous, though none of them were of long duration. Dr. Barnard and Mr. Thorne have continued their detailed survey of the indigenous fish fauna of the fresh waters of the South-west Cape. Dr. Hesse has taken some opportunities of collecting the Bombyliid flies of which he is making such a thorough study for his monograph, and the main object of one expedition was a search for fossil reptiles—Deinocephalians in particular—on the part of Dr. Boonstra, with the help of other members of the staff. The departmental reports give further information regarding this field work, as also of some collecting carried out, on lines that were new to us, for the recently established Zoological Survey.

School Cases.—The circulation of travelling cases among the country schools of the Western Province began early in the year, and the cases, at present about thirty in number, have found a warm welcome. Their standard, alike of contents, installation and labelling, is certainly high; the neatness and soundness of the work put into them reflects great credit on Mr. Thorne. We have heard nothing yet as to a further grant from the Carnegie Corporation towards the expenses of preparing these cases, but we shall continue to add fresh cases to the series as long, at any rate, as the balance remaining from previous grants holds out.

Zoological Survey.—A new line was taken up during the year, when some local collecting was carried out for the recently inaugurated Zoological Survey under the auspices of the Veterinary Division of the Department of Agriculture. The programme was to collect the external and internal parasites of the widest possible range of wild mammals, with incidental birds and reptiles. Some intensive work on these lines—involving the taking of blood-smears and the dissection of the entire alimentary canal of each animal, as well as the preparation of the skin—was undertaken on the Cape Peninsula by Dr. Boonstra and Mr. Smithers, and the results appear to have given satisfaction.

Scientific Work.—The original scientific work which occupies the major part of the time of members of the staff in charge of the different departments is referred to in their individual reports. Here a brief summary only is called for. Dr. Barnard's chief concern during the year has been with the freshwater fishes, but several sea fishes have also raised interesting questions; and collections of fishes and crustacea have been worked through and identified by Dr. Barnard for the Natal Museum and the Universities of Capetown and the Witwatersrand. Dr. Hesse is steadily pursuing his exhaustive studies of the Bombyliids ("bee-flies"), a group of insects specially fully developed in South Africa. The first part of his monograph on the group has appeared during the year as a large volume of our *Annals*. Dr. Boonstra has brought his study of the Deinocephalian group of Karoo fossil reptiles to somewhere near the stage of preparing a monograph; the technical side of the work is made particularly difficult by the refractory nature of the rocks in which the bones of these reptiles are found. Miss Lewis, in such time as she can spare for the work, is continuing her systematic study of the bulbous plants of the family *Iridaceae*; and Mr. Smithers, in addition to much incidental work in other directions, is following up his study of the poisonous "button spiders" of the genus *Latrodectus*.

GENERAL VIEW OF MUSEUM WORK.

Additions to the exhibits in the public galleries have been, probably, of more than usual interest to the average visitor this year, a fact which may have been a contributory cause of the increased attendance. Two individual new cases seem in particular to have made a popular appeal, namely Miss Shaw's coin case and my own case of common local birds. Miss Shaw finished the coin case before she went on leave. In rather cramped space it provides an illustrated history of the coinage of South Africa, with just so much explanatory labelling as is needed to enable a visitor to follow it intelligently. The collection as now set out occupies one side of a double-slope stand-case. For the present we are compelled to place it against a wall in the entrance hall, where the other side is hidden. As soon as it is possible to give access to both sides, we shall use the second slope for some accessory

exhibits, for example of medals, paper money and some of the very interesting war issues. The main collection already on view includes a number of valuable coins, and as a safeguard it is removed from the case every night.

The gradual accumulation of material for my bird case has been mentioned in several recent reports. It has taken long to complete because it is not the sort of work I can do in museum hours, and it has consequently been done almost entirely at home and at night. My objects in planning the case were to provide an introduction to local ornithology; to leave behind me, as I have done in other museums with which I have been connected, a memento of my taxidermy; and to make the case attractive by a suggestion of natural habitat and by the use of internal lighting.

These objects seem to have been achieved. The thirty-odd birds included in the case have all been mounted by me, and I have tried to make each of them a study from life. Their setting is a reproduction of a piece of sandy ground at the Cape; in the scenic lay-out and in all the details of its fitting up I have had invaluable help from my sister, Miss Marion Gill. The case is placed opposite the head of the main staircase, where the surroundings are generally dark enough to show up the internally lighted scene to advantage. Panels at either side are designed to hold descriptive labels in English and Afrikaans, with a black background and illuminated lettering.

In one respect we have been unfortunate. My sister and I had made large quantities of artificial foliage in coloured wax, cotton wool and wire. When it first went into the case its effect was excellent; but we had been obliged to add considerably to our original lighting, with the result that, in spite of much increased ventilation, a large proportion of our foliage was more or less badly spoiled by the heat. After so long a spell of night work we have felt it necessary to give the case a rest, but we hope soon to tackle the problem, possibly finding a remedy in the use of celluloid in place of wax.

Of the exhibition galleries, the one that has undergone the greatest change during the year is the new gallery of ethnology. For some years it has been in a half-finished condition, its walls only partially lined with cases and the further third of its length cut off by a partition for use as a work-room and store. Early in the year the partition was altered so as to open to the public some more of the wall cases which were ready for exhibition, the outer face of the partition being used to show a fresh selection from the Frobenius collection of rock paintings.

That was the position when Miss Shaw went on leave. (It may be mentioned here that she visited many of the leading ethnological collections in Europe while she was away.) During her absence a transformation took place: the remaining wall cases for the gallery arrived and were erected; the partition and all that it contained were removed; and taking advantage of the temporary closing of the gallery, Mr. Drury undertook a thorough renovation of the three large centre-cases containing the Bushman and other native figures. Slight damage that had occurred to some of the figures during various removals was made good, the figures arranged to better advantage, and the groundwork of all the cases was filled in between the figures and finished off with a more natural surface. The final result, with a new set of labels, was a great improvement in the general appearance of these important cases. With the partition gone, the wall-cases completed and the centre-cases overhauled, we were able for the first time to throw the whole gallery open to the public.

Since her return, Miss Shaw has sorted through all the reserve and duplicate ethnological material and arranged it in the "long shed" under the best conditions for its preservation that the makeshift quarters allow. She has now started work on the new range of wall cases in the exhibition gallery.

Another important happening of the year, though it does not affect the public galleries, has been the completion by the Public Works Department of the internal fittings of the new block erected last year for the departments concerned with fossils and stone implements. Excellent workmanship and material have been put into these fittings and they serve their purpose exceedingly well. Dr. Boonstra, for his work on the fossils, has been provided with a handsomely fitted office, a very good workshop and a well arranged storeroom. The smaller portion of the block, designed to house the reference collections of stone implements, is not divided into separate rooms, but the best lighted end of it is arranged as a working space, the rest being filled to its maximum capacity with storage compartments for the systematic keeping of the collections. Dr. Boonstra is now established in his new quarters and has removed into them the greater part of the reference collection of fossil vertebrates. Mr. Goodwin, our honorary keeper of archæology, has carried through the formidable task of moving the reference collection of stone implements into the new store and arranging them there systematically. This new and well furnished block of building constitutes a most important gain in our resources for research and the proper keeping of collections, and removes a long-standing obstacle to the work of the two departments.

To the Public Works Department we are indebted for some further improvements, including special lighting for the Van Riebeeck tombstone, a glass screen as a backing to the entrance counter, the re-decorating of the entrance hall, and the making of a new length of gravelled roadway at the rear of the building to replace a piece cut off by the extension of the library.

During the early part of the year Mr. Drury finished the colouring and labelling of the much enlarged geological relief map of the South-Western Cape, and it was then put on exhibition in a handsome case in the geological room. The finished map was too large to be shown safely and conveniently in the nearly horizontal position in which the first half of it was mounted; its new case is upright, with a slight backward tilt at front and back; the map occupying the front, while the back is reserved for photographs of some of the scenery and geological structures characteristic of the region. Other work that has occupied Mr. Drury has been the mounting of several notable fishes, marine and freshwater, received during the year, and the mounting of a few birds and small mammals. Among the birds was a fine male gompou (kori bustard), well known for years as an inhabitant of the Groote Schuur Zoo; the mounting of him by Mr. Drury is a fine piece of work.

As stated in the Trustees' report, the future insect room is now equipped with cases. The preparation of the exhibits for this room will mean a very great deal of detailed work, and not much progress with it can be expected until Dr. Hesse and Mr. Thorne are able to break off the work they are at present engaged upon—the preparation of school cases on the part of Mr. Thorne, and to some extent of Dr. Hesse too. A considerable amount of material is, however, practically ready to be installed in the insect room. In the room adjoining it, fitted up by Dr. Boonstra to illustrate vertebrate comparative anatomy and evolution, some additional exhibits have been set out since the room was opened last year. I am sorry to have to record a step in the opposite direction: owing to the annoying and largely irreparable damage being done to the whale skeletons by an undesirable class of visitors, we have been compelled, for the present at least, to close the whale shed.

Some mention must be made of the visit of the very representative party of Dutch naturalists who carried out a tour of the Union in the spring. During their stay in Capetown a number of them spent some time with the members of our staff in charge of the departments in which they were specially interested; some of us accompanied or guided them on local excursions; and on one wet afternoon my sister and I had the pleasure of entertaining them to tea in the Museum and taking them on a short general tour of the galleries.

Fuller details of the year's work will be found in the following reports of the separate departments.

I am, etc.,

LEONARD GILL,
Director.

DEPARTMENTAL REPORTS

DEPARTMENT OF MAMMALS AND BIRDS.

TO THE TRUSTEES OF THE SOUTH AFRICAN MUSEUM.

SIRS,—I have the honour to present the following report on this department for the year 1938.

The mammal collection has been considerably augmented, from two sources: (a) a further consignment—the smaller skins—from Captain Shortridge's Namaqualand expedition; and (b) nearly a hundred skins of Cape Peninsula mammals collected during the work for the Zoological Survey, as described in my general report (p. 8). Captain Shortridge's collection was referred to in the last annual report; this Museum is fortunate to be sharing in the results of such a well-organized and successful expedition.

The collection made during the work for the Zoological Survey included no fewer than sixteen examples of the Cape golden-mole, *Chrysochloris aurea*. A useful series of bats, numbering 37, was obtained near Redelinghuis by Dr. Barnard and Mr. Thorne on one of their expeditions. Another bat, and a particularly interesting one, was sent from Zululand by Mr. H. W. Bell-Marley. It is an example of *Miniopterus scotinus*, the lesser long-winged bat, a species new to our collection. Like other species of *Miniopterus* it shows the remarkable feature that the end of the wing folds back when at rest, much as it does in a beetle.

Among other acquisitions of the year are a good specimen of the silver fox or draaijakkals (*Vulpes chama*) caught at Kommetje and presented by Mr. J. G. van der Horst; and the head of a female pigmy sperm whale (*Kogia*), one of three of these animals that came ashore on the Salt River beach in June in rather remarkable circumstances. From the evidence of eye-witnesses there can be no doubt that the three *Kogias* were being attacked by a school of porpoises, which had already inflicted a good deal of damage on them. It is the first instance I have heard of in which porpoises have been known to attack animals larger than themselves, after the manner of killer whales.

In the department of birds the chief event has been the installation of the case of local birds which I have, with my sister's help, had in preparation for so long. Enough has been said about this, however, in my general report. A considerable number of skins have been added to the collection, partly as the result of occasional trips by members of the staff, and through some collecting done for us by Admiral Hubert Lynes during his recent expedition to South West Africa. The birds obtained for us by Admiral Lynes included the Damaraland rock-jumper (*Archaeops pycnopygus*) and the cinnamon-breasted warbler (*Euryptila subcinnaamomea*). The latter is one of the least-known of South African birds, and the locality, the foothills of the Great Karas mountains, marks a considerable northward extension of its known range.

Another little-known South African bird represented in the year's acquisitions is Layard's seed-eater, *Polioptila leucoptera*, a soberly coloured member of the canary group which seems to have a very restricted habitat in the mountains of the south-west Cape. A specimen from the mountains near Worcester was presented by Mr. G. Zuidmeer, through Mr. B. Peers, who had kindly preserved and mounted it for us. A bird of still more restricted habitat is the Gough Island bunting, *Rowlettia goughensis*, found only on Gough Island, the southern outlier of the Tristan da Cunha group. A skin of this bird was presented by Mr. Allan B. Crawford; it is in the immature plumage which differs so much from that of the adult as to have led at first to its being named as a distinct species.

Other acquisitions include a series of beautiful specimens of Australian finches, presented by Mr. C. N. Abrahams as the outcome of a short but devastating epidemic in one of his aviaries; and a fine male gompou or Kori bustard, for years a well-known inhabitant of one of the paddocks at the Groote Schuur Zoo. This gompou has been excellently mounted by Mr. Drury, who during the year has also mounted several other birds and small mammals for exhibition.

In addition to the donors already mentioned, the department is indebted, for the gift of specimens, to Mr. van den Houten, the Union Health Department, and the Groote Schuur Estate. Our thanks are also due to the following for leave to camp on their property during the work for the Zoological Survey: Messrs. N. A. Louw, of Steenberg; H. Heinmann, Retreat; J. Meglaughlin, Hout Bay; W. F. H. Jeffcoat, Diep River; and the District Forest Officer of Capetown.

I am, etc.,

LEONARD GILL,
Director.

DEPARTMENT OF REPTILES AND AMPHIBIANS.

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to submit the following report for the year 1938.

Field Work.—During the year under review the Department was much more active than during 1937. Several expeditions were made, in most cases in co-operation with other departments, to the North-western districts, the Little Karoo and South-eastern districts, resulting in the addition of valuable material to the collection. During March the opportunity arose to add to our collection small series of specimens from each of the four stations set up on the Cape Peninsula in connection with the Zoological Survey. The value of the specimens so obtained was in no way impaired by the routine examination for diseased organs and stomach contents undertaken as part of this Survey.

Among the specimens received from outside collectors must be mentioned, a fine series of *Typhlops* and *Acontias* from the Cape Peninsula, collected by Mr. J. Vine, of Hout Bay; a series of "Horned Adders", *Bitis cornuta*, two specimens of *Chonodrodactylus angulifer* and three "Whistling Geckos", *Ptenopus garrulus*, from Namaqualand presented by Mr. J. C. Dendy; a *Breviceps* from Zululand from Mr. R. Attwell; three snakes from Zululand, one of them, *Lycophidium semiannalis*,

previously unrepresented in the collection, from Mr. H. W. Bell Marley; and a specimen of *Zonurus capensis* presented by Dr. G. Theiler, of Wellington. Dr. K. H. Barnard and Mr. C. W. Thorne contributed a series of Amphibia from widely divergent localities; and Dr. R. F. Lawrence two specimens of *Zonurus warreni* previously unrepresented in our collection.

Research Collection.—During the latter part of the year Mr. V. FitzSimons, of the Transvaal Museum, visited the department to carry out an examination of our Lizard collection, now amounting to some 2,700 specimens, in connection with his work on South African species. This resulted in the discovery of several new forms which will be dealt with by him at a later date. Advantage was taken of this opportunity to rebottle and relabel the collection and to bring the record books up to date.

Exhibition Gallery.—Several of the older and more faded specimens were replaced as fresh specimens became available and the whole exhibit cleaned up and new labels printed.

Identification of Snakes and Lizards was carried out at various times throughout the year for schools and private individuals, and several exchanges made with other Museums.

The following table represents the acquisition to the department during the year 1938:—

	Specimens.	Species.
Lacertilia	84	29
Ophidia	31	16
Amphibia	19	8
	<u>134</u>	<u>53</u>

Thanks.—The thanks of the Trustees are due to the following donors: Mr. J. C. Dendy, Mr. H. W. Bell Marley, Dr. G. Theiler, Mr. R. Attwell, Dr. K. H. Barnard, Mr. C. W. Thorne, Mr. J. Vine, Miss A. Hart, Mr. A. Theunissen, Dr. R. F. Lawrence, Rear-Admiral H. Lynes, C.B., C.M.G.

I am, etc.,

REAY H. N. SMITHERS,

In charge of the Department.

DEPARTMENT OF FISHES AND MARINE INVERTEBRATES.

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to present the following report on this Department for the year 1938.

Exhibition Galleries.—Most of the work concerns the Fish Gallery, only a few specimens of crabs and shells having been renovated or replaced by better specimens.

The specimens of fishes mounted include: a large Yellow-finned Tunny, Long-finned Sea-bream, two large specimens of the Olifants River (Clanwilliam) Yellow-fish, a "Rubber-lip" example of the same species, and six other specimens of fresh-water fishes. The last-mentioned have been either fresh specimens, or old specimens removed from jars and mounted dry. The removal of these somewhat unsightly jars makes more room for labelling, and allows the dry-mounted specimens (coloured as far as possible in natural colours) to be shown to better advantage.

As far as circumstances permit it is hoped to continue this process of weeding out discoloured specimens in jars and to replace them by dry-mounted and coloured specimens. The question of rearranging one or two whole cases and exhibiting a habitat group has been discussed with Mr. Drury; but it is realized that this would entail a lot of work and time on his part. For the present the increased interest in river angling indicates the desirability of having the collection of fresh-water fishes as complete and informative as possible.

Study Collections.—As in previous years collections of Marine Fishes and Crustacea have been identified for Prof. T. A. Stephenson (University of Cape Town) and Prof. C. J. van der Horst (Witwatersrand University). The Natal Museum has submitted fresh-water fishes and crustacea for identification.

Several interesting additions to the fauna-list of crustacea have been made by Prof. Stephenson and Prof. van der Horst, both of whom have allowed this Museum to retain specimens.

Among the marine fishes two are of outstanding interest. The Yellow-finned Tunny (*Neohunnus itosibi*) is the second specimen of this species to be caught in South African waters. The same distinction applies to the specimens of the Long-finned Sea-bream (*Taractes longipinnis*) and the Sander Maasbanker (*Decapterus iqang*); although in the latter case the fish is probably not rare, but merely not recognised among the catches of Mackerel or not thought to be of sufficient interest to send to the Museum.

Another remarkable specimen is a pure albino of the common Dogfish (*Scylliorhinus africanus*). This apparently is the first record of an albino of this species.

Publications.—A paper by Giesen on S. African Crinoids (*K. Sv. Vet. Ak. Handl.* xvii, 1938) deals partly with material loaned by this Museum.

I have published the description of a new species of fresh-water fish from Natal (*Ann. Natal Museum*, VIII, 1938), and a preliminary synopsis of the Cape species of *Barbus* [*Ann. Mag. Nat. Hist.* (XI) 2, 1938].

Two papers on marine animals are ready to be sent to the printers.

Field-work.—The collecting of indigenous fresh-water fishes in the rivers of the S.W. Cape has been continued. I have made two longish trips in connection with my research work on the mountain fauna.

In connection with the investigation of the river fishes I wish to place on record my obligations and thanks to the late Mr. E. H. Cooke and his son, Mr. Vernon Cooke, for the loan of a light "three-ply" folding boat, which has been of the greatest use, in fact without which the capture of river fishes in many localities would have been impossible.

Accessions.—

	Specimens.	Species.	New to the Collections.
Fishes	7,702	33	2
Crustacea	94	18	5
Mollusca	70	5	—

Thanks.—The thanks of the Trustees are due to the following donors and helpers: H. W. Bell-Marley, Mrs. Bollmann, Mr. O. Callaghan (Assegai Bush), Major M. Connolly, Mr. H. Fleck, Mr. A. C. Harrison, Mr. George Hayward, M.P. (Steytlerville), Mr. H. A. Jandrill, Dr. R. F. Lawrence, Dr. J. L. B. Smith, Prof. T. A. Stephenson, Prof. C. J. van der Horst; and members of the staff, among whom the assistance of Mr. C. W. Thorne should be specially recognized.

I am, etc.,

KEPPEL H. BARNARD,

Assistant Director.

12th January, 1939.

DEPARTMENT OF ENTOMOLOGY.

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to present the following report on this department for the year 1938.

Research Work.—Most of my time during the course of this year was devoted to a continuation of my revision of the *Bombyliidae* of Southern Africa. The first part of this monograph has now been published as Vol. XXXIV of our *Annals*. Some time was also spent in a study of the hymenopterous parasites of the egg-cocoons of the poisonous "Button-Spider". These parasites have now been figured and described in MS. form and will be submitted for publication as soon as the other investigations on this spider, now being done in this Museum, have been completed. Biological notes in both English and Afrikaans have been written up for such school cases as have been made up by Mr. C. Thorne during this year. Insects or small collections of insects, belonging to other institutions or to private individuals and submitted to me during the course of the year, have also been classified. In connection with research in this department the work on the life histories of some moths, flies and parasitic *Hymenoptera* which Mr. C. Thorne carried out during the course of this year, both for this department and for the travelling school cases, also deserves special mention.

Field Work.—In conjunction with this and other departments some field work and collecting were also done. Three important trips were undertaken during this year. One trip was made to the Laingsburg-Gouph Karoo by Dr. L. D. Boonstra, Mr. C. Thorne and myself during March. A second one was undertaken by Dr. K. H. Barnard and Messrs. C. Thorne and H. Zinn to Klaver, Leipoldville, the Olifants River mouth and the West Coast during September. The third trip was slightly farther afield, to Towerwaterkloof, Steytlerville, Uitenhage, Patentie, Knysna and George, and was undertaken by Dr. K. H. Barnard, Mr. C. Thorne and myself during October. Several minor excursions and day trips were also made by Dr. K. H. Barnard and Mr. C. Thorne to Stanford, Riversdale, the Olifants River Valley and to various localities in the Western Province. As some attention was given to insect collecting on all these trips quite a number of insects have been acquired by this department during the course of the year.

Accessions.—In addition to the insects obtained on the various trips, small collections of miscellaneous insects from Natal, Zululand and South West Africa were presented to this department by Dr. R. Lawrence, of Pietermaritzburg, and Mr. H. W. Bell Marley, of Durban. A small collection of butterflies was presented by Mr. R. L. Weyers, of New Bethesda, and Mr. R. Turner, of Mossel Bay, contributed a few specimens of Diptera. Messrs. H. Wood and C. Thorne also collected some Tipulid-flies at Knysna. A small but valuable collection of bees, chiefly species of *Halictus* from South Africa and other parts of Africa and including a type and some cotypes, has also been presented to the Museum by Prof. T. D. A. Cockerell, of Boulder, Colorado. In addition Prof. Cockerell, who is an authority on Ethiopian bees, has also presented numerous reprints of his papers on African bees to our entomological library. The approximate number of insects acquired during the course of the year is 2,000.

Museum Material and Specialists.—During the year a collection of *Pterostichini* (*Carabidae*) was sent to Prof. S. Straneo, of Parma, and some *Chrysididae* to Dr. Berry Edney, of Bulawayo. Material sent out either this year or in previous years and now returned includes some *Anthidium*-Bees from Mr. G. Mayromoustakis, of Cyprus, some *Eumenidae* from Dr. A. Soika, of Venice, some *Rhagionidae* from Dr. H. Oldroyd, of the British Museum, and some *Simuliidae* from Dr. E. G. Gibbins, of Liverpool.

Publications of interest to the Museum or based on Museum material, which have appeared during this year, are:—

- (1) Monographie der Subtribus Scaratina (Col. Carab.): *Deut. Ent. Zeit.*, Heft I, 1938, by M. Bänninger.
- (2) Notes on Ethiopian Simuliidae, II: *Ann. Trop. Med. and Parasitol.*, XXXII, No. 1, 1938, by E. G. Gibbins.
- (3) A revision of the Bombyliidae (Diptera) of Southern Africa; General Introduction and Part I: *Ann. S. Afr. Mus.*, Vol. XXXIV, 1938, by A. J. Hesse.
- (4) The Moths of South Africa, Vol. III, Parts ii and iii, 1938, by A. J. T. Janse.
- (5) Arbeiten über morphologische und taxonomische Entomologie: *Notiophygus*; Band 5, Nr. 2, 1938, by H. John.

Thanks.—The thanks of the Trustees are due to the following donors and collectors: Dr. K. H. Barnard, Mr. H. W. Bell Marley, Dr. L. D. Boonstra, Prof. T. D. A. Cockerell, Dr. R. Lawrence, Mr. R. L. Weyers, Mr. H. Wood, Mr. C. Thorne, Mr. R. Turner and Mr. H. Zinn.

I am, etc.,

ALBERT J. HESSE,

In charge of the Insects.

DEPARTMENT OF ARACHNIDA AND MYRIOPODA.

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR.—I have the honour to submit the following report for the year 1938.

Field Work.—Collecting during the year was undertaken on a more extensive scale than during 1937, resulting in a decided increase in the amount of material added to the collection. Several expeditions were made to the districts of Clanwilliam, Namaqualand, the Great Karoo and the South-eastern districts, mainly in connection with my research into the habits and distribution of certain of the Theridiid spiders, during the course of which valuable collections of other material were made. As well as this, short expeditions were taken, at intervals throughout the year, to the districts round Capetown, in order that something might be learnt concerning the life-history and habits of the Theridiid spider *Latrodectus indistinctus*.

During the Zoological Survey expedition in the Cape Peninsula Dr. L. D. Boonstra and I collected numbers of Arachnids and Myriopods from the four stations set up in connection with this Survey.

Outside collectors were active during the year, and the department is indebted to Mr. A. Attwell for a collection of Spiders and Scorpions from Zululand; to Mr. J. J. Marais for specimens from the Loangwa Valley, Southern Rhodesia; and especially to Rear Admiral H. Lynes for allowing our skinner, Ali Safi, who accompanied him on his expeditions to South West Africa and the Transvaal, to collect material for the Department.

During the early part of the year large numbers of ticks were received for identification from the Union Health Department, and in return we were allowed to retain a series of specimens for the collection.

Special mention must be made of the fine collection of Scorpions and Solifugae, 102 specimens in all, presented by Dr. G. Theiler, of Wellington. The majority of these specimens were from Southern Rhodesia and Basutoland.

Exchanges.—Exchanges were arranged during the year with the British Museum (Nat. Hist.); the Museo Nacional, Buenos Aires; the Dominion Museum, Wellington, New Zealand; the University of Jerusalem and other museums and institutions.

Research.—Owing to the economic importance of the "Knopiespinnekop", *Latrodectus indistinctus*, a departure from the usual routine examination of preserved specimens was undertaken in connection with my work on this species. A series of live specimens was kept under observation in the laboratory during the year and an examination made of their life history and habits. This study was supplemented from time to time by examination of specimens in the field and by rearing the young in containers in the Museum.

An interim report on the distribution of *Latrodectus indistinctus*, from records available up to September, 1938, was published in the *South African Medical Journal*, January, 1939, and a paper on the South African species of the genus *Latrodectus* was completed during the latter part of the year.

During the early part of 1938 a paper was received from Dr. R. F. Lawrence, "A New Species of Pume-footed Mite from South Africa" (*Annals of the South African Museum*, Vol. XXXII, Part 3, p. 269) based on material in the collection of this Department.

Exhibition Collection.—Several additions were made to the collection of Araneae and their nests in the desk and wall cases as material became available.

Study Collection.—The arrival of the glassware ordered during the previous year allowed the work of re-bottling and labelling to be completed. Owing to the rapid expansion of the collections it became necessary to have additional shelves constructed to accommodate these.

The following table represents the acquisitions to the department during 1938:—

Araneae	684
Scorpiones	318
Solifugae	14
Acari	146
Pseudoscorpiones	127
Myriopods	62

At present the Araneae collection alone consists of representatives of 739 South African species, of which no less than 407 are types.

Thanks.—The thanks of the Trustees are due to the following donors and collectors: Dr. G. Theiler, Dr. M. H. Finlayson, Dr. R. F. Lawrence, Mrs. Grace Sherwell, Dr. K. H. Barnard, Mr. E. Wolfaardt, Mr. C. W. Thorne, Rear Admiral H. Lynes, C.B., C.M.G., Dr. A. J. Hesse, Mr. J. J. Marais, Dr. J. Hewitt, Mr. J. C. Dendy, Mr. C. H. Colson.

I am, etc.,

REAY H. N. SMITHERS,

In charge of the Department.

DEPARTMENT OF PALAEOLOGY.

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR.—I have the honour to submit the following report for 1938.

The chief event of the year was the completion of the new building for the department. The department now has the use of a roomy office, a well-equipped laboratory and an adequate storeroom. Considerable time was taken up by moving into the new quarters. The transshipment and rearrangement of the bulky specimens of the Karoo study-collection especially was a laborious task.

Considerable progress has been made in the preparation of the difficult Deinocephalian material. During the last few months the department was without a full-time preparator. Our attempt to train a European youth for the work has so far been unsuccessful; three youths have been tried in succession but all proved unsuitable. At present one of the cleaners assists in a part-time capacity.

A short collecting trip to the western part of the Koup was undertaken to obtain Deinocephalians. I was accompanied by Dr. A. J. Hesse and Mr. C. Thorne, and we succeeded in obtaining some skulls—one through the co-operation of Mr. J. H. Marais, of Buffelsvlei, to whom we wish to express our indebtedness.

During March I spent three weeks in the field accompanied by Mr. R. Smithers in connection with the Zoological Survey undertaken by the Museum in co-operation with the Veterinary Laboratory at Onderstepoort. In this connection I was also delegated to assist a group of biologists from the University of Stellenbosch in a survey of Jonkershoek. During the course of the year Mr. Smithers and I undertook post-mortem examinations of all animals brought in, in order to obtain external and internal parasites for Onderstepoort.

I was also responsible for the organisation in connection with the visit of the party of Dutch biologists, in particular during their stay in the Peninsula.

The following publications appeared during the course of the year:—

L. D. Boonstra:

- (1) A Report on some Karoo Reptiles from the Luangwa Valley, Northern Rhodesia. *Quart. Journ. Geol. Soc. (Lond.)*, Vol. XCIV, pp. 371-384.
- (2) On a South African Mammal-like Reptile, *Bauria cynops*. *Palaeobiologica*, Bd. VI, pp. 164-183.

Accessions.—

Karoo Vertebrates	29
Tertiary	1

I am, etc.,

L. D. BOONSTRA,

Assistant in charge of the Department.

DEPARTMENT OF BOTANY.

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to present the following report on the work of this department for the year 1938.

Accessions.—

Capt. T. M. Salter	144 specimens from the Cape Province.
O. C. Penfold	51 specimens from the Cape Province.
Dr. H. G. Fourcade	12 specimens from the Cape Province.
C. Thorne	148 specimens from the Cape Province.
Miss G. J. Lewis	274 specimens from the Cape Province, Bushmanland and Gordonia.
C. Thorne	30 specimens from South-West Africa.
T. P. Stokoe	106 specimens from the Cape Province.
Dr. L. Bolus	55 specimens from the Cape and Eastern Province and Namaqualand.
Dr. M. R. Levyns	11 specimens from the Cape Province.
Various	64 specimens from the Cape Province and Transvaal.

Field Work.—Towards the end of September a collection of plants was made in the Piquetberg Mountains and the Oliphants River Valley by Dr. K. H. Barnard, Mr. C. Thorne and Mr. Zinn. At the same time I joined an excursion organised by Prof. R. S. Adamson to Bushmanland and Gordonia. In addition I have been on a number of day excursions to different parts of the Cape Peninsula.

Research Work.—During the year I have been working on the Iridaceae and Orchidaceae and the genus *Aspalathus* found on the Cape Peninsula with a view to revising, describing and classifying the genera and species for a Flora of the Cape Peninsula which will be edited by Prof. R. S. Adamson. In the course of the collecting trips necessary for this work two or three new species of Iridaceae have been found. These will be named and published shortly.

Specimens Mounted and Incorporated.—692 specimens, including 2 genera and 64 species new to the Herbarium.

School Travelling Cases.—Material has been collected and used in making up three Botanical cases, showing some important South African timbers, some medicinal plants and a few plants of economic importance.

General Report.—Herbarium specimens have been sent on loan to the following institutions: the National Herbarium, Pretoria; Stellenbosch University; the National Botanic Gardens, Kirstenbosch. Material previously lent has been returned from the Royal Botanic Gardens, Kew; the National Herbarium, Pretoria, and the Botanical Museum, Lund.

Botanical specimens have been identified for private individuals and Government institutions, including a large collection of flowering shrubs and trees from the Municipal Gardens, Capetown.

The flowers sent for display by Mr. Minicki are now arranged on a raised stand specially constructed for this purpose. Most of the names have been printed and it is hoped that the list will shortly be completed.

Thanks.—The thanks of the Trustees are due to the donors of specimens and to Mr. Minicki for the fine collection of fresh wild flowers sent by him every week, and to Mrs. J. Solly for flowers sent from Sir Lowry's Pass. Thanks are also due to the Department of Forestry and Agriculture for supplying material for the school cases.

I am, etc.,

G. J. LEWIS,

Assistant in charge of the Department.

DEPARTMENT OF ETHNOLOGY.

TO THE DIRECTOR, SOUTH AFRICAN MUSEUM.

SIR,—I have the honour to present the following report on this department for the year 1938.

The most important event during the year has been the erection of the wall-cases that were needed to complete the series round the exhibition gallery, and the opening up of the entire gallery to the public. At the same time the opportunity was taken to renovate the central cases containing Bushman figures. This took place during my absence on leave, and the specimens which had been stored in that part of the gallery which was newly opened were removed temporarily to the whale shed, until I was able on my return to rearrange them systematically in the shed in which they are now stored. To combat the increased danger from insects I have arranged a programme of weekly inspection and fumigation to cover the whole collection every six months, and in the case of more vulnerable specimens, every three months.

With the removal of the wooden partition which served as a useful screen in the exhibition gallery, the copies of rock-paintings, small selections of which have been exhibited from time to time, had finally to be removed, and there is unfortunately at present no prospect of sufficient wall space being found to re-exhibit them.

Towards the end of the year a start was made with the arrangement of specimens in the new wall-cases. One section of these cases will complete the series showing the material culture of representative tribal groups from the whole of South Africa and including the southernmost part of Northern Rhodesia. The other section will be used to illustrate fully some of the more important South African native industries. A case of Bushman material was arranged by Mr. Thorne for the Travelling School Museum series.

During the early part of the year I arranged an exhibit of coins and notes to show the history of currency in South Africa. The arrangement is chronological with a good deal of descriptive labelling.

At the beginning of the year the weekly talks in the exhibition gallery were resumed, and continued with fairly good attendance until March.

Three papers, "Ovambo Knives", "South African Pipes", and a supplementary paper on South African Snuff-boxes, were published in the *Ann. S. Afr. Mus.* Vol. XXIV, pt. 5.

The year's accessions number 113. Specially interesting among them is an ivory arm-band obtained from one of the Xosa chiefs in the war of 1877. It was given by Miss Edith Frost, whose father, Sir J. Frost, K.C.M.G., was commander-in-chief at the time. In addition the thanks of Trustees are due to the following donors: Mr. Mitford Barberton, Mr. R. C. Camp, Mrs. Cawthorne, Mrs. E. H. Cook, Mr. F. Corner, Mrs. J. Dendy, Mr. Dickman, Sister Editha of St. Cuthbert's Mission, Mr. F. N. Hoborn, Mrs. P. C. Keytel, Mr. J. Robertson and the African Department of the Musée de l'Homme, Paris.

I was absent on leave from March to September, and during that time I visited a number of the most important ethnographical collections in Belgium, France, Switzerland, Germany, Holland and Great Britain, and obtained much useful information regarding both ethnographical material and museum methods in display, storage and cataloguing. I should like to express my appreciation of the kindness with which I was received everywhere, and the facilities I was given for study.

I am, etc.,

E. M. SHAW,

Assistant in charge of the Department.

KOOPMANS DE WET HOUSE.

TO THE TRUSTEES OF THE SOUTH AFRICAN MUSEUM.

SIRS,—I have the honour to present the following report on the Koopmans de Wet House for 1938.

As in the case of the main museum, the Koopmans de Wet House has shown a considerably increased attendance of visitors for the year: 26,239 as against 22,489 for 1937 and 25,450 for 1936. This total included 909 children coming in parties from schools; 37 schools were represented, the parties ranging in size from 8 to 112. Women made up 57 per cent. of the total attendance; coloured people 8.4 per cent.

The chief event of the year was a public presentation of the collection of Dutch tiles, received at the end of the previous year (see last report) as a gift from Mr. Willem van Vliet, of Gouda, Holland. The tiles were set out in groups on one wall of the "music room", and on the 25th of February, before the Mayor and an invited company which quite filled the room, the formal presentation was made by Mr. J. M. Prillewitz.

The tiles were selected from his own very large collection by Mr. van Vliet, and they represent all the periods of Dutch tile making, from its beginning about 1600 down to about 1790. Most of the tiles were made at Delft, the remainder at Gouda. Some of the earliest are the most pleasing, particularly a group each bearing a single figure in blue, cleverly handled with free strokes of the brush. Some of the early polychrome floral designs are also very attractive. A good deal of the later work, mostly in purple-brown, is much more elaborate but less pleasing as art. It includes a pair of the well-known long vertical panels designed for the sides of fireplaces, and some conventional pastoral scenes. A special "collector's piece", of a kind much sought-after if by no means beautiful, depicts a canary in a cage. It is intended to instal certain of the groups of tiles as permanent decorations about the fireplace of the room where the collection was temporarily exhibited.

We were much indebted to Mr. Prillewitz for the great interest that he took in this donation, not only before it left Holland, but on the journey (he brought the tiles out himself) and in Capetown. To the regret of the surviving friends who had known him many years ago in Capetown, or later when he acted as consul for South Africa at The Hague, he died in Johannesburg only a few weeks after he had made the presentation.

Among other gifts received during the year mention must be made of an old silver buckle and name-shield from an ammunition belt. It is the work of a Cape silversmith and is engraved with the name W. A. de Klerk, the donor being a descendant of the same name. A carved wooden mug with hinged lid, of the general pattern of a German beer mug, was a gift from Mr. Donald Bain; it was found among old family possessions in a loft. A notable acquisition by purchase was a fine coloured line engraving of Table Bay, dated 1766, by Canot from a drawing by W. Hirst.

I am, etc.,

LEONARD GILL,

Director.

SOUTH AFRICAN MUSEUM.

STATEMENT OF REVENUE AND EXPENDITURE FOR THE YEAR ENDED 31st DECEMBER, 1938.

<i>Expenditure.</i>		<i>Revenue.</i>			
	£ s. d.		£ s. d.	£ s. d.	
To Salaries, Wages and Allowances	5,667 3 6	<i>By Grants:</i>			
Trustees' Contributions to Provident Fund	336 10 10	Union Government	7,300 0 0		
Railage, Cartage and Dock Charges	35 16 9	Capetown Corporation	400 0 0		
Library	155 7 5			7,700 0 0	
Postal and Telephone Charges	81 4 10	„ Sale of Guides and Postcards		64 1 6	
Water, Light and Electricity	137 0 9	„ Sale of Annals		35 13 9	
General Upkeep of Museum	413 11 5	„ Refund, cost of Removal of Trees		15 3 7	
Pension	24 0 0	„ Balance, Excess Expenditure over Income		430 14 8	
Insurance	79 4 8				
Bank Charges	7 4 5				
Upkeep of Grounds (by Municipality)	187 10 0				
Publications	732 10 11				
Uniforms	21 12 4				
Furniture and Fittings	131 4 6				
Audit Fee	5 5 0				
Show Cases	111 9 0				
Travelling and Collecting	93 17 2				
Honorarium	25 0 0				
	<u>£8,245 13 6</u>				
				<u>£8,245 13 6</u>	

This account has been examined under my directions and is correct.

3rd May, 1939.

W. M. S. HOPE,
for Controller and Auditor-General.

E. L. GILL,
Director, South African Museum.

STATEMENT OF REVENUE AND EXPENDITURE OF THE STAFF PROVIDENT FUND FOR THE YEAR ENDED 31st DECEMBER, 1938.

<i>Expenditure.</i>		<i>Revenue.</i>			
	£ s. d.		£ s. d.	£ s. d.	£ s. d.
To Insurance Payments	435 19 11	By Members' Contributions	336 10 10		
„ Payments on Retirement	143 6 0	<i>Less</i> amount credited at 31st December, 1937	0 10 0		
„ Balance, Excess Income over Expenditure	215 4 10			336 0 10	
		„ Trustees' Contributions		336 10 10	
		„ <i>Interest on Investments:</i>			
		Union Government Stock	71 5 0		
		Capetown Municipal Stock	44 0 0		
		Cape of Good Hope Savings Bank	6 14 1		
				121 19 1	
		<i>Less</i> accrued interest 1937	31 12 9		
		„ Accrued Interest		90 6 4	
				31 12 9	
	<u>£794 10 9</u>			<u>£794 10 9</u>	

This account has been examined under my directions and is correct.

3rd May, 1939.

W. M. S. HOPE,
for Controller and Auditor-General.

E. L. GILL,
Director, South African Museum.

STATEMENT OF REVENUE AND EXPENDITURE OF KOOPMANS DE WET HOUSE FOR THE YEAR ENDED 31st DECEMBER, 1938.

<i>Expenditure.</i>		<i>Revenue.</i>	
	£ s. d.		£ s. d.
To Purchases	41 7 3	By Capetown Corporation Grant	100 0 0
„ Balance, Excess Income over Expenditure	58 12 9		
	<u>£100 0 0</u>		<u>£100 0 0</u>

STATEMENT OF REVENUE AND EXPENDITURE OF SHAHMAHOMED COIN FUND FOR THE YEAR ENDED 31st DECEMBER, 1938.

<i>Expenditure.</i>		<i>Revenue.</i>	
	£ s. d.		£ s. d.
To Purchases	10 12 9	By S.A. Association, interest	4 0 0
	<u>£10 12 9</u>	„ Balance, Excess Expenditure over Income	6 12 9
			<u>£10 12 9</u>

STATEMENT OF REVENUE AND EXPENDITURE OF CARNEGIE GRANT FUND FOR THE YEAR ENDED 31st DECEMBER, 1938.

<i>Expenditure.</i>		<i>Revenue.</i>	
	£ s. d.		£ s. d.
To Purchases and Salaries	262 10 10	By Balance, Excess Expenditure over Income	262 10 10
	<u>£262 10 10</u>		<u>£262 10 10</u>

These accounts have been examined under my directions and are correct.

3rd May, 1939.

W. M. S. HOPE,
for Controller and Auditor-General.

E. L. GILL,
Director, South African Museum.

THE LIBRARY OF THE
 UNIVERSITY OF ILLINOIS
 1935-1940

STATEMENT OF ASSETS AND LIABILITIES OF THE STAFF PROVIDENT FUND AS AT 31st DECEMBER, 1938.

<i>Liabilities.</i>		£	s.	d.	£	s.	d.	<i>Assets.</i>			
<i>To Provident Fund:</i>											
	Balance at 31st December, 1937	2,824	10	3				By Government Stocks (at cost)	1,470	0	0
	Balance for 1938	215	4	10				„ Municipal Stocks (at cost)	1,131	1	8
					3,039	15	1	„ Union Loan Certificates	79	5	9
								„ Savings Bank Account	324	16	1
								„ Cash on hand	2	18	10
								„ Interest Accrued	31	12	9
					<u>£3,039</u>	<u>15</u>	<u>1</u>				
									<u>£3,039</u>	<u>15</u>	<u>1</u>

STATEMENT OF ASSETS AND LIABILITIES OF S.A. MUSEUM AS AT 31st DECEMBER, 1938.

<i>Liabilities.</i>		£	s.	d.	£	s.	d.	<i>Assets.</i>			
<i>To Koopmans de Wet House:</i>											
	Cr. Balance for 1938	58	12	9				By Cash at Bank	1,294	11	8
	Balance at 31st December, 1937	259	17	10				„ Petty Cash and Stamps on hand	81	5	0
					318	10	7				
<i>„ Shahmahomed Coin Fund:</i>											
	Balance at 31st December, 1937	8	16	8							
	Dr. Balance for 1938	6	12	9							
							2	3	11		
<i>„ Carnegie Grant Fund:</i>											
	Balance at 31st December 1937	492	16	0							
	Dr. Balance for 1938	262	10	10							
							230	5	2		
<i>„ Museum Funds:</i>											
	Balance at 31st December, 1937	1,255	11	8							
	Dr. Balance for 1938	430	14	8							
							824	17	0		
					<u>£1,375</u>	<u>16</u>	<u>8</u>				
									<u>£1,375</u>	<u>16</u>	<u>8</u>

This account has been examined under my directions and is correct.

3rd May, 1939.

W. M. S. HOPE,
for Controller and Auditor-General.

E. L. GILL,
Director, South African Museum.

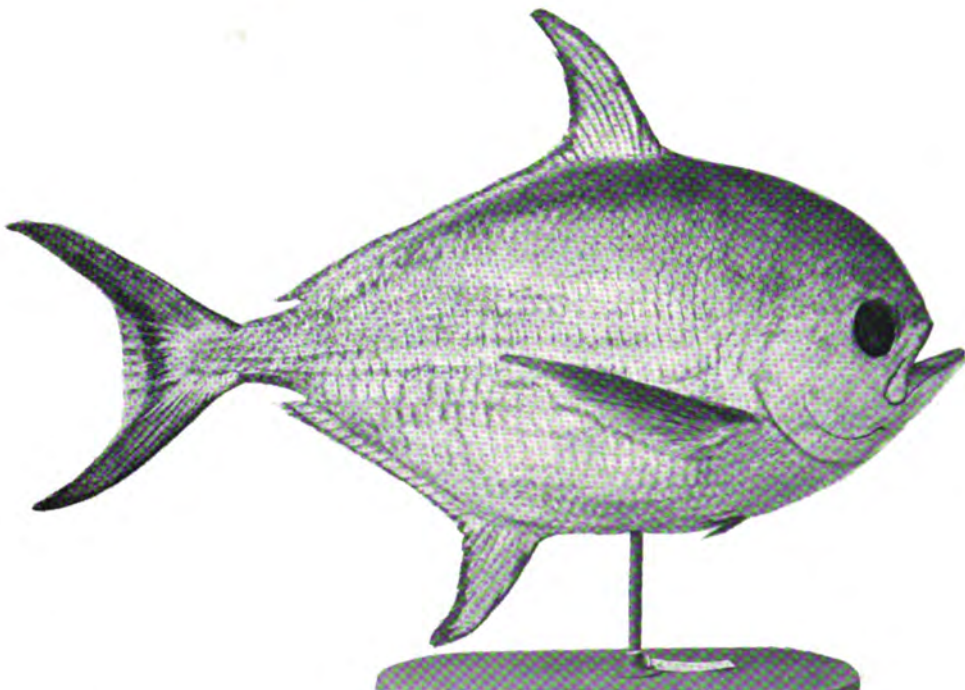
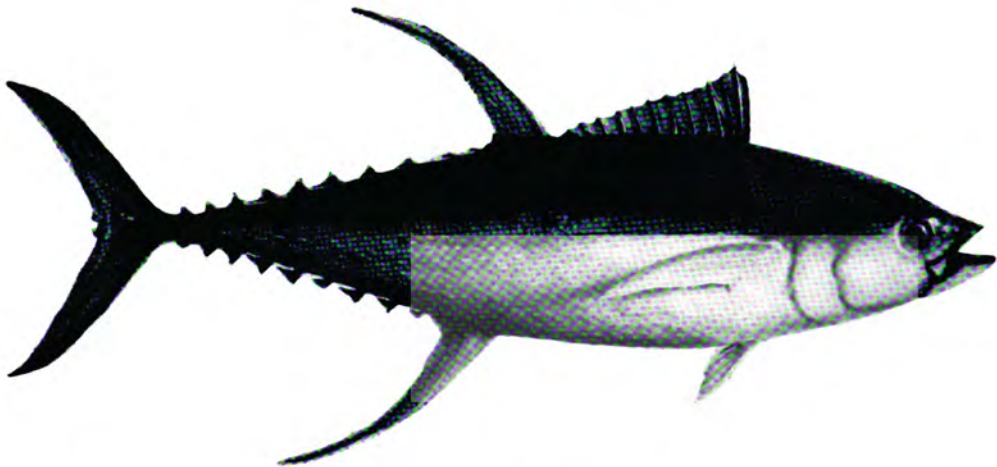


NEW CASE OF BIRDS OF CAPETOWN NEIGHBOURHOOD.
(See Page 9.)

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MALE GOMPOU (*Kori Bustard*).
In breeding condition. From the Grootte Schuur Zoo.



TWO OF THE INTERESTING MARINE FISHES obtained during the year (see p. 12)
Above, Yellow-finned Tunny (*Neothunnus*), length 5 ft. 6 ins.
Below, Long-finned Sea Bream (*Taractes*), length 2 ft. 7 ins.

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