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**EARLY FARMING COMMUNITIES ON THE SOUTHERN HIGHVeld :
A SURVEY OF IRON AGE SETTLEMENT**

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VOLUME ONE

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Frontispiece. Nteuanateatsi from the south, Skaaprand to the left. The name Nteuanateatsi is symbolically linked with the creation of man, and it was from here that the radiation of Kwena lineages south of the Vaal took place.

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P R E F A C E

The wealth of Stone Age material has until recently occupied the attention of most archaeologists in South Africa. The Iron Age was a neglected and underrated field of research until about 1960, and the little work that had been done was mainly that of amateurs. The resurgence of interest has brought with it a realization not only of the rich potential for research, but more especially of the vital importance of the Iron Age to our understanding of earlier South African history and indeed of South African society today. The later prehistory is of heightened importance in view of the short span, only a mere century and a half, of conventional history in the interior of southern Africa. The current growth of Iron Age studies is a parallel development to the awakening interest in the autochthonous history of the sub-Saharan African continent.

The School of African Studies at the University of Cape Town has played an active part in the development of a new awareness that historical studies of African societies have much to contribute to research in a variety of related disciplines. The present project serves as an example, for it is a result of the interest and initiative of Professor M. Wilson and Professor R.R. Inskeep. One of the more significant manifestations of this new emphasis in African studies is the Oxford History of South Africa (Wilson & Thompson, 1969). In the preface to this work the authors were able to say that, "Far too little systematic excavation has yet been done... on Iron Age sites in the Orange Free State, Natal, and the Transkei." The present project was established to begin to fill the enormous gaps in archaeological knowledge in these areas.

The first chapter of this thesis reviews previous research on topics related to Iron Age settlement on the southern Highveld. It is apparent that several misleading ideas have grown out of the inadequate archaeological and historical information, notably those concerning the 'Hoja' people and the construction of corbelled hut settlements, which have had to be modified in view of the present results. In the past the only excavations were a few inadequately controlled, small scale 'digs' carried out in the 1930's. The present work has therefore had to make a completely fresh start. The initial stage was an analysis of the aerial photography covering the Orange Free State and parts of adjacent areas. This not only revealed a large number of Iron Age settlements, but made it possible to classify them according to a typological framework that then became the basis for planning a program of fieldwork. Sites of the major types were examined in the field

and one or two of each were surveyed and excavated. A total of about 14 months was spent on the sites, the excavation of which provided most of the material contained in this thesis.

Four distinct archaeological entities, labelled Types N, V, Z and R, have been defined for the first time, three of them being virtually unknown previously. Several additional types or sub-types have been identified and briefly described. The geographical coverage includes the Orange Free State and adjoining parts of Griqualand West, the southern Transvaal and western Natal. The types represent a variety of distinct Iron Age communities each with a well developed settlement pattern, material culture and economy. Type R differs from the others in that its inhabitants were pastoralists, identifiable as Khoisan on the evidence of history and physical anthropology. This is the first time that pastoralists have been identified in the archaeological record of South Africa.

It is now possible to establish a provisional scheme of Iron Age industries covering the past 500 years on the southern Highveld. Comparisons with neighbouring regions have been made but they must remain tentative until these regions are better known archaeologically. The evidence indicates that both the southern Transvaal and the Tugela Basin had an influence on cultural development, but that the character of the industries, especially the eastern ones, was to a considerable extent locally determined. The development of Type R seems to have been a response to a particular cultural and environmental context.

Extensive use has been made of historical and ethnological information, including unpublished material, in an attempt to reconstruct some of the historical processes and to identify the builders of the different types of settlement. A fair measure of success has been achieved in this direction and it was possible to demonstrate that particular settlement types are not necessarily the work of a single group of people identified from historical sources. Earlier syntheses were shown to be extensively incorrect in their attribution of particular archaeological remains to particular peoples.

The main aim of this thesis has therefore been to establish an archaeological framework for the Iron Age of the southern Highveld, and, by integrating this with a revision of the earlier historical evidence, to attempt a reconstruction of the life of Highveld communities over the past 500 years.

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PREVIOUS RESEARCH : THE BACKGROUND TO THE PROJECT

The southern Highveld, between the Orange and Vaal Rivers, remained part of the 'Dark Continent' down to the 1830's. Only then did literate visitors enter the area and establish its first written records. Prior to this the area falls within the realms of pre- or proto-history, in the literal sense, and its past must therefore be reconstructed by methods other than conventional historiography.

The recognition of these academic subdivisions is necessitated by the different nature of the evidence available for each period and the different academic disciplines required to examine it. Yet the division is unfortunate in that it cuts across the broad sweep of history and leaves us with truncated sections of the time sequence. In our area, however, the subdivision into preliterate and literate history is to a considerable extent justified by the enormous changes that took place within the same decade; changes associated with the Difaqane wars, the rise of Moshweshwe and the arrival of white missionaries and settlers, which radically altered the course of history between 1830 and 1840.

The Orange River had been crossed by white travellers during the eighteenth century and for the region immediately west of the Orange Free State, the areas occupied by the Griquas, the Tlhaping and several other groups as far north as the Marico, written records extend back to the turn of the nineteenth century. This thirty year period is important as it reaches back to the pre-Difaqane period, before 1822, to give us a clear picture of conditions in at least one Iron Age community, the Tlhaping, and a considerable amount of information on other groups.

Knowledge of the Iron Age settlement of the Highveld has been increasing since the first references to deserted villages in the 1830's. The growth of factual information and the development of its interpretation can be traced to three main sources. Firstly, various explorers and missionaries in the nineteenth century who reported a number of occurrences, mainly of stone ruins. Secondly, in the early years of this century when several works were published on the oral history of the Sotho. And finally, from about 1925, when archaeologists began to take an interest. The three sources must be examined in some detail for together they represent the state of knowledge before the start of the present research project, and furthermore a close examination shows that several unsubstantiated claims have been perpetuated.

THE EXPLORATORY PHASE

Among the first written accounts of our area there is already mention of stone structures built by various Sotho groups. When Arbousset and Daumas (1846) travelled through a large part of what is now the northern Orange Free State in 1836 they came upon numerous stone villages, some still inhabited but the majority recently abandoned, often with signs of strife. Their Sotho guides called these abandoned stone structures lerako or more commonly litaku in the plural, and the missionaries were aware that this word in its locative case litakung - at the ruins - (Dithakong in modern spelling) was the name of the capital of the Tlhaping people (op.cit., 123). Dithakong, some 60 km north-east of Kuruman, was so named because of stone ruins near the town, but when it was first visited and described by travellers in 1801, the inhabitants were building in more perishable materials and they had no tradition of who had built the stone walls, although they were carefully questioned (Barrow, 1806, 396; Borchers, 1861, 84). This lack of a tradition on the stone builders is confirmed by later sources (Burchell, 1822, ; Campbell, 1815, 156), so we must accept that these ruins were built long before the end of the eighteenth century, for there is no evidence to suggest that the Tlhaping were newcomers to the area.

These two observations made some 400 km apart and before white settlement had become effectively established north of the Orange, demonstrate two facts which are of fundamental importance to Iron Age studies. Firstly, that building in stone had a considerable antiquity in the region and secondly, that several of the Sotho groups were still building in stone in the earlier nineteenth century.

The writings of Campbell, Moffat, Cornwallis Harris and others from north of the Vaal in the same period show that stone-built settlements, both occupied and abandoned, were regular features of many areas occupied by Sotho-Tswana peoples. Much of this primary evidence has been republished in recent syntheses by Mason (1962, 378-81) and Wilson (1969, 138-42), and it is now firmly established that much of the stone building on the Highveld was the work of the Sotho-Tswana. It is therefore unnecessary to review the evidence from north of the Vaal; however, that from the south of the Vaal is directly relevant and will therefore be summarized.

James Walton (1965) has recently edited several of the early accounts of Sotho settlements, in particular that of Stow which was

previously unpublished, but these relate only to the Hoja. Most authors are frustratingly vague about details of settlement patterns and construction, for example "old sheep folds, and other ruins obstructing the progress of travellers" (Arbousset & Daumas, 1846, 92) suggests the presence of stone walls without proving it. However, when brought together the evidence is sufficient to give a broad general picture of settlements, while some of the details of material culture are sufficiently well described to be of great value in interpreting the archaeological record.

Most of the early descriptions are from the Caledon Valley. Here the evidence of destruction and depopulation as a result of the Difaqane wars was still fresh on the ground. Deserted villages and human bones were seen between Thaba Nchu and Thaba Bosiu (Casalis, 1889, 171), north of the Phuthiatsana river (Smith, 1940, 135) and in the Kweneng of northern Lesotho (Arbousset & Daumas, 1846, 43). At least some of these deserted villages, a few kilometres north of Mequatling and near Clocolan, had stone cattle pens (Backhouse, 1844, 392; Mears, no date, 17).

For the occupied settlements of the Caledon Valley more information is available. The huts were hemispherical and it seems that they usually had a protruding entrance passage. This type is described from Thaba Bosiu, Morija, Mpharane, Mequatling and at Bethulie, a mission among refugees on the Orange River (Backhouse, op.cit., 355, 365, 368, 390 & 396). This evidence requires some examination for such huts have been almost entirely replaced by cone-on-cylinder or rectangular houses in the area today.

Casalis (1861, 172) illustrates and describes an oval beehive hut with entrance passage as being the hut of the Basotho, and contrasts this with the cone-on-cylinder type of the southern Tswana. Backhouse (op. cit.) also illustrates the beehive with entrance passage type from Bethulie, but from Thaba Bosiu and Mequatling he merely describes the huts as being "in form something like sections of sparrow-pots". The exact shape of a sparrow-pot is something of a mystery, but from the O.E.D. definition (Sparrow-pot - sparrow bottle, a jar suspended on a wall to serve as a nesting place for sparrows) it seems that it had a neck which resembled the entrance passage. We must therefore accept that the beehive hut with entrance passage was in general use in the 1830's. The settlements mentioned above, where these huts were seen, are particularly significant as they include centres of the three most important political divisions in the area, Moshweshwe's people at Thaba Bosiu and Morija, the Taung of Moleteane at Mequatling and the Tlokwa of Sekonyela at Mpharane. The huts

of these three groups were similar but formed a marked contrast with those of the Rolong refugees at Bethulie and Thaba Nchu who were recent Tswana arrivals from north of the Vaal.

The Rolong huts had "upright sides plastered with clay, and thatched tops" (Backhouse, op.cit., 355). "From the lower part of the thatch, pillars are placed perpendicular in advance of the wall so as to form a sort of veranda under which they sleep during the summer" (Smith, 1940, 155). Casalis illustrates a Rolong hut in section, probably taken from one of these refugee settlements, and here the veranda has been walled in to form a concentric passage completely encircling the hut (Casalis, 1861, 126).

The beehive huts were built of branches and reeds or grass, well plastered with mud daga (Backhouse, op.cit., 368 & 390) and often decorated (Casalis, 1861, 127). The entrances were only about half a metre in height (Backhouse, op.cit., 368) and they opened into circular courtyards enclosed by high fences of reeds or branches (Backhouse, op.cit.; Casalis, 1861, 130).

These dwellings were usually grouped around in a ring enclosing an open space; sometimes there were narrow lanes between the huts (Backhouse, op.cit., 365; Casalis, 1889, 178). The open space was at the centre of the settlement and it contained several circular cattle pens. Wherever the description is adequate it is evident that these pens were built of stone. Thus at Thaba Bosiu, Mequatling, Mpharane and Thaba Nchu we find that among the major political divisions of the period, the Sotho of Moshweshwe, the Taung, Tlokwa and Rolong respectively, that cattle pens were built of stone (Casalis, 1889, 179; Backhouse, op.cit., 390; Arbousset & Daumas, 1846, 36; Smith, 1940, 156).

Although these descriptions do not give an exact picture of the settlement pattern they do include the main architectural elements and they show that the settlements in different parts of the Caledon Valley were essentially similar with the exception of the immigrant Rolong. The beehive huts in their courtyards grouped around the central open space which contained stone cattle pens and the men's Khotla - from the literature this is about as close as we can get to the pattern of settlements in the area in the earlier nineteenth century.

North of the Caledon up to the Vaal River there is much less information but a general picture can be reconstructed from the travels of Arbousset and Daumas (1846). They travelled through what are now the districts of Ficksburg, Senekal, Lindley, Reitz, Frankfort, Heilbron, Kroonstad, Winburg and Thaba Nchu, in each of which they came upon occupied

or recently deserted villages. In each of these districts the Taung (whom they call Lighoya) were represented, while in Lindley and Reitz there were also former Tlokwa towns. Two smaller groups were also mentioned, the Bamoliberis (Molibeli, a Kwenza group) in Senechal and the Barankokoto in Frankfort. Stone structures are specifically mentioned in the districts of Lindley, Reitz and Frankfort, and are related to these peoples in several instances. In the other districts the architecture is not described, from which one can at least infer that it was not radically different.

The most detailed early description of a ruined settlement is that of Bennie (1956), written in 1843. On the Sand River he passed a large town consisting of stone cattle enclosures and smaller circles of low stone work which had been huts. The pens and huts were linked by other stone walls - this being the earliest reference to such linking walls.

At another but unspecified location Bennie (op.cit., 11) describes a settlement with corbelled huts, and this again seems to be the earliest reference to them (see editor's note No. 31 in Bennie, op.cit., 22).

Bennie and subsequent authors who mention ruined settlements were travelling through the country on their way northwards and were not in contact with the remnant population, as were Arbousset and Daumas, and therefore they do not record the names of the peoples who occupied the settlements. Bennie, however, attributes them to tribes destroyed by Mzilikazi (op.cit., 12). Sanderson (1860) mentions stone ruins on the Liebenbergsvlei and north-west of Lindley near the Elandspruit, the latter being given a similar attribution. This author is less well known than the others included in this section, for example he is not mentioned in Mason (1962), Walton (1965) or Wilson (1969), the main reviews of these early historical sources, but he deserves more attention.

Sanderson travelled through the Orange Free State and the Magaliesberg of the south-western Transvaal in 1851-52. He described in detail a Tswana village under chief Mahata about 16 km north-west of Rustenburg and mentioned numerous ruined sites, which included stone structures. In summary he says, "A great part of the country I had passed through during the last six weeks or two months, and especially the southern side of the Magaliesberg, was covered with ruined kraals, the remains of tribes of natives driven out or extirpated by Moekakates" (op.cit., 253). Breutz (1956, 5) includes one quotation from Sanderson but this refers to stone enclosures near the Bloukrans river in Natal, not east of Rustenburg as Breutz suggests. This mistake is hardly

justified in view of the, for that time, excellent map and descriptions.

Thomas Baines (in Walton, 1965, 17) described and illustrated the construction of a corbelled hut, but by the second half of the nineteenth century the Orange Free State was becoming well known and therefore less likely to be described by travellers. Anderson (1887) described and illustrated various Iron Age settlements (Walton, 1965), but as this material is controversial it will be examined in detail in the fourth section of this chapter.

By the time that the Orange Free State republic obtained recognition from the British government, in 1854 at the Bloemfontein Convention, a good deal of information was already written, if not yet published, on the settlements of the previous inhabitants. The Caledon Valley and much of the northern half of the country contained many villages, some still occupied, but, in the latter area in particular, many had been abandoned and were in ruins. Indeed the early history of white settlement in the area shows several points of contact with these settlements. The battle of Vegkop between the Trekkers and Mzilikazi in 1836 took place on a hill covered with stone ruins (Van Riet Lowe, 1927), and the site of the Sand River Convention of 1852 is among hills with large concentrations of stone structures. The names of farms where Iron Age settlements occur frequently make reference to these structures. Thus names such as Klipkraal, Kaffirskop, Kaffirstad and particularly Kaffirkraal were given to farms presumably because of the settlements they contain, a few of which would still have been occupied in the early years of white settlement (Arbousset & Daumas, op.cit.; Bennie, op.cit., 13), although some were early locations (Webb, pers.comm.).

THE RECORDING OF SOTHO ORAL HISTORY

The reports of the exploratory phase were essentially descriptions of objects and activities as observed by the authors. The usefulness of these reports depend mainly on the powers of observation and the extent to which the authors went into detailed descriptions. There was little room for errors here, other than those of omission. Several of the early authors give information on the history of the area drawn from oral sources and dealing mainly with the events of the Difaqane and the rise of Moshweshwe, but no systematic history based on oral sources was published before the turn of this century. An early work on Basotho history, that of J.M. Orpen published in 1857, devotes only five pages to the period before the arrival of missionaries in 1833.

Knowledge of the pre-nineteenth century Sotho in our area thus remained severely limited until the publication in 1905 of Stow's 'The Native Races of South Africa' and Macgregor's 'Basuto Traditions'. These were followed in 1912 by 'History of the Basuto Ancient and Modern', the work by Ellenberger and Macgregor that remains to this day the standard reference. Numerous other works concerned partly or wholly with Sotho history have appeared subsequently and have added more information, but none have concentrated on the earlier period.

A full review of this material is quite beyond the scope of this project; it is a complex task requiring specialised historiographic skills and preferably the collection of additional primary material. An invaluable tool in this work is the Gazetteer for Basutoland (Webb, 1950), with its many additions since publication, for not only does it contain place names in Lesotho but also the names and the locations of historical Sotho settlements in the Orange Free State. (I am indebted to Captain R. Webb for bringing this source to my attention.) It should be mentioned here that if the student of the Iron Age is to make full use of the historian's work, it is essential that the historian should be as precise as possible about the location of the places to which he refers. Unfortunately this is seldom the case, even with recent authors, which forces the archaeologist to spend many hours returning to original sources and attempting to correlate these with the maps, not always with success.

Even when examining general distributions the recent historians are not always accurate. For example Legassick (1969, 125), in his otherwise excellent paper on early Sotho-Tswana history, has the distribution of Kwena-Fokeng chiefdoms around 1800 stop short of the Caledon Valley, yet we know that by then they extended far down the valley (Ellenberger, 1912, 121). Furthermore he makes insufficient allowance for the Taung and none for the Tlokwa, yet both of these groups occupied large areas in the northern Orange Free State. As the prehistorian has had to become part geographer, so must the historian, who studies non-literate (and hence non-cartographic) societies, become to some extent his own cartographer.

Qualified historians have in recent years shown a renewed interest in the earlier collections of oral history. These works contain a rich supply of primary material which is of great use provided that certain limitations are recognised. The problems are of two main types. Firstly, oral history by its very nature requires a strict methodology distinct from that of literate history, but this was not available before

the growth of interest in the history of indigenous African peoples which has taken place during recent decades. The second problem is the need "to strip the recorded oral traditions of the assumptions in which they have become embedded by their compilers and recognize them for precisely what they are - the traditions of the ruling lineages of those chiefdoms that were in existence at the time when the traditions were recorded" (Thompson, 1969, 10).

Legassick (1969, 92) has shown that both Stow and Ellenberger were heavily influenced by social historians of the late nineteenth century. This has led them to interpret the oral evidence in terms of a series of long distance migrations with successive waves of population breaking over southern Africa. Stow's map of migrations is a brave attempt to represent these waves diagrammatically but it immediately shows up the weaknesses. All the population groups of southern Africa are drawn from the Great Lakes region of central Africa as if there were continual overpopulation here and a near-vacuum further south. Even from their start in equatorial Africa, he divides the Sotho-Tswana into their various groups such as Rolong, Tlhaping, Hurutshe, Tlokwa etc., whereas the traditions themselves suggest that the dispersion took place in and around the Transvaal.

The complete reassessment of the recorded oral evidence must be left in the hands of competent historians. There are, however, several notions which have been repeated and elaborated by more recent authors and are becoming entrenched in the archaeological literature. These notions, which relate to the Hoja people, require detailed examination as they have played a large part in the interpretation of the archaeological evidence from our area.

The Hoja, the Taung and the Kubung

There has been considerable emphasis on the Hoja (Lighoya)¹ among later authors, particularly Van Riet Lowe (1927) and Walton (1965) and the name has already spread into popular literature; yet the use of this name has not been given sufficiently critical consideration. The main authority used is Stow, yet the only clear traditions on the Hoja which Stow himself collected (Walton, 1965, 30-31) relate to the later part of

¹ Many authors have used the spelling Lighoya or Ghoya but members of the Kubung and Taung lineages questioned by Captain R. Webb insisted that there is no guttural sound and therefore the spelling Lihaja or Hoja is to be preferred.

their history and these agree in principle with other sources. For the earlier history Stow quotes Arbousset and Campbell, usually without acknowledgement which may be because of Theal's editing, and he combines this information with several assumptions which we will examine below. At this point however we must return to Arbousset as this seems to be the source of the misunderstanding.

Throughout their travels between the Caledon and the Vaal, Arbousset and Daumas (1846) use the term Lighoya, even when referring to the Taung chief Makuana ('MaKhoana) and his capital Entikoa (Nthikhua). They do however qualify this by explaining that 'MaKhoana and his ancestors "revered the lion....whence comes the ancient and celebrated designation of Bataung, or those of the lion, but commonly called the Lighoyas" (op. cit., 214). They add that "The denomination Lighoyas comes from a powerful chief, whose subjects did him the honour to assume his name, a custom which thereabouts is very common.....It remains to be seen which of these names will prevail some time hence. But that of Bataung cannot be changed in that way, which is a happy circumstance for those interested in statistics." With this amusing comment on academics the authors get to the heart of the problem. To them the terms are synonymous - the Hoja and the Taung are precisely the same people. Stow quotes these same passages, and for him and subsequent authors who followed him the terms are apparently also synonymous.

In terms of modern scholarship, if we accept this synonymity, Taung must replace Hoja, for the siboko of the ruling lineage is the clearest and least ambiguous means of identifying different groups in the oral record. Once identified as Taung this group of people emerge with a body of clear oral tradition which links up with their early written history and can be followed down to the present. In the same way the use of the term Mantatees to describe the Tlokwa followers of MaThatisi has created confusion, for sometimes the groups who were loosely referred to as Mantatee were not Tlokwa at all (Lye, 1967). Legassick (1969, 114) regards the name Hoja as "anachronistic" and suggests that "Fokeng" would be more appropriate. However, the present writer can find no reason to suggest a connection with the Fokeng. In view of the undoubtedly close relationship - and for some authors identity - with the Taung, this term must be given preference. The definitive test should be whether the people or at least their ruling lineage have the lion for their siboko. The word Taung is used in this sense from here onwards.

However this still does not completely explain the use of the name

Hoja, for there is another set of traditions and historical references which relate to a different origin and ruling lineage associated with the name Hoja, quite distinct from that of the Taung.

Ellenberger (1912) records that the Hoja separated from the Rolong and Hurutsha and that the name derives from Sehoya, the derivative nickname of their popular chief Mabula. More significantly, on separation they adopted the Hippopotamus as their siboko. They are therefore more correctly known as the Kubung. They settled in the north-western Orange Free State and became closely associated with the Taung who eventually assumed political control over them by the early nineteenth century.

This tradition is confirmed in many details and amplified by the information of Serama Ramakabane, a member of the Kubung lineage, collected by A.A. Moletsane and R. Webb in 1964 (Moletsane, 1967, 26-29). Here again Mabula alias Sehoya was a popular chief, but several generations of rulers are remembered before him extending back to Serama who seems to have been a Rolong or Hurutsha chief. Formerly the group had praised iron, later it was fire, but on separation they adopted the Hippopotamus thus becoming the Kubung. This record together with other, as yet unpublished, material referred to in it will go a long way towards clarifying the history of the various peoples who lived just south of the Vaal River. Although a complete review is not possible here, the published material of Ellenberger and A.A. Moletsane is quite sufficient to confirm the existence of a group of separate origin from the Taung within the all-embracing term Hoja. Here again it is the siboko that must determine the nomenclature, so this group should be referred to as the Kubung. Indeed A.A. Moletsane, a member of the Taung lineage and grandson of the famous Makgothi Moletsane, uses the name 'Bakubung Lihaja' to distinguish them. In view of the variety of usages in the literature, the term Hoja is now completely ambiguous unless explicitly associated with either the Taung or the Kubung.

All accounts agree that the Kubung were politically absorbed by the Taung around the time of the Difaqane, but it seems likely that they had a close association from a much earlier date, as the take-over was apparently voluntary (Moletsane, op.cit., 28). Breutz (1956, 12) gives a rather different view on the origins of these groups indicating that "the present beTaung, beKubung and bePhiring are the descendants of the Digøja", although this does not accord with Taung or Kubung traditions. Any conclusions on the relationship between Taung and Kubung must await a complete reassessment of all the material, but there are several

references suggesting a long-standing and relatively amicable connection. For instance when in 1882 Moletsane revisited the former Taung settlements of Motloantloang (Steynsrust), Maphororong (Doornberg) and Nthikhua (Makawaanstad, 12 km east of Steynsrust) he also visited Bolibeng baLiku^{bu} (Kroonstad) the former Kubung centre. Moreover, these important Taung sites seem at one stage to have been associated with the Kubung lineage (Moletsane, 1967, 4, 16 & 27).

It is also of interest that when Backhouse (1844, 391) was at Mequatling in 1839 he met "Mogoya, the Chief, whose people were called Ligoya, or Lehoya. He resided near to Molitsani, but was inferior to him". And again, in Moletsane's own description of the Difaqane we find: "Molitsane, accompanied by his friend Gassapiane (Khasapane) the Chief of the Lighoyas, then retreated towards the Modder River" (Theal, 1883, 517). Evidently some political structure was retained by the Kubung although they came under Taung suzerainty.

The name Hoja was evidently in popular use in the early nineteenth century to describe the various communities of Kubung and Taung, for it is used thus by Campbell (1822, 2, 351) on information obtained from the Kora and by Arbousset and Daumas (op.cit.). To a large extent the Kubung and Taung retained their separate identities as represented by the difference in siboko, however they were divided into a number of communities covering a considerable area and with a weak political organization until Moletsane's time (Ellenberger, op.cit., chapter 5). It is perhaps because of this dispersion, and no doubt considerable intermarriage and mixing between the two groups, that the term Hoja tended to be applied indiscriminately to both.

A source of confusion in the use of the name Kubung arises from the adoption of the Hippopotamus as the emblem of the Ramokhela branch of the Taung, according to Ellenberger (1912, 63). However, this happened at a relatively late date in their history; their common origin with the Taung is well established and as they continued to be known as the Ramokhela or Ramokhela Taung the retention of this name will avoid confusion.

A thorough re-examination of the evidence concerning the Taung and Kubung, and their relationship with one another and with the Rolong would throw much light on problems of historical and archaeological interpretation in our area. Some aspects will be referred to in subsequent chapters but at this point we must take a critical look at the assumptions that have been built around the name Hoja.

The Taung and the stone ruins

Undoubtedly to many authors of European origin or descent the building of stone walls implies a rather higher degree of cultural development than the use of other materials such as mud, timber or reeds. Yet there is considerable evidence to suggest that this was not the case among the relatively unspecialised agricultural and pastoral peoples of the Iron Age south of the Limpopo Valley. That the archaeologist will tend to concentrate on stone settlements is inevitable because of their relative ease of location and excavation, but here too it is necessary to guard against lithocentricity, the tendency towards overweighting the significance of the stones.

The evidence that the Taung and perhaps the Kubung built stone walls and corbelled huts is well nigh incontrovertible and is now widely accepted. Stow (in Walton, 1965, 30) records two informants, one himself of the Taung, who affirmed that the "Leghoya" built stone huts and enclosures, and Van Riet Lowe (1927, 228) met a man whose great-grandfather, again of the Taung, had lived in one of the stone-built settlements near Vegkop. Walton (1956, 133) records that the descendants of the Kubung or Taung continued to build corbelled huts until a few years ago in Lesotho. There is also a very close correlation between known settlements of the Taung and sites with stone enclosures and corbelled huts in the north-central Orange Free State (chapter 15). The suggestion that the Taung and/or Kubung were responsible for all the stone ruins of any class, including the corbelled huts must, however, be questioned.

Van Riet Lowe (op.cit., Fig.7) and Walton (1956, Fig.7 & 1965, Fig.2) imply in their distribution maps that the Hoja extended throughout the areas known to contain corbelled hut settlements. Walton (1956, 37) also states that his Group A settlements - those with corbelled huts - were "built by the Ghoya and later by the Taung", although elsewhere he records that corbelled huts of a slightly different type are still being made by the Phetla and Phuthi, and he quotes Ellenberger's (op.cit., 71) description of corbelled huts among the Hlakwana. This latter evidence is sufficient to establish that the Taung and Kubung were not the only builders of corbelled huts let alone other stone structures. Moreover, there are clear traditions of other groups including the Fokeng, Kwena and Tlokwa living in areas which include such sites, for example the north-eastern Orange Free State, which is beyond the known range of the Taung. However, the impression still seems to persist that corbelled

huts must be linked with the Hoja (e.g. de Jager, no date). This assumption can in most cases be traced back to Stow, therefore his evidence must be examined.

Stow gives a good description and illustration of a corbelled hut settlement but then asserts that "these Leghoya ruins afford us, as we have seen, certain knowledge with regard to the migrations of their tribe; for the old Leghoya state that they, and their forefathers, were the only stone-hut builders" (in Walton, 1965, 25). Continuing in this vein, he suggests elsewhere (Stow, 1905, 430) from Campbell's description of stone ruins that these "may have belonged to the old Leghoya race, as some of the ruins of their ancient towns are still to be seen near the Marikwa". Now Stow's reason for suggestion "Leghoya" settlements in the Marico seems to be the drawings and description by Anderson of corbelled hut settlements here (Walton, 1965), but there are serious reasons (discussed below in section 4) for doubting that these are genuine.

It seems that, following his initial assumption about stone huts, Stow has stretched the evidence too far. He describes the migration of the "Leghoya in successive stages, passing the sources of the Marikwa, the site of old Lithako (Dithakong), and thence to the south-east towards the 'Gij-'Gariep'" (Stow, 1905, 432). In the case of Dithakong, Stow (Walton, 1965, 25) mentions the existence of a tradition of Hoja settlement as well as the stone ruins, as evidence that the Hoja settled there. But as neither the tradition nor its source is described, and as we have already seen that the early travellers were unable to find any tradition as to the builders of the Dithakong stone ruins, Stow's argument is by no means established. Ellenberger (1912, 52-3) indicates a similar migration but their account is mainly repeated from Stow. The Kubung traditions recorded by Moletsane (1967, 28) do indicate an origin in the Marico but they trace the migration to the upper Hartz and then across the Vaal, well to the east of Dithakong. That the Kubung moved from the neighbourhood of the Marico into the north-western Orange Free State is quite acceptable; but to attempt to link any archaeological sites north of the Vaal with the Kubung on present evidence would be unwise.

On the distribution of people south of the Vaal in 1820 Stow misquotes Campbell to the effect that "the Leghoya themselves then lived near the junction of the Vet river with the Vaal, and spread thence about two days' journey farther to the eastward" (Stow, 1905, 309). However, Campbell actually stated that the Lynx Kora lived near the junction of the Vaal and Donkin (presumably the Vet) and that "The Goha nation is the nearest to the Lynx Kraal in an easterly direction, being about four days'

journey higher up the Donkin River" (Campbell, 1822, 350). This four day journey would reach the known area of Taung and Kubung settlement around Winburg and the Sand River, as well as the stone settlements some 140 km upstream from the Vaal. Conversely, no Iron Age sites have yet been found near the lower Vaal River, the area indicated by Stow.

From these examples it is apparent that Stow's evidence, particularly for the earlier periods must be used with great caution. Where there is clear evidence that he collected the traditions himself, for example when he gives the informant's name and specific details on places and individuals, the information is often reliable but where he combines some vague traditions with material taken from written sources the results are usually unreliable.

ARCHAEOLOGICAL RESEARCH

After the First World War the emphasis in research on the indigenous peoples of southern Africa passed to the anthropological disciplines, particularly social anthropology. There is not a great deal of information on material culture in these studies but they do contain valuable analyses of the societies, against which such things as settlement patterns and aspects of economy can be interpreted. Burial customs and other ritual observances of the Sotho may be reflected in the archaeological record. But, for the most part the value of this research to the archaeologist is at the level of broad interpretation. Furthermore the Sotho south of the Vaal, particularly those in the Orange Free State, have received a proportionately smaller share of the anthropological research than the Sotho-Tswana north of the Vaal.

Published studies on material culture have as yet been few, for the emphasis here has been on collecting. The few publications usually cover such a wide geographical field that the specific details of regional or tribal styles of manufacture, which would be most useful to the archaeologist, are lost or blurred. In the present state the archaeologist usually has to turn directly to the museum collections in order to compare his finds with those of ethnology. Walton (1953b & c; 1958) has published several useful papers, on smoking pipes, grind stones and cattle enclosures, in which he describes both recent and archaeological examples from our area, and demonstrates similarities. But, with the exception of the paper on pipes, these are not systematic ethnological descriptions. Walton's

(1967) work on pottery is a valuable compilation and frequent reference will be made to it, yet even this does not give an adequate picture of Sotho pottery and several characteristic types are not included.

The attention of archaeologists was first drawn to the Iron Age of our area by Van Riet Lowe who reported on the stone hut settlement on Vegkop in 1927. This paper was followed by three others, by Laidler (1936), Daubenton (1938) and Pullen (1942) which are best reviewed as a group forming the first phase of Iron Age research. This phase was part of the general interest in archaeology in the 1920's and 30's that was created largely by the systematic work of Goodwin, the energy of Van Riet Lowe and the enthusiasm of Dart and those under him. Indeed both Pullen and Daubenton were in the Department of Anatomy at Witwatersrand University, as were Wells and Jones who wrote similar reports on Iron Age sites north of the Vaal (Wells, 1933a; Haughton & Wells, 1942; Jones, 1935). The interest of the anatomists led to a number of burials being removed and described, while material was collected on the surface or dug up, but with the exception of Laidler's work near Heilbron nothing that could be called controlled excavation was attempted.

Van Riet Lowe (1927) describes the corbelled hut and the plan of a typical settlement unit. Although Stow had illustrated several examples (Walton, 1965, 22), Van Riet Lowe's is the first detailed description of this common settlement pattern and we have therefore given it the designation Type V after Vegkop. He pays considerable attention to the construction of corbelled huts (Van Riet Lowe, 1927 & 1944) but description of finds is very brief with the exception of a sandstone crucible which he suggests was used in smelting metals. He interprets these settlements as belonging to the "Leghoya" largely on Stow's evidence but also on the first hand evidence of a Taung informant whose great-grandfather lived in one. However, the historical reconstruction has several flaws, for example he claims that the first Bantu-speakers crossed the Vaal about the dawn of the eighteenth century although the historical evidence is several centuries earlier, and that the Tlokwa attack on the Taung during the Difaqane came from north of the Vaal whereas they were living well to the south. But for the most part this is a valuable contribution and it established the background for later workers.

In three short papers Van Hoepen (1932, 1935a & b) described decorated cylindrical stone smoking pipes from Bethlehem District and relates them to nearby stone ruins. In the first paper he takes Van Riet Lowe to task for not giving the evidence on which he bases the association between the ruins and the "Leghoya". Van Hoepen considers that this is

like "eating the pudding himself and allowing his readers to enjoy the odour". Van Hoepen here suggests a possible link with Khoikhoi or San, but in the two subsequent papers he regards the pipes as of Sotho origin and even tries to establish which Sotho group made them on the basis of identifying the decoration as depictions of totem objects. This claim is, however, unconvincing as the decoration is essentially patterning of a non-representational type.

Daubenton's (1938) report on several settlements north and south of Steynsrust is very brief and apart from giving the location and general appearance of the sites he concentrates on a few architectural details which do not appear in the previous publications. These include the small circular enclosures often attached to the front of isolated corbelled huts which we refer to as a lalapa following Walton.

Pullen (1942) described material collected from settlements of the same type near Frankfort. His is the best and most detailed analysis of pottery, much of which is illustrated. Burnish and the addition of red and black colouring matter is mentioned, while most of the illustrated sherds could be matched with examples from the sites 001 and 002 described below (chapters 4 and 6). Two burials were exhumed and described.

These two papers are essentially brief descriptions of newly found settlements and a few of the objects or features they contained. Both authors refrain from making broad interpretative statements but acknowledge the similarity of their sites to those described by Van Riet Lowe (op.cit.) and Laidler (1936). Laidler published before Daubenton and Pullen but as his is the most ambitious work of this phase it requires more detailed consideration.

Laidler, with a well-organized party including Wells and others from Witwatersrand University, investigated several settlement units in the area west of Heilbron. However, five different sites were examined apparently in the space of one weekend; while two surveyed plans, which would have made the descriptions clearer and added weight to the discussion, were unfortunately lost prior to publication. If one adds to this the rather hazy geographical indications (for example Krugerskraal is west of Heilbron not south-west), it is unlikely that the exact locations could be found again. The present writer spent a day in this area but was not able to establish exactly where Laidler had worked although many ruins were visited. Nevertheless this was the largest field investigation prior to the present research project and it certainly did add considerably to the knowledge of these sites.

New features described included other hut types, small stone circles

which are considered as the bases of clay grain bins, stone paths and a low lintelled structure within a wall which was probably a drain, although it was not recognised as such. He remarks on such features as the double row of large stones forming the foundations of walls, the smoothed stones at entrances and the levelling of the floor within livestock pens. His description of the corbelled hut is the most accurate one of this period, but his multiplicity of types of settlement plan is not supported by sufficient evidence. Indeed, had he seen these settlements from the air he could hardly have failed to be impressed by the general similarity.

A wider range of small finds are described including metal objects and various ornaments. The pottery is, however, inadequately described considering the interpretations he bases on it. He separates the pottery into four types which he treats as if they were obtained from different contexts, yet there is very little evidence to support the separation. The first type includes multi-coloured burnished sherds with geometrical zones delineated by grooves, a type that has not been found elsewhere in the Orange Free State, yet his comparison with Khami and Dhlö Dhlö wares is hardly justified. It is this tendency to stress local differences, and to make long distance comparisons that seriously detracts from the value of this paper. His chronological sequence in not only architecture and ceramics but also burial practices, racial type, metallurgy and other aspects of material culture is far from being acceptable from the published evidence. That there was a long period of occupation on some of these sites is clear; but the drastic changes caused by some catastrophic event, that he postulates, are most unlikely. The only stratigraphical evidence is the occurrence of stone structures below or on top of middens at some sites, thus the chronological aspects of this paper will have to await confirmation from future field work in this area.

Fortunately the positive aspects of this report more than compensate for its limitations. It contains the only analysis of faunal remains from our area, among which springbuck, Alcelaphine antelope and domestic cattle are predominant. Burrowing animals are noted and there is evidently a complete lack of sheep or goats which is surprising. The historical discussion is well balanced and the error of Stow and Theal in equating the Hoja and the Taung is discounted. The conclusion that the corbelled hut settlements in this area were built by the Taung is widely accepted today.

These papers demonstrated the existence of Iron Age remains over quite a large area south of the Vaal and established a general connection between these and some of the Sotho peoples and also with Iron Age remains

north of the Vaal. They emphasised the corbelled hut and covered a range of other material items, but by contemporary standards most of the descriptions are inadequate. While the plans of settlements were described there was little understanding of them. But in view of the short periods spent in the field and the limited resources available to these authors, the amount of information they recorded is creditable.

The Second World War caused a break in research and with the emphasis in South African archaeology still heavily on the Stone Age, the second phase of Iron Age research in this area started only about 1950 with the work of James Walton.

Walton's research is not strictly archaeological, for, being an architect, his central interest is vernacular architecture. Indeed he is the pioneer in this still neglected field and his "African Village" (Walton, 1956) remains the only monograph on African settlements in southern Africa. It is a compilation of information drawn from historical, archaeological and recent ethnological sources and is of considerable value to the archaeologist in demonstrating the relevance of the recent information as well as providing detailed architectural data which may help in interpreting the archaeological record. In these respects and in his descriptions of various other aspects of Sotho material culture Walton's work is not specifically archaeological, but there are other sections that have a direct bearing on this study.

Walton seems to have carried out only two small excavations in western Lesotho, and therefore his work is not based on excavated material. However, he did visit a number of sites other than those already described and he sketched their ground plans and examined surface material. As we have seen (section 2) he made considerable use of oral and early written historical sources on the Sotho-Tswana. Using these various sources he has moved from the descriptive level to one of synthesis in an attempt to write the prehistory of the Sotho peoples in this region. Here again he is moving into a new field but, in this case, because of the severe deficiencies within the archaeological and historical material available to him, the result is much less satisfactory. He sees two essential subdivisions among the settlements south of the Vaal: those with corbelled huts which he claims have comb-stamped pottery and were built by the Kubung and Taung; and settlements consisting of linked enclosures of irregular shape where the huts were of wattle and thatch over paved floors. These he claims are associated with pottery decorated with a variety of moulded rim impressions and were the work of the Fokeng (Walton, 1956, Part II). This is the essence of his reconstruction although he also describes other

sites such as rock shelters containing Iron Age structures. An examination of the source information would show that this interpretation is based on a fragile foundation and that it is an over-simplification which fails to solve a number of problems such as the distribution of groups including the Tlokwa and Kwena who have a long history of settlement south of the Vaal. However, as this whole question is bordering on much of the work of the present research project, it can only be reviewed after the presentation of the field results.

One aspect of Walton's work which requires comment is his subdivision of the corbelled huts into four types. The first three, his Types A to C vary from small huts built of irregularly shaped rocks through larger huts where flat slabs were used to Type C where the only way to extend the size was to build oval shapes. His fourth type were built against an earlier curved wall giving them a lenticular shape (Walton, 1956, 39; 1965, 5). In this way the technical problems and limitations of building corbelled structures out of undressed stones are recognised. The sequence of development is of interest and may, as Walton suggests, have been a chronological one, but the evidence for this, the association of two-handed grindstones with the larger huts - is insufficient to establish it. It is significant that the large, well built huts only occur where the local rock provides suitable large flat slabs as at Sedan, while the small, more crudely built huts seem to occur everywhere and even in association with the others. It is possible that the status of the owner may have been related to the type of hut, for the large flat slabs probably required special quarrying.

In dividing the Orange Free State pottery into two types, the comb-stamped and the coarser rim decorated wares, Walton is following Laidler and Schofield in their reviews of prehistoric pottery. Laidler (1938) describes a variety of types but he sees these as essentially the finer colour burnished pottery associated with the earlier stone settlements and the later ware which became coarser as a result of Bushman influence. Schofield's (1948) more detailed and cautious review deserves closer attention. He recognises more or less the same two groups of pottery calling them ST1 for the colour burnished and comb-stamped wares and ST2 for a variety of forms including notched rims and finger-impressed ware. He refers to these as Classes of pottery but says that both "were used concurrently, and may have been derived from a common source, the one being the ware used on special occasions and by special persons, the other a common domestic pottery" (op.cit., 143). This interpretation is in accord with the evidence, for on most sites sherds of both classes were present,

but it contradicts Walton's suggestion of a quite different origin and cultural association for the two classes, although the possibility that the Fokeng made the ST2 ware was first suggested by Schofield. These classes are indeed a source of confusion where they cut through the contents of a single pottery assemblage, for they then become a concept of the archaeologist rather than an expression of the people he is studying.

Schofield's "Primitive Pottery" remains the basic work on Iron Age ceramics for much of southern Africa and its value is attested by the extent to which recent reviews of the Iron Age (Fagan, 1969; Inskip, 1971) have made use of it. It was based on Schofield's personal knowledge of the material available at the time, mainly in small samples and from surface collections or inadequate excavations, and therefore as modern Iron Age research proceeds, region by region, Schofield's work will tend to be superseded, as has already happened in Rhodesia.

Both Schofield and Walton, but particularly the latter, devote a considerable amount of their attention to synthesis, and that they were able to do this was largely due to their extensive personal acquaintance with a wider range of information than that of the earlier authors. But it is significant that no further excavations had been carried out in the Orange Free State since the first phase, and it is in this tendency to over-synthesise on inadequate data that one can find fault with these writers. By contrast Inskip (1971, 245) has recently expressed the view that "it is far too early to attempt anything approaching an historian's synthesis of the evidence; it is so meagre as to be almost meaningless".

Continuing the synthetic trend, De Jager (no date; also De Jager, 1966) has largely based his thesis on the Orange Free State ruins on a review of the existing literature. He did visit a number of sites, making surface collections, and he recognised the importance of bone tools and the extent to which quarrying had been carried out to provide the building stone, but for the most part he relies on the previous authors. He located a number of unrecorded settlements by sending postal circulars to farmers, but this survey produced a lower density of sites than the examination of air photographs and, moreover, it was limited to the districts of the north-eastern Orange Free State and thus did not establish the total distribution.

Since De Jager's thesis is based on the work of Walton, Schofield and the first phase of research its conclusions are essentially similar. Great emphasis is attached to the presence or absence of corbelled huts, and on this feature the settlements are divided into two cultures. The

corbelled huts sites are associated with pottery that is largely undecorated but sometimes has simple geometric designs. This is regarded as the work of the Taung and Hoja. The stone ruins without corbelled huts are associated with rim decorated pottery essentially the same as Schofield's ST2 class which De Jager likewise considers to be the work of the Fokeng. This is more or less a repetition of Walton's hypothesis although the latter is to be preferred in its handling of the evidence. De Jager's use of the historical evidence is incomplete for he squeezes the whole Iron Age occupation of the Orange Free State into the period 1675-1800 and he makes no attempt to explain why it should have ended at that time. There is no discussion on the Difaqane, and the account of Arbousset (1846), which is the most valuable source on the northern Orange Free State in the early nineteenth century, is not even among the references.

Ockham's Razor resharpened

The archaeological literature reviewed above is essentially of the 'uniformitarian' academic tradition in that the prehistory is interpreted in terms of what is known about the peoples of this region from literate historical and recent times. Where it may be criticised is in the somewhat scholastic tendency towards over-synthesis of the literary sources without sufficient awareness of their limitations and the vast gaps which remain unknown.

The southern Highveld for the most part remained free of the sort of unscholarly writing that has so frequently cut across the main stream of academic research on the Iron Age further north. The focus for this has been Zimbabwe which in the popular, encapsulated histories of parts of southern Africa has achieved a symbolic value which has little or no relation to the archaeological reality. The variety of non-scientific literature and popular belief that has grown up around Zimbabwe is best examined in the light of the social anthropologist's approach to myth. Much of this material is closely akin to mythology, for as Beattie (1964, 24) has said: "Myths nearly always imply some sort of evaluation, some statement of the way in which the people who have the myth think about themselves and about the world, and what they consider to be important. Often myths tend to sustain some system of authority, such as a kingship or a priesthood, with its implicit distinctions of power and status." It appears that the modern Zimbabwe myths must be evaluated in terms of the social and political history of Rhodesia since the discovery of gold mines and ancient ruins by white explorers. But, a few faint echoes have reached

our area from further north and these require examination.

A.A. Anderson (1887, 2, 55) in the account of his travels says of a ruined settlement in the Marico area that: "These extensive kraals must have been erected by a white race who understood building in stone and at right angles, with doorposts, lintels and sills, and it required more than Kaffir skill to erect the stone huts, with stone circular roofs, beautifully formed, and most substantially erected, strong enough, if not disturbed to last 1,000 years...." And again in the caption to a drawing of corbelled huts in the Orange Free State Anderson says: "They were erected by the white race that built the forts in Mashonaland" (Walton, 1965, 17). This blatant example of what is referred to above as the lithocentricity of some European writers demonstrates how, to such people, substantial stone buildings in undeveloped parts of the world could only be explained in terms of vanished civilizations of high antiquity:

The Hoernlés (1930) have subjected Anderson's description to a close examination and have thrown serious doubts on his veracity. They show that the corbelled huts he describes and illustrates are quite unlike any of the known Iron Age examples and that despite a search no trace has been found of the Marico corbelled hut settlements. Walton (1965, 15) considers that Anderson probably did see these settlements near Zeerust and reproduces four of his previously unpublished drawings in support. However, two of these are merely different versions of the originally published plate (Walton, op.cit., plates 3 & 4) and they all show the characteristics mentioned by the Hoernlés; height, doorways with sills and doorposts of hewn stone, regular courses of stone work and rectangular courtyards that do not occur on any of the known Iron Age sites. Braatz (1956) who is familiar with many of the Marico sites confirms that there are no corbelled huts here, and the present state of archaeological knowledge indicates that this would be improbable, although not impossible.

On quite different evidence Summers (1971, 55-7) has recently shown that much of Anderson's account of ruins in Rhodesia is "extremely suspect". Summers probably gets to the root of the problem in his suggestion that Anderson may have embellished his own story with material drawn from Mauch and Baines, both of whom had published before his book came out in 1887. In the interim between his travels and their publication the scramble for Africa including Rhodesia had got under way. The reports of ancient ruins and gold mines were attracting wide public interest, and in the year after Anderson published, Rhodes secured the mineral rights of Matabeleland through the Rudd Concession of 1888. Under

these circumstances it seems that Anderson could not resist the temptation of filling out his own knowledge of the ruins with a great deal of imagination. If this was the case, he probably did see corbelled huts in the Orange Free State and perhaps also some ruins in the Marico. From these two sources he may, as Hoernlé (1930, 40) suggests, have concocted "a drawing to fit his description". Whatever was the case it is clear that as a source of information on the Iron Age he is not to be trusted.

This concludes the review of previous literature, for with the exception of a few brief references to Iron Age remains in papers dealing with other topics (e.g. Harding, 1950b, 1951a & b; Malan, 1959) little else has been written on our area. Two papers describe stone settlements on the Riet River (Van Riet Lowe, 1931; Du Toit, 1964) but these will be discussed in the section dealing with those settlements.

This review has examined the sources of information in some detail in an attempt to extract from them what may be accepted as reliable and to explain their limitations. It must, however, be admitted that relatively little well documented information of the standard required by contemporary archaeology is available for our area. The only excavations were carried out before 1934 and were published without measured plans or sections. A variety of cultural material has been described but in insufficient detail to allow for comparisons between sites. Chronological information was for the most part lacking, while the historical literature contained several contradictions. A general relationship between the Iron Age sites and the Sotho was recognised, but archaeology had made little contribution towards the elucidation of earlier Sotho history. A measurement of this lack of information can be seen in the meagre paragraph that Fagan (1965) assigns to the Orange Free State in his book on the Iron Age of southern Africa.

THE ENVIRONMENT

The southern Highveld is an elevated grassy plain sloping gently from an altitude of over 1 800 metres (6 000 feet) along its eastern margin to 1 200 metres (4 000 feet) in the west. It is defined by several natural features including the Vaal River to the north and west; on the east by the Drakensberg escarpment northwards of Mont-aux-Sources and from here southwards by the Caledon Valley as far as its confluence with the Orange River which forms the southern boundary. This definition of the Highveld does not accord with that of King (1951) who on geomorphological grounds extends the Highveld as far west as Calvinia, whereas Schulze (1965), on the basis of climate, includes Lesotho but excludes the western half of the Orange Free State. But for our purposes the Lesotho Highlands and the arid regions south and west of the Orange are best excluded because of their extreme environments; the term will be restricted essentially to parts of the Transvaal and Orange Free State as Clark (1959) has done.

The southern Highveld, by this definition about the size of England and Wales, is to a considerable extent a natural region, for the Lesotho Highlands and Natal escarpment form a considerable barrier to the east, while the country to the west and south-west becomes increasingly arid. To the north, however, the Vaal is less satisfactory as a boundary, for although it has had some effect as a natural dividing line, some types of settlement occur on both sides of it. The choice of the Vaal as the boundary is one of convenience, to restrict the already large area to be surveyed, but it is worth noting that the environment for some distance north-eastwards is essentially similar.

GEOLOGY AND TOPOGRAPHY

The whole area of the southern Highveld with very little exception is covered by the sedimentary series of the Karoo System. The exceptions are the complex area of the Vredefort Dome in the north, small outcrops of the Venterdorp System in the west and outliers of the Stormberg lavas in the Caledon Valley. The two latter occurrences do not seem to have influenced Iron Age settlement, but the Vredefort Dome with its complex geology and relief appears to have produced local specialization within the Iron Age. Because this rates as a special problem, the Vredefort Dome has been excluded from the present project except in terms of the analysis of air photographs.

The detailed lithology of the Karoo beds need not concern us, but the general characteristics of the main formations have had a direct and indirect effect on the Iron Age.

The Karoo outcrops form several concentric arcs centred on the Lesotho Highlands (fig. 1). Furthest to the west the tillite and shales of the Dwyka Series occupy a relatively small area between the Orange and lower Vaal Rivers. Succeeding these the Ecca Series, essentially shales and mudstones in our area, form a broad belt from Koffiefontein to Frankfort and beyond. The Beaufort Series comprising sandstones as well as mudstones and shales forms a central belt running from the south to the north-east. Finally, the south eastern margin consists of the softer, lower beds of the Stormberg Series capped by the massive Cave Sandstone and in a few places by laves of the Drakensberg Beds.

The trend from softer towards harder rocks is reflected in the relief which changes from flat plains in the west and north through an undulating landscape to broken mountainous country in the east. The soft but impervious Ecca shales have weathered to form very flat plains which, especially in the drier western areas, are dotted with numerous pans. The Beaufort Series has produced a gently rolling landscape with occasional sandstone escarpes. Du Toit (1926, 227) has said of this series that: "The materials referred to as 'shale' and 'mudstone' are seldom well laminated, being argillaceous or more commonly sandy rocks with poor bedding that may be quite hard when fresh and have a tendency to splintery or conchoidal fracture, but are reduced to a mass of irregular fragments by exposure to the elements for a short time." Such rock is very characteristic of the area; it weathers rapidly where it is exposed on hillsides and tends to produce rather poor soils. The non-laminar structure is frequently reflected in the texture of pottery from sites on the Beaufort and in some cases from the Ecca as well. The irregular fragments and splinters were frequently broken up and mixed with the clay as filler, especially at OFD 1 and OXF 1.

The most striking relief is that produced by the Cave Sandstone and associated sandstone strata. Outcrops occur in the region south of Bethlehem and east of Theba Nchu most of which falls within the Caledon Valley. The massive tabular outcrops have had a profound influence on the inhabitants of this area, at least from Late Stone Age times when the rock shelters were occupied and their pale sandstone walls provided excellent painting surfaces. The shelters continued to be occupied during the Iron Age but it was the flat topped and steep sided mesas that were to play a vital role until well into the second half of the nineteenth century, for

GEOLOGY

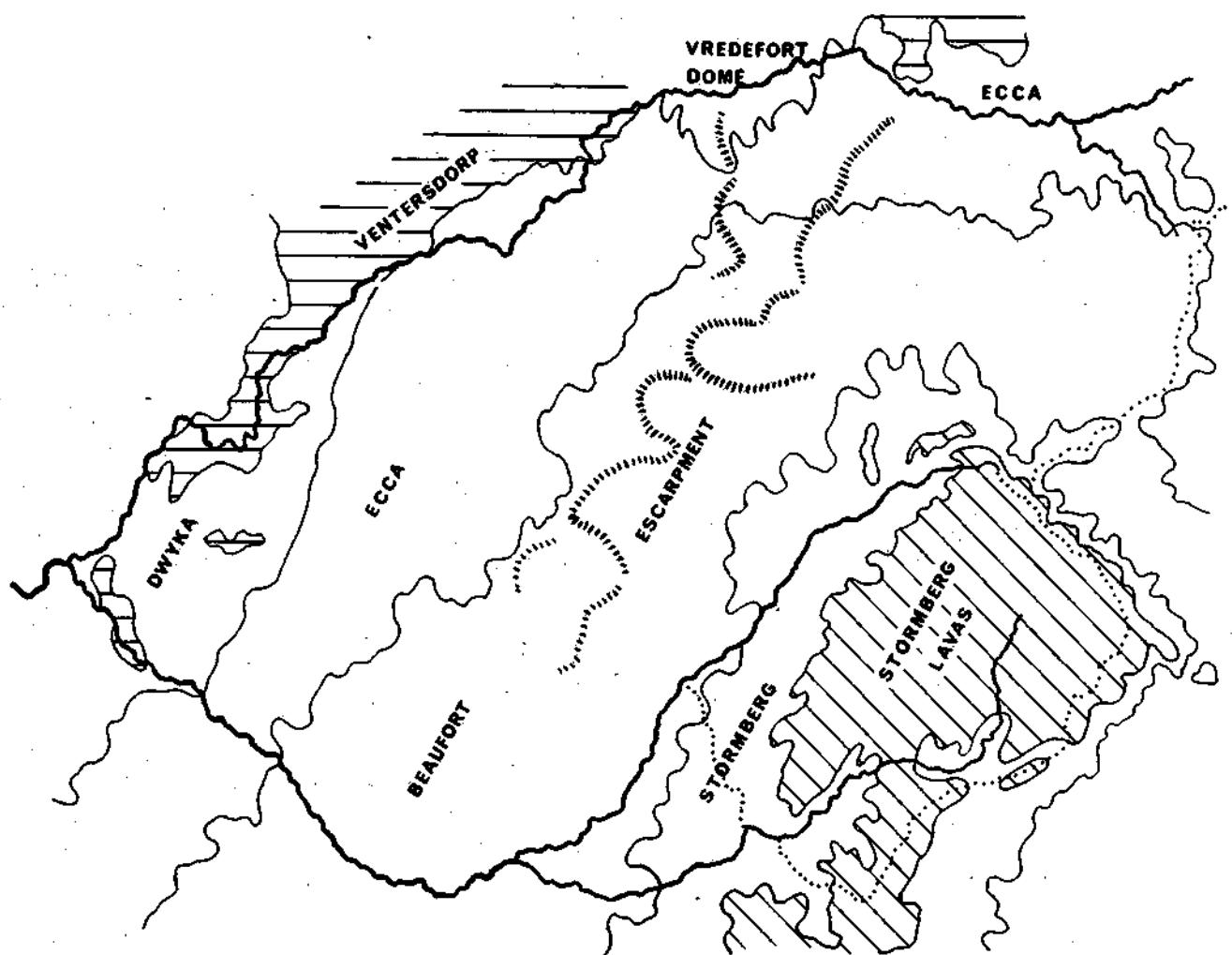


Fig. 1

they provided the natural fortresses - Thaba Bosiu, Marabeng and others - around which the historical events of the nineteenth century developed. There is some oral evidence indicating that mesas had been used by Sotho peoples well before the nineteenth century.

Away from the Cave Sandstone the softer sedimentary rocks have influenced the general character of the landscape but they are seldom resistant enough to produce marked relief. In the next chapter it will become apparent that topography is a crucial factor in settlement location, but here it is the igneous intrusions within the Karoo beds that are the determinant.

The sedimentary series are penetrated by a vast network of intrusive sills and dykes of Karoo Dolerite. Petrologically there is considerable variation within this rock and much of it is not strictly dolerite, but this term will be used throughout and no apology is needed in view of the similar general usage by geologists themselves (Du Toit, 1926; Hamilton & Cooke, 1965). Sills are most common and they occur in sheets generally between 15 and 150 metres thick. They may be concordant with the more-or-less horizontal sedimentary beds but more often cut across them at angles of between 15° and 50° (Du Toit, op.cit., 285). Outcrops of such transgressive sills are often in the form of what King (1951, 69) calls a pseudo-cuesta. Here it is the sloping sheet of dolerite which forms the ridge instead of a resistant bed within inclined strata, as in the case of a true cuesta. Pseudo-cuestas are a feature of the northern Orange Free State where they appear as sinuous ridges dipping gently on one side but with an abrupt scarp on the other, often facing more-or-less southwards. Their crests were favourite locations for Iron Age settlements, for example the OO 1 settlement east of Lindley which extends for about 8 km along such a ridge, but locations above the scarps of horizontal sills were equally suitable.

The relative hardness of the dolerite sills is the dominant factor in the topography of much of our area, and in some places there are quite bold hills and scarps, but relief is seldom more than about 150 metres in height. Scarps are seldom precipitous and even on dolerite much of the landscape is gently undulating.

Dykes are less common than sills and are much narrower, seldom more than 10 metres thick, but they too form ridges in some areas and a number of settlements are located on or beside them (Plate 12).

Apart from its general effect on topography the dolerite has had an influence on the Iron Age through two other of its characteristics, weathering and jointing. In the drier areas to the west and south the

outcrops tend to stand out as bare rocky features above the level plains. Individual rocks are piled above each other and their exposed surfaces are often shiny black from the redeposition of iron and manganese oxides. These surfaces were ideal for the engravers of the Late Stone Age. In the better watered areas to the east chemical weathering is more active than physical, and most of the dolerite is covered by a thin layer of soil or at least a crumbly horizon of weathered dolerite. The unweathered stone usually only outcrops on scarp faces or hilltops. The semi-weathered material was used in Iron Age times to make floors, for, like the decomposed granite and termite mounds used in Rhodesia (Summers, 1971, 149), it forms a hard, binding daga. This characteristic is still recognised today for decomposed dolerite is used extensively for surfacing gravel roads.

But the dolerite itself was more important than its weathered products for outside the Cave Sandstone area it was the basic building material. In the drier areas such as the Riet River and on some scarp faces there would be enough loose material available for building, but at many sites quarrying was necessary and here the jointing of the dolerite was most important. Commonly there is a well developed system of cross-jointing which produces angular blocks. These were often used for building but they tend to form unstable walls especially where they have become rounded by the spheroidal weathering characteristic of dolerite. Other patterns of jointing also occur and Du Toit (1926, 284) describes "an inherent tendency towards the development of columnar structure in the sheets". In some cases this results in massive hexagonal columns too large to be exploited by Iron Age technology, but more often one finds vertical joints irregularly orientated or in three sets which produce much smaller columns with a triangular or trapezoid section. These were exploited by Iron Age builders and have even been used in recent times as fence posts, in the neighbourhood of the OXF 1 site for example. The best stone results from a single set of parallel or sub-parallel vertical joints in the dolerite, for here the quarried stone consists of flat slabs, usually a few centimetres thick but sometimes more. These are ideal for walls and paving (Plate 53) and where they are well developed, as at Sedan, they have permitted the construction of large corbelled huts.

Variations in the jointing pattern are very localised and may take place within the space of a few metres. On most sites this is reflected in the different qualities of walling that can be observed and it is evident that particular shapes of stone were often selected for particular

techniques must therefore be cautious for they may merely be localised phenomena.

In the Cave Sandstone area this material was generally used for building although dolerite, where it occurs, seems to have been preferred. Although the sandstone provides excellent building material when quarried by modern techniques, Iron Age technology was unable to produce regular shaped blocks from it so that the walling was generally unstable and most of it has tumbled down, as on the sites near Maquatling.

Local geological conditions have influenced the Iron Age in another and quite different direction for there is apparently a lack of exploitable metal ores on the southern Highveld. Although indications of metallurgy have been found at some sites and Casalis (1861) describes both smithing and smelting in Lesotho there is as yet no definite evidence of smelting from settlements in the Orange Free State. This problem will be examined in more detail at a later stage (chapter 15) but some general points are worth mentioning here. The Karoo System is in general lacking in suitable deposits of metal ores and although the Middle Ecca Beds in Natal and to a lesser extent the Transvaal contain lenses of iron ore the corresponding beds in the Orange Free State are not mentioned in this context (Geological Survey, 1936, 204; Haughton, 1963, 203). There may well be minor local sources of ore, both within the Karoo System and as concentrations in the profiles of recent soils, but it is unlikely that large bodies of good quality ore are present. Even if they were, the lack of timber over most of our area would have inhibited their exploitation for lack of charcoal. Much of the metal work used by the Iron Age inhabitants must therefore have been obtained from outside the area, although the possibility of some local production cannot be excluded. The Vredefort Dome with its complex geology and abundant tree cover would seem to be a likely area in which to find a smelting industry and indeed Wagner records an ancient copper mine here (Fouché, 1937, Map 1), but the Iron Age of this area is still unknown.

A topographic feature of indirect importance to Iron Age settlement, although in itself of minor significance, is the escarp which runs roughly from south to north through the centre of the Orange Free State. It is low and discontinuous, indented by the valleys of the westwards flowing rivers and seldom more than 100 metres high. It follows approximately a line through the modern towns of Brandfort-Theunissen-Hennenman here dividing into two, the western one running northwards from Kroonstad to the Vredefort Dome, the higher eastern one passing just west of Edenville and Heilbron (fig. 1). There is some variation in altitude but it follows

the 1 450 metre contour (4 750 ft) for much of its distance.

Despite its topographic insignificance in comparison to the Drakensberg Escarpment or even the mountains of the Caledon Valley, the scarp forms an approximate line between the plains to the west and the higher undulating country to the east. This coincides with a change in vegetation and to some extent with soil and rainfall changes described below, and these factors combine to make it an important natural division.

SOILS

At present little can be said about the relationship between Iron Age settlement and soils in our area. A more detailed knowledge of the soil types, their potential for agriculture and the agricultural practices of the period would be required before a meaningful reconstruction could be attempted. Nevertheless, a brief discussion is included to give a general impression of the soils and some of their characteristics which may have had an influence on the Iron Age.

The main soil types are shown in fig. 2 after Van der Merwe (1962). The great majority of Iron Age sites fall within the region of Highveld Prairie soils but there is some overlapping on to other soils especially towards the north. The Highveld Prairie soils are podzolic although they lack the surface accumulation of organic material characteristic of true podsol. They tend towards friable sandy loams, low in humus, moderately leached and easily eroded. Toward the south, in the Caledon Valley particularly, the soils are largely derived from sandstones and their ability to retain moisture is so great that today wheat is grown in winter and spring on the residual moisture alone. The finer grained soils derived from the Ecca and Beaufort Series are less porous and crops can only be grown during the summer rainy season.

Under natural conditions vleis tend to develop in hollows and along watercourses. The soil to a depth of a metre or more consists of dark clay which is relatively impervious and produces marshy conditions. The vleis are very sensitive to the cycle of erosion and, when erosion is accelerated by overgrazing, gullies are rapidly eroded through them. These immature gullies are a common feature of the landscape in much of the southern Highveld today but their immaturity shows that they are for the most part of recent origin. Such rejuvenation of drainage courses through erosion may well have taken place in areas of dense and prolonged Iron Age settlement, but there is evidence from several areas, for example Ntsuanatsatsi, that in earlier Iron Age times and even within living

SOIL TYPES

AFTER VAN DER MERWE

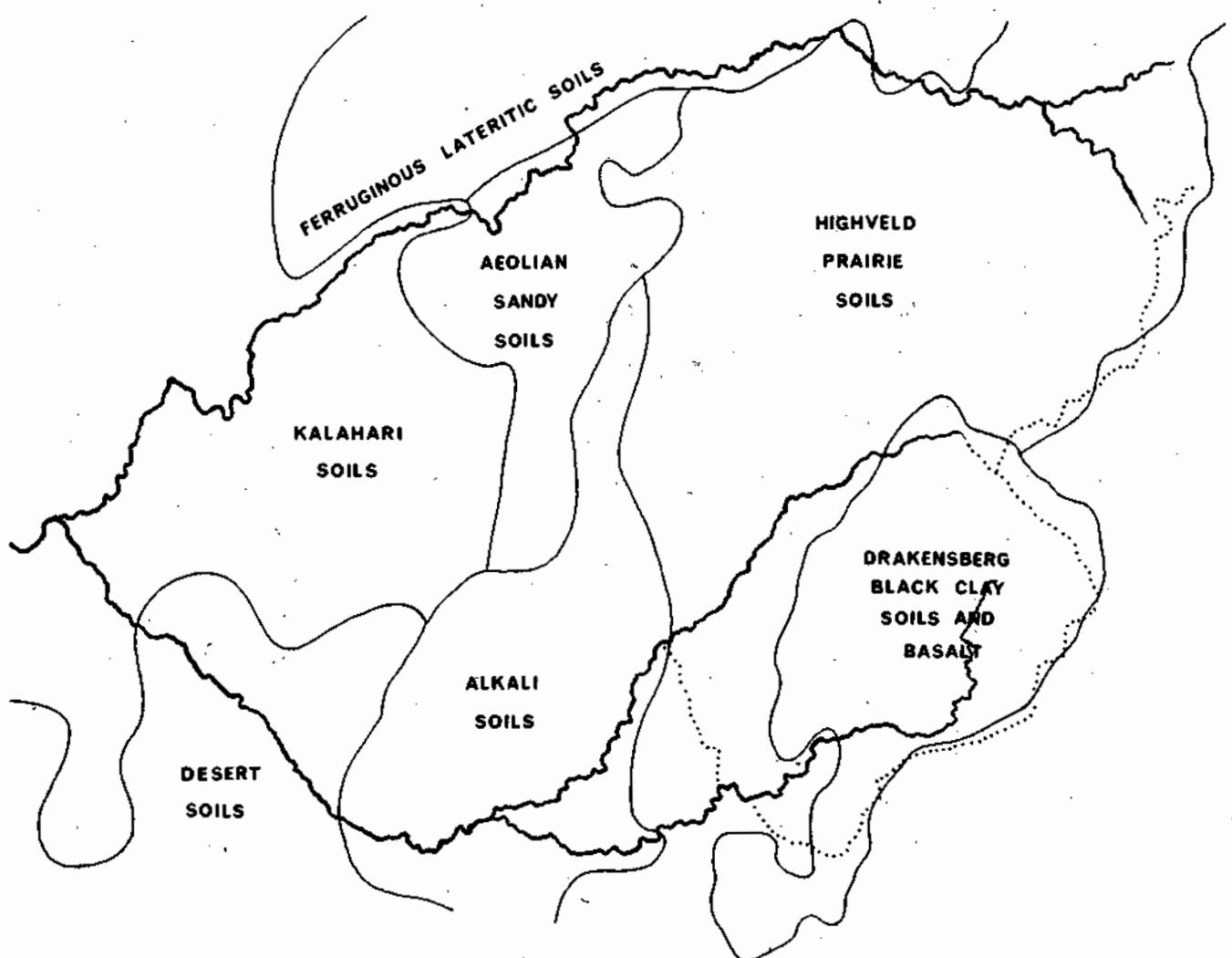


Fig. 2

memory marshy stream courses fringed with reed beds were much more common than they are today.

The soils derived from the dolerite outcrops differ from the podzolic prairie soils in that they are brown to black clays. They are deepest and best developed in the higher rainfall areas towards the east where they form the best arable land but further west the rainfall is usually insufficient to produce crops on this soil (Van der Merwe, op.cit., 144).

Marginal to the area of Highveld Prairie soils are a number of other types (fig. 2). To the south-east are the Drakensberg Black Clay soils derived from the Stormberg lavas, which are generally immature. The sharp relief and high altitude of most of this area inhibited extensive Iron Age settlement while most of it is unsuitable for agriculture and pastoralism. To the south-west is an area of Salonetzic, alkali soils best developed towards the east which is marginal for cultivation. The soil is light grey sandy loam and easily eroded by both rain and wind. Westwards the Salonetzic soils become shallower and are finally replaced by the desert soils of the Karoo.

In the north-western Orange Free State is an area of aeolian sandy soil known as the Hoopstad Sandveld. It has been suggested that this is an outlier of Kalahari Sand (Van der Merwe, op.cit., 191) although there is evidence to suggest that the sand is of more local origin (Piaget, 1963). The sand is usually 1 or 2 metres deep providing good drainage but being subject to wind erosion where the vegetation is removed.

The humus content is low and although parts of the area are cultivated today this was a marginal area for Iron Age settlement as only the northern portion has produced evidence of occupation. Further west the soil type is 'Kalahari Sand on Lime', the B horizon developing into a calcrete where the weathering of a parent rock such as dolerite provides calcareous material. Here again there is some doubt whether the red sands are all of the Kalahari System.

The Highveld Prairie soils extend into a small portion of the south-eastern Transvaal as far north as Bethal, but with this exception their northern and eastern margin coincides with the limits of our area, namely the Vaal River and the Drakensberg Escarpment. Beyond are the Brown Ferruginous Lateritic and the Red Ferrallitic soils of the Transvaal and Natal. The latter is developed along the high rainfall belt of the Escarpment while the former covers considerable areas of the southern Transvaal and the Natal Midlands both of which saw extensive Iron Age settlement.

CLIMATE

The southern Highveld has a healthy climate isolated from the tropical diseases that affect man and his domestic animals in many parts of the sub-continent. Rainfall is restricted largely to the summer months, the winters being dry with warm sunny days but frequent frosts at night. Occasionally there are light snowfalls on the higher areas near the Drakensberg Escarpment.

Rainfall has been the main climatic determinant on the spread of Iron Age communities by its effect on the suitability of the natural vegetation for grazing as well as by setting limits to the spread of agriculture. The isohyets run approximately north to south across the southern Highveld, but with considerable alteration in the region of the Lesotho Highlands (fig. 3). Along the Drakensberg Escarpment rainfall exceeds 800 mm (32 ins.) and in places rises to over 1 250 mm (50 ins.). However, little settlement took place here for the eastern limit of the Highveld Iron Age north of Mont-aux-Sources coincides closely with the 800 mm isohyet (figs. 3 & 6). All the settlements located in the course of this project, with the exception of those on the Riet River far to the south-west, occur between here and the 500 mm isohyet. Indeed the western limits of settlement fall between the 500 and 600 mm isohyets corresponding to a rainfall of 550 mm (22 ins.) or slightly more, which could be represented approximately by a line drawn down Longitude 26°30' east. This line is significant for unlike the eastern limits of settlement it does not correspond to any physiographic feature. It therefore seems that climate and its effect on vegetation determined the extent to which communities could spread westwards.

Towards the south the area between the Lesotho Highlands and the limits of sufficient rainfall narrows down to a thin corridor just east of Aliwal North. During the nineteenth century this was an important avenue of contact between the Sotho and the Nguni but as yet nothing is known of the Iron Age in this area. The survival of vigorous bands of San until well into the nineteenth century certainly checked the spread of farming communities here.

Rainfall is almost entirely restricted to the summer months between October and April, reaching its peak from November to January, although the western section receives its maximum between January and March (Schulze, 1965). Droughts of greater or lesser severity affect the whole of our area although their incidence increases as the mean annual rainfall decreases to the west. Their effect would be most pronounced on

MEAN ANNUAL RAINFALL
ISOHYETS IN MILLIMETRES

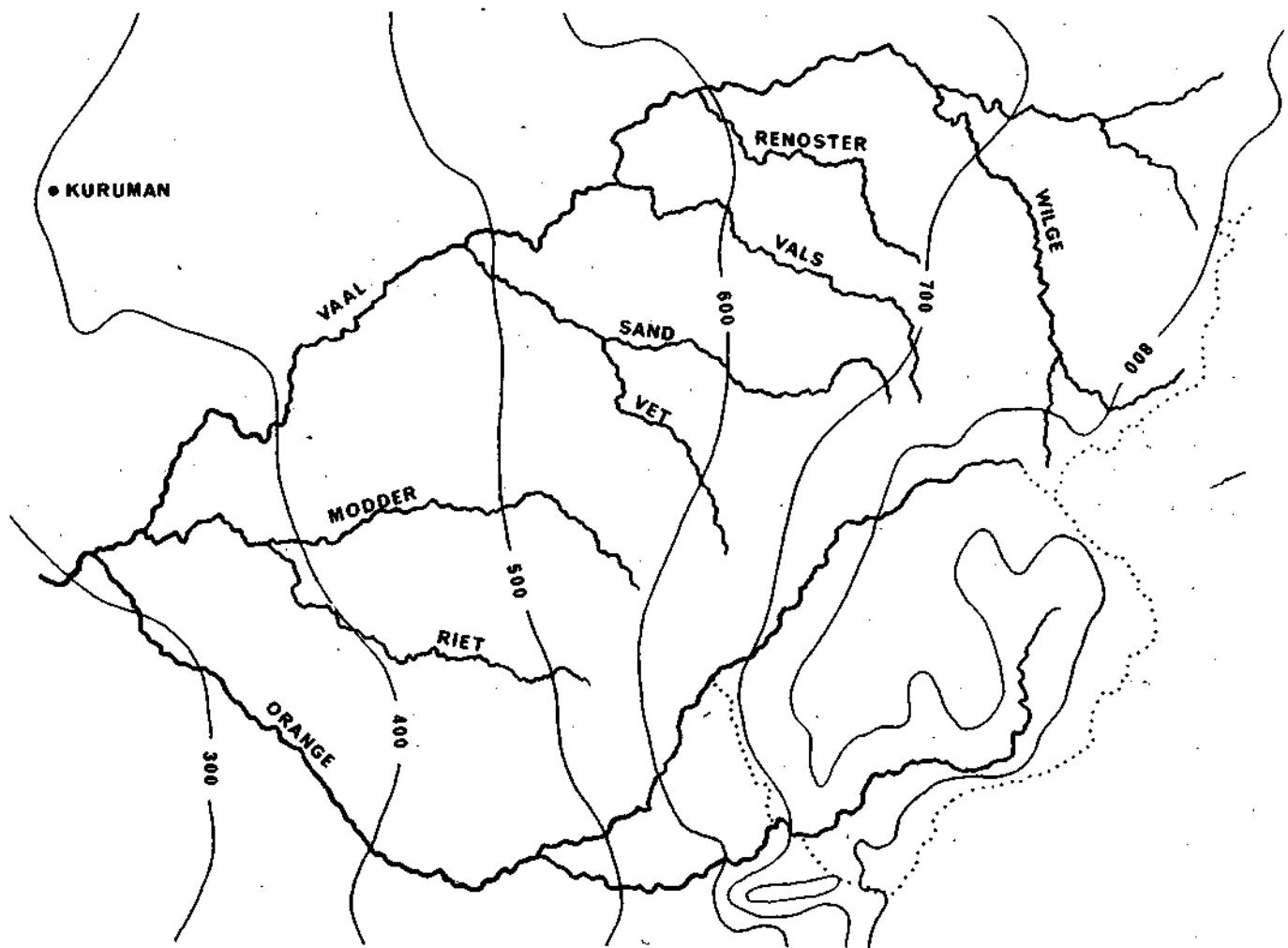


Fig. 3

cultivated crops but the natural grassveld would also suffer.

Although no archaeological evidence of droughts has yet been found they must have influenced the lives of the prehistoric communities, for in the terminal Iron Age Sotho-Tswana societies, rainmakers and the associated rituals played a prominent part.

The range of temperature on the Highveld is large, recordings above 35° and as low as -10° have been made, but for the most part the climate is temperate; the means for the hottest and coldest months at one station in our area (Bethlehem) are 20°C in January and 7°C in July. Temperatures rise gradually westwards and by increasing the evaporation rates exaggerate the effect of the decreasing rainfall. Temperature alone has probably had little effect on the spread of the Iron Age with the exception of the Lesotho Highlands. Here the rigorous winter conditions delayed settlement in many areas until during the last hundred years when population pressures in the lowlands forced people up the valleys.

The high altitude and clear skies make for large diurnal temperature ranges especially in winter when they reach a mean of around 18°C. In the areas of higher relief, cold air drainage is well developed on winter nights, producing temperature inversions in the valleys which further increase the diurnal range. This phenomenon is recognised by the present Sotho population who, wherever possible, avoid building their houses in the valley bottoms. Micro-climatic factors would also have played a part in determining the location of Iron Age settlements and this will be discussed in the following chapter.

In a recent paper on the Marekabei Basin of Central Lesotho, Fuggle (1971) has shown that micro-climate has a marked influence on the location of contemporary settlements. Most dwellings are on the middle slopes thus avoiding the cold air drainage of the valley and the upper slopes with their similarly low temperatures. This situation also affords the highest daily maximum temperatures. Another important factor is the orientation of the slope, for all dwellings occurred on slopes with a northerly to easterly aspect. Fuggle demonstrates that this provides maximum solar heating on winter mornings and thus vindicates Casalis' (1861, 124) statement on Sotho villages that "the first rays of the rising sun should fall without obstacle on the fold that contains their flocks". These micro-climatic factors would presumably have influenced Iron Age settlement, but because the southern Highveld has a more equable climate than the Lesotho Highlands their effect would have been less pronounced.

Climatic change during the present millennium in southern Africa is

too little understood to justify any reconstruction of the Iron Age environment on this basis at present. However, as more becomes known it will be necessary to give some consideration to climatic change when examining the development and spread of the Iron Age. Cyclical changes in rainfall correlating with inverse changes in temperature have been noted from a number of South African stations since the beginnings of weather recording in the second half of the nineteenth century (Schulze, 1965, 84). The duration of these cycles are mainly in the region of 30 ~ 50 years and although no long-term linear trends are evident, the changes in rainfall of around 20% above or below the mean could have quite a marked effect on a society largely dependent on cultivated crops. There is some indication that these cycles are of more than local significance, for example the significant rise in temperature between about 1900 and 1930 at Cape Town (Hofmeyr & Schulze, 1963) is matched by a similar rise over the same period at Hobart, Tasmania and indeed there is evidence of world-wide temperature increases between 1880 and 1940 with subsequent decreases (Lamb, 1969, 36).

Fluctuations of this kind would have occurred during the Iron Age but their magnitude and duration is not known. There is, however, good circumstantial evidence that the area of the present Cape Province north of the Orange River was becoming increasingly arid during the late eighteenth and first half of the nineteenth century. Nokaneng (Lat. $28^{\circ}13'S$ Long. $22^{\circ}30'E$) which means the place on the river was the capital of the Tlhaping people sometime around 1775 (Burchell, 1833; Maingard, 1933) but it was abandoned before 1800 and since then it seems only to have contained a few wells which could support small villages (Campbell, 1822). Mason (1971) has recently examined the evidence recorded by the early nineteenth century travellers, Campbell, Burchell, Smith, Moffat and Harris, which indicates that stream flow in the Kuruman, Mashoweng and Molopo rivers in particular was stronger in the late eighteenth and early nineteenth century than it has been since. There are other types of evidence which also suggest a higher rainfall, for example early travellers stress the importance of agriculture at Dithakong (e.g. Barrow, 1806, 393; Burchell, 1822, 413) and Campbell (1822, 126) describes a field several kilometres in extent, although there is little if any agriculture in the area today. Moffat (1842, 195) records dry-land cultivation at Kuruman but this seems to have been about the western limit of cultivation by the Tlhaping at this time (1825). Livingstone (1857, 56) records the drying up of springs in south-eastern Botswana, a little further north.

It is not clear where the western limits of dry-land cultivation are in the Northern Cape today but there has been some movement westwards in recent years (Talbot & Talbot, 1960). It is significant that the two crops which extend furthest westwards are Sorgum and Cow peas (op.cit.) both of which were cultivated here before the nineteenth century by the Tlhaping.

The whole question of climatic change in the Northern Cape and adjacent areas requires a more detailed review than can be given here. It does seem that there was increasing aridity around the beginning of the nineteenth century but whether this related to one of the short-term cyclical movements as recorded in recent years or whether an altogether larger order of change was involved, is not known. The pattern of Iron Age distribution south of the Vaal is compatible with the present order of rainfall rather than an appreciably wetter or drier regime.

VEGETATION

The southern Highveld is a pure grassveld area which can be subdivided into several types. To the east and west the area is bordered by regions of distinctly different vegetation. The veld types shown in fig. 4 and described below are those of Acocks (1953) which are based on samples selected to demonstrate the most useful potential state of the vegetation, thus they do not necessarily represent the climax stage which would eventually be reached under natural conditions, nor do they describe the present overgrazed and disturbed state of a large proportion of the country. This picture therefore seems to be a particularly useful one as a background to the Iron Age, assuming that there has been no significant climatic change. In fig. 4 the peripheral types have been somewhat simplified from those of Acocks, while the hatching has been selected to illustrate the transitions between the different grassveld types.

The pure grassveld types occur at altitudes above 1 100 metres (3 500 ft) "in regions which are too dry and/or frosty for the development of any kind of forest" (Acocks, op.cit., 129). Open grassveld is the predominant feature but the development of patches of bush and scrub-forest in some of the transitional areas is of importance.

The main change that has taken place during the historic period, through mismanagement of the veld, is the regression of parts of the Sweet Grassveld into Mixed Grassveld in the north and False Karoo in the south. Regression may well have started in areas of dense Iron Age settlement but the magnitude of the change would have been much less than that produced during the past 100 years or so.

VELD TYPES

AFTER ACOCKS

Grassveld Types:

— Cymbopogon-
Themedia Veld
— Dry Cymbopogon-
Themedia Veld

Themedia Veld

Highland Sourveld

Interrupted lines indicate
transitional types

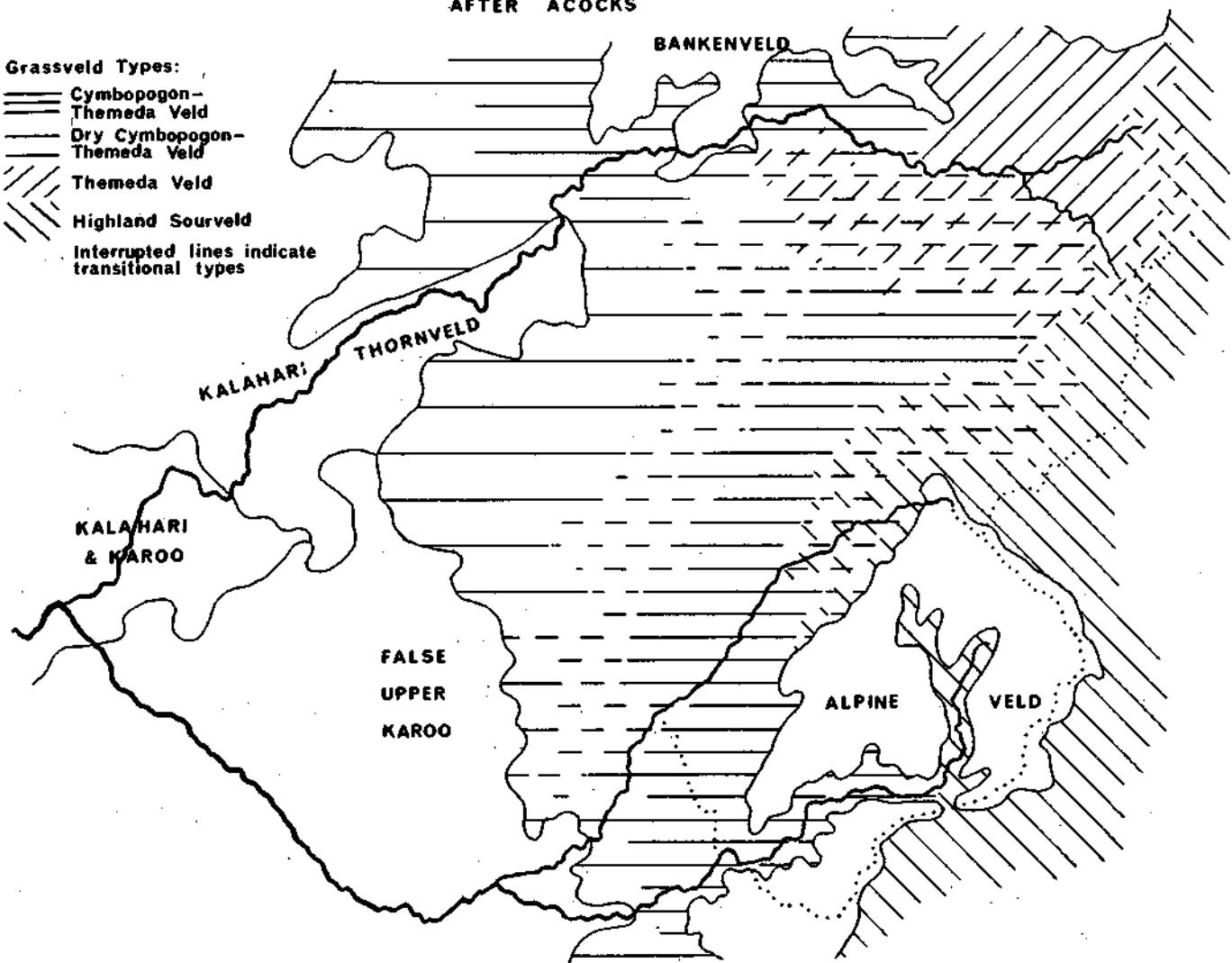


Fig. 4

The core of our area is the belt of *Cymbopogon*-*Themeda* Veld which runs northwards from the middle Caledon Valley to a transitional zone in the north-eastern Orange Free State. Although this is an area of mixed rather than sweet veld the nutritional value of the grass is high in summer and remains at moderate level even in winter (Talbot & Talbot, 1960). It is therefore preferable as grazing land to the areas to the east and west and has a fairly dense grass cover when not overgrazed. Most of the best agricultural land also falls within this area with its rainfall of around 700 mm and its prairie soils.

The *Cymbopogon*-*Themeda* Veld has a fairly short grassveld climax in which *Themeda triandra* and *Setaria flabellata* are the most common species although a number of other plants, mainly grasses, are represented. Trees and shrubs are normally absent but in favourable localities such as rocky hillsides a few stunted examples of *Celtis africana*, *Leucosidea sericea* and *Rhus ssp.* may occur. Westwards this type gives way to the Transitional *Cymbopogon*-*Themeda* Veld which extends to "the small escarpment that runs down the middle of the Orange Free State" (Acocks, *op.cit.*, 131) as shown in Fig. 1. Much of the area consists of dolerite outcrops, while climate is slightly warmer and drier. This has produced a greater predominance of *Themeda triandra* and other changes in the grasses but most significant for the Iron Age is the growth of a fairly rich bushveld along the escarpment itself. The trees and shrubs include *Celtis africana*, *Olea africana*, *Ziziphus mucronata*, *Rhus ssp.* and others but most important is *Acacia karroo*, from which one of the most prominent features of the escarpment, Doringberg, gets its name.

West of this minor escarpment lies the Dry *Cymbopogon*-*Themeda* Veld, bounded by the Kalahari Thornveld reaching up the Vaal River and the False Upper Karoo spreading northwards from the Orange River as a result of recent overgrazing. This is relatively sparse grassveld with low nutritional content in winter (Talbot & Talbot, 1960) although Acocks classifies it as sweet veld. With a rainfall around 500 mm and essentially sandy soils this must have been a marginal area for cultivation by Iron Age communities and settlement is only known to have taken place towards the north (fig. 8). Shrubs and trees occur in certain situations noticeably *Acacia karroo* along the rivers and mixed bush on hills which in this area are mainly of low relief.

The position of the boundary between grassveld and Karoo vegetation has moved far into the Orange Free State in recent decades as the result of poor veld management (Acocks, *op.cit.*). There is also evidence that the boundary is fairly sensitive to climatic change, for the palynological

sequence from Aliwal North (Coetzee, 1967, 124) which is close to the present position of the boundary, shows at least three changes from Karoo to grassveld and back to Karoo during the period dated by radio-carbon to between $12\ 600 \pm 110$ - $9\ 650 \pm 150$ B.P. Information is, however, not available for the period covered by the Iron Age. The vegetation in the region of the Vaal-Orange confluence will be examined more closely in connection with the Riet River settlements (chapter 12).

East of the *Cymbopogon*-*Themeda* Veld and bordering the northern end of the Lesotho Highlands is the zone of Highland Sourveld to *Cymbopogon*-*Themeda* Veld Transition. Here *Tristachya Liepida* is co-dominant with *Themeda* and the grass cover is taller and more sour than its western neighbour. Much of this zone is on the Cave Sandstone with its rocky slopes and ravines which support bush and sometimes forest growth in favourable situations (Van Zinderen Bakker, E.M., 1971). These forest patches also occur further south in the Caledon Valley in the *Cymbopogon*-*Themeda* Veld between Ficksburg and Ladybrand. The characteristic species are *Euclea crispa*, *Ehrharta erecta*, *Myrsina africana*, *Rhus pyroides* and *Olea africana* and a number of other trees and shrubs are also represented. They have had some influence on Iron Age settlements but it should be stressed that this vegetation is restricted to favourable niches and that the area in general has a grassveld climax.

The eastern margins of our area are defined by the Highland Sourveld north of Mont-aux-Sources and the *Themeda*-*Festuca* Alpine Veld of the Lesotho Highlands to the south. The latter offers fairly good grazing, at least in summer, but its cold climate and extreme relief inhibited Iron Age settlement. Highland Sourveld is the vegetation of the Drakensberg Escarpment overlapping on to the Highveld in a belt about 25 km wide from the crest of the watershed, northwards from Mont-aux-Sources. If its distribution is compared with the overlay map (fig. 6) showing the area of Iron Age settlement it is evident that the limits of settlement coincide very closely with the western edge of the Highland Sourveld.

It is an area of cold winters and wet summers, with over 800 mm (32 ins.) of rain rising to over 1 500 mm (60 ins.) in places. Soils are leached and it is difficult farming country even today, although the summer grazing is fairly good.

Acocks (*op.cit.*, 119) considers that the climax vegetation was probably scrub forest although the higher and more level areas may always have been more grassy than the mountain slopes. The trees include

Leucosidea sericea, Podocarpus latifolius and a variety of others, while shrubs and smaller plants are also important. A wide range of grasses occur in which Themeda and Tristachya are again the most common species, but overgrazing quickly causes regression to poorer types.

When compared with the Cymbopogon-Themeda Veld and its transitional types the Highland Sourveld would have been an unfavourable area both for the grazing of stock and for agriculture. The apparent absence of Iron Age settlements suggest that these were crucial factors, while the generally uncomfortable climate may also have discouraged human habitation. But its summer grazing potential may well have been exploited.

In this description of the veld types stress has been laid on the presence or absence of bush and tree growth as this has had an influence on Iron Age architecture. To demonstrate this more clearly fig. 5 has been drawn up to show the essentially treeless zone of the north-eastern Orange Free State and the areas on either side of it which contain considerable patches of bush or scrub forest. The distribution is based on the writer's own experience as well as Acocks' veld types and it should be regarded as no more than a general indication. A point worth mentioning is that the open areas of the west and south tend to contain more patches of bush growth, especially on hills and beside watercourses, than does the north-east. This main treeless zone corresponds closely to the true Cymbopogon-Themeda Veld north of the Caledon Valley, the Themeda Veld of the south-eastern Transvaal and the transition between these two. North of the Vaal River (not shown on fig. 5) the treeless zone is bounded on the north and west by Acocks' (op.cit.) Bankenveld which today is predominantly grassveld but which almost certainly has a scrub forest climax (Davidson, 1964). The main treeless zone does have small patches of bush and trees in particularly favourable situations but even here they tend to be stunted. One gains the impression that there would have been sufficient wood available for making artefacts but not enough for building or for fuel on any extensive scale. This is supported by the archaeological evidence from sites in this area where stone was used very extensively for building, charcoal is rare and usually from twigs or thin branches and no definite evidence of iron smelting has been found. Today bushes and even small trees may grow out of the stone ruins, the rubble protecting the plants when young. The rocky hills probably likewise supported a greater proportion of bush and tree clumps when Iron Age settlers first arrived than they do at present. There has even been the suggestion that the area was once covered by trees (Van der Merwe, 1962, 141), but under the present climatic conditions this is improbable. Assuming that the climax

BUSH AND SCRUB FOREST PATCHES

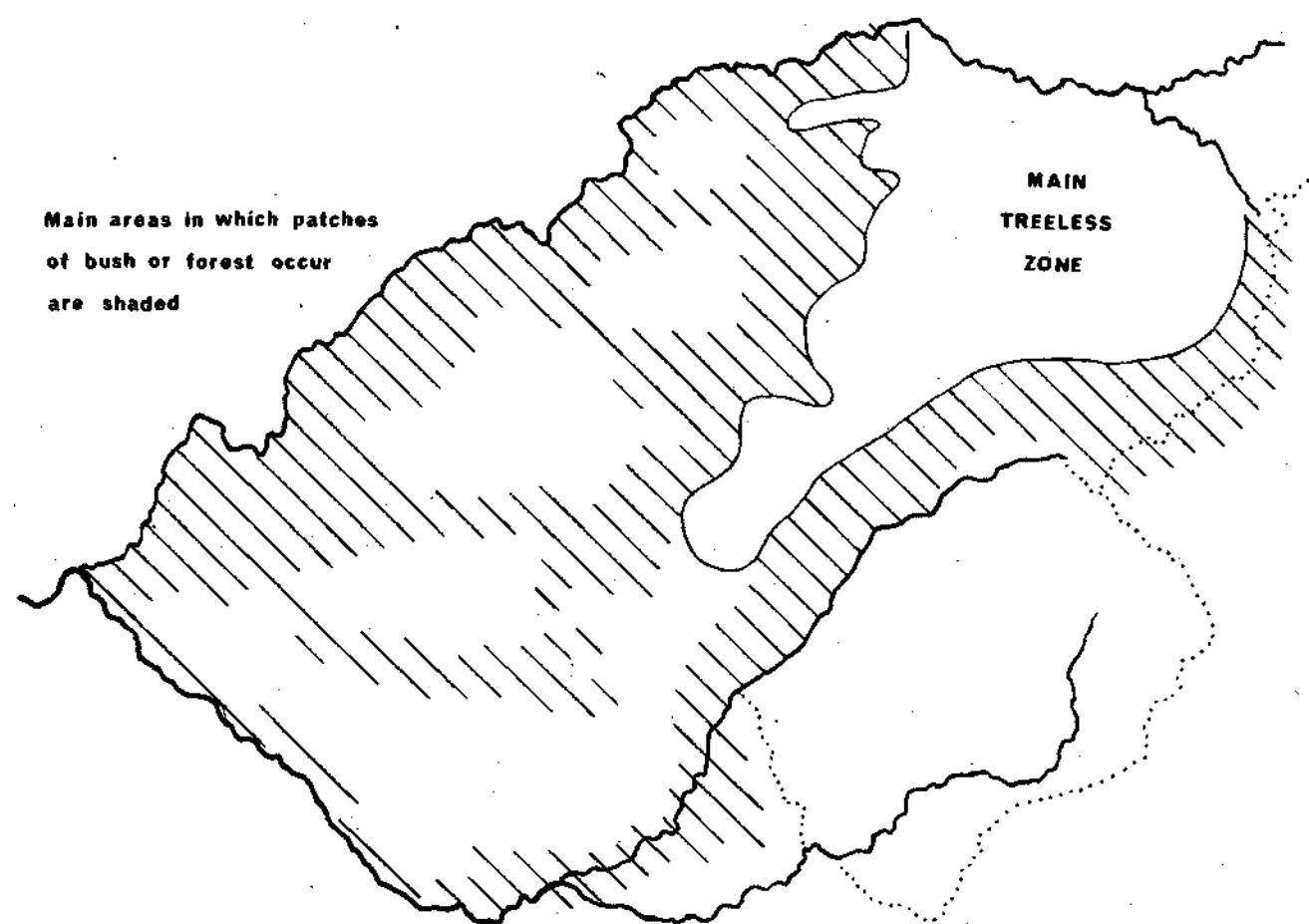


Fig. 5

conditions described by Acocks (op.cit.) were prevalent at the time of the first Iron Age settlement, the meagre timber resources of the area would have been rapidly exhausted if they were exploited on any scale. Indeed, the evidence of the present project supports the view that the distribution of vegetation types and in particular the distribution of trees was much the same throughout our period as that described by Acocks.

LOCATION AND SETTLEMENT PATTERNS

"It is a hive without any bees to build the walls with golden bricks of honey. A cave cluttered with a millstone."

Dawald Joseph Mtshali

SOME GENERAL FEATURES

In their general characteristics there is a great deal in common between Iron Age settlements and historical or recent vernacular forms in southern Africa. This has long been recognised by archaeologists and some individual examples of resemblance have been demonstrated, but comparative studies such as Walton's 'African Village' are rare. Detailed information on contemporary vernacular architecture in many areas is still very limited and studies of such aspects as the range of variation within ethnic groups or changes in time and space are practically non-existent. Ethnologists until recently have tended to neglect architecture and, while social anthropologists have sometimes examined settlement patterns in relation to social and kinship organisation, they seldom describe the actual structures in any detail. Thus the archaeologist may still have to carry out his own 'ethno-archaeology' in order to gain an understanding of the evidence he finds on the prehistoric sites.

Before the specific types of settlements are described it is important to examine some of the general features of both Iron Age and recent habitation. This will not only give a wider background to the description but also explain some of the terms and concepts used in the analysis of the settlements.

Aspects of social structure, particularly kinship, are of great importance in the study of settlement patterns, and while direct archaeological evidence is usually lacking, it may be possible in some cases to extrapolate from ethnological parallels.

The male and female roles in society are also reflected - men are associated with animals, particularly cattle, while women are associated with cultivation and the house. In the great majority of patterns in southern Africa the livestock pen or pens have a central position and the daily lives of the men revolve around this area. Cattle have a high symbolic and religious significance beyond their economic value, and this is reflected in the position and form of their enclosures. The men's meeting place, the kgotla of the Sotho-Tswana, which is also the

administrative centre, is in or near the cattle pen, and sometimes it is a symbolic cattle pen, taking the same form but not being used as such.

Women tended to be excluded from the central area and from most activities connected with cattle. Among the Sotho, Casalis (1861, 124-5) records that women were not allowed to enter the kgotla nor the cattle pens. Their realm would be the dwelling and the field, and they were responsible for cultivation, storing the harvest and preparing food as well as building the dwelling. It is significant that among the Sotho-Tswana grain storage takes place within or close to the dwelling, but often towards the outer edge of the settlement. In the mid-nineteenth century Backhouse (1844, 369) records that the Sotho grain baskets stood around the huts but outside the courtyards "and the people being honest, they consider these granaries safe". Agriculture would usually have supplied the greater part of the diet yet its products were kept in the most exposed positions while cattle were kept in the best protected central area. This arrangement seems to reflect the high symbolic value of cattle and the much lower value attached to agricultural produce, and it in turn shows that socio-cultural attitudes are more important than material considerations in determining this pattern.

ELEMENTS OF THE SETTLEMENT

The term settlement pattern is used here to describe only the regular ordering of the artificial components within a settlement. The positions of settlements relative to one another and to aspects of the physical environment, which some authors refer to as settlement patterns, are described here as location patterns since to a large extent different factors influence the two different types of pattern.

The settlement patterns are all based on the circle, a shape particularly characteristic of sub-Saharan Africa and also generally linked with the absence of the plough (e.g. Mallows, 1963, 11). But looked at more positively the circle is the most efficient shape, for it encloses the maximum space for the minimum length of wall, and in hut building curved walls will sustain the lateral thrust from the roof more easily than straight walls. Although the shape is more often oval or slightly irregular than exactly circular the argument remains the same.

The physical advantage of the circle may, however, be of minor importance compared to its socio-cultural and perhaps even religious significance. Biermann (1971, 98) sees the circle as deliberately expressed throughout Zulu material culture from settlement patterns down

to baskets and beadwork. In discussing the functionally and aesthetically successful patterns of vernacular African villages, Rapoport (1969, 77) says that "some of these cultures do not have a word for straight, and are not susceptible to the various optical illusions based on straight lines and used in experimental perception work". The curved line and the circle are so fundamental that they are a part of the personality of these peoples while the straight line is alien to them. The Kosi of the Cameroons, for example, resisted the attempt by the German colonial authorities to make them build villages along straight roads, insisting on at least one bend to frustrate the power of witches and to facilitate escape in time of war (Levin, 1971, 150).

Among the Sotho-Tswana peoples the circle was also of fundamental importance although its precise significance is not known. The attitude of some of the earlier missionaries is, however, illuminating in this respect for they regarded circular forms as pagan and encouraged the use of straight lines and right angles. For example, Casalis (1861, 109 & 111) contrasts the "heathen community" among the Sotho of about 1850 who built high up on hillsides in immense circles composed of oval huts, as against the mission converts who built small stone houses "pretty well arranged in a row" and lower down the slopes. Of the large cattle pens in the centre of the villages he says that they "are perfectly round among those tribes who are still in their primitive condition, and square among those who have yielded to the influence of European civilization" (op.cit., 125). The change from circle to square is virtually complete in the Orange Free State today but in Lesotho the traditional form has been widely retained.

When examining Iron Age settlements recognition must therefore be given to the importance of the circular structures. They are indeed the primary element because they are the first part of the settlement to be built, and they normally serve the basic functions of huts for sheltering people and of larger enclosures for sheltering livestock. We shall therefore refer to the wall of such an enclosure as a primary wall, defined as continuous, curved walling which by itself forms an enclosure; this primary enclosure being approximately circular or oval in shape.

Most primary enclosures were either huts or stock pens and in some cases they were the only structures in a settlement. More often, however, there are some secondary or linking walls which may produce additional enclosures. Secondary walling is defined as walling which abuts onto one or more primary wall. These junctions are not keyed in and it is evident that the secondary walls were built subsequently as they merely rest against the primary walls, a widespread characteristic of Iron Age building

(e.g. Caton Thompson, 1931, 17). Secondary walling tends to be straight or irregularly sinuous in plan although it may also be more regularly curved like primary walling. An enclosure produced by it is described as a secondary enclosure and this will include as part of its circumference a portion of the primary wall against which it abuts. A secondary enclosure may be built against the inside or outside of a primary enclosure or it may link up several primary enclosures.

Certain types of secondary enclosures are characteristic of some settlement patterns; particularly common are the small courtyards into which huts often open. Mallows (1963, 18) has said that "the space between the hut and the fire, and round the fire, always remained the centre of life, where food was cooked, meals were eaten" and other activities took place. In our area this space was often surrounded by a secondary wall abutting against the sides of the hut.

A third spacial element is the intervening, unenclosed space between the various structures. This would have provided access and routes for circulation while some parts may have been used for particular purposes which have left little or no trace in the archaeological record. We have already seen that some storage took place here and it seems likely that certain communal activities may have done likewise, but there is little material evidence.

The settlement patterns are defined in terms of the regular ordering of primary and secondary elements to form a recognisable cluster of structures which will be called a settlement unit. It is difficult to give a verbal definition of the settlement unit in general, although individual types are readily defined. It could be described as a group of dwellings around a single or several contiguous livestock pens, the whole being more or less spacially distinct from neighbouring groups.

The form of the settlement unit is largely the result of kinship and social structure. The Iron Age units correspond to the ward among the Tswana (Schapera, 1935), the 'village' of the Zulu (Krigs, 1936, 43) and similar ethnological examples from many other peoples in southern Africa (e.g. Walton, 1956, 151, 154 & 156). Many terms have been used in the literature to describe this type of grouping - compound, homestead, hamlet, village, site, kraal, stad, etc. - but most of these are insufficiently precise or have a connotation which makes them unsuitable, and therefore settlement unit will be used here.

In some cases the settlement unit is surrounded by a wall, giving it a clear unity and well defined limits. These walls take a variety of forms and with some settlement patterns they are optional or absent.

They may have been partly for security but other factors would also have contributed. Mallows (1963, 27) considers that their "main utility was probably to keep children and cattle in rather than the enemy out", and the exclusion of wild animals may also have been important. Elsewhere (Maggs, 1971, 44) it has been suggested that part of their purpose was to define the area of the settlement in a similar way to the wall or fence around a modern garden. The area within the wall was usually kept clean while rubbish might be dumped immediately outside the wall, for example on settlements in the north-eastern Orange Free State (chapter 5). Even where there was no surrounding wall the rubbish may still be kept at a corresponding distance from the buildings. Among the Zulu, who during the last hundred years have largely stopped building surrounding walls, the equivalent space around the settlement unit is still kept clear of vegetation and debris.

The size of the settlement units and the number of smaller structures they contain varies within a fairly broad range but in most cases they conform to the pattern characteristic of their type. The settlement unit is the module from which the settlement as a whole is built up. The larger settlements merely comprise a greater number of units than the smaller ones, there is no qualitative difference between them. This homogeneity corresponds to the lack of economic specialization and the relatively undeveloped social stratification characteristic of many simple societies.

SUMMARY OF TERMS

Structure - Any of the basic structural elements including huts, large enclosures, pieces of walling, stone circles, etc.

Primary enclosure - More or less circular structure formed by a single, curved primary wall.

Secondary enclosure - More or less irregularly shaped enclosure bounded in part by primary walling and in part by secondary walling which abuts against the primary walling.

Settlement unit - The group of structures, including both huts and livestock pens, which forms the module from which the settlement as a whole is built up.

Settlement pattern - Any regular ordering of the man-made components of a settlement, but specifically the patterns created by a) the characteristics of the structures and their arrangement within the settlement unit,

and b) the arrangement of settlement units in the complete settlement. The pattern is essentially determined by socio-cultural factors.

Location pattern - The pattern created by the arrangement of settlements a) in relation to one another, and b) in relation to aspects of the natural environment. Economic and environmental factors are the main determinants.

Site - An arbitrary locality for the convenience of the archaeologist. Excavated sites are numbered as follows:- the motor vehicle registration code of the relevant magisterial district - two or three letters - is followed by the site number within that district. Hence 00 1, the first site excavated in Lindley District. The vehicle registration code has indeed become a part of South African folk lore.

Settlement - An area of sufficiently close occupation to be regarded as a single entity. The degree of concentration or dispersion varies and in some cases an arbitrary decision has to be made as to the limits. However, in most cases the limits of settlements seem to be readily defined, with settlement units not separated from one another by more than a few hundred metres while neighbouring settlements would normally be a kilometre or more distant.

ANALYSIS OF AERIAL PHOTOGRAPHS

As archaeological reconnaissance progresses it is becoming more and more apparent that stone building was a regular feature of the Iron Age, especially south of the Zambezi. In Rhodesia, where attention has been focused on the more impressive sites associated with politically centralised societies engaged in long-distance trade, there is also a range of lesser stone structures associated with peasant societies. The classification of stone buildings in Rhodesia has recently been re-examined by Garlake (1970) and Summers (1971) and therefore does not require review here.

The first use of air photographs on Iron Age sites in southern Africa was at Zimbabwe (Caton Thompson, 1931) and Mapungubwe (Fouché, 1937) but it was not until 1956 that their potential value further south was demonstrated by Walton (1956, 49). The first systematic survey was that of Mason in 1965, which was greatly extended in 1968.

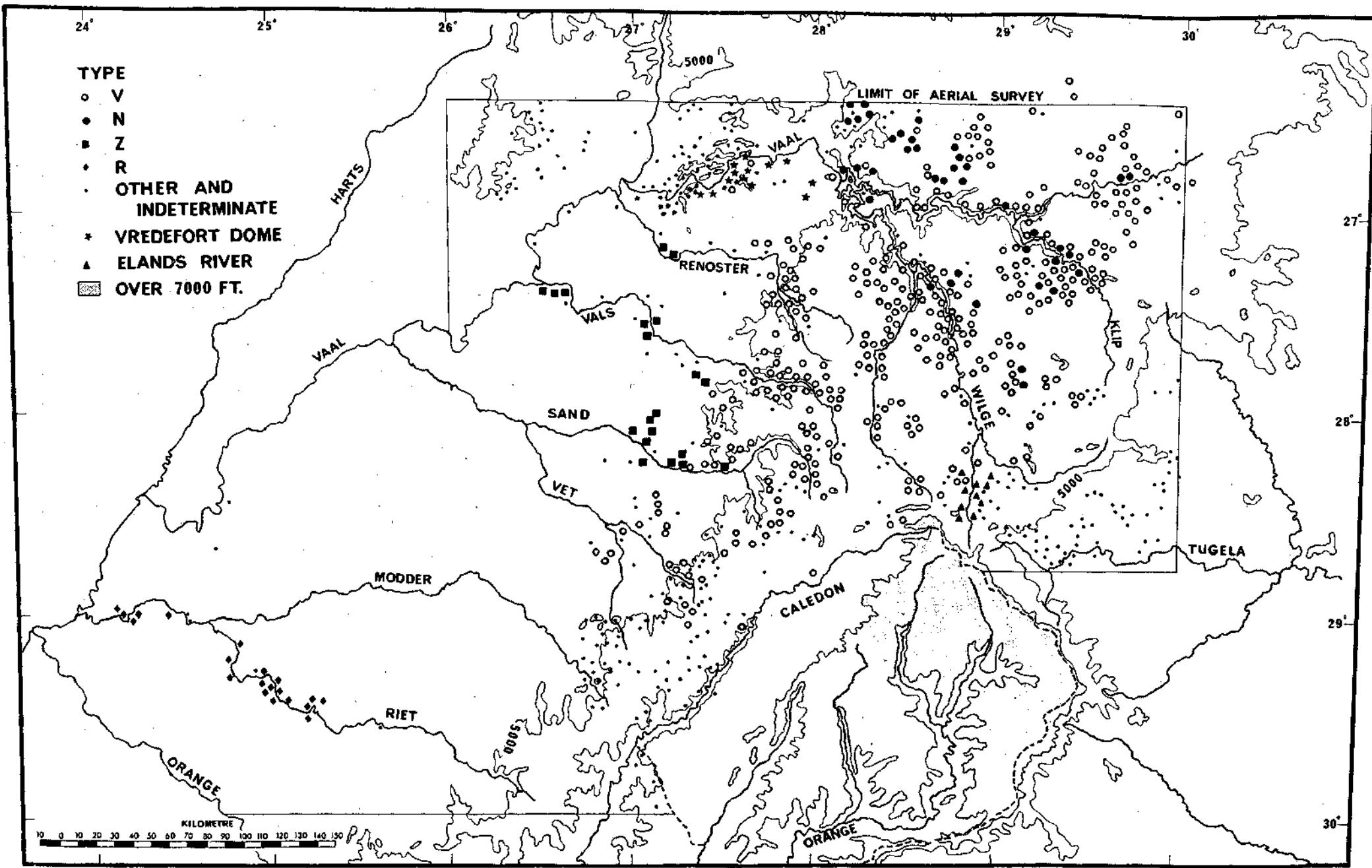
In the initial stages of the present project, in 1966, aerial photography covering the area between the Caledon, middle Orange and Vaal rivers was examined. This was extended southwards to 30°S, north

of the Vaal to 26°30'S and eastwards to 30°E, to include parts of Griqualand West, the southern Transvaal and upper Tugela Basin of Natal (fig. 7). The photographs used were those of the Trigonometrical Survey offices in Pretoria which are taken in the first instance for topographical mapping. The usual scale is around 1:30 000 to 1:40 000 at which size only the clearer archaeological sites are visible and their identification as to type is hazardous. Some form of magnification was therefore essential, and since it is only practicable to have photographic enlargements made of selected sites or small areas, optical magnification of the contact prints proved to be the most satisfactory method.

A low power binocular microscope with a magnification of around six or twelve times was the most suitable instrument; greater magnification merely showed the grain of the photograph while a monocular lens caused eye strain when used over an extended period. It would be worth considering the possibility of having larger scale photographs taken for future research projects where these would be concentrating in more detail on smaller areas. A stereoscope proved useful in a number of cases, especially towards the beginning of the work when experience in the identification of relief features was limited. A magnifying stereoscope is perhaps the ideal instrument and one was used in the detailed examination of some of the sites, but the time required to set up each stereo pair prevented its more frequent use in view of the large area that had to be covered.

While we are discussing the methods used it is perhaps worth mentioning some of the problems. Firstly, it is necessary for the individual worker to develop a perceptual understanding of the photographic evidence, since both the aerial view and the morphology of the settlements are initially unfamiliar. It is also important to be able to correlate the photographic evidence with the actual objects on the earth's surface in order to check on one's interpretation. In fact field checks are an essential part of the work, a principle which research workers in a number of other fields including soil science, geology, hydrology and botany were all agreed upon at a recent symposium on remote sensing (University of Natal, February, 1971). The process of identifying sites and classifying them according to type is of course a subjective one based on the perception of the individual worker. Mason (1968) has indeed demonstrated that there was considerable variation in the number of structures identified by different students working from the same photograph although they were closely agreed as to the types of structure present. Provided

DISTRIBUTION OF SETTLEMENTS



that the types are clearly defined, that the observer has a fair degree of familiarity with the process and that he applies field checks, this type of survey can be of great value to Iron Age research.

In contrast to some of the more sophisticated applications of aerial photography in the northern hemisphere, the photographs used here do not show archaeological features that are not readily visible to the observer on the ground. Photographs taken specifically for archaeological purposes might supply such information but because of the generally coarser vegetation, widespread erosion and the absence of earthworks, ditches and similar features from most Iron Age sites, the possibilities are reduced. The real value of the air photographs has been in the identification of large numbers of sites and their typological classification.

It is naturally easier to recognise sites in open grassland than in scrub or bush country, although even here it may be possible, provided that there is sufficient space between the trees or bushes. Bushes are more inclined to grow among the rocks of the walls than in the open where they are not protected from grazing animals or fire, and sometimes this helps in the identification of sites. However, the vegetation obscures details and contributes to the collapse of walls which makes classification more difficult.

A number of natural phenomena and even some modern artificial features may resemble Iron Age settlements. Clumps of bushes or trees, especially where there has been severe overgrazing, are probably the most difficult to eliminate as they may be growing over walls. However, trampling by stock produces a light coloured ring around the trees whereas stone walls will usually be darker than the vegetation. Soil and hydrological markings particularly in hollows and around small pans may present problems as also certain types of erosion and quarrying. These examples can usually be eliminated by the use of a stereoscope or because they occur in locations unsuitable for settlement such as in depressions. Soil or crop markings in fields are sometimes suggestive but these certainly do not represent surface stone structures. It was hoped that some indication of Iron Age field systems might show up either in the natural veld or in modern cultivated areas but nothing definite was found and there are no areas of terracing such as occur in the Carolina-Machadodorp-Lydenburg region of the eastern Transvaal.

The linear and rectangular patterns of virtually all modern habitations in the Orange Free State greatly facilitated the identification of Iron Age sites. Where circular vernacular forms have been retained as

in Lesotho and Natal greater caution is needed, for recently abandoned settlements may closely resemble the prehistoric ones. Rural settlement is today more dispersed and there has been a tendency to move from the tops of hills and ridges to the lower hillsides. These changes have contributed to the preservation of the Iron Age sites, whereas in Lesotho, where the dense population still tends to occupy the same type of locality, the recent settlements not only mask the earlier ones but may even destroy the surface indications by reusing the building stone. Even in the Orange Free State many settlement units have been damaged or destroyed by stone robbing during the historical period, for building on the same site or elsewhere. In some cases parts of the Iron Age walls have been incorporated into the circumference of recent stock pens and it is sometimes possible to determine the pattern of the original structure from such fossilised walling (Plate 8).

On the available photographs and making allowances for variation in quality it is usually not possible to see a structure the size of a hut, about 3 - 4 metres in diameter, except as a dot. Vegetation and the collapse of walls often obscure details such as wall junctions, thus making the identification of primary and secondary walling more difficult. The larger primary enclosures can usually be recognised by their circular shape provided that their walls have not been excessively robbed or overgrown. The larger middens are sometimes visible as mounds but more often they show as a lighter discolouration around the settlement units, whilst at many sites they are poorly developed and do not appear on the photographs at all.

On many of the settlements there are structures and even settlement units which for a variety of reasons cannot be classified. The photograph may be inadequate, the walls may be collapsed, robbed, overgrown or rebuilt, or the structures themselves may be atypical. For these reasons it was decided not to attempt to classify each individual settlement unit, a process which would indeed have been very slow in view of the vast number of sites within the area covered. An impression of the numbers involved can be obtained from fig. 9 which shows 369 identifiable units in what is only a very small part of the total area. The classification of sites has therefore been based on the characteristics of the majority of settlement units. Where two or three types occur on the same settlement, as with some of the sites in the north-eastern region, this is recorded, but where a single settlement unit appears to be of a type which is not otherwise represented in the vicinity, it is not accepted without confirmation from field evidence. Such examples are recorded on the

maps with the same symbol as indeterminate sites. In essence the result is a relatively gross distribution of the main types with a few of the more distinct localised variations. Many of the detailed problems arising from the examination of air photographs will have to await more intensive research programmes.

THE SETTLEMENT TYPES

Some eight weeks were spent on examining the air photographs of the whole area. As a result 413 photographs covering the main settlements were obtained from the Trigonometrical Survey. These were examined more closely to extend the number of settlements identified and to check on classification, and they were an invaluable aid in the field. Sites were plotted on the 1:250 000 Topo-cadastral series maps as these are also used as the base for the flight plans and thus the plotting from photograph to map is quicker.

Type V Settlements

First description: Van Riet Lowe, 1927. Vegkop

Type site: 00 1

Vernacular name: Makgwareng

Current name: Elandsfontein No. 990

Bronkhorstfontein No. 991

District: Lindley

Other sites excavated: OND 3

Vernacular name: Tihela

Current name: Kroonfontein (portion of
Straalfontein No. 117)

District: Ladybrand

The Type V settlement unit consists of a number of primary enclosures grouped around in a ring. The enclosures are either contiguous or linked by secondary walling to form a central secondary enclosure (Plate 2). The great majority of the primary enclosures open into the secondary enclosure which normally has only one external entrance. There may be additional free-standing structures, particularly huts, around the periphery of the settlement unit but there is no surrounding wall.

The primary and secondary walling which surrounds the central secondary enclosure is built of stone and on most sites this is all that can be recognised from the air photographs; it is therefore the

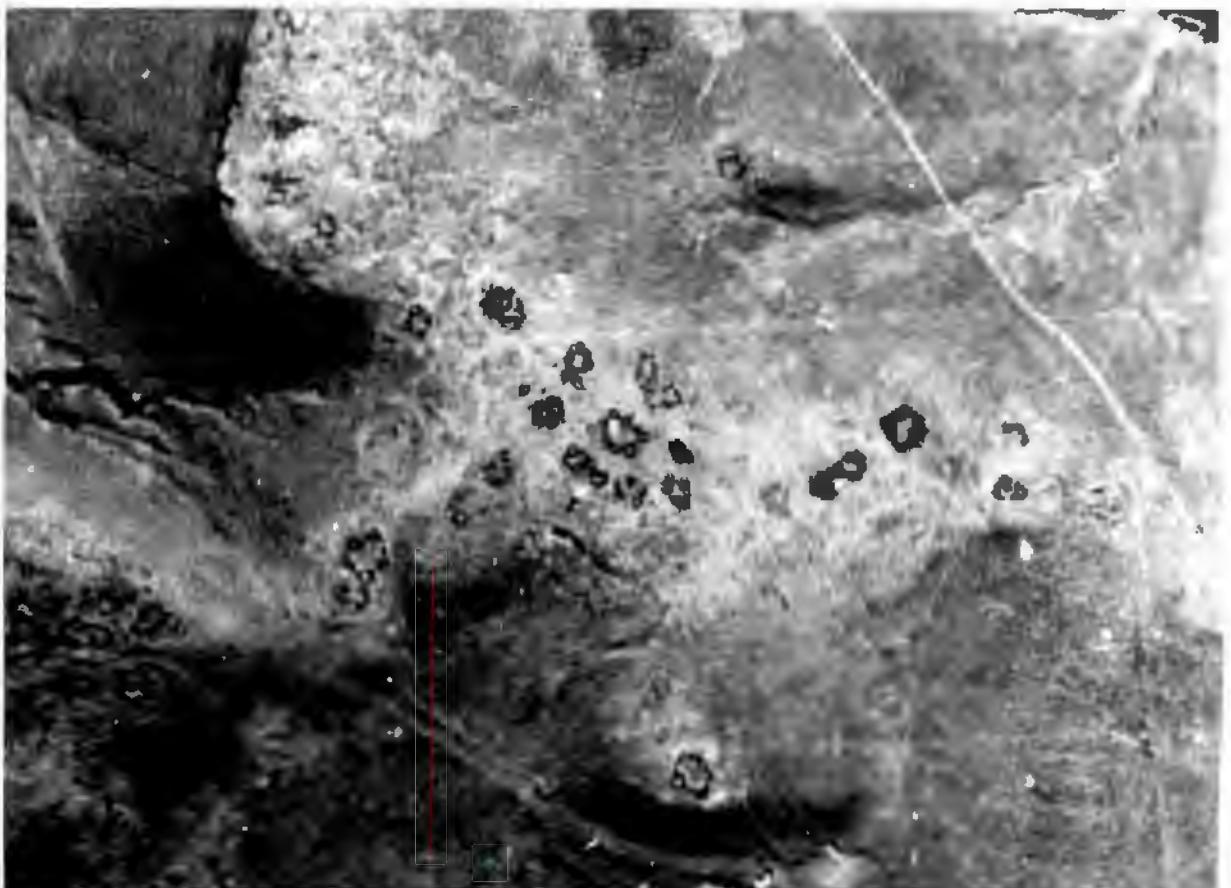


Plate 2. Air photograph showing Type V settlement pattern. Characteristic location near scarp on flat hilltop. Vrede District. This and the following air photographs are reproduced by kind permission of the Trigonometrical Survey.



Plate 3. Air photograph of part of the 001 site on Makgwareng ridge showing one dominant Type V settlement unit among many smaller ones, towards the left. The excavated settlement unit is fourth from the right.

diagnostic attribute of Type V. The primary enclosures include livestock pens and also some huts where these are built of stone. It should be stressed that while most of the corbelled stone huts occur on settlements of this type they are not a diagnostic feature for they are sometimes found on other sites. Furthermore, many Type V settlements have huts built of materials other than stone. But in general and in the north-eastern quarter of the Orange Free State corbelled huts are associated with the Type V settlement pattern. Even where corbelled huts were used there are often a few free-standing ones around the edges of the settlement units, and where huts were not built of stone, as at OND 3, this is their normal position.

This type of settlement unit was recorded by Stow in the late nineteenth century (Walton, 1965) but it was first described in detail by Van Riet Lowe (1927) from Vegkop, near Heilbron. Walton (1956, fig. 12) has also illustrated several examples but its widespread distribution so south of the Vaal has not previously been recognised. Type V has some resemblance to Mason's (1968) Class 2a, but because of differences in methods and definitions these should not be equated.

Type V is by far the most common and widely distributed settlement pattern on the southern Highveld. It extends throughout the north-eastern Orange Free State as far south as Ladybrand and northwards into the south-eastern Transvaal as far as Bethal and Ermelo (fig. 7). Although this reaches the limits of the examination of the aerial coverage, there is considerable reason to believe that it is about the northern limit of Type V, for the density of sites falls off markedly. Further north in the Carolina to Lydenburg area the sites are quite distinct; the settlement units have surrounding walls, they are often linked by trackways and there are large areas of terracing (Van Hoepen, 1939). There is also a marked reduction in the incidence of Mason's comparable Class 2a north of Bethal (Mason, 1968, fig. 3).

Type V is a true Highveld expression of the Iron Age occurring almost exclusively between the altitudes of 1 450 and 2 000 metres (4 750 - 6 500 feet), which restricts it to the zone between the Drakensberg escarpment to the east and the minor escarpment of the central Free State to the west. If the transparent overlay map (fig. 6) is examined in conjunction with the maps showing environmental characteristics (figs. 1 - 5) it will be seen that Type V occurs in the area of Highveld Prairie soils with a rainfall of 600 - 800 mm. The vegetation climax is grassveld of the *Cymbopogon*-*Themeda* and *Themeda* Veld including the intervening transitional zone. To the west there is some overlap onto the zone of

transition towards the Dry Cymbopogon-Themeda Veld while towards the east the areas of transition to the Highland Sourveld were partly occupied, but the Sourveld itself was avoided. The distribution corresponds closely to the main treeless zone of fig. 5 but there is an overlap into the area of ravine forest patches towards the south. The presence of trees seems to have influenced the architecture in this area, a possibility that will be examined more closely in relation to the OND 3 site.

The distribution of Type V is shown in more detail in fig. 8 (folding map in end pocket). From this it is apparent that the majority of settlements occur in clusters around the main river systems of the area. These include the following rivers and some of their tributaries: upper Vaal, Klip, Wilge, Liebenbergsvlei, and the upper sections of the Renoster, Vals, Sand and Vet. There are, however, a few smaller clusters in watershed areas, for example around Greylingstad north of the Vaal, around Motlomo (Kafferkop) north-west of Bethlehem and at scattered sites along the divide between the Caledon and the Sand-Vet system.

While the clusters around the main river systems account for the majority of settlements, few were actually built on riverbanks. Even where apparently suitable localities were available immediately beside the larger rivers they were often unused. For example the majority of sites along the Wilge and Liebenbergsvlei are 2 km or more from the river. There seems to have been a deliberate tendency to avoid the riverbanks, although there are a few small sites close to them. The topography tends to be flat or gently undulating in the watershed areas with higher relief and steeper slopes among the spurs and re-entrants at the sides of the river valleys. As mentioned above, the relief is also influenced by geology, so these spurs and hills are normally capped by dolerite or sometimes sandstone. The tops and where available the small plateaux on the sides of these relief features are the most favoured locations for Type V settlements (Plate 3 and fig. 9).

In an examination of the possible reasons for this preference the physical factors will inevitably be stressed as they are the only ones that can be examined directly from the archaeological evidence. Nevertheless it must be recognised as a socio-cultural preference and therefore it may well be influenced by factors other than the purely physical advantages. The availability of building stone on hilltops and especially near scarp faces would have been a strong inducement to choose such locations. The general impression gained from working on such sites is that the proximity of suitable stone was crucial and that it was not usually carried more than a few dozen metres from source to structure. This was confirmed by

examining the source of the raw material used for several of the OO 1 settlement units (fig. 12).

The avoidance of nocturnal temperature inversions in the valley bottoms would almost certainly have been one reason for building higher up, yet on the other hand the hilltops tend to be exposed to winds. As mentioned above, micro-climate has a marked effect on settlement location in Lesotho today (Fuggle, 1971) and in the Mequatling area, at least, the present inhabitants avoid building in the valleys because of cold night temperatures. Further north in the Orange Free State the Sotho population also seems to be aware of this factor when choosing locations for their homesteads while the Afrikaans population tend to ignore it, for many farmhouses and even villages are in depressions. By contrast, most of the Type V settlements in the vicinity of site OO 1 are from 50 to 120 metres above the river level (fig. 9).

Slope orientation was evidently not a major factor in the location of Type V sites for there is wide variation and many do not fall within the north-east quadrant as did the modern sample from central Lesotho (Fuggle, op.cit.). However, with the relatively low relief and tendency to build on high ground most situations would have allowed the settlements to receive the rays of the early morning sun.

While some sites are on isolated hills, those at the sides of the river valleys are usually at about the same altitude as, and adjoin the higher land surfaces and only have a scarp slope on one or two sides facing the valleys. Among such sites there seems to be a preference for locations along the tops of more or less southward facing scarps, a good example being the Makgwareng Ridge with its 9 km of Type V settlement including the OO 1 site (fig. 9). However, scarps with other orientations were also used and further work would be needed to demonstrate the degree of this preference.

The elevated locations, particularly those on isolated hills and mesas would offer some degree of security from surprise attack and an advantage in combat. The Sotho of the Difaqane period were aware of these advantages and many groups carefully selected locations with this in mind. Even before the Difaqane oral tradition describes the use of the mesa for defence (Ellenberger, 1912, 64). However, as most of the archaeological sites would at best be protected on only one or two sides, defence does not seem to have been a major factor in location except in highly disturbed times.

The main disadvantages would appear to be the distance from water and arable land, problems which would mainly have affected the female

inhabitants of the settlements. It has not been possible to establish what order of distance would have been involved for no definite trace of cultivated areas was found, while the question of water supply is complicated by the falling water table as a result of recent erosion. In many areas farmers talk of springs that have dried up or streams that no longer hold back the water in pools. The air photographs show that recent and currently active gully erosion is widespread on the southern Highveld and particularly concentrated in the areas of steeper relief. Thus surface water would almost certainly have been available closer to many of the settlements than is the case today. Nevertheless it is probable that only a small proportion of the settlements were within one kilometre of a perennial water supply and that in many cases the inhabitants would have had to walk two kilometres or more, particularly during the dry winters or periods of drought.

Physical factors would undoubtedly have influenced the location of settlements but, since the actual process of choosing the situation was a deliberate decision, cultural preferences and avoidances would also have played a part. Despite the lack of archaeological evidence, an examination of Sotho historical sources indicates two significant features here. The important settlements tend to be on or beside mountains or hills, and the surrounding area including the settlement often takes its name from the mountain. Some of these mountains achieve a symbolic and even religious value, thus Ntsuanatsatsi achieved a significance somewhat similar to the Garden of Eden with which it has indeed become confused since the introduction of Christianity (Arbousset, 1846, 113; Ashton, 1952, 10). Secondly, and by contrast, rivers tend to have a sinister connotation. Several Sotho myths mention humans transformed into snakes which are in various ways associated with river pools (Martin, 1903, 143, 158 & 170). Certain reaches of the Orange and other rivers, particularly the pools below rapids or waterfalls are associated with mythical snake-like animals (e.g. Martin, op.cit., 16), and canoeists on the upper Orange have been warned of this danger by local villagers (Watkins, *perc.comm.*). Tomo-Tomo near Bothaville in the north-western Orange Free State is another 'ill-omened' place associated with a river snake by the Kubung and Taung peoples (Moletsane, 1967, 15 & 27). Furthermore, Casalis tells us that the flats and watercourses were "the special haunts of the shades" (1861, 253) and Backhouse (1844, 383) says that the Sotho of the Caledon Valley considered the "plains unhealthy". Thus rivers and their valleys may be antipathetic whereas mountains and hills are regarded as benign and even protective. Rapoport (1969, 74) has shown that among many peoples,

settlement location depends on cultural values including religion and myth rather than utilitarian factors and it seems that to some extent this was also the case with the Type V settlements.

Another distinctive feature of the Type V pattern is the arrangement of settlement units which constitute a settlement. Single settlement units are occasionally found in isolation but the vast majority occur in groups which may include anything from three or four to more than a hundred. Within a settlement the units are spaced far enough apart to be individually identifiable, usually not less than 10 metres and sometimes up to 3-400 metres from their neighbours (Plate 2). Settlements are normally separated from one another by more than a kilometre but in the more heavily occupied areas there are sometimes so many settlement units scattered about that any attempt to establish limits to individual settlements would in part be arbitrary. The settlement units may be in clusters two or three deep or, more characteristically, they may be strung out in an irregular row along the top of a ridge or scarp; both types are well developed along the Makgwareng Ridge (fig. 9).

Beyond this there is no obvious pattern within the settlement. Variability among settlement units will be examined in relation to evidence from 00 1 in the following chapter, but it is worth mentioning that on some sites one settlement unit is appreciably larger than the others and probably reflects the hierarchical structure of the society (Plate 3). But more often this is not evident and the component units of the settlement are undifferentiated.

Elongated Type V Settlement Units

Type site:	OU 2 (Settlement Unit 2)
Vernacular name:	Phuka (river)
Current name:	Smaldeel No. 719
District:	Vrede
Previous description:	None

In a limited area around the Klip and upper Vaal rivers are a number of settlement units which are somewhat different from the normal Type V. The ring of primary enclosures linked by secondary walling is still present but instead of being more or less circular it is elongated into an elliptical shape or sometimes even further into a long irregular belt (Plate 4 & fig. 49). The primary enclosures are larger and there are more of them than normal so that the settlement units are particularly large. A feature of several of them is the extension of the secondary

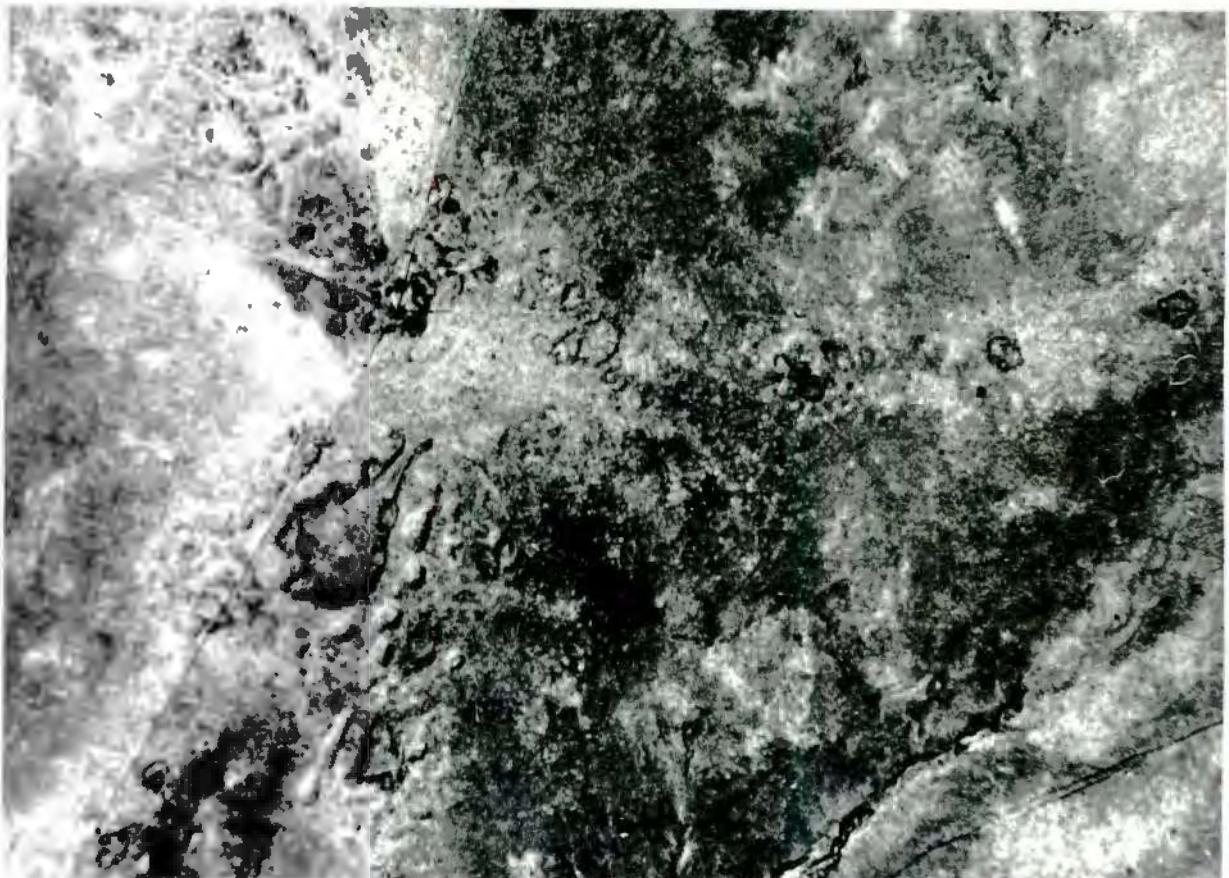


Plate 4. Air photograph of an Elongated Type V settlement unit with funnel-shaped entrance, among a group of ordinary Type V settlement units; midden mounds visible. Driekuil, to the west of DU 2, Vredé District (see fig. 45).



Plate 5. Air photograph of part of the Ntsuanetsatei settlement showing Type N settlement units along Skaaprand. Some surrounding walls are faint because of robbing (see fig. 38 for location).

walls on either side of the entrance to form a trumpet-shaped passage opening (Plate 4). This is quite distinct from the usual Type V entrance, a mere gap in a wall, and it would have greatly facilitated the driving in and out of livestock.

Only thirty-five settlements have been observed to include such elongated settlement units and in almost all cases they occur singly, no settlements having more than two. However, they are usually associated with normal Type V settlement units which appear from the air photographs to be of equivalent age, that is to say the walls of the one type have not been robbed to build the other. The distribution is shown in fig. 8 (in end pocket) and it is apparent that they are limited to a small area within the distribution of Type V as a whole. They present an interesting problem - their typological relationship with Type V is confirmed by the results of fieldwork on one of them, OU 2 Settlement Unit 2, yet they are clearly a regional specialization within this building tradition. Their size and shape, and their occurrence usually as a single unit among a number of smaller Type V settlement units suggests that their inhabitants were an economically and politically powerful group within the settlement.

Other Variations within Type V

Apart from the elongated settlement units no regular variations that would justify establishing subdivisions were observed. However, there are several exceptional features of some sites that merit brief description.

Towards the southern limits of distribution, around Harrismith, Bethlehem and south of the Sand River, Type V settlements tend to be smaller and more widely spaced apart. There is also a change in the settlement units which tend to become simpler in plan with few primary enclosures, perhaps two or three, and a corresponding increase in secondary walling around the central secondary enclosure. No detached structures around the edges of the settlement units are visible on the air photographs but on the ground rows and rings of stone usually only one course high mark the foundations of huts and other structures.

This corresponds approximately with the change of environment to the area of the Stormberg Series with its higher relief and sandstone kranses, and the appearance of bush and tree growth on hill slopes and forest patches in ravines. Rainfall is somewhat higher, 750 - 800 mm, and the grass is more sour, being transitional between the *Cymbopogon*-*Themeda* Veld and the Highland Sourveld.

It seems that the builders of the Type V settlements are thinly

spread in this area, however, there are a number of other Iron Age sites which completely replace Type V south of Mequatling near Ladybrand and continue to south of Wepener (fig. 7). These are not distinct enough to give a typological label but are referred to loosely as the Caledon Valley sites and are described in chapter 8.

A rare feature seen on the air photographs of two or three sites was a wall built along the top of a steep escarpment or krans adjacent to the settlement. At OND 2 short walls were found blocking natural pathways down the krans in front of the site and such barriers may be more common than the air photographs suggest. Such walling makes the escarpments more difficult to ascend or descend but as they do not continue around the other sides of the settlement they would be of only marginal use in defence. It seems more likely that they were built to control the movement of livestock and perhaps children.

From the more northerly areas of Type V distribution there are a few instances where the central secondary enclosure of a settlement unit has been subdivided into two or three sections. This gives the impression that two or three settlement units have been joined together to form a larger grouping. However, the occurrence is too rare to suggest any development towards a more complex or compact settlement pattern, and the few examples are probably idiosyncratic variations.

With this exception there seems to have been no tendency to develop more elaborate patterns based on combinations of Type V settlement units. Indeed the dominant impression is one of settlement units, based on fairly small kinship groupings, reasonably well separated from one another and loosely clustered into unspecialised and homogeneous settlements with a few dozen or hundreds of inhabitants.

Type N Settlements

Type site:	OU 1
Vernacular name:	Ntsuanatsatsi
Current name:	Skaaprand, Tafelkop
District:	Vreda
Other sites excavated:	OU 2 (Settlement Unit 1)
Vernacular name:	Phuka (river)
Current name:	Zoetbron, No. 151
District:	Vreda

As with Type V, the settlement unit has a group of primary enclosures arranged around in a ring and linked by secondary walling to form a central secondary enclosure. The essential difference is that the settlement unit is surrounded and defined by a wall which encloses all the structural components (Plate 5). Detached huts and other elements which are usually not visible on the air photographs occur in the area between the surrounding wall and the central group of structures.

The huts seem to have been made of reeds and dags with paved stone floors. On several sites corbelled huts have been constructed on the Type V pattern over an earlier Type N settlement unit, the older walls being robbed for this purpose (OU 1), but there is no definite evidence that corbelled huts were built as part of a Type N settlement unit.

The surrounding walls show considerable variety in shape. Some are nearly circular or oval and thus form large primary enclosures. More often they are slightly irregular with portions of straight and curved walling. One or more small primary enclosures may be attached, making the surround a secondary wall as in the case of both surveyed examples, OU 1 and OU 2 Settlement Unit 1. These settlement units both have irregular sinuous walls which is in accord with their being secondary. Part of the surrounding wall may consist of a series of scallops with their concave faces inwards; an example of this type of walling being the appendage on the western side of the OU 1 settlement unit (fig. 39).

Northwards into the Transvaal scalloping becomes more evident and on some sites such as Klipriviersberg (Walton, 1956, 49; Mason, 1962, 398 & 1968) it is the dominant feature of the surrounding walls. These sites are not classified as Type N although they are very likely related and there may well be a complete range of examples from completely scalloped through partly scalloped and sinuous to nearly circular surrounding walls. Further westwards and north-westwards in the Transvaal the situation becomes more complex. At Doornspruit in the Magaliesberg the settlement units are again surrounded by scalloped walling but the scallops are broad and each seems to form a segmental courtyard in combination with one or more primary enclosures, leaving a large central space (Jones, 1935; Walton, 1956, 46). Different again are the settlement units around Klerksdorp and Potchefstroom with their more or less incomplete fringes of scallop-shaped structures around a central group of large primary enclosures. Walton (op.cit., 48) illustrates one of them and they will be discussed more fully in their relationship to Type Z.

The Type N pattern has not been described before the present project. Mason's (1968) Class 3 defined as "clear enclosing wall and inner circles"

would include Type N but also the various scalloped types, and indeed Klipriviersberg is used to illustrate Class 3. This would also include settlement units as diverse as those associated with the Eastern Transvaal terraces, some from the Vredefort Dome, some of the Type R settlement units described below and even the traditional Zulu pattern (Biermann, 1971). Surrounding walls are a recurring feature of African settlement patterns both from Iron Age and more recent times and therefore on their own they are not a diagnostic feature. For this reason Type N cannot be equated with Mason's Class 3 which is widely distributed through the southern Transvaal.

Type N is limited in distribution to the north-eastern Orange Free State and adjacent parts of the Transvaal (fig. 8). Most sites are in the valleys of the lower Wilge, Klip and the Vaal above Vereeniging. They extend north-westwards to Suikerbosrand, south of Johannesburg, which marks the northern limit of the aerial survey. Type N may be found still further north, but in this area the scalloped surrounding walls become more numerous.

Within the complex of Type V sites on the Renoeter River south-west of Heilbron there are a few which may include settlement units of Type N. In particular the settlement on the farm Palmiet Spruit No. 144 appears to have some surrounding walls and Leidler's (1936, 27) description of the Jamaica site a few kilometres further north mentions an outer wall. It is therefore likely that there were some Type N settlements in this area, but as none are definite from the air photographs and as this is some distance west of the nearest identified examples they have not been classified as such.

Most significantly, the distribution with the exception of the Suikerbosrand area falls entirely within the distribution of Type V. It covers most of the north-eastern portion of the Type V area but does not extend quite to the limits except towards the north-west. Type N overlaps the area of the elongated Type V but is more extensive.

Environmentally therefore Type N coincides with the northern Type V areas. It is again a Highveld grassland type occurring on the Themeda Veld and its transition to the Cymbopogon-Themeda Veld but stopping short of the latter in the Orange Free State (fig. 4). An interesting point is that unlike Type V it extends on to the Bankenveld vegetation zone of the south-central Transvaal.

Settlement location follows much the same pattern as Type V and indeed settlement units of this type occur on many of the sites. However, the Type N settlements are less common and more widely spaced indicating a

smaller population. They usually occupied the more favourable situations associated with marked relief features whereas some Type V situations had relatively insignificant relief, perhaps because the more favourable were already occupied.

A few settlements comprise only three or four settlement units but on the other hand there are several with over a hundred and the proportion of larger sites seems to be higher than the Type V. The larger are usually associated with prominent features such as Ntsuanatselei (Tafelkop-Skaaprand) and Peme (Leeukop) which dominate the lower Wilge valley. The settlement may be on a hilltop or on level areas on the slopes as at Peme (Plates 6 & 7). Settlement units may be spaced out along a ridge as at Skaaprand (Plate 5), but more characteristically in the larger settlements they may cluster together up to five deep in the most favoured areas with straggling rows or isolated units spreading in several directions (Plate 6). Much depends on local topography but there is a noticeable tendency towards closer clustering than with Type V.

Some settlement units are built so close together that their surrounding walls unite. In this way irregular clumps and linear conglomerations are formed and from the air photographs it is sometimes difficult to resolve the individual settlement units. Some of the more complex examples may merit separate classification but this is not justified by the aerial evidence alone. Fieldwork was confined to settlements where the characteristic settlement units were readily visible, the conglomerations must therefore await future research.

Type V settlement units occur on many of the Type N settlements and in some cases are so numerous as to completely transform the site. They may be built beside the Type N settlement units but in many cases the central ring of primary enclosures was re-used - with some alterations - since it also conforms to the Type V pattern. Extensive wall robbing takes place and in all cases observed in the field and on the air photographs the Type N structures, especially the surrounding walls, were robbed to build the Type V pattern. This is well demonstrated by the photograph of OU 2 (Plate 8) where the settlement unit to the left of Settlement Unit 1 has its central ring of primary enclosures well preserved but the surrounding wall has been extensively robbed and in parts completely removed. By contrast, Settlement Unit 1 which was not rebuilt as a Type V settlement unit has all its walls robbed. The Type N settlement unit surveyed at OU 1 (fig. 39) was also refurbished as a Type V settlement unit by the building of some 32 corbelled huts from stone robbed from the surrounding wall and other earlier structures. This superimposition has

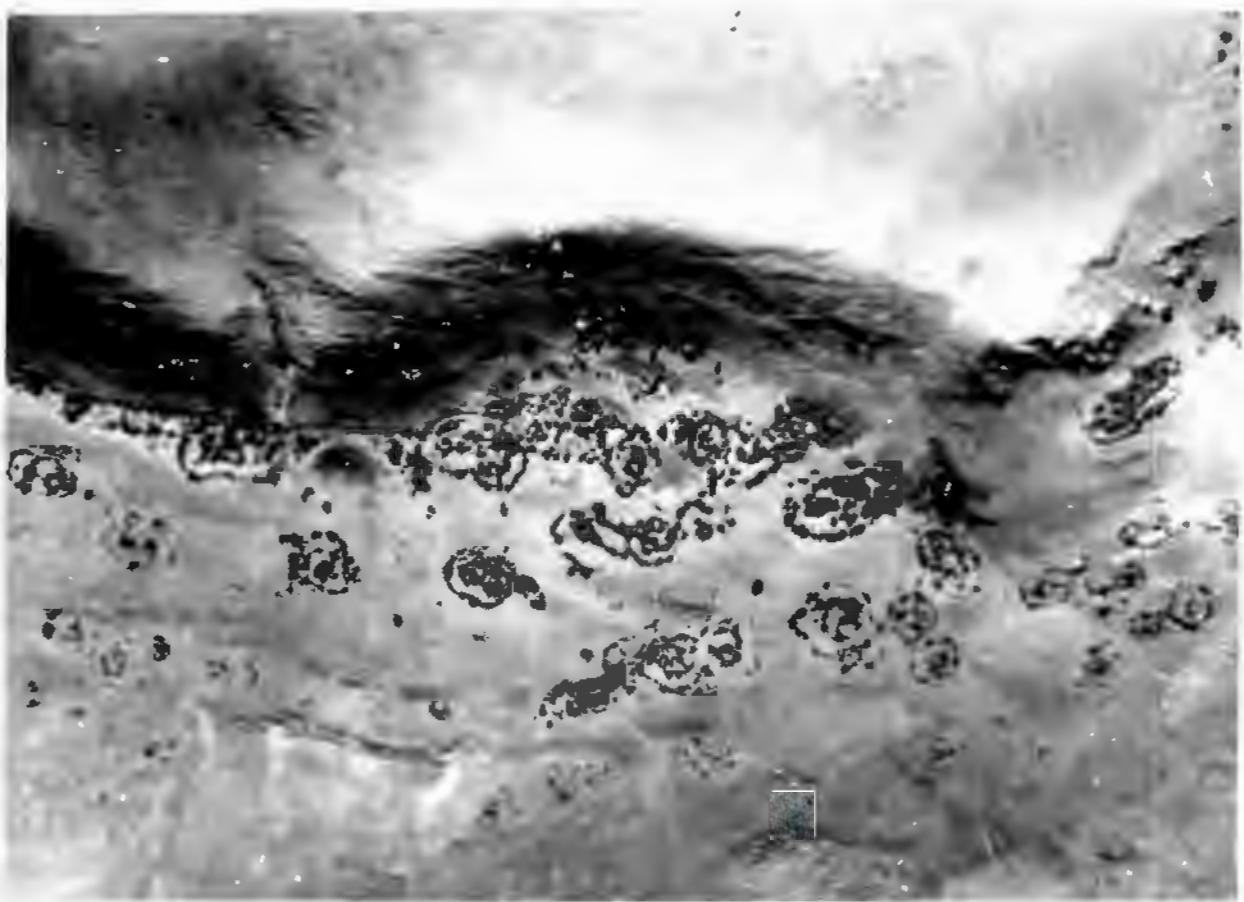


Plate 6. Air photograph of Type N settlement at Peme.



Plate 7. Oblique view of part of Peme settlement from hilltop, looking southwards.



Plate 8. Air photograph of southern part of OU 2 settlement. Settlement Unit 1 is faintly visible towards the lower right. Bolder structures are mostly Type N settlement units refurbished as Type V; the large one on the right has been further modified as a recent stock pen (see fig. 45 and Plate 42).

confused parts of the original plan and made it more difficult to understand.

The inference to be drawn from these repeated superimpositions is that the Type V settlement units are later than the Type N. Although there is as yet no stratigraphic evidence to support this, and indeed a diligent search would be required in view of the lack of deposits on many of these hilltop sites, the evidence from C.14 dates does support this interpretation.

At the entrances of Type N settlement units the ends of the surrounding walls often curve inwards to form a funnel-shaped passage leading to the central secondary enclosure. This would have facilitated the movement of livestock and prevented them entering the area between the ring of primary enclosures and the surrounding wall where the huts were built and domestic activities took place. Examples can be seen on the west side of the settlement unit from OU 1 (fig. 39) and on the one from OU 2 referred to above (Plate 8) but both have been affected by later rebuilding. Such entrances are common on Type N sites but they do not seem to be general and therefore have not been included among the diagnostic features. They have not been observed on normal Type V settlement units, except where these are superimposed, but the passage entrances of the elongated Type V settlement units are very similar and may well be derived from them, although the remainder of the surrounding wall was no longer built.

There is an unusual development at a site on the south bank of the Vaal Dam where a large cluster of Type V settlement units are apparently superimposed on an earlier Type N settlement. There are the remains of an extensive surrounding wall which at one point curves inwards to form an entrance passage that is extended as an irregular roadway for several hundred metres into the cluster of settlement units. This occurrence is, however, exceptional; the roadways characteristic of settlements and areas of terracing in the Carolina-Lydenburg region of the eastern Transvaal are rarely found on the southern Highveld.

Type Z Settlements

Previous description:	None
Type site:	DXF 1
Vernacular name:	Matloang
Current name:	Strydfontein and Main Reef
	Noe. 211 and 376
District:	Ventersburg

Other sites excavated:	OMB 1
Vernacular name:	Mophate
Current name:	Moerfontein No. 624
District:	Bothaville

Settlements of this type can only with difficulty be defined from the aerial evidence, since some of the diagnostic features are only visible on the ground or on the clearest photographs. At first sight there appear to be numbers of primary enclosures in globular clusters from a few hundred metres to about two kilometres in diameter (Plate 9). Closer examination of the clearer photographs does, however, reveal a unitary pattern within these clusters although it is poorly developed on some sites. The settlement unit has at its centre a compact group of large primary enclosures, usually from three to eight in number and often so close as to be touching. Smaller primary enclosures may be included in this group, some of them small enough to be huts, perhaps used by the herds as Walton (1956, 47) suggests. The group may be linked by secondary walling in which case the primary enclosures open into the secondary enclosure which in turn has a single entrance. This arrangement has been described by Wells (1933, 583) from Platberg north of the Vaal and has been recorded from the OMB 1 site (fig. 79) but it is often absent and is not regarded as a diagnostic feature.

Around this central group are a number of other enclosures, usually from 8 to 20 but with considerable variation. These are dwellings which comprise a hut and its front and rear semicircular courtyards, an arrangement that is so distinct that it has been given the name bilobial dwelling. On some sites, particularly the smaller ones, some dwellings may only have a front courtyard while variations with three or four courtyards are also known, but the bilobial pattern is generally predominant. The dwellings form a fringe around the central group producing a pattern similar to the petals of a composite flower. Their entrance face inwards and they are arranged side by side, sometimes touching or with walls abutting, but there are always gaps between some of them so they do not produce a continuous ring (fig. 67). The typical settlement unit therefore consists of a central group of large primary enclosures surrounded by a discontinuous ring of bilobial dwellings.

The huts within the dwellings show up as rings of stone slabs set vertically in the ground and their floors were usually paved. Corbelled stone huts appear rarely on these sites; they are uncharacteristic and suggest a contact with the Type V settlements to the east.

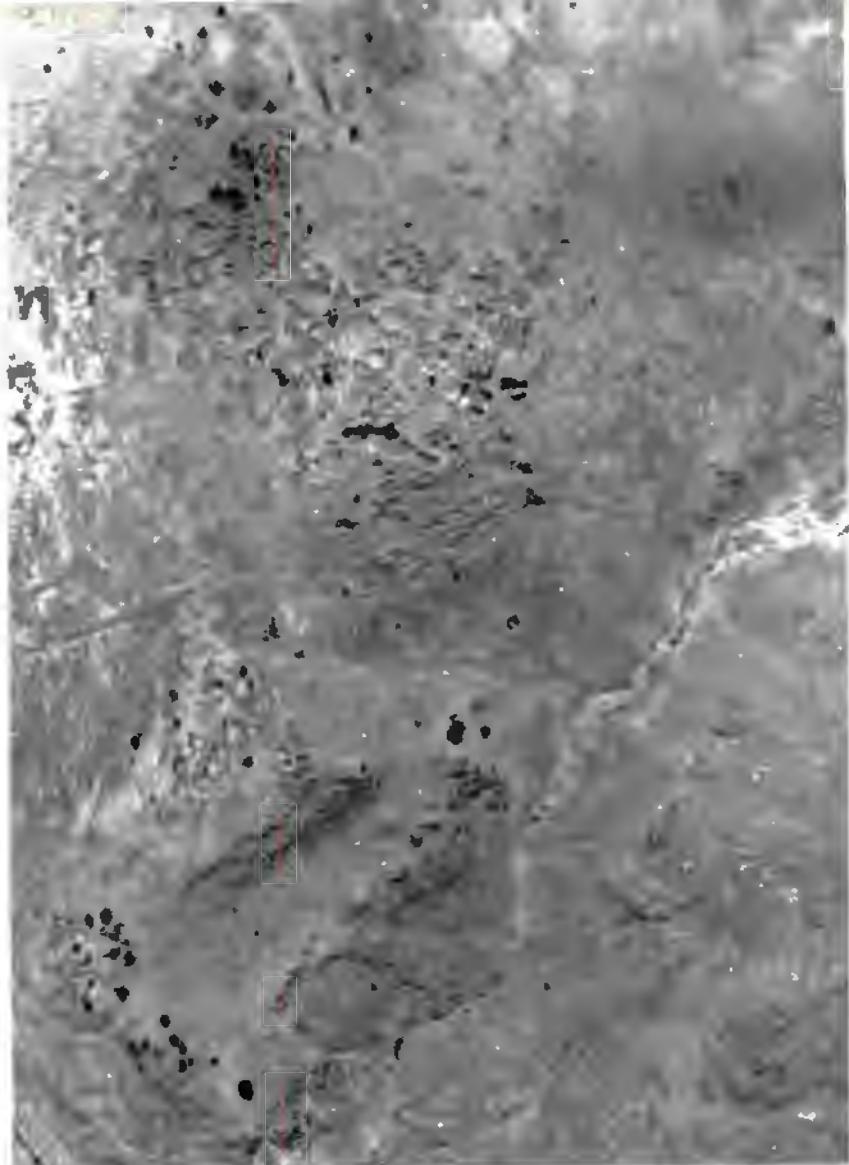


Plate 9. Air photograph of the OXF 1 Type Z settlement, showing main concentration of structures towards the north, with two smaller areas further south.

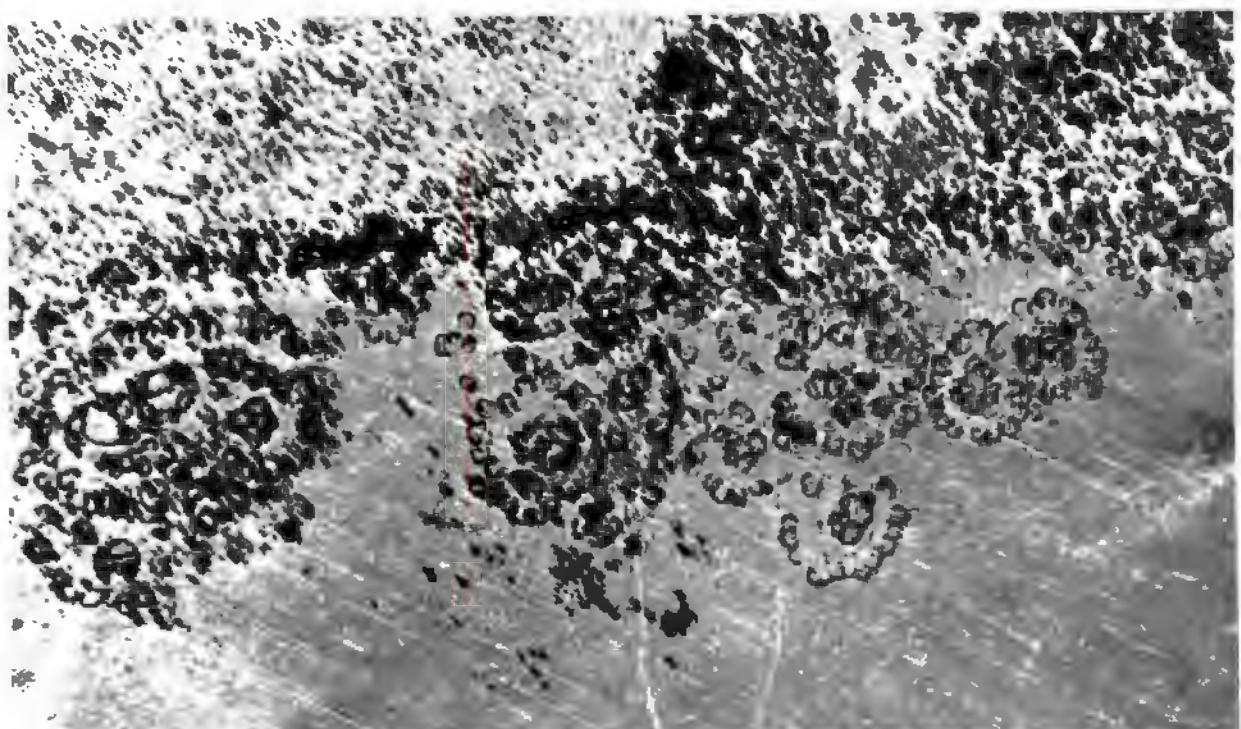


Plate 10. Air photograph of part of a settlement similar to Type Z but north of the Vaal in Klerkedorp District. The settlement units show various stages of amalgamation into larger units, increasing from left to right. This is from the northern part of the cluster of settlements around Thabeng, the former Rolong capital.

The distribution of Type Z settlements is limited to the north-western Orange Free State in the valleys of the Sand, Vals and Renoster rivers. The main concentration is in the Doornberg-Virginia-Ventersburg area where it partly overlaps with Type V (fig. 8). Smaller concentrations occur south-east and north-west of Kroonstad, at Bothaville and on the lower Renoster River.

The majority of settlements are along the central Orange Free State escarpment (fig. 1) where there is a rainfall of around 600 mm. The Bothaville concentration is in a lower, flatter region of sandy soils and around 550 mm of rain. This is the driest situation of the Free State stone settlements, with the marked exception of Type R, and it may well represent the environmental limit of Iron Age subsistence under conditions of relative stability.

It is significant that the distribution stops short of the main treeless zone of fig. 5. Although Type Z occurs in relative dry country, mainly in the Transitional and Dry Cymbopogon-Themedu Veld, the sites are all in areas where timber is available either along the escarpment or in the case of the Bothaville concentration on the edge of the Kalahari Thornveld.

The location of settlements is again influenced by relief although the area is in general one of lower relief than that of Type V. Sites are generally on flat uplands, such as Maphororong (Doornberg) and the OXF 1 site, or on gentle slopes. Again there seems to be a tendency to avoid river banks as most sites are two kilometres or more from the main rivers, but there are a few large sites such as OMB 1 within a few hundred metres of the rivers. Scarps are more gentle than further east and even where they are available they do not seem to have been favoured locations. It is interesting to see that at Maphororong where Types V and Z overlap, the former tend to be situated above scarps, both north and south facing, while the latter mostly occupy the central plateau area. However, a word of warning is required on this overlap, for the extensive bush and tree cover in this part of the Sand River valley makes the recognition of settlement types difficult and therefore the distributions shown in fig. 8 should be regarded as general indications and not a complete inventory of sites.

In the arrangement of units within the settlement, Type Z shows a patterning quite distinct from Type V. Individual settlement units may occur in isolation or detached from each other by a few dozen or hundred metres, but clusters of from three or four units and upwards are more characteristic.

The settlement units are built close together, and this, with their loose internal arrangement of structures produces the initial visual impression of a random scatter of enclosures. Even on the ground it may be difficult to resolve individual settlement units without surveying an extensive area of the settlement (fig. 67). Local topography will affect the pattern and neighbouring settlement units may be so close as to distort the position or even the shape of structures. But in general there are gaps between settlement units and in the field these proved to be useful as access roads for vehicles. Their width is irregular and they often contain accumulations of ash and other midden material.

Apart from the complexity and distortion of pattern which results from settlement units being tightly packed together, there is evidence of a further development on some of the larger sites, particularly the northern ones. Where two or more settlement units are contiguous the surrounding fringe of dwellings may be interrupted so that the central group of primary enclosures of each settlement unit falls within the same open space. This amalgamation is apparent on the air photograph of a similar settlement north of the Vaal near Klerksdorp (Plate 10), where the individual settlement units are still apparent although some are joined. Further combination produces a large settlement unit out of a number of smaller ones. The central group of primary enclosures from each component settlement unit may still be distinguishable but several such groups are brought together in the central area and they may even be interlinked by secondary walling. The dwellings are then built in a more or less circular or oval ring around this aggregation of groups to complete the pattern. In general the larger the settlement unit, the larger will be its central primary enclosures. The larger settlement units may also have a double row of dwellings around parts of their circumference. An example of these large amalgamated units can be seen on the left side of Plate 10, while the ground plan from OMB 1 (fig. 79) covers a sector of one which includes a group of primary enclosures linked to adjacent groups, and part of the surrounding fringe of dwellings.

But it can be repeated that these patterns are not immediately clear from the air photographs, and the variability within settlements complicates the task as does the tree cover present on many of them. The earliest mention of a Type Z site is that of Bennie (1956, 10) written in 1843. Near the Sand, presumably at Sandrivierspoort he describes an extensive ruined town which "consisted of circular stone kraals adjoining circular stone kraals 5 or 6 feet in height, with lower stone walls many of which also formed small circles, and others running in lines bending or

nearly straight between the kraals and the lower and smaller circles; thus forming numerous areas of various extent and form". He also mentions stone hut foundations and courtyards but the overall pattern understandably eluded him.

Faced with similar sites in the Transvaal, Mason (1968) has established his Class 4 with its three subdivisions. The first division, Class 4a, is defined as:- "no enclosing wall; scattered circles forming a closely related whole"; Classes 4b and 4c being essentially variations with greater extent and dispersion of structures. Many Type Z sites could be included in such a category, but in the absence of any definition of a pattern among the structures this would be misleading.

Little can yet be said of the distribution of Type Z or similar settlements in the Transvaal although there are some interesting indications. The examination of air photographs covered a strip of the southernmost Transvaal and showed that sites similar to that shown on Plate 10 extend from north of Klerksdorp to the northern ridges of the Vredefort Dome. Eastwards of Vereeniging they become difficult to distinguish from settlements like Klipriviersberg with their scalloped surrounding walls but further west the difference is more distinct. They seem to be the Transvaal equivalent of Type Z but have not been classified as such in the absence of supporting field evidence. From the air photographs the bilobial dwelling pattern is seldom apparent but in other respects the settlement units are of the Type Z pattern and indeed are often clearer and larger than those south of the Vaal. The fringe of dwellings appears as a series of semicircular stone walls forming a scalloped line where they are contiguous. This indeed was the case at OMB 1 just south of the Vaal, for the walls of the front lobes, not being built of stone, are not visible from the air (fig. 79). It seems most likely therefore that some of these south-western Transvaal sites will prove to have bilobial dwellings on being examined in the field.

Type R Settlements

Previous descriptions: Van Riet Lowe (1931). Afvallingskop.
Du Toit (1964). Driekopseiland.

Type site: OFD 1

Vernacular name: Gumaap (Riet River)

District: Koffiefontein

The settlements along the Riet River from Kalkfontein Dam to near the confluence with the Vaal are not only geographically and environmentally distinct from the other types described here but they appear to be based on a different system of subsistence. Furthermore the historical and archaeological evidence suggest that they may be the work of a Khoisan rather than a Bantu-speaking group. As they have relatively little in common with the main Iron Age settlements they will be considered separately in chapter 12 and only a brief outline of some of their main characteristics will be given here.

The Type R settlement unit consists of a particularly large and approximately circular primary enclosure, which served as a stock pen, with several smaller primary enclosures arranged around it (Plate 11). In a minority of cases there is a surrounding wall but in no case had this definitely been completed and some bordered only one side of the settlement unit. Secondary walling linking primary enclosures or forming small secondary enclosures occurs on several settlement units but it does not seem to produce any characteristic patterns. The smaller primary enclosures vary considerably in size and number, there being on average about five per settlement unit and they tend to face the large central enclosure. Some were used for domestic activities but their exact function is still little understood. In general these settlements were poorly built and their components are relatively dispersed when compared to the types described above. There are few settlement units per settlement, which, together with a greater distance between settlements indicates a relatively low population density. The pattern of site location, described in chapter 12, also distinguishes Type R from the other settlement types.

The programme of fieldwork described in the following chapters was based on the aerial analysis. Seven sites of the four main settlement types described above were excavated as well as one of the Caledon Valley sites. Together these types cover the great majority of known Iron Age occurrences on the southern Highveld. In addition several settlement patterns of localised distribution were observed on the air photographs but there was insufficient time available to examine them in the field. For this reason they have not been defined in detail and indeed little can be said about them at this stage, but as they present interesting problems for future research brief descriptions will be given.



Plate 11. Air photograph of Type R settlement units at Afvallingskop, Koffiefontein District. Linear object at top is modern canal. Settlement unit at right on hilltop is the largest of this type.

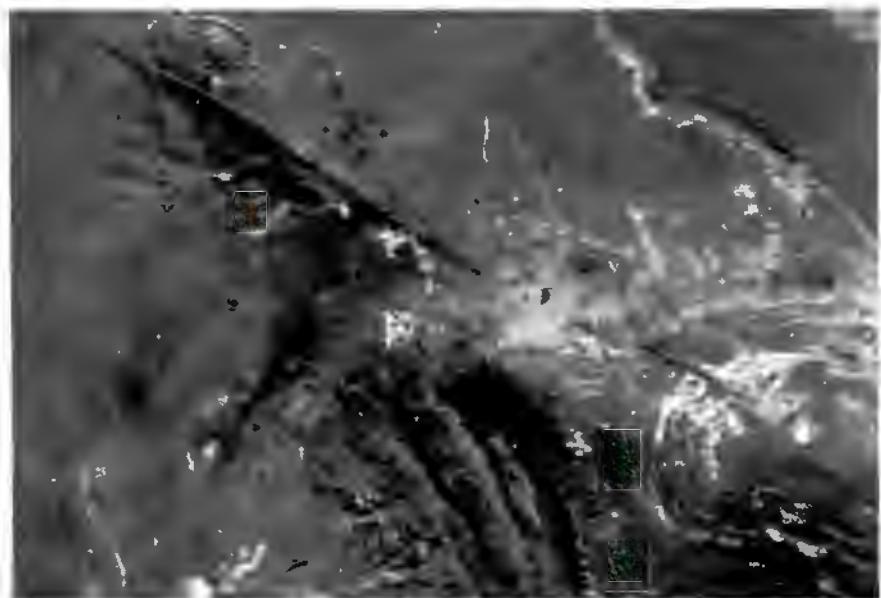


Plate 12. Air photograph of a settlement in the Elands River valley with poorly developed pattern and some concentric structures. N.B. choice of location beside dolerite dykes.

Vredefort Dome Settlement

As mentioned above the Vredefort Dome is an area that is environmentally distinct from the rest of the Orange Free State, and it was densely settled in Iron Age times (fig. 8). Several settlement types are present including a few of Type V to the east, and some of the Transvaal settlements resembling Type Z to the north. In addition there are numerous structures with surrounding walls, which are shown as stars on the distribution maps, figs. 7 & 8. Towards the east the surrounding walls are usually scalloped and they resemble the Kliprivierberg examples, while the majority towards the west have nearly circular surrounding walls. The latter show some resemblance to Type N but do not seem to include the central secondary enclosure formed by the ring of primary enclosures, and they have therefore not been classified as Type N. The concentration and variety of Iron Age settlements on the Vredefort Dome point it out as a valuable area for future research; in particular it may help to explain something of the origins of and relationships between the different types of settlement in the southern Transvaal and Orange Free State.

Elands River Settlements

In a limited area of the Elands River valley just north of Witzieshoek are a number of settlements shown as triangles on the maps (figs. 7 & 8). Although these hardly justify a separate category on the basis of the air photographs alone they are distinct from Type V, which also occurs in the neighbourhood, and may represent a group of related settlements. They consist of irregular scatters of medium and large primary enclosures sometimes in small groups and sometimes with additional secondary enclosures attached (Plate 12). A feature of some sites is the construction of one more or less circular enclosure inside a larger one forming a concentric pattern. On most sites the structures are rather dispersed and some show evidence of rebuilding. Environmentally they reach into the high rainfall Highland Sourveld zone which was generally avoided by the settlements further north. There is higher relief and sandstone outcrops are common, but dolerite dykes seem to have been favoured localities for building. Little more can be said without field investigation, but they may prove to be relatively recent and connected in some way with the history of the present population of Witzieshoek.

Settlements in the Upper Tugela Basin

Below the Drakensberg Escarpment in Natal there are a number of stone settlements in the valley of the upper Tugela and some of its tributaries. These extend as far as the southern and eastern limits of the present aerial survey around Bergville and Ladysmith. Iron Age structures built of stone are known from beyond this area in Natal, for example at Moor Park south of Estcourt and even east of the Buffalo River in Zululand, but they seem to become rarer in areas where timber is available.

The air photographs show numbers of primary enclosures loosely grouped but not appearing to follow a very distinct settlement pattern. Settlement units seem to be small and rather dispersed. Historical evidence suggests that they predate the rise of the Zulu military empire, for the Upper Tugela was virtually swept clear of population in the first half of the nineteenth century. A programme of research in this area is planned for the near future.

OO 1, MAKGWARENG

"Our camp was pitched on a little flat, rising ground, distinguished only by the number of enclosures of stones, in which the Mantetis formerly shut up their cattle. Thither we conducted ours, to prevent them being devoured during the night by the wild beasts."

Arbousset & Daumas, 11th April, 1836,
near Makgwareng.

The Makgwareng ridge and its neighbourhood was selected for examination in the field because of its cluster of Type V sites which are fairly centrally situated within the distribution of this settlement type and well away from the distribution of the other types. Makgwareng with its south facing scarp was a particularly favourable location (Plate 13) and it supports one of the most extensive Type V settlements, with others of various sizes and in various situations in the vicinity.

The environment of this part of Lindley District in the north-central Orange Free State is representative of a large proportion of the region in which Type V settlements are found. The topography is characteristic; the valley of the Vals is overlooked by ridges and hills topped by doleritic sills on which the sites were built (fig. 9). The valley is fairly broad but narrows towards Lindley town. In places sandstone cliffs outcrop close to the river and at Veenkop two rock shelters contain paintings from the Late Stone Age. Away from the river and above the valley the topography is gently undulating and in the flatter areas - the northern parts of the map (fig. 9) - pans have developed. Figure 9 covers the north-eastern end of the cluster of settlements on the Vals River. To the north and east no further sites were observed until the valley of the Liebenbergvlei is reached (fig. 8).

Most of the settlements were examined in the field and the OO 1 site on Makgwareng Ridge was selected because it included well preserved structures and considerable midden deposits (Lat. $S27^{\circ}57'20''$ Long. $E28^{\circ}04'$). The Sotho name Makgwareng is used to describe the ridge, for although the name does not appear on published maps it is in local use. It is the locative form of lekgwara - a stony hill, and could be translated as the place of stones. (I am indebted to Mr. J.R. Masiea of the School of African Studies, University of Cape Town for this information.) According to the orthography current in Lesotho the spelling would be Makhoareng

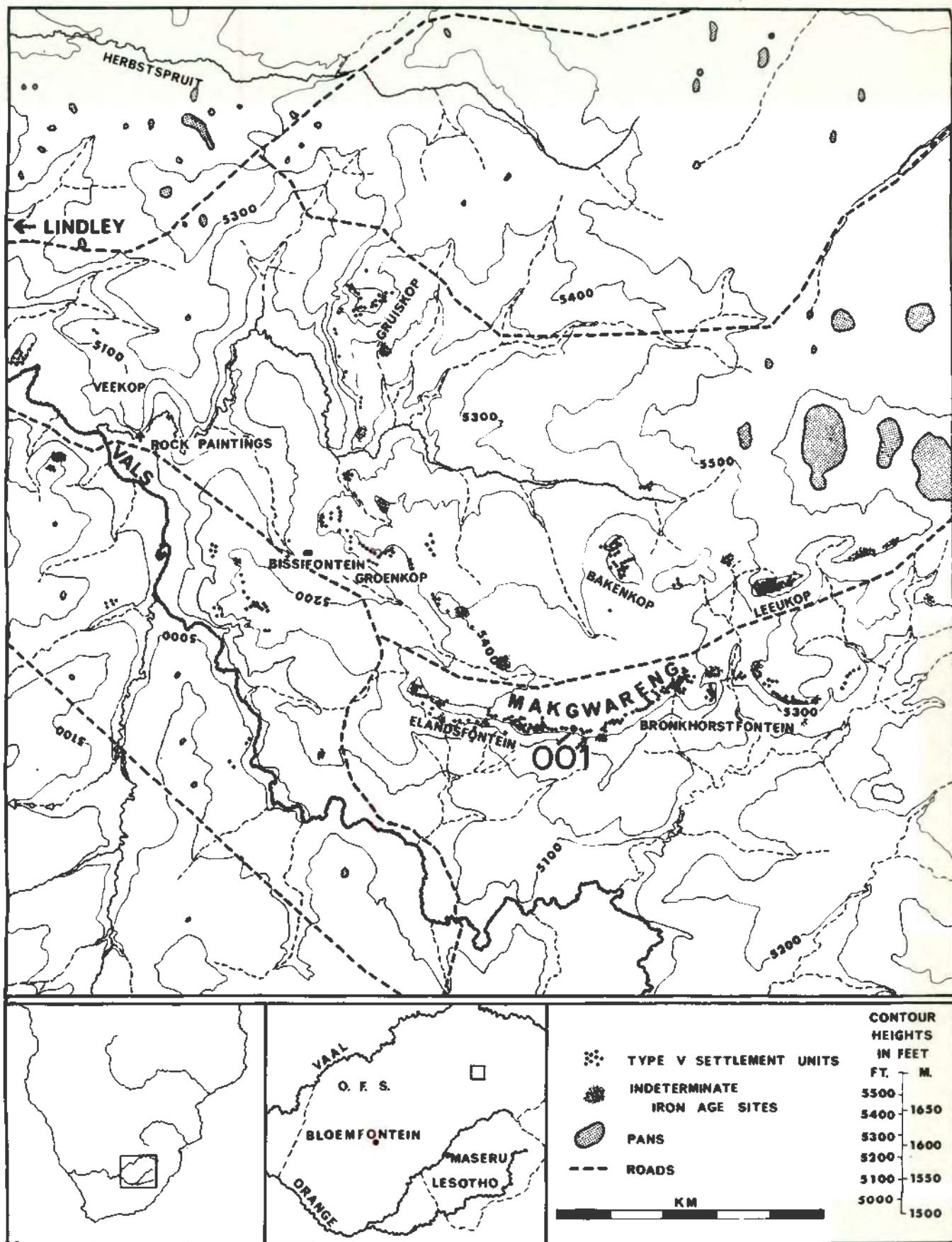


Fig. 9



Plate 13. View of the Makgwareng ridge from the west.



Plate 14. Interior of a corbelled hut showing roof construction. Sedan, Lindley District.

(Webb, pers.comm.). Most of Makgwareng is included on the farms Elandsfontein No. 990 and Bronkhorstfontein No. 991 but the use of the former name would create confusion in the archaeological literature and throughout this project farm names have been avoided as site names.

With so many settlement units in the area the selection of one for excavation proved difficult. The aim was to examine a single settlement unit in detail so that the various components could be described and their relationships and functions explained. By excavating a large proportion of the settlement unit it was hoped that numerical information on variability could be obtained as well as a large sample of cultural material and occupation debris. The main requirements were therefore that the settlement unit should be sufficiently separated from its neighbours so that its structures and middens could be identified, and that the structures should be relatively well preserved and the middens should be of suitable size and separation for a number to be excavated and compared. A settlement unit towards the eastern boundary of Elandefontein farm seemed most suitable and it had the additional advantages of including a large number of structures in a compact area and having a few earlier, robbed walls nearby which suggested the possibility of finding earlier stratified material. Work at the 00 1 site consisted of excavating this settlement unit and also of examining the portion of the settlement between the eastern fence of Elandefontein and the beacon 1,5 km further west along the ridge. Data on the structures of 25 settlement units were collected and three burials were excavated in this area, while measurements were taken of the thirteen most complete corbelled huts that were found along the entire 8 km of the ridge.

The building tradition

Being built of undressed stone, corbelled huts tend to collapse and in most areas only a few survive in a complete or near complete state. Once collapsed, so much rubble fills their interiors that they must be cleared before measurements can be taken. For this reason only the more or less complete examples were measured. The stone on this site is not of particularly good quality for building and the large, well-built corbelled domes of some sites, for example Sedan (Plate 14), do not occur here. Hut dimensions are given below in for the form of the smallest and largest and the arithmetic mean for each. The means from a slightly smaller sample measured by De Jager (no date) on several sites in the Orange Free State are included for comparison.

Internal Measurements in Centimetres

	00 1		From De Jager	
	Min.	Mean	Max.	Mean
Front-rear	104	174	260	206
Left-right	100	182	279	180
Height	80	115	164	114
Doorway				
Width at top	39	51	71	48
Width at bottom	31	43	67	
Height	43	67	91	

The huts may be circular or elliptical in plan and the smaller ones would not permit an adult to stretch out fully, nor was it possible to stand upright in any, yet several people could be accommodated in sitting or curled up postures without being squashed together. The smallest doorways were uncomfortable to enter but the others could be entered by crawling on hands and knees or even by crouching. The huts are not completely rainproof and one had a small drain about 10 cm wide and deep passing under its rear wall.

The large volume of dolerite in the walls and roof act as a 'heat sink' while the roughly hemispherical shape provides maximum volume with minimum surface area for absorption or radiation of heat. Rapoport (1969, 89) has shown that the use of high heat capacity materials, such as stone, and compact geometrical forme are characteristic of dry areas with large diurnal temperature variations. It was frequently noticed that the corbelled huts were warmer at night and cooler at midday than the open air, but no measurements of this effect were taken.

In the sample of 25 settlement units the orientation of the doorways of huts was measured where they were not too badly collapsed. Those forming part of the ring of primary enclosures around the central secondary enclosures would to some extent have their orientation controlled by position and therefore they were considered separately from the detached huts, which could face any direction. However, the samples of 53 and 48 respectively do not show any preferred orientation.

	N	NE	E	SE	S	SW	W	NW
Huts around secondary enclosure:-	8	7	3	8	8	6	6	7
Detached huts:-	6	5	4	5	10	3	8	7

Of the 65 huts around secondary enclosures the great majority open into the enclosures and only five definitely open outwards. At Vegkop, 55 km further north, there seems to have been a higher proportion with external access (Van Riet Lowe, 1927). One hut is built within a secondary enclosure.

A feature of many corbelled huts is the small space enclosed by secondary walling at their entrances. The walls abut on to the sides of the huts and enclose a space of about the same size as the hut floor. The walls are low and usually poorly built, with a gap opposite the hut doorway or at one side serving as the entrance (fig. 13). These small courtyards have been described by Walton (1956) who uses the Sotho name lelapa for them. Lelapa seems to refer to almost any courtyard but it is used here in a more restricted sense just for those built at the entrances to corbelled huts.

Of the detached huts almost half (35 out of 81) have a lelapa whereas only two out of the 65 huts around secondary enclosures had well developed examples. This is rather surprising since livestock would have been driven through the secondary enclosure to get to their pens, so that without a lelapa the huts that open inwards would have lacked living areas screened off from livestock at their entrances.

In fig. 10 the number of huts and larger primary enclosures per settlement unit are shown in relationship to one another. The settlement units are arranged in order of increasing number of corbelled huts, those built around the secondary enclosures being shown as a subtotal. The points on the diagram are joined by lines to make for easier viewing; the result is not, however, a graph.

The mean composition of a settlement unit comprises six huts and three larger primary enclosures, but there is considerable variation especially in number of huts, which ranges from 1 to 19. All units have at least one hut among the structures around the secondary enclosure but few have more than three. A few of the smaller units have no detached huts. Although the larger units do show some increase in number of central huts the correlation is very variable and it appears that the proportion of detached huts increases more than the proportion of central huts among the larger units. The sample is, however, too small for any conclusions to be reached on this point.

The smaller settlement units have from one to three larger primary enclosures while the larger units have from three to five, but again there is considerable variability (fig. 10).

The diameters of the larger primary and the central secondary

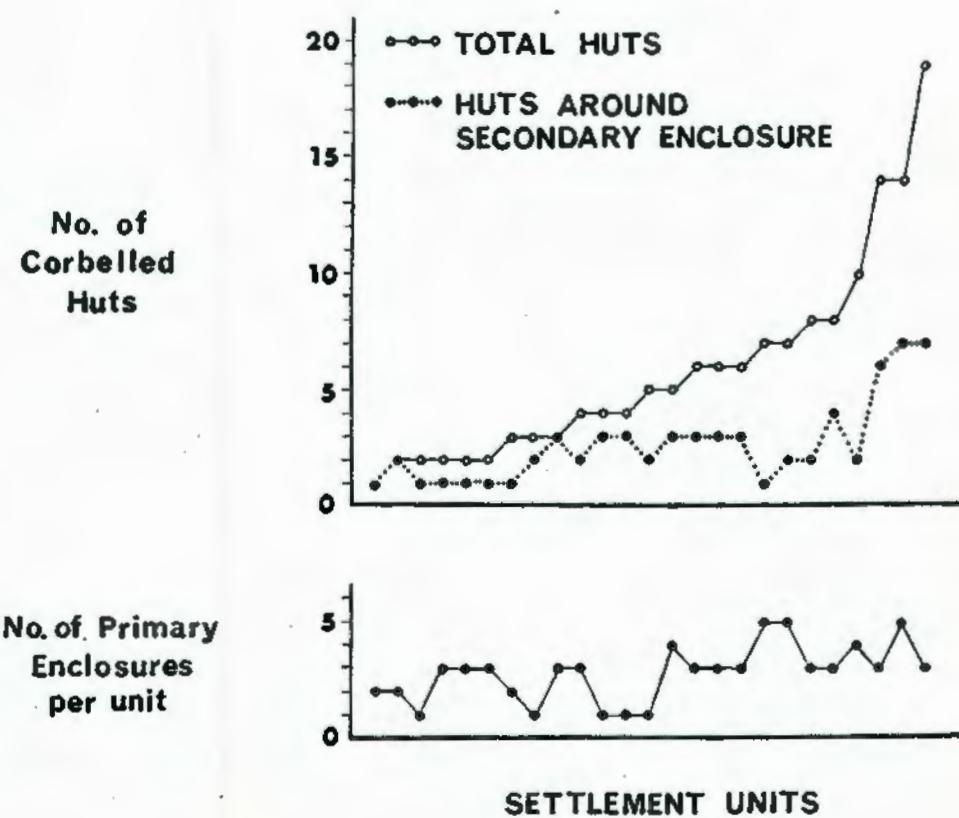


Fig. 10
Number of structures per settlement unit

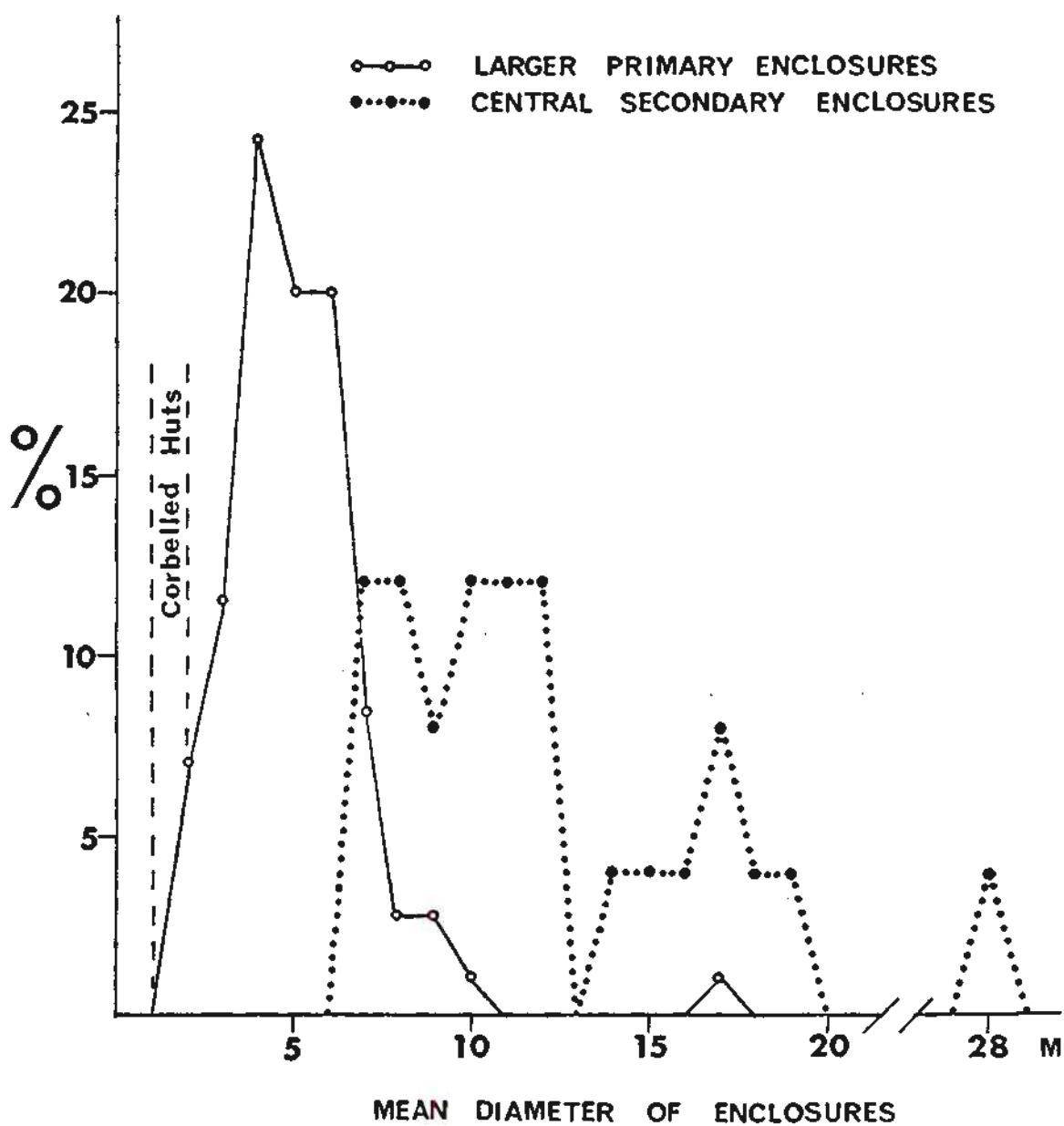


Fig. 11

enclosures are shown in fig. 11. In each case two measurements of the internal diameter were taken, approximately at right angles to one another, and the mean of these is used. The primary enclosures are quite small, varying from 2 m - the size of the larger corbelled huts - up to 10 m with one exception at 17 m. Individual examples of larger primary enclosures were observed on this site and elsewhere, but in general on Type V sites these enclosures are small, for instance when compared to those on Types Z and R sites.

The secondary enclosures are more variable in diameter and indeed, being less regularly shaped, the diameter is less accurate as an indication of size. Nevertheless, they are certainly larger on average than the primary enclosures although there is a broad overlap. The data on which this description is based are included in Appendix 1.

Towards the eastern border of Elandsfontein there is a small outcrop of sandstone on the edge of the escarpment. This has been indurated by contact with the intrusive dolerite of the sill and has a poorly developed conchoidal fracture for which it was exploited in Stone Age times. The Iron Age inhabitants used it for grindstones and, in the immediate neighbourhood of the outcrop, for building. Because the whole ridge consists of dolerite it was not possible to determine the exact source of this building material, but because of its localised occurrence the sandstone must all have come from this and one other outcrop several hundred metres further east. This offered the opportunity of determining how far the building material was carried, and therefore the area around the outcrop was surveyed (fig. 12) and the proportions of sandstone and dolerite in the five neighbouring settlement units were counted. The percentages are based on counts of about 200 stones along a sample length of wall on each unit. On fig. 12 the units are shown as circles and the percentages as sectors. The visible outcrops of dolerite are also shown but there may have been other sources as the whole area with the exception of the sandstone outcrop consists of dolerite. The proportion of sandstone drops off steeply from 91% right beside the outcrop to 17% at a distance of 130 metres. Further settlement units off the diagram to the west had virtually no sandstone at all, so it would seem that this distance is about the maximum that the stone was carried for building purposes.

The technique of building both walls and corbelled huts has been described in some detail by previous authors (Van Riet Lowe, 1927 & 1944; Laidler, 1936; Walton, 1956) so it requires only brief mention here. The technique used at OO 1 and indeed on the great majority of Iron Age sites known to the writer is to build the two faces of the wall with the larger

USE OF SANDSTONE AND DOLERITE FOR BUILDING,
RELATED TO DISTANCE FROM OUTCROPS

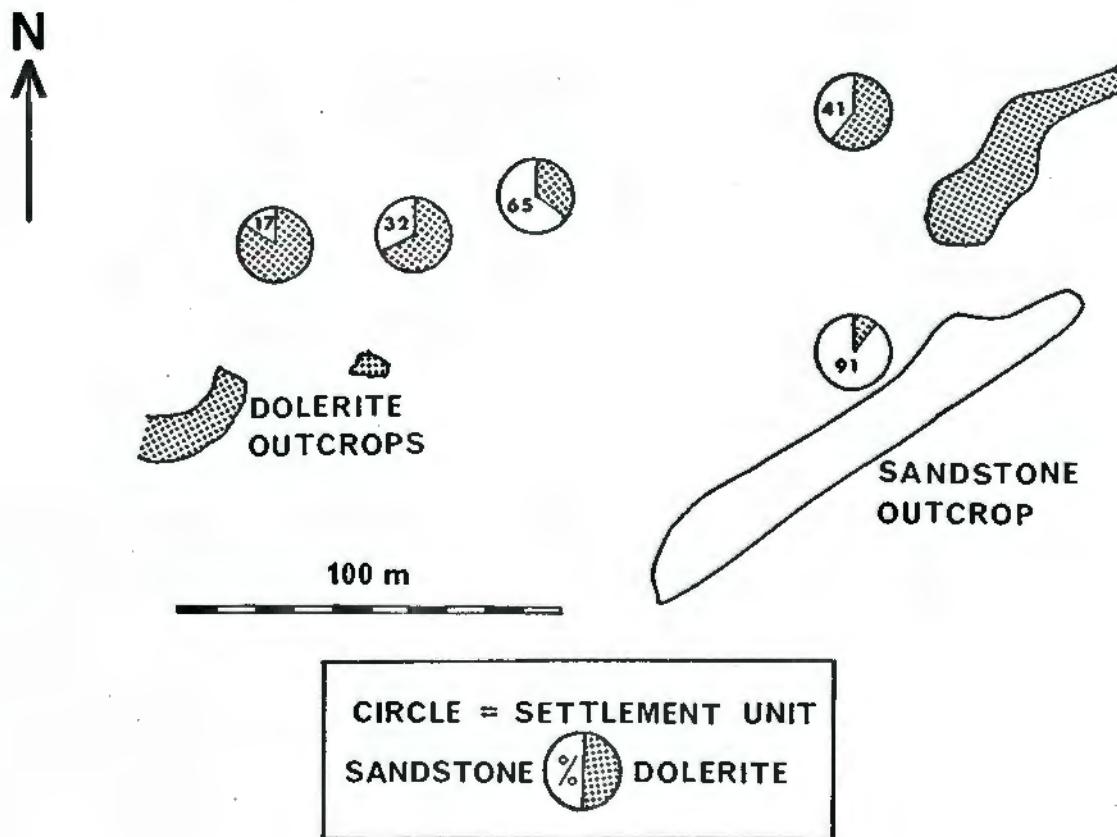


Fig. 12

and, if available, the more regularly shaped stones. The intervening space is filled with smaller rubble and the two faces tend to slope inwards so that the wall becomes narrower towards the top. No foundations are dug but the basal stones are often of a particularly large size and where the wall has been robbed it may be only these large stones that remain.

Entrances are normally built with large and carefully selected blocks, for otherwise individual stones would easily be dislodged. Several authors have commented on the smoothness of these entrance stones, attributing this to the rubbing of animals and people as they passed in and out (Van Riet Lowe, 1927, 219; Laidler, 1936, 27). However, in view of the hardness of dolerite it is unlikely that this action alone would have produced the considerable rounding visible on many entrances. Furthermore, rounding occurs at the entrance to corbelled huts as well as the larger enclosures and is often present on edges that would not have been touched by anyone using the entrance.

Elevations of the entrances of seven corbelled huts (those which retained their lintels) from the excavated settlement unit are shown on fig. 14 and the rounded edges are indicated by stippling. Considerable battering has been applied to many stones and it is evident from the extent and, particularly on Huts 1 and 17, the position of the rounding that the sharper edges were deliberately smoothed off by battering during the process of building.

It is interesting to note that the Sotho population in this area still build dry-walling by the same technique. When asked to restore a wall two of the labourers set to work on opposite sides of the wall, selecting the larger blocks for the faces and filling the intervening space with rubble as they went (Plate 15).

THE EXCAVATED SETTLEMENT UNIT

A total of four months was spent at OO 1, September-October of 1967 and January-February of 1969. Mr. Cedric Poggenpoel was present throughout this period and a great deal of the fieldwork was carried out by him or under his supervision. I would like to record a large measure of gratitude to him and his wife, Gwen, for their invaluable contribution, and also to Tony Humphreys, Leon Jacobson, Julie King, John Parkington, Frank Schweitzer and Colin Sutherland who spent some time working on the site.

From the settlement unit there is an extensive panorama southwards across the Vals River and beyond to the mountains of the northern Caledon Valley some 70 km away. Northwards the view is restricted by hills



Plate 15. Contemporary wall building using the traditional technique of larger blocks for the two faces and rubble for the core. Makgwareng.



Plate 16. The OO 1 settlement unit after excavation, from the north-east.

including Leeukop, Bakenkop and Groenkop which also support Type V settlements, while the shallow valley between these hills and Makgwareng has an apparently perennial supply of water at Bissiefontein (fig. 9). The other permanent supply of surface water would be the Vals River but formerly there are said to have been small springs at the foot of the ridge. On examination these proved to be small hollows with shallow watercourses leading from them a few metres down the lower slopes and then merging into the general topography. Today they are dry and it seems unlikely that they would ever have been sufficient for the regular watering of cattle but they may have supplied domestic needs. Otherwise the nearest perennial water supply seems to have been about 3 km away.

In places the scarp is very steep but there are several natural routes which provide easier access and these tend to show more erosion. However, there is no evidence of any deliberate modification. Various bushes grow among the ruins while on the scarp face there are some stunted trees but otherwise the vegetation is essentially grassveld. Today the ridge and particularly the ruins provide a refuge area for a variety of floral and faunal species including among the latter small antelope, porcupine, hare, mongoose, ground squirrel, snakes and a variety of invertebrates and birds, but this would hardly have been the case during the occupation. In view of the concentrated settlement the natural food resources of the ridge would have contributed little to the diet and exploitation would rapidly have exhausted them.

The settlement unit in its final form (Plate 16) comprised 19 corbelled huts and three larger primary enclosures which are numbered on the plan (fig. 13). There are several other structures whose shapes have been altered by rebuilding. Around the structures and keeping a little distance from them is a ring of eight middens, three of which were excavated. The unit itself was divided into five arbitrary areas designated Zones A-E for convenience in excavating and drawing detailed plans. The order of numbering structures, middens and zones is clockwise starting at the entrance to the central secondary enclosure (fig. 13).

The natural stratigraphy of the site consists of a hard brown soil usually only a few centimetres thick overlying an horizon of reddish-brown weathered dolerite. The weathering may extend to some depth but in places the fresh rock appears just below the surface. Most commonly there is a zone of about 10-20 centimetres where there has been sufficient chemical weathering to reduce the dolerite to a crumbly consistency which can be broken up by pick but not easily by spade. This horizon is important for it provided daga for earth floors, while excavations made into it by the

OO 1

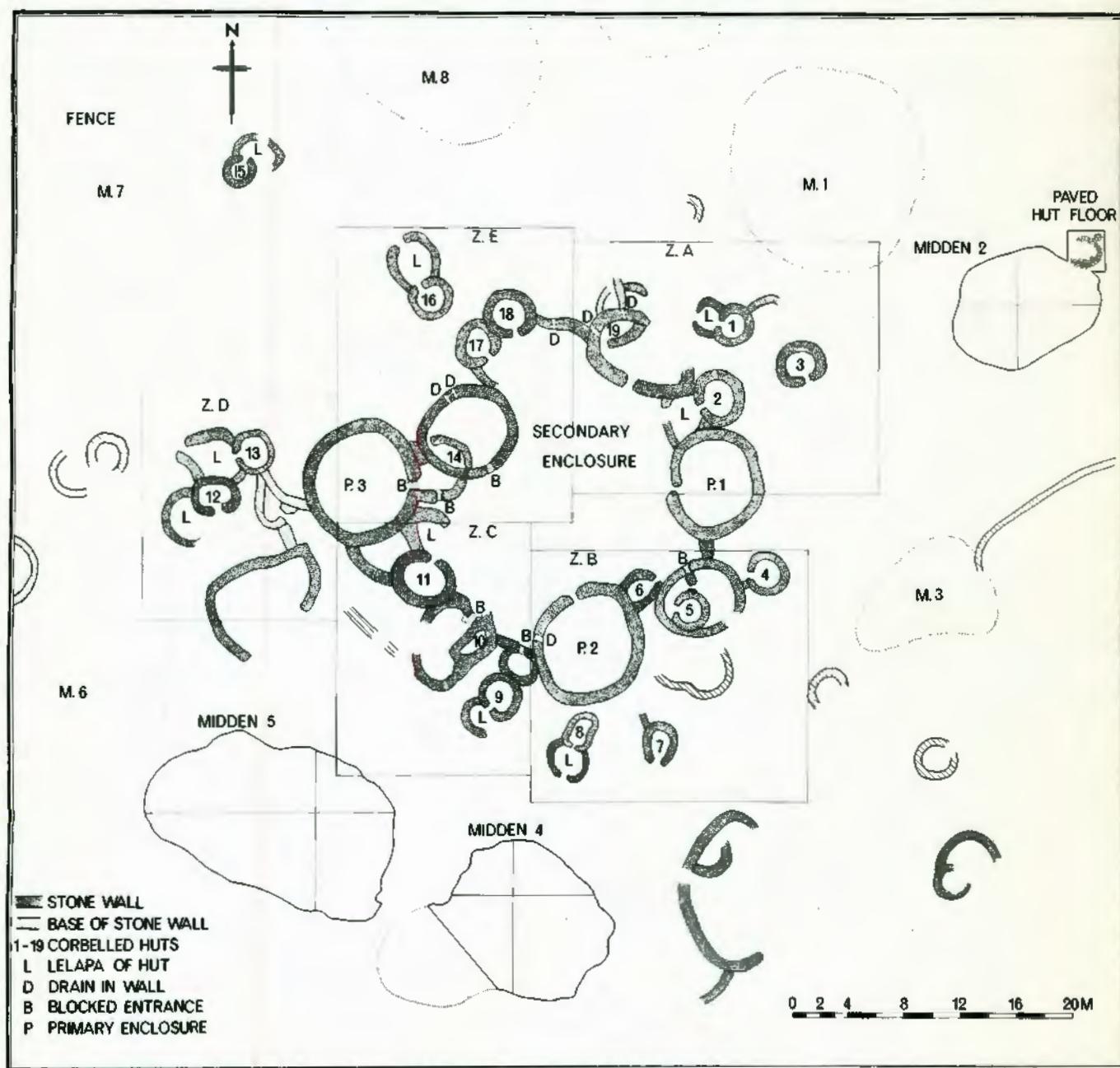
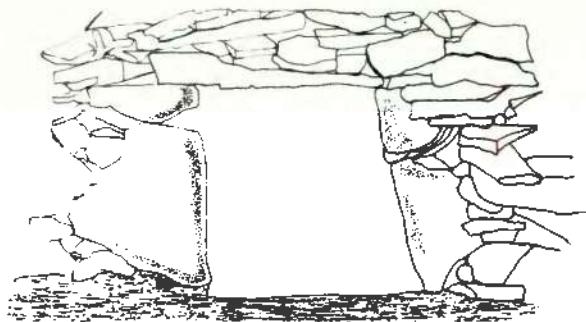
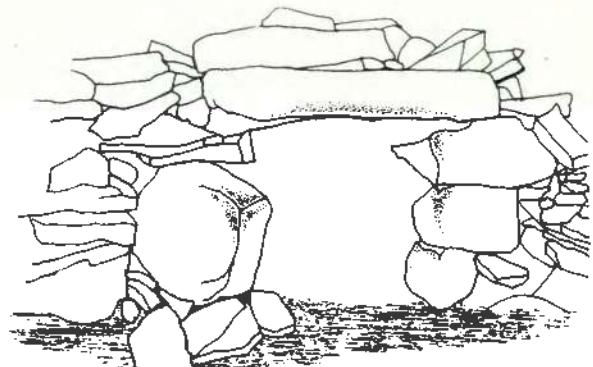


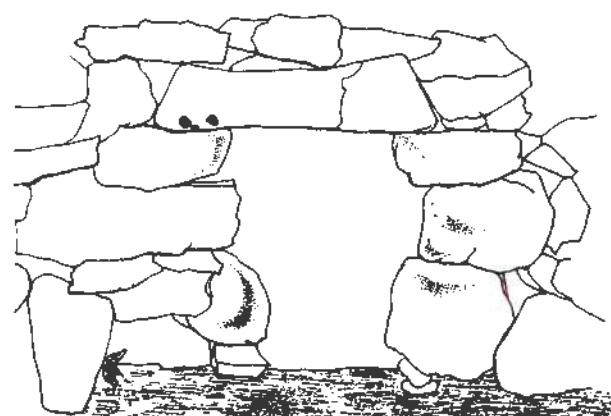
Fig. I3



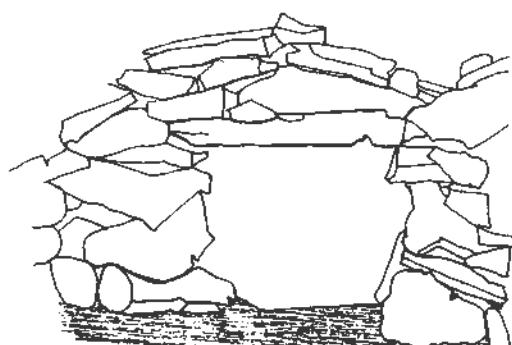
HUT 1



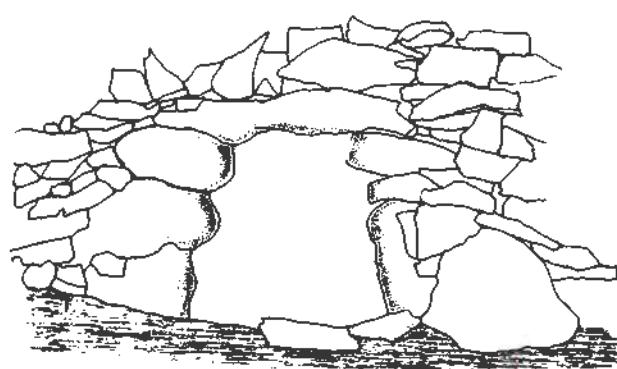
HUT 4



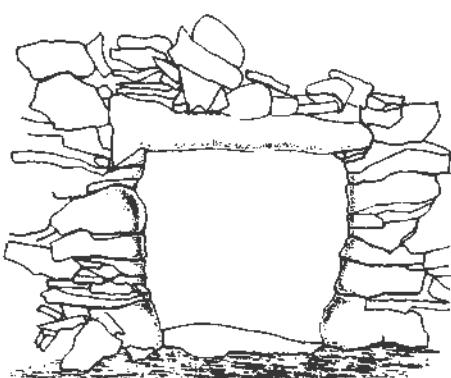
HUT 6



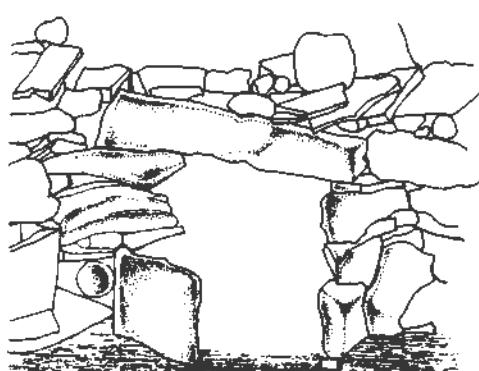
HUT 8



HUT 12



HUT 13



HUT 17

001
ENTRANCES TO
CORBELLED HUTS
Stippling indicates artificially
rounded edges



Fig. 14

Iron Age occupants provide evidence of earlier structures.

The deepest of the archaeological deposits are the middens, which may reach a little over half a metre in places. Within the settlement unit itself the deposit averages about 10 cm with a few deeper sections in hollows and among the structures. What stratigraphy there is, occurs in isolated patches which cannot be correlated, although their relationship to neighbouring structures can sometimes be determined. Under these circumstances most of the area was excavated as a single layer, the main aim being to determine as much as possible about spatial relationships within the unit. This strategy seemed justified as the site appeared to represent a single occupation. In the final stages of excavation the discovery of an earlier Iron Age occupation without stone structures indicated that closer attention to the minor stratigraphy might have yielded more information. However, in view of the shallow and mainly coarse grained deposits, useful stratigraphic excavation could only have been carried out in the more favourable patches of deposit.

THE EXCAVATIONS

Zone A

Four huts and several other structures are included in this quadrant of the settlement unit (fig. 15). Hut 1 was the best preserved corbelled hut and its section and front elevation (figs. 14 & 16) show the method of construction. It has a lelapa and a short secondary wall at the rear which partially encloses another small area.

Before the hut was built a hollow was excavated between it and Hut 3 presumably to obtain rotten dolerite for use as daga. Another excavation within the lelapa also predates the building and as fresh dolerite with almost parallel jointing planes outcrops here this seems to have been a small quarry. The latter, about 20 cm deep, had been filled in with ash and a thin layer of daga had been applied to level off the area before the hut and lelapa were built (fig. 16).

The larger hollow at the rear had also been filled in but here a more complex sequence was evident which can be summarised as follows:-

1. Recent brown soil.
2. Daga with small patches of paving.
3. Thick layer of ash which contained a lens of daga towards the centre of the hollow.
4. Disturbed paving with some daga.
5. Pebbled floor.

ZONE A

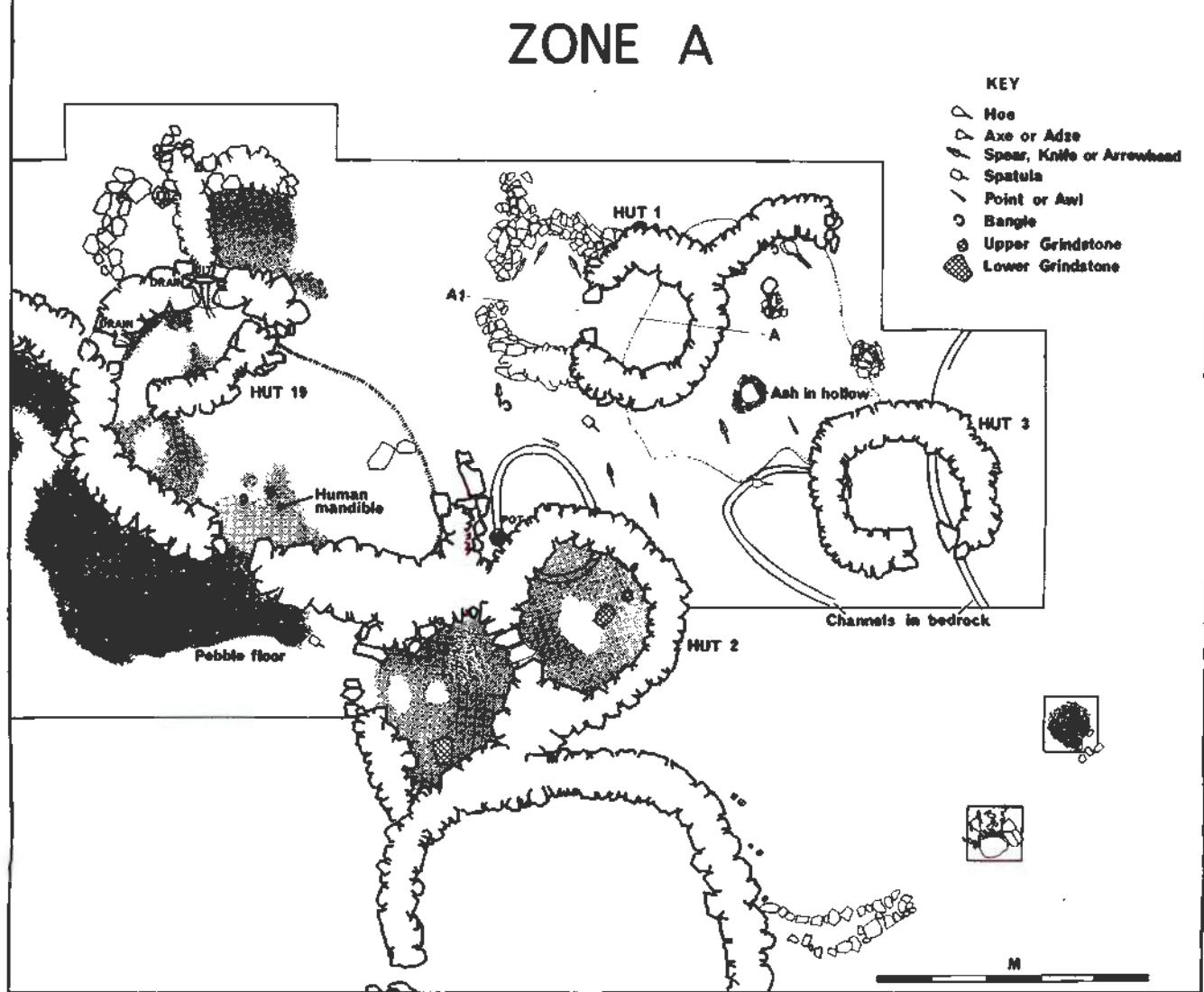


Fig. 15

SECTION THROUGH HUT 1

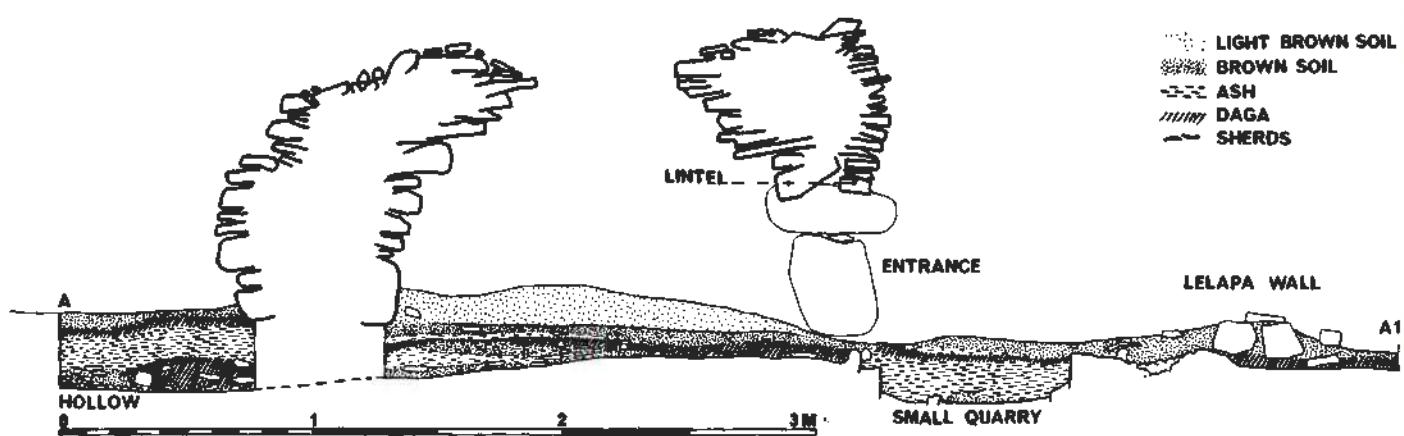


Fig. 16

6. Bedrock.

As this section (fig. 16) includes the main types of deposit found on the site it is worth giving some description of them. The brown soil of the surface includes humic material and roots. Among rocks and especially within the huts this is replaced by a light chestnut-coloured soil of fine texture which has accumulated since the site was abandoned. Hut 1 contained about 15 cm of this material which seems to be mainly wind blown dust. The daga usually consists of rotten dolerite which may be extremely difficult to distinguish from weathered bedrock. The procedure adopted was to sweep it clean, whereupon the original jointing planes were usually visible if the bedrock had in fact been reached. The ash in this hollow was almost devoid of cultural material. It was a light grey powdery substance including some fine soil but with virtually no charcoal. The limits of the ash filling in the hollow are shown on the plan (fig. 15). Layers 4 and 5 represent two types of stone flooring which are common on the site. The pebbles often rest on bedrock and consist of a single layer of small pieces of dolerite. Sometimes coarser pebbles were used or flat slabs in which case the floor is described as paving. Examples of the three textures are shown in Plate 17 while on the plans the finer pebbling is shown as lighter stippling and the coarser pebbling and paving as darker stippling. However, it is omitted from the area of Hut 1 because of the later features shown.

The sequence of layers contained little cultural material and there was no indication of how long the process of filling took. After it had been cleared the hollow collected rainwater, and it may be for this reason that it was deliberately filled in. Certainly the whole infill including the upper layer of daga was laid down before Hut 1 was built.

The areas beside and in front of Hut 1 had very shallow deposits, patches of pebbling and daga with a little ash in small hollows. Although the daga was not a continuous layer it seems that the whole area was levelled off before the hut was built. Most of the cultural material including a rich assortment of ironwork came from above the daga, while in the 'enclosure' between Huts 1 and 2 there were three paved stone circles set into the daga layer. The smallest of these may have been a hearth, the large round stone beside it may have been one of three used to support a pot over the fire. Beside this and against the wall was a small hoard of two hoes and an iron bangle (Plate 18). The other two stone circles are better made, larger and include small slabs set upright in the daga as well as some horizontal slabs. Two further circles were found in the unexcavated area south of Hut 3, one of which consists entirely of small

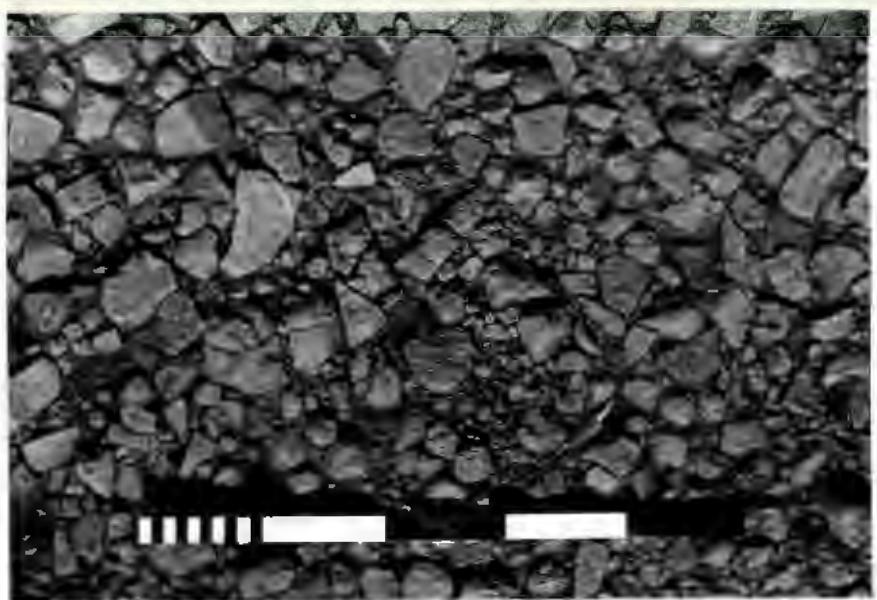
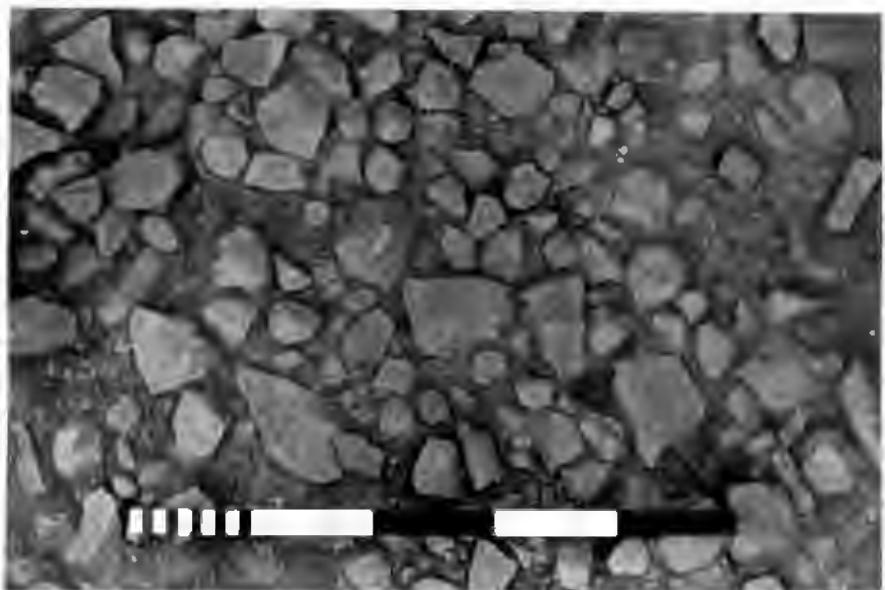


Plate 17. Different textures of floor preparation:
a) fine pebbling



b) coarse pebbling



c) paving

upright slabs. As ethnographic evidence is required to interpret these circles, they will be considered in more detail below.

Hut 1 was built on the edge of the hollow, therefore the section through its floor towards the rear shows a sequence similar to that of the hollow, although somewhat complicated by small lenses of soil and ash (fig. 16). Pebbling overlies bedrock and some pottery sherds were included. In the front half the daga immediately overlies this, and a compact brown soil a few centimetres thick over the daga seems to represent the hut floor. The upper layer of light chestnut soil, as mentioned above, postdates the occupation and it contained the complete skeleton of a lamb which must have died within the hut in recent years.

The lelapa wall was very poorly built and much collapsed; it was probably never as much as a metre in height. A small patch of paving on its north side may have been a fireplace.

Hut 3 is a detached hut without lelapa. Like Hut 1 it was built on the edge of the hollow and the stratigraphy beneath it is part of the filling. After rubble and loose earth, in which a spearhead with long tang was found, had been removed the upper daga was reached. The hut wall was built on this surface. Beneath it at the northern end of the hut was a layer of paving set in an ashy daga - apparently the edge of the filling of the hollow. To the south was an ash lens with a second daga layer beneath, resting on bedrock.

Cut into the weathered zone of dolerite were two channels about 10 cm wide and deep. These are the foundation trenches of earlier structures which will be examined in more detail in connection with the better preserved examples from Zone D. A third example beneath Hut 2 was an elliptical hut-sized structure 1.6 x 2.3 m in diameter. One of those beneath Hut 3 may have been of similar size while the other would have formed a far larger enclosure. Apart from the channels and their contents nothing could be associated with this earlier occupation, although the hollow may have been excavated at this time.

Hut 2 with its lelapa and the walls on either side are part of the ring of primary enclosures around the central secondary enclosure. Within the hut and lelapa the stratigraphy consisted of:-

1. Rubble and chestnut soil.
2. Brown ashy soil with concentrations of ash representing hearths.
3. Fine pebble floor.
4. Thin layer of daga.
5. Bedrock.



Plate 18. Hoard of two hoes and an iron bangle against the wall behind Hut 1.



Plate 19. Hollow in bedrock showing position of former primary enclosure in Zone A. Pole marked in 0,5 m intervals.

The total accumulation below the rubble being merely 10-15 m thick.

The pebbles seem to have been set on the daga and covered with ashy soil to provide a floor. The pebbling extended under the walls but outside the hut to the rear only slight traces were visible. The patch of ash in the centre of the hut and the two patches in the lelapa seem to have been burnt in situ for they have a variegated light to dark grey colouring and the pebbles and daga below the former were blackened. The lelapa contained a lower grindstone and the hut had two, the smaller being well smoothed and reddened by ochre. A stone wedged in the hut entrance acted as a sill.

Primary Enclosure 1 forms the south wall of the lelapa, and the narrow gap between it and Hut 2 was blocked by stones. The enclosure was not excavated but in clearing rubble from the area behind it a line of stones was found that appear to be the base of a wall. In this area a number of upper grindstones were found.

The structures west of Hut 2 show some interesting features and must be examined in detail. In the final form of the settlement unit, the entrance in the wall between Huts 2 and 19 was the only access to the central secondary enclosure and primary enclosures opening off it. Outside the entrance there is an oval-shaped hollow which includes Hut 19. This was largely filled with rubble and loose soil, while some patches of pebbling occurred on bedrock. Within the hollow, between 10 and 30 cm of weathered dolerite had been removed leaving the walls on either side of the entrance perched on a step of the weathered material; in other words the hollow had been excavated after the walls were built. Following the wall from the entrance eastwards to the side of Hut 2 it curves round and then peters out at a few large blocks but, significantly, the step continues round to link up with the wall of Hut 19. The step can be seen on Plate 19 which shows that the wall originally extended right around the hollow and formed a primary enclosure. The stones were subsequently removed from this section.

At this point it should be mentioned that on many Iron Age sites the floors of the larger primary enclosures had been excavated to lower levels than the surrounding surfaces. This was the case with Primary Enclosures 2 and 3 at OO 1 and the process seems to be related to their use as stock pens which will be discussed below. It is sometimes possible to recognize the position of primary enclosures by such hollows even if the robbing of stone has left little trace of walls.

Once the hollow is recognized as a former primary enclosure a number of features are explained. The entrance was originally that of the

enclosure which, like the other primary enclosures, could only be entered from the central secondary enclosure. The latter must have had some other exit before the removal of this stretch of wall. The lenticular shape of Hut 19 resulted from the use of part of the primary wall and the building of a secondary wall at the western end of the former enclosure. This secondary wall rests on the floor of the hollow. Two lintelled drains in the primary wall of Hut 19 were clearly built to drain the former enclosure for, since the excavation of the hollow, they only operate after the hut has been flooded to a depth of about 10 cm. To overcome this, one of them was deepened by digging a channel into the weathered dolerite. The hut contained three upper grindstones and a grooved piece of sandstone but apart from these and some small ash lenses there was little evidence of occupation.

Near the entrance within the former primary enclosure two iron bangles and a human mandible were found among the rubble, the depth of deposit being quite insufficient for a grave. The mandible is that of an adult as the third molar has erupted and shows some wear.

Where the wall of the enclosure meets that of Hut 2 a large pot had been placed against the wall (fig. 29, 3). Its contents were examined but yielded nothing. Outside the wall of Hut 19 were two small secondary enclosures with poorly built walls. One had a pebbled floor and they both contained pottery but their function is unknown.

Sequence of building in Zone A

1. Channels in bedrock and perhaps the hollow behind Hut 1.
2. Hut 2 and larger primary enclosures on either side as part of the Type V unit.
3. Removal of part of primary wall and building of Hut 19.
4. Abandoned leaving hoes etc. behind Hut 1, numerous spearheads in lalapa and beside Hut 1 and pot beside Hut 2.

Zone B

This area which includes Huts 4 to 8 and Primary Enclosure 2 again represents a sector from the centre of the settlement unit to its edge (fig. 17). It is just south of Zone A but a gap of 4 metres was left as this contained little of interest except for part of Primary Enclosure 1. The northern half of the Zone, including all the structures except Huts 7 and 8, was excavated.

Hut 4 was built detached from the central ring of enclosures but

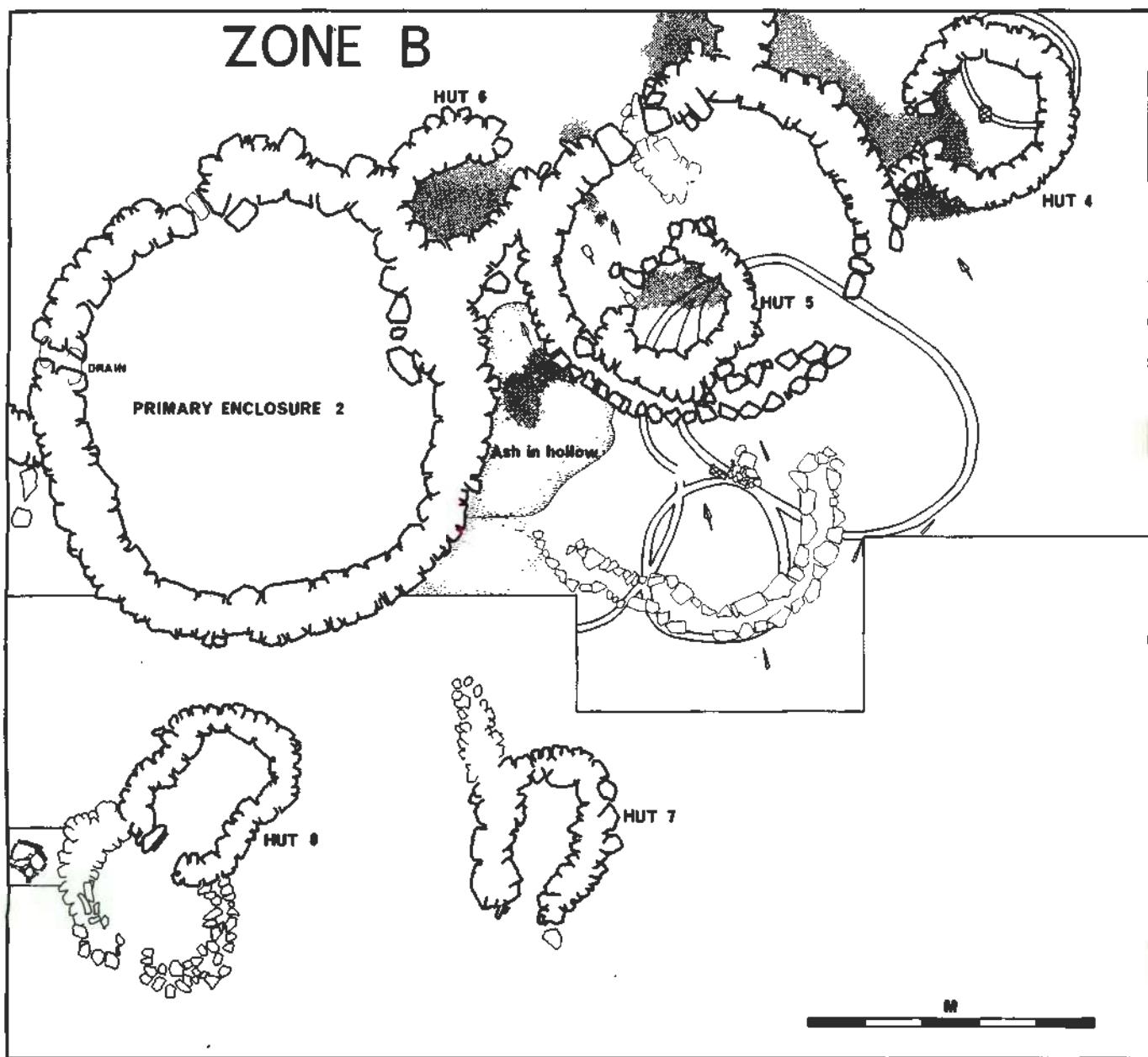


Fig. 17

was subsequently linked to the adjacent wall of a primary enclosure by a short secondary wall on one side of its entrance. These walls provided a sheltered corner which seems to have been used as a *lelapa*. The bedrock of this area in front of Hut 4 was uneven with some slight hollows filled with ash, while a pebbled floor extended into the front portion of the hut and apparently under its walls. Above this a few centimetres of soil had accumulated in places. In the middle of the hut an accumulation of ash suggested a fireplace, and an upper and lower grindstone were also found here. A channel had been cut into bedrock in the middle of the hut and extending under its north and east wall to form a complete oval of hut size, some 1,7 by 2,1 metres in diameter. Behind Hut 4 the shallow deposit consisted of natural soil and perhaps some *daga* with a little cultural material but less than was found in front.

Hut 5 had been built inside a primary enclosure, the sequence of building being of interest, but here again stratigraphic units that could be associated with the different phases were absent. Beneath the walls of both hut and enclosure were two channels dug into bedrock. One formed a primary enclosure some 3,5 by 5 metres in extent while the other may have been an extension to this or part of another enclosure. Adjacent was a smaller circular channel cut by another with a larger radius of curvature. Two or more episodes of building are represented by these channels. Overlying them was the foundation course of a poorly built stone wall or perhaps a screening wall with stone base and some other superstructure. Its function is not clear but as it curves around a small area of paving which may have served as a fireplace it may have supported a windbreak. On both sides of the wall iron 'points' were found - small iron rods sharpened to a greater or lesser extent at one end - and it is possible that they reflect an activity carried on in this area such as the sewing of skins. However, the evidence is inconclusive and similar, although less concentrated, finds were made in other zones.

The primary enclosure in which Hut 5 was built originally opened into the central secondary enclosure, the large blocks marking the entrance being evident (fig. 17). Subsequently this was blocked with stones and a short secondary wall extended inwards. Hut 5 was built against the side of the enclosure, the wall being robbed and at the rear entirely removed to provide a new entrance. Although the hut was built against the primary wall it is not lenticular in shape like the similarly situated Huts 14 and 19, but circular. The shared portion of wall was rebuilt when the hut was constructed suggesting that the earlier wall had already been robbed. In the terminology used here it is a primary structure superimposed on an

earlier and larger primary structure, not a secondary structure as are Huts 14 and 19 with their abutting walls.

The space in front of Hut 5 is referred to as its 'lelapa', for although the earlier primary wall was used to form most of the enclosure, the short secondary wall blocking the former entrance was clearly added to complete the space as a *lelapa*. Patches of pebbling occurred in the hut and *lelapa* and appeared to extend under the walls although the patches may be of different ages. Bedrock is uneven, perhaps because the more weathered material was removed while the former primary enclosure was in use. There was little accumulation of deposit below the rubble fallen from the walls. However, both hut and 'lelapa' yielded iron implements and beads of metal and glass, the latter in considerable number from the 'lelapa'.

In the area between Hut 5 and Enclosure 2 was a hollow filled with ash and rubble extending beneath the stone walls. The hollow had been excavated down to the unweathered dolerite in its centre and some pebbling had been laid down. Subsequently it was filled in with ash and stones, the latter being particularly concentrated towards the edges, and to a maximum depth of about 30 cm, which brought it up to the level of the surrounding ground surface (Plate 20). The contents of the fill included a spearhead and the characteristic range of pottery (see Appendix 2) but less than might be expected. The plan of the hollow is partly obscured by the stone walls but it appears to have been roughly circular in shape. It may have been excavated to obtain daga or it could represent the hollowed out interior of an earlier primary enclosure whose walls were subsequently removed. The latter interpretation is supported by the central pebbling and the concentration of stone rubble towards the edges, but the evidence is not conclusive.

Primary Enclosure 2 retained its initial form and presumably its function throughout the occupation of the Type V settlement unit, of which it is one of the original structures. Its wall rests on the filling of the hollow suggesting that the levelling may have been done in order to facilitate building. As in other such enclosures the weathered dolerite has been removed leaving the wall perched several centimetres above the present floor. This is particularly noticeable where the wall overlies the ash of the hollow and it has caused the wall to slump inwards in this area. The ground slopes towards the north-west, towards the entrance and a drain through the wall, thus run-off from the enclosure would have flowed into the central secondary enclosure. A little soil and humic material had accumulated on the floor but not apparently any occupational deposit



Plate 20. Hollow filled with ash and rubble, in Zone B. Part of fill remains in situ.



Plate 21. Interior of Hut 11 showing that about 10 cm of the weathered bedrock has been removed from the floor. Scale of 0,5 m rests on the original ground surface. Hut was built on about 10 cm of ash above the original surface.

and there was very little cultural material, which is in keeping with its function as a livestock pen.

Hut 6 is a small corbelled hut elongated in the direction of its entrance. It blocks the narrow gap between two primary enclosures and therefore is probably of the same age as them although its walls abut on to Primary Enclosure 2. The stratigraphy within the hut consisted of:-

1. Rubble and light chestnut soil.
2. 2-5 cm harder ashy soil.
3. Pebble floor.
4. Weathered bedrock perhaps with some daga.

The pebbling and perhaps some of the ashy soil were laid down before the hut walls thus there was practically no accumulation during the occupation. Cultural material was confined to the ashy soil and among the pebbles, and there were a number of sherds at the entrance.

Huts 7 and 8 were cleared of rubble but not excavated. The former yielded part of a barrel-shaped pot with diagonal notches on its rim very similar to and probably made by the same potter as another from Hut 1 (fig. 27, nos. 10 & 11). Beside the lelapa wall of Hut 8 was a small stone circle consisting of horizontal slabs with some small upright ones around them.

The portion of the central secondary enclosure falling within Zone B was excavated but contained little cultural material and only a few centimetres of accumulated soil. In front of Hut 6 there was about 8 cm of rubble and soil and some finds including sherds, an upper grindstone and the point of a blade with thickened midrib.

Sequence of building in Zone B

1. Two or more episodes of construction represented by the channels in bedrock. The hollow may have been dug at this time.
2. Hollow filled and some areas of pebbling laid prior to building stone walls.
3. Two larger primary enclosures and Hut 6 built.
4. Hut 5 built after the rear wall of the primary enclosure was robbed and partly removed. Entrance blocked by short secondary wall.

Zone C

The quadrant of the central secondary enclosure included in this

Zone is bounded by a row of small structures which opened into it (fig. 18). Backing on to one of these, Hut 9 with its lelapa opened outwards. Beneath the walls of the hut and lelapa are three channels of wide curvature which probably represent three larger primary enclosures, although none was completely excavated. As they overlap each other they must represent three episodes of construction. Although stratigraphy is lacking, a possible indication of their relative ages can be obtained by examining their intersections. The channels are increasingly deep towards the south which suggests that they are successively younger in this direction, for where a new channel cut across an older one it may have been an advantage to cut it deeper to provide sufficient support for the superstructure. Just west of the lelapa of Hut 9 where the three channels meet is a fourth of much smaller radius of curvature representing a hut-sized structure. Beside it are two of the stone circles; one in good condition and set in daga overlying a channel is more likely associated with Hut 9 than the earlier structures. The other and a third nearby are much disturbed and their association with the structures could not be determined.

Within Hut 9 below the usual fallen rubble and light chestnut soil was a shallow layer of brown soil resting on bedrock. Towards the centre was an ashy hearth with some charcoal and beneath this one of the channels. The second channel at the entrance was much deeper and had been filled with small stones. Against the rear wall a group of flat stones had been placed on the brown soil to form a small platform 50 cm long. On top of this was a tin of the type commonly used for fish, much rusted but of recent origin. The rear wall of the hut is well preserved and still serves as shelter during rain so it seems that it has been put to good use in the time since it was abandoned. A fairly fresh maize cob found among the rubble of another hut indicates a similar visit in recent years. Finds within the occupation layer include some pottery, a metal blade and a glass bead.

The lelapa wall was badly built and much collapsed. At first it was thought that the lelapa was paved, but apart from two stones in the hut entrance that may have been a sill, the stones all proved to be collapsed. There was little deposit on the floor but for an accumulation of bones and sherds just west of the hut entrance and in the area of the lelapa entrance. Most decorated sherds came from a pot with corrugations formed by repeated finger-pinched impressions similar to those illustrated in fig. 30, Nos. 7 & 9.

After a large amount of rubble had been removed from behind Hut 9

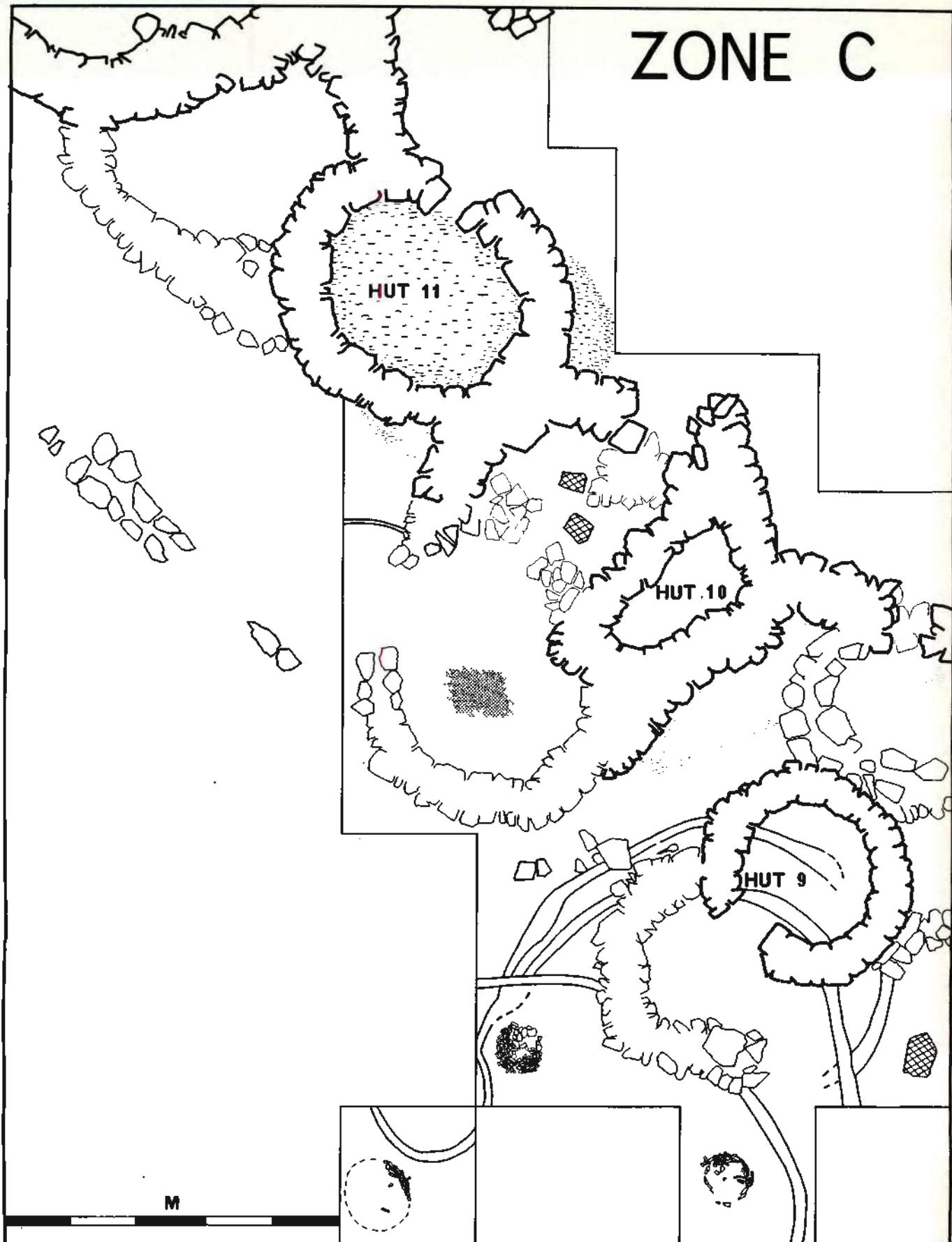


Fig. 18

the foundation stones of a similar sized enclosure became evident. This must have been a corbelled hut which opened into the central secondary enclosure, but its walls were extensively robbed before Hut 9 was built. Below the rubble was a compact 5 cm lense of ash with some pebbling resting on it, extending beneath the wall into the area between Huts 9 and 10. The few decorated sherds it contained proved to be representative of the range found at this site, and an ash sample collected in the hope of obtaining a C14 reading was considered to be unsuitable by Dr. J. Vogel.

Hut 10 and the enclosure between it and Hut 11 comprise a number of walls altered and rebuilt until it is no longer possible to determine their original form. 'Hut 10' may not even have been a hut, its form is irregular and no doorway could be traced nor did it contain any appreciable depth of deposit or quantity of cultural material. The extension of its wall to the north in combination with a short wall protruding from Hut 11 formed an entrance into the central enclosure which had subsequently been blocked. It is possible that this was originally the entrance to a primary enclosure which included Hut 10, while another possibility is that it was the original main entrance to the settlement unit, only being blocked after the opening of the later entrance in Zone A. The former possibility is supported by the fact that the floor towards the south had been scraped down to the unweathered bedrock and some pebbling laid down, but this had not occurred towards the entrance. This portion, between Huts 10 and 11 had been further enclosed by two short pieces of badly built secondary walling leaving only a narrow entrance. Two lower grindstones, one with traces of ochre, placed upside-down suggest that this little enclosure was used as a working area during the later stages of the occupation.

Hut 11 is the largest in this settlement unit, reaching 3 metres along its longest axis at right angles to the entrance. The stones of the entrance have slumped and therefore the opening may not have been oblique as is indicated by their present position (fig. 18). Beneath the collapsed rubble the floor of the hut consisted of a thick deposit of ash about 20 cm deep resting on bedrock. Unweathered bedrock was exposed in the central portion but towards the walls a step of weathered dolerite about 10 cm high was uncovered (Plate 21). Resting on this original ground surface on the eastern side of the hut was an ash lense up to 10 cm thick upon which the walls were built. The sequence of events seems to have been as follows:-

1. Accumulation of ash lense on ground surface.
2. Building of hut wall.

3. Removal of weathered dolerite layer within the hut.
4. Accumulation of ash floor.

No stratigraphy was apparent within the ash thus the relationship of the earlier and later ash could not be directly observed. Nevertheless, it seems that there were two periods of accumulation for the hollow could hardly have been dug before the wall was laid down as the step coincides closely with the inner face of the wall. The reason for digging this hollow is not clear but it may have been to allow for a deeper ash floor which would have been warmer and drier than a shallow accumulation over the weathered dolerite.

Just below the fallen rubble near the entrance were the maxilla and mandibular fragments of a domestic pig, the deciduous teeth and unworn first molar indicating an age of about six months. They could date from any time subsequent to the abandonment of the hut. A fair quantity of cultural material was also present, mainly on or close to the surface of the ashy floor and concentrated towards the central area. Portions of three decorated pots are illustrated including one with an elaborate motif of comb-stamping in diagonal panels (fig. 26, 9), one with notched rim and one with miscellaneous rim impressions (fig. 27, 7 & 12). Other items include part of a sandstone pipe and an iron spearhead or knife (fig. 32, 20; fig. 34, 10). One lower and three upper grindstones from within the ash must have been in use during the occupation but two more lowers found among the collapsed rubble may have been incorporated in the roof. The centre of the hut where the roof was highest and where most light was available from the doorway seems to have been the main working area while the sides may have been kept clear for sleeping. Part of the ash may have accumulated from fires in situ but no evidence of hearths was found.

The portion of the central enclosure in front of Hut 11 served as a *lalapa* and was partly enclosed by a secondary wall running from the hut to Primary Enclosure 3 and then curving round to the right. Only the end of the latter portion is included in Zone C (fig. 18). This area contained a shallow deposit of brown soil with numerous small stones which may have been a disturbed pebble floor. Material including a comb-stamped pot (fig. 26, 5) and a fragment of a decorated stone pipe were found here.

On the east side and behind the hut the ash lenses again appeared, showing that it was indeed laid down before the walls were built.

Between Hut 11 and Primary Enclosure 3 are two secondary walls enclosing a small area which appears to have had no entrance. Similar wasted areas, cut off between two primary enclosures, were noted on other sites such as OMB 1. They are an inherent and inevitable disadvantage of

compact settlement patterns based on circular shapes. When such negative spaces were too narrow to be of use they were sometimes sealed off with secondary walls at either end, as in this case.

Sequence of building in Zone C

1. Three episodes represented by the channels cut into bedrock.
2. Construction of the Type V settlement unit including the former hut behind Hut 9, parts of 'Hut 10' and Hut 11.
3. Robbing walls of former corbelled hut and construction of Hut 9. Part of 'Hut 10' built and other modifications beside it including blocking of entrance to central enclosure.

Zone D

This is the only zone that does not represent a quadrant of the settlement unit, for the rear portion of Primary Enclosure 3 is the only part of the central ring of enclosures falling within it. Instead, two detached huts, 12 and 13, with their lelapas are included as well as an irregular structure forming roughly three sides of a rectangle. It appeared to be a fairly simple area but excavation revealed a large number of features and so, to avoid confusion and repetition, these will be examined more or less in chronological order.

By far the greatest concentration of channels in bedrock occurred in Zone D, particularly in the southern half. Again they represent structures of various sizes, the smallest with diameters of around two metres would presumably have been huts, while the larger with diameters of up to seven metres may have been screening walls of courtyards or livestock pens (fig. 19).

At least two of the structures had burnt down and thus provided evidence of the construction which would otherwise have been lost.

After a layer of daga had been removed from beside the rectangular stone wall the outline of a channel became visible because of its grey-brown infill which contrasted with the brown of the weathered dolerite. Along one edge of the channel the truncated ends of a row of carbonized reeds were preserved (Plate 22). These had been placed as a single row standing upright and the channel had been filled with daga to support them.

More information was forthcoming from the hut-sized enclosure cut by the western edge of the Zone near its south-west corner. Here a few carbonized reeds were again found in a single row against the outer edge of the trench. Immediately above bedrock within the hut was a layer of burnt pieces of daga, not apparently from a floor. Most were merely

ZONE D

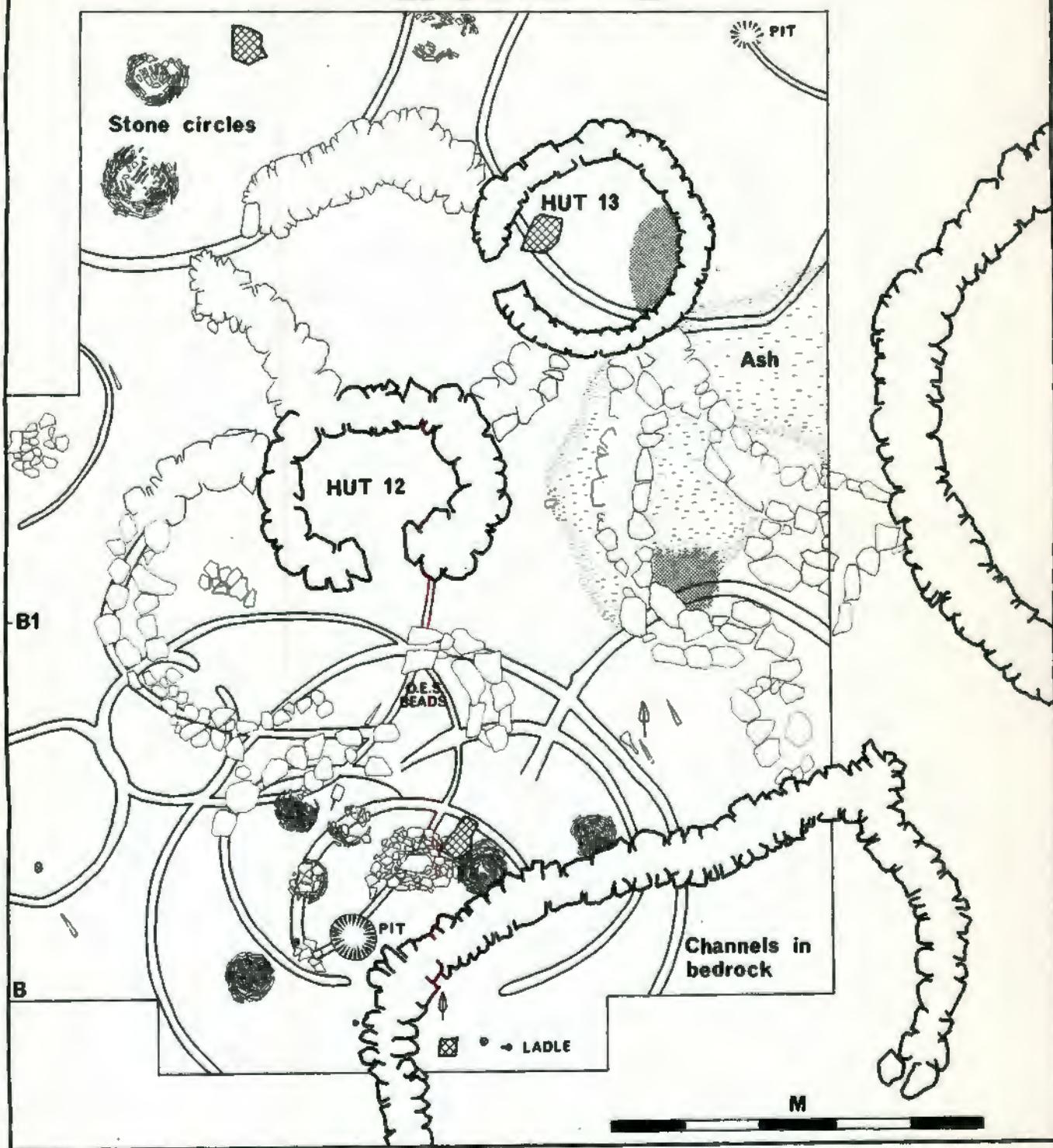


Fig. 19

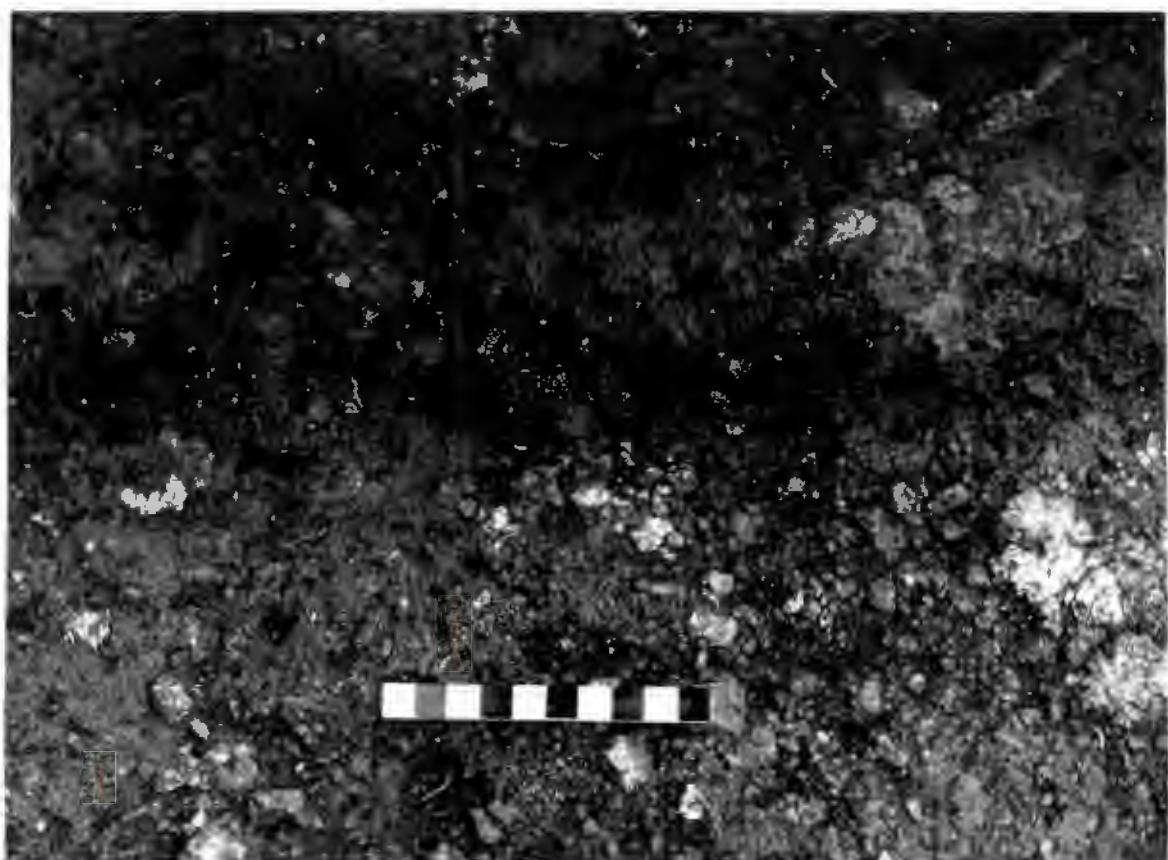


Plate 22. Vertical view of carbonised reeds in channel. Scale in cm.



Plate 23. Floor of Hut 12 showing different textures at different levels. Right to left - upper paving, lower pebbling in daga, bedrock. Note pot sherds in paving at bottom right.

blackened but a few had been heated sufficiently to produce vitrification and a bubbly texture which has been observed on other sites where huts burnt down. Such heat does not occur in normal domestic fires. One piece preserved the impressions of reeds, showing that the reed structure was plastered on at least one side. A section through the hut along the western edge of the Zone (fig. 20) shows that the burnt daga was confined to the central part and grades into unburnt material near the channel. This suggests that the structure was a domed hut of reeds and plaster, for if such a hut should burn down the highest temperatures would occur in the upper and therefore central portions. There is an accumulation of daga near the trench on the left but little daga occurs outside the hut again suggesting a domed rather than cylindrical shape. This part of the section is overlaid by the edge of the ash from Midden 6 which was not excavated except where it extended into Zone D.

Contiguous with this hut was another smaller one, virtually circular in plan and perhaps slightly earlier as the digging of its channel had not obliterated the line of carbonized reeds where the two overlap. A gap in its channel of about half a metre presumably represents an entrance facing north-east - the only entrance noted on any of these structures although several apparent wall ends were uncovered.

Within two of the smaller structures were patches of paving which may have served as floors. One is situated at the middle of the western edge of the Zone and the other beside the pit and rectangular wall. Both structures are larger than the huts just described but might have been roofed. The latter example overlies one channel but appears to be beneath the daga into which the stone circles were set and therefore may relate to an earlier phase of the occupation. However, no definite case of a prepared floor was found within any of the reed structures, nor any appreciable accumulation of deposit nor removal of the weathered dolerite layer.

One channel follows closely the line of the lelapa of Hut 12 and may possibly have formed a reed lelapa before the stone wall was built, but no confirmation of this was found. Otherwise none of the reed structures abut against or form any functional pattern with the stone walls, and where contiguous the channels always extend beneath the walls. At least four episodes of construction - four overlapping and therefore not contemporary structures - are represented by the channels. Although the life of a reed structure would be short, it seems likely that a period of at least half a century would be represented.

SECTIONS IN ZONES D AND E

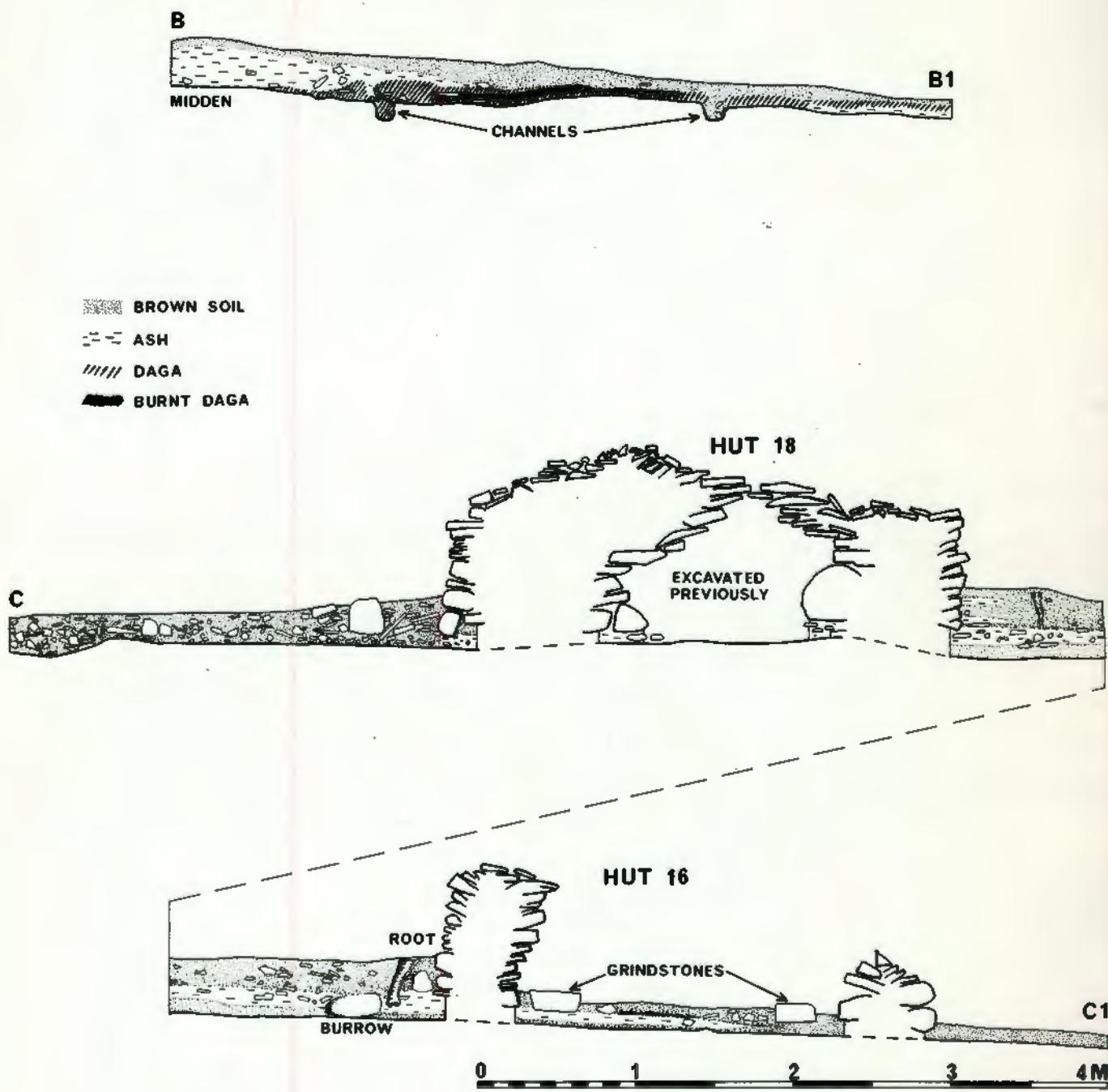


Fig. 20

The only other feature that may be associated with the reed structures is the ash accumulation south of Hut 13 which predates the stone walls in this area. Like the other early ash lenses it is compact and almost pure ash with very little cultural material. A large sample was collected in the hope of obtaining a C14 reading, but evidently it is unsuitable material and certainly there is no visible charcoal in it. The carbonized reeds from the trenches were submitted for dating and the results will be discussed below.

The channels south of Hut 12 were covered by a daga layer consisting of rotten dolerite. As this material also filled the channels they were often difficult to follow and in parts could not be traced. For this reason and because there is usually no indication of which structures were built and in use at the same time, it was not possible to establish the plan of the reed-built settlement at any stage of its existence.

Beside the wall of the rectangular feature a conical pit some 45 cm deep and 70 cm wide was uncovered. A group of large stones filled the upper portion and at first it was thought that this might be a grave. However, apart from some sherds that did not fit together and some scraps of animal bone it contained nothing of interest. A smaller and less defined hollow occurred in the north-eastern corner of the Zone; it suggests a soft patch of bedrock that was hollowed out rather than a pit. Both features were cut by channels but there was no other evidence to suggest that they were associated and the larger pit may well belong to the later occupation as the daga floor only extended across one edge of it.

Above the daga south of Hut 12 and above the ash lens to the east, rubble and brown soil had accumulated to a depth of about 10 cm. Close to the hut this resembled paving but proved to be collapse from a number of remnant walls including that of the *lalapa* and two other pieces in front of the hut, whose original forms could not be determined. To the east, secondary walls linked Huts 12 and 13 and Primary Enclosure 3, between which another secondary wall formed a small enclosure which may have been a hut. Immediately below the rubble within this was a human mandible from which the portions behind the first molars were missing and all erupted teeth had either fallen out or broken off at the roots. However, the unerupted second premolars indicate an age of about ten years at the time of death. A small patch of pebbling had been laid down inside the structure above the ash lens which predates the walls. Poor construction and extensive robbing complicate the interpretation of these features.

The Type V settlement unit is represented by Huts 12 and 13 and their associated features which would have been built somewhat later than

the central ring of enclosures, of which Primary Enclosure 3 is a part, but how much later is not known.

Hut 12 is of particular interest because of its elaborately prepared floor. The stratigraphy consisted of:-

1. Rubble and chestnut soil.
2. Dark brown fibrous daga.
3. Paving of stones and sherds set in daga.
4. Small ash lense towards the back only.
5. Light brown daga with pebbling set in upper portion, extending beneath walls.
6. Lense of sterile soil towards the back.
7. Bedrock.

The total accumulation below the rubble being about 15 cm.

As bedrock slopes towards the back of the hut the lower daga served to level the surface prior to building. Midden material - ash, small sherds and bones - was mixed with rotten dolerite to produce a hard layer and, judging by the quantity of small stones, pebbling had been set into the upper portion of this. The photograph (Plate 23) shows the difference in texture between this and the overlying paving set in dark daga.

Included among the paving stones were several sections of pottery vessels each cracked into a number of pieces which were reassembled. Four medium sized and large pots could be reconstructed, two of which had decorated rims (fig. 28, 5; fig. 29, 2, 4 & 6). Because of their large size it is probable that these sherds were from pots in use shortly before construction of the paving, for most of the pottery on this site has been broken into much smaller pieces, presumably by trampling. Two had their surfaces heavily abraded, which suggests that at some stage the daga floor above was worn through to the extent that parts of the paving were exposed. The dark upper daga, burnt in places, had quite a different texture from the lower one, being softer and containing fibrous organic matter. It resembled the mixture of earth and cattle dung used in contemporary buildings and this was almost certainly its composition. It formed a floor only 2-3 cm thick over the paving and may have had to be renewed periodically as suggested by the abraded sherds.

The floor must have been kept relatively clean for, apart from a few sherds, no cultural material and hardly any deposit had accumulated on it during the occupation. A few flat stones set in or on the daga in the doorway were probably a sill. Part of the roof had collapsed but otherwise the hut remained in good condition (Plate 24).

Hut 13 had relatively narrow walls built of small slabs and it had collapsed to the extent that only 70 cm or so remained standing although the lintel was still in position (fig. 14). The channel beneath the hut had been covered by a daga layer extending beyond the area of the hut, before it was built. The daga is essentially rotten dolerite and devoid of cultural material, although the light chestnut soil immediately above it contained a few sherds and a broken iron blade. One sherd is from a small spherical bowl with a unique combination of grooved and stylus impressed decoration (fig. 30, 13) which is of further interest because several adjacent sherds of the same pot were recovered in Zone E some distance away. The light soil and rubble constituted the remainder of the deposit with the exception of a paved platform 1.5 m long against the rear wall, similar to but larger than that from Hut 9 and raised a few centimetres above the floor level (fig. 19). Casalis (1861, 127 & 129) describes and illustrates similarly situated platforms in Sotho huts of the mid-nineteenth century where pots, often containing milk or beer, were kept - this was probably the function of the OO 1 examples, although no pots were found on them.

Beside the platform were two large spherical pieces of dolerite with a third on top of the platform (fig. 19). Although there was no definite evidence of a hearth, these stones may have served to support a pot over a fire. Their shape is unsuitable for building and they appear to have been carefully selected for some purpose. Near the entrance was a large lower grindstone, inverted as were a number of others on this site.

In the lelapa of Hut 13 and behind the hut a considerable depth of rubble and soil had accumulated but there was little occupational deposit or cultural material. The lelapa of Hut 12 had a thick daga floor into which a group of flat stones had been set close to the west side of the hut. This does not resemble the stone circles but it may have been a hearth as it is in a well sheltered position.

Zone D was particularly well supplied with stone circles, there being six in the area between the lelapa of Hut 12 and the rectangular feature and three beside the lelapa of Hut 13 with another slightly further north and just outside the Zone. The former six were all built on the daga floor thus postdating the channels (Plate 24). Two have some small slabs laid horizontally in their centres but the others are entirely of upright slabs. They are about 60 cm in diameter whereas those near Hut 13 are somewhat larger, up to one metre. Of the latter, one is superimposed on a channel and the other two are relatively well preserved; thus in all probability they too belong to the Type V settlement rather than the



Plate 24. View of Zone D after excavation, Hut 12 in background. Daga and most of stone features removed to expose channels in the weathered bedrock from earlier occupation. The stone circles, of which two remain, were set into the later daga. Late 'rectangular' feature in foreground.



Plate 25. Blocked entrance to Primary Enclosure 3, Zone E.

earlier period of reed building. A large lower grindstone was found in each group of circles and with the southern group were two uppers.

Most of the cultural material in Zone D was recovered from the shallow deposit above the daga that was laid down prior to the construction of the stone walls. The pottery is characteristic of the site as a whole but includes a slightly larger percentage of finger impressed decoration on the bodies of vessels; 24% as opposed to 16% for the whole site. Three of these have been illustrated (fig. 30, 2, 8 & 9) of which the first two have unusually elaborate motifs of finger-pinched lines. A fourth pot with deep stylus impressions all over its sides (fig. 30, 14) was reassembled from sherds scattered over a wide area of Zones D and E from beside Hut 12, within Primary Enclosure 3 and within the central secondary enclosure. Such scattering suggests deliberate action, perhaps after the abandonment of the settlement, rather than chance mixing due to natural processes.

Lying on the daga in the lelapa of Hut 12 was a group of ostrich egg-shell beads about 8 mm in diameter and still in position, showing that they had been strung in a single row. Nearby an awl and a spatula, both made of iron, were found with further east a group of four iron implements. It may be that some activity such as the preparation of skins is reflected in this concentration.

In a corner of the rectangular feature at the southern edge of the Zone was an interesting group of objects including an iron blade, a small lower and upper grindstone that had been used to grind ochre and a pottery spoon (fig. 31, 10). The deposit here was so shallow that it was not possible to determine whether these objects were associated with the rectangular wall or whether they were related to an earlier phase of the occupation. This wall is the latest of the structures in Zone D for it overlies not only the channels but also two of the stone circles. It is in better condition than the other walls and was probably built from stone robbed from those on either side of Hut 12. Although not precisely linear nor rectangular its shape does suggest this form rather than the characteristic curved shapes of the Iron Age, and therefore it may post-date the occupation. It does not form a complete enclosure nor does it seem to form part of the Type V settlement pattern thus its purpose is enigmatic.

Sequence of building in Zone D

1. Construction of reed and daga huts and enclosures in at least four episodes.

2. Daga laid down in area of Hut 12 and in front of it.
3. Construction of the Type V settlement unit - firstly Primary Enclosure 3 and Huts 12 and 13 followed by the associated secondary and lelepa walls. Most if not all the stone circles belong to this phase.
4. Rectangular feature built probably from robbed walls beside Hut 12.

Zone E

This quadrant covers the north-western part of the settlement unit and includes Huts 14, 16, 17 and 18 as well as a number of other features. The southern portion contains a complex of walls representing several stages of construction and habitation (fig. 21).

Primary Enclosure 3, as with the similar enclosures in other Zones, had the weathered layer of dolerite removed from its floor to a depth of 10 cm or more, leaving the walls perched. Pebbling extended under the walls near the entrance but if this had continued within the enclosure the removal of weathered material would have destroyed it. Subsequently the entrance, which opened into the central enclosure, was deliberately blocked by stones which are conspicuously smaller than those used for the entrance itself (Plate 25). The northern wall was extensively robbed and it seems that the enclosure was used for domestic purposes at a late stage of the occupation, for six lower grindstones, three of sandstone, were found on the surface, and also a fair quantity of sherds.

From the south side of the blocked entrance a secondary wall extended eastwards then curved to the north to abut against the rear of Hut 14, thus forming a small secondary enclosure. This was a late feature as it was only built after Primary Enclosure 3 became redundant and its entrance could therefore be blocked off. The small enclosure contained little cultural material or occupational deposit above its pebbled floor and its function is unknown. There are no indications that it was ever roofed. Its entrance had in turn become blocked but, because the wall here is poorly built, it was not possible to determine whether this was done deliberately or merely arose from the collapse of the upper part of the wall.

Hut 14 was built against a curved wall which, after excavation, proved to have been a primary enclosure opening into the central enclosure. Its wall was nearly contiguous with that of Primary Enclosure 3, the narrow gap being blocked with stones. The floor was pebbled in parts and the unweathered bedrock showed through in places indicating the removal of

ZONE E

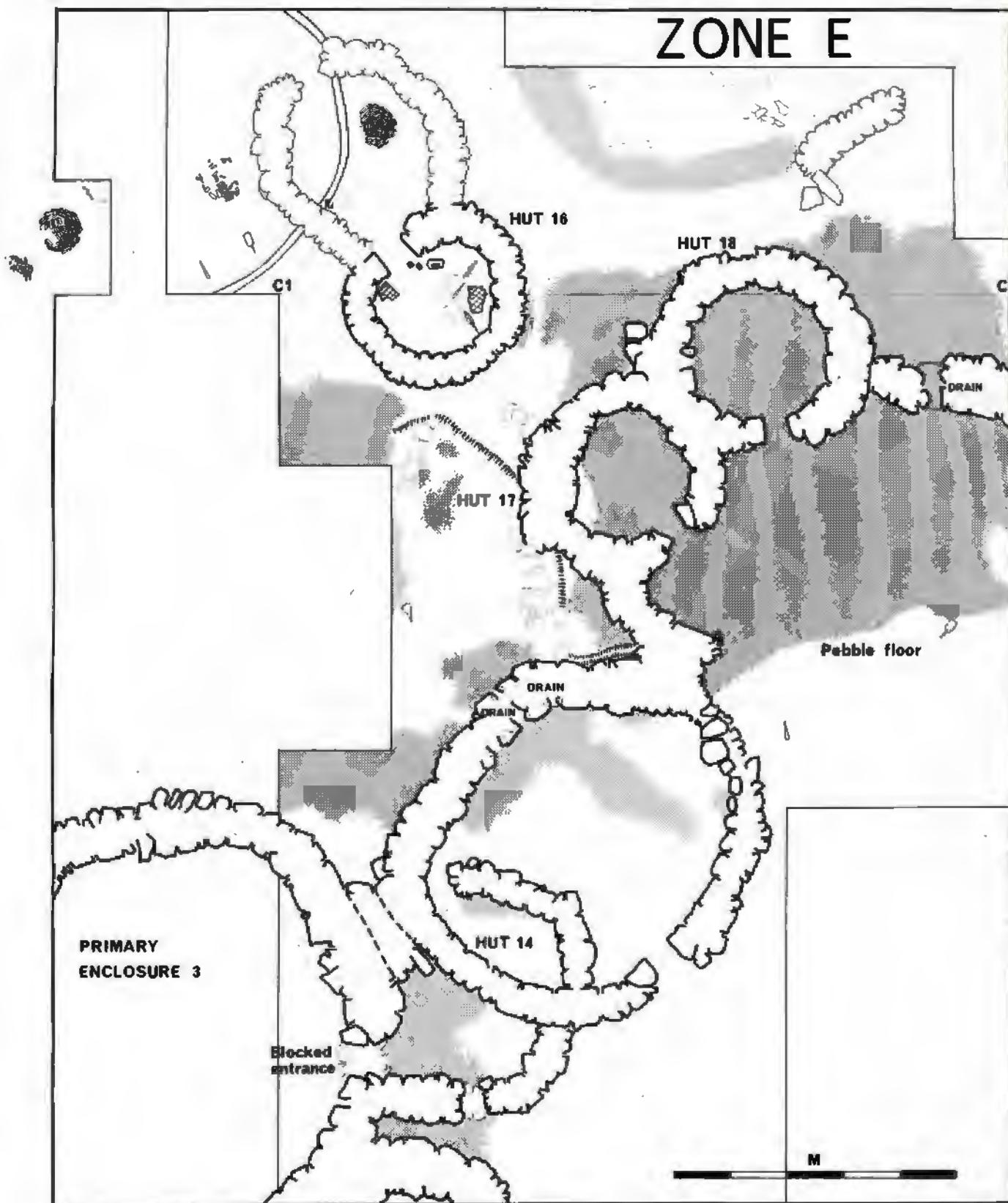


Fig. 21

weathered material. The deposit above this consisted of brown soil and rubble with some sherds but little else. It is of interest that these three enclosures in Zone D, which must all have received their cultural remains at a late stage of the occupation, lack comb-stamped pottery. Although the samples are small (Appendix 2) and stratigraphy is absent, this may indicate the reduced use of comb-stamping towards the end of the occupation.

The rear wall of the enclosure contained two and possibly three lintelled drains which would have effectively removed rainwater from the lowest area of the floor. A narrow channel along a portion of the outside of the wall may also have served as a drain.

The builders of Hut 14 took advantage of the primary wall and, by building a curved secondary wall against it, produced a lenticular plan similar to that of Hut 19. The corbelling was confined to the secondary wall, the primary wall being more or less vertical producing a lean-to structure. Such construction was possible since, owing to the lenticular shape, the maximum roof span was little more than a metre. The deposit within the hut consisted of light brown soil and rubble with little cultural material.

Huts 17 and 18 and the area in front of them form the lowest portion of the central secondary enclosure and rainwater drains in their direction. It may be for this reason that a carefully prepared floor was laid down prior to the construction of the huts. Resting on bedrock was a lens of ash up to 10 cm deep in places but more often about 5 cm, which extended from behind Hut 17 and the centre of Hut 18 forwards through the huts and into the central enclosure. This contained very little cultural material and was apparently not burnt in situ as it did not show variegated lenses. It is not clear whether it represents an ash accumulation from a previous period of occupation or whether it was deliberately laid down as a floor for the huts.

On the ash and extending over a somewhat larger area was a coarse pebble floor (fig. 21). This does not show up very clearly in section (fig. 20) but when its surface is exposed its character becomes evident (Plate 26). The angular pebbles would have provided an uncomfortable living floor and in Hut 17, at least, it was covered by a few centimetres of light brown soil as a daga floor. In front of the huts about 10 cm of soil and rubble had accumulated over the pebbling and this contained a large quantity of pottery and occupational remains including bones and upper grindstones. Two of the pots from here, one decorated with an applied band and the other with stylus impressions, are illustrated (fig.

28, 9; fig. 30, 14).

Huts 17 and 18 as well as the secondary wall to the east of the latter were built directly on the pebbled floor. This can be seen extending under the walls and through a large drain in the secondary wall (Plate 26).

Within Hut 17 above the pebbling and daga was an ash layer which pinched out towards the front. It contained a thin black lens and seems to represent a hearth in the centre of the hut with an accumulation of ash around it. Above this was a layer of powdery chestnut soil and rubble formed since the hut was abandoned. The total depth of deposit was around 30 cm, most of the cultural material being found on the pebble floor or in the succeeding layers. Finds include two spherical bowls, one with a row of rim impressions (fig. 28, 2 & 12), part of a bowl containing powdered specularite, several metal items, part of a stone pipe and two upper grindstones. Cattle and Hartebeest teeth were among the faunal remains, but a portion of the horn sheath of a sheep or goat is almost certainly of recent origin as this type of material has not survived elsewhere on the site.

Hut 18 was one of the first to be excavated and, through lack of experience, the pebble floor was not recognised as such. However, it was visible after excavation in the sections under the hut walls. Bedrock sloped upwards towards the back of the hut and the overlying ash, rather darker here, was found only in the front half. Above the ash the deposit consisted of brown ashy soil mixed with rubble, suggesting that the occupation floor was a soft earth daga as in Hut 17. Two lower grindstones were found in the centre, while four upper grindstones, three iron implements and a number of sherds were also recovered.

Excavation of the area west of Hut 17 uncovered a hollow dug into the weathered dolerite horizon. It was about 15 cm deep and bounded by a step which described an arc with a diameter of about 5 m. This closely resembled the hollow marking the position of the former primary enclosure in Zone A, and indeed there are traces of a stone wall around its edge. Where Hut 17 is contiguous with the hollow its wall is noticeably thickened and a bench-like arrangement of stones within the hut, which continues to the rear, is most readily explained as part of an earlier wall (fig. 21). Other large stones on and beside the step also seem to be the remains of a wall. This feature indicates that at least one primary enclosure with stone walls was probably built during a phase of the occupation prior to the main Type V settlement unit. The hollow subsequently was filled with rubble and ash making its surface level with



Plate 26. Pebbled floor and drain in wall just east of Hut 18, Zone E.



Plate 27. Iron bangles among the stones collapsed from the roof of Hut 16. The hoard of bangles must have been hidden in the roof.

the surrounding area.

The pebbling beneath Hut 18 peters out a short distance north of the line of the section C-C1. Immediately behind the hut parts of a Dutch gin bottle square in shape and marked Simon Rynbende & Zonen, Schiedam, were found beneath rubble collapsed from the hut. The bottle is of nineteenth century pattern and from its position must postdate the abandonment of the hut.

About one metre north of the hut the edge of another hollow was exposed. This, however, was a gently sloping depression with pebbling on its sides and a lens of ash towards the centre. It was filled with rubble and soil in which there was no visible stratigraphy, to a depth of some 20 cm. On its eastern side a row of stones suggest that there was once a wall here, but if so, only the lowest course remains. Of later date and resting almost on the present ground surface was a short isolated piece of walling. In its present form it would hardly be of any use unless as a platform, however, it may have continued to the back of Hut 18, a metre away, in which case it would have formed a small sheltered area behind the hut. In this area a large lower grindstone with two uppers was found on the surface, but removed for excavation. Thus at a late stage of the occupation this may have served as a working area.

Between Huts 16 and 18 there was a deposit of some 30 cm (fig. 20). Overlying bedrock a light brown layer of soil or daga is succeeded by the ash lens and the pebbling. The latter reaches only to the back of Hut 16 but the ash extends under the wall to the centre of the hut. The upper deposit consists of coarse brown soil and rubble with numerous roots and scattered cultural material. Being built immediately on the ash lens, Hut 16 must be closely contemporary with Huts 17 and 18 and thus with the Type V settlement unit as a whole.

Within Hut 16 the occupation layer consisted of 8 cm of dark brown soil. Towards the centre was a lens of carbonised material in which grass stems could be recognised, but their haphazard arrangement suggests a bundle of grass rather than a mat of any sort. Two lower grindstones were found against opposite walls, the larger being inverted, and beside the entrance were two uppers and a block of sandstone with rounded edges and two grooves. Two small iron rods with pointed ends may have been awls or broken spear tangs, while the broken blade of a spear or knife was also recovered. Five beads of glass and a large one of ostrich egg-shell were found within the hut, as well as a piece of glass from the Dutch gin bottle.

Above the occupation layer was the characteristic light chestnut

soil and rubble of the collapsed roof and walls. While removing this prior to excavation three iron bangles were found and a little lower down a further group of twelve came to light. All were among the rubble with some stones beneath them, the lowest being partly covered by the light powdery soil (Plate 27). They could not have been on the floor at the time of collapse but must have been stored away in one or two hoards among the stones of the upper part of the hut. Other metal items were recovered from among the roof rubble of several huts and it therefore seems to have been a common practice to use the gaps in the stonework for storing valuables.

The north-western corner of Zone E including the lelapa of Hut 16 had a very shallow deposit of 5-10 cm consisting of soil and patches of daga which extended under the walls of the lelapa and the front of the hut. A channel dug into the weathered bedrock and running under the lelapa wall would have formed an enclosure some 6 m in diameter. Carbonised reeds from within it were submitted for radiocarbon dating (see below).

Within the lelapa a copper bangle and a considerable number of sherds were found including parts of a large pot with a row of rim impressions (fig. 28, 4). A well preserved circle of upright stones appears to be contemporary with the lelapa, and it forms a rough line with four less preserved ones outside the lelapa to the west.

Sequence of building in Zone E

1. Channel beneath lelapa of Hut 16.
2. Hollow and remains of stone wall behind Hut 17, representing former primary enclosure. This could have been contemporary with some of the reed structures, e.g. No. 1 above.
3. Coarse pebbling laid down over ash layer beneath Huts 17 & 18.
4. Construction of Type V settlement unit including Primary Enclosure 3, former primary enclosure containing Hut 14 and Huts 17 & 18 followed closely by Hut 16.
5. Entrance to Primary Enclosure 3 blocked; construction of small secondary enclosure and Hut 14.
6. Abandonment of the settlement leaving valuables in some of the huts.

The Middens

Eight rubbish heaps are situated around the periphery of the settlement unit at a minimum distance of 3 metres from the structures. Their main constituents are ash, brown soil, small stones and domestic debris, for the most part broken bones and pottery. Maximum depth is about half a metre, diminishing gradually outwards and merging imperceptibly with the natural soil around the edges.

Experience on sites excavated previously had shown that most middens are extensively disturbed by burrowing animals and this was also the case here. Fresh burrows were evident on the surface and some were still inhabited by mongoose (Herpestes or Cynictis sp.), ground squirrel (Xerus inauris) and a large scaly lizard which locally rejoices in the name of karkoer hotnot (Cordylus giganteus). Fresh skeletal remains of spring hare (Pedetes capensis) and a variety of small rodents (not identified) from the middens suggest that these animals also took advantage of the soft and relatively deep deposits. The extent of the burrowing is best expressed in the words of an informant who was asked the origin of some middens in the eastern Cape and replied that "they were built by God for meerkat to live in" (Derricourt, pers.comm.).

The result is a mixing of the midden layers and the underlying soil and a further lateral spread of the material, leaving a cratered surface to the most heavily disturbed middens. Towards the margins where the deposit becomes about 8-12 cm deep the texture gradually changes, becoming harder and consisting increasingly of brown soil. The amount of cultural material decreases but a scatter of sherds continues as the middens taper off and merge with the natural soil. Thus no exact margin could be established and during excavation an arbitrary limit was chosen where the depth reached 10 cm.

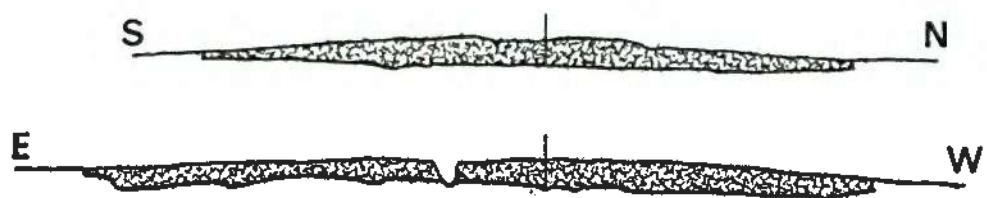
Three middens were excavated, partly to obtain large samples of material and partly to compare the content of each to assess variability within the site. The extent of disturbance suggested that stratigraphic excavation would be of little value but the mounds were divided into quadrants and the two sections along these lines were drawn. By excavating in quadrants it was possible to compare the sample of material from each arbitrary division for variability within the midden.

Midden 2

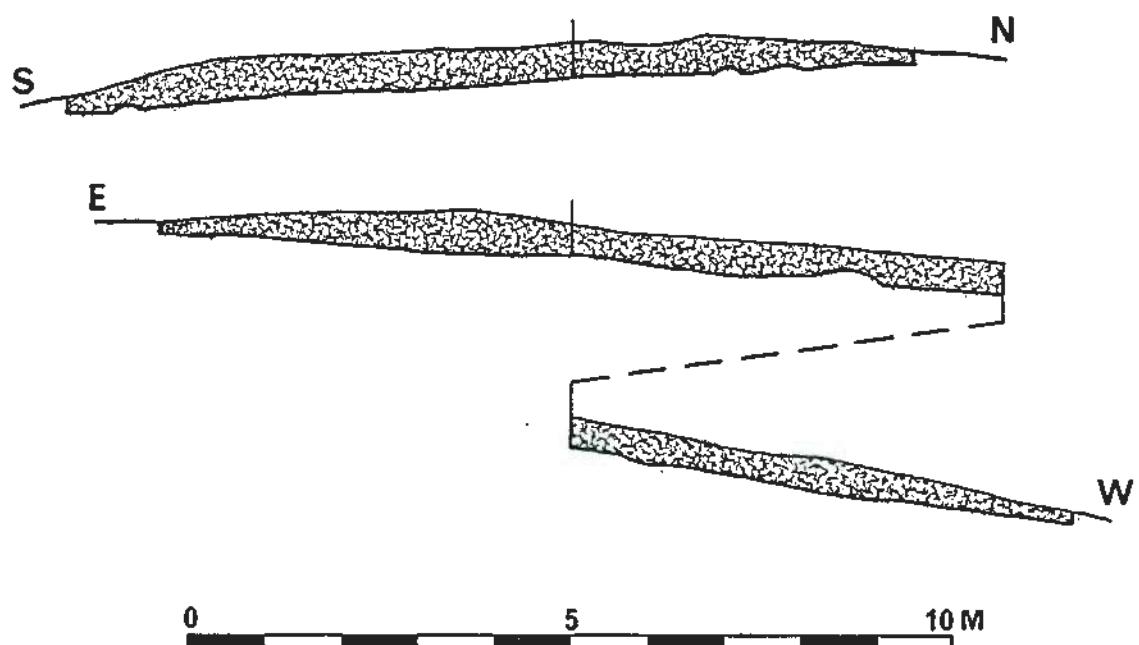
A fairly small and regular shaped mound was taken first. The north-east and south-west quadrants were excavated to expose the transverse sections (fig. 22) and after these had been drawn the other two quadrants

SECTIONS

MIDDEN 2



MIDDEN 5



0 5 10 M

Fig. 22

were removed. The central area was heavily disturbed but towards the edges were a number of thin lenses of ash and red-brown soil indicating small patches of the original deposit between disturbed areas. On the western side of the south-west quadrant was a thin lense of pink ash 1-2 cm thick resting on the original ground surface and extending beyond the midden. It may be from an early phase of the occupation but contained little cultural material. The midden itself contained an abundance of pottery representative of the range from the site as a whole (Appendix 2) as well as bones of domestic and wild animals.

The margin of the north-east quadrant overlapped the edge of a horseshoe shaped area of paving that must have been the floor of a hut (fig. 13). Around the edge a row of small slabs had been set into the ground leaning outwards, perhaps against the inner face of the wall but no trace of this could be found. There were remains of daga made from rotten dolerite between the paving stones but no other signs of the original construction. The lack of paving on the western side suggests that the entrance may have been here, however the gap is too wide for a doorway and it seems likely that the paving was subsequently removed from here and the central portion of the floor.

Some midden material was found on the floor, presumably derived from Midden 2, but the remains of a pot from the north-eastern part of the paving is probably associated with the floor. It is a sub-spherical pot with flat base, row of impressions on the rim and comb-stamped pendant triangles above an ochre burnish on the body (fig. 26, 1). This combination of features is characteristic of the OO 1 pottery.

Adjacent to the paving on the north-eastern side is a typical example of the circles of upright slabs as found within the settlement unit itself. This and the pot, both apparently associated with the floor, indicate the same cultural tradition as the Type V settlement unit although the paved floor may well be earlier - perhaps contemporary with the reed structures.

Midden 4

This was a fairly small but pronounced mound reaching a thickness of 0,6 m above ground level. It was much less disturbed than Middens 2 and 5 and therefore detailed sections were drawn, but these reveal that the southern and western portions have been extensively mixed while even the most intact section (fig. 23, centre-east) includes several burrows.

The north-west quadrant was excavated first, followed by the south-east to expose the sections (Plate 28). The upper 10-20 cm were devoid

MIDDEN 4

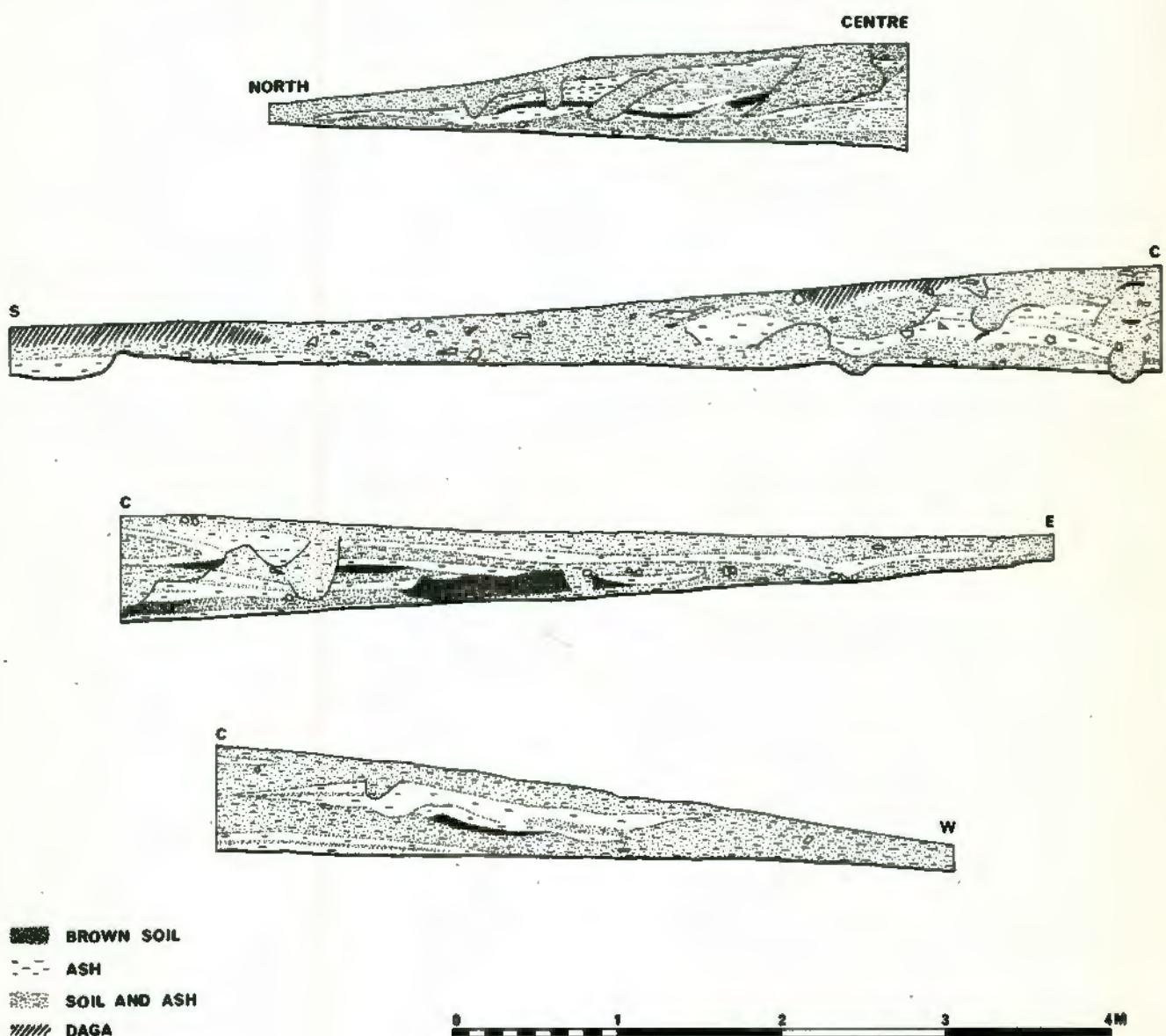


Fig. 23

of definite lenses and were the grey-brown colour typical of disturbed midden. Below this level a number of lenses of pinkish or light grey ash and of brown soil appeared. Resting on the original ground surface towards the centre of the midden was a thin lens of white-ash containing some carbonised material. This relatively compact and undisturbed layer was the nucleus of the midden and therefore in excavating the south-east and south-west quadrants it was isolated and searched for charcoal but it contained insufficient for a C14 sample, the carbonised material being mainly small pieces of burnt dung and earth.

The removal of a large stone from the surface of the south-west quadrant (Plate 28) revealed a buried pot. A section was cut transecting the pot but leaving a step to support it (Plate 29). The midden was too disturbed in the area around it to show from what level it had been buried, but it would have postdated most if not all of the accumulation for the stone was partly on the surface. The pot is barrel or U-shaped with a flat base and row of finger-pinchings on the rim - a type of vessel very characteristic of the site (fig. 29, 8). Although intact, it was cracked in antiquity and perhaps discarded for this reason. Half of a large broken bowl had been placed on top as a lid, which had been cracked into a number of pieces by the weight of the stone. The bowl is flat-based with a short everted neck and is of a thin, well burnished ware unusual among the larger vessels from OO 1. The combination of pot, lid and large stone on top showed that the burial had been carefully carried out.

The pot was lifted with its contents intact and then examined under cover. It contained the skeleton of a still-born or new-born child placed head upwards and apparently supported by some small stones placed around it. The pot was full of midden material which would have fallen through the cracks in the lid, but the stones seem too large to have done this and therefore were probably put in deliberately. The burial position could not be established further due to the fragmentary nature of the bones and their partial disturbance from settling and perhaps from biotic activity. The cranial vault was a mere 0,5 mm thick and the long bones were very poorly preserved with only their shafts remaining. The best preserved bones were the bulbæ and the spinal processes. Infant burials in pots were recorded from similar sites near Heilbron (Laidler, 1936) while Ashton (1952, 104) records the same practice among the present population of Lesotho.

The south-west quadrant was contiguous with a smaller mound whose morphology suggested a separate but overlapping midden. This was not

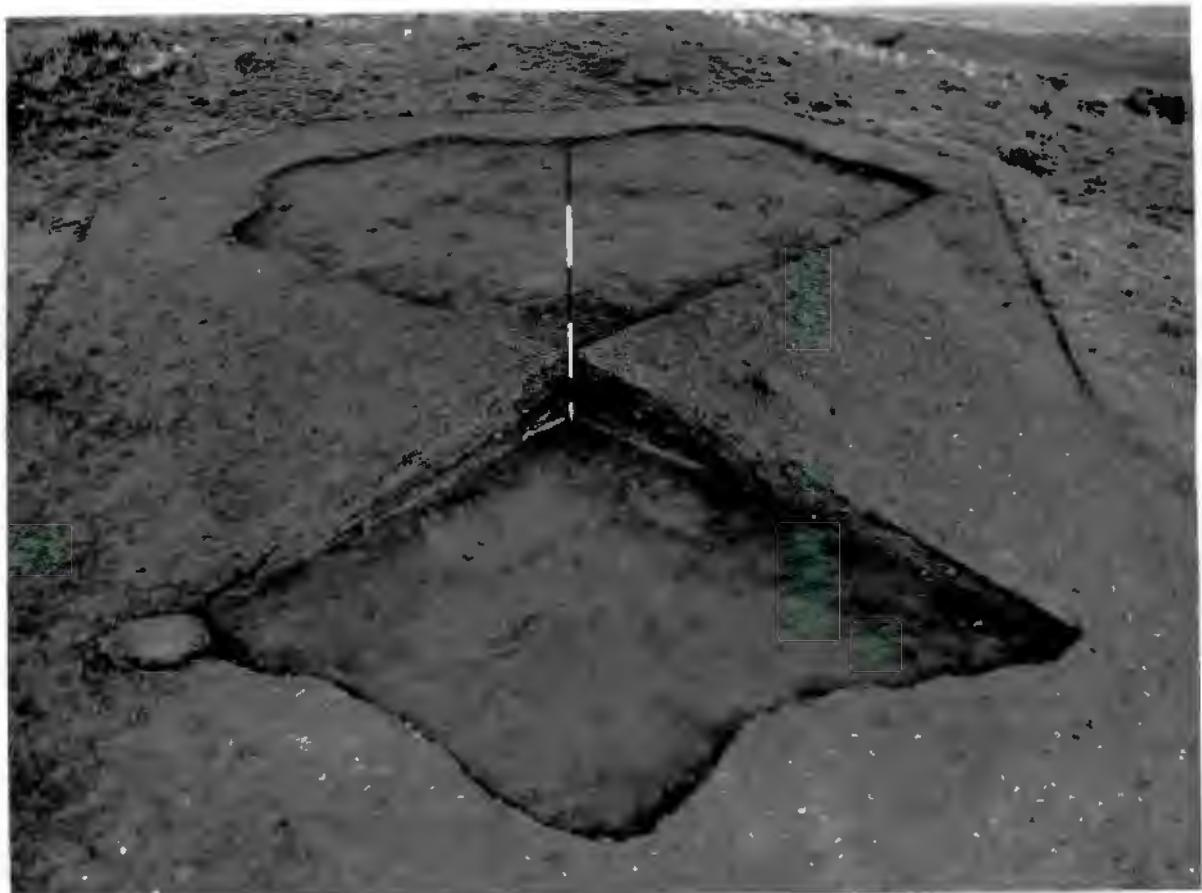


Plate 28. Midden 4 with the north-west and south-east quadrants excavated. Large stone to right of the ranging pole covered the pot burial.



Plate 29. Infant pot burial in Midden 4, 'lid' broken by overlying stone.

excavated but an arbitrary straight line was cut at approximately the lowest point between the two mounds.

Since the basal ash lenses contained insufficient charcoal, an attempt was made to obtain a C14 sample from the remaining north-east quadrant. The upper disturbed layer and as many of the deeper disturbances as possible were first removed. Then the whole quadrant was sieved and all the charcoal removed and submitted as a sample, but even this was insufficient, which is indicative of the extreme rarity of charcoal at this site.

Midden 5

South of the settlement unit on the edge of the scarp was a large but heavily disturbed midden. Virtually the whole deposit had been churned over by burrowing animals and the only considerable undisturbed area was in the north-west quadrant where it merges with Midden 6. Here a number of light and dark ash lenses are preserved by contrast with the general grey-brown colour of the bulk of the disturbed material.

The midden extended much further down the slope to the south-west than was apparent before excavation. It was more dispersed than the other middens, lacking a central hump, and therefore the point chosen as the centre for the quadrants was in fact well to the side. Burrowing and soil creep have probably contributed to this down-hill spreading. Because of it, the limits of excavation were set where the midden reached a depth of about 15 cm instead of the 10 cm used on the up-hill margins. At this point the deposit was becoming more earthy and included more small stones. Where the north-west quadrant merges with Midden 6 an arbitrary limit was drawn at about the lowest point between the two. The shape of the two middens shows that they accumulated as two separate dumps with a slight overlapping. The minimum depth in the overlapping area was about 20 cm.

A large sample of pottery was obtained, 1 323 decorated sherds as against 529 and 630 for Middens 2 and 4 respectively. There were a number of small finds including objects of metal, but on the whole the middens contained little metal, except for broken pieces, when compared with the excavations within the settlement unit.

Although no further pot burials were found skeletal remains of three children are represented by various cranial bones. Mainly from the south-east quadrant were some fragmentary remains of two new-born or still-born babies comparable in size and condition with those from the pot. A frontal from the north-west quadrant fitted a left parietal from the south-

west, proving that they are from the skull of the same individual and demonstrating the degree of disturbance that has taken place. In this individual the thickness of the cranial vault is around 1,7 mm which together with the size shows that it was considerably older than the two from the south-east quadrant, although nevertheless a child. It is most probable that the three were actually buried in the midden but subsequent disturbance had so scattered the remains that only fragments were recognised among the collected bone.

The Burials

Apart from the infants buried in the middens and the two mandibles from Zone A and Zone D, no human remains were recovered from the excavations of the settlement unit. Previous workers on Iron Age sites in the Orange Free State exhumed a number of burials, but while the skeletal remains were described, insufficient attention was paid to the nature of the burial (Van Riet Lowe, 1927; Laidler, 1936). A search was therefore made along the ridge in the vicinity of the settlement unit and three features were excavated, all of which proved to be graves. Most of this work was carried out by Cedric Poggenpoel.

The skeletal remains have been described by De Villiers (1972) and her report is included in Appendix 3 of this chapter.

Burial 1

The most westerly settlement unit included in the analysis, Unit Y (Appendix 1), is situated some 20 m north-east of the beacon which in turn is 900 m along the ridge to the west of the excavated settlement unit. It is a Type V settlement unit with three corbelled huts and three larger primary enclosures the largest of which contained a group of stones partly slumped into a hollow. As this feature suggested a grave it seemed worth excavating.

Vegetation and loose soil were cleared and some of the more scattered stones removed. This revealed a loose group of flat stones beside the wall of the enclosure and confirmed that some had slumped into a deep hollow (Plate 30). The stones would have formed a low mound or, being predominantly flat, a platform. It was, however, impossible to reconstruct the original shape owing to the disturbance and the inclusion of some stones fallen from the wall. After some of the uppermost stones had been removed it was decided that a section should be recorded, thus fig. 24 does not include all the upper stones.

BURIAL 1

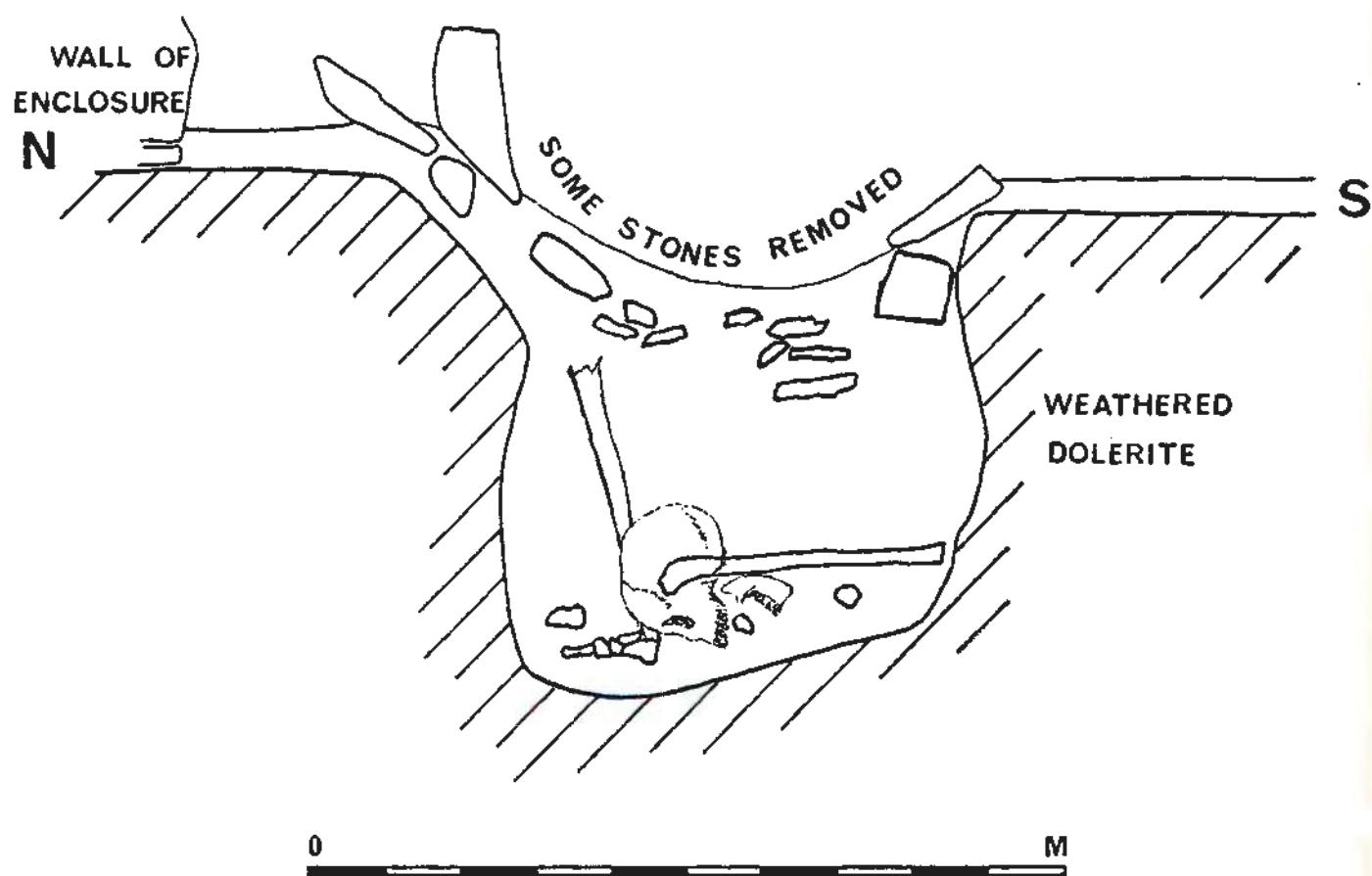


Fig. 24



Plate 30. Stones above Burial 1 slumped into hollow.
Wall of primary enclosure in background.



Plate 31. Burial 1 in situ showing small size of
grave dug into weathered dolerite.

The filling consisted of loose brown soil among the rocks, giving way to coarser and more compact material, essentially weathered dolerite. A little below the lowest of the sloping rocks and into the harder material a layer of smaller flat slabs set horizontally was reached. During excavation it was thought that these represented a separate layer of stones within the grave filling, but in view of the subsidence there can be no certainty. At this level the distal end of a femur and the proximal of a tibia appeared, confirming that there was a burial.

With increasing depth the grave appeared as a narrow shaft some 65 cm in diameter dug into the partly weathered but nevertheless hard dolerite. It was approximately cylindrical but angular in places because of joint-planes in the rock. It must have been difficult to dig with Iron Age tools and for this reason was kept as small as possible, being only 65 cm deep. The weathered dolerite dug from the grave had been used to refill it while some remained on the floor of the enclosure beside it.

As much of the burial as possible was uncovered and photographed before removal (Plate 31). This was complicated by the coarseness of the deposit, the brittleness of the bone, the confined working space and the disarticulation of some bones, to the extent that Plate 31 does not adequately demonstrate the burial position which must therefore be described in some detail.

In general the evidence is compatible with an upright flexed position from which some bones, particularly from the head and shoulder region, have slumped, presumably as a result of post-mortem decay.

1. The cranium was very low and facing downwards. It was no longer articulated with the spine and had probably slumped forwards and downwards from an initial position facing north-east. Its position has been indicated on the section (fig. 24) although it was not within the plane of the section.
2. The bones of the shoulder region were slightly disturbed as were the ribs and vertebrae but they would have been articulated at burial as all were present in the area just south of the cranium, viz. clavicles, scapulae, humeri, ribs and vertebrae.
3. Both arms were articulated, the left being tightly flexed at the elbow, the right being bent at about 45°. Both are in a horizontal plane, the left elbow being close to the right wrist but the bones of both hands were not articulated and for the most part absent.

4. The vertebrae extended in a row from the shoulder region downwards to the pelvis in the centre of the grave. The pelvic bones were poorly preserved; being deepest in the grave they were probably kept damper than the other bones.
5. The right femur was articulated with the pelvis and stood vertically beside the eastern side of the grave. Excepting the right femur, the positions of the leg bones were hardly compatible with any burial position and it is clear that some disarticulation or major disturbance has occurred.
6. The left femur was absent from the grave.
7. The left foot bones were articulated with the tibia and fibula which stood upright - the whole being consistent with an upright flexed position but for the absent femur.
8. The right tibia and fibula were slightly separated, not articulated at either end and most surprisingly were lying horizontally on top of the arms, ribs and vertebrae (Plate 31, tibia extends from cranium towards lower margin of picture, fibula already removed).
9. The right calcaneum was above the toes of the left foot at the northern end of the grave, diametrically opposite the adjoining distal end of the tibia. Several other bones of the right foot were recovered from beside the tibia and above the right humerus.

The positions of the leg bones described in paragraphs 6, 8 and 9 cannot be explained in terms of subsidence or small-scale disturbance such as might result from biotic activity. The stones over the grave together with its position in an enclosure should have prevented the removal of bones by scavenging animals, especially during the occupation. There is no evidence of disturbance in recent times and the relative fragility of the bone would have led to fracturing of the displaced bones if this had been the case. The other possibility would be that the legs were disarticulated and the femur removed before, during or not long after burial. The lower left leg and foot were clearly articulated at burial but the lower right leg was at least partly disarticulated and was placed above the shoulder region. But with these exceptions, the body was interned in an articulated state and in an upright flexed position facing northwards.

The remains were submitted to De Villiers (1972) whose report is

included in Appendix 3. The burial was that of a young adult female about 20 years old and in physical type corresponding to the South African Negro.

The only grave goods were three copper earrings of Sotho pattern found beside the mandible and described below together with similar examples found in the main excavations. Adhering to one of these and preserved by it was a short piece of hair which was submitted to D. Brothwell for examination. It was photographed under a scanning electron microscope but the material was too poorly preserved to be of any use.

Burial 2

Eastwards along the ridge from the excavated settlement unit are two fairly large Type V settlement units followed by a smaller one and two heavily robbed structures. On the edge of the escarpment beside the latter and at a point where the slope is moderate, a group of dolerite rocks forming a rough mound half a metre in diameter protruded above the ground. A dolerite outcrop immediately downhill indicated that there was very little depth of soil, but the rocks appeared to have been deliberately placed which was suggestive of a burial.

Excavation proceeded leaving some of the rocks on the eastern side and the burial was reached at a depth of about 40 cm. Beneath the larger surface rocks were a number of smaller ones forming a considerable portion of the grave filling, the remainder consisting of partly weathered dolerite and the natural brown soil of the ridge. The burial rested directly on an unweathered dolerite block which prevented the grave from being made any deeper (Plate 32). The dolerite is in the form of a dome reaching its highest in the area of the shoulders, knees and hands and becoming deeper uphill and downhill towards the head and feet respectively. The deeper areas had been partly filled by stones, there being several near the feet and one supporting the chin.

The remains were in poor condition being both friable and fractured in many places. Bone deteriorates fairly rapidly in the natural soil, apparently more rapidly than in weathered dolerite while it is well preserved in the ash middens, which largely accounts for the differential preservation of the three 001 burials. Chemical weathering was particularly noticeable on the axial skeleton and other less dense bones. Additional damage was caused by the stones above the burial pressing it on to the underlying rock which produced a number of fractures, for example of the cranium and long bones (Plate 32).



Plate 32. Burial 2.



Plate 33. Burial 3.

The burial was tightly flexed with legs and arms bent up against the body, the legs together and the arms on either side. It was placed on the right side facing west. The axial skeleton was poorly preserved and slightly disturbed but all major bones were present.

The remains were submitted to De Villiers who found that they were those of a young woman of about 20 years, the cranial morphology being consistent with the South African Negro physical type (Appendix 3). There were no grave goods.

After it had been uncovered, the burial was left open overnight which unfortunately attracted the attention of some cattle in the field. Several bones were chewed up and broken, especially those of the post-cranial skeleton and there was further damage to the facial area. In the phosphorus deficient grassveld of parts of South Africa cattle will frequently chew bones as an alternative source of supply, particularly during late summer and winter when the grass has its lowest nutritional value. Archaeologists working in such areas might well bear this in mind to avoid similar cases of damage to excavations where bone is present.

Burial 3

A short distance east of Burial 2 and about 300 metres from the excavated settlement unit was an ash midden with a group of rocks on it. There were four large rocks slightly separated from each other with several smaller ones, partly set into the ground and clearly placed there deliberately. Here as with Burial 2 it was a case of several irregularly shaped rocks roughly grouped together rather than a carefully built cairn or mound. The midden, being on the edge of the scarp, sloped southwards which may have led to the displacement of some stones.

The rocks were removed and 30-40 cm of midden material were excavated before reaching the burial. One stone was found a few centimetres above the cranium but the others were near to or on the surface. The total depth was between 40 and 60 cm depending on the surface slope. The deepest part of the grave was dug into bedrock which consisted of angular and spheroidally weathered blocks of dolerite (Plate 33). Although the burial occupied the hollow in bedrock, most of the filling consisted of midden material including several sherds and animal bones although there was some soil and rotten dolerite especially in the deepest portion. Clearly the grave was dug through the midden and not before its formation; the shallowness of the hollow and the stones on the surface confirm this. The midden ash has afforded good preservation despite the softness of the bones, being those of a child. Only in the deepest portion where bones

were in direct contact with the dolerite have they been extensively damaged. This applies particularly to the pelvis and right side of the frontal.

The burial position was essentially flexed and facing downwards but with the shoulder region twisted on to the right side. The legs were tightly flexed but about 10 cm apart, the knees to the north and what remains of the pelvis to the south (Plate 33). The axial skeleton lay horizontally across the right leg, the vertebral column curving first north-eastwards and then round to the north-west. The left shoulder was raised and the forearms were crossed beneath the chest. The cranium was in articulation with the spine but twisted into an east-west plane facing almost directly downwards. There was no real orientation in the usual sense but if a living person were to stand up from this position they would be facing approximately northwards.

The skeleton is in good condition and almost complete, but minor disturbance to hands and feet plus decay have led to the loss of several smaller bones. The remains were submitted to De Villiers who found them to be those of a child of about 10 years, the morphology being consistent with the South African Negro physical type. There were no grave goods.

THE FINDS : POTTERY

Fabric

The great majority of sherds are made of a clay of sandy texture, although for sand the individual grains are relatively small, being about 0,1 mm in diameter or less and the proportion of quartz seems relatively low. In view of the geological situation the clay would almost certainly be derived from the weathering of mudstones or shales of the Beaufort System. It may have been redistributed by rain or river action but not necessarily. Such material could probably be found almost anywhere in the area. Indeed a Sotho potter who lives a few kilometres from OO 1 obtains her clay in the open ground far from any stream, where it is probably merely the well weathered country rock. In texture this is similar to, if a little finer, than most of the OO 1 pottery.

Any attempt to locate the actual source of clay would probably not be worth while, but in view of the rounded nature of the quartz grains the dolerite sill which caps the ridge on which the settlement was built can be excluded.

Grit, sometimes angular and sometimes rounded, may be included in

the fabric but usually in small quantities. A few sherds have crushed pottery grog but this is not characteristic. White calcareous nodules occur in a number of cases and seem to be deliberate additions. Similar nodules were observed in the soil in and around the site.

Two of the illustrated vessels differ from the majority in that they are particularly thin and contain a much larger proportion of a shaly grit (fig. 27, 10 & 11). This shale must have been crushed and added to the clay. A few vessels are made of a rather finer grained fabric which shows a laminated structure on broken edges. This is probably made from clay derived from the weathering of shale.

Firing must have been at relatively low temperatures for most vessels have a dark core from incomplete combustion of the carbon in the clay. This may vary in different parts of the same vessel, for instance several cases were noted where the areas around the rims were more completely fired than the lower parts which also tend to be thicker. Patchy colouring is common and would be caused by the position of the pot during firing and the way that the fuel was placed in and around it. Dung would have been the main fuel and this may be the reason for the low degree of most firings.

The colour of most vessels falls within the buff-brown-grey range indicating a relatively smoky fire with little oxygen, although actual reduction would be difficult to achieve without a kiln. The orange-red colours, indicating oxidization of the iron in the clay, are rare although intermediate colours such as red-brown are more common.

There is a great deal of minor variation in fabric, colour, surface texture and thickness from vessel to vessel. From this it was often possible to pick out and reassemble sherds belonging to a single vessel from among a large quantity of others. These subtle variations seem to have no real archaeological significance and for this reason the description of the fabric has been restricted to the more general features.

Burnish

All sherds were examined for surface treatment and divided into plain and burnished categories. Burnish is defined as a surface sufficiently smooth to produce a shine when the sherd is held obliquely to a diffused source of light. The source used was daylight from a window but not direct sunlight nor an electric bulb. This definition was chosen as being the simplest one where conditions can readily be repeated and where results by different workers should be much the same.

The problem here is that many sherds are borderline cases where there is some smoothing but not a high degree of burnish. Such examples would probably fall under different headings if classified by different workers unless a relatively objective method could be adopted. In practice this method is quick and reasonably successful although even here there are some borderline cases.

With such fragmented pottery some sherds have had their surfaces worn away thus removing any burnish there might have been. This problem cannot be avoided but with large samples it is likely to be insignificant and indeed the proportion of abraded sherds is low. To limit this problem sherds are only included in the analysis if they retained some part of their outside surface. Sherds which have lost one surface through splitting or severe abrasion are only included if it is clear from their curvature or from being burnished or decorated that the remaining surface is the outside one.

Burnished sherds are subdivided into three categories: those where the normal fabric of the pot has been burnished, those where a coating or slip of red ochre has been applied and then burnished and those with black burnish. No graphite or other types of burnish were seen on this pottery and indeed it is not certain that the black burnish really represents a separate category; most of these sherds probably had one of the other two types of burnish and subsequently became blackened by fire. The category has, however, been retained as some of the sherds may represent a deliberately applied black burnish.

TABLE OF SURFACE FINISHES AND RIM PROFILES ON 00 1 POTTERY

	UNDECORATED SHERDS				DECORATED SHERDS				TOTALS	
	Plain		Burnished		Plain		Burnished			
	Burnish	Ochre	Black	Burnish	Ochre	Black	Burnish	Ochre		
RIM SHERDS										
Rounded	2411	203	43	14	965	52	224	3	3915	
Flattened	1605	48	14	1	555	14	73	-	2310	
Pointed	124	6	2	-	22	1	-	-	155	
Misc.	286	8	-	-	819	9	50	2	1174	
BODY SHERDS	98164	3813	1725	576	1198	53	484	7	106020	
TOTALS	102590	4078	1784	591	3559	129	831	13	113574	

Most of the pottery from 00 1 is plain. Only some 6% is burnished, a lower proportion than on most of the other sites. The figures for the

three types of burnish are given in the table. When all sherds are considered the most common burnish lacks any addition of colouring matter, followed fairly closely by ochre burnish, with the black burnish being much rarer. However, among decorated sherds the ochre burnish exceeds the ordinary one and black burnish is almost absent. This preponderance of ochre shows that there is a close link between it and decoration, a feature that will be examined more closely in the following section.

Decoration

The OO 1 assemblage is best described by its decoration, which covers a considerable range of techniques and motifs but is nevertheless characterised by a few regularly occurring types.

The great majority of sherds are undecorated which might suggest that decoration is relatively rare. However most of the decoration is found on or only a short distance below the rims of vessels and an approximate indication of the extent of this is demonstrated by the fact that 37% of all rim sherds were decorated while only 1,6% of body sherds were decorated. These figures suggest that about one third of all vessels may have been decorated.

Comb-stamping

Comb-stamping is one of the most important decorative techniques, accounting for 24% of the decoration. No objects suitable for applying this decoration were found on the site and thus the nature of the combs is unknown. Nor is it always possible to determine their length but most seem to have been around 2,5 cm with examples as short as 1,5 cm and as long as 3,3 cm. The comb-stamping tends to be finer than that from many southern African sites, in most examples there are from four to seven impressions per centimetre.

In the analysis comb-stamping is subdivided into four motifs and these require separate description.

Pendant triangles

Examples are illustrated in figure 26, 1-4. One apex of each triangle is pendant while the opposite side is placed horizontally just below the rim. Sometimes there is also a horizontal band filled in with comb-stamping between the rim and the triangles (fig. 26, 4). The triangles are normally outlined with a line of comb-stamping and then filled in with further lines which may be horizontal, oblique or radiating

DECORATED SHERDS FROM OO 1

Motif	Motif No.	No. of Shards	%
Comb-stamping in pendant triangles	1	195	4
" horizontal bands	2	168	4
" alternating diagonal panels	3	92	2
" sherd too small	4	614	14
Rim notches	5	653	14
Misc. impressions on rim	6	426	9
Finger impressions on rim	7	774	17
Applied band	8	341	8
Finger impressions on body	9	736	16
Cusps	10	60	1
Stylus impressions in parallel rows	11	92	2
Misc. impressions on body	12	278	6
Parallel grooves, sherd too small	13	33	1
" in horizontal band	14	57	1
" in pendant triangles	15	10	
		4529	99

from the lower apex of the triangle. Pendant triangles account for 4% of decoration. There are occasional examples where triangles are used to form motifs different from the standard one, including triangles suspended from the apex, various combinations of triangles and other shapes, and two interdigitating rows of triangles with a gap in between forming a chevron (fig. 27, 1 & 2). These variations are, however, numerically insignificant and they are included among the pendant triangles in the analysis.

Band or bands (fig. 26, 5-8)

Usually one but sometimes two or three bands may be placed horizontally just below the rim. The bands are outlined by a line of comb-stamping and filled in with further lines which are usually oblique. Sometimes two rows of lines are set at opposite angles to each other forming a herringbone effect (fig. 26, 8). Bands of comb-stamping represent 4% of decoration. If another motif such as pendant triangles is added below the band the sherd is classified thus and not as a band.

Diagonal panels (fig. 26, 9-11)

This motif does not seem to have been described from any other Iron Age site in southern Africa. It is better defined as alternating diagonal panels of comb-stamping and ochre in horizontal bands. There are normally two such bands and the panels in each are arranged to coincide

with one another but sloping in opposite diagonal directions to form a herringbone effect. This motif is associated with one or more bands of comb-stamping just below the rim in which the lines of stamping are also arranged in a herringbone. Although the motif occurs on only 2% of decorated sherds it is one of the most distinctive and elaborate forms of decoration found on this site.

The fourth category includes all sherds which have some comb-stamping on them but are too small for the motif to be determined. Even after reassembling a considerable number of sherds this category is still the largest among the comb-stamping accounting for 14% of all decoration. This is some indication of the degree to which most of the OO 1 pottery has been fragmented. Presumably these fragmented sherds belonged to vessels with the three motifs described above but for numerical purposes they must be given a separate category.

There are a number of features associated with all the comb-stamped motifs which differentiate them as a group from the other OO 1 pottery. Most prominent among these is the incidence of ochre burnish. The tables containing the basic information for the pottery analysis (Appendix 2) show that among decorated sherds almost all the ochre burnish is associated with comb-stamping and to a slightly lesser extent this is also true of the ordinary burnish. Comb-stamping with a high degree of surface finish sets these vessels apart from the majority of the assemblage although there are a few vessels which have only comb-stamping or ochre burnish and lack the other feature.

Comb-stamped and burnished sherds tend to be rather thinner than those with other decoration. Sherds from the north-west quadrant of Midden 5 were measured and the results from the two categories are shown in the histograms (fig. 25). There is relatively little difference and both have modal values of 7 mm but the mean value of the other decorated sherds is 8,4 mm whereas that of the comb-stamped sherds with ochre is 7,3 mm and there is a small but consistent shift in the histogram of the latter group to the left of the former.

Ochre burnish is usually applied to the outer surface of the vessel from the rim to the base or nearly to the base. It was applied after the comb-stamping as the decorated areas are not burnished. It usually occurs on the rim and on the inner surface of the vessel to a depth of one centimetre or more. Apart from its decorative value the burnish would have tended to reduce the porosity of the pottery and the burnish on and inside the lip would have made the vessel more pleasant to drink from, especially as the drinker's lips tend to stick to the surface of a porous

THICKNESS OF COMB-STAMPED AND OTHER DECORATED
SHERDS FROM MIDDEN 5. N.W. QUADRANT COMPARED

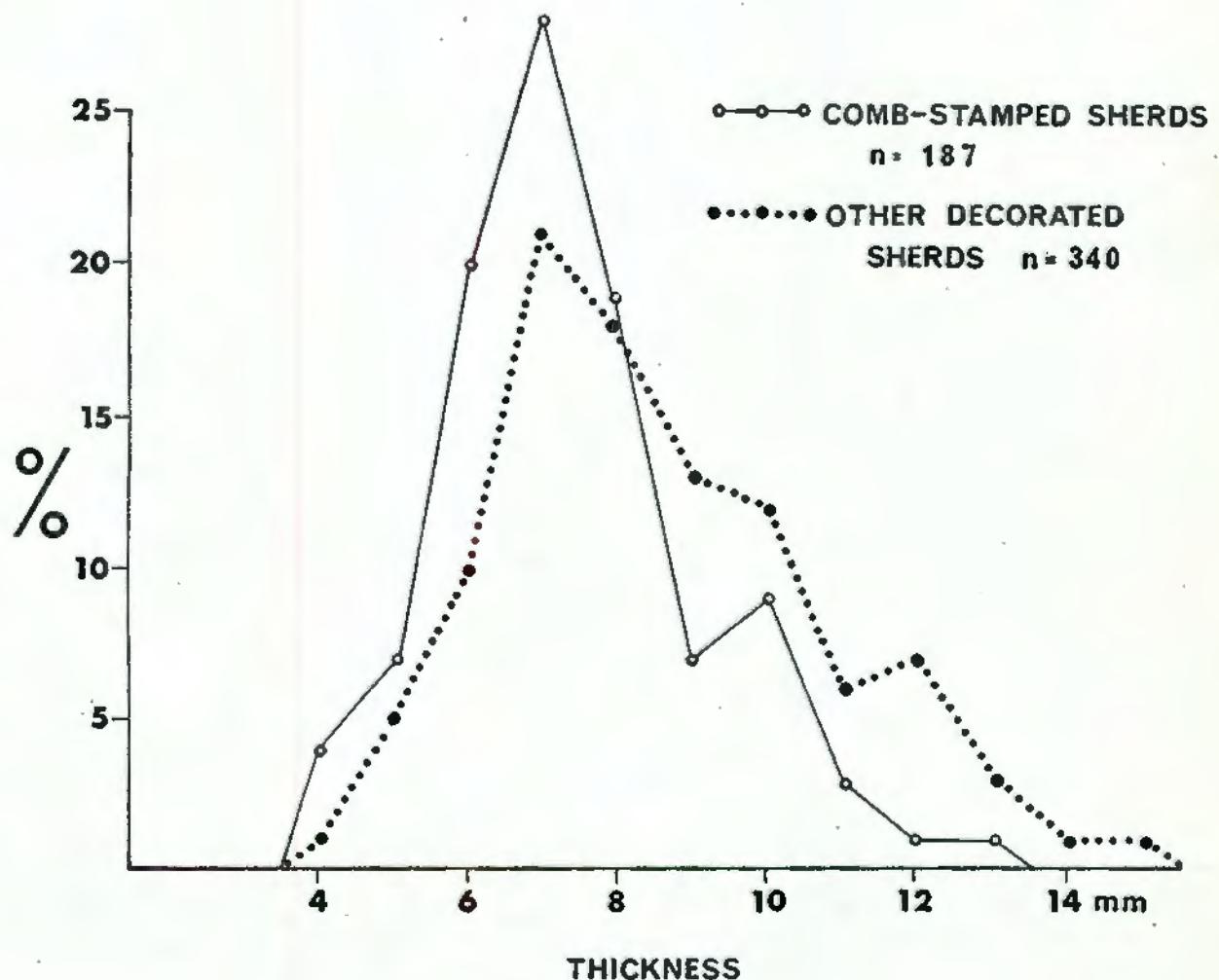


Fig. 25

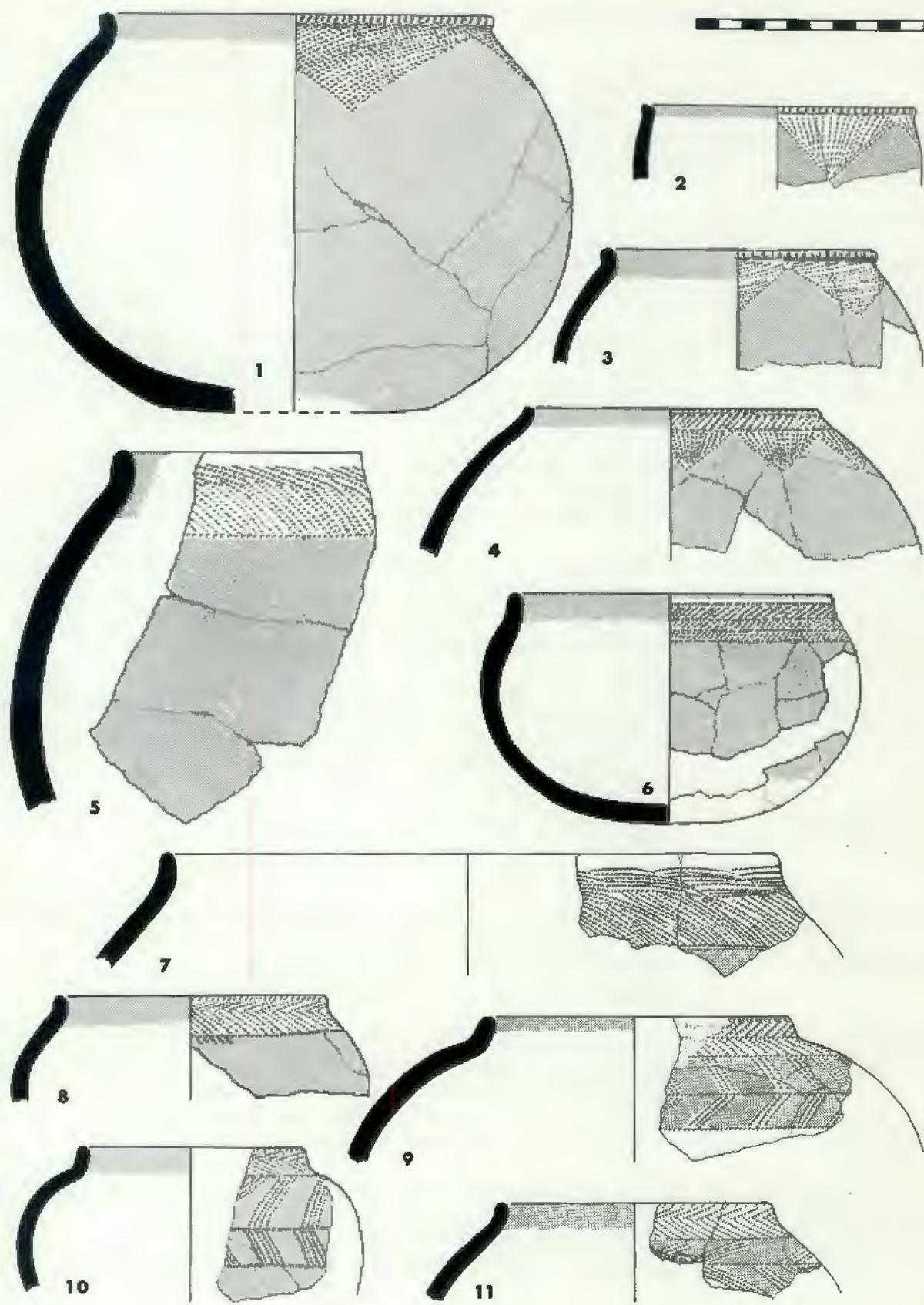


Fig. 26

clay receptacle unless the clay is already saturated. Sotho potters today sometimes paint a band of P.V.A. based paint on the rims of their vessels, partly for this reason.

Many of the comb-stamped vessels especially the smaller ones have a row of notches or miscellaneous impressions on their rims. This combination of motifs is shown in the tables (Appendix 2) and it includes both vertical and diagonal notches, lines of comb-stamping and various other sorts of fine rim impressions. Examples of these are shown in figure 26, 1-4 & 8-11. Rim impressions are not a feature that is normally associated with comb-stamped ware from other parts of southern Africa so this again is a distinguishing characteristic.

A white powdery substance remains in some of the comb impressions even after sherds have been washed. This was presumably applied to heighten the decorative effect and in a freshly made pot it must have formed a strong contrast with the ochre burnish. It is only visible on a few sherds today but was probably more common originally. Comb-stamped vessels seldom show fire-blackening, thus they were not intended for cooking. The amount and fineness of decoration together with the burnish suggests they were used as containers for beverages and for drinking.

Rim notches

Sherds with a row of impressions along the rim, the cross-section of the impressions being V-shaped, are included in this category. The notches could have been made by a wide range of objects such as splinters of wood or bone with a rectangular or triangular section. In the initial classification two variations were recognised, those where the direction of the notch was vertical and those which were diagonal and the figures for these are included in Appendix 2. The diagonal notches may slope in either direction but downwards to the left is most common. For the numerical analysis the vertical and diagonal are combined as the difference seems to have little significance.

Together, the two types of notches account for 14% of the decoration. However, this does not include sherds where there is another motif such as comb-stamping in addition, so a slightly higher percentage of decorated sherds do include rim notching and it is certainly one of the characteristic motifs of the assemblage. Examples are illustrated in figure 27, 7-11, and they include a wide range of vessel types and sizes. The notches are small and usually carefully made and evenly spaced, about 2-5 per centimetre. A number of vessels are burnished or have an ochre burnish although this is less common than among the comb-stamped sherds.

Figure 27

Unusual comb-stamped motifs, grooved motifs and typical notched rims.

1. Probably sub-spherical pot with upright neck, rounded rim. Band filled with oblique lines of comb-stamping forming herringbone above pendant triangles suspended from apex instead of side as in almost all other examples. Ochre burnish. Sandy, buff throughout. Zone C.
2. Pot with upright neck and rounded rim. Comb-stamping on rim, in herringbone pattern filling band and in adjoining pendant triangles together with an oblique panel. Ochre burnish. Brown with dark core, sandy.

Nos. 1 and 2 are examples of rare variations from the normal pendant triangle motif as illustrated by Nos. 1-4 in fig. 26. They are, however, combined for classification.
3. Vessel of unknown shape. Pendant triangle filled with shallow, horizontal grooves. Ochre burnish below. Light buff throughout, shale grit temper. Midden 4, S.W. quadrant.
4. Sherd with rounded rim. Band of shallow, horizontal grooves. Ochre burnish on rim. Buff throughout, shale grit temper. From the secondary enclosure in front of Huts 17 and 18.

Nos. 3 and 4 are distinct from the characteristic pottery of OO 1, but in decorative technique and motif, in the use of ochre and in colour and texture they resemble the pottery from Type Z sites.
5. Vessel with flattened rim. Horizontal grooves with miscellaneous impressions in between. Brown with dark core. Sandy with some grit. Zone A.
6. Small perhaps sub-spherical bowl with rounded rim. Two bands of horizontal grooves, the lower punctuated by vertical finger smears at intervals. The lower edges of the grooves show cut marks as if the grooves were made by a series of impressions not a single dragging motion. Red-brown with dark core. Sandy. Midden 4, S.W. quadrant.
7. Large inverted bag-shaped bowl with flattened rim. Row of vertical V-shaped notches on rim. Brown, blackened in places. Sandy. Hut 11.
8. Small vessel with slight shoulder and flattened rim. Vertical notches on rim. Rough finish, unburnish. Grey with dark core and blackened on outside. Sandy. Zone A.
9. Small spherical bowl with rounded rim. Vertical notches on rim. Red-brown with dark core. Sandy. Midden 5, N.W. quadrant.
10. Barrel-shaped pot. Diagonal V-shaped notches on rim. Ochre burnish. Orange-buff with dark core. Very thin ware with shale grit. Hut 1.
11. Shape, decoration and ware as No. 10 but no burnish. Probably made by same potter. Hut 7.
12. Near-spherical pot. Miscellaneous impressions on rim. Dark brown, blackened and with soot. Sandy with grit and calcareous nodules. Hut 11.

clay receptacle unless the clay is already saturated. Sotho potters today sometimes paint a band of P.V.A. based paint on the rims of their vessels, partly for this reason.

Many of the comb-stamped vessels especially the smaller ones have a row of notches or miscellaneous impressions on their rims. This combination of motifs is shown in the tables (Appendix 2) and it includes both vertical and diagonal notches, lines of comb-stamping and various other sorts of fine rim impressions. Examples of these are shown in figure 26, 1-4 & 8-11. Rim impressions are not a feature that is normally associated with comb-stamped ware from other parts of southern Africa so this again is a distinguishing characteristic.

A white powdery substance remains in some of the comb impressions even after sherds have been washed. This was presumably applied to heighten the decorative effect and in a freshly made pot it must have formed a strong contrast with the ochre burnish. It is only visible on a few sherds today but was probably more common originally. Comb-stamped vessels seldom show fire-blackening, thus they were not intended for cooking. The amount and fineness of decoration together with the burnish suggests they were used as containers for beverages and for drinking.

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Sherds with a row of impressions along the rim, the cross-section of the impressions being V-shaped, are included in this category. The notches could have been made by a wide range of objects such as splinters of wood or bone with a rectangular or triangular section. In the initial classification two variations were recognised, those where the direction of the notch was vertical and those which were diagonal and the figures for these are included in Appendix 2. The diagonal notches may slope in either direction but downwards to the left is most common. For the numerical analysis the vertical and diagonal are combined as the difference seems to have little significance.

Together, the two types of notches account for 14% of the decoration. However, this does not include sherds where there is another motif such as comb-stamping in addition, so a slightly higher percentage of decorated sherds do include rim notching and it is certainly one of the characteristic motifs of the assemblage. Examples are illustrated in figure 27, 7-11, and they include a wide range of vessel types and sizes. The notches are small and usually carefully made and evenly spaced, about 2-5 per centimetre. A number of vessels are burnished or have an ochre burnish although this is less common than among the comb-stamped sherds.

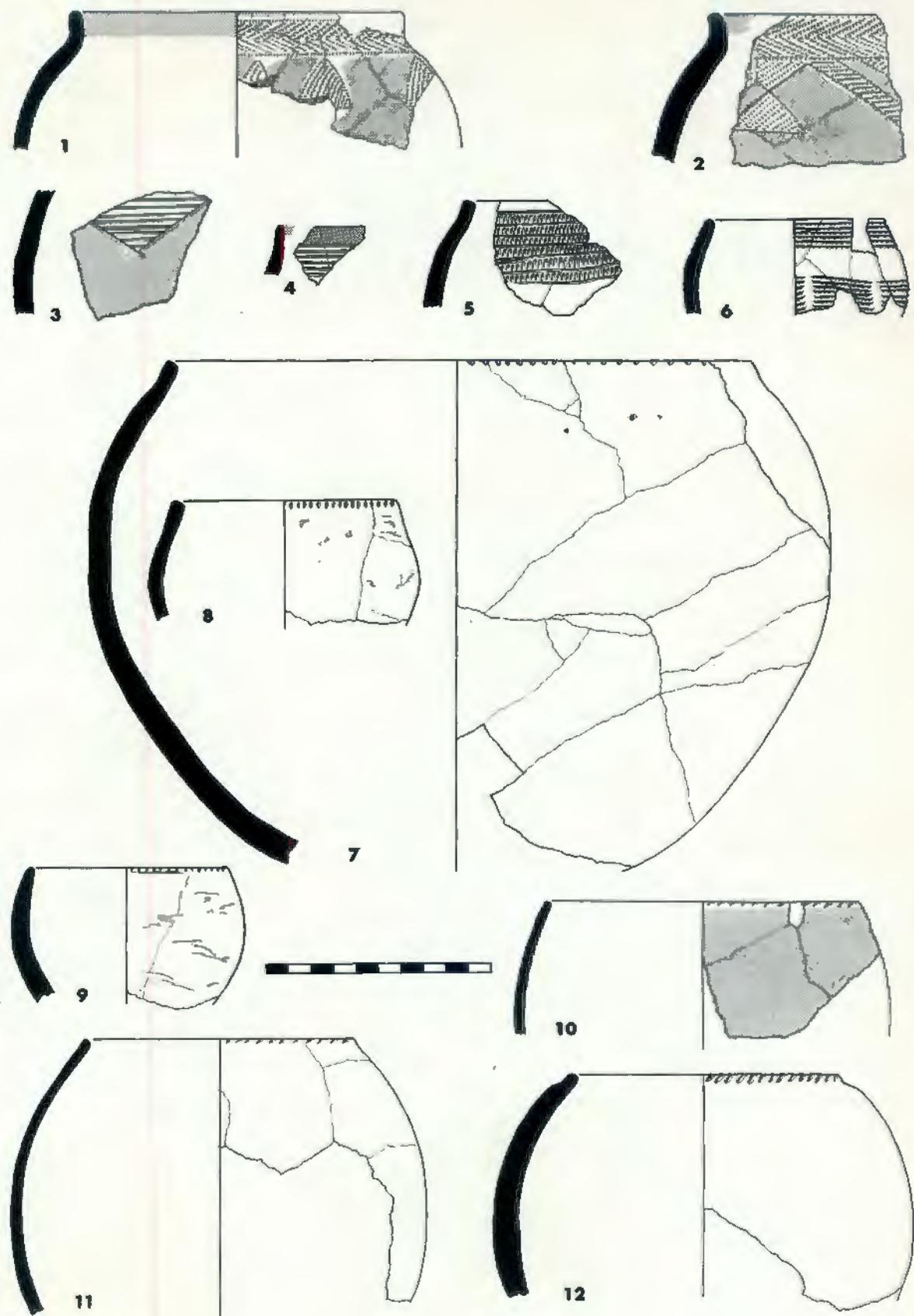


Fig. 27

Figure 27

Unusual comb-stamped motifs, grooved motifs and typical notched rims.

1. Probably sub-spherical pot with upright neck, rounded rim. Band filled with oblique lines of comb-stamping forming herringbone above pendant triangles suspended from apex instead of side as in almost all other examples. Ochre burnish. Sandy, buff throughout. Zone C.
2. Pot with upright neck and rounded rim. Comb-stamping on rim, in herringbone pattern filling band and in adjoining pendant triangles together with an oblique panel. Ochre burnish. Brown with dark core, sandy.
Nos. 1 and 2 are examples of rare variations from the normal pendant triangle motif as illustrated by Nos. 1-4 in fig. 26. They are, however, combined for classification.
3. Vessel of unknown shape. Pendant triangle filled with shallow, horizontal grooves. Ochre burnish below. Light buff throughout, shale grit temper. Midden 4, S.W. quadrant.
Nos. 3 and 4 are distinct from the characteristic pottery of OO 1, but in decorative technique and motif, in the use of ochre and in colour and texture they resemble the pottery from Type Z sites.
4. Sherd with rounded rim. Band of shallow, horizontal grooves. Ochre burnish on rim. Buff throughout, shale grit temper. From the secondary enclosure in front of Huts 17 and 18.
Nos. 3 and 4 are distinct from the characteristic pottery of OO 1, but in decorative technique and motif, in the use of ochre and in colour and texture they resemble the pottery from Type Z sites.
5. Vessel with flattened rim. Horizontal grooves with miscellaneous impressions in between. Brown with dark core. Sandy with some grit. Zone A.
6. Small perhaps sub-spherical bowl with rounded rim. Two bands of horizontal grooves, the lower punctuated by vertical finger smears at intervals. The lower edges of the grooves show cut marks as if the grooves were made by a series of impressions not a single dragging motion. Red-brown with dark core. Sandy. Midden 4, S.W. quadrant.
7. Large inverted bag-shaped bowl with flattened rim. Row of vertical V-shaped notches on rim. Brown, blackened in places. Sandy. Hut 11.
8. Small vessel with slight shoulder and flattened rim. Vertical notches on rim. Rough finish, unburnish. Grey with dark core and blackened on outside. Sandy. Zone A.
9. Small spherical bowl with rounded rim. Vertical notches on rim. Red-brown with dark core. Sandy. Midden 5, N.W. quadrant.
10. Barrel-shaped pot. Diagonal V-shaped notches on rim. Ochre burnish. Orange-buff with dark core. Very thin ware with shale grit. Hut 1.
11. Shape, decoration and ware as No. 10 but no burnish. Probably made by same potter. Hut 7.
12. Near-spherical pot. Miscellaneous impressions on rim. Dark brown, blackened and with soot. Sandy with grit and calcareous nodules. Hut 11.

On the other hand a rather larger proportion seem to be blackened by fire so some of them were probably used for cooking.

Miscellaneous rim impressions

This category includes sherds which have a single row of impressions on their rims but which do not fall within either the previous or the following categories. Most of the impressions were made by stylus, a wide variety of shapes being produced including circles, short lines and arcs as if made by the split end of a reed (fig. 28, 1). Also included are sherds which may have belonged to other rim-impressed categories but which have been damaged to an extent where identification is no longer certain.

Examples are illustrated in figure 27, 12 and figure 28, 1, 2 & 4. They include a wide variety of vessels tending to be larger and coarser than the last category but again a few of the smaller examples with finer impressions may have burnished or ochre burnished surfaces. The coarser ones tend to be fire-blackened. Miscellaneous rim impressions comprise 9% of the decoration.

Finger decoration

An outstanding feature of the OO 1 pottery is the direct use of the potter's fingers impressed into the clay to produce a variety of decoration. This technique accounts for some 40% of all decoration and it can be subdivided into several distinctive categories. Finger decorated vessels do not have any burnish nor the addition of any colouring matter but a large proportion show fire-blackening.

Finger impressions on rim

Three types of finger impressions occur in rows along rims. These subdivisions are included in the initial analysis (Appendix 2) but are combined for numerical purposes.

Fingernail impressions occur usually on top but sometimes on the outer surface of the rim. Here only the impression of the nail itself is visible not that of the ball of the finger. This is not a common motif at OO 1 and there is a graduation from this into the next type.

Fingertip impressions on rim show the imprint of both the ball of the finger and the nail, although in some cases the latter is faint. They are produced by repeatedly pushing the end of a finger into the clay while it is still wet. They are often deep and spaced about 1 cm apart. The impressions are usually on the side, sometimes the top, of the rim and the

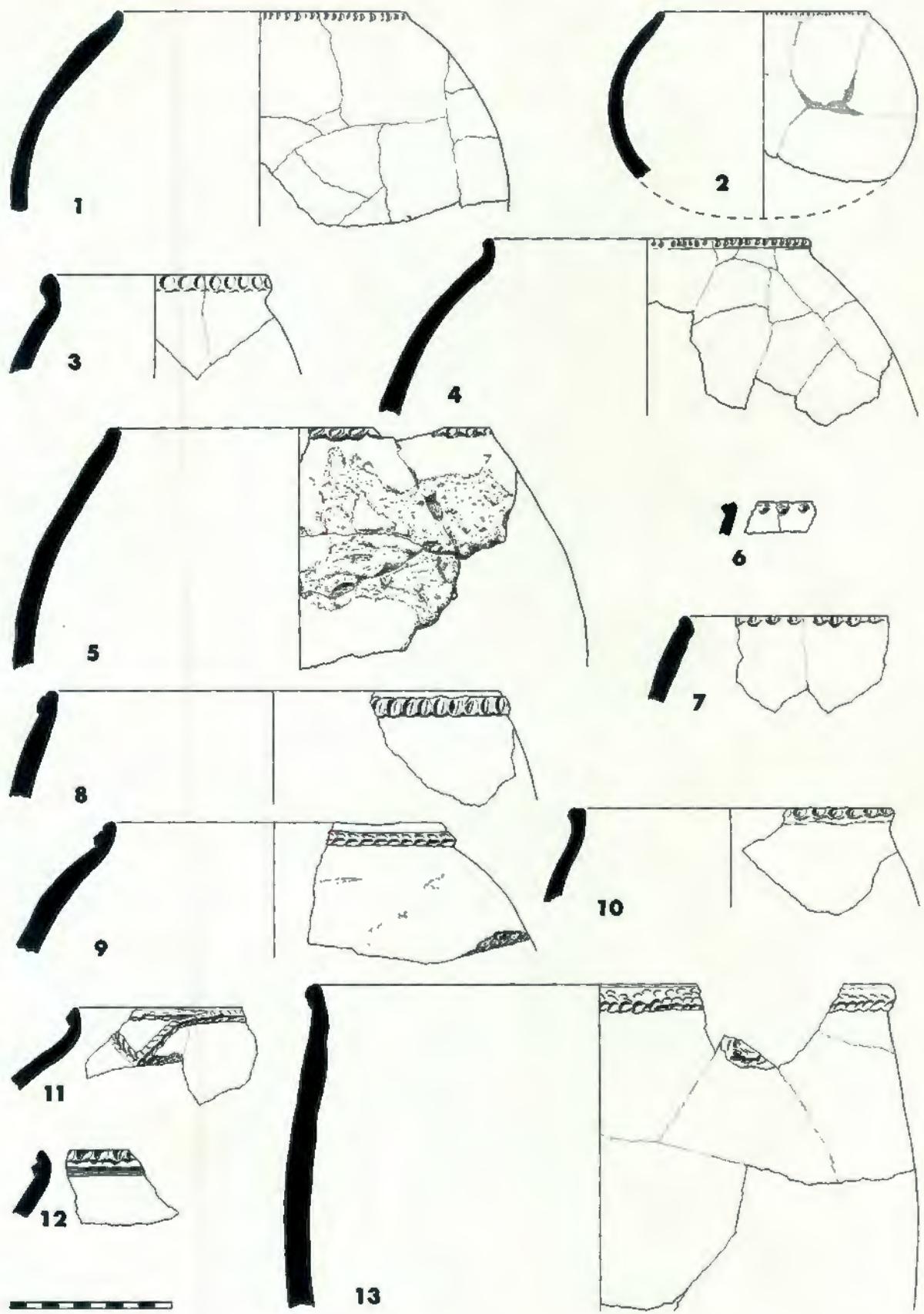


Fig. 28

Figure 28

Miscellaneous and finger impressions on rims and applied bands with finger-pinchings.

1. Sub-spherical pot with rounded rim. Miscellaneous rim impressions perhaps made by split reed or twig. Red-brown with dark core. Sandy with grit. Zone A, against the lelapa wall of Hut 1.
2. Sub-spherical bowl with rounded rim. Miscellaneous impressions in row on rim. Orange-buff with slightly darker core, soot on exterior. Sandy. Hut 17.
3. Probably bag-shaped pot with short everted neck. Row of fingertip impressions in rim. Red-brown with dark core and blackened. Sandy with some grit. Midden 4, N.E. and S.W. quadrants.
4. Near-spherical pot with short upright neck and rounded rim. Miscellaneous impressions on rim. Orange-buff with dark core. Grit. Lelapa of Hut 16.
5. Large bag-shaped pot. Fingertip impressions on rim. Coarsely finished. Sandy with grit. Brown with dark core and blackened with soot. Much of the surface has been worn away as these sherds were part of the paving in Hut 12.
6. Rim sherd with mamillations formed by pinching between thumb and finger. Such mamillations are rare and they are classified with the other types of finger-decoration on rims. Brown with dark core. Grit. Zone B.
7. Vessel with fingertip impressions on rim. Grey. Grit and calcareous nodules. Midden 5, N.E. quadrant.
8. Large probably bag-shaped pot with rounded rim. Band of clay applied below rim and pinched with thumb and forefinger held side-by-side into a series of protrusions. Brown throughout. Sandy with some grit. Midden 5, N.E. quadrant.
9. Pot with short upright neck. Applied band pinched with thumb and forefinger held one above the other to produce a ridge along the centre of the band. This vertical pinching or the horizontal pinching of No. 8 is found on the great majority of applied bands. Rough surface. Brown with dark core, blackened outside. Grit. Secondary enclosure in front of Huts 17 and 18.
10. Pot with short everted neck and flattened rim. Fingertip impressions on rim. Brown with dark core and blackened in places. Sandy. Midden 5, S.W. quadrant.
11. Pot with short upright neck and rounded rim. Applied band with finger pinching on rim and forming a pendant triangle. Red-brown with dark core. Sandy with grit. Midden 5, S.W. quadrant.
12. Pot with short everted neck. Finger-pinchings on rim and applied band with finger-pinchings just below. This combination is not unusual. Buff-brown with dark core. Sandy with grit. Hut 17.
13. Large barrel-shaped pot with upright neck and rounded rim. Applied band with pinching on rim and also a portion of unknown shape on the body. Brown with dark core and interior. Sandy with some grit. Zone A, entrance to secondary enclosure.

nail mark is usually at right angles to the line of the rim although it may be oblique or even parallel (fig. 28, 3, 5, 7 & 10). Sometimes this produces a notched effect but the nail mark distinguishes it from the other notches.

Finger-pinching on rims produces a similar effect to the fingertip impressions but here there are a series of opposed tip and nail marks which show that the thumb and forefinger were used together in a pinching movement. The impressions tend to be wider and the protrusions in between tend to be higher and more pointed than in the preceding category (fig. 28, 12 and fig. 29, 8). Usually the thumb and finger are positioned side-by-side but in some cases one is held above the other producing impressions on and below the rim with an irregular ridge formed in between.

On small or damaged sherds it may be difficult to distinguish this from the previous category. The decorative effect is similar and they occur on the same types of vessel so they are probably best combined. Frequently the decoration has so altered the shape of the rims that they have to be put into the miscellaneous category of rim profiles. Not only is burnish absent but the surface is often rough and irregular. These motifs are very characteristic of the OO 1 assemblage representing 17% of the decoration.

A variation of the finger-pinching which has been included with it in the analysis is illustrated in figure 28, 6. Here the protrusion between each impression has been pinched up to form a mammillation. This is really a development from the normal pinching and as it is relatively rare it is not considered to be worth a separate category.

Applied band

In the great majority of cases the applied bands have finger-pinched impressions. The exceptions include some with circular stylus impressions and with notches (fig. 29, 1) but being numerically insignificant they have been combined with the others in the analysis.

There is usually a single band, sometimes two, about 1 cm wide applied on or just below the rim. Pinching as in the preceding category may be with the finger and thumb held side-by-side which produces a series of hollows and protrusions (fig. 28, 8) or held one above the other which pinches the band into a pointed ridge (fig. 28, 9 & 11). Elaborations of this motif include examples where there is a pendant line or triangle formed of a similar pinched band running downwards from the band around the rim (fig. 28, 11 & 13) but these are rare and few are complete enough to reconstruct the whole motif.

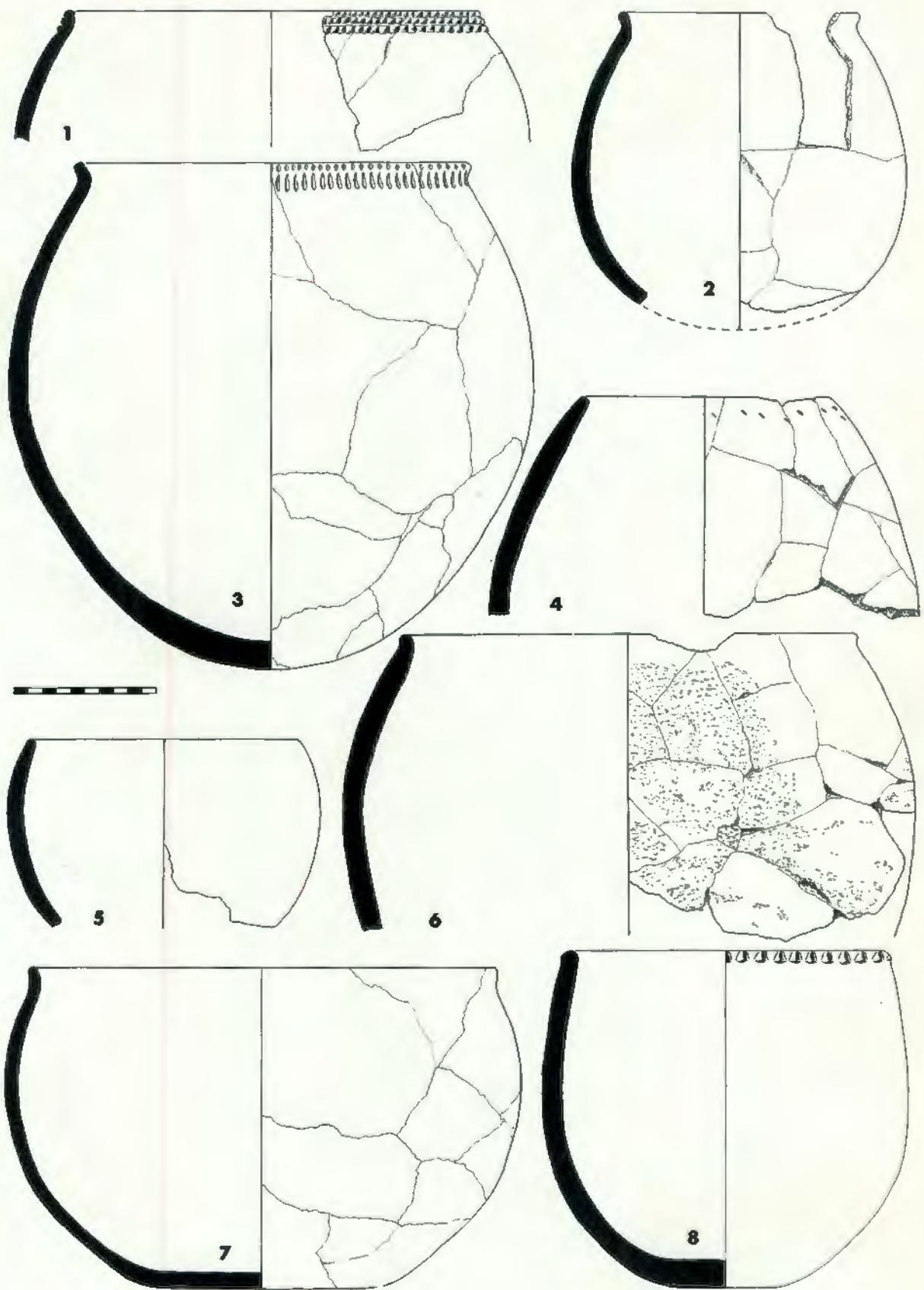


Fig. 29

Figure 29

Large vessels with various types of decoration, some undecorated.

1. Large pot probably bag- or barrel-shaped with flattened rim. Rows of notches on rim and on two applied bands below rim. This is one of the rare examples where the impressions on applied bands were not made by finger-pinchng. Brown with dark core and blackened. Sandy with grit. Zone E.
2. Bag-shaped pot with short everted neck and rounded rim. No decoration. Brown with slightly darker core, blackened in places inside and out with soot. Sandy with some grit. From the paving in Hut 12.
3. Large bag-shaped pot with round base, short everted neck and flattened rim. Two rows of curved stylus impressions on rim. Red-brown with dark core and blackened with soot on sides. Sandy with some grit. Base has an added layer of clay to thicken and presumably to repair it. Found cracked but in situ against the outside of Hut 2, see plan of Zone A.
4. Bag-shaped pot with rounded rim. Irregular row of miscellaneous impressions. Grey-black throughout with soot on exterior. Grit and probably crushed pottery temper. Paving of Hut 12.
5. Deep spherical bowl with rounded rim. No decoration. Buff-grey throughout with soot on exterior. Sandy. Hut 17.
6. Large barrel-shaped pot with slightly upturned and rounded rim. No decoration. Sandy with grit. Surface worn as the sherds were part of the paving in Hut 12.
7. Half of large bowl used as lid for infant burial in No. 8. Flat base, slightly everted short neck and rounded rim. This is an unusual vessel in shape, in being well burnished possibly with some ochre and in thinness even at the base. Red-brown with black patches and dark core. Sandy. Midden 4, S.W. quadrant.
8. Pot used for infant burial. Barrel shaped with small flat base. Finger-pinchng in row on rim. Coarse surface. Buff-grey with blackening and soot on sides. Sandy with grit and calcareous nodules. Complete but with crack down one side and several around base, perhaps discarded for this reason. Midden 4, S.W. quadrant.

The motif is quite often combined with a row of finger impressions on the rim (fig. 28, 12) and the two categories tend to occur on the same types of vessels. The applied bands with finger-pinchng are again very characteristic of the assemblage although they only comprise 8% of the decoration.

Finger impressions on body

Here again there are two subdivisions which are included in Appendix 2 but they are combined for the numerical analysis.

Fingertip impressions on body refers to examples where the individual impressions are separated from each other by an area of the undecorated surface although sometimes this may be very small. They may occur in irregular rows or haphazardly placed and they usually cover a zone of the vessel amounting to its upper half or two thirds. The impressions are usually made by a single finger repeatedly impressed but sometimes finger and thumb are impressed together (fig. 30, 1). The zone of impressions may be varied by vertical or horizontal rows of impressions in the form of lines (fig. 30, 2 & 3) but this is not usual. The motif is often associated with some form of rim impression.

Fingertip impressions in rows forming corrugations refers to examples where finger-pinchng is repeated in parallel rows to form a series of pointed ridges with intervening furrows. These usually run vertically from just below the rim to near the base of the vessel (fig. 30, 7 & 9) but occasionally are used in more complex motifs (fig. 30, 8). The corrugations are about 1 cm apart and are sometimes so deep that they would appear to weaken the vessel but there is no marked tendency to break along the furrows.

The effect of this technique is not unlike that on Sampson's Class A pottery from the Orange River (Sampson, 1967, 52). There, however, the furrows are smaller in scale and made by a thin cylindrical stylus held obliquely to the surface and repeatedly impressed along lines to form parallel furrows. This pottery is associated with the final stage of the Late Stone Age on the Middle Orange and it has been found over much of the eastern Karroo and extreme southern Orange Free State (Rudner, pers.comm.; Maggs, 1971).

The two finger-impressions-on-body categories share several features including the lack of any burnish, the addition of rim impressions on some vessels, the rather standardised shape of vessels and the effects from use on fires: blackening and soot incrustation. They seem naturally to fall into one category and have therefore been combined in the numerical

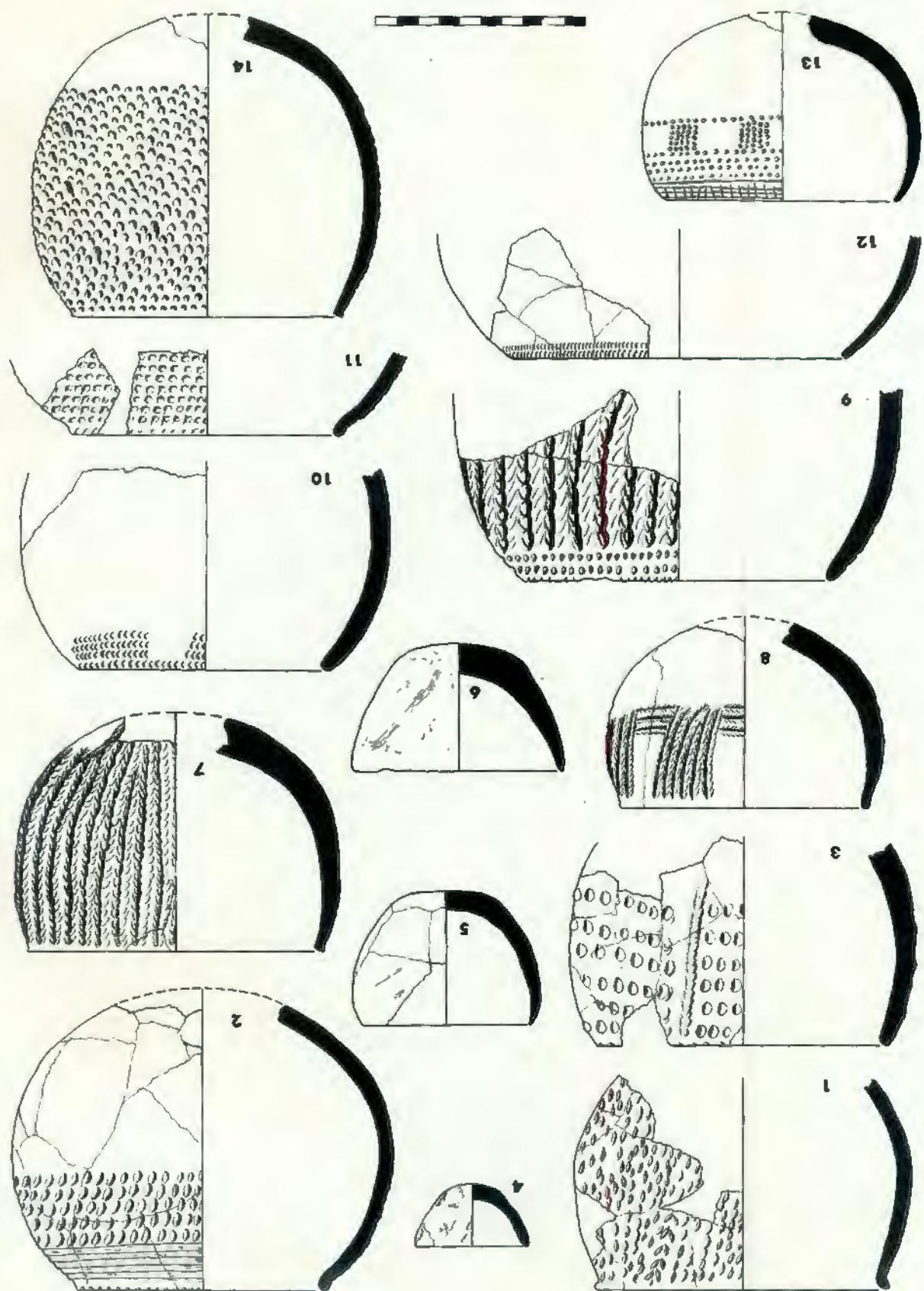


Figure 30

Small vessels with finger impressions on the bodies, also stylus and miscellaneous impressions, cusps and small undecorated bowls.

1. Deep spherical bowl with short everted neck and rounded rim. Fingertip impressions on body. Unburnished. Red-brown with dark core. Sandy. Midden 4, N.W. and S.W. quadrants.
2. Sub-spherical pot with rounded rim. Vertical notches on rim, six horizontal corrugations formed by repeated fingertip impressions along a line, and band of fingertip impressions down the middle of pot. This is the only example of this variation on the fingertip impressions on body motif. Grey-brown with some soot. Unburnished. Sandy. Zone D.
3. Deep spherical bowl with flattened rim. Miscellaneous rim impressions, zone of fingertip impressions in rows down to below middle of bowl, with a single vertical row of finger-pinchings forming a corrugation. Brown within, black core and exterior with soot. Sandy. Midden 2, N.W. quadrant.
- 4-6. Three small wide-mouthed bowls. No decoration nor burnish. probably made by pinching clay up from base. 4 - red-brown, 5 & 6 - buff with darker bases, all have dark cores. 5 - sandy, 4 & 6 - sandy with calcareous nodules. 4 - Midden 2, S.W. quadrant. 5 - Zone B. 6 - Zone A behind Hut 1.
7. Deep spherical bowl with flattened rim. Finger-pinchings in rows forming corrugations extending down almost to base. Red-brown with dark core, blackened with soot on sides. Sandy with grit and calcareous nodules. Midden 4, N.E. and S.E. and S.W. quadrants.
8. Small spherical bowl with short upright neck and flattened rim. Finger-pinchings in rows forming vertical corrugations in zones linked by horizontal corrugations around the middle of the bowl. This is the only example of this variation on the finger-pinchings in corrugations motif. Brown with dark core, blackened and sooty on exterior. Sandy. Zone D.
9. Barrel-shaped pot. Row of notches on rim, two rows of stylus impressions below rim and rows of finger-pinchings forming deep vertical corrugations on body. Brown with dark core and soot on exterior. Grit. Zone D beside Hut 12.
10. Spherical pot with rounded rim. Rows of stylus impressions just below rim in groups forming panels. Red-brown with dark core and soot on exterior. Sandy with grit. Zone E.
11. Pot with rounded rim. Parallel rows of cusps apparently raised from the wall by pinching. Brown with dark core and blackened on exterior with soot. Sandy.
12. Probably spherical pot with flattened rim. Two rows of stylus impressions just below rim. Red-brown throughout. Sandy. Zone A between Huts 1 & 2.
13. Small spherical bowl with rounded rim. Four horizontal grooves just below rim cut by series of vertical grooves. Below this, horizontal rows of stylus impressions and panels of stylus impressions in rows. This combination of motifs was unique. Grey to black with brown patches and soot on exterior. Sandy with calcareous nodules. Hut 13 & Zone E.
14. Near-spherical pot with flattened rim. Miscellaneous impressions on body down to near base. Impressions made by cylindrical stylus held obliquely to surface. Red-brown with dark core and sooty from the middle down. Crushed pot sherds and some grit. Sherds from this vessel were scattered over much of Zones D and E including the central secondary enclosure, Primary Enclosure 3 and the exterior of Hut 12.

analysis. They are very characteristic of the assemblage and comprise 16% of the decoration.

Cusps

These are small protrusions raised from the wall of the vessel usually in rather neat parallel rows but sometimes rather haphazardly spaced (fig. 30, 11). The cusps are usually formed by pinching and the rows extend from just below the rim to well down the side of the vessel. Numerically this decoration is insignificant, representing only 1% of the total, but its general appearance is not unlike that of the finger-impressions-on-body category.

Stylus impressions in parallel rows on or below rim

This motif is a particular form of the miscellaneous-rim-impressions category where there are at least two horizontal rows of impressions. Stylus shape varies but circular and crescentic are most common, the latter possibly made with the split end of a reed or cylindrical bone (fig. 30, 10 & 12). This motif is sometimes combined with others or the rows may be combined with panels (fig. 30, 10 & 13) but there does not seem to be any regular combination. It represents only 2% of the decoration.

Miscellaneous body impressions

This is a convenient category which brings together various forms of impression and motif that occur so rarely as to have little significance (fig. 30, 14). Most are stylus impressions of various kinds occurring on the body, including a rather shallow rice-shaped impression (fig. 29, 4). Many of the sherds in this category are so small or damaged that a more definite classification is not possible. They represent 6% of the decorated sherds but because of the variation cannot really be regarded as characteristic of the assemblage.

Grooves

Parallel grooves

Grooves include all cases where an object has been pulled along the wet surface of the clay to form a continuous line. Most grooves are one or two millimetres wide and they are not characteristic of the assemblage. This category includes all sherds that are too small for the whole of the motif to be determined; it represents only 1% of the decoration.

Parallel horizontal grooves

These are sherds with at least two, and usually more, grooves on or below the rim, extending right around the vessel to form a horizontal band. The motif is uncommon, representing only 1% of the decoration and even then showing considerable variation; several examples have a vertical element introduced either as stylus impressions between the grooves or as short vertical grooves across the band (fig. 27, 5 and fig. 30, 13). The latter could sometimes be classified as cross-hatching but as the horizontal element is stronger than the vertical this has not been done.

Pendant triangles in parallel grooves

Sherds with this motif are so rare that they do not even amount to 1% of the decoration. Therefore they do not appear in the numerical analysis for this site, although from Middens 2 and 4 there are sufficient to constitute 1%. The motif is thus not characteristic and furthermore, several examples are clearly related to the pottery from Type Z sites. Several grooved sherds have regular shallow grooving combined with lines or zones of ochre burnish, ordinary burnish on the inside, well fired orange-buff ware with no dark core and a large proportion of crushed shale temper (fig. 27, 3 & 4). As these features are all out of character with the great majority of the OO 1 assemblage and are typical of the pottery from OXF 1 one must conclude that this handful of sherds is the result of some sort of contact with the inhabitants of the Type Z sites, the nearest known ones being some 80 km to the west and south-west.

Shape

Rims

Rim sherds were all examined for their profile and assigned to the four categories: rounded, flattened, pointed and miscellaneous, the details of which appear in the table on page 107. Forms are simple and no great elaboration was observed although much of the decoration is on or just below the rims. Rounded rims are almost twice as common as flattened ones while there are relatively few pointed.

The miscellaneous category includes examples which fall between these shapes and they mainly come from among the decorated sherds where the application of the decoration has altered the profile. This is particularly common among sherds with coarse finger impressions on the rim. With the other three categories the rims were deliberately made to

these shapes, although many are crudely finished. Some authors have suggested that rim flattening occurs unintentionally when the vessel is inverted for drying (Fagan, 1967; Rudner, 1968 and others). For several reasons this is unlikely. Practical experience by contemporary potters shows that once the clay is stiff enough for the vessel to be picked up and inverted the rim does not become noticeably flattened. If this were to happen it presupposes that the potter had a suitable completely flat surface such as a table top on which to place the pot and that the rim was sufficiently in the same plane for the flattening to be of similar degree right round the vessel. In fact Iron Age potters would hardly have had such flat surfaces. Furthermore the rims of most vessels do not lie on a flat plane, so any flattening that occurred from inversion would have been irregularly spaced at points of contact around the rim. A conclusive argument against this fortuitous flattening is that on many vessels the flattening is not even in a horizontal plane but at an oblique angle, usually sloping inwards, and in these cases, at least, the flattening must be deliberate. In view of this it seems reasonable to regard rim flattening in general as deliberate unless more positive contrary evidence is forthcoming.

It would be possible to subdivide rim profiles into further categories and several authors have done this for southern African pottery (e.g. Lawton, 1967; Rudner, 1968). However, rim profiles from the Orange Free State Iron Age are a relatively simple and undiagnostic feature of the assemblages; nothing like the elaboration seen on some West and Central African assemblages occur here. For these reasons a more elaborate classification of rim profiles has not been undertaken, and it seems unlikely that this would have been justified by the additional information gained.

Vessels

A wide range of sizes and shapes of vessel occur so that any generalization on the basis of shape alone would be difficult. There are however definite tendencies for shape to be associated with other attributes, particularly decoration, and it is in this light that shape will be examined. Nevertheless it is worth bearing in mind that to the potter the function for which the vessel was required would be the initial consideration which would determine what form of vessel she would make, while decoration and surface treatment would be subsequent considerations. However, with little information on function and insufficient on shape we must reverse this order.

Comb-stamped decoration and its associated features occur mainly on a restricted range of vessels including more or less spherical and sub-spherical pots and deep bowls (fig. 26). These have short, usually upright necks of about one centimetre in height with poorly defined points of inflection and most have rounded rims. Both flat and round bases are known. They are slightly thinner on average than other decorated vessels (see above fig. 25) and many are quite small, around 16 cm in maximum diameter, although larger ones up to 35 cm do occur.

The comb-stamped ware is thought to have been used for storing and drinking beverages. The fine decoration, burnish and lack of fire blackening all tend to support this and the shapes of such vessels particularly the small bowls would have been suitable. This ware must have been more highly considered than the majority of the pottery by the inhabitants of OO 1. Schofield (1948, 143) has suggested that the use of such vessels may have been restricted to certain occasions or certain members of the family, for example the men may have used them for beer drinking.

Rim notching is found on a wide variety of vessels but they are usually medium or small in size. They include bowls of various shapes - spherical, wide-mouthed, inverted bag-shape etc. - and various pots including more or less spherical ones and larger ones tending to bag-shape with coarser finish. Some have fire blackening and their functions were probably intermediate between the comb-stamped ware and the finger-impressed ware.

Vessels with miscellaneous rim impressions show a range similar to those with rim notching although they tend to include rather larger pots as well. Both categories include some burnished sherds which again suggests an intermediate position in the assemblage.

Pots with finger impressions on the rim and those with applied bands can be described together here as they include the same forms of vessel. These are large, thick-walled pots, coarsely finished and lacking any burnish. They are U-shaped or bag-shaped with minor variations and they range in size from around 20-40 cm in maximum diameter (fig. 28, 3-13 and Fig. 29, 8). They are among the largest vessels of the assemblage and many of this size and shape are undecorated (fig. 29, 2 & 6). Some have flat bases and many have been blackened by use on a fire. This blackening, sometimes with an incrustation of soot, occurs on the sides of pots from near the base to above the widest part and sometimes up to the rim.

Pots similar to these are still made by southern Sotho potters

today. Most are undecorated and they are usually known as Nkho or Nkhwane, the diminutive form (Lawton, 1967). Their use is for storing water and sometimes beer and there is no mention of cooking which is usually done in an iron pot nowadays. The applied band with finger-pinchng seems to have disappeared from contemporary ceramics but fingertip impressions are still made around the rime of some of these vessels, for example near Teyateyeneng in western Lesotho (Lekokoaneng - Barbour, pers.comm.; Kolonyama - observation by present writer). An earlier example, donated to the Natal Museum in 1910 (N.M., 1661) and said to date from the mid-nineteenth century and come from Maseru, is called Leriteana (Plate 78). It has fingertip impressions on the rim, fire blackening on the exterior and food remains within and it is described as an "earthen cooking pot used before the introduction of iron utensils by Europeans". From this evidence and from the amount of fire blackening on many of the excavated examples it is apparent that in former times they were used for cooking although they may also have had other functions such as storage.

These bag- or U-shaped pots, both decorated and undecorated ones, account for most of the largest vessels on the site but their size range overlaps with the larger examples of the other vessel types. In shape there seems to be a gradation between the bag-shape and the more spherical, so that it would be difficult to define any rigid categories. Other forms of decoration may occur on these pots including miscellaneous rim and body impressions (fig. 29, 3 & 4), but the great bulk consists of finger impressions on rims or applied bands. These two categories are seldom found on the smaller vessels. The pots sometimes have everted necks, usually curved outward with a poorly defined point of inflection, but many have no neck at all.

Finger impressions on bodies are in the main restricted to a narrow range of vessels in both shape and size. These are around 14-22 cm in maximum diameter and from 9-14 cm high. In shape they include more or less spherical to sub-spherical pots and bowls, while some of the pots are rather taller than spherical and tend towards barrel-shape (fig. 30, 1-3 & 7-9). This range of shape extends right across the arbitrary line used here to differentiate bowls from pots, i.e. the ratio of height to rim diameter (Schofield, 1948; Lawton, 1967), thus the definition has no real significance among this group of vessels. The definition has, however, been retained as it gives some precision to the description of individual vessels and the terms bowl and pot do have a general validity even if the dividing line is necessarily arbitrary.

The vessels in this group usually have no neck or only a short vestige of one, bases are round. Most show considerable fire blackening and accumulation of soot so they were apparently used for cooking although they would have contained far smaller quantities than the large bag- and barrel-shaped pots.

Similar pots and bowls of approximately spherical shape may have other decorative motifs including parallel rows of stylus impressions, cusps, miscellaneous rim or body impressions, grooves (fig. 30, 10-14) or they may be plain, but the finger impressions predominate.

Undecorated vessels of almost any of these shapes may occur while there are examples of other shapes such as the large, flat-based bowl used as a lid for the pot burial in Midden 4 (fig. 29, 7). Little bowls, sometimes with flat bases, but rather coarsely made and undecorated are quite common and were probably made by pinching up from a lump of clay (fig. 30, 4-6).

Summary

Using both the numerical and intuitively derived evidence we can say in general that the 00 1 assemblage is characterized by four main groups of vessels:-

- 1) Comb-stamped and burnished small bowls and medium sized pots of approximately spherical shape, which were probably used for drinking and storing beverages.
- 2) Vessels with a row of notches or stylus impressions on their rims or lacking decoration. These include a wide variety of shapes usually of small or medium size. They are occasionally burnished and in function were probably intermediate between 1 & 3.
- 3) Medium to large pots more or less bag- or barrel-shaped. These, where decorated, have finger impressions on rims or applied bands with finger-pinchings. They seem to have been used both for storage and for cooking.
- 4) Fairly small pots and bowls of approximately spherical shape where the most common decoration consists of finger impressions on the body, although other rim and body impressions may occur. These were used for cooking and perhaps other purposes.

These groups describe the main elements of the assemblage but there

are numerous exceptions, in particular among undecorated vessels a great variety of shape and size exists. It would be difficult and perhaps not very meaningful to divide the assemblage into vessel classes as has often been successfully achieved in other areas. The reasons for this are the wide range in shape and decoration and the predominantly fragmentary condition of the pottery.

Flat bases and pedestal bases

Flat bases are a regular feature on this site, several of the illustrated pots have them (fig. 26, 1 and fig. 29, 7 & 8) and additional examples are shown in figure 31, 1-3. The latter include a variety of profiles of which the plain flat base (No. 1) is more common than those with a foot (Nos. 2 & 3). A further variation, of which only one example was noted, is a rounded base with a slight though definite foot ring (fig. 31, 4).

The proportion of flat to round bases is not known and with the fragmentary state of most vessels it is rather easier to recognise the flat ones. Considering this point it is probable that round bases are well in the majority, but nevertheless flat ones are a characteristic of the assemblage.

Two small pedestal bases were found of roughly cylindrical shape and about 2.5 cm in diameter (fig. 31, 5 & 6), while there were several fragments of similarly shaped and slightly larger objects. Although none was sufficiently preserved for the whole shape to be established, it is likely that they were the bases of pedestal cups of the kind still made by Sotho potters (Plate 79). The evidence is inconclusive but the possibility remains open that pedestal cups may be an Iron Age cultural trait and not merely copied from imported manufactured goods.

Fortuitous impressions on the pottery

A number of sherds have impressions which must have been caused by a variety of objects coming into accidental contact with or being included in the wet clay. The majority are irregular in shape and probably caused by pieces of grit, but a few are of more interest. Only two seem to have been caused by an artefact, apparently a coil made of thin, irregularly wound wire. No wound wire ornaments were recovered from the site, despite the large number of metal items, but the impressions suggest that they may have been here formerly.

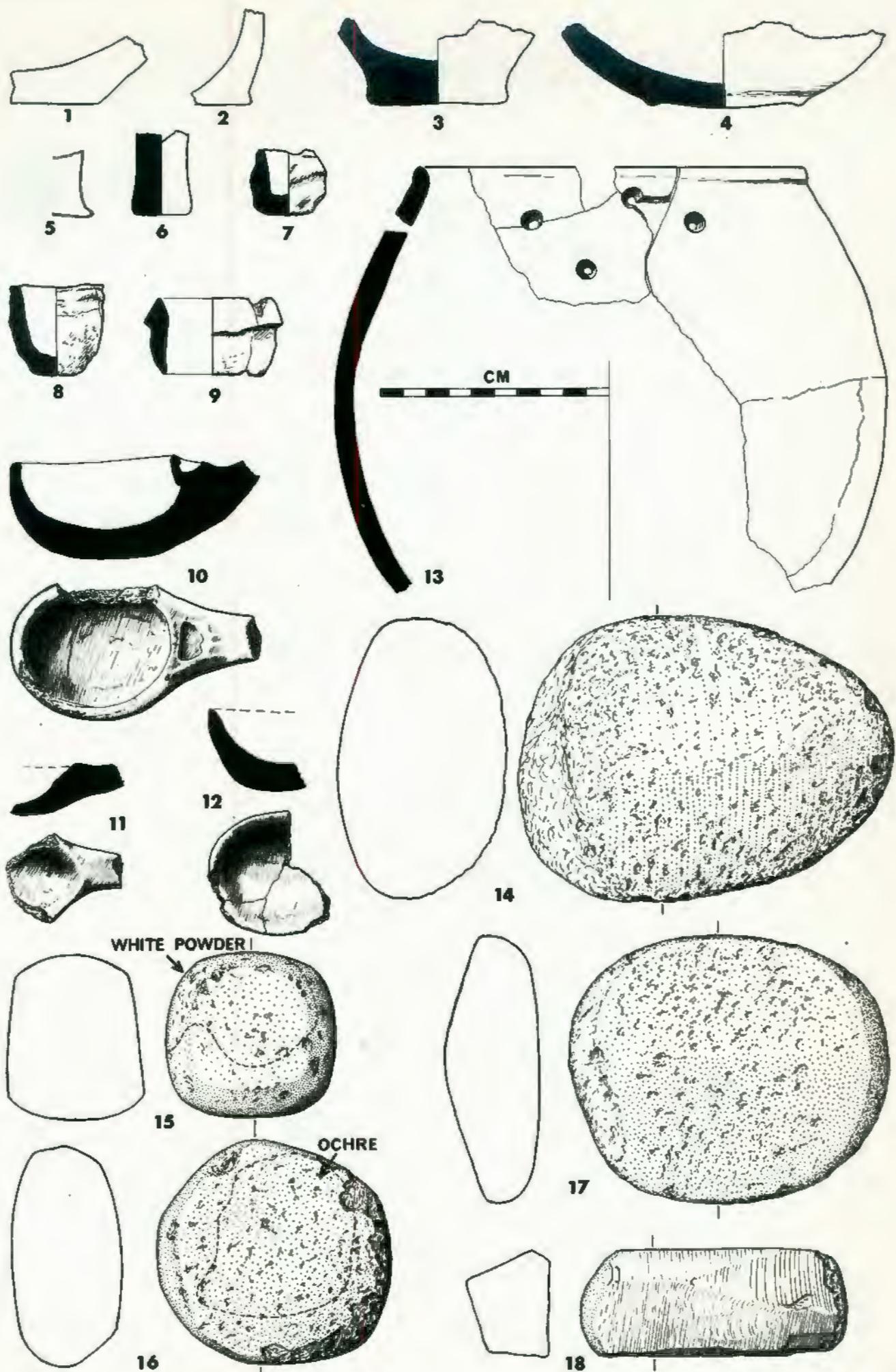


Fig. 31

Figure 31

Flat bases, model pots, repair holes, pottery spoons and grindstones.

- 1-3. Flat bases of pottery vessels. Midden 5, N.W. and S.W. quadrants..
4. Round base of pot with slight foot ring; the only example recovered. Zone E.
- 5-6. Pedestal bases probably from cups similar to those made by contemporary Sotho potters. Midden 4, S.E. quadrant; Midden 5, N.W. quadrant.
- 7-8. Coarsely made model pots. No decoration nor surface finish. Buff-grey. Grit. Midden 4, S.W. and N.W. quadrants.
9. Portion of collar-shaped pottery object of unknown function. Grey-brown with dark core. Fine grit. Midden 4, S.E. quadrant.
10. Pottery ladle. Deep bowl with short up-swept handle from which the end has been broken. Dimple at base of handle probably resulted from pinching up the adjacent rim which is rather thin at this point. Grey. Grit. Zone D, rectangular feature.
11. Portion of pottery spoon, ends broken. Red-brown with dark core. Grit. Midden 5, S.E. quadrant.
12. Portion of ladle probably similar in shape to No. 10. Buff with dark core. Grit. Zone A.
13. Bag-shaped pot with slight upturned rim. Conical holes drilled to repair one definite and another probable crack extending downwards from the rim. Buff-grey blackened. No decoration or burnish. Three small shards on left side from lelepa of Hut 13, large shards from Hut 1.
14. Large grindstone with curved and well pecked main grinding surface. Opposite side shows a little grinding and edges are battered in places. Striations at right angles to long axis on main surface. Dolerite. Primary Enclosure 3.
15. Smaller cuboid stone with two flat grinding surfaces on opposite sides, the intervening faces battered and ground into four additional facets. The main surfaces are polished with some pecking. White powder on several surfaces. Dolerite. Hut 17.
16. Smaller stone with two grinding surfaces, both slightly curved and well pecked. Intervening faces well battered. Red ochre on one side, white powder on the other. Dolerite. Hut 18.
17. Sandstone grinder with two grinding surfaces, one curved, the other flat, both well pecked. The surfaces have been worn down to such an extent that the stone is quite thin. Edges battered. Hut 4.
18. Natural columnar piece of dolerite heavily battered at both ends. Perhaps used to roughen grinding surfaces. Hut 13.

Impressions of vegetation include pieces of grass leaves and stems, which do not seem to have any archaeological significance, and a number of seed impressions. The latter seem to be confined to cucurbit and sorghum seeds. Species of both were being cultivated by the Sotho of our area in the early nineteenth century, and they were staples of most Iron Age societies.

Pottery repairs

Because of the fragmentary nature of the pottery, little can be said under this heading, however, there is evidence of two methods of repairing. Several sherds have conical holes drilled through them. In only one case was sufficient of the vessel recovered so that its shape and the pattern of the holes could be reconstructed. This was a fairly large undecorated, bag-shaped pot, blackened by fire (fig. 31, 13). A crack must have developed from the rim running downwards into the body, for two holes were drilled on the left and one on the right through which thongs could have been tied to hold the crack together. There was some lateral movement along the crack for the broken surfaces have had their more protruding parts worn down; the later fractures do not show such abrasion. There seems to have been a second crack 9 cm to the left, for another hole was drilled beside it and the broken edge again shows abrasion, but the adjoining sherd was not recovered. Rather surprisingly the larger section of the pot was found in Hut 1 while the smaller sherds to the left of it came from the lelepa of Hut 13 some distance away.

The other method was noticed only on the largest reconstructed pot (fig. 29, 3). Here an additional layer of clay had been applied on the exterior of the base, being 5 mm thick at the extreme base and tapering off to nothing at about 10 cm from this. Although the evidence is not conclusive, it is thought that this was applied to seal off cracks which might have developed when the pot was used on a fire.

Lawton (1967, 130) finds that today Sotho potters sell pots that have been cracked and mended whereas the Nguni do not. In Lesotho the bulb of a plant called Boka is cooked and made into a paste for repairing cracked pottery. Boka is the name for two species of Amaryllidaceae, Ammocharis coranica and Brunevigia radulosa, both of which are used for this purpose and are widespread over much of South Africa (Jacot-Guillarmod, 1971). It seems likely that Boka has been used for repairs by Sotho potters for a longer period of time, but it is unlikely that

evidence for such repairs would be preserved in the archaeological record.

The evidence suggests that despite the quantity of pottery recovered in the excavations it was not so easily available that a slightly cracked pot would be discarded.

OTHER CERAMIC OBJECTS

Model pots

Several miniature vessels 3-4 cm in maximum diameter were recovered. Most were in a fragmentary state but two small ones from Midden 4 were complete (fig. 31, 7) and half of a slightly larger one from the same midden was restored (fig. 31, 8). They are very coarsely made and lack any surface finish but have been fired. Their significance is unknown but they could well have been made by children from scraps of waste clay.

Ladles and spoons

Twelve objects can be assigned to this category although only one of them is nearly complete. Eight are from Middens 4 and 5 while Zones A, C, D and E yielded one each. The best example is the ladle from the rectangular structure in Zone D (fig. 19). It is 11 cm long but would have been slightly longer as the end of the handle is missing (fig. 31, 10). The thick handle joins a relatively large bowl some 3 cm deep and from these characteristics it is described as a ladle rather than a spoon. The ends of two similarly shaped but rather shallower bowls were also found (fig. 31, 12) and at least one conical handle from a ladle with a fairly deep bowl.

Three items are classed as spoons because of their shallower and perhaps more circular bowls and their more cylindrical handles. All are fragmentary but they show a wide range in size, for example the widths of the handles at the junctions with the bowls are respectively 3 cm, 2 cm and 1.3 cm; the second one being illustrated in figure 3, 11. A larger series would be needed to determine whether the spoons and ladles are distinct classes or whether there is an intermediate range between them.

Present evidence suggests that ceramic spoons have an irregular distribution among Iron Age cultures in southern Africa. They have been found on several sites in the Orange Free State (e.g. Pullen, 1942) and it is possible that in our area pottery was substituted for wood because of the shortage of suitable wood for carving spoons.

Figurines

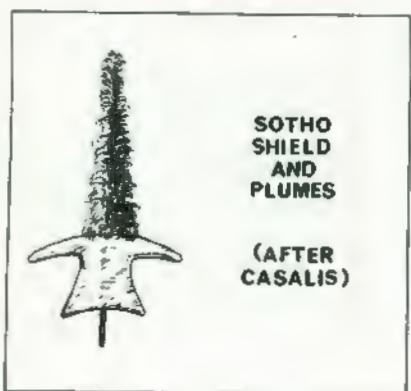
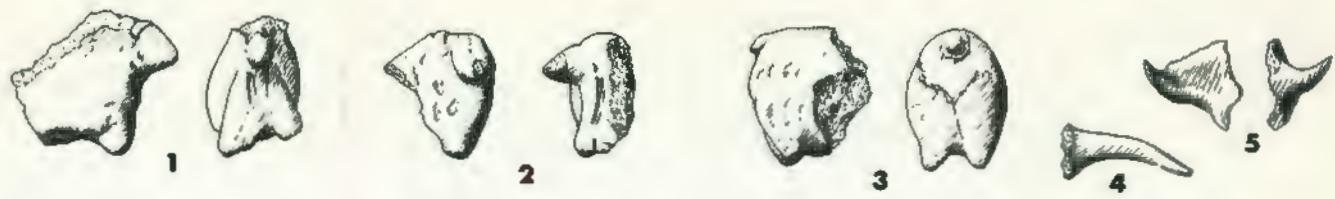
Only two types of figurine were recovered from this site, those representing animals and those shaped like Sotho shields. Both are small and crudely made. The animal figurines are usually 3 cm or more in height but three smaller ones from Midden 5 are about 2 cm high. All identifiable examples are of cattle but as the larger ones are fragmentary it is not always possible to make an identification, especially as there is no developed style of representation (fig. 32, 1-3). Horns broken from figurines may be short and thick but several long ones with a slight spiral twist were also found, suggesting the presence of long-horned cattle (fig. 32, 4 & 5). In all cases where the neck has survived a hump is shown, but only as a slight thickening and never accentuated (fig. 32, 2, 6 & 7).

Five fragmentary examples are apparently representations of Sotho shields, similar representations having been found by Mason (pers. comm.) at Olifantspoort in the western Transvaal. They are less than 1 cm in thickness, perhaps 4-5 cm in maximum length and consist of four limbs projecting from the central portion (fig. 32, 8-10). An illustration of an actual shield used by the southern Sotho in the earlier nineteenth century is included for comparison (fig. 32, 11) and it will be noticed that this has a central vertical stick supporting a tall column of plumes above the shield. These were of ostrich feathers (Casalis, 1861, 136) and the stick was threaded through a row of loops at the back of the shield to hold it in place (Arbousset, 1846, Plate 6). It is significant that the figurines all have at least one central vertical hole in their upper margins suggesting that they were similarly adorned, perhaps with small feathers. Three examples also have horizontal holes pierced through the shields near their upper margins (fig. 32, 10) the reason for which is unknown. Two are decorated with a series of impressions placed rather irregularly in the central portion on one side (8 & 9).

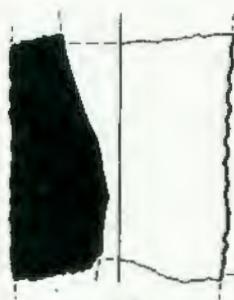
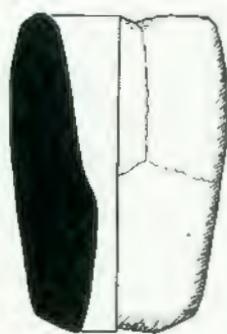
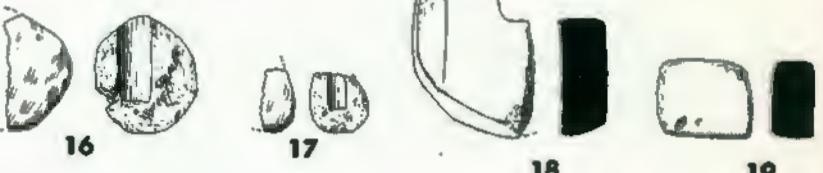
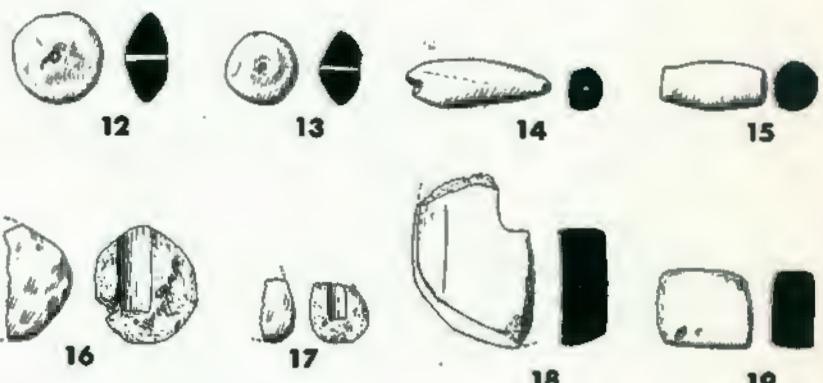
No human or other types of figurines were found; the crude manufacture and the masculine emphasis (cattle and shields) suggest the work of boys.

Beads

Three beads, made of essentially the same clay as the pottery and other ceramic objects, were recovered from the middens. Two from Midden 2 are disc-shaped, 1.6 and 2 cm in diameter. The other is an elongated shape 3.4 cm long and 1 cm in maximum diameter tapering towards the ends. The perforations are neatly cylindrical, perhaps made with a grass stem



11



PROJECTION OF DECORATION



CM

Fig. 32

before the clay was dry or fired. However, the surfaces are roughly finished.

Four cylindrical or conical objects of fired clay, mostly broken, were found. The only complete one (fig. 32, 15) is quite well finished and suggestive of a bead in shape but lacks a perforation as do the others. Their purpose is unknown.

Miscellaneous ceramic objects

Several objects of unknown function and rare occurrence are included under this heading. Two broken hemispherical pieces of lightly fired clay have cylindrical holes extending more than half way through them (fig. 32, 16 & 17). Their original shape was probably roughly spherical and they must have formed knobs on the end of sticks or similarly shaped objects.

Two irregularly shaped sherds (not illustrated) have a series of cut marks around their circumferences. These may have been chopped with a rather blunt blade, but since the marks are often in pairs about 2 mm apart it is possible that they represent rodent gnawing. Certainly the irregular shape of the sherds does not suggest modification for a particular purpose.

Several sherds had had broken edges ground smooth. Three from Midden 5 are part of a broken disc about 7 cm in diameter which apparently had a perforation somewhat off centre (fig. 32, 18, one sherd illustrated). This resembles the spindle whorls from Iron Age contexts north of the Limpopo (e.g. Caton-Thompson, 1931) but was probably not used as such in our area. On the other hand, Casalis (1861, 271) records that a carefully rounded sherd, bored through the centre was worn on a cord with some glass beads around the neck of a girl as an amulet. This was done to avoid misfortune after she had broken her eating vessel, a sherd of which was used for the amulet.

The other edge-ground sherds usually have only one or two smoothed edges although a rectangular example had all four (fig. 32, 19). It is possible that these were used as abrasives.

OBJECTS MADE OF STONE

Pipes

Both stone and ceramic pipes, essentially similar in shape, were used by the inhabitants of OO 1. The forms are those described by Walton (1953) from other Iron Age settlements in the Orange Free State

including his Type A2 - large undecorated earthenware pipe bowls, Type A3 - large barrel-shaped stone bowls and Type A5 - "helminthoid-pattern" bowls.

At least three fragments of ceramic bowls were recovered from the middens while an almost complete one, decorated with stylus impressions, was found on the surface in one of the Type V settlement units some 300 metres eastwards along the ridge (fig. 32, 23 & 24). These conform to Walton's Type A2 and diverge from the barrel or cylindrical shape in being slightly waisted and/or tapering towards the base. The decorated example is unusual but it shows that decoration may occur in this category.

The most complete stone pipe is made of a friable off-white sandstone and was recovered from Hut 11 (fig. 32, 20). Traces of discolouration are preserved on the inside penetrating the stone to a depth of 2 mm.

The most distinctive pipes of the Highveld Iron Age are Walton's Type A5 with "helminthoid-patterns", so called from the sub-geometric or looped pattern of lines carved in relief. Fragments of two such pipes were recovered, pieces of one from among the pebbling in Hut 17 and from the central secondary enclosure nearby, which suggests that the pipe dates from before the completion of the Type V settlement unit (fig. 23, 21); the other, which is of better workmanship, is from Midden 5 (22). The stone, a grey-green siltstone which is not apparently of local origin suggests that the raw material and perhaps the finished bowls may have been a trade item. Their known distribution is a limited one confined to the south-western Transvaal, north-eastern Orange Free State and Caledon Valley essentially along the line of the modern towns Zeerust, Rustenburg, Potchefstroom, Heilbron, Vrede, Bethlehem and Harrismith; although future work may well extend this.

Schist 'pendant'

A single piece of schist, probably retaining its natural shape, was recovered. The only definite modification was the cutting of a notch about midway along either side for the attachment of a cord which has left faint signs of wear around the middle (fig. 32, 25). The material is a dark grey, soft, micaceous schist, certainly not of local origin as the nearest metamorphic rocks, other than those associated with the intrusive Karoo dolerite, are at least 120 km distant. It is described as a pendant because it had been attached to a cord and presumably served as an ornament, although this is not certain.

Sandstone crucible

Several fragments of sandstone from Midden 4 enable the partial reconstruction of a bowl-shaped object about 11 cm in diameter, 2 cm or more in thickness and perhaps 9 cm high (fig. 32, 26). The sandstone is a pale grey and it has been subjected to intense heat causing the accumulation of vitrified material around the base and rim. The colour of this material shows great variation from pale grey and green to red and black. In places it has penetrated between the interstices of the sandstone to a depth of several millimetres while in a molten state.

Similar objects were first reported by Van Riet Lowe (1927) and Laidler (1936), both from Type V sites near Heilbron. The former suggested that they were crucibles used in smelting small quantities of iron, but he admitted that tests had been inconclusive in establishing their function.

A piece of the sandstone was submitted to Professor Schreiner and Dr. Verbeek of the University of Natal who made the following analyses. The sample used was a composite of random chippings from the outside of the fragment.

Na ₂ O	1,7%
Total Fe as Fe ₂ O ₃	3,8%
K ₂ O	6,4%
CaO	10,1%
MgO	4,1%
MnO	0,1%
Al ₂ O ₃	7,0%
TiO ₂	0,6%
Cu	0,38%
SiO ₂	not tested

Dr. Verbeek (pers.comm.) laid stress on three aspects of the analysis; that the value for copper was relatively high, that the total iron content was relatively low and that the values for CaO and MgO were relatively high. The results suggested that the crucible was used to process copper, the high calcium content perhaps being indicative of the use of a flux.

A drop of 98% pure melted copper from Midden 4 adds support to the idea that copper was melted on the site.

Grindstones

During excavation, 64 upper grindstones were recovered and of these 55 were retained in the collection, the remaining nine were drawn and then discarded. The collected specimens were arranged according to weight and examined to see if this grading would produce any grouping within the series. There were no major breaks in the series of weights, but the stones fell into three morphological groups when examined in this way. Each group will be described separately.

Largest stones: These range in weight from 3 kg down to 1,3 for those made of dolerite, two made of sandstone being slightly lighter as the stone is less dense. The characteristics of this group include a relatively flat main grinding surface; the opposite surface is usually more arched and shows a little grinding and in a few cases it is also a well developed grinding surface. The intervening surfaces may be unmodified or battered but seldom to the extent where facets are developed.

The main grinding surface may be fairly flat but there is a curvature in one direction, more or less at right angles to the long axis of the stone. The shape demonstrates that there has been a considerable wearing down of the stone yet the surface is always well pitted and usually there are only small polished areas in between (fig. 31, 14). In plan form the shape is irregularly oval or elliptical.

Many are too large to use conveniently in one hand, which feature, together with the curvature of the grinding surfaces indicates that a two-handed action was used on a fairly flat lower stone. The more rounded upper surface would have provided a good grip. The roughness of the grinding surfaces must have been required for efficient grinding but the result would have been a relatively coarse meal.

The 15 stones in this group came from the following situations: one within Corbelled Hut 16, four outside huts, two inside Primary Enclosure 3, three outside Primary Enclosure 1 and five from general positions within the zones.

These stones correspond approximately to the quern stones of contemporary Sotho as described by Walton (1953), although the latter have a more markedly convex grinding surface. Walton (op.cit., 37) has suggested that the two-handed stones were used to grind maize and that they are indicative of a date after about 1820 in the Orange Free State. Their absence from sites occupied prior to 1820 has not, however, been satisfactorily demonstrated, and therefore their chronological value is not established. The occupation of OO 1 could have

continued for a short period after 1820 but the number recovered suggests that they were in use over a considerable period.

The shape, size and surface texture of the stones, together with the ethnological evidence suggests that they were used to reduce grain to meal. This grinding would have been one of the staple activities of the community.

Medium - small stones: These range in weight from about 1 kg to 0,6 kg. They normally have two well developed grinding surfaces on opposite sides while the intervening faces are battered and sometimes ground to additional surfaces. In the more regularly shaped examples this results in a cuboidal shape (fig. 31, 15 & 16) or a spheroid with flattened top and bottom. Few show any cortex but the heavy battering has often broken off one end. A few elongated elliptical or rectangular examples occur but the majority have nearly equal length and breadth.

The main grinding surfaces may be curved but the majority are relatively flat. Again, many are roughened by pecking but usually to a lesser extent than the larger stones, while several are highly polished. Battering and grinding actions seem to have been combined on some of the side surfaces. It seems likely, as suggested by Walton (1953), that the flatter surfaces are produced by a circular grinding action whereas the curved surfaces result from a backward and forward motion perhaps with a deliberate rocking action. Even the flattest surfaces never become concave, nor do they have dimples.

Colouring matter in powder form was found on six stones of which four had red ochre and three (one of which also had ochre, fig. 31, 16) had white powder. Both colours were used on comb-stamped pottery and there may well have been other uses.

Most of these stones are too small to be used with two hands. Hammering was an important function of most, while the relatively smoother surfaces could have produced a finer textured powder than the larger stones.

Apart from grinding colouring matter these stones probably had a variety of functions as they are the most common type. They would probably also have been used in grinding grain and perhaps other foodstuffs as well as snuff (Walton, 1953), cosmetics, medicines and perhaps for burnishing earth floors. They must also have been used as hammers to roughen the surfaces of the larger stones.

Of the 31 stones in this group 14 came from within huts including one each from Huts 1, 4, 6, 9, 18 and 19, two each from Huts 11 and 17

and four from Hut 3. Two came from the lelapas of Huts 9 and 12 and six more were adjacent to huts, one of them was in the small circular trench in Zone C. Three were outside Primary Enclosure 1, three were in the south-western corner of Zone D, while the remaining three came from various positions in the zones and middens. The high proportion that occurred in or next to huts suggests a somewhat different pattern of use from the large stones with their more general distribution. The concentrations of stones in the open outside Primary Enclosure 1 and in the south-west corner of Zone D are of interest, particularly in view of the proximity of several small stone circles to each group.

The sandstone grinders require separate description although two of them fall into the first category. The others come into the second category according to weight, but as the sandstone is less dense than dolerite and as several examples are broken, the weight is not so significant. In plan they resemble the larger stones, being more or less elliptical, however they usually have two well developed grinding surfaces on opposite sides, and continued use has worn the stones down to a thickness of about 4 cm (fig. 31, 17). This 'pancake' shape is common among the sandstone grinders and perhaps represents the stage when they were discarded.

The main surfaces may be flat or curved and as with the larger stones they are well pecked, but the clear advantage of sandstone is that it tends to retain a granular surface where dolerite becomes highly polished. The edges show some battering, but the sandstone would be less suitable for hammering and it would break more easily, which presumably accounts for the large proportion of broken examples. None had any trace of colouring matter nor did any resemble the smaller stones in shape, thus they seem to belong with the larger stones in terms of function.

The nearest source of sandstone is about 0,5 km along the ridge to the east where it has become indurated from proximity with the igneous sill. This distance, although not great, suggests that sandstone may have been preferred for grinding grain, presumably because it does not become so highly polished.

The 10 stones in this group came mainly from within corbelled huts, including two whole ones from Huts 4 and 6 and broken ones from Huts 3, 11, 16 and 19 and two from Hut 18. The other two stones, one of them broken, came from general positions within the zones. This distribution is more like that of the smaller stones and suggests a use

predominantly within huts.

Smallest stones: These range in weight from 0,25 to 0,5 kg with one of 0,6. There are only five stones in this group, all of dolerite. They are of irregular elongated to oval shape and usually have one or two small grinding surfaces, and on one of these there were traces of red ochre. The main feature, however, is that the ends are modified by extensive battering; indeed two examples are natural columnar pieces with no grinding surfaces at all (fig. 31, 18). These coincide with Walton's (1953) quern peckers as found among the contemporary Sotho and this was presumably their function although several were also used for grinding.

Of the five stones one came from Hut 13, another from the lelapa of Hut 12 and the remainder from the middens and zones. Their rarity compared to the number of grindstones shows that they were not regularly used and it seems that much of the roughening of grinding surfaces was done by the upper grindstones themselves.

Lower grindstone: There was a large number of lower stones in and around the structures of the settlement unit. Twenty-one were recorded of which only seven were unbroken. The seven have a mean length of 42 cm and width of 35 cm, the largest being 63 cm by 46 cm and the smallest 32 cm by 29 cm. Nine were of sandstone which again shows a preference for this more distant raw material, over the dolerite of which the walls were built. These stones have a circular to oval hollow which has sometimes been worn to a depth of several centimetres.

Lower stones used for ochre: Five thin, flat slabs of dolerite which had been used for grinding ochre were recovered. These are about 25 cm long and only 2-3 cm thick. Some retain the unevenness of the natural cleavage plane but the more worked ones are lightly pecked. Of these, one came from Hut 2, one from Hut 5, one from within the rectangular feature on the south side of Zone D (fig. 19) and one from Midden 5.

Sharpening stones: Two long thin dolerite slabs 30 and 35 cm long by 10 and 12 cm wide appear to have been used for sharpening iron blades. On both the smoothed areas are relatively flat and show striations, in one case parallel to and in the other at right angles to the long axis. On the latter the smoothing has slightly rounded the edges. They were found in Zones B and C.

Block with battered edges: In Hut 17 a block of dolerite weighing

6,6 kg shows extensive battering which has rounded all its corners. The effect is similar to that found on many doorway stones but more extensive (fig. 14). Even when held in both hands the weight of this stone is considerable and it therefore seems that it was struck by a smaller stone used as a hammer. It is not clear why its edges were carefully rounded in this way unless it formed part of the structure or furnishings of the hut, but there is no definite evidence on this point.

Grooved sandstone blocks: Three irregularly shaped blocks of sandstone were recovered, one from within Hut 19, one from the little enclosure behind it and one from Hut 16. Each has groups of V-shaped grooves on several surfaces, a few millimetres deep and of similar width, the longest being up to 7 cm. The sandstone must have been deliberately chosen for its abrasive quality and the grooves were probably used for shaping or sharpening tools made of iron or bone.

Other ground stone artefacts: Dart (1929) and Walton (1956a, 59) have suggested that several other types of stone artefact which occur in the Orange Free State may be associated with Iron Age settlement. These include elongated conical stones of about 25 cm in length, shorter conical stones of about 3-10 cm and bored stones. A farmer from Lindley District gave examples of each of these types to the writer but they were not known to have come from Iron Age sites, nor does the writer know of any good evidence to associate these types with the Iron Age in the Orange Free State.

Flaked stone artefacts

Two scrapers and several flakes, chips and chunks were recovered, most of them from the middens. They are made of locally available materials - indurated sandstone, lydianite and agate and a single piece of calcite. There is a fair amount of Stone Age material in the area which would account for the presence of some of it among the Iron Age debris. The process of cleaning the surface of the settlement, which would gradually remove the soil, and dumping the rubbish in the middens would concentrate the stone age material in the middens.

Colouring matter

As mentioned above, part of a bowl containing powdered specularite was found in Hut 17. This material was widely used as a cosmetic and less commonly for decorating objects, in early historic times on the

Highveld. Sources are known from Bomvu Ridge in Swaziland to the north-east, westwards through the Transvaal and down to Postmasburg in the northern Cape. The specularite trade is discussed below in the report on the ODF 1 site.

A piece of red ochre was found in the lelapa of Hut 13 and two others in Midden 4. Apart from its use as a coloured burnish on the pottery it might have had cosmetic and other uses, for example several of the larger ostrich egg-shell beads had traces of red on one side. A small and well polished quartzite pebble from Midden 4 could have been used in the burnishing of pottery.

No trace of the use of graphite was observed at OO 1.

METAL WORK

Hoes

Four hoes were recovered from the settlement unit, two formed part of the hoard behind Hut 1 (Plate 18), another was found nearby beside Hut 3 and the fourth lay beside the lelapa wall of Hut 9. They are of relatively simple design with elliptical blades which become thinner towards the edges but lack a central midrib (fig. 33, 1-3). The tangs are long and taper generally to end in rounded pointe. In side view they are quite straight and slightly thickened where the blade merges with the tang.

A number of bars of iron, broken at one or both ends and having round or square sections (fig. 33, 4 & 9), are probably parts of the tangs of hoes or other heavy duty tools.

Axes and adzes

The only undoubtedly example of this class is an adze with thin, curved blade and sharp cutting edge (fig. 33, 8). The sides of the blade converge to form the tang and they have been hammered, perhaps when cold, to form rough flanges. The implement had been broken in two in antiquity, perhaps as a result of cold hammering, and the pieces were found separated, the blade in Zone D and the tang in Zone A.

A tool of similar shape but considerably thicker and with a blunt edge may have been some sort of adze (fig. 33, 6) as it is curved in side view. The thickness and blunted edge suggest use as a hoe but the shape is very different from the hoes described above. A broken tang of rather similar shape but straight in side view (fig. 33, 7) may be from a similar implement.

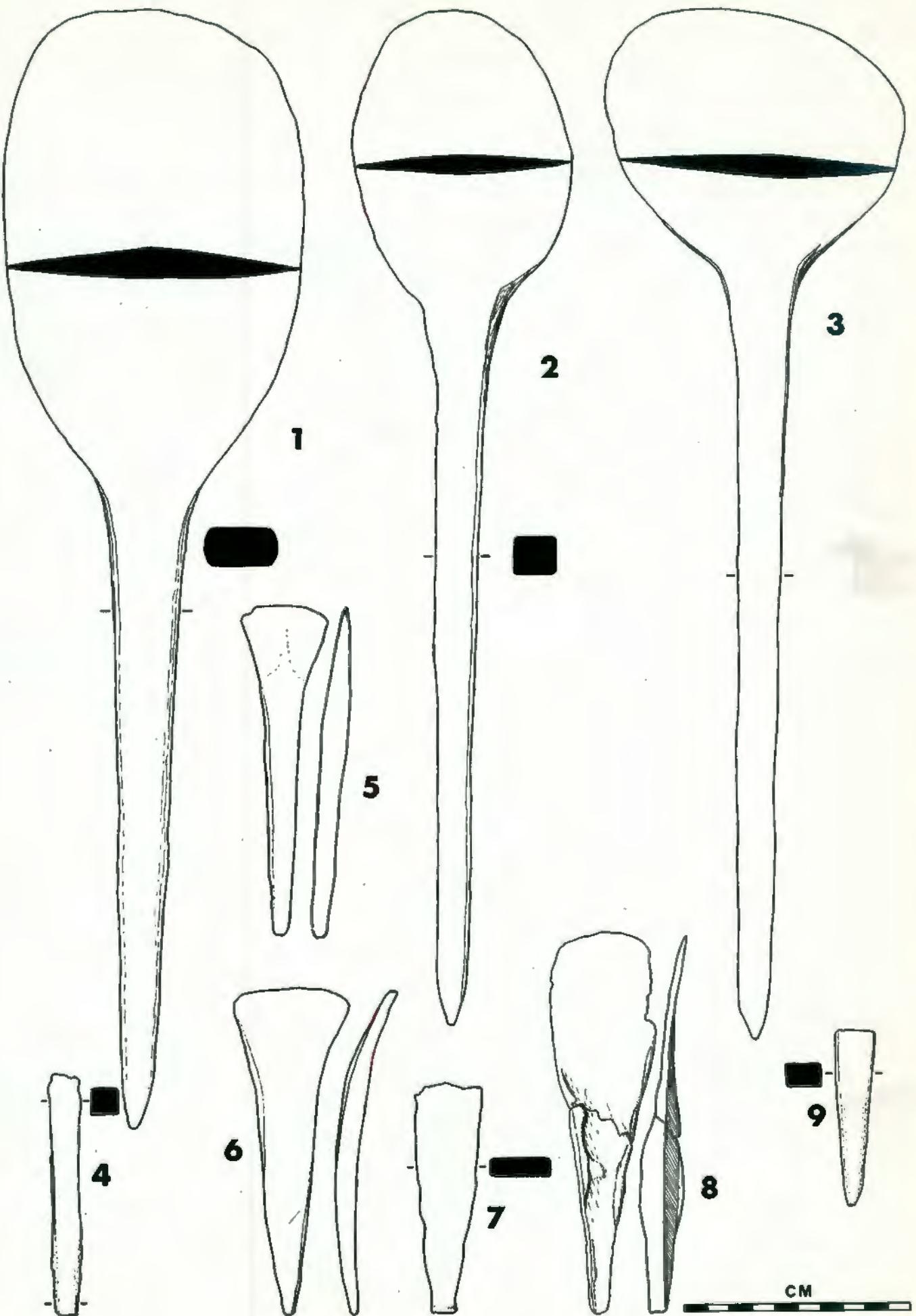


Fig. 33

Figure 33

Hoes and other large iron tools.

1. Hoe with elliptical, relatively unworn blade, somewhat thickened centrally but without midrib. Long tapering tang partly rounded in section. Hoard against wall behind Hut 1.
2. Hoe similar to No. 1 but with narrower, more worn blade and straight tang with square section. Hoard against wall behind Hut 1.
3. Hoe with unevenly worn blade and long straight tang with square section Zone A beside Hut 3.
4. Iron rod with square section changing to round, broken at both ends. Function unknown, perhaps hoe tang. Hut 11.
5. ? Axe with small blade and tapering tang with square section. This could be a worn down hoe but the tang is much shorter and lighter than Nos. 1-3. Secondary enclosure in front of Huts 17 & 18.
6. Adze or worn down hoe, with small blade and short tapering tang. Rectangular section and curved in side view. The end of the blade is blunt which suggests use as a hoe, however the above examples are all straight in side view. Zone E.
7. Tapering piece of iron with rectangular section, broken at broad end hammered at narrow end. Presumably the broken tang of a heavy duty tool. Hut 1.
8. Adze with thin, sharp blade tapering to form tang, the sides hammered into two irregular flanges. Side view shows curvature and also twist in the plane of the blade. Found broken in two pieces, the blade in Zone D, tang in Zone A between Huts 1 & 2.
9. Tang with rectangular section slightly rounded. Probably end of hoe tang. Midden 5, N.E. quadrant.

An implement with a relatively long tang and small sharp triangular blade was presumably used as an axe (fig. 33, 5). It may have been made from a worn down hoe.

Spears and knives

It is not always possible to distinguish between these two classes but where the blade is thin and fragile and the tang is short the item is probably a knife.

The spears are mainly of two kinds, those with small blades and long tangs and those with fairly large blades and more conventional tangs. The former have small, neatly shaped blades with a slight midrib. One, rather more massive than the others, has an ogee section (fig. 34, 4). The tangs are up to 25 cm in length and round in section except for a narrower portion 4-6 cm long at the end which is square, and it is this part that would have been inserted into the spear shaft. This type of spear occurs widely in southern Africa but it was particularly common and well developed among the Sotho, judging by the ethnological collections of the South African Museum and the Natal Museum. Seven examples were recovered (fig. 34, 1-4), one each from Hut 3, the lelapa of Huts 1 and 5, outside Huts 2 and 4 and two, with their blades missing, from Hut 18 and the area in front of it.

The more conventional spear heads grade into the knives, no clear dividing line seems to exist. Moreover there are numerous examples of broken tips (13), portions of blades (8+) and broken tangs (20+) which may come from either knives or spear heads. Blades are usually rather flat, occasionally there is a slight midrib and one has an ogee section (fig. 34, 6). Tangs are fairly short, around 5 cm, and are more often square than round in section (fig. 34, 5-9).

The objects described as knives have flat, rather delicate blades and rounded tips which would appear to be less suitable for spears. In one example (fig. 34, 10) the tang ends in a broad, flat oval shape, while two others have very short tangs of 2-3 cm (fig. 35, 1 & 2). In no case was the end of the tang bent over, a useful characteristic of some assemblages which allows for the differentiation between spears and knives (Fagan, 1961, 207)

A knife of European pattern (fig. 35, 25) was found in the central secondary enclosure, the shallowness of the deposit making its association with the Iron Age occupation uncertain.

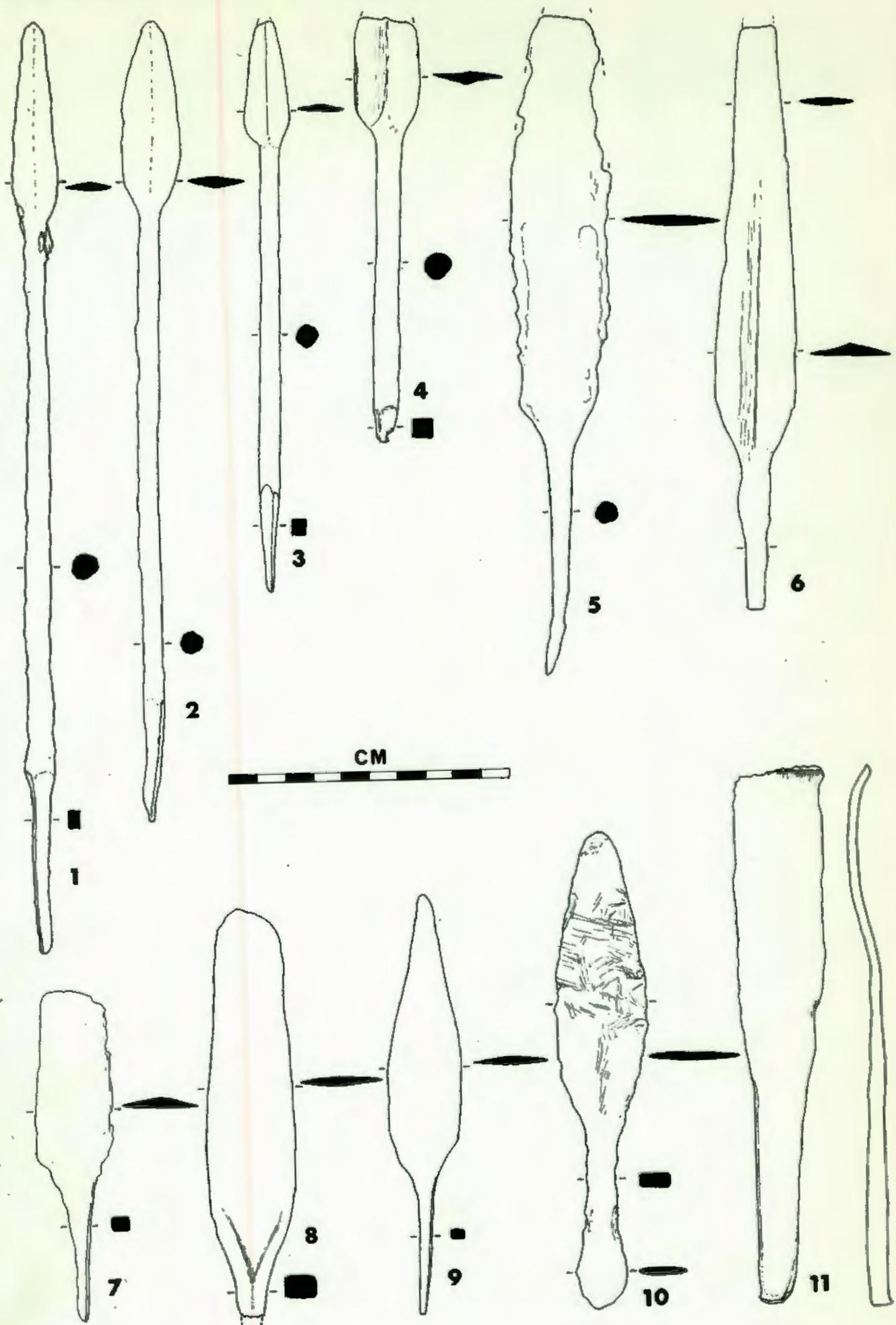


Fig. 34

Figure 34

Spear heads and knives.

1. Spear head with small, delicate blade and slight midrib. Very long tang with round section, the hafted portion of which is narrower and square in section. Zone A between Huts 1 & 2.
2. As No. 1 but with somewhat broader blade. Zone B, between Hut 4 and Primary Enclosure 1.
3. Spear head with very small blade and slight midrib. Tang as Nos. 1 & 2 but shorter. Hut 3.
4. Spear head with both ends broken. Blade has midrib and ogee section. Fairly long and thick tang with round section, the hafted portion being narrower and square. Lelapa of Hut 1.
5. Spear head with large flat blade and tapering, round-sectioned tang. Badly oxidised. Zone B.
6. Spear head or knife with long blade showing strong midrib and ogee section on one side, the other almost flat. Short, almost square-sectioned tang has swelling near base of blade. Lelapa of Hut 1.
7. Probably a spear head. Blade with slight midrib, end broken. Short tang with square section. Zone B beside Hut 7.
8. Spear or knife blade with tip and tang missing. Almost flat section thickening towards the tang where the edges of the blade have been hammered towards the centre. Hut 5.
9. Small spear head or knife with almost flat blade and tang with square section. Lelapa of Hut 1.
10. Knife with blade of almost flat section, retaining numerous grass impressions. Tang has rectangular section broadening into a flat oval disc at the end. Hut 11.
11. Apparently unfinished object with straight blade and broad tang. In section the blade is bent into a curve and snapped off at the end. The end of the tang is slightly rolled over from hammering. Surface find from Type V settlement unit near beacon west of excavation.

Arrow heads

Although there is little evidence for the use of bows and arrows by Iron Age peoples as far south as OO 1 there are several implements whose shape and size strongly suggests their use as arrows rather than knives or spears (fig. 35, 5-8). One complete and several broken examples have willow leaf shaped blades without midribs, and round or square tangs 3-4 cm long. A single example of a different pattern (fig. 35, 8) has a small, probably triangular blade with long, slender tang. It is rather corroded but a series of irregularities along the tang may be all that remains of rows of barbs. The evidence is insufficient to establish with certainty the use of bows and arrows.

Spatulate objects

This group can be subdivided into razors, with or without tangs, and "sweat scrapers" for which the Sesotho word lebeko will be used.

Razors are most commonly tangless, thin sheets of iron with parallel or converging sides (fig. 35, 9-11 & 14-16). The broader end is convex and sharpened. At least one tanged razor (fig. 35, 18) was recovered and several other items may well be of this type (17 & 19). They may have been used for a variety of purposes other than shaving, for example Smith (1836, ¹⁹³⁹ Plate 23) illustrated a tanged example from the Caledon Valley which was being used by a Mosotho as a surgical knife.

The lebeko is a rather delicately made instrument which the Sotho of the Caledon Valley as well as many other peoples of southern Africa used for "all the purpose of a handkerchief" (Casalis, 1861, 133), or as Smith (op.cit., 143) has it - "serves the double purpose of scraping off the perspiration and cleansing the nostrils from the immense loads of snuff with which they stuff them". Most historical and ethnological examples differ slightly from these (fig. 35, 20-23) in having narrower blades often with wings protruding from their bases on either side of the tang, and a slight midrib. Here, however, they have short, relatively broad blades, usually with only a gentle curve in side view. The end of the tang is curled over to allow the owner to wear it on a cord around his neck. Of the four recovered from OO 1 three are from huts. The largest one, which is particularly well preserved, was found among the rubble collapsed from the roof of Hut 19 and therefore had probably been put into a crevice among the stones for safe keeping.

Awls

A large number of iron rods, more or less sharpened at one end,

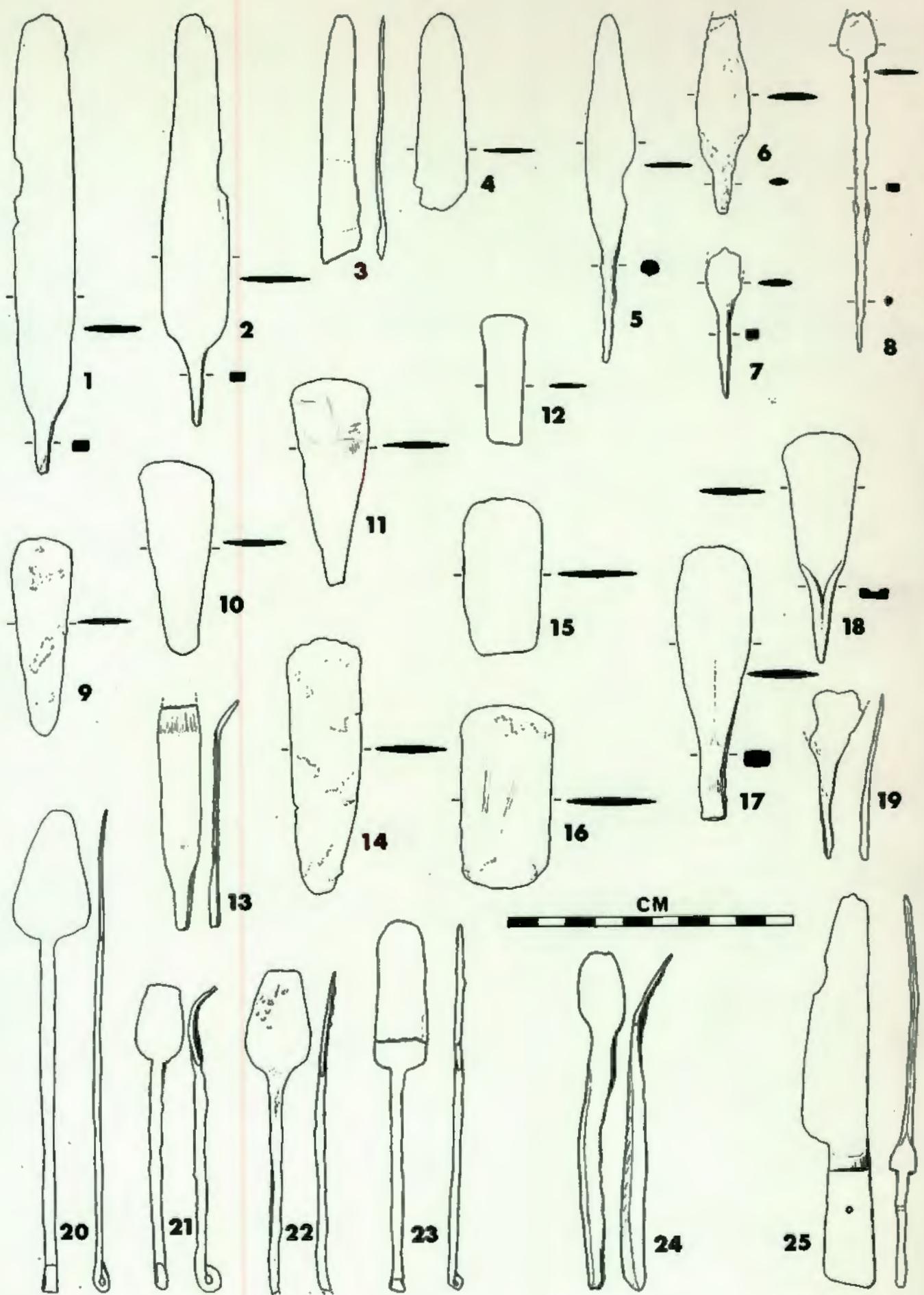


Fig. 35

Figure 35

Iron knives, arrow heads, razors, etc.

1. Knife with straight flat blade, end rounded. Short rectangular tang. Zone C.
2. Knife as No. 1 but with tapering blade and slightly longer tang. Primary Enclosure 3.
3. Thin, delicate blade with rounded end, broken before tang and bent in two places. Probably a knife as it would be very light and fragile as a spear. Primary Enclosure 4.
4. As No. 3 but broader. Hut 16.
5. Arrow head of willow leaf shape with no midrib and round tang. The only complete example of this type. Zone B.
6. Arrow head of similar shape but slightly broader and much corroded so that both ends are missing. Zone D.
7. Incomplete object with square tang and thin blade, possibly an arrow head. Zone A, between Huts 1 and 2.
8. Object with long slender tang tapering to sharp point. Tip of blade missing but blade seems to have been triangular in shape. Corroded knobs along middle and upper part of tang may have been barbs. May be an arrow head. Zone A, against lelapa wall of Hut 1.
- 9-11 Razors varying slightly in shape from sub-rectangular to sub-triangular. All are flat in section and have convex cutting edges.
- 14-16. Nos. 11 & 16 have grass impressions on one side. 9 - Secondary Enclosure in front of Huts 17 & 18. 10 - Zone E. 11 - Midden 5, 14 - Zone D. 15 - Zone B. 16 - Zone E.
12. Object similar to Nos. 9-11 but with narrower blade slightly splayed at the end. Narrow convex cutting edge, other end broken off. Secondary enclosure in front of Huts 17 & 18.
13. Small tanged tool broken at both ends, flat straight blade and rectangular tang. Bend in blade probably accidental. Function unknown. Midden 5. S.W. quadrant.
17. Probably a razor, with convex cutting edge and slight midrib where blade merges with short stout tang. Zone D.
18. Razor similar in shape to Nos. 9-11 but with edges of lower portion of blade hammered over to form two flanges which converge to form a tang. Zone A, between Huts 1 & 2.
19. Implement with thin blade, broken, and short square tang. Perhaps a tanged razor. Midden 4, S.W. quadrant.
- 20-23. Four examples of "sweat scrapers" or lebeko. Thin flat blade usually curved in side view, long thin tang ending in eye formed by curling over and hammering flat the end of the tang. 20 - Hut 19. 21 - Secondary Enclosure, Zone A. 22 - Hut 13. 23 - Lelapa and doorway of Hut 5.
24. Heavy implement with small spatulate blade and thick, square tang slightly twisted. Secondary Enclosure, Zone E.
25. Knife of European pattern with straight back, provision for handle and rivet hole. Secondary Enclosure in front of Huts 17 & 18.

were recovered, but the majority of these could not with certainty be identified as awls. Those that are definitely awls have a round section and are between 9 and 17 cm in length. A knob at the broader end confirms their identification, but this is not always present (fig. 36, 1-4). Among the rods without knobs there is a gradation from relatively thin examples with at least their pointed ends round in section, towards thick, less pointed rods, with square section (fig. 36, 5-10). The latter type are probably broken tangs from spears and similar implements but some of the former were probably used as awls; many of those whose position is shown on the plans of the settlement unit (figs. 15, 17, 18, 19 & 21) are of this type.

Among Sotho-Tswana peoples of the earlier nineteenth century awls were kept in leather sheaths hung around the necks of men who used them in the masculine and high status task of sewing skins (e.g. Casalis, 1861, 135; Burchell, 1822, 405).

Wire drawing plates

Evidence for the manufacture of copper wire at OO 1 consists of two fragmentary and one complete, though bent, draw plates (fig. 36, 14-16). These are comparable in size and shape with examples from Ingombe Ilede on the Zambezi (Fagan, et al., 1969) although somewhat thinner in section. The complete one has only two holes and is abruptly bent and almost broken at the second, which may have caused it to be discarded. The holes have been punched from one side and are 2,5-3 mm in diameter.

Of the other tools associated with wire drawing (Fagan, op.cit.) no tongs were found but some of the thicker tapering iron rods would have been suitable as wedges.

Iron ornaments

All iron bangles are made of solid metal, round in section with one exception being sub-rectangular (fig. 36, 20). A selection is illustrated in figure 35 which covers the range of thickness, from 3,5-8 mm. One example has an end finished off by rolling the metal over and hammering it down to produce a knob (fig. 36, 21), but for the rest the ends are crudely cut or broken off and sometimes slightly flattened.

The iron beads, of which 14 were found, are cylindrical in shape and from 5-9 mm in diameter. They are rather corroded but appear to have been made by bending a rectangular strip of metal around into a ring.

In addition to the categories already described there are numerous

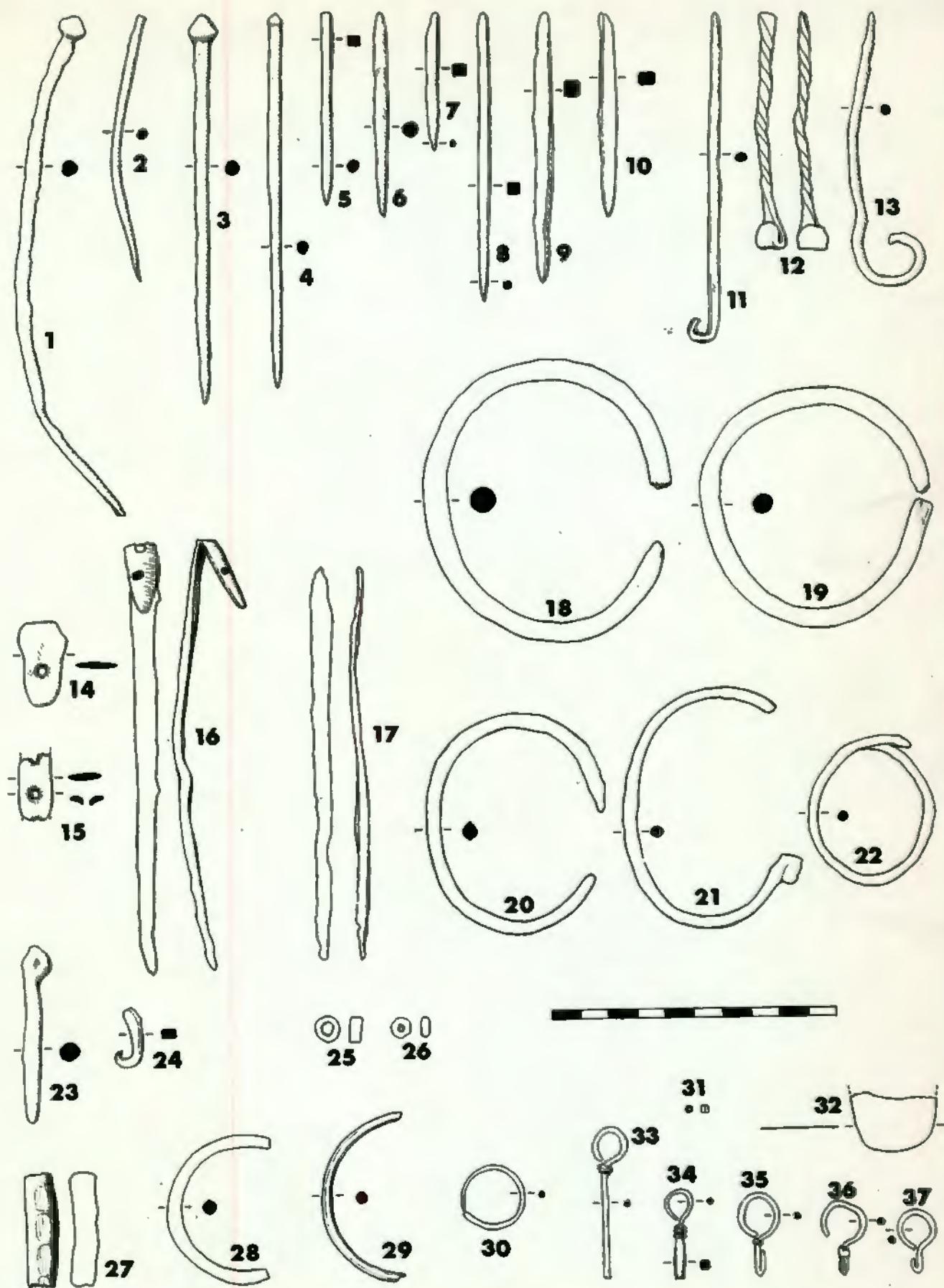


Fig. 36

Figure 36

Awls, wire drawing plates, iron and copper ornaments.

1. Large awl with knob on end, bent and almost broken. Secondary Enclosure, Zone E.
2. Thin, sharp awl in good state of preservation, bent. Zone B.
3. Awl with knob on end. Hut 18.
4. Awl with slight knob on end. Zone E.
- 5, 7 & 8. Implements of various lengths, pointed and with round sections near the points, grading into square sections towards the opposite ends. Probably awls but may be broken tangs. Zone D.
6. As for Nos. 5-7 but more or less round section throughout. Zone A.
- 9-10. Similar to Nos. 5-7 but square section throughout, somewhat thicker and less pointed. Probably broken tangs but might have been used as awls. Zone D.
- 11-13. Tangs with curled-over ends, No. 12 twisted. They probably had some sort of blades which have broken off. Nos. 11 & 13 may have been used as awls. 11 - Midden 5, N.W. quadrant. 12 - Midden 2, S.W. quadrant. 13 - Primary Enclosure 1.
14. Fragment of iron with hole pierced through it. Perhaps part of a draw plate. Midden 4, S.E. quadrant.
15. Fragment of wire drawing plate with two and possibly three punched holes. Midden 5, S.E. quadrant.
16. Complete draw plate with two punched holes, bent and almost broken at the second hole. Length 18 cm. Midden 5, S.E. quadrant.
17. Long slender piece of iron with gentle 'S' twist, perhaps the key from a "hand piano". Hut 4.
- 18-22. Iron bangles of various sizes and thickness of metal. All round in section except No. 20 which is sub-rectangular. No. 19 is one of 15 from hoard in Hut 16. No. 21 is unique in having one end curled over.
23. Small cylindrical rod of iron ending in knob where the end seems to have been curled over. Function unknown. Midden 5, S.W. quadrant.
24. Small piece of iron, tapering and bent round into a hook. Function unknown. Zone B.
- 25-26. Two examples of the common iron beads. Approximately cylindrical in shape and usually much corroded. 25 - Zone A. 26 - Zone E. Copper ornaments.
27. Fragment of curved bar of copper almost circular in section but slightly flattened and showing hammer marks on one side. Hut 3.
28. Half of copper bangle with round section. Midden 4, N.E. quadrant.
29. As for No. 28 but thinner and slightly flattened on either side. Hut 16.
30. Copper ring of size suitable for finger, made from thin wire. Lelapa of Hut 5.
31. Small copper bead, the only one recovered. Made from a thin strip bent round into a cylinder, seam visible. Lelapa of Hut 5.
32. Thin, flat copper sheet broken at top and therefore shape uncertain but probably an earring of Tswana pattern. Midden 5, N.W. quadrant.
33. Earring with long straight shank and collar at base of hook. Hut 4.
34. One of three similar earrings from Burial 1. Three flanges at top of shank chased into a series of indentations, lower portion of shank thickened and square in section with rounded edges.
35. Earring with shank bent double, collar at base of hook but not around doubled-over end. Lelapa of Hut 13.
36. As for No. 35 but collar around both base of hook and doubled-over end of shank. Hut 5.
37. Earring with shank bent double but without collar. Secondary Enclosure, Zone E.

miscellaneous scraps and objects of iron which cannot readily be identified. Several elongated pieces with their ends bent over were probably the handles of implements such as the lebeko (fig. 36, 11-13) but may have been used as awls. One of these is the only example of a twisted iron rod from this site (No. 12). One fairly flat strip of iron which thickens towards one end and has a gentle S-bend in side view may be a key from a 'hand piano' (fig. 36, 17).

Copper ornaments

Copper is rarer than iron and was used for a limited range of items all of them ornamental. Some of the items described here as copper may prove to be copper alloys.

The copper bangles like those of iron are all of solid metal, no wound wire or strip was found. The three bangles are 3-5 mm thick and made of round-sectional copper slightly flattened on each side (fig. 36, 28 & 29). A much thicker bar showing hammer marks and broken at both ends might have been part of a bangle but is more likely a piece of raw material; the copper may have been traded in the form of cylindrical bars. The ornaments were made by two techniques - hammering and wire drawing - sometimes used in combination. The bangles are at least partially hammered while sometimes the copper was flattened into a sheet less than 0,5 mm thick. The two items made from sheet are the bead (fig. 36, 31) consisting of a strip rolled around into a ring and the incomplete object with converging sides and rounded base (fig. 36, 32). The latter is probably part of a sheet earring of the type found commonly among southern Tswana groups in the early nineteenth century. These frequently had converging sides forming an elongated triangle or almost a rectangle with rounded corners, and were worn only by high-ranking males (Burchell, 1822, 306, 403; Daniell, 1820. For further discussion see below - OFD 1, Burial 1).

Two complete and two broken rings were made of drawn wire 1,5-2,5 mm in diameter. They are of suitable size to be worn on fingers (fig. 36, 30).

The most common copper ornaments are earrings made of wire. They have not been described previously in the archaeological literature and I am therefore grateful to Mrs. Adi Inskip for pointing out their resemblance to examples illustrated from the Tlheping (Burchell, 1822) which explained the purpose of those from OO 1. Wire of about 1,5 mm thickness is bent into a ring about 1 cm in diameter to form the hook which was threaded through the pierced earlobe. From the hook a straight

shank extends downwards giving the earring the shape of a question mark. The shank - the visible portion when in use - shows a variety of forms, it may merely be a straight piece of wire but more often is bent back upon itself to form a double thickness (fig. 36, 33-37). There is often a small collar made from another piece of wire wrapped and hammered around the top of the shank, which sometimes secures the end of the wire where this has been doubled over.

The three earrings from Burial 1 show a better standard of workmanship. The hooks are of wire only 1 mm thick and the ends are bent around so as to touch the top of the shank - clearly the hook was bent closed when fitted to the ear. The top of the shank thickens into three flanges which resemble the collars mentioned above but in this case are hammered up from the material of the shank and not applied separately. Some of the flanges have a series of nicks cut into them forming denticulate ridges (fig. 36, 3, Plate 34). Below the flanges the shank broadens to 3 mm and has a square section with rounded edges. The bottom is cut off neatly at right angles.

Burchell (1822, 398) describes the Tlhaping examples as "a thin wire very neatly wound around another of larger dimensions and terminated by a small knob formed by a piece of copper hammered round the end; the upper part being bent into a ring by which it is fastened to the ear,..... They are not always worn in both ears at the same time: sometimes as many as six are appended; and most frequently more than one. These....are worn equally by both sexes." His comments are interesting in view of the three found on Burial 1 and the identification of the skeleton as that of a woman, whereas the sheet earrings were only worn singly and by men of high status among the Tlhaping.

From a village near Morija in the Caledon Valley Backhouse (1844, 363) recorded that "Most of them (the villagers) had earrings, many of which were of copper wire, rather stout, and resembled spiral springs that had been drawn beyond their strength." In the collections of the South African Museum is an example, obtained from a Bushman, which again has a spiral of wire around the shank the bottom of which widens into a flat, oval shape. None of the spiral type have yet been found on Iron Age sites south of the Vaal but two were recovered at Olifantspoort (Mason, pers.comm.).

The earliest record of such earrings seems to be the illustration by Spaarmann (1785, Plate 2) of two examples worn by Khoikhoi. These have a straight shank and a collar twisted around the lower end.

On present evidence the distribution seems to be confined essentially



Plate 34. Copper earring from Burial 1.



Plate 35. Imported metal buttons (top row), musket ball and buckle from OO 1. On right drop of 98% pure melted copper.

to the Highveld of the Orange Free State, Lesotho, south-western Transvaal and westwards to the fringes of the Kalahari. None have been recovered in Rhodesian excavations and it seems likely that they are peculiar to the Sotho-Tswana and neighbouring Khoisan peoples. In view of the presence of draw plates, the copper wire and the earrings could well have been made on the site.

Imported metal items

Apart from the iron knife mentioned above (fig. 35, 25) several other metal items of European manufacture were found. These are illustrated in Plate 35 and include an iron belt or harness buckle from Hut 9 which together with the food tin suggest the re-use of this at a later date, perhaps during the South African war, as it faces the escarpment and the extensive view southwards. An iron button was found on the surface in Zone C and a lead musket ball near Burial 1, both of which probably postdate the Iron Age occupation.

Four fragments of hollow, sub-spherical brass buttons seem to be contemporary with the occupation. Their age is uncertain but they are similar to examples used in conjunction with glass beads by the Sotho around the turn of the present century, the only obvious difference being that the latter have a loop of wire at the back for fastening whereas those from OO 1 have two holes pierced in the back.

Metalworking

OO 1 falls well within the main treeless zone (fig. 5) and therefore supplies of wood for making charcoal on any but a minimal scale would have been inadequate. No iron slag, tuyères, furnaces nor any other signs of ironworking were seen at Makgwareng or the other sites visited, nor does there appear to be a suitable source of iron ore, as iron smelting was clearly not carried out locally. Supplies must have been obtained by trade probably from north of the Vaal or east of the Drakensberg Escarpment. There may have been some smithing done on the site but the evidence - a few apparently unfinished objects (fig. 34, 11; fig. 35, 24) - is inconclusive.

The sandstone crucibles from OO 1 and the sites near Heilbron were apparently used in the processing of copper. As the source of the ore must have been beyond our area and as no signs of unsmelted ore or slag were found, it seems that the copper was re-melted. The reason for doing this and the process used are unknown but perhaps it was to convert ingots or scrap into a suitable form for the manufacture of wire. The

drop of 98% pure, melted copper (Plate 35) is additional evidence of re-melting on the site.

The drawing of copper wire and its manufacture into ornaments including rings and earrings could have been carried out at OO 1 since draw bars were available and only a low heat would be required (Fagan, *et al*, 1969, 105; Stayt, 1931, 65). However, no unused wire was found, nor was it possible to identify any particular part of the site with this activity.

GLASS BEADS

Although many thousands of glass beads have by now been recovered from Iron Age sites in southern Africa, their usefulness as chronological indicators is still severely limited, especially south of the Limpopo Valley. A descriptive list of the beads from OO 1 was prepared and sent together with the beads to Mr. K.R. Robinson to whom I am very grateful for the report which is included together with additional points from correspondence and the list.

Locality	No	Colour	Shape	Diameter mm	Series
Zone A	1	Red or green	Cylinder	4	L
"	6	Blue	Cylinders	2,6-3,6	L
"	1	Blue	Cylinder (broken)	7(?)	L
"	2	Green	Cylinders	3	E
Hut 1	1	Green-blue	Cylinder	3	?E
Hut 1, Lelapa	1	Red on green	Cylinder	3,5	L
Enclosure behind Hut 1	1	Blue	Cylinder	3	E
Zone B	1	Pink on white	Oblate	4	R
"	2	Red on green	Cylinders	3,5	L
"	1	Blue	Cylinder	3	L
"	1	Blue	Cylinder	4	L
"	1	Blue	Oblate	4	R
"	1	Blue	Oblate	12(?)	R
"	1	Green-blue	Cylinder	3	E
"	1	Black	Oblate	3,5	R
Hut 4	1	White	Cylinder	3	L
"	3	Blue	Cylinders	3	L
"	1	Yellow	Oblate with ridges	5	?R
Hut 5	1	Blue	Cylinder	4,5	L
Hut 5, Lelapa	2	White	Cylinders	3	L
"	3	Red on green	Cylinders	4	L
"	6	Blue	Cylinders	3	L
"	1	Blue	Oblate	2,4	R
"	1	Turquoise	Oblate ?wound	9	L
"	2	Green-blue	Cylinders	3	E
Hollow	1	Blue	Cylinder	4	L

Locality	No.	Colour	Shape	Diameter mm	Series
Zone C, Hut 9	1	Blue	Cylinder	3,5	L
Hut 11	3	White	Cylinders	3,5-4	L
"	1	Red on green	Cylinder	3,5	L
Zone D	15	White	Cylinders	3-4	L
"	1	White	Oblate	2	R
"	1	White	Oblate	4	R
"	1	Pink	Oblate	2,5	R
"	1	Orange	Oblate	2,5	R
"	4	Red on green	Cylinders	3,5-4	R
"	18	Blue	Cylinders	3-4	L
"	1	Blue	Oblate	2	R
"	1	Green	Cylinder	3	E
"	1	Black	Cylinder	4	E
Hut 13	1	Blue	Cylinder	3,5	L
Zone E	3	White	Cylinders	3	L
"	1	White	Oblate	6	R
"	1	Yellow	Oblate with ridges	5,5	?R
"	2	Pink	Oblates	4	R
"	5	Red on green	Cylinders	3-4	L
"	9	Blue	Cylinders	3-4	L
"	1	Blue	Cylinder (broken)	6	L
"	1	Green-blue	Cylinder	3	E
"	1	Green	Oblate moulded	4,5	?R
"	1	Green	Disc (?broken button)	14(?)	?R
Hut 14	3	Blue	Cylinders	2,5-3	L
"	1	Red on green	Cylinder	4	L
Hut 16	1	White	Cylinder	4	L
"	1	White	Oblate	5,5	R
"	1	Red on white	Oblate	6	R
"	1	Blue	Cylinder	3	L
"	1	Turquoise	Oblate	8,5	R
Hut 16, Lelapa	1	White	Cylinder	5	L
"	1	Blue	Cylinder	3	L
Primary Enclosure 3	1	Blue	Cylinder	3	L
Former Primary Enclosure	1	Red on transparent	Cylinder	3	L
"	2	Blue	Cylinders	3+4	L
Midden 4, N.W. Quadrant	1	White	Cylinder	3	L
"	1	Blue	Cylinder	3,5	L
Midden 4, N.E. Quadrant	1	Blue	Oblate	3	
"	1	Turquoise	Oblate	5	
Midden 4, S.E. Quadrant	1	Blue	Cylinder	3	?E
Midden 5, S.E. Quadrant	1	White	Cylinder	3,5	L
"	1	Red on green	Cylinder	3,5	L
"	5	Blue	Cylinder	3-4	L

REPORT ON GLASS BEADS FROM OO 1 by K.R. Robinson

Each entry on the list is marked as E, L or R, namely, earlier, later and recent. My opinions are, of course, based entirely on the outward appearance of the beads and they must, therefore, be regarded as very tentative.

Earlier: these are mainly transparent to translucent small blue to
 11 green cylinders with snapped ends. They resemble some of
 the Leopard's Kopje beads and have been recovered from
 deposits dated as early as the 8th century but probably
 survived to a much later date.

Later : these include the Indian red over greens, white opaque
 113 cylinders, transparent dark blue cylinders and the pink
 opaque oblates. All I can suggest is an 18th to 19th
 century date. The lack of plain opaque red beads suggests
 to me a post-18th century date for most of these beads.

Recent : the white and black oblates (and perhaps the pink oblates)
 20 are probably late-19th century. Pink or red over white
 beads were still being sold in Mashonaland well into this
 century. I would also include as recent the small orange
 oblate from Zone D, the small blue oblate from Hut 5 and
 most of the larger oblates.

The green disc from Zone E is probably modern as I have
 seen similar disks, only white, on modern beadwork. The moulded
 green oblate from Zone E also looks pretty recent
 to me. Moulded beads are very late in Malawi sites.

With regard to the two yellow ridged beads, I have not
 come across anything like them before. The nearest
 parallel, if it is one, is the bead of transparent red
 glass described by Beck (Zimbabwe Culture, p.234, 6d and
 Frontispiece 6d). This is a wound bead and much shorter
 than your yellows, also its associations are not too clear.
 I rather suspect that the yellow ridged beads are recent
 and belong to the same period as the disc and moulded beads.
 However, I have no comparative material at all.

Mr. Robinson adds the following comments:

"I feel confident that your collection contains an earlier bead series than that represented by the bulk of the material, but exact dating is not possible on the evidence available to me at present. I suppose the question of ancestral beads may apply.

Indian red over transparent green beads are, as was emphasized by Schofield, usually late 19th century but may be earlier. Your 'later' beads are very similar to the beads recovered at Van Niekerk Ruins and described by Schofield (in Summers, 1958). He was cautious about dating, but Roger Summers dated Van Niekerk to about the eighteenth century.

There is a complete absence of any of the typical brightly coloured cylinders and oblates common at Zimbabwe or Khami in your material. The few very small oblates are certainly late, they occur in thousands at places like Nkudzi Bay associated with cored beads."

Following Robinson's subdivisions it is possible to propose two trade sources for the OO 1 material. The earlier series - essentially blue to green snapped cylinders - were probably the result of trade with Iron Age peoples to the north. In the later eighteenth century travellers on the Orange reported various coloured glass beads especially green ones. They were cylindrical and of a type unknown at the Cape, coming from Bantu-speaking groups further north and originally perhaps from the Portuguese trading stations (Wikar, 1779, 76, 79 & 149; Le Vaillant, 1796, 2, 360. Also quoted by Schofield in Summers, 1958, 186).

The 'recent' and some of the 'later' series would seem to have come from Dutch and British trade from the Cape and perhaps the Natal coast in the eighteenth and nineteenth centuries. For example the ruby-red on white oblates and the large turquoise beads were also found on the mid-nineteenth century OND 3 settlement. However, by this time more elaborate cored beads and oblates were in use and transparent cylinders were rare.

These two possible sources may help to explain the dichotomy within the OO 1 assemblage, for the earlier series would have reached here later than Rhodesia, whereas the 'later' and 'recent' beads may be rather earlier here than further north. A few might be chance inclusions in the assemblage from occasional recent visits to the sites, as suggested by the food tin in Hut 9 and other such finds. From the historical evidence it is clear that there could have been no occupation from the mid-nineteenth century onwards.

ARTEFACTS OF BONE AND SHELL

In view of the extensive area excavated, the quantity of bone work was relatively small, which, when compared to the results from some of the

other sites (e.g. OU 2 and OXF 1) suggests that the availability of metal for both tools and ornaments meant that there was little need to use bone.

Three bone pendants were recovered, two made from pieces of rib (fig. 37, 1 & 2) while the third is made from the palate of a mammal (3); the species has not been identified but it would be of the order of size of a large antelope or cattle. The palate was split down the central suture and then cut along a line almost parallel, to form the pendant. The choice of such an unlikely bone suggests that the intention was not for decoration but rather for some other purpose such as an amulet.

A single bone bead together with two articular ends of small long-bones (fig. 37, 4 & 5) show that beads were made by cutting a groove in a ring around the bone and then snapping it. Two other beads seem to be made from teeth, one may be *Hippopotamus* ivory (according to Mr. R. Summers who was kind enough to examine it) while a smaller one could have been made from the canine of a small carnivore (fig. 37, 6 & 7).

Bone tools can be divided into those with points and those with rounded working edges. The points can further be subdivided into the more delicate and often well shaped ones usually made from split ribs, and the more robust ones made from broken long-bones. The former are by far the most common, there being 38 examples of which all but two were recovered from the middens, and they include a wide range of lengths (fig. 37, 13-17 & 20). The most robust points include seven from middens and one from Zone E. They tend to show a higher degree of polish around their points but are not shaped along their sides as are many of the others. It is not certain if this difference coincides with a functional differentiation or not.

The tools with rounded working ends are common to most of the Iron Age sites visited but are not well represented at OU 1. Of the 10 examples six are from middens, one each from Zone E and the lelapa of Hut 2 and two from Hut 11. The latter are of interest as the only examples made of unsplit ribs and worn to very well rounded ends (fig. 37, 11). Of the others, four are made from split ribs and four of broken long-bones (12). The wear and polish has been produced by holding the implements at right angles or obliquely to the working surface and rubbing them up and down, thus the term bone scraper seems apt, although it should be noted that the working edge is merely the broken end of the bone and is not given any secondary preparation prior to use. Splinters of bone have in some cases been broken from the working edge during use leaving a ragged edge, with polish only on the protruding parts.

From Dithakong in 1812 Campbell (1815, 250) observed Tlhaping men

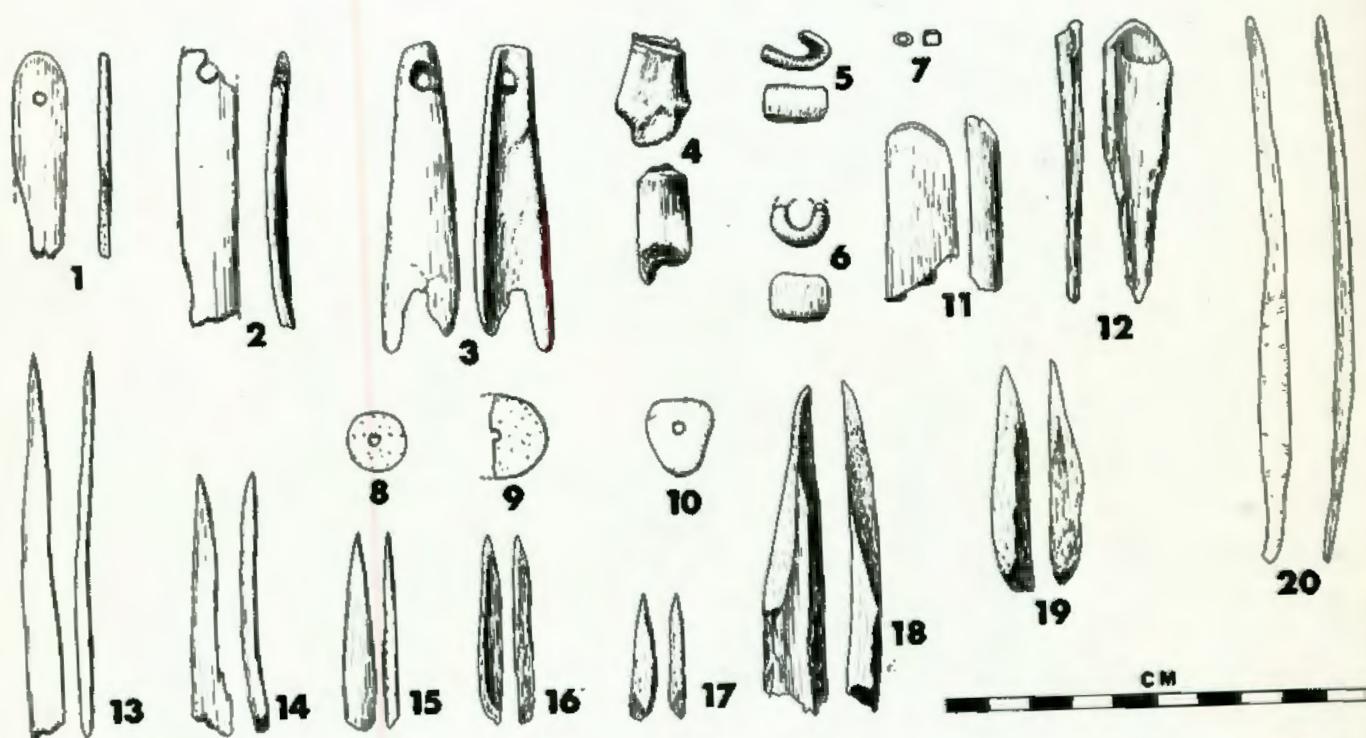


Fig. 37

Figure 37

Bone tools and ornaments and ostrich egg-shell beads.

1. Flat bone pendant made from split piece of rib, lower end broken. Zone E.
2. Bone pendant made from piece of rib, broken at both ends. Midden 2, S.W. quadrant.
3. Bone pendant apparently made from half of the palate of a mammal larger than a sheep, split along the central suture, cut to shape and smoothed on both sides and ends. Complete. Midden 5, N.E. quadrant.
4. Distal end of small (?) tibia cut off by ring-and-snap process. Zone E.
5. Bone bead made by ring-and-snap process from small long-bone. Broken. Midden 5, S.W. quadrant.
6. Bead probably made from Hippopotamus tooth ivory. Broken. Zone E.
7. Small bead probably made from a tooth. Midden 4, N.E. quadrant.
- 8-10. Examples of the largest ostrich egg-shell beads. 8 & 10 - Midden 4, N.W. quadrant. 9 - Midden 5, S.E. quadrant. Latter has ochre on inner side.
11. Piece of rib with end rounded and polished. Hut 11.
12. Splinter of bone with end rounded and polished. Zone E.
- 13-17. Examples of the more delicate bone points showing size range. No. 16 made of long-bone splinter, others of split ribs. 13 & 16 - Midden 5, S.E. quadrant; 14 & 17 - Midden 4, N.W. quadrant, 15 - Midden 2, S.E. quadrant.
- 18-19. More robust bone points made from splinters of long-bones. 18 - Midden 4, S.W. quadrant; 10 - Midden 5, S.E. quadrant.
20. Longer, slender bone point made from split rib, the lower part shows rodent gnawing. Midden 4, N.W. quadrant.

"rubbing the inside of skins with rough bones, which gives them much the appearance of woollen cloth". The position and characteristics of the wear and polish on the bone scrapers makes it probable that they were used for the same purpose.

A total of 174 beads of ostrich egg-shell were recovered and they are listed together with their diameters in Appendix 4. Although some have suffered from decay they all seem to be of ostrich egg-shell, none could be recognised as of *Achatina* or any other molluscan shell. Most are 7-11 mm in diameter although examples as small as 5 mm and as large as 20 mm (fig. 37, 8-10) do occur. A concentration of 89 were found in Zone D in front of Hut 12, some remaining undisturbed to show that they had been strung as a single row on a string.

Despite the number of beads very little unused egg-shell was found, only seven fragments from the three middens, and no unfinished beads. This strongly suggests that at least the majority of beads were not made on the site, for normally a proportion are broken during drilling. In this connection it is worth quoting the story of the youth of Moletsane, the nineteenth century Taung leader. He was born about 1788 according to Ellenberger (1912, 58) and, "In order to evade the evil spirits and so escape the fate of his brothers, he was sent in infancy to an outlying cattle-post to be reared by the Bushmen herds of his father. These, delighted at this mark of their master's confidence, took great care of the boy. They showed him much affection, and made him a girdle (moletsane) of the shells of ostrich eggs. This is how he became to be called Moletsane."

Apart from the insight that this passage gives us into the client relationships of the time it also shows that San were making and supplying ostrich egg-shell beads to the Taung in our area as late as the beginning of the nineteenth century. This would seem to be the source of the 001 beads.

Marine shells

The shells of Unio caffer, the freshwater mussel were merely discarded and not apparently used for any purpose after the flesh had been eaten. However, three marine molluscs were clearly brought to the site as ornaments. They include a cowrie, identified by R. Kilburn as Cypraea helvola and two fragments of Cypraea sp. and Nerita sp. too small to be specifically identified, all from the south-west quadrant of Midden 4. The present distribution of C. helvola is from the Eastern Cape and Natal northwards in the Indian Ocean. All three have been modified by

grinding down their backs to expose the hollow interior in a manner commonly found among ethnological items where similar shells have been attached to garments.

FAUNAL REMAINS

The analysis of all faunal samples in the present project has been limited to the identification of the species and number of individuals present in order to examine this aspect of the economy. The material was sorted by the writer into mammalian jaws and teeth and non-mammalian remains; no attempt was made to identify the bulk of the material which consists of post-cranial fragments from various mammal species. Many of the identifications from OO 1 and the other sites were made or confirmed by Q.B. Hendey, A.W. Gentry, R. Klein, G. Avery, R.A. Jubb, R. Kilburn, C. Poggenpoel and E.A. Voigt and their help is gratefully acknowledged.

The material from each zone and midden was identified separately, and the minimum number of individuals of each species was determined within these divisions. From this it is clear that domestic stock was by far the most important source of meat and, although no estimate has been made of the amount of meat represented, cattle alone would have contributed more than all other sources combined. A considerable proportion of the cattle, about one third, were juveniles and even among the adults most were not of advanced age as indicated by the height of their teeth.

No differentiation has been made between sheep and goat remains but it is likely that both are present as was the case in our area in early historic times (Arbousset, 1848, 90 & 197). Small stock would presumably have been penned separately from cattle, a factor which would help to account for the number of small pens which form part of Type V settlement units.

The final column in the table represents the sum of the minimum number of individuals from each zone and midden. In some cases different dental parts were used in the different samples and insufficient data was recorded to allow for the counting of the same part from each sample. However, from the incomplete data it is possible to establish the minimum occurrence of 38 adult cattle based on the left M3 in wear, 12 juvenile cattle based on the left M2, five adult sheep or goats based on left mandibles including at least M1 and two juvenile sheep or goats based on left mandibles retaining the deciduous dentition. These figures are conservative because of the incomplete data.

FAUNAL REMAINS FROM OO 1

	Zones					Middens			Sum
	A	B	C	D	E	2	4	5	
Cattle - adult	3	2	3	7	7	3	4	14	43
Cattle - juvenile	2	1	2	3	2	4	5	6	25
Sheep/Goat - adult	2	1		2	1	1	2	4	13
Sheep/Goat - juvenile	1						2	1	4
Alcelaphine antelope (total)		1			1	1	2	1	6
cf. <u>Damaliscus dorcas</u>		1							1
cf. <u>Alcelaphus caama</u>					1				1
Springbuck			1			1		1	3
Indeterminate bovid				1			1		2
Equid								1	1
Canid cf. domestic dog				1	1		1		
Viverrid - medium							1		1
Viverrid - small						1		1	2
Shrew			1	1					2
Dassie (<u>Procavia</u>)								1	1
Springhare (<u>Pedetes</u>)		1					2		3
Hare					2				2
Rodents - small	1	1	1			3	11	11	28
Bird (size of Heron)		1							1
Frog						1	1	1	3
Fish				1		1		1	3
Crab						10	9	15	34
Freshwater mussel (<u>Unio</u>)	18	12	15	14	34	102	278	456	929
Ostrich egg								1	1

Among the wild animals Alcelaphine antelope are the most important source of food, which is also a characteristic of other faunal samples from this project (Maggs, in press; see also below, chapter 15). Of the six animals two have been provisionally identified as Alcelaphus caama the Red Hartebeest and Damaliscus dorcas, the Blesbuck while one from Midden 4 is a juvenile.

The three Springbuck are identified from portions of right mandibles containing several teeth as individual teeth are difficult to distinguish from those of sheep. The indeterminate bovids include a very juvenile right mandible from Midden 4 which might be a small antelope or a sheep. With these exceptions no small antelope are present. An equid represented by three molars from Midden 5 is probably a zebra or quagga but specific identification was not possible.

The canid remains, although fragmentary have been referred by Q.B. Hendey to the domestic dog. Historical sources confirm the general presence of dogs in terminal Iron Age communities (Casalis, 1861, 176). The viverrids and shrews most probably represent animals that have burrowed and died in the deposits after the site was abandoned, the same could be said of the springhare and small rodent remains. The extent of burrowing

in the middens has been described above, and both viverrid and rodent species were still living in these burrows. Many of the bones showed gnaw marks of small rodents which must have occurred after the bones were discarded from the settlement.

Some of the smaller animals such as dassies, hares and birds seem to have been items of diet, but little effort was spent on obtaining animals of this size range which suggests that there was no particular shortage of meat from other sources.

The exploitation of the riverine fauna is perhaps surprising in view of the sanctions against fish eating among many Sotho-Tswana peoples (Wilson, 1969). The fish remains were sent to R.A. Jubb who made the following identifications:

1. From Midden 2. Pharyngeal bone and teeth of a Barbus species probably Barbus holubi, about 20-25 cm in length.
2. From Zone E. Vertebra of fish 20-25 cm in length.
3. From Midden 5. Interopercular bone in the skull of a Barbus(?). If this is correct then the size of the fish is the same order as above.

There is no direct evidence on how the fish were taken and clearly they were an insignificant item in the diet.

The only parts of the freshwater crabs that survive are the fingers of the chelae. Sorting into left and right as well as major size differences enables a minimum number of individuals to be calculated. Many are blackened which suggests that the crabs were placed whole on a fire before being eaten.

The freshwater mussel Unio caffer is particularly common here but it occurs at all the sites investigated. Minimum numbers were determined by dividing the number of surviving hinges by two. This bivalve normally lives in the mud or sand of stream beds and is therefore more accessible when water is low - in winter or during droughts. It may perhaps have been a seasonal or famine food as it is not eaten by the Sotho of our area today according to numerous informants.

The condition of bone and shell from the middens was generally good as a result of the ash, but deterioration is fairly rapid in the soil of the site. Bones from the larger mammals were largely reduced to splinters although some articular ends and parts of shafts remained. Heads including jaws were much fragmented, most teeth are loose and some are broken, horn cores are virtually absent, which may indicate the use of horns for various purposes.

Chop marks appear on ribs and a few long-bones but are not very common whereas slight cut marks, perhaps made by knives, are more numerous. Most of the butchering may have been done with lighter iron tools and thereafter the bones may have been split open by breaking them with stones.

The juvenile sheep or goat from Hut 1 and the domestic pig from Hut 11 have been excluded from the table as they are considered to be recent, while the human remains have been described according to the zone or midden in which they were found.

THE OCCUPATION

Dating

Three radiocarbon samples from OO 1 have been processed by Dr. J. Vogel of the C.S.I.R.

Pta 133 70 ± 50 B.P.

This was a charcoal sample collected beside the well-built stone circle immediately behind Hut 1. The material came from above the daga layer which levelled off the hollow, and therefore relates to a late stage of the occupation, contemporary with Hut 1. Dr. Vogel (pers.comm.) has said that it could "either date between AD 1840 and AD 1900 or even be from AD 1700".

Pta - 134 140 ± 50 B.P.

This sample was of carbonised reeds from the channel beneath the lelepa wall of Hut 16 in Zone E. It therefore predates the hut and would belong to the period of reed structures which precedes the Type V settlement unit. Dr. Vogel comments that it "could date from anywhere between AD 1650 - 1850 approximately".

Pta - 401 0 ± 50 B.P.

This is another portion of the same material as used in Pta - 134 and therefore the discrepancy calls for comment. A third portion was sent to the Gulbenkian Radiocarbon Dating Laboratory at the University College of Rhodesia but it was not processed following the advice of Dr. J.G. Sheppard (pers.comm.) who reported that the "sample is exceedingly impure and I doubt if we can obtain a meaningful date. Each bit of charcoal when broken open reveals further contamination by obviously modern rootlets and we have found it impossible to remove this contamination".

Several other samples were submitted but not processed owing to

insufficient or unsuitable material. The extreme shortage of charcoal and the intense penetration of grass rootlets have hindered the use of C14 dating at this site but the three determinations do at least suggest that the occupation did not extend back before the seventeenth century. It is unfortunately still not possible to achieve chronological precision on Late Iron Age sites where the age falls short of the effective upper limits of the C14 method.

Imported objects which can be associated with the occupation include glass beads and metal buttons. The beads are fairly well distributed through the site but the concentration in Hut 5 and its 'lelapa', which belong to the latest phase of the occupation, may indicate that they became more numerous then.

The earlier bead series suggests that the occupation could extend back several centuries, but the majority are clearly indicative of an eighteenth and nineteenth century date. Many beads, such as those from within huts, are definitely associated with the Type V occupation as are most of the metal items. Since the latter are, with few exceptions, of Iron Age pattern it is evident that the European trade items are limited to ornaments and that European technological and economic influences had not yet been felt on any scale.

The historical information on this particular area does not help to establish the date of occupation but it is relevant to fixing the date of abandonment. All enquiries in the area failed to determine which Sotho group inhabited the site, nor was any reference to it found in recorded oral history.

The events of the Difaqane, from about 1822, certainly affected this area as they did the whole Highveld. Indeed when the initial attack by the Hlubi on the Tlokwa took place, the latter were living in an area only about 60 km west of OO 1. The disruption of the following decade must have been felt by the inhabitants of Makgwarieng if the settlement was still occupied, but specific information is lacking.

The earliest written information is that of Arbousset and Daumas (1846) quoted at the head of this chapter. The course of their travels can be traced sufficiently accurately to determine that they spent the night among ruins within a few kilometres of Makgwarieng, if indeed it was not in the eastern part of the settlement. Being missionaries they were travelling largely for the purpose of making contact with the local Sotho population. Since they met no one in the area it is virtually certain that the settlement was ^{abandoned} abandoned by 1836.

Immediately thereafter white settlers, the Voortrekkers, began to

establish themselves on the Highveld. The present town and thence district of Lindley was named after one of their first pastors, the American missionary, Daniel Lindley (Smith, 1949). The remnant Sotho population was rapidly incorporated into the political and economic system of the Trekkers in the occupied areas. A few pockets remained for a short time under Sotho control but one was not apparently within one of them. In contrast to the lack of local information on Makgwareng there are strong traditions among both Sotho and Afrikaans populations concerning the settlements of 'Makhoana and his Taung, west of Lindley, which were occupied until the mid-nineteenth century. The present owner of Elandsfontein, Mr. J.J. Geldenhuys, remembered the story of an old Sotho woman who lived a semi-wild existence on the ridge, around the end of the nineteenth century, but nothing was known of the earlier occupants.

In all probability, therefore, the settlement was abandoned during the Difaqane if not earlier. Furthermore it is inconceivable that the socio-economic pattern of existence, as reconstructed from the archaeological evidence, could have continued into the period of Trekker occupation.

The development of the settlement

Sporadic occupation of Makgwareng by Stone Age groups over a considerable period of time is attested by the finds of stone implements. In particular the outcrop of indurated sandstone east of the excavations (fig. 12) was exploited for its rather indifferent conchoidal fracture, implements and debris from this being scattered along the ridge. Some of these appear to be of Middle Stone Age typology.

We do not know when the first Iron Age peoples moved into the area nor what form their settlements took, but the channels beneath the stone walls are the earliest indications yet available and they may indeed represent the earliest Iron Age occupation of Makwareng. The architecture of this phase consisted of huts and larger enclosures built of reeds set upright in rows in the foundation channels. The huts were around 2 m in diameter and were probably hemispherical and plastered on at least one side. The direct evidence for this construction has been described above from Zone D. In addition, it is improbable that a cylindrical wall of a single row of reeds would be able to support a conical roof of thatch unless it formed the core of a thick mud wall. As there is no evidence for this, the hemispherical shape is more likely than the cylinder-on-cone. The early historical evidence from the Caledon Valley confirms that the dome was general among all Sotho groups in the area in the earlier nineteenth

century, and it was generally plastered on the inside at least for part of its height (Casalie, 1861, 127; Mabille, 1905).

The larger reed structures would have been unroofed and had vertical walls, from which there is no evidence of plaster. The construction would have been similar to that shown in Plate 36 which is the courtyard at the entrance to the homestead of Frans, a Mofokeng who assisted in the fieldwork. Some of the larger reed enclosures may similarly have formed entrance courtyards to huts, others may have served a variety of purposes but it is uncertain if any were used as stock pens. Construction would have been very light, perhaps too fragile to hold larger stock, and furthermore there is no evidence for the removal of weathered bedrock from within them as is the case with the stone primary enclosures. The hollow behind Hut 17 may well have been a stone pen which was used during this phase and, although the evidence is more tentative, the hollows on the northern edge of Zone E and in the centre of Zone B could have had a similar origin.

The settlement pattern can not be determined but it could have resembled Type V, certainly there are many Type V settlement units where the huts do not have stone walls (OU 2, Settlement Unit 2 and OND 3). The small assemblage of sherds that is securely associated with these structures, 581 of which 24 are decorated, are not distinguishable from the other 1001 pottery, indeed despite the small sample there is a high level of numerical agreement in the incidence of decorative motifs (Appendix 2).

The many overlapping channels in Zone D show that there were at least four episodes of building in the area south of Hut 12, similarly in Zone C three episodes are represented. It is not known whether the settlement was abandoned and reoccupied several times or whether individual structures were merely replaced occasionally as their condition deteriorated or requirements changed. Whatever was the case it seems unlikely that this phase lasted less than half a century. The hollows and ash lenses that are demonstrably older than the stone settlement - the ash-filled hollows in Zones A and B and the lenses in Zones C, D and E - may well belong to this phase, and it is significant that while all are adjacent to early structures none are cut by them. The lenses contained very little cultural material and here again (e.g. the hollow beside Primary Enclosure 2 in Zone B) it is not distinguishable from the later occupation.

The floors of the reed huts do not show any preparation, although in Zone D the possibility that stone paving may be associated with two has



Plate 36. Contemporary Sotho homestead at Makgwareng showing construction of reed courtyard in front.



Plate 37. Contemporary Sotho cattle pen with dung cut to dry for fuel on the wall. Moshebi, Lesotho.

already been mentioned. The paved hut floor beside Midden 2, which predates at least the final stages of the midden accumulation, may be contemporary with the reed structures, but this is uncertain.

In several areas, notably Zones A, C and D, the channels were sealed off by daga before the later stone structures were built. With this exception there is no stratigraphic separation of the earlier from the later occupation, thus the time interval between the two could have been quite short. The few burnt reed structures in Zones D and E do not suggest that a whole settlement unit caught fire, but rather that individual structures burnt down, probably at different times.

The details of construction and development become much clearer when the Type V settlement unit is considered. It was a family homeestead typical of many hundreds in the Mekgwareng area and of thousands in the north-central and eastern Orange Free State, although the additions and alterations make it rather more complex than many. In the absence of a refined chronology it is not possible to establish when stone replaced reeds as the main building material at OO 1, but in view of the quantity of stone buildings it could hardly have been later than the beginning of the eighteenth century. The heavily robbed stone walls on either side of the settlement unit indicate that part if not all of the occupation is later than that of the neighbouring units.

Before building started a considerable amount of work was done to prepare the site. The ash lenses probably resulted from the earlier occupation but it is possible that some were laid out in preparation for building. The inhabitants were at pains to fill in hollows and produce an even surface. Advantage was taken of the ash lenses in the area of Huts 17 and 18, even if it was not laid at this time. Being in the lowest part of the site it would have provided a porous layer with a relatively dry surface; the coarse pebbling, which was laid over it before the walls were built, would also seem to have been to assist drainage.

The filling of the hollows in front of and behind Hut 1 was completed by a layer of weathered dolerite daga which levelled the area before building, as was the case in the southern half of Zone D. Thinner layers of daga were put down in other areas such as beneath Hut 2 and in the exterior portion of Zone B.

The finer pebbled floors were also laid prior to building in many areas including beneath Huts 2, 4 and 6, around the entrance to Primary Enclosure 3 and probably in a number of places where subsequent traffic has destroyed it. Sometimes the pebbles were set in a thin layer of daga (e.g. Hut 2) but in other places they may have been scattered on the

natural surface and perhaps covered with a soft daga of ashy soil (e.g. Hut 6). The purpose of the fine pebbling is not clear; it might have contributed to drainage but if so its usefulness would have been limited. In some of the open areas it may have served as metalling to make the ground firmer and less slippery when wet, but again this explanation seems inadequate as it often rests on a hard surface of slightly weathered dolerite rather than soil.

The initial form of the settlement unit was a simple Type V plan with five larger primary enclosures and six corbelled huts built around the central secondary enclosure. Proceeding clockwise these were Hut 2, Primary Enclosure 1, Hut 6, Primary Enclosure 2, the former hut behind Hut 9, Hut 11, Primary Enclosure 3, the former primary enclosure containing Hut 14, Huts 17 and 18 and the former primary enclosure containing Hut 19 (fig. 13). It was not possible to establish what structures belonged to this phase in the area of 'Hut 10' but, as already mentioned, this may have been the main entrance; certainly the later main entrance between Huts 2 and 19 only led into the primary enclosure at this period. The other possible location of the original main entrance is in the secondary wall between this primary enclosure and Hut 18. There is a kink in the wall just east of the drain, and the eastern section is of poorer construction but no definite blocked entrance could be traced.

Several of the detached huts, numbers 1, 3, 4, 7, 8, 12, 13, 15 and 16, could have been built shortly after the central ring of structures or they may have been added piecemeal, perhaps as the family numbers grew and new accommodation was required.

The slight slope towards the north-north-west, from the highest point behind Primary Enclosure 2 to the lowest around Huts 17 and 18, was recognised during initial building and lintelled drains were set into walls to prevent the retention of water. At least three primary enclosures have drains, Primary Enclosure 1 and the former primary enclosures on either side of Huts 17 and 18, while provision was made to drain the secondary enclosure through the large drain in the secondary wall beside Hut 18.

Cattle and small stock would have been driven through the secondary enclosure and into the primary enclosures each evening and out again in the morning - on analogy with early records of Sotho-Tswana groups. The resulting trampling would have denuded the ground within the walls and the thin layer of soil would have been reduced to dust, and in wet weather mud, exposing the semi-weathered dolerite beneath to the same process. If dung was allowed to accumulate for long, it and the soil would have turned

into a quagmire in wet weather.

The main source of fuel must have been dung, for little wood was available. The soft grey ash of the undisturbed lenses is typical of ash from dung fires, it is darker and less laminar than wood ash and contains very little visible carbonised material. There are two possible sources of dung: the deposits within stock pens and the individual pats scattered about the grazing areas. While both sources could have been used, the former would be most concentrated and would have required no transport, it was therefore the most economical source to use.

The archaeological evidence shows that a considerable volume of material has been removed from the floors of the primary enclosures. To see this process in action we may look at contemporary Sotho practice. Over much of Lesotho, where grazing areas are not fenced, stock are still penned at night. The dung accumulation has a consistency similar to peat and, like it, is cut into blocks and stacked to dry. Plate 37 shows a stock pen in the Sehlabathebe basin of eastern Lesotho where blocks have recently been cut and stacked on top of the walls. It is evident that soil and small stones would become incorporated into the fuel through trampling and also in digging out the blocks. In Iron Age times the hoe would have been used and this would have contributed to the loosening of material from the floor of the pen. This process, carried on over a period of time, would be sufficient to account for the lowering of the floors of primary enclosures, as seen at 00 1 and many other sites, often to the extent that bedrock is exposed.

Today in the Orange Free State where farms are fenced into camps, stock tend not to be penned regularly. The Sotho population is still largely dependent on dung for fuel and they collect it in the veld. Sometimes it is formed into flat, oval cakes which, when dry, are built into neat domes reminiscent of the shape of corbelled huts, such as the example in Plate 38 which is from the neighbouring farm, Bronkhorstfontein. These are common over much of the northern Orange Free State and are a traditional form which may well go back into Iron Age times, although no early evidence of them has been found.

Within the ash middens some of the soil and small stones are probably the result of inclusions in the fuel. Small blackened lumps of earth are quite common within the ash and may be mistaken for charcoal unless examined closely.

The middens numbered 1 to 8 on the plan (fig. 13) must very largely be debris from the Type V settlement unit as they are carefully spaced around and a



Plate 38. Dried dung cakes stacked in shapes resembling corbelled huts. Contemporary Sotho homestead, Makgwarieng.

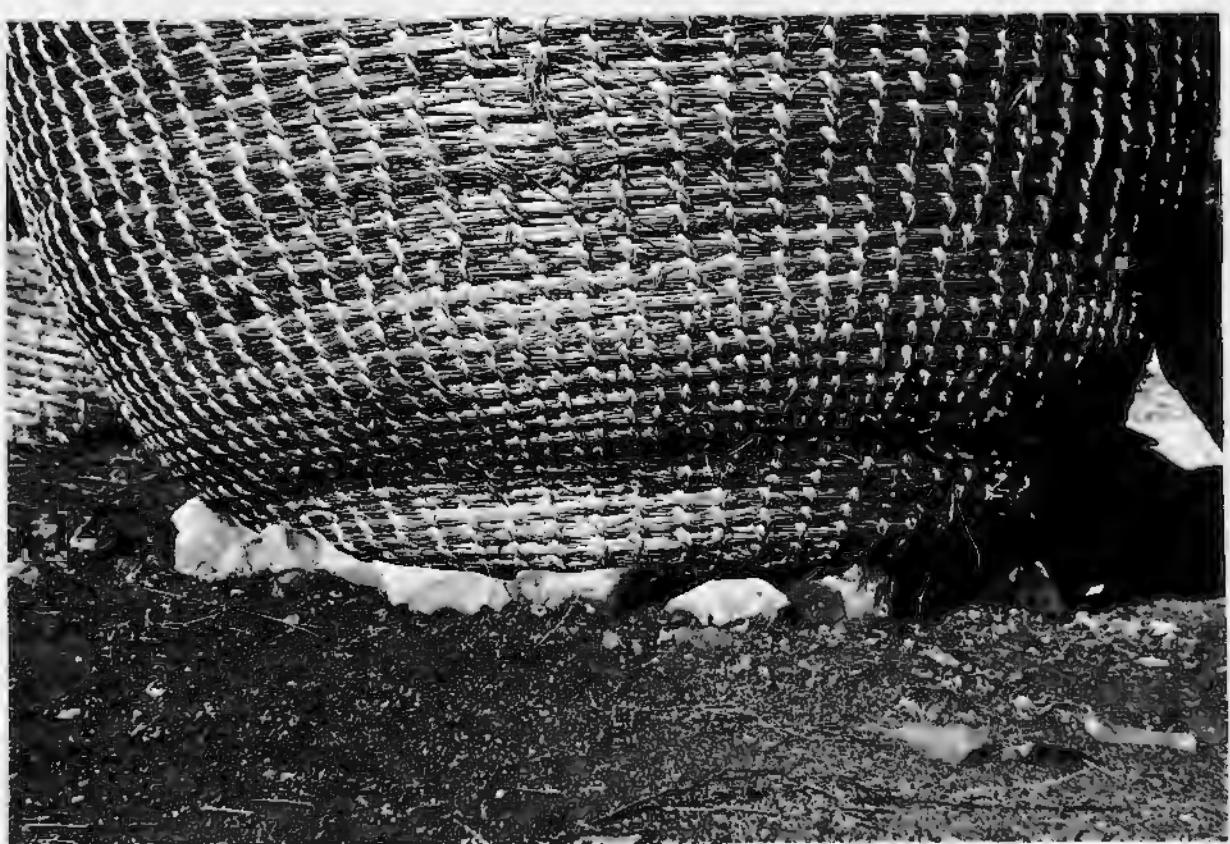


Plate 39. Contemporary sasiu on low, circular stone base. Diameter of basket about 1 m. Khomo oa Mollo, Lesotho. Courtesy of Patricia Carter.

little way apart from the huts and other structures. The thin basal lenses of relatively pure ash in Middens 2 and 4 may be earlier than the main occupation, but they were almost devoid of cultural material.

The huts show considerable variation in size, shape and construction. Walton (1956a & 1965a) has proposed a fourfold division of corbelled huts based on these features, and he regards the differences as indicative of chronological change. However, this was not the case at OO 1 where the 19 huts virtually cover the whole sequence. The smaller, simpler huts - Walton's Type A - are represented by Huts 1, 4, 5, 6, 7 and 12, the larger huts built of flatter slabs - Type B - include Huts 2, 13 and 18 while the large oval Hut 11 could be included within Type C although it is not as large as some examples. The lenticular huts built against the curving walls of primary enclosures are represented by Huts 14 and 19. On this site therefore the various types are broadly contemporary and examples of the first three types were built at the same time, being included in the initial phase of the Type V settlement unit.

Apart from careful preparation of the ground prior to building, in most cases little was done to the floors of huts, although several entrances had stone sills. Most floors showed only a few centimetres of dark brown or light ashy deposit representing the occupation. In some cases, particularly above pebbling, it is probable that such material was laid down as a floor, but being relatively soft it is no longer recognisable as such. In other cases ash may be the result of fires within huts for several, including at least Huts 2, 4 and 9, had central hearths. Hut 17 had a soft, light brown daga floor over the pebbling, and above this in turn was an accumulation of ash indicating a central hearth with ash spreading out towards the rear.

Two huts show a more complex floor preparation. In Hut 11 the floor had been dug down to bedrock apparently after the walls were built, and then ash had accumulated to a depth of about 20 centimetres. The most elaborate floor was in Hut 12 where, above the initial daga, the stone and pottery paving was laid and then covered by a second, more fibrous daga which formed the floor. This was the only paved corbelled hut, although examples have been noted on other sites.

Among the smaller stone-built features are the stone circles, less than a metre across and composed of small slabs set upright in the ground, sometimes with intervening horizontal slabs. Rare examples have a little ash and burnt material on them, and some of the smaller, irregular ones may have been fireplaces, such as that beside the wall behind Hut 1. But the well-built circles were clearly required for some other function.

There seems to be no reason for setting hearth stones on edge, while many circles are too large and show no signs of use as hearths. Furthermore, the projecting edges of the slabs have been deliberately rounded to remove sharp edges. The stones are carefully set in a layer of *daga* so that they project 2-3 cm. By analogy with the historic Sotho (Casalis, 1861; Mabille, 1906) cooking would normally have been done in front of the hut, preferably in the *lelapa*, and there is some evidence that this was the case here too (e.g. Huts 2 and 12). The internal fires would have been mainly for heating and perhaps for cooking in bad weather. The only example of a well-built circle within a *lelapa* is the one in front of Hut 16. All the others are on the outer edge of the settlement unit, near huts but unenclosed and arranged in groups of from two to six. Where there is stratigraphic evidence to demonstrate associations, such as behind Hut 1 and in front of Hut 12, the circles were set into the latest layer of *daga* indicating a broad contemporaneity with the stone huts. Although some are as little as 60 cm in diameter, there is always sufficient space between them to allow each a diameter of at least one metre.

Now, the traditional method of grain storage in our area was the sesiu, a large and approximately spherical basket, a metre or more in diameter. The method of manufacture, using loose coils of grass woven together with plaited grass ropes, was described by Backhouse (1844) and Casalis (1961), and as early as 1836 Arbousset (1846) contrasts the Sotho use of the *sesiu* with the Nguni use of pits for grain storage. The usual position of the *sesiu* in the historic settlements was "around the huts of the natives, outside the fences" (Backhouse, op.cit., 369). This corresponds precisely with the position of the stone circles.

The *sesiu* is still used in the mountain areas of Lesotho; sometimes it is placed within a hut but a group that was examined at the village of Khomo oa Mollo, near the junction of the Sehonghong and Orange rivers, were in the open and are of particular interest. A group of three were placed in a row on an artificial terrace. Each stood on a stone circle about 70 cm in diameter, the stones of which protruded a few centimetres above ground level (Plate 38). The local rock, Cave Sandstone, was used, and this produces irregularly shaped stones when compared to the dolerite at OO 1. The circles are clearly designed to keep the base of the *sesiu* dry to prevent its decay and resulting damage to the contents; they may also have served to prevent rodents burrowing in from underneath. It was not possible to remove a *sesiu* to examine the stones of the circle but it is worth mentioning that a similar circle at the OND 2 site, also made of

sandstone, had its projecting edges smoothed off (Plate 50).

Seen against this evidence, the 00 1 stone circles were clearly *sesiu* stands. The small slabs set on edge would have ensured the drainage of any water that might have settled at the base of the basket after rain, and the rounded edges would have been necessary to prevent the basket-work being cut by the weight of the stored grain whose volume amounted to between nine and 36 bushels (about 0,2-0,8 cubic metres) (Backhouse, 1844).

Groups of *sesiu* stands were found in five places: near Huts 1 and 3 (4), near Huts 8 and 9 (4), in front of Hut 12 (6), in front of Hut 13 (3) and near Hut 16 (5). Huts opening into the central enclosure and some external ones do not have any nearby, therefore it seems that the occupants of several huts would place their stores close together. Some concentrations of grindstones occur near groups of stands, for example in front of Huts 3 and 12, but this was not always the case and the numbers of grindstones from within huts suggest that grinding was often done indoors.

The distribution of some of the finds within the settlement unit suggest that the inhabitants may have left suddenly and even violently. The evidence from Zone A - the small hoard of undoubtedly valuable iron goods behind Hut 1, the numerous spear heads around the hut and the human mandible in the main entrance - is strongest in this respect. If there was an attack, the inhabitants would be likely to make a stand near the entrance to protect the internal portion of the unit including the stock pens. The concentration of weapons could therefore be interpreted as the scene of a fight. If the attackers were an Nguni group - the Ndebele, Hlubi and Ngwane were all active in this region during the Difaqane - and if they were victorious they would be unlikely to retrieve the fallen weapons of the lighter Sotho pattern.

The hoard of iron bangles in Hut 16, the iron items in several other huts and the string of ostrich egg-shell beads in front of Hut 12 would hardly be left behind if the site was abandoned voluntarily. Reconstructions of events based on this type of circumstantial evidence are clearly subjective. However, since many villages in this region were attacked and destroyed during the Difaqane (e.g. Arbousset, 1846, 128), Makgwareng may well have suffered a similar fate.

The process of additions and alterations to the stone structures of the settlement unit probably went on gradually over a period of decades, perhaps generations. It is not clear whether the occupation was continuous

or repeated after short abandonments, but the former seems more likely. The local environment seems rich enough to have sustained a fairly dense and stable Iron Age population, larger than the rural population of today. Local movements may have been necessitated by excessive exploitation in areas such as this where settlement was particularly concentrated. But no signs of an earlier cycle of erosion were noticed whereas current overgrazing and erosion are very evident. An obvious counter to overgrazing would have been to send herds to cattle posts distant from the main settlements. This has been a common practice of Sotho-Tswana animal husbandry, particularly among richer families who would send a large portion of their livestock to cattle posts, under the charge of African or San clients, keeping only a few animals for milk and immediate consumption. Such an economic pattern would be extremely difficult to reconstruct on archaeological evidence, but a close examination of the wide belts of country between the main river valleys, which appear to have been unoccupied (fig. 8), might reveal small temporary settlements. Certainly, if there was pressure on the settled areas the intervening belts would have been put to some more intensive use than hunting. In the absence of marked vegetational changes within the region, seasonal movements would probably have been of little significance.

Within the settlement unit itself, the main changes were the destruction of primary enclosures and the building of additional huts. Four of the six original primary enclosures were altered so that they could no longer have been used as livestock pens and three of them had huts built within them. The lenticular Huts 14 and 19 were built against primary walls while the rear wall of the former primary enclosure in Zone A was removed allowing its entrance to become the main entrance to the settlement unit. In Zone B Hut 5 was superimposed on the former enclosure which had its entrance blocked partly to provide a lelapa for the hut but also to avoid having two entrances into the central enclosure, a feature avoided on all the Type V sites examined. Of the four, Primary Enclosure 3 was the only one that did not have a hut built within it, instead its northern wall was extensively robbed allowing access from outside, while the original entrance was blocked. Several upper and lower grindstones on the surface suggest that in the final stage of the occupation it was used by the women as a working area. The small secondary enclosure built in front of its blocked entrance may have been used as a hut but no sign of a roof was noticed and it certainly did not have a corbelled stone roof like the other huts.

The earlier hut behind Hut 9 had all but its foundation stones removed, and the wall of Hut 9 was built slightly overlapping the remains. The hut-like feature behind Primary Enclosure 3 in Zone D similarly had its walls robbed. Various changes were made in the vicinity of 'Hut 10' until in the final stage the small semi-enclosed area was used as a domestic working area. 'Hut 10' itself seems to have been walled off and it was probably not a hut at all but simply an unused area which was cut off as a result of the alterations. The latest structure of all was probably the rectangular feature in Zone D which was superimposed on two of the sesiu stands rendering them useless.

Thus in its final form the Type V settlement unit consisted of only two livestock pens (Primary Enclosures 1 and 2) and eight huts forming parts of the central ring of structures (Huts 2, 5, 6, 11, 14, 17, 18 and 19), although of these the later additions (5, 14 and 19) opened into the former primary enclosures and not directly into the central enclosure. Hut 9 would have been occupied at this time and most if not all of the other detached huts (1, 3, 4, 7, 8, 12, 13, 15 and 16) for they would have been in good condition and none had been robbed.

From this evidence it is possible to make a provisional estimate of the settlement unit's population at the initial and final phases of the occupation. Most huts seem to have represented households, many with their own lelepa or equivalent area and grain stores. In our area in the early nineteenth century Arbousset (1846, 88) used as a population estimate an average of three people per hut. This would seem to be the most suitable figure on anthropological evidence as well (Wilson, pers. comm.), for the household would comprise the mother and dependent children plus the father in a monogamous family. The corbelled huts are smaller than modern Sotho houses but most could accommodate two or three sleepers without difficulty.

Considering only the numbered huts but excluding the doubtful 'Hut 10' we arrive at the following figures for the two phases of the unit.

	Primary Enclosures	Internal	Huts :-		
			Other	Total	Population
Early Phase	5-6	6	0-9	6-15	18-45
Late Phase	2	8	8-10	16-18	48-54

The figures indicate an increase in the settlement unit's population and a marked decrease in space available for the penning of livestock. Whether the actual amount of livestock decreased or whether a change took

place in the pattern of husbandry is not clear. However, in view of the incidence of stock raiding during the Difeqane period, the former seems more likely.

The burials provide some information on population as well as showing parallels with nineteenth and twentieth century Sotho practice, in particular the burial of adults in cattle pens as with Burial 1 and of infants within pots in the household ash heap (Ashton, 1952, 104). The fact that the remains of at least four infants were recovered although only three of the eight middens were excavated, indicates a high infant mortality rate. The youthful mandible from Zone D together with the ages of the three excavated burials - although Burials 1-3 would not have been individuals from this settlement unit - show that there was a considerable mortality rate around the ages of 10-20 years as well. Both Burials 1 and 2 were women of about 20 years which suggests that they might have died in childbirth, although there is no specific evidence in this respect.

Burial within a cattle pen is, or was, very characteristic of the Sotho who often removed part of the wall in order to dig the grave beneath it. According to Casalie (1861, 203) the chiefs and rich men were buried in the centre and their wives and children under the walls. Burial was normally in an upright flexed position, the body being held thus by cords and if it had already become too stiff the sinews might be cut to enable it to be flexed (Casalie, op.cit.; Mabille, 1905, 177). The tightly flexed positions of Burials 2 and 3 could have been the result of binding with cords. The stones on top of the grave also have a historical parallel, for the Sotho placed stones on graves to prevent hyenas from digging them up (Casalie, 1889, 145).

A provisional estimate of population may also be made for the Mekgwarieng settlement as a whole. In the analysis of the 25 settlement units near the excavations, there is a mean of six huts per unit. Again using the figure of three people per hut we arrive at a mean of 18 per unit and a total of 450. On the map (fig. 9) there are 160 units marked along the ridge and some 370 in the area as a whole.

The counting of settlements from air photographs alone presents problems but the results would underrate rather than overrate the true number. The greatest problem is to establish the contemporaneity of all the units within a settlement and of all the settlements within an area. At present this cannot be done with certainty, but in the case of a single compact settlement the pattern and the preservation of the walls are good indications. An earlier and disused unit may become partly built over

and it will certainly be heavily robbed to provide stone for the later units in the neighbourhood. Thus neighbouring units with walls in similar condition are almost certainly contemporary. On the air photographs heavily robbed structures show up poorly or not at all, while the complete ones are usually clear.

Despite these limitations an estimate of 3 000 inhabitants for the 8,5 km of settlement along Makwareng may not be unreasonable, and likewise a figure of 6 500 for the 370 settlement units in the 325 square kilometres covered by the map (fig. 9). These figures may seem excessive and indeed they may not represent the population at any given moment of time, but perhaps several generations of builders. However, we may bear in mind that the site and its area were chosen for research partly because they fall within one of the dense aggregations of Iron Age settlement. No matter how we consider this estimate it clearly indicates that there was a dense population here in terminal Iron Age times.

APPENDIX 1 OF CHAPTER 4

COMPOSITION OF 25 SETTLEMENT UNITS OF TYPE V AT OO 1

Huts around Central Secondary Enclosures					External Huts					
Unit	Orientation of Huts	Total	No (L) ¹	No (Ext) ²	Unit	Orientation of Huts	Total	No (L)	Int ³ Hut	TOTAL HUTS
A	SW C	2	-	-	A	N C N(L) C E(L) N(L)				
B	NW C	2	-	-	B	C	1	-		3
C	S C C	3	-	-	C	C C C(L)	3	1		6
D	E W	2	-	-	D	NE(L) W(L)	3	2		6
E	NW C S SE E N	6	-	-	E	W(L) C S(L) NW(L) C(L) NE(L) NW(L) NW(L)	8	7		14
F	S	1	-	-	F	C	1	-		2
G	SW SW	2	-	-	G	N C S(L) C	5	1		7
H	NE(Ext) NW NW W W W	6	-	1	H	C W E(L) C(L) S SE(L) C	7	4	SW(L)	14
I	(Main site) SW(L) NE NE NW SE S SW(Ext)	7	1	1	I	(Main site) W(L) W W(L) S SW(L) SW(L) C S(L) W(L) NW(L) C	12	7		19
J	N	1	-	-	J	C	1	-		2
K	S S	2	-	-	K	W(L) C C C E(L) S(L) S(L) C	8	4		10
L	SE C NW N	4	-	-	L	NE C NE(L) N(L)	4	2		8
M	NE	1	-	-	M	C	1	-		2
N	N C	2	-	-	N	-	-	-		2
O	SE SE N	3	-	-	O	C SE	2	-		5
P	SE	1	-	-	P	S E NW(L) SW C NE	6	1		7
Q	SE S W(Ext)	3	-	1	Q	C	1	-		4
R	NE	1	-	-	R	-	-	-		1
S	NE	1	-	-	S	C C	2	-		3
T	N N	2	-	-	T	SE C	2	-		4
U	SW C C	3	-	-	U	NW(L) N C	3	1		6
V	NW C W	3	-	-	V	S(L) NW S	3	1		6
W	S(Ext) C SE(L)	3	1	1	W	SE(L)	1	1		4
X	E	1	-	-	X	S	1	-		2
Y	C(Ext) N NE	3	-	1	Y	-	-	-		3

¹ = Hut with Lelapa² = Hut opens to the exterior; all others open into the Central Secondary Enclosure³ = Hut inside the Secondary Enclosure

C = Hut collapsed therefore orientation uncertain

APPENDIX 1 OF CHAPTER 4 contd

Unit	Primary Enclosures around Secondary Enclosure	No	External	Central
			Primary Enclosure	Secondary Enclosure
	Two internal diameters			
A	6,65x8,00 3,50x4,25 4,10x4,20	3	-	11,9x11,9
B	5,65x80	1	-	7,40x5,90
C	5,90x6,70 3,90x4,00 5,40x5,60	3	3,25x2,50	15,4x11,6
D	3,65x3,45 4,75x6,20 3,60x3,00 4,60x5,00	4	-	12,0x9,00
E	5,70x9,10 2,55x3,65 3,80x5,30 3,30x4,55 3,70x5,00	5	2,50x?	22,1x15,0
F	2,30x5,90 2,55x4,10 3,50x5,80	3	-	9,30x9,00
G	4,90x10,5 2,40x2,30 4,10x5,80 5,90x4,00 4,20x6,30	5	?	12,0x20,8
H	8,10x11,4 13,8x19,7 4,20x4,70	3	-	31,4x24,8
I (Main site)	5,10x6,10 6,50x6,50 7,00x6,70	3	-	19,9x15,4
J	3,50x4,40	1	-	9,25x7x30
K	6,20x6,80 3,70x4,10 5,60x4,55 3,60x5,10	4	-	12,3x8,70
L	5,85x6,70 6,00x5,10 2,10x3,20	3	-	10,7x18,4
M	4,20x4,90 2,90x5,40 2,70x2,70	3	-	12,85x6,55
N	4,80x6,60 2,25x2,70	2	-	7,10x7,70
O	2,05x3,50	1	-	6,85x17,7
P	4,80x6,65 2,10x2,95 2,35x2,35 5,50x5,60 4,05x8,80	5	-	12,45x8,05
Q	4,65x5,50	1	-	10,5x5,50
R	5,80x6,40 4,00x5,80	2	-	8,50x6,50
S	3,60x3,00 5,80x7,10	2	-	10,3x12,7
T	3,70x4,60 5,40x5,30 2,10x2,60	3	-	11,0x8,00
U	7,80x9,40 4,70x4,20 4,00x5,60	3	-	20,6x13,70
V	5,60x9,70 4,40x3x70 6,90x7,60	3	-	25,5x9,00
W	5,80x7,50	1	-	8,40x5,00
X	4,80x4,60 3,20x4,60 2,70x5,70	3	-	11,8x9,70
Y	7,70x9,80 7,30x5,00 3,70x4,50	3	-	11,7x11,5

APPENDIX 2

Decorated sherds from 00 1

Number of sherds
Body sherds
Rim rounded
Rim flattened
Rim pointed
Rim misc.
Plain surface
Burnished surface
Ochre burnish
Black burnish
Comb-stamping, pendant triangles
" horizontal band
" alternating diagonal panels
" sherd too small
Rim notches vertical
Rim notches diagonal
Misc. impressions on rim
Finger-nail impressions on rim
Finger-tip " " "
Finger pinching " " "
Applied band with pinching
Applied band, other
Finger impressions on body in zone
" " parallel corrugations
Cusps
Stylus impressions in parallel rows
Misc. body impressions
Parallel grooves, sherd too small
" " horizontal band
" " pendant triangles
" " chevron or arcade
Ochre lines
Dragged wavy lines
Cross hatching

ZONE A

General Exterior

ZONE A

General Exterior Secondary enclosure and entrance

Hut 1

Number of sherds	7	9	11	11	5	8	7	5	17	128	3	1	4	2	1	2	1	1	2	2	1	1	1	1	2	3	5	1	2	2	1	1	1		
Motif numbers																																			
Body sherds																																			
Rim rounded																																			
Rim flattened																																			
Rim pointed																																			
Rim misc.																																			
Plain surface																																			
Burnished surface																																			
Ochre burnish																																			
Black burnish																																			
Comb-stamping, pendant triangles	1																																		
" horizontal band	2																																		
" alternating diagonal panels	3																																		
" sherd too small	4																																		
Rim notches vertical	5																																		
Rim notches diagonal	5																																		
Misc. impressions on rim	6																																		
Finger-nail impressions on rim	7																																		
Finger-tip " "	7	●	●																																
Finger pinching "	7	●	●																																
Applied band with pinching	8																																		
Applied band, other	8																																		
Finger impressions on body in zone	9																																		
" parallel corrugations	9																																		
Cusps	10																																		
Stylus impressions in parallel rows	11																																		
Misc. body impressions	12																																		
Parallel grooves, sherd too small	13																																		
" " horizontal band	14																																		
" " pendant triangles	15																																		
" " chevron or arcade	16																																		
Ochre lines	17																																		
Dragged wavy lines	18																																		
Cross hatching	19																																		

ZONE B
General Exterior

ZONE E

General Exterior. Sec. Hollow beside Primary
Encl. Primary Encl.2. Encl.2

Hut 4

ZONE C

Number of sherds	General Exterior	Outside Hut 9	Hut 9	Lelapa of Hut 9
Body sherds	4 8 2 1 1 6 2 1 2 1 3 6	2 1 2 2 1 4 2 1 1 0 1 1	3 2 1	1 1 2 1 1 2 3 4
Rim rounded	●	●	●	●
Rim flattened	●	●	●	●
Rim pointed		●	●	●
Rim misc.	● ●	●	●	●
Plain surface	● ● ● ● ● ●	● ● ● ● ● ●	● ● ● ●	● ● ● ●
Burnished surface		● ● ● ● ● ●	● ● ● ● ● ●	● ● ● ● ● ●
Ochre burnish		● ● ● ●		●
Black burnish		●		
Comb-stamping, pendant triangles	1	● ●		
" horizontal band	2	● ●		
" alternating diagonal panels	3			●
" sherd too small	4	●		●
Rim notches vertical	5			
Rim notches diagonal	6		● ●	●
Misc. impressions on rim	7			
Finger-nail impressions on rim	7	●		
Finger-tip " " "	7	●		
Finger pinching " " "	7	●	● ●	● ●
Applied band with pinching	8	●		
Applied band, other	8			
Finger impressions on body in zone	9	● ●		
" parallel corrugations	9	● ●		
Cusps	10	● ●	● ●	● ●
Stylus impressions in parallel rows	11			
Misc. body impressions	12			
Parallel grooves, sherd too small	13			
" " horizontal band	14			
" " pendant triangles	15			
" " chevron or arcade	16			
Ochre lines	17			
Dragged wavy lines	18			
Cross hatching	19			

Number of sherds	ZONE C																											
	Hut 10			Hut 11			Secondary Encl. in front of Hut 11			Former Hut																		
Motif numbers	2	1	5	2	2	4	3	3	1	1	1	1	2	1	1	1	3	5	3	2	1	4	1	2	1	2	1	
Body sherds	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
Rim rounded		●		●				●		●							●	●	●	●	●	●	●	●	●	●	●	
Rim flattened					●																							
Rim pointed																												
Rim misc.																												
Plain surface	●	●					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Burnished surface							●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Ochre burnish																												
Black burnish																												
Comb-stamping, pendant triangles																												
" horizontal band																												
" alternating diagonal panels																												
" sherd too small																												
Rim notches vertical																		●										
Rim notches diagonal																			●									
Misc. impressions on rim																				●								
Finger-nail impressions on rim																					●							
Finger-tip " " "																					●							
Finger pinching " " "																					●							
Applied band with pinching																					●							
Applied band, other																					●							
Finger impressions on body in zone																					●							
" parallel corrugations																					●							
Cusps																						●						
Stylus impressions in parallel rows																							●					
Misc. body impressions																								●				
Parallel grooves, sherd too small																								●				
" " horizontal band																									●			
" " pendant triangles																										●		
" " chevron or arcade																											●	
Ochre lines																												
Dragged wavy lines																												
Cross hatching																												

ZONE D
General

Number of sherds	1	2	1	1	1	3	3	7	1	1	3	1	3	16	4	2	7	1	2	5	2	16	1	1	12	6	3	1	4	5	7	10	2	1	1	12	5
Body sherds																																					
Rim rounded																																					
Rim flattened																																					
Rim pointed																																					
Rim misc.																																					
Plain surface																																					
Burnished surface																																					
Ochre burnish																																					
Black burnish																																					
Comb-stamping, pendant triangles	1																																				
" horizontal band	2																																				
" alternating diagonal panels	3																																				
" sherd too small	4																																				
Rim notches vertical	5																																				
Rim notches diagonal	5																																				
Misc. impressions on rim	6																																				
Finger-nail impressions on rim	7																																				
Finger-tip " " "	7																																				
Finger pinching " " "	7																																				
Applied band with pinching	8																																				
Applied band, other	8																																				
Finger impressions on body in zone	9																																				
" parallel corrugations	9																																				
Cusps	10																																				
Stylus impressions in parallel rows	11																																				
Misc. body impressions	12																																				
Parallel grooves, sherd too small	13																																				
" " horizontal band	14																																				
" " pendant triangles	15																																				
" " chevron or arcade	16																																				
Ochre lines	17																																				
Dragged wavy lines	18																																				
Cross hatching	19																																				

ZONE II

General

Exterior
of Hut 12

Hut 13

Number of sherds	ZONE D												ZONE E														
	Hut			Behind Former			Lelapa of Hut 13			Rect. feature			General Exterior.														
	12	Hut 12	Hut	1	1	1	1	1	2	1	1	1	3	2	1	2	1	10	1	7	6	1	1	2	2	6	
Body sherds				●		●			●		●							●		●				●	●	●	
Rim rounded				●		●			●		●								●		●			●	●	●	
Rim flattened						●				●		●								●		●			●	●	
Rim pointed																											
Rim misc.				●																							
Plain surface				●		●			●		●		●	●	●	●	●		●								
Burnished surface				●		●			●		●		●	●	●	●	●										
Ochre burnish				●		●			●		●																
Black burnish																											
Comb-stamping, pendant triangles	1																										
" horizontal band	2																										
" alternating diagonal panels	3																										
" sherd too small	4																										
Rim notches vertical	5																										
Rim notches diagonal	6																										
Misc. impressions on rim	7																										
Finger-nail impressions on rim	8																										
Finger-tip " " "	9																										
Finger pinching " " "	10																										
Applied band with pinching	11																										
Applied band, other	12																										
Finger impressions on body in zone	13																										
" parallel corrugations	14																										
Cusps	15																										
Stylus impressions in parallel rows	16																										
Misc. body impressions	17																										
Parallel grooves, sherd too small	18																										
" " horizontal band	19																										
" " pendant triangles																											
" " chevron or arcade																											
Ochre lines																											
Dragged wavy lines																											
Cross hatching																											

ZONE E

General Exterior.

	ZONE E																							
	Lelapa of Hut 16			Primary Hut 18			Enclosure 3			Former Primary Enclosure by Hut 14														
Number of sherds	4	5	2	2	1	1	1	1	1	1	2	3	5	1	2	5	1	3	1	1	3	1	6	
Body sherds					●	●										●	●							
Rim rounded	●	●				●		●											●		●	●	●	
Rim flattened									●															
Rim pointed										●														
Rim misc.																								
Plain surface	●	●	●	●	●	●		●		●	●	●	●	●	●	●	●							
Burnished surface																		●	●	●	●	●	●	
Ochre burnish																		●						
Black burnish																								
Comb-stamping, pendant triangles	1									●	●													
" horizontal band	2																							
" alternating diagonal panels	3																							
" sherd too small	4									●	●													
Rim notches vertical	5	●																						
Rim notches diagonal	5																		●					
Misc. impressions on rim	6	●								●		●	●							●				
Finger-nail impressions on rim	7																			●				
Finger-tip " " "	7		●								●													
Finger pinching " " "	7																							
Applied band with pinching	8																							
Applied band, other	8																							
Finger impressions on body in zone	9					●	●																	
" parallel corrugations	9																							
Cusps	10																							
Stylus impressions in parallel rows	11																							
Misc. body impressions	12		●																					
Parallel grooves, sherd too small	13																							
" " horizontal band	14																							
" " pendant triangles	15																							
" " chevron or arcade	16																							
Ochre lines	17																							
Dragged wavy lines	18																							
Cross hatching	19																							

Number of sherds	Matrix numbers	ZONE E Small Secondary Encl. by Primary Encl. 3.				TRENCHES IN BEDROCK						ZONE C	
		ZONE A Beneath Hut 3			ZONE B General								
		1	1	3	1	1	1	1	1	1	2	4	
Body sherds							●	●	●				1
Rim rounded							●			●			
Rim flattened				●						●	●		●
Rim pointed										●	●		
Rim misc.										●	●		
Plain surface			●	●	●								
Burnished surface			●	●	●			●		●	●	●	
Ochre burnish										●			
Black burnish							●	●					
Comb-stamping, pendant triangles	1												
" horizontal band	2												
" alternating diagonal panels	3												
" sherd too small	4							●	●				
Rim notches vertical	5		●										
Rim notches diagonal	5		●										
Misc. impressions on rim	6			●									
Finger-nail impressions on rim	7												
Finger-tip " " "	7												
Finger pinching " " "	7			●									
Applied band with pinching	8												
Applied band, other	8												
Finger impressions on body in zone	9							●					
" " parallel corrugations	9												
Cusps	10												
Stylus impressions in parallel rows	11												
Misc. body impressions	12												
Parallel grooves, sherd too small	13												
" " horizontal band	14												
" " pendant triangles	15												
" " chevron or arcade	16												
Ochre lines	17												
Dragged wavy lines	18												
Cross hatching	19												

TRENCHES IN BEDROCK

ZONE D

General Circular Trench
in S.W. corner

ZONE E

Number of sherds	TRENCHES IN BEDROCK		
	ZONE D		ZONE E
	General	Circular Trench in S.W. corner	
Body sherds	1	1	1
Rim rounded	1	1	1
Rim flattened	1	1	1
Rim pointed	1	1	1
Rim misc.	1	1	1
Plain surface	1	1	1
Burnished surface	1	1	1
Ochre burnish	1	1	1
Black burnish	1	1	1
Comb-stamping, pendant triangles	1	1	1
" horizontal band	1	1	1
" alternating diagonal panels	1	1	1
" sherd too small	1	1	1
Rim notches vertical	1	1	1
Rim notches diagonal	1	1	1
Misc. impressions on rim	1	1	1
Finger-nail impressions on rim	1	1	1
Finger-tip " " "	1	1	1
Finger pinching " " "	1	1	1
Applied band with pinching	1	1	1
Applied band, other	1	1	1
Finger impressions on body in zone	1	1	1
" parallel corrugations	1	1	1
Cusps	1	1	1
Stylus impressions in parallel rows	1	1	1
Misc. body impressions	1	1	1
Parallel grooves, sherd too small	1	1	1
" " horizontal band	1	1	1
" " pendant triangles	1	1	1
" " chevron or arcade	1	1	1
Ochre lines	1	1	1
Dragged wavy lines	1	1	1
Cross hatching	1	1	1

00.1
MIDDEN 2.

N.E. Quadrant.

Number of sherds	2	4	13	2	6	3	3	3	2	12	14	6	2	6	1	2	3	2	12	5	4	3	5	5	2	4	25	3	11	1	1	5	1	
Motif numbers	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Body sherds																																		
Rim rounded																																		
Rim flattened																																		
Rim pointed																																		
Rim misc.																																		
Plain surface																																		
Burnished surface																																		
Ochre burnish																																		
Black burnish																																		
Comb-stamping, pendant triangles	1	●																																
" horizontal band	2		●	●																														
" alternating diagonal panels	3			●																														
" sherd too small	4				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Rim notches vertical	5																																	
Rim notches diagonal	5																																	
Misc. impressions on rim	6																																	
Finger-nail impressions on rim	7																																	
Finger-tip " "	7																																	
Finger pinching " "	7																																	
Applied band with pinching	8																																	
Applied band, other	8																																	
Finger impressions on body in zone	9																																	
" parallel corrugations	9																																	
Cusps	10																																	
Stylus impressions in parallel rows	11																																	
Misc. body impressions	12																																	
Parallel grooves, sherd too small	13																																	
" " horizontal band	14																																	
" " pendant triangles	15																																	
" " chevron or arcade	16																																	
Ochre lines	17																																	
Dragged wavy lines	18																																	
Cross hatching	19																																	

00 1
MIDDEN 2
N.W. Quadrant

001
MIDDEN 2
S.E. Quadrant

Number of sherds

Body sherds
Rim rounded
Rim flattened
Rim pointed
Rim misc.
Plain surface
Burnished surface
Ochre burnish
Black **burnish**
Comb-stamping, pendant triangles
" horizontal band
" alternating diagonal panels
" sherd too small
Rim notches vertical
Rim notches diagonal
Misc. impressions on rim
Finger-nail impressions on rim
Finger-tip " " "
Finger pinching " " "
Applied band with pinching
Applied band, other
Finger impressions on body in zone
" " parallel corrugations
Cusps
Stylus impressions in parallel rows
Misc. body impressions
Parallel grooves, sherd too small
" " horizontal band
" " pendant triangles
" " chevron or arcade
Ochre lines
Dragged wavy lines
Cross hatching

Motif numbers

	1	6	1	9	2	1	5	2	2	3	6	6	1	1	1	5	1	6	6	7	1	1	2	5	7	5	6	1	2	1	1	6	2	8	3											
1	●			●	●	●	●														●																									
2		●						●	●	●				●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●										
3			●																																											
4				●				●	●	●	●	●																																		
5					●																																									
6																																														
7																																														
8																																														
9																																														
10																																														
11																																														
12																																														
13																																														
14																																														
15																																														
16																																														
17																																														
18																																														
19																																														

00 1
MIDDEN 2
S.W. Quadrant

00 1
MIDDEN 2
S.W. Quadrant

00 1
MIDDEN 4
N.W. Quadrant

Number of sherds	Motif numbers
Body sherds	3 1 1 1 3 2 1 3 1 2 4 9 1 3 8 9 5 3 8 15 2 1
Rim rounded	● ●
Rim flattened	●
Rim pointed	●
Rim misc.	● ●
Plain surface	●
Burnished surface	● ●
Ochre burnish	● ●
Black burnish	●
Comb-stamping, pendant triangles	1 ●
" horizontal band	2
" alternating diagonal panels	3
" sherd too small	4 ● ● ●
Rim notches vertical	5
Rim notches diagonal	5
Misc. impressions on rim	6 ●
Finger-nail impressions on rim	7
Finger-tip " " "	7
Finger pinching " " "	7
Applied band with pinching	8
Applied band, other	8
Finger impressions on body in zone	9
" " parallel corrugations	9
Cusps	10
Stylus impressions in parallel rows	11
Misc. body impressions	12
Parallel grooves, sherd too small	13
" " horizontal band	14
" " pendant triangles	15
" " chevron or arcade	16
Ochre lines	17
Dragged wavy lines	18
Cross hatching	19

00 1
MIDDEN 4
N.E. Quadrant

00 1
MIDDEN 4
S.W. Quadrant

00 1
MIDDEN 4
S.E. Quadrant

00 1
MIDDEN 4
S.E. Quadrant

00 1
Midden 5
N.W. Quadrant

Number of sherds	3	3	4	6	14	3	13	8	67	1	6	11	6	3	1	3	6	420	1	4	1	1	6	221	1	1	12	512	26	2	7	1		
Motif numbers																																		
Body sherds	●			●			●	●	●	●																								
Rim rounded	●			●	●						●	●																						
Rim flattened		●									●	●																						
Rim pointed													●																					
Rim misc.																																		
Plain surface																																		
Burnished surface																																		
Ochre burnish																																		
Black burnish																																		
Comb-stamping, pendant triangles	1																																	
" horizontal band	2																																	
" alternating diagonal panels	3	●	●	●																														
" sherd too small	4																																	
Rim notches vertical	5																																	
Rim notches diagonal	5																																	
Misc. impressions on rim	6																																	
Finger-nail impressions on rim	7																																	
Finger-tip " "	7																																	
Finger pinching " "	7																																	
Applied band with pinching	8																																	
Applied band, other	8																																	
Finger impressions on body in zone	9																																	
" parallel corrugations	9																																	
Cusps	10																																	
Stylus impressions in parallel rows	11																																	
Misc. body impressions	12																																	
Parallel grooves, sherd too small	13																																	
" " horizontal band	14																																	
" " pendant triangles	15																																	
" " chevron or arcade	16																																	
Ochre lines	17																																	
Dragged wavy lines	18																																	
Cross hatching	19																																	

00 1
 Midden 5
 N.W. Quadrant

Number of sherds

Body sherds
 Rim rounded
 Rim flattened
 Rim pointed
 Rim misc.
 Plain surface
 Burnished surface
 Ochre burnish
 Black burnish
 Comb-stamping, pendant triangles
 " horizontal band
 " alternating diagonal panels
 " sherd too small
 Rim notches vertical
 Rim notches diagonal
 Misc. impressions on rim
 Finger-nail impressions on rim
 Finger-tip " " "
 Finger pinching " " "
 Applied band with pinching
 Applied band, other
 Finger impressions on body in zone
 " parallel corrugations
 Cusps
 Stylus impressions in parallel rows
 Misc. body impressions
 Parallel grooves, sherd too small
 " " horizontal band
 " " pendant triangles
 " " chevron or arcade
 Ochre lines
 Dragged wavy lines
 Cross hatching

Motif numbers

	7	6	14	7	349	3	521	3	10	3	224	8	716	6	212	12	3	5	3	3	325	3	5	9	2	7	
1	•																										
2		•	•			•	•	•			•	•					•				•			•	•		
3				•					•	•		•					•				•			•			
4																											
5																											
5																											
6																											
7																											
7																	•	•									
7																	•	•	•	•							
7																											
8																											
8																											
9																											
9																											
10																											
11																											
12	•	•																									
13																											
14																											
15																											
16																											
17																											
18																											
19																											

00 1
Midden 5

N.E. Quadrant

S.E. Quadrant

00 1
Midden 5
S.E. Quadrant

Number of sherds	13	1	5	4	5	5	1	2	1	1	2	2	3	2	2	13	1	3	4	2	9	1	3	5	10	7	4	1	8	1	2	3	5	1	2	
Motif number																																				
Body sherds																																				
Rim rounded																																				
Rim flattened																																				
Rim pointed																																				
Rim misc.																																				
Plain surface																																				
Burnished surface																																				
Ochre burnish																																				
Black burnish																																				
Comb-stamping, pendant triangles	1																																			
" horizontal band	2																																			
" alternating diagonal panels	3																																			
" sherd too small	4																																			
Rim notches vertical	5	●	●	●	●																															
Rim notches diagonal	5					●	●	●	●																											
Misc. impressions on rim	6																																			
Finger-nail impressions on rim	7																																			
Finger-tip " "	7																																			
Finger pinching " "	7																																			
Applied band with pinching	8																																			
Applied band, other	8																																			
Finger impressions on body in zone	9																																			
" parallel corrugations	9																																			
Cusps	10																																			
Stylus impressions in parallel rows	11																																			
Misc. body impressions	12																●	●	●	●																
Parallel grooves, sherd too small	13																																			
" horizontal band	14																																			
" pendant triangles	15																																			
" chevron or arcade	16																																			
Ochre lines	17																																			
Dragged wavy lines	18																																			
Cross hatching	19																																			

00 1
 Midden 5
 S.W. Quadrant

Number of sherds	7	2	1	2	2	1	6	2	5	2	4	7	1	2	4	6	4	2	5	2	1	5	14	10	8	2	5	3	6	8	15	4	7	18	4	14	1	1	1										
Motif numbers																																																	
Body sherds	●				●			●	●	●																																							
Rim rounded		●	●					●																																									
Rim flattened																																																	
Rim pointed																																																	
Rim misc.																																																	
Plain surface																																																	
Burnished surface																																																	
Ochre burnish		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Black burnish																																																	
Comb-stamping, pendent triangles	1	●	●	●	●	●	●	●	●	●	●																																						
" horizontal band	2																																																
" alternating diagonal panels	3																																																
" sherd too small	4																																																
Rim notches vertical	5																																																
Rim notches diagonal	5	●	●																																														
Misc. impressions on rim	6																																																
Finger-nail impressions on rim	7																																																
Finger-tip " "	7																																																
Finger pinching " "	7																																																
Applied band with pinching	8																																																
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Finger impressions on body in zone	9																																																
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" chevron or arcade	16																																																
Ochre lines	17																																																
Dragged wavy lines	18																																																
Cross hatching	19																																																

00 1
Midden 5
S.W. Quadrant

Number of sherds	1	2	9	4	3	3	1	10	9	14	4	24	12	12	138	4	3	21	7	7	2	1	
Motif numbers																							
Body sherds																							
Rim rounded																							
Rim flattened																							
Rim pointed																							
Rim misc.																							
Plain surface																							
Burnished surface																							
Ochre burnish																							
Black burnish																							
Comb-stamping, pendent triangles	1																						
" horizontal band	2																						
" alternating diagonal panels	3																						
" sherd too small	4																						
Rim notches vertical	5																						
Rim notches diagonal	6																						
Misc. impressions on rim	7																						
Finger-nail impressions on rim	8																						
Finger-tip " " "	9																						
Finger pinching " " "	10																						
Applied band with pinching	11																						
Applied band, other	12																						
Finger impressions on body in zone	13																						
" parallel corrugations	14																						
Cusps	15																						
Stylus impressions in parallel rows	16																						
Misc. body impressions	17																						
Parallel grooves, sherd too small	18																						
" " horizontal band	19																						
" " pendant triangles																							
" " chevron or arcade																							
Ochre lines																							
Dragged wavy lines																							
Cross hatching																							

APPENDIX 3 OF CHAPTER 4

SKELETAL REMAINS FROM OO 1 by H. De Villiers

OO 1 Burial 1

The skeletal remains consist of:

Cranium - which is complete except for the ethmoid, body of the sphenoid, palatine, vomer and turbinal bones. The zygomatic arches, too, are defective.

Mandible - was fractured in the region of the right canine. The coronoid and condylar processes and the angles of the mandible have been damaged.

Teeth - all permanent teeth had erupted at the time of death, the upper and lower incisor teeth, upper and lower right first premolar teeth and lower right second premolar tooth and upper right third molar tooth are missing although, from the sockets, there is evidence that all these teeth were present at the time of death.

Post cranial skeleton - consists of right and left clavicle; fragmentary scapulae, humeri, ulnae, radii, tibiae, fibulae and right femur.

Fragmented iliac bones together with the acetabulum; ribs and rib fragments; manubrium; patella, three tarsal bones, five metatarsal bones and one phalanx. Also two fragments of animal bone. Most of the long-bones had been damaged and broken.

Description

The remains are those of a young adult female, probably about 20 years of age - all permanent teeth are fully erupted but the third molars show virtually no wearing. The basioccipital and sphenoid bones had not yet fused - this fusion is usually completed by the twenty-fifth year of life.

The cranium and mandible correspond in their features, both metrical and non-metrical, with the South African Negro female cranium and mandible.

The cranium is both absolutely and relatively long - dolichocranial and of moderate height or orthocranial; slightly broader than high or metriocranial and ovoid in norma verticalis. There is no frontal narrowing, the cranium being eurytopic. The glabella is slightly curved and the superciliary eminences are absent. The forehead recedes in an even uninterrupted convexity and reaches its highest point vertically above porion. The superior temporal line follows a moderately high course with an anterior convexity. The sphenoparietal suture is wide. The

parietotemporal suture is convex rising above pterion, the posterior limb continues the convexity. The region above asterion is slightly flattened. The mastoid process is small, the digastric fossa is shallow and ridged. The mastoid crest moderately developed. The supramastoid crest slightly developed while the posterior root of the zygoma is rounded in contour and slight.

The upper face appears to have been mesene and the total face leptoproscopic. This difference being due to the deep symphyseal region of the mandible. The face shows a moderate degree of both subnasal and total facial projection. The orbits are hypsiconch and the nose platyrhine. The superior orbital margin is sharp and the interorbital region of moderate width. Nasion is not depressed. The inferior margin of the nasal aperture is formed by a fusion of the spinal and turbinal crests. There is a small subnasal gutter. The subnasal alveolus is deep.

Norma basalis shows an elongated foramen magnum which is oval and dolichotrematous. The occipital condyles are damaged but appear to have been of moderate size. The glenoid fossa is of moderate depth and the post-glenoid tubercle is small.

The dental arcade of the hard palate is divergent U-shaped. The hard palate is deep.

The mandible is wide in relation to its length but it is also low in relation to its length. The ramus is relatively broad and the corpus is low in relation to the height of the symphysis menti. The region of the chin is prominent with a well developed mental protuberance - the resultant chin shape is pointed. The mental foramen is situated below the apex of the second premolar tooth and is directed posteriorly and superiorly. The genial tubercles consist of two separate superior tubercles and a single median inferior tubercle.

The estimated living stature of the individual, based on Trotter & Glesers (1958) regression formula for Negro females is 156 cms.

00 1 Burial 2

The skeletal remains are fragmented and friable and consist of: Cranium - which has been crushed on the left side so as to fragment the vault bones on this side. The cranial base as well as the facial skeleton is likewise fragmentary. The facial skeleton consists largely of the right maxilla and a small portion of the left maxillary alveolus bearing the second premolar and the three molar teeth.

Mandible - consists of the alveolar portion at the symphysis menti bearing the four incisor teeth, the left canine and two premolar teeth, and of the right condylar process and posterior portion of the ramus.

Teeth - the complete upper right permanent dentition, the left central incisor, second premolar, first, second and third molar teeth. The mandibular incisor teeth, and left canine and premolar teeth.

Post cranial - the post cranial skeleton is very fragmented and consists largely of the shaft of the right humerus, shaft of the right femur, tibia; fragments of vertebrae, ribs, tibia, fibula, tarsal bones, metatarsal bones and innominate bones.

Description

The remains are those of a young adult female, approximately 20 years of age - all permanent teeth are fully erupted, however, the third molar is unworn.

The cranial vault and maxilla correspond in their general features with the South African Negro female cranium.

The cranial vault appears to have been relatively long - dolichocranial and of moderate height - orthocranial. The sphenoparietal suture is wide and the parietotemporal suture is convex rising above pterion. The region above asterion is slightly flattened and the mastoid process is small. The supramastoid crest is slightly developed while the posterior root of the zygoma is rounded in contour and of slight development. The glenoid fossa is of moderate depth and the post-glenoid tubercle small. The hard palate appears to have been deep and sloping in the anterior region.

It was not possible to estimate the living stature of this individual owing to the fragmentary state of the long-bones.

001 Burial 3

The skeletal remains consist of:

Cranium - which is complete except for some erosion damage on the right side of the frontal bone and the zygomatic bone. The superior and lateral margins of the right orbit are therefore defective as is the right zygomatic arch.

Mandible - is complete but for the tip of the right coronoid process.

Teeth - a) Maxillary: on the right side the permanent incisor, canine and first molar teeth have erupted fully, the second permanent molar was in the process of erupting but at the time of death as yet below the gum

level. On the left side the permanent incisor and first molar teeth have erupted. The crown of the canine and of the first premolar tooth have been formed but are below the alveolar margin. The second deciduous molar remains in position. The crowns of both right and left third molar teeth had been formed.

b) Mandibular: both right and left permanent incisor, first and second molar teeth have erupted. On the right, the first premolar crown has been formed but the deciduous second molar is still in situ. On the left both deciduous molars are in position. The crowns of the canine teeth have been formed but are still contained in the alveolar bone.

Post cranial skeleton is all but complete and consists of: 23 vertebrae, 30 ribs and rib fragments, right and left clavicles, the lateral portions of both scapulae, the blades and spines are missing; right and left humerus, left radius and the shaft of the right radius; right and left ulna, the shafts and the proximal and distal extremities are fragmented; the right ischium, right and left femur and tibia together with their epiphyses; right and left fibula, six tarsal bones, three sesamoid bones and 15 fragments of metacarpal, metatarsal bones and phalanges.

Description

The remains are those of a child of approximately ten years of age. It is not possible to assess the sex with any degree of accuracy at this age owing to the absence of the pelvis.

In keeping with the age of the individual, the cranium is lightly constructed and slender in build. The cranium is relatively long - dolichocranial and ovoid in shape, but low. The superior limb of the complete parietotemporal suture barely rises above pterion. The posterior root of the zygoma and the supramastoid crest show a slight degree of development. The mastoid process is small, the mastoid crest well developed. The digastric fossa is shallow but not exposed in norma lateralis. The glenoid fossa is of moderate depth and the post-glenoid tubercle well developed. The tympanic plate of the temporal bone is moderately thickened. The orbits are hypsiconch and the nose platyrhine. There is a slight degree of infra-orbital excavation but a moderate degree of subnasal prognathism. The palate is deep and the anterior region is shelving. The teeth are large. The abovementioned features are in keeping with the generally Negroid morphology of this cranium. The morphology of the temporal bone and the lowness of the cranial vault reflect the immaturity of the individual.

TABLE OF MEASUREMENTS AND INDICES (measurements in mm)

Cranial	OO 1 Burial 1	OO 1 Burial 3	OU 2 Burial 1	OU 2 Burial 2
L	185	182	183	169
B	134	122	129	
L/B 100	72,4	68,5	70,5	
H'	130	122		119?
H'/L 100	70,3	67,0		70,4
H'/B 100	97,0			
OH	110	101	111	103
OH/L 100	59,5	55,5	60,6	60,9
B'	97		88	92
B'/B 100	72,4		68,2	
U	510	494	504	
Q	291	274	290	
S	378	364	368	351
S'1	116	107	110	101
S'2	106	113	116	110
S'3	96	91	91	90
S1	136	128	129	120
S2	121	125	130	120
S3	121	111	109	111
S'1/S1 100	85,2	83,6	85,2	84,1
S'2/S2 100	87,6	90,4	89,2	91,6
S'3/S2 100	79,3	82,0	83,4	81,1
fml	36,4	35,5		34,2
fmb	26,9	29,7		25,3
fmb/fml 100	73,9	83,6		73,9
G'H		61,9		54,9
GH		97,6		89,1
GB				77,6
GL		95		85?
LB	95	93		85?
GL/LB 100		102,1		100
DC		23		19,6
01	39,5	35,2		36,2
02	36,9	31,9		32,4
02/01 100	93,6	90,6		89,5
NH	48,1	46,1		37,1
NB	25,8	26,0		22,0
NB/NH 100	53,6	56,4		59,2
G'1		42,2		
G'2		36,7		
G'2/G'1 100		86,9		

Mandibular measurements

w1		101,6		93,4
cyl		14,6		14,4
rb'	41,1	30	28,2	
m2p1	30,2			
h1	35,5	29	25,7	
zz	48,4	41,7		40,0
cror				75,8
M/		126		123
cpl		70		67
r1		41		46,5
gogo		77,8		70,3
m1		94		85
crh		51		44
m2H	29,0			

APPENDIX 4 OF CHAPTER 4

LIST OF SMALL FINDS FROM OO 1

P I P E S

Locality	Material	Illustration
OO 1		
Surface find (not main site)	Pottery	Fig.32 No.23
Hut 11	Stone	Fig.32 No.20
Zone C, within secondary enclosure (from same pipe)	"	Fig.32 No.21
Hut 17, on paving at right	"	Fig.32 No.21
Midden 4, S.W. Quadrant	Pottery	
Midden 5, N.W. Quadrant	"	
" S.E. Quadrant	Stone	Fig.32 No.22
" S.W. Quadrant	"	Fig.32 No.22

IRON IMPLEMENTS

Locality	Object	Illustration
Zone A	?Awl	
"	"	
"	?Awl	Fig.36 No. 6
"	Tip of blade	
"	"	
"	"	
"	"	
"	"	
"	"	
"	Arrowhead	
Hut 1	"	
"	Tapering piece of iron	Fig.33 No. 7
Hut 1, Lelapa	Spear	
" "	"	Fig.34 No. 9
" "	?Awl	
" "	"	
" "	Spear	Fig.34 No. 6
" "	Spear (broken)	Fig.34 No. 4
Behind Hut 1	Hoe	Fig.33 No. 1
" "	"	Fig.33 No. 2
Between Huts 1 & 2	Spike	
" " "	Tanged razor	Fig.35 No.18
" " "	?Arrowhead	Fig.35 No. 7
" " "	Arrowhead	
Between Huts 1, 2 & 3	Tip of blade	
" " "	Tang of blade	Fig.33 No. 8
Beside Hut 2	Long tanged spear	Fig.34 No. 1
Hut 3	Arrowhead	
"	Tip of blade	
"	Broken blade with tang	

APPENDIX 4 OF CHAPTER 4 contd

Locality	Object	Illustration
Hut 3	Broken blade with tang	
"	Long tanged spear	Fig.34 No. 3
"	Hoe	Fig.33 No. 3
Hut 19	Lebeko	Fig.35 No.20
Against Hut 1, Lelapa wall	?Barbed arrow	Fig.35 No. 8
Primary Enclosure 1	Awl	Fig.36 No.13
Secondary Enclosure	Lebeko	Fig.35 No.21
Within Secondary Enclosure	Awl	
" " "	?Lebeko blade	
Zone B	Spear	Fig.34 No. 5
"	"	Fig.35 No. 5
"	Awl	Fig.36 No. 2
"	"	
"	"	
"	?Hook	Fig.36 No.24
"	Tip of blade	
"	Razor	Fig.35 No.15
"	Broken blade with tang	
"	?Awl	
"	"	
"	"	
Hut 4	?Hand piano key	Fig.36 No.17
Hut 5	?Razor	
"	Spear	Fig.34 No. 8
Hut 5, Lelapa	Long tanged spear	
Hut 5, Lelapa and in doorway	Lebeko	Fig.35 No.23
In front of Hut 6, Secondary Enclosure	Tip of blade	
Outside Hut 7	Spear	Fig.34 No. 7
Exterior, between Hut 4 and Primary Enclosure 1	Long tanged spear	Fig.34 No. 2
Zone C	Knife	Fig.35 No. 1
"	Tip of blade	
"	"	
Hut 9	Knife	
Hut 11	Tang	Fig.33 No. 4
Hut 11, Lelapa		
Zone D	Spear	Fig.35 No. 6
"	Adze	Fig.33 No. 8
"	Broken blade with tang	
"	Razor	Fig.35 No.14
"	Tanged razor	Fig.35 No.17
"	?Awl	Fig.36 No. 9
"	"	Fig.36 No. 8
"	"	Fig.36 No. 5
"	"	Fig.36 No. 7
"	"	Fig.36 No.10
Hut 13	Tip of blade	
Hut 13	Lebeko	Fig.35 No.22
Former Primary Enclosure 1	Long tanged spear (broken)	
Zone E	Adze	Fig.33 No. 6
"	Awl	Fig.36 No. 4
"	Razor	Fig.35 No.10

APPENDIX 4 OF CHAPTER 4 contd

Locality	Object	Illustration
Zone E	?Razor	
"	Tip of blade	
"	Razor	Fig.35 No.16
Hut 16	Tip of blade	Fig.35 No. 4
"	?Awl	
"	"	
Hut 17	?Broken spear	
Hut 18	Long rod	
"	Awl	Fig.36 No. 3
"	Spear	
Primary Enclosure 3	Spear	Fig.35 No. 2
Primary Enclosure 4	Tip of blade	Fig.35 No. 3
Secondary Enclosure	Implement with tang	Fig.35 No.24
" "	Awl	Fig.36 No. 1
Secondary Enclosure, in front of Hut 17	Razor	Fig.35 No. 9
Secondary Enclosure, in front of Huts 17 & 18	?Draw plate	
" " "	Razor	Fig.35 No.12
" " "	Tang without spearhead	
" " "	Knife	Fig.35 No.25
" 2 " "	?Axe	Fig.33 No. 5
Midden 2, N.W. Quadrant	Broken blade with tang	
" S.W. Quadrant	Twisted tang	Fig.36 No.12
Midden 4, N.E. Quadrant	Small blade	
" N.W. Quadrant	?Awl	
" S.E. Quadrant	Draw plate (broken)	Fig.36 No.14
" S.W. Quadrant	Blade	
" "	Tang with broken blade	Fig.35 No.19
Midden 5, N.E. Quadrant	Tang (broken)	Fig.33 No. 9
" N.E. Quadrant	Broken blade with tang	
" N.W. Quadrant	Awl	Fig.36 No.11
" "	?Awl	
" "	Razor	Fig.35 No.11
" S.E. Quadrant	Draw plate	Fig.36 No.16
" "	Draw plate (broken)	Fig.36 No.15
" "	Broken blade with tang	
" "	Broken blade	
" S.W. Quadrant	Rod with knob	Fig.36 No.23
" "	Razor	
" "	Razor	Fig.35 No.13

METAL ORNAMENTS

Locality	No	Illustration
Iron bangles		
Zone A, near Hut 1	1	
" behind "	1	Fig.36 No.22
" in hoard with hoes	1	Fig.36 No.18

APPENDIX 4 OF CHAPTER 4 contd

Locality	No	Illustration
Zone A, entrance to Secondary Enclosure	2	Fig.36 No.20
Zone D	1	
" Hut 13	1	Fig.36 No.21
Zone E	1	
" former Primary Enclosure	1	
" Hut 16	15	
Secondary Enclosure	1	
Midden 5, S.W. Quadrant	1	
Copper bangles		
Zone A, Hut 19	1	
Zone E, Hut 16	1	
Midden 4, N.E. Quadrant	1	Fig.36 No.29
Iron beads		Diameter mm
OO 1		
Zone A	1	8
"	1	9
Hut 1	1	7
Hut 1, Lelapa	1	7
Zone B, Hut 5	1	6
Hut 5, Lelapa	2	7
"	1 (Copper)	
Zone D	1	6
"	1	7
Zone E	1	7
"	1	6
Hut 16, Lelapa	1	6
"	1	5
Midden 2, S.W. Quadrant	1	7
Imported buttons		
Zone C, surface	1 (Iron)	12
Zone D	1 (Brass)	11
Zone E	2 (Brass)	8
Midden 5, N.W. Quadrant	1 (Brass)	8
Zone C, Hut 9	1 (Iron buckle)	
Copper ornaments - Bangles		
Zone A, Hut 19	1	
Zone E, Hut 16	1	
Midden 4, N.W. Quadrant	1	
Copper bar		
Zone A, Hut 3	1	

APPENDIX 4 OF CHAPTER 4 contd

Locality	No
Rings	
Zone B, Hut 5	1
Zone E, Hut 17	1
Midden 5, N.W. & S.W. Quadrants	2 (broken)
Copper sheet ?earring	
Midden 5, N.W. Quadrant	1
Wire earrings	
Zone A, between Huts 1 & 2	1 shank bent and held by collar
Zone B, Hut 4	1 long straight shank, collar
" Hut 5	1 shank bent and held by collar
Zone D, Hut 13, Lelapa	1 shank bent, collar
Zone E, Hut 16	1 " " "
" "	1 shank bent, no collar
" former Primary Enclosure	1 " " "
" Secondary Enclosure	1 " " "
" " "	1 shank bent, collar
Midden 5, S.W. Quadrant	1 long straight shank, collar
" " "	1 " " " no collar
Burial 1	3 thick, decorated shank

OSTRICH EGG-SHELL BEADS

Locality	No	Diameter mm
00 1		
Zone B	1	5
Zone D, in front of Hut 12	89 (some broken)	9+
Zone E, Hut 16	1	12
"	1	
Midden 2, S.W. Quadrant	1 (broken)	7
" N.E. Quadrant	1	11
" "	1	9
" "	1	7
" "	1	7
" S.E. Quadrant	1 (broken)	12
Midden 4, S.E. Quadrant	1 (broken)	6
" "	1	6
" N.W. Quadrant	1	7
" "	1	14
" "	1	9
" "	1	5
" "	1 (broken)	11
" "	1	15
" N.E. Quadrant	1	8

APPENDIX 4 OF CHAPTER 4 contd

Locality	No	Diameter mm
Midden 5, N.E. Quadrant		
" "	1 (broken)	6
" "	1	7
" "	1	9
" S.E. Quadrant	1 (broken)	20
" "	16	11 ⁺
" "	1	4
" "	1	6
" "	11	12 ⁺
" "	3 (broken)	9 ⁺
" "	5	8
" "	1	11
" S.W. Quadrant	1 (broken)	16
" "	1	11
" "	1	10
" "	2	8
" "	1	9
" "	2	6
" "	1	6
" "	1	10
" "	1	7 x 10
" "	1 (broken)	10
" "	3 (broken)	7 ⁺
" "	1	9
" N.W. Quadrant	4 (broken)	10 ⁺
" "	1	7
" "	2	6
" "	2	5

OU 1, NTSUANATSATSI

"The Basuto say they come from a place named Ntsuanatsatsi, a kind of big hole with a rock overhanging it, full of reeds, where voices from under the ground may be heard. It is supposed that the reed fixed at the entrance of a house where a birth has taken place is symbolic of the origin of man. Man comes from the reeds."

(Mabille, 1906).

The choice of this site to represent the Type N settlement pattern was determined not only by the large concentration of structures visible on the aerial photograph but also by the significance of the name Ntsuanatsatsi in early Sotho history. Ntsuanatsatsi is a prominent flat-topped hill (Plate 1) midway between the modern towns of Frankfort and Vrede in the north-eastern Orange Free State (Lat. $32^{\circ}20'$ Long. $28^{\circ}48'$). The first written reference to it was in the travels of Arbousset and Daumas (1846) who passed within sight of it in 1836 and recorded the presence there of ruined stone structures which had formerly been inhabited by Sotho peoples. Their description (op.cit., 131) - "towards Intsuanatsatsi, one of the three little mountains whence flows from the east to the west, and into the Namagari (Wilge), a little stream called by the natives Noka, or Little Elephant River" - is inadequate to pin-point the location but Ellenberger identifies it on independent evidence as the hill now known as Tafelkop. This identification was regarded with caution at the beginning of the fieldwork but it was confirmed by several informants at this site and elsewhere and it can therefore be accepted as well established. As is commonly the case in Sotho history the name of the mountain or hill applied to the surrounding area as well (Ellenberger, 1912, 17).

The correct attribution of vernacular place names is an essential preliminary to the use of vernacular history and therefore we must examine such names in this area before proceeding. In the quotation from Arbousset (above) the name of the stream should read Noka Tlou; Tlou - elephant - being omitted in the English edition but included in the French and on both maps. Its position as described is ambiguous, it could flow from any of the three mountains mentioned. Ellenberger (1912, 17) identifies it as the Rietespruit which rises on either side of Ntsuanatsatsi, but as he is in part using Arbousset's account this may have arisen from ambiguity. In this area there are two obvious "little mountains", the third could be one of several including Skeaprand, depending on the

vantage point; but in addition to Ntsuanatsatsi, Peme is clearly one of those intended (fig. 38, Plates 6 & 7). Peme is the Sotho name for the hill shown on maps as Leeukop; informants at both OU 1 and OO 1 confirmed this and the latter knew of it as a former Fokeng settlement. The informants at OU 1 insisted that the Noka Tlou was not the Rietspruit but the stream which runs immediately on the south side of Peme, called Leeuspruit on recent maps. Although the two streams are only some 20 km apart the differentiation is important as Noka Tlou and Ntsuanatsatsi are connected with different Sotho groups in the traditions.

NTSUANATSATSI IN HISTORY AND SYMBOL

No historian nor anthropologist has yet produced a penetrating analysis of the significance of Ntsuanatsatsi in understanding the Sotho past. Although this is scarcely the field of the archaeologist, some attempt must be made here, not only to complement the study of local archaeological remains but also because it may give us some insight into the personality of the peoples whose settlements are the subject of this research. The present review does not introduce any new evidence but merely seeks some order in the previously published material and draws some inferences from it.

At the outset it is necessary to point out that apart from the normal problems associated with early recordings of oral history, the information concerning Ntsuanatsatsi is further complicated by the great symbolic value attached to the place or at least to its name. We shall attempt to examine the historical and symbolic aspects separately but it must be stressed that as far as the writer is aware there is no completely objective method of separating the purely historical from the symbolic or religious aspects and that to do so may well reflect personal bias on his own part or that of the original literate recorders - mainly Christian missionaries.

The importance of Ntsuanatsatsi in both its historical and symbolic senses was recorded as early as 1836 by Arbousset (1846, 131):

"This spot is very celebrated amongst the Basutos and the Lighoyas, not only because the litakus (stone ruins) of the tribes are there, but because of a certain mythos, in which they are told that their ancestors came originally from that place. There is there a cavern surrounded with marsh reeds and mud, whence they believe that they have all proceeded."

By 1836 the stone structures were already in ruins and the creation myth was well established among both the Sotho of the Caledon Valley and the Taung.

According to Ellenberger (1912, 18 & 68) the first Sotho inhabitants of Ntsuanatsatsi were a Fokeng group who had the hare for their siboko. They were "in all probability the first Bantu to cross the Vaal", and when they settled here "they found the country more or less occupied by Bushmen". They were one of a number of small Fokeng chiefdoms that spread south of the Vaal at an early date, for apparently all but one of the later Sotho groups found Fokeng already in occupation of the country when they arrived.

"At the foot of the hill on the eastern side was the village of the chief of the Bafokeng; the plateau on top, which as stated, was surrounded by trees (wild olives), was his court or place of meeting, lekhotla" (op.cit., 17).

Some generations later, at a date estimated by Ellenberger (op. cit., 17 & 337) to be about the end of the fifteenth or mid-sixteenth century the first Kwena crossed the Vaal and settled near the Fokeng. This was occasioned by Napo breaking away from his elder brother, Mochuli, who remained ruler of the senior branch of the Kwena at Molepolole. Macgregor (1905, 9) records the tradition that this southward movement took place two or more generations later under Monaheng, but Ellenberger's more detailed account describes this as a second southward movement ending on the Caledon after the Kwena had returned north of the Vaal from Ntsuanatsatsi.

The Kwena remained at Ntsuanatsatsi for about two generations but friction between them and the Fokeng began to develop, initially over shortages of resources but finally over the succession of a Fokeng chief whose mother was a San. The Kwena and some of the Fokeng refused to recognise him and moved away.

Napo is the putative common ancestor of all the Kwena lineages south of the Vaal (Ellenberger, op.cit., 394). His three sons, Motebang, Lisema and Molapo started separate lines - Motebang's two grandsons, Tsulo and Tsuloane causing a further split - to produce respectively the Molibeli, Monaheng, Hlakwane and Makhoakhoa lineages. Even if we accept that these traditions may not be entirely accurate in an historical sense, they do establish that the area around Ntsuanatsatsi was important in the dispersal of the Kwena and to a lesser extent the Fokeng in our area. These lineages represented a considerable proportion of the population of

the Caledon Valley in the earlier nineteenth century including Moshweshwe's lineage, the Mokoteli, a branch of the Monaheng.

The Hlakwana remained for a time in the area and some Fokeng are also mentioned here at a later date (op.cit., 69 & 70). Some branches of the Taung are also associated with the area, Tebeyane and his followers near the modern Frankfort (op.cit., 70) and Motete and Moisetse on the Noka Tlou (Arbousset, 1846, 210), but as they were only a generation or two older than Molteane (Ellenberger, op.cit., 368) this must have been during the eighteenth century. The Taung are essentially associated with areas west of the Wilge River.

The largest groups to settle in this area in later centuries were the Tlokwa and Sia, two related lineages which came to occupy most of the Wilge-Liebenbergvlei valleys. Ellenberger (op.cit., 38, 40 & 47) has them mainly to the south of Ntsuanatsatsi but many remain here today. Peme was at one time associated with the senior branch of the Tlokwa, the Mokhalong (Webb, *pers.comm.*). Most of the labourers employed at OU 1 were Tlokwa and some could trace their ancestry back several generations in the neighbourhood. Furthermore they claim it was the Tlokwa alone who built the stone settlements on Skaeprand and elsewhere in the vicinity. This is a popular local belief; one farmer even assured the writer that Makatees (the common name for Tlokwa) means ridge-dwellers because they used to build in stone on top of the ridges. It is, however, a corruption of MaNthatisi via Mantatees, the name of the Tlokwa regent of the earlier nineteenth century.

The Wilge-Liebenbergvlei was evidently an important zone of access to the southern Highveld and the Ntsuanatsatsi area was successively settled by representatives of at least three of the main Sotho peoples, the Fokeng, Kwena and Tlokwa. Of this we can be certain, although some of the details relating to the earlier periods may be questionable on a strictly historical basis and require rather to be examined from an anthropological standpoint.

More than a century after Arbousset, Ashton (1952, 10) recorded the same belief "that all true Basuto originated from the same place, namely, a reed bed at Ntsuanatsatsi, where the first man emerged. This legend, which is almost universally held, has many variations and is sometimes combined with Biblical stories of the creation". The traditional mode of burial is to face the body in the right direction for the spirit to "proceed on its way to Ntsuanatsatsi" (Ashton, op.cit., 113). The name means the east and among the Tlokwa the body faces north-east while with other Sotho it faces east (op.cit., 106). This is to say the burial

position is in accord with the symbol of Ntsuanateatsi not its geographical position which is north of Lesotho.

Some Sotho-Tswana peoples beyond our area appear to attach the name to a different locality (Legassick, 1969, 100; Westphal, pers.comm.) but this need not concern us here. The people to whom Ntsuanatsatsi seems to have been most important historically were the Kwena. Although they were subdivided they seem to have been the dominant group in the Caledon Valley even before the nineteenth century, while with the rise of Moshweshwe they became paramount. This may have led to a reinforcing of the beliefs concerning Ntsuanateatsi, but they were certainly very widespread before this influence could have been generally felt. On the other hand it is not clear to what extent such views prevailed among groups such as the Taung and Kubung who did not trace their ancestry back to early settlements here.

Casalis (1861, 240) records the two aspects - the cavern and the marsh with reed beds - as two separate traditions concerning the creation of man. The latter was so generally believed that "a reed, fastened over a hut, is the symbol announcing the birth of a child". Ashton (1952, 29) confirms that a reed thrust into the hut roof symbolises birth and "at the same time warns men to keep away. Among the Tlokwa a single reed is sometimes used to indicate a girl, and two a boy, but among other clans no differentiation is made". When a man is buried, the reed used to measure his grave may be buried with him (op.cit., 106), another example of the association of reeds with human life. The fact that the domestic architecture, both huts and lelapa walls, was traditionally made of reeds and that the rhizomes provide a famine food (Jacot Guillarmod, 1971), might also have a bearing on the symbolic importance.

We must now turn to the physical environment of Ntsuanatsatsi to see to what extent this is compatible with the traditions.

THE ENVIRONMENT

A dolerite sill forms the crest of Skaaprand and, at a considerably higher level, perhaps upfaulted, that of Ntsuanateatsi as well. Dolerite is again the building material and it occurs here in irregular angular blocks which do not produce stable walls. The geology below the sill consists of shales and mudstones of the Ecca Series. The bolder dolerite escarp such as Skaaprand produce fairly steep relief with slight overhangs in places, but there are certainly no caves of any size that could accord with the tradition.

The vegetation is typical Highveld grassland; the area is transitional between *Themeda* Veld and *Cymbopogon*-*Themeda* Veld. On Skaaprand and Peme there is a fair amount of bush growth, especially *Rhus* sp. and *Leucosidea sericea*, mainly on the ruins themselves but also on the steeper slopes. Before the advent of farming communities this would no doubt have been more extensive and have occurred on the slopes of Ntuanatsatsai as well, but apparently not on the more level areas. The Sotho tradition as recorded by Ellenberger (1912) that: "Three hundred years ago its (Ntuanatsatsai's) plateau was bordered by wild olive trees, such as were not to be found anywhere else in the neighbourhood" therefore gives us a picture in accord with what we would expect to have been the situation in earlier Iron Age times. *Olea africana* may indeed still be found on these slopes although none were observed, nor is it recorded in this area by De Winter *et al.* (1966).

The modern subdivision into small fenced farms has led to heavy and prolonged overgrazing with a marked effect on the landscape. At the time of the fieldwork, after an extended drought, the vegetation had been grazed right down to the ground and the grasses were giving way to unpalatable plants. If we look at the upper portion of the Rietespruit drainage basin we find a typical example of what is taking place in many Highveld areas. This amounts to a new cycle of erosion caused by overgrazing and cultivation. The rejuvenated Rietespruit and its tributary streams have incised their beds to a depth of about two metres or more (Plate 1); the form of the gullies with their bare, near-vertical banks shows that this has taken place recently. The gullies are dry except for a short period after rain when runoff is rapid and heavily laden with silt from the overgrazed slopes. The mixture is highly abrasive and the gullies are enlarged and extended upstream towards their sources. Denudation allows less water to percolate into the soil. Beside the streams in the valleys the water table is lowered leaving the banks dry, incapable of supporting much vegetation and therefore even more susceptible to erosion. This well known cycle (e.g. King, 1951) was strikingly demonstrated during the course of the fieldwork when, after several drought years some 75 mm of rain fell in one night.

That the Highveld landscape was not always like this seems to be generally accepted among natural scientists (chapter 2). Early travellers do describe some of the large rivers as being difficult to cross by wagon because of their steep banks, but of the smaller drainage features we are given a picture of pools connected by small streams and fringed with reeds and rushes (Sanderson, 1860, 240; Bennie, 1956, 14). More specifically

the present owner of Helena, Mr. L. Beyers, who has lived here since about 1912, and his wife could remember as children swimming in pools in the southern branch of the Riet spruit where there are none today. The name itself - Reedstream - indicates an environmental change, for no reeds were seen along at least this portion of its course.

The symbolic relationship between reeds, man and Ntsuanatsatsi suggests that reeds were formerly common. The historical and environmental evidence for our area in general and the Riet spruit in particular argues that the stream courses probably consisted of chains of pools flanked by reed beds. The recovery of pieces of daga with reed impressions from the Skaaprand settlement indicates the former use of reeds for building. There must therefore have been an ample local source within reasonable distance, which is not the case today.

Thus even under the present climatic regime, the environs of Ntsuanatsatsi of several centuries ago would have supported a more luxuriant vegetation than they do today. The Sotho traditions to this effect are abundantly supported by other evidence.

THE SETTLEMENTS

Several weeks of November and December of 1966 were spent on the OU 1 site, the aim being to examine the Type N settlement pattern in the field, to survey one settlement unit as an example and to carry out a small excavation to obtain a suitable pottery sample and material for C14 dating.

The Wilge Valley was one of the most heavily settled in our area during the Iron Age and this portion of it is no exception. There are numerous Type V settlements (fig. 9) including those on the farms Kalkoen and Riet spruit described by Pullen (1942), the latter on the stream of this name near its confluence with the Wilge.

Settlements on the Riet spruit stream below Ntsuanatsatsi include both Types N and V. To the east there is a gap of some 22 km, corresponding in part with the watershed between the Wilge and the Vaal and its higher tributaries, before the concentration of settlements is reached around the modern village of Vrede and further north. The extensive Type N settlement at Peme visible 18 km to the south-east has already been mentioned and although no excavation has been carried out here it was visited and it appears to be very similar to OU 1.

On the slopes of Ntsuanatsatsi itself there are a number of structures, some of Type N but others indeterminate (fig. 38) and all

have suffered severely from erosion. They were built on natural terraces but even these are sloping and recent overgrazing has led to sheet and in places gully erosion.

On the summit, towards the centre, is a square stone enclosure with a steep track leading up to it from the northern side. According to Mr L. Beyers of Helena, this was made by the British Army during the South African War, which attests to the strategic position. At either end of the summit there is an oval enclosure in more ruinous condition, one of which could perhaps have been the kgotla of the Fokeng chief referred to by Ellenberger.

But the majority and the best preserved structures are on the slopes and along the top of Skaaprand, a kilometre to the west (fig. 38, Plates 1 & 5). The settlement units are all apparently of Type N but many have been extensively modified in Iron Age and recent times. Some on the lower slopes have been robbed to provide stone for farm buildings and at one point on top of the ridge is a small but massively constructed rectangular structure which seems to have been used as a block house during the South African War.

There is some evidence of quarrying in the form of slight hollows beside low outcrops of dolerite on top of the ridge but no large quarries were noted. A sloping outcrop on the crest was pointed out by Mr. Beyers as having been used as a rock slide by children in his youth. The high degree of polish and the proximity of several settlement units make it likely that the slide was also used in Iron Age times.

A settlement unit on top of the ridge opposite Ntsuanataatsi was chosen to be surveyed because its shape had not been compressed by neighbouring settlement units nor topographical features and it demonstrated the characteristic features of Type N (fig. 38, No. 2). Two large primary enclosures and a number of huts form the ring around the central secondary enclosure, outside of which there are additional huts and other structures (fig. 39). The surrounding wall, the definitive characteristic of Type N, has been heavily robbed and now has several gaps in it, but originally it would have been continuous.

An unusual feature of this particular settlement unit is the appendage on the western side with its scalloped wall. As mentioned above (chapter 3), scalloping is not common on Type N sites but becomes very common and even characteristic of some sites further north on the Vredefort Dome and in the Transvaal. The appendage was joined to the settlement unit but its function is unknown; it probably contained several huts. In the area of the junction there is a complex of walls

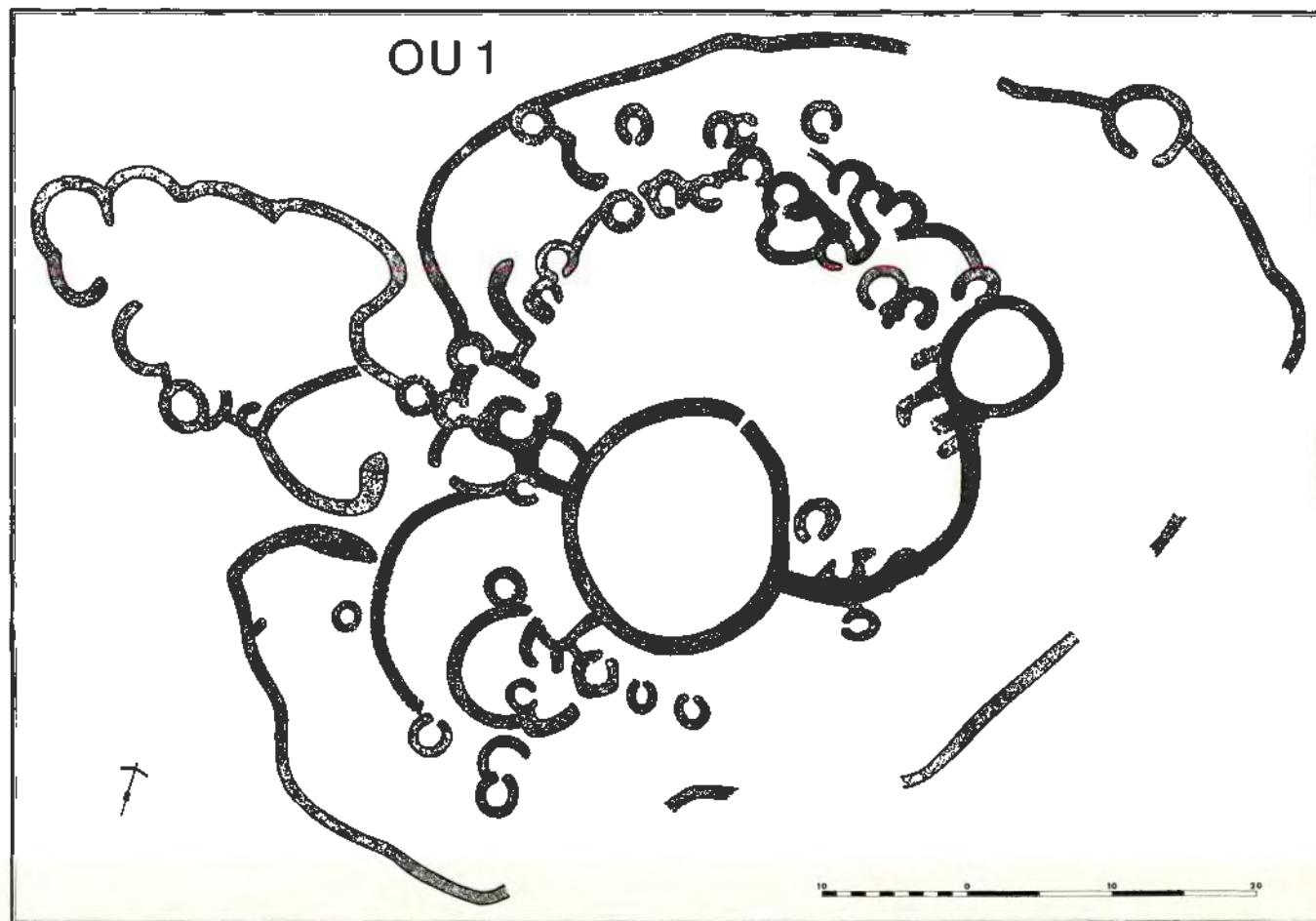


Fig. 39
OU. 1, a Type N settlement unit.

which must have been built at different times and which make it impossible to establish the original form. However, the enclosing wall curves inwards towards the central secondary enclosure here and this was probably the original entrance to the settlement unit, although later building has cut off the access.

Although this settlement unit did not have any visible middens, elsewhere on Skaaprand several middens were observed, always just outside the enclosing walls. It has been suggested above (chapter 3) that the enclosing walls were probably intended to define the living area for such reasons as neatness, privacy and to control stray animals and children. They would have been of only marginal use in defence but perhaps more useful in excluding feline and canine predators.

The most common modification observed on this site was the robbing of surrounding walls to build other structures, especially corbelled huts and their lelapas. This was very noticeable on the surveyed settlement unit where the walls of the appendage were also robbed almost to ground level. By contrast, the largest primary enclosure and most of the 36 or so stone huts retained all their stone, although they had partly collapsed. If the robbed walls were to be deleted from the plan (fig. 39) the remaining structures would form a Type V settlement unit. This is also the case with a number of other units on Skaaprand, and it is clear that the latest phase of occupation was by a group of people who built according to the Type V pattern. At another settlement unit a few hundred metres further north the modification has gone even further. Only a small part of the enclosing wall survives while there are 58 corbelled huts and only two larger primary enclosures. Although no exact figures could be obtained from less modified settlement units it was apparent that the proportion of huts to larger primary enclosures would have been more even than this. No corbelled huts could with certainty be associated with the Type N building phase and, while the evidence is as yet inconclusive, finds of burnt daga with reed impressions suggest that the earlier huts were built of reeds. At Peme where there does not seem to have been a re-occupation of the Type N settlement units, robbing is not apparent and no corbelled huts were seen.

THE EXCAVATIONS

The area selected for excavation is on a natural terrace towards the foot of Skaaprand, below the surveyed settlement unit and some 300 metres north-west of the Helena farmhouse (fig. 38, No. 1). The terrace faces east directly towards Ntsuanatsatsai, it is easily accessible and it

supports several Type N settlement units as well as the most extensive midden deposit noticed in the area. A grid was laid out over an area of 20 by 40 m including the midden and adjacent structures. From the plan (fig. 40) it can be seen that the midden has accumulated in association with two walls of which the western one marks the upper edge of the midden. This wall is part of the surrounding wall of the adjacent Type N settlement unit, part of which can be seen on the western edge of the plan. The other wall is apparently older as it has been robbed of all but its basal stones and is largely buried by the midden.

Other features on the plan include several secondary walls built against the inside of the enclosing wall, parts of two primary enclosures which together with others form the ring of primary enclosures around the central secondary enclosure, and a small circular stone platform which may have been the base of a grain store. The settlement unit itself takes up the flattest part of the terrace, to which its shape closely conforms. The contours, drawn at 0,5 m intervals, show that the midden is on a somewhat steeper gradient which increases still further just below it.

Two trenches were dug approximately at right angles to the walls and intersecting them in the hope that their relationship could be established stratigraphically. The trenches followed rows K and P of the grid, the latter appearing from surface indications to be the deepest part of the midden although even here it was nowhere deeper than 0,5 m.

Burrowing was very evident even on the surface, in the form of numerous fresh holes and hummocks. Excavation showed that very little of the midden has escaped the disturbance which has presumably been going on for centuries. In the more recent burrows numerous insectivore faeces were found and faunal remains from the midden include those of mongoose (Viverridae) as well as small rodents.

Most of the midden consists of light, grey-brown material resulting from the mixing of ash and soil (fig. 41). Such areas show no stratigraphy. The few remaining undisturbed patches are readily recognised as they consist of narrow bands of white and grey ash or brown soil. Excavation was carried down to the original ground surface which consists of a hard black waxy soil on which a number of rocks rested and into which the burrows extended to depths of a few centimetres. The larger rocks of the foundations of both walls rest on or in the black soil. Together with the disturbance this made it impossible to establish the relationship of the two walls by stratigraphy.

OU 1
MIDDEN

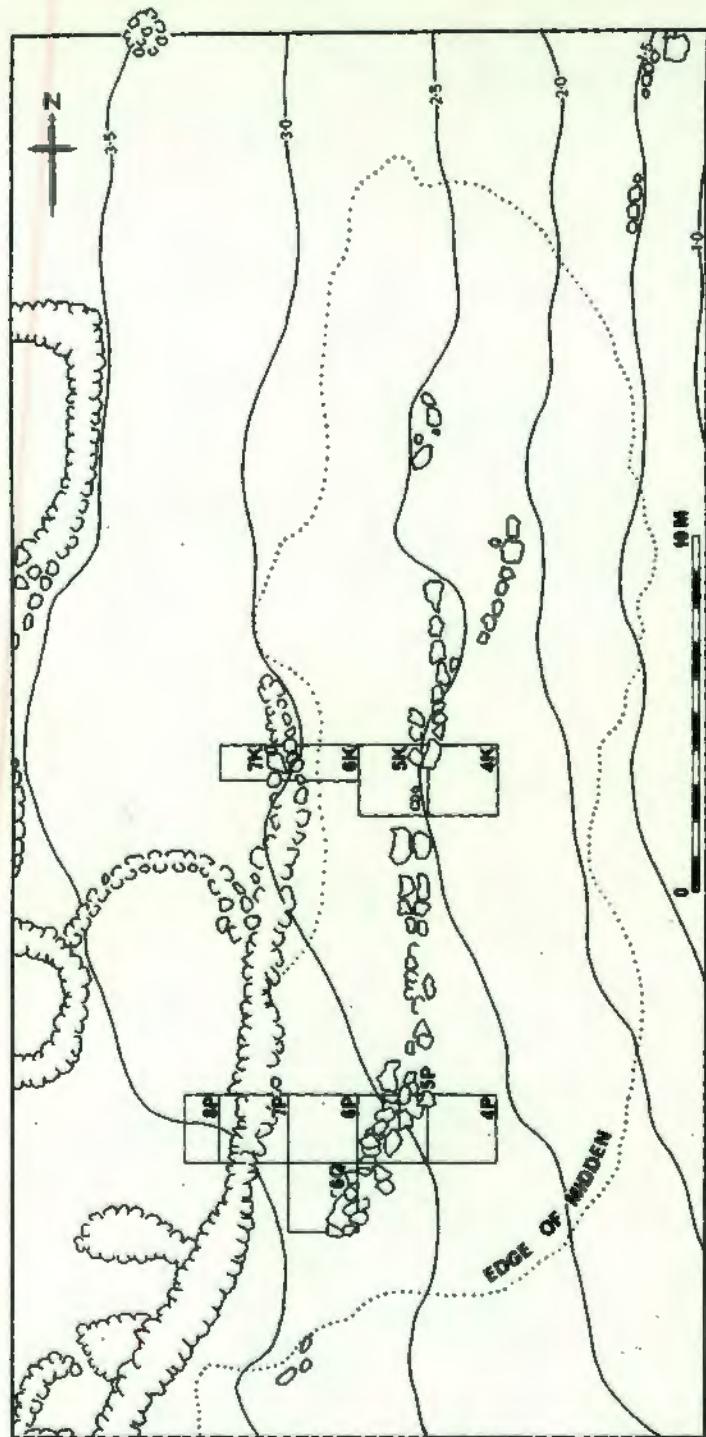
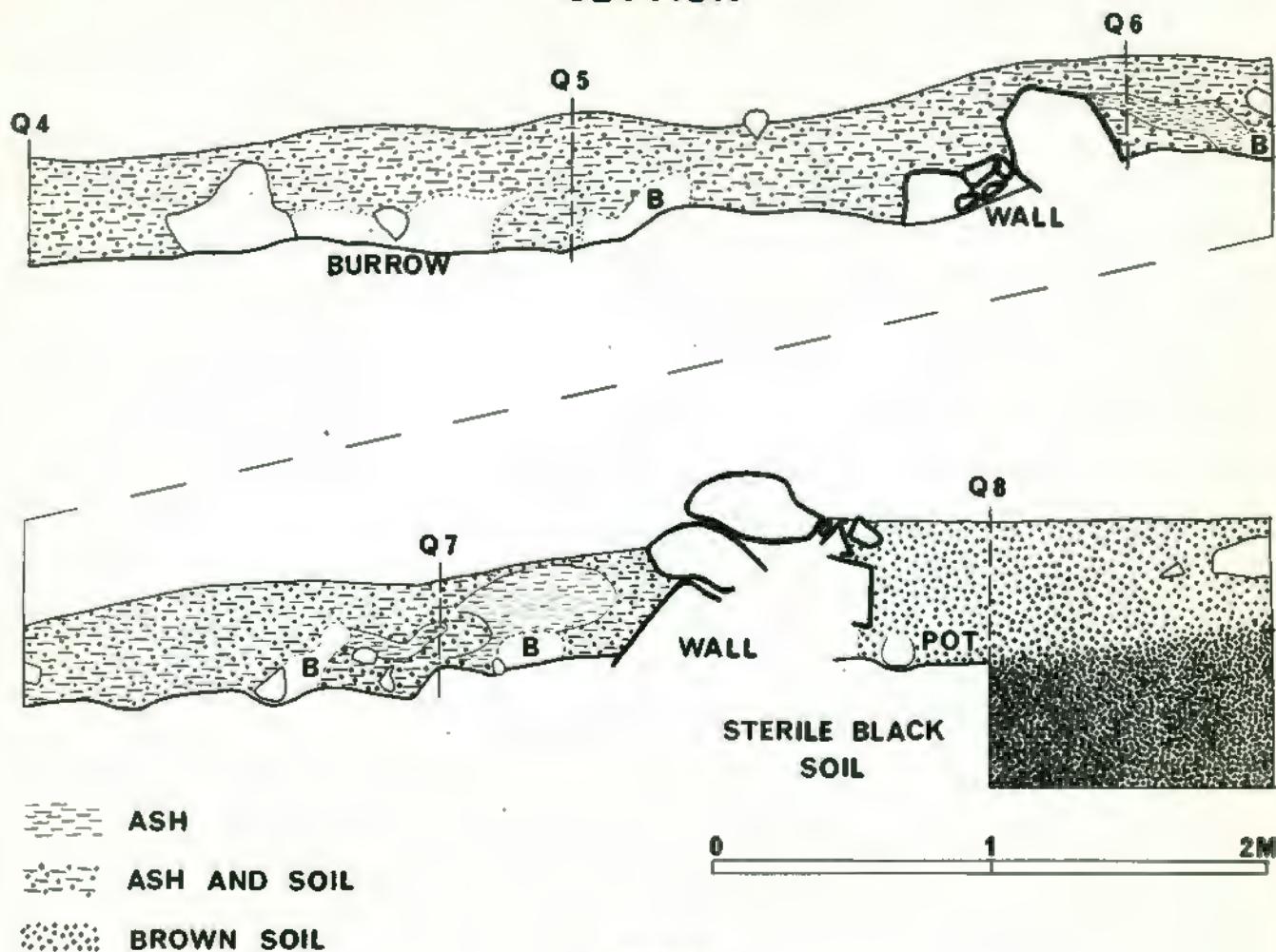


Fig. 40

OU 1 MIDDEN
SECTION



PLAN

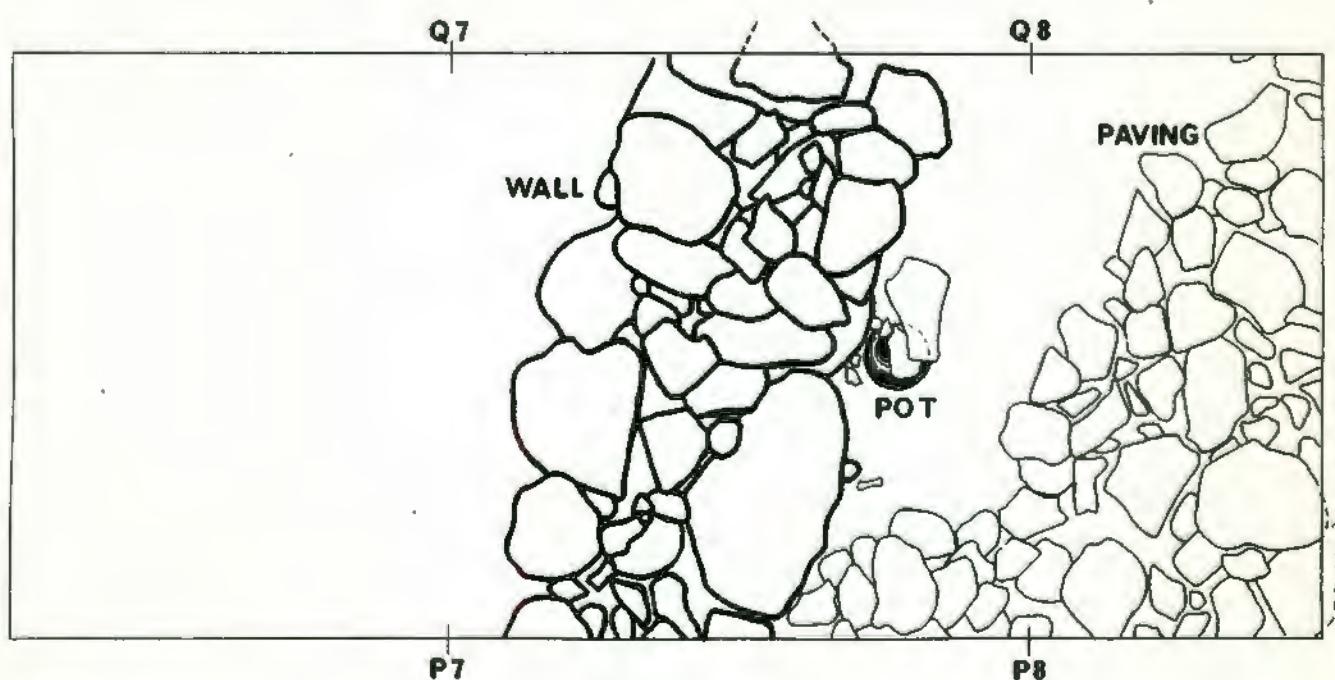


Fig. 41

Areas of undisturbed ash were found in the southern parts of Squares P6 and P7 (fig. 41). Square Q6 was therefore excavated and a charcoal sample was collected from similar undisturbed deposit in the adjacent corner of this square. The sample gave a radiocarbon age determination of 505 ± 95 (A.D. 1445) GX 1014.

The upper and more complete wall marks the edge of the midden. Downhill from it the deposit is essentially midden while above it, within the settlement unit, there is a dark brown hard nodular soil which grades into the black waxy soil of the hillside with depth. Part of the area uncovered within this wall was found to be paved and the excavation was extended another half square, P8, to reveal more of the paving (fig. 41). Similar comb-stamped sherds were recovered from above and below the paving suggesting that this floor does not mark a significant change in the occupation.

Beside the base of the wall and almost touching it was a pot which had been carefully buried with a ring of small stones to hold it upright and a large sherd from a similar vessel placed over it as a lid (Plate 40 and figs. 41 & 43). Above this in turn was a rock almost certainly placed deliberately on the lid as its weight had cracked the original sherd into several smaller ones. The base of the pot was 8 cm below the base of the wall in the black soil but some of the small supporting stones actually rested against the wall, which shows that the pot was buried after the wall had been built. The level of the paving is well above that of the base of the wall and therefore it must have been laid down at a later date, probably towards the end of the occupation of this settlement unit. However, it was not possible to establish the relative ages of the pot and the paving. The pot is much deeper and therefore may be older, but it is not covered by the paving and therefore could have been buried subsequently.

In order to make certain that the underlying black soil did not include cultural material it was excavated to a depth of a metre, with negative results. It clearly represents the natural soil of the terrace prior to the occupation but whether it formed in situ or through colluvial processes is not known. With the relatively gentle gradient of the terrace there would be a tendency for soil to be deposited here from the steep slope above. The building of the stone wall would have accentuated this effect and the half metre of dark brown soil that has accumulated against the wall must be largely the result of this process.

The pot was removed in one piece and sherds which had cracked loose on one side were removed to reveal a section through the contents



Plate 40. OU 1 infant pot burial in situ beside base of wall.



Plate 41. Pot with contents in situ showing small stones placed over infant bones.

(Plate 41). A few centimetres below the rim a row of small stones was found around the edge, and beneath them were a number of bones in a very decayed state. Initially these proved very difficult to identify and it was only after the infant pot burial at 00 1 had been found that they were recognised to be those of a still-born or new-born child. In such circumstances the only bones which survive in reasonable condition are the bullae, some spinal processes and the shafts of some limb bones.

The sequence of events in the excavated area was as follows:-

1. Building of lower wall.
2. Building of upper wall as part of the settlement unit - presumably the lower wall was robbed at this time.
3. The midden accumulated from this stage onwards during the occupation although it may well have been started after the first wall was built. The radiocarbon date is associated with this phase.
4. Concurrently with No. 3 soil started accumulating against the uphill side of the second wall.
5. The pot burial, probably preceding the laying down of the paving in Squares P7 and P8.

THE FINDS : POTTERY

Fabric

Most of the pottery is made of a fine-grained clay which has a chalk-like texture when fired. These sherds give off a coloured streak when rubbed on a hard white surface. There are, however, a number of sherds, particularly from the larger undecorated pots, that have a coarser matrix.

Grit has been added to the clay, often in large quantities. This is most commonly mudstone or poorly laminated shale which seems to have been deliberately crushed for the purpose. The pieces are angular and up to about 4 mm in length. Grit from other sources occurs in some sherds including pieces of weathered dolerite, calcareous nodules and fine grit which may have come from a stream bed. All of these materials are available within a few hundred metres of the midden.

In colour the ware ranges from grey to buff or brown with some orange or red-brown sherds. The decorated sherds may be well fired throughout but many, particularly of the undecorated sherds, have a dark core.

Burnish and Decoration

Only a small proportion of the assemblage as a whole is burnished but among the decorated sherds as many are burnished and as many have an ochre burnish as are unburnished. Black burnish is rare but among the decorated sherds two have a graphite burnish. Both examples are small and their surfaces are rather abraded but the identification as graphite seems certain - it was possible to produce a grey streak by rubbing them on a piece of paper. Graphite is very rare as a burnish in the Orange Free State, these were the only examples noted among all the excavated material.

TABLE OF SURFACE FINISHES AND RIM PROFILES ON OU 1 POTTERY

	DECORATED SHERDS				UNDECORATED SHERDS				TOTALS	
	Plain	Burnished			Plain	Burnished				
		Burnish	Ochre	Black		Burnish	Ochre	Black		
RIM SHERDS										
Rounded	15	16	13	4*	233	9	10	2	302	
Flattened			6		48	1			55	
Pointed	1				25				26	
Misc.		1	1		19	1			22	
BODY SHERDS	19	22	14		3939	179	194	74	4441	
TOTALS	35	39	34	4	4264	190	204	76	4846	

* Two have graphite burnish

DECORATED SHERDS FROM OU 1

Motif	Motif No.	No. of Sherds	%
Comb-stamping in pendent triangles	1	33	29
" horizontal bands	2	14	12
" sherd too small	4	58	52
Misc. rim impressions	6	2	2
Applied bands	8	2	2
Misc. body impressions	12	3	3
	112	100	

The proportion of decorated sherds is low, but when rim sherds alone are considered the proportion rises to 1 in 7. The proportion of decorated to undecorated vessels may therefore have been of this order.

Comb-stamping

The range of decoration in this assemblage is very limited for only six of the categories used in the project as a whole are represented, and the comb-stamped motifs account for 93% of the total.

The combs used at this site were coarse. All stamped sherds were examined and they show from three to five tooth impressions per centimetre, in the following proportions:

Tooth impressions per cm	No. of sherds	% sherds
3	35	37
4	48	50
5	12	13

These figures are comparable with the results from the other Type N assemblage, OU 2 Midden 1, and contrasts with the wider range and generally finer nature of the combs used at the Type V sites (fig. 51).

Pendant triangles

Many of the comb-stamped sherds are so fragmented that it is no longer possible to determine what decorative motif was used. However, pendant triangles could be recognised on 29% of the decorated sherds. The triangles have horizontal lines of stamping filling them in, and they are outlined by one or more rows of stamping (fig. 42, 1-4). Sometimes the combs have been rather carelessly applied (fig. 42, 1 & 3), but in other cases there is more regularity.

Variations on the pendant triangle motif which would merit separate classification if they were more common, are two sherds with chevrons (fig. 42, 8) and two with arcades (fig. 42, 7). In both cases there is a horizontal line of stamping just below the rim which forms an upper margin for the arcade or chevron line, so in a sense these examples are hollow pendant triangles. This interpretation is supported by several examples among the infilled pendant triangles where there are three, four or even five rows of stamping outlining the triangles (fig. 42, 4). The emphasis here seems to be on the chevron outline rather than the triangular centre. There does thus seem to be something of a transition between the normal pendant triangles and chevrons in this assemblage.

Although comb-stamped chevrons are numerically insignificant in the assemblages described here, their distribution is of interest. One or two examples occur in each of the three assemblages from Vrede District; OU 1 and OU 2 Middene 1 and 2. Although the latter is a Type V site no

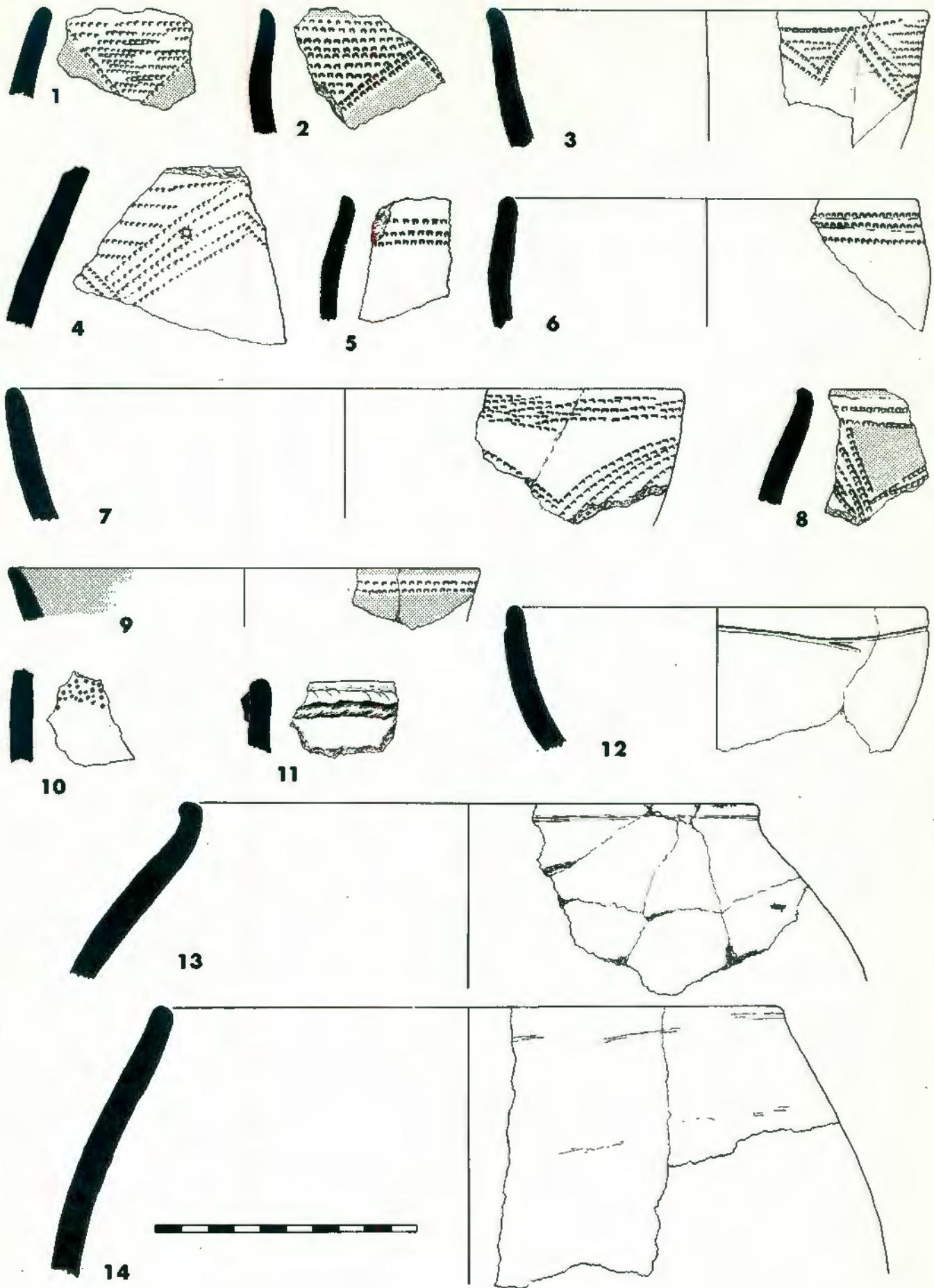


Fig. 42

Figure 42

Pottery from the midden.

1. Sherd with pendant triangle outlined by single row of comb-stamping and filled in by horizontal lines of stamping, ochre below. Buff throughout. Large quantity of shale grit. Square 6P.
2. Sherd with coarse comb-stamping in pendant triangles outlined by two rows and filled in by horizontal lines; ochre on rim and below decoration. Buff with grey core. Grit. Square 6Q.
3. Bowl with short, slightly everted neck and rounded rim. Comb-stamping in pendant triangles with horizontal lines of stamping and outlined by two rows. Burnished. Orange-buff with grey core. Shale grit. Squares 6Q & 8P, Layer 1.
4. Sherd with comb-stamping in pendant triangles outlined by five rows of stamping. Burnished. Red-brown throughout. Sandy with some grit. Square 7K.
5. Sherd with three lines of comb-stamping forming horizontal band. Highly burnished. Orange-buff with dark rim and grey core. Shale grit. Square 7P.
6. Bowl with upright sides and rounded rim. Three horizontal rows of comb-stamping forming band. Brown with dark core. Grit and calcareous nodules. Square 5K.
7. Large wide-mouthed bowl and rounded rim. Horizontal band of stamping just below rim and chevron or arcade of stamping in parallel lines. (Classified among pendant triangles because of the rareness of this motif.) Buff, blackened. Shale grit. Square 8P, Layer 2.
8. Sherd with horizontal band of stamping just below rim and chevron of parallel rows of stamping; ochre in the triangle thus formed and on rim. (Classified as No. 7.) Buff with grey core. Shale grit. Square 6K.
9. Wide-mouthed bowl with rounded rim. Two horizontal lines of comb-stamping forming band; ochre on rim and below band. Buff with dark core. Grit. Square 6Q.
10. Sherd with a zone of small round stylus impressions. Burnished. Buff-brown. Grit. Square 5K.
11. Sherd with rounded rim. Horizontal band of clay with finger-pinchng applied just below rim. Brown, blackened on surface. Grit. Square 4K.
12. Bowl, probably hemispherical, with rounded rim. Single groove below rim. It is uncertain whether this groove was intended as decoration. Buff with dark core. Grit including dolerite and calcareous nodules. Squares 5P & 8P.
13. Large pot with short, upright neck, poorly defined point of inflection and rolled-over rim. No decoration or burnish. Red-brown. Sandy. Square 5K.
14. Large bag-shaped pot with rounded rim. Slight upright neck. Grey-black throughout. Much shale and dolerite grit. Square 6P.

chevrons were found on similar sites further south, not even among the much larger sample from OO 1. This suggests that the stamped chevron may be a useful typological indicator despite its rarity.

Bands

Bands of comb-stamping form 12% of the decoration. They occur as a single band just below the rim of the vessel and consist of horizontal rows of stamping, usually two, three or four in number (fig. 42, 5, 6 & 9). The simplicity of these bands and their horizontal stamping contrasts with examples of the same motif from Type V sites (e.g. OO 1) where multiple bands occur and where the lines of stamping are usually oblique.

As elsewhere in the eastern Orange Free State there is a close relationship between the application of burnish, particularly ochre burnish, and comb-stamped decoration. Both of the sherds mentioned above as possibly having graphite burnish also have comb-stamping (Appendix 1 of this chapter).

Miscellaneous impressions

Two sherds have small irregular impressions on their rims while one of the comb-stamped sherds also shows this feature. There are, however, no notched rims or other well developed types of rim impression in the assemblage.

Three body sherds have small circular stylus impressions about 1.5 mm in diameter arranged in rough rows or scattered (fig. 42, 10). They may have come from the same vessel as they are all from Squares 4 and 5K.

Applied bands

Only two sherds have applied bands of clay, both just below the rim and pinched with finger and thumb held one above the other (fig. 42, 11). The rareness of this motif is of interest since it accounts for 24% of the decorated sherds from OU 2 Midden 1, while in other respects the two assemblages are very similar. The great predominance (93%) of comb-stamping over all other techniques of decoration is indeed the most outstanding feature of this assemblage.

Shape

The comb-stamped vessels that could be reconstructed include three wide-mouthed bowls with rather straight diverging sides and rim diameters of 17, 18 and 26 cm (fig. 42, 3, 7 & 9). The largest has some external

fire blackening, as do several other comb-stamped sherds, but the majority of such vessels were not used on fires. Some of the comb-stamped vessels would have been pots with slight upright necks (fig. 42, 2 & 8), while there is also an example of a deep bowl with upright sides (6). There may have been a predominance of bowls over pots.

It was not possible to reconstruct the shape of any other decorated vessels, but a small hemispherical bowl with a rim diameter of 15 cm had a single groove around it which may have been intended as decoration (fig. 42, 12).

The undecorated vessels that could be reconstructed consist mainly of more or less bag-shaped pots that usually have short upright necks with poorly defined points of inflection (fig. 32, 13 & 14; fig. 43, 1 & 2). They are unburnished, have a coarse surface finish and have often been used on fires. The applied band decoration would most likely have come from this type of pot. The only complete example (fig. 43, 1) is the pot that was used for the infant burial described above. Pressure from the overlying stone and soil had cracked it in several places, but around the base there were several radial cracks which must have developed while the pot was in use, as they contain soot. It seems likely that the pot was discarded as it became useless for cooking or containing liquids, and subsequently was used for the burial. The evidence is that the more highly finished and decorated pots were not used for burying infants.

Large bowls are also represented among the coarse undecorated vessels (fig. 43, 3). The illustrated example is 26 cm wide at the rim and has almost straight diverging sides.

Rims are predominantly rounded in profile, especially those of decorated vessels, but there are small numbers with flattened, pointed or irregular profiles.

The round base of the pot used for the infant burial is the only one whose shape is known. No definite flat bases were noted but this cannot be regarded as proving their absence from the site. Indeed their occurrence in Midden 1 at OU 2 would suggest that they may well occur here. The presence of part of what appears to be a pedestal base (fig. 43, 4) is of interest as it is similar in size and shape to the bases from pedestal cups which are still made by Sotho potters. Although it is incomplete and its upper section is absent it seems more likely to be from such a vessel than anything else.

OTHER CERAMIC OBJECTS

Two fragments of pottery spoons were recovered, both being the

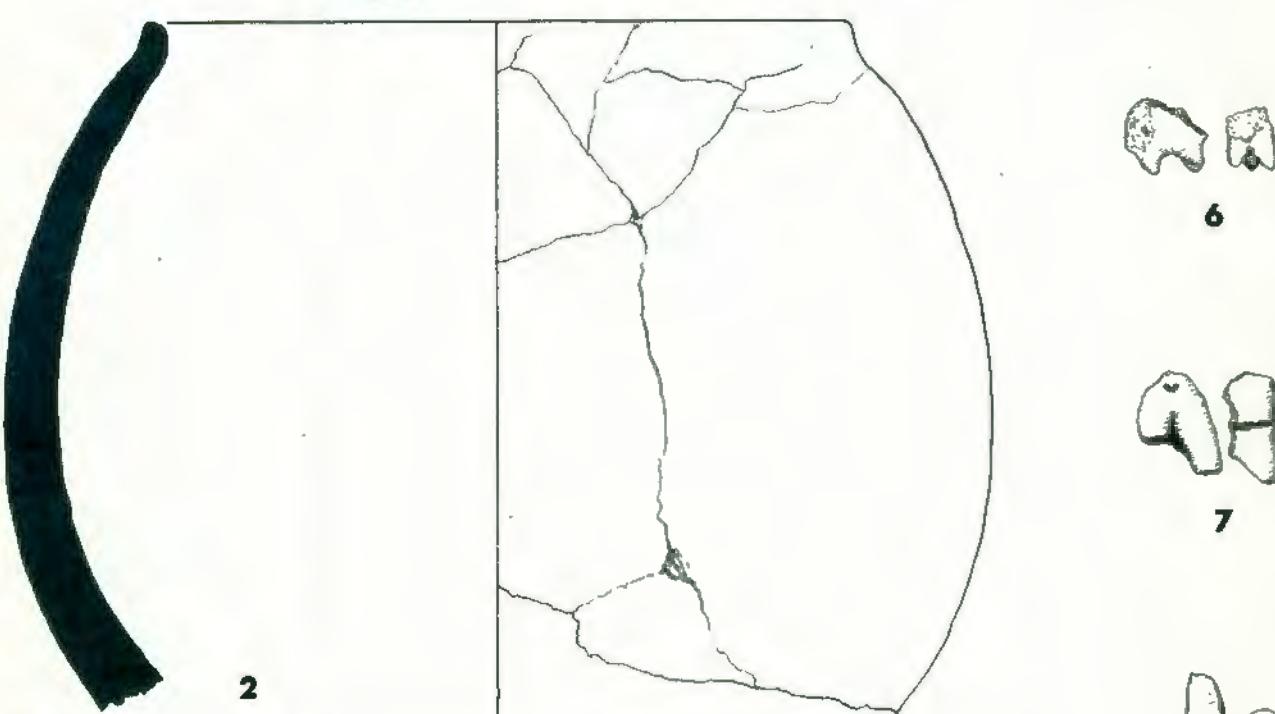
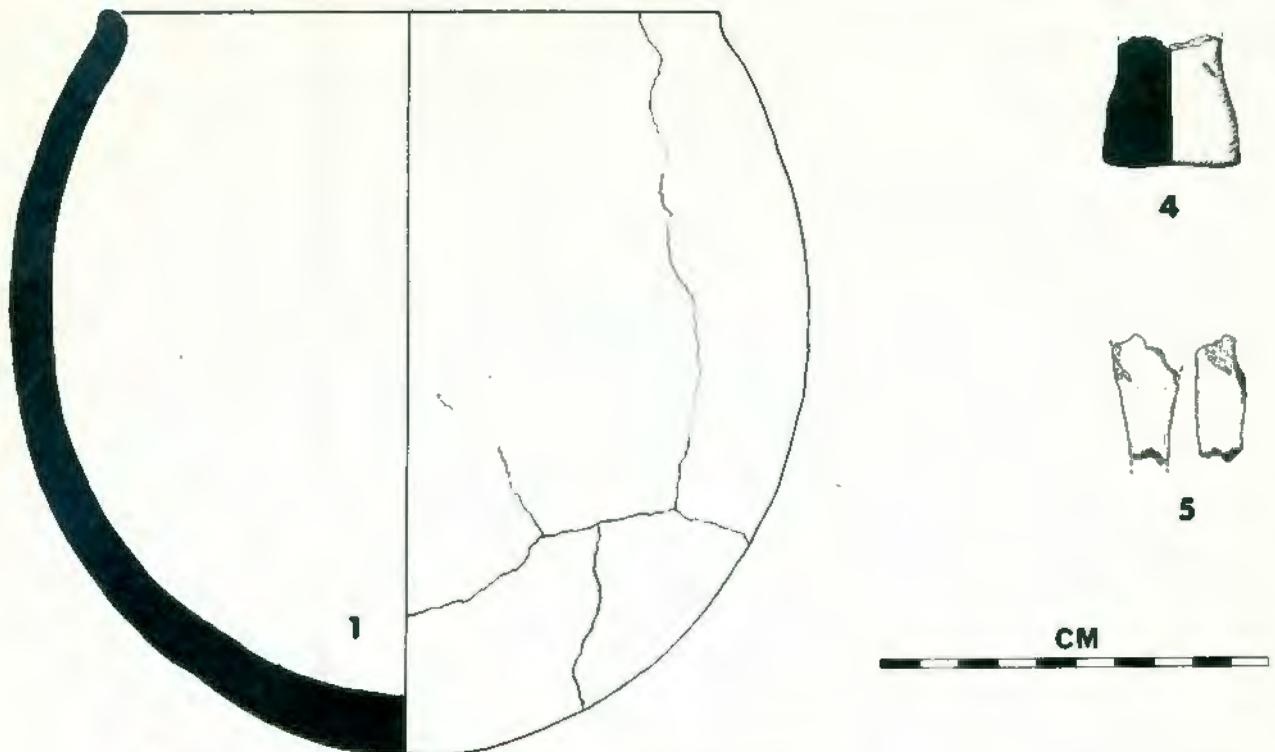


Fig. 43

Figure 43

Pottery and other ceramic objects.

1. Bag-shaped pot with round base, very short upright neck and rounded rim. This complete pot was used in the burial of an infant. Undecorated and rough surface finish. Brown, blackened with soot on sides. Some of the basal cracks must have appeared while pot was in use on a fire as they contained soot. Grit and calcareous nodules. Square 5P (see Plates 40 & 41).
2. Large sherd used as lid for infant burial (No. 1). Shape as above but larger. Brown, blackened with soot on sides. Large quantity of shale grit. Broken by weight of overlying stone.
3. Open-mouthed bowl with straight sides. Coarse surface finish. Grey-black throughout. Grit and calcareous nodules. Square 6P.
4. Part of what seems to be the pedestal base of a cup. Upper section missing. Brown clay with some grit and ? vegetable fibres. Square 7P.
5. Middle portion of pottery spoon with round, tapering handle. Buff. Coarse grit. Burnished. Square 6Q.
6. Lower portion of small animal figurine with three legs remaining. Crudely made, no identification possible. Square 5P.
7. Hindquarters of a larger animal figurine. Small tail and squared off rump suggest cattle. Square 5K.
8. Crude cylindrical object of fired clay, presumably a bead. Longitudinal impressions within hole indicate use of a grass stem to make perforation. Square 5K.
9. Portion of lower part of stone pipe. Outer surface ground to shape leaving a series of rounded facets showing striations. Hourglass perforation produced by chopping then drilling. Square 6P, Layer 1.

section where the handle joins the bowl (fig. 43, 5). They are delicately made with gently tapering handles, round in section and with a maximum diameter of about one centimetre. In both cases the bowl and the end of the handle is missing so the other dimensions are unknown.

Parts of two animal figurines resemble the examples from OO 1. The smaller includes only the lower part of the animal including three legs which were pinched out from the body (fig. 43, 6). The larger is from the hindquarters of what was probably a cattle figurine to judge by the small tail and rather squared off rump when viewed in profile (fig. 43, 7). As is the case with all ceramic objects from this site, the figurines are made from material indistinguishable from the pottery.

The single clay bead is a rather crude cylinder tapering at either end (fig. 43, 8). The perforation is 3 mm in diameter, quite regular and has parallel longitudinal ridges from a grass stalk with its leaf still in place. It seems that the clay was modelled around the stalk which may have been left until it was destroyed in firing.

Parts of two other modelled clay objects were recovered, but they are too fragmentary to merit description or illustration.

OBJECTS MADE OF STONE

Fragments from two pipes are made from an easily worked siltstone, but of a slightly different colour. A fragment from the rim of a pipe bowl, found in Square Q6, is too small for the diameter to be estimated but it retains some blackening on the inner surface. The other piece is large enough to permit reconstruction of the lower half of the pipe (fig. 43, 9). It was ground into a roughly cylindrical shape leaving a series of slight facets on the outer surface. The diameter of nearly 2,5 cm is small for this type, and the lower hollow and perforation are likewise small. The conical hollow was first shaped by chopping and then drilling to produce a more regular shape but retaining some of the deeper chop marks.

The larger fragment came from Layer 1 in Square P8, postdating the pavement, and therefore its context is a relatively late one in this excavation. The smaller is from Square Q6 from which the C14 sample was obtained, but a fragment as small as this can not be regarded as securely associated in a partly disturbed context. Nevertheless the occurrence does suggest the possibility of Cannabis-smoking at an early date in southern Africa, an idea first put forward by Phillipson (1965) on the evidence from Sebanzi.

An irregular flat piece of the same stone as that used for the pipes was recovered from Square Q6. A number of small flakes have been removed from its edges and both sides show some grinding, but insufficient to produce any regularity in the shape. It is 3,3 cm long and 1 cm thick, therefore too small for the manufacture of a pipe.

A small biconical core made from silicified wood was recovered from Square K4. This material occurs commonly in parts of the Karroo System particularly in the northern Orange Free State where it was often used for Late Stone Age artefacts.

A weathered piece of banded ironstone was found on the surface. Its geological origin is unknown, and it is unmodified, but it would seem to be suitable for smelting. However, no other trace of materials relating to iron smelting were found and it is clear that this did not take place on the site.

Numerous upper and lower grindstones were seen in and around the settlement but none were excavated. There seems to have been a preference for sandstone although dolerite examples and one of microgranite were also present. The nearest sandstone outcrops in the bed of the Rietspruit near the Helena farmhouse but this has probably been exposed by recent erosion and therefore another source may have been used. The preference for sandstone was also noted at OO 1.

METALWORK

Apart from an iron nail of European pattern from Square K4, seven items of iron make up the inventory of metalwork (fig. 44, 1-7). Four of these were recovered in excavation and three were from the surface of the midden and are therefore most likely, but not certainly, from this source.

The broad spear head (fig. 44, 1) is of interest for its marked ogee section and its exceptional size when compared with most from Iron Age contexts in our area and indeed with most Sotho spears. The smaller, flat-bladed example is more characteristic (fig. 44, 2), but no trace of the long-tanged type was found.

The function of the three incomplete implements with tangs and blades is less certain. That with the thickest tang (3) and a slight midrib was most likely a large spear similar to No. 1. The smallest has the tip of its blade missing and the remainder folded over (4) at which stage it was presumably of no further use. Originally it may have been a small spear or knife. The third (5) has a blade which becomes broader and thinner away from the tang. Although the end of the blade may be missing, the shape suggests a razor.

The two iron rods are badly corroded; the shorter which has an irregular square section is probably a broken tang, while the larger which has a gentle taper and a round section at least at its broader end is probably an awl.

BONE IMPLEMENTS AND EGG-SHELL BEADS

The two bone tubes (fig. 44, 13 & 14) were made from a bird bone and an ungulate cannon bone, both by the ring-and-snap process. The latter shows some additional cut marks as well as an overall polish both internally and externally, which indicates that it has been worn on a string, probably around the neck as a bead. It shows rounding and polish at both ends whereas the other tube is cut at one end and merely broken at the other, showing no further signs of use. As indicated in fig. 44, 12 several delicate thread-like bone trabeculae are preserved within this tube which show that it had not been strung or had any other solid object pass through it. It may indeed represent the discarded end of a bone from which a tube was cut.

The bone implements comprises six bone scrapers (fig. 44, 8-10) as described from OO 1, one point (12) and one utilised splinter (11). The best example among the scrapers is a split long-bone with a chisel-like end that has been extensively rounded by being used at a variety of angles to the working surface (8). The other examples are made from parts of long-bones or ribs and their edges are worn more or less at right angles to their main axes as is characteristic of the bone scrapers.

The bone point is 5 cm long, sharp at both ends and is well polished which suggests considerable use, however its function is unknown. A pointed bone splinter (11) has had its point rounded and well polished from use, but here again the function is not known.

Seven ostrich egg-shell beads, of which three are incomplete, were recovered and are listed as follows:

Locality	Diameter in mm
Square P6	12
"	?12 broken
Square Q6	12
"	12 broken
"	11 broken
Surface	10
"	9

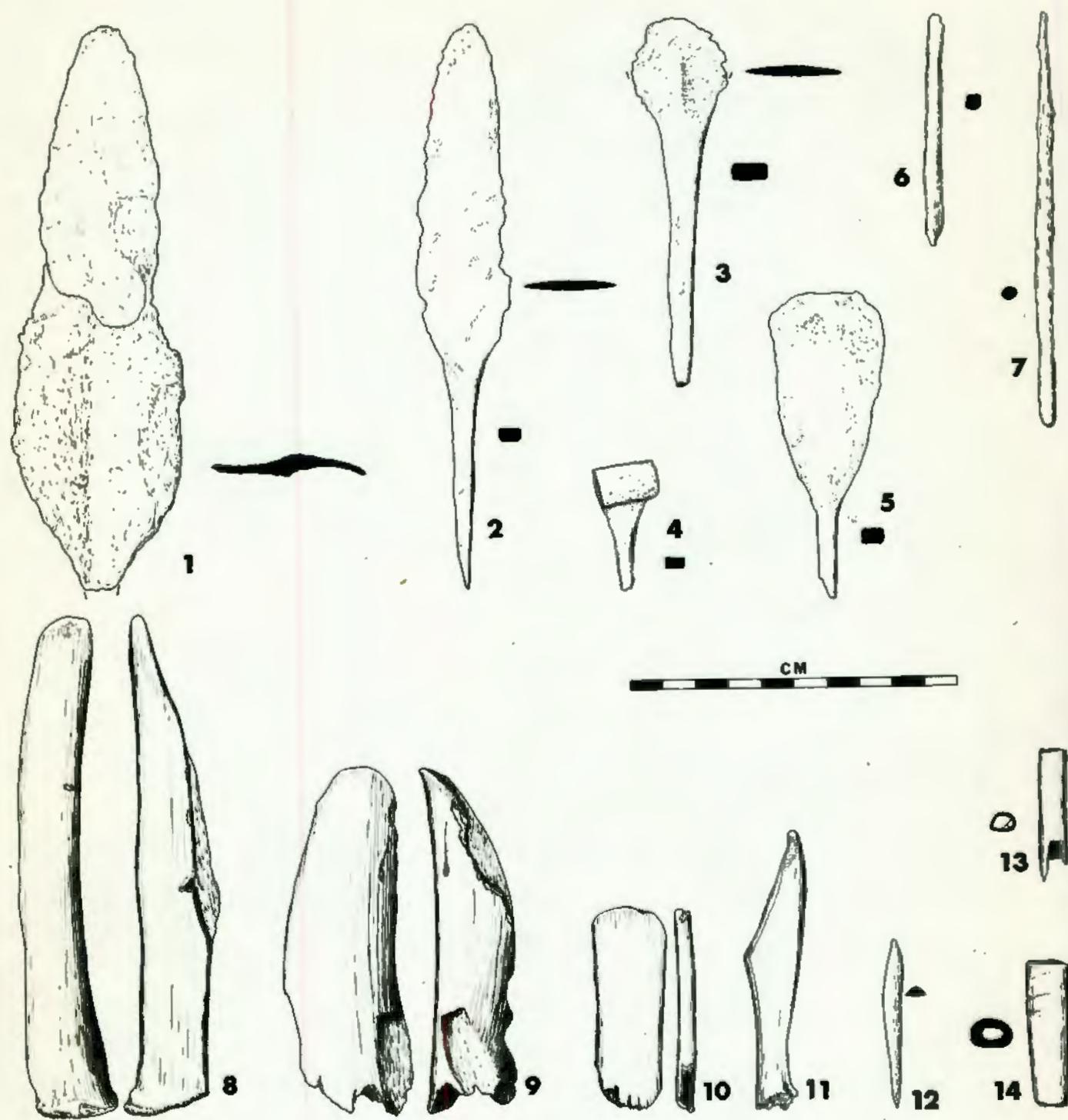


Fig. 44

Figure 44

Iron and bone implements

1. Broad spear head with ogee section, tang missing. Badly corroded surface and splitting along laminations. Midden, Square 6Q.
2. Small spear head with flat blade, tang rectangular section suggests a fairly large implement perhaps like No. 1. Midden surface.
4. Small implement with short tang, blade folded over and end snapped off. Function unknown. Midden, Square 4K.
5. Implement with splayed blade and short tang, apparently broken at both ends. Original shape of blade unknown. Could have been a spear head but splayed shape suggests rather a razor. Midden surface.
6. Short iron rod with square section, corroded. Perhaps a broken tang. Midden, Square 4K.
7. Long tapering iron rod, much corroded but retains round section towards thicker end. Probably an awl. Midden, Square 6P.
8. Split long-bone showing extensive rounding and smoothing to its chisel-like end.
9. Portion of split humerus with curved end showing polish, similar to but less extensive than No. 8. Midden, Square 6P.
10. Portion of rib partly smoothed and partly broken at both ends from scraping action. Midden, Square 6P.
11. Bone splinter with point rounded and polished, otherwise unmodified. Midden, Square 6P.
12. Bone splinter with triangular section, pointed at both ends and polished all over. Function unknown. Midden, Square 6Q.
13. Tube of bird bone, cut and snapped at upper end, broken at other. Function unknown. Delicate internal bone trabeculae retained. Midden, Square 7P.
14. Tube made from ? cannon bone, cut and snapped at both ends then rounded off particularly at lower end. Latitudinal cut marks on one side. Internal as well as external polish indicates that it was worn as a bead. Midden, Square 6Q.

They are very regularly shaped, some almost give the impression of being mechanically made. The perforations are of equal width throughout which suggests that an iron drill was used. There is a tendency for the edge of the hole on one side to be frayed, the other being quite rectangular.

Part of a cowrie shell, identified by E. Voigt as Cypraea helvola, was found in Square Q6. This species occurs from the eastern Cape and Natal coasts northwards. Although broken, the specimen was sufficiently preserved to show that its back had been ground down as is usual with cowries from Iron Age contexts.

FAUNAL REMAINS

The small faunal sample can only give a general idea of what animals contributed to the diet, however the results are similar to those from other sites. Preservation was poor in the trench in row K and in Squares P7 and P8 where soil replaces the midden material. In addition there seems to be a smaller proportion of bone in this deposit than on some sites. The remains, especially those of the bovids, are much fragmented, jaw fragments are few and even many of the teeth are broken. The rodent and viverrid remains serve to identify the burrowers, and there has been some rodent gnawing of bones. The Aardwolf - Proteles cristatus - also lives in burrows, which would explain its presence in the assemblage.

The species and minimum number of individuals present is as follows:-

Cattle - adult	1
Cattle - juvenile	1
Sheep/Goat - adult	1
Sheep/Goat - juvenile	1
Alcelaphine antelope:-	
cf. Wildebeest	1
cf. Hartebeest	1
Aardwolf	1
Viverrid - small	2
Rodent - small	1
Frog	1
Freshwater mussel	10
<u>Achatina</u> sp.	1
<u>Opeas</u> sp.	1

As at most sites, the large and small stock and the Alcelaphines seem to have provided almost all of the protein. The freshwater mussel -

Unio caffer - is still available in the area but is no longer eaten according to local informants.

The large land snail - Achatina sp. - was present only at this site and at OU 2. The evidence is insufficient to suggest that it was eaten, while the shell at both sites is very thin and it does not appear to have been used to make beads as was sometimes the case in Iron Age times further north. A single specimen of a small land snail - Opeas sp. - is too small to be eaten and its presence, like that of the Achatina, is probably a natural occurrence.

CONCLUSIONS

The Type N settlement pattern associated with the ceramic industry and other cultural items and dated to the fifteenth century represents an archaeological entity which has not previously been defined. There is some similarity to the Uitkommet pottery (Mason, 1962) with its high incidence of comb-stamping, while some of Mason's (1968) Class 3 structures could be classified as Type N. However, it is not yet possible to draw direct parallels with sites beyond our area. The affinities will be examined in more detail in chapter 13.

The evidence from the excavation suggests that there was a fairly long occupation including at least one major modification or rebuilding, as represented by the later wall beside which the pot was buried. It was the midden accumulation after this wall had been built that yielded the radiocarbon date. The Iron Age occupation therefore started earlier than this phase of the occupation, but it is not known how much earlier.

The age determination of 505 ± 95 B.P. is as yet the earliest Iron Age date from the Orange Free State. It accords well with Ellenberger's estimate, based on the orally recorded lineages, that the Kwena under Napo arrived here some time around the end of the fifteenth to the middle of the sixteenth century, and that the Fokeng had been here for several generations when they arrived. Although it is not possible to assign particular structures within the settlement to specific groups of people, there is good reason to associate the Type N settlement as a whole with the early Fokeng-Kwena occupation at Ntsuanataatsi. The survival of at least 100 settlement units of this type indicates that there was a considerable concentration of population, perhaps several thousand. Thus both historical and archaeological evidence shows that this was an important centre at an early stage of the Iron Age settlement of the southern Highveld.

The later occupation, characterised by the conversion of Type N settlement units to Type V and the building of numerous corbelled huts, was largely confined to the crest of Skaaprand and does not seem to have affected the excavated area. This phase is undated but it could have been as late as the eighteenth or early nineteenth centuries. It can probably be assigned to the Tlokwa people who indeed claim to have built the ruins.

APPENDIX 1
Decorated sherds

OU 1
Midden

APPENDIX 1 Decorated sherds		Square 8P I above paving	Square 8P II below paving	OU 1 Midden	Square 6Q	Square 4K
Number of sherds	Motif numbers	1 2 1 1	2 1 3 1 1 1	4 2 1 1 2 1 3 1	1 1 1 1 2 2 2 2 2 1 2	
Body sherds	1	•		•	•	
Rim rounded	2	• • •	• •	• •	• •	• •
Rim flattened	3			•	•	
Rim pointed	4		•		•	
Rim misc.	5					
Plain surface	6	•	•	•	•	•
Burnished surface	7	• •		• •	•	•
Ochre burnish	8		•	•	•	•
Black burnish	9	•		•	•	•
Comb-stamping, pendant triangles	10	• • •	• •	• • •	• • •	•
" horizontal band	11					
" alternating diagonal panels	12		• • •			
" sherd too small	13					
Rim notches vertical	14	•				
Rim notches diagonal	15					
Misc. impressions on rim	16					
Finger-nail impressions on rim	17					
Finger-tip " " "	18					
Finger pinching " " "	19					
Applied band with pinching						
Applied band, other						
Finger impressions on body in zone						
" " parallel corrugations						
Cusps						
Stylus impressions in parallel rows						
Misc. body impressions						
Parallel grooves, sherd too small						
" " horizontal band						
" " pendant triangles						
" " chevron or arcade						
Ochre lines						
Dragged wavy lines						
Cross hatching						

APPENDIX 1
Decorated sherds

Number of sherds	Motif numbers	OU 1 Midden		
		Square 5K	Square 6K	Square 7K
Body sherds	1	1 1 1 1 1 1	1 3 2 3 1	1 2 1
Rim rounded	2	● ●	● ●	● ●
Rim flattened	3	●	● ●	●
Rim pointed	4			
Rim misc.	5			
Plain surface	6	●	● ●	●
Burnished surface	7	●	●	● ●
Ochre burnish	8	●	●	●
Black burnish	9			
Comb-stamping, pendant triangles	10			
" horizontal band	11			
" alternating diagonal panels	12			
" sherd too small	13	● ● ●	● ● ●	● ●
Rim notches vertical	14			
Rim notches diagonal	15			
Misc. impressions on rim	16			
Finger-nail impressions on rim	17			
Finger-tip " " "	18			
Finger pinching " " "	19			
Applied band with pinching				
Applied band, other				
Finger impressions on body in zone				
" " parallel corrugations				
Cusps				
Stylus impressions in parallel rows				
Misc. body impressions				
Parallel grooves, sherd too small				
" " horizontal band				
" " pendant triangles				
" " chevron or arcade				
Ochre lines				
Dragged wavy lines				
Cross hatching				

OVERLAY MAP OF SETTLEMENT TYPES



Fig. 6

THE SOUTHERN HIGHVELD AROUND
A.D. 1800



Fig. 96

THE SOUTHERN HIGHVELD AROUND
A.D. 1800



Fig. 96