

LETTERS TO THE EDITOR.

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The British Association and our Colonies.

THAT four hundred members of the British Association have recently visited the principal places of interest in South Africa, that they have been the recipients of magnificent hospitalities, that they have read papers and discussed points of importance bearing upon the development of African colonies, are facts well known to the reading public. Although so much has been written and said about what the association has done, but little has been conjectured as to possible outcomes from this remarkable excursion. To many the expedition may appear as a gigantic "picnic," the members participating in which have had a hurried glance at Africa and have returned with that modicum of knowledge which is proverbially regarded as dangerous. If, however, we turn to a list of the names of those who were members of the association party, and observe that it includes those of recognised leaders in science, literature, and in a variety of professions, casual conclusions of this nature are at once dispelled. What is realised instead is that South Africa has been visited by a number of specialists whose services are frequently retained by Governments and corporate bodies. No doubt these gentlemen have learned much, but it is difficult to imagine that they left South Africa without leaving some small return. Now that they are back in Britain it is tolerably certain that they have brought with them opinions bearing upon railways, mines, agriculture, emigration, and on other matters connected with the development of South Africa, all of which will command attention. A well known eastern country which sends its experts to exploit the western world attains a similar end by systematised departmental methods.

The benefits of greatest importance, however, may be the resultant of personal and friendly relationships which have been established between leading men of science and practical workers in two related countries. These relationships should stimulate reciprocity, remove misconceptions, and pave the way to cooperation in various directions. Regarded from this point of view, it is difficult to escape from the conclusion that the meeting of the British Association in South Africa has played an important part in strengthening a union between a parent and its offspring.

Should views of this description meet favour, it remains for members of the British Association and others to consider the possibility of extending the work of such national importance. One method by which this might be attained would be the organisation of an intercolonial meeting of the British Association. The difficulties connected with the organisation of such a convention, say in London, to be supplemented by visits to various centres in Britain, to which representatives and visitors from overseas connections should be invited, have already been informally discussed by home and colonial members of the British Association. They do not appear to be insuperable, and it may be anticipated that such an undertaking would meet with national approval and support.

JOHN MILNE.

The Stone Age of the Zambesi Valley, and its Relation in Time.

ABOVE and below the Victoria Falls stone implements are present in profusion, both in the river gravels on the highest margins of the Zambesi valley and also spread broadcast, along with rolled gravel, on the basalt platforms of the ancient river channel below the Victoria Falls. Stone implements are also found in abundance along the higher

"desert sands," which form the old Zambesi valley below the immediately on the basalt platform of chaledony, ferruginous sandstone; these are certainly the platforms at the base of the "desert

These "desert sands," which occur in the Zambesi valley, I was able to examine below the Victoria Falls. They are present, at places fifty, sixty, and perhaps a hundred feet in depth. The railway from the falls through these sands, and good sections of them, are to be seen. There are no stone implements, and no description to be found throughout the valley until we reach the very bottom of the chaledony, ferruginous sandstone on the basalt. The chaledony lies from a few inches to two feet or more thick, and marks the majority of the iron chaledony; likewise to a great extent the gravels of the river, both above and below the Victoria Falls. Of the thousands of implements that I handled, very few were made of basalt, but the rocks that lie at the base of the falls, and I did not find a single implement of dolerite. The quarries of the dolerite beds that lie at the base of the "desert sands" they were fashioning their implements of the chaledony formation there. The Zambesi was flowing at their feet, stream, precisely as it flows in the "desert sands" above the present falls, and the platforms were sunk under the water.

The evidences that the river gravels now resting upon the basalt of the Victoria Falls were deposited by the river flowing at a height of 400 feet or 500 feet level are as follows:—Above the Victoria Falls, on the bank of the river, near the ferry, the river gravels are well in evidence, rounded pebbles of chaledony, dolerite, and other rocks; the contained implements are water-worn, and of the same character as the gravels below the Victoria Falls. The implements of Palaeolithic type.

When we pass below the Victoria Falls, we can realise without doubt that once flowed over this area, and that the Victoria Falls have been the falls of the river. The gullies of the Rain Forest implements are to be found of the same character as the gravels above the Victoria Falls; the implements deposited there by the river when it was formed part of its bed. When we pass below the course of the old river-bed we find the promontories of the basalt, now 400 feet or 500 feet above the ravines, which overlook the zigzag of the Zambesi rushes 400 feet below, and bearing gravel. We cannot therefore conclude that these implements deposited there by the Zambesi when the river was in its present position. The surfaces I took implements some of which are of the same type as those in Europe, would be called typical Palaeolithic.

If I am correct in my observations, the evidence of the deposition of these implements, and the fact that an immense period of time has elapsed since the present man lived on the banks of the Zambesi, at the present measure that period by our present measure, but we may be satisfied that man has lived in the Zambesi valley below the Victoria Falls for the present level, and before its waters had reached the hard basaltic beds the wonderful chaledony quarries for forty miles below the Victoria Falls. Geologists may in the future be