Letters to the Editor

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Scientific Centralisation in the British Empire

THE leading article entitled "Ottawa and After", in *NATURE* of October 8, 1932, concludes with an interesting comment on higher education in the Dominions. I can speak with first-hand knowledge of conditions in New Zealand and Australia, and feel that there is a greater fundamental difficulty than the existence of a superior climate which is more conducive to outdoor life. The difficulty is an Imperial one. The Empire is centripetal, not centrifugal, and the tendency is to look to England as the only place where the best may be encountered, or the best work carried on. This influences educational outlook from the secondary schools to the universities, and the public, despite crudely nationalistic tendencies on the parts of some lesser journals, sees greener pastures in all branches of culture, in distant Albion.

Add to this the fact that Dominion universities are primarily concerned with professional training, in the present stage of development of these lands, and it becomes clear that the inducement to attract and retain good men in professional posts involves more than might be supposed. The old-established scientific societies with all their tradition and prestige, their facilities for publication and criticism of original work, and their influence in paving the way to higher posts, are in Great Britain.

The personal contacts made and maintained at meetings of the societies are of inestimable value in fanning the flame of original work. Just as the 'hungry forties' were the driving force in colonisation, so the underpayment of university assistants in the nineteenth century led them to posts in Australia at salaries far beyond their reach for many years had they remained in England and Scotland. But, just as it has become safer for the workers to remain in England, so is it with the professor's assistant, who now cannot be so readily induced to accept a professorial salary of £1,100 in Australia, with a sacrifice of the advantages of scientific centralisation, advantages greatly enhanced by the establishment of medical and industrial research subsidy under the ægis of the scientific societies.

It has long been my conviction that it rests with the better men of the Dominions themselves to save the outer Empire from the intellectual anæmia which highly centralised intellectual advantage and prestige must necessarily provoke. After their post-graduate years in England they must resist the almost overwhelming temptation to accept posts in the British Isles, and must, when opportunity offers, return and fight their lonely battle for its own sake.

Unless and until this happens our claim to Imperial greatness must remain open to question, for otherwise all our technical and governmental skill will have been directed to purely material ends, and the term 'Commonwealth of Nations' must remain a hollow sham.

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The Oldoway Human Skeleton

WE should be grateful if the following statement on the question of the age of the Oldoway human skeleton could be published in *NATURE*.

One of us (L. S. B. L.) brought back to England a large series of samples of the different strata which were collected not only from the region of the 'man site' but also from widely separated points, up and down the Oldoway Gorge. These samples have now been examined at the Imperial College of Science and Technology by P. G. H. Boswell and J. D. Solomon. The following conclusions emerge from their study.

(1) The materials of Beds II and III appear to be very similar to each other so far as their mineral constitution is concerned, but they can both be clearly distinguished from the materials of Bed IV and also from Bed V.

(2) The material of Bed V is so distinctive in its mineral content that it can be immediately distinguished from any of the four lower beds.

(3) Thin layers of steppe-lime, which in places occur at the base of Bed V, are not distinguishable with certainty from the steppe-lime which forms the top part of Bed V.

(4) The thin red-coloured deposit which is present in the section of the 'man site' overlying Bed II and underlying Bed V is a hillwash material in which the characteristic minerals of Beds IV and V occur.

(5) Samples of Bed II, actually collected at the 'man site', at the same level and in the immediate vicinity of the place where the skeleton was found, consist of pure and wholly typical Bed II material, and differ very markedly from the samples of the matrix of the skeleton which were supplied by Prof. Mollison from Munich.

Following from (4) above, it is clear that erosion had removed from the region of the 'man site' the whole of the overlying Beds III and IV before the hillwash, formed during the last stages of this process, was deposited and afterwards covered up by the formation of Bed V. Thus, at some stage before the deposition of Bed V in this area, the top of Bed II was exposed as a land-surface with a thin mantle of hillwash material.

We may further note that all of those who have examined the section at Oldoway are agreed in the opinion that the Oldoway skeleton cannot reasonably be regarded as having been buried after the deposition of Bed V proper, and of the steppe-lime which covers it.

One of the reasons which caused one of us (P. G. H. B.) in his letter in *NATURE* of August 13, 1932, to suggest a post-Bed V date, was the presence of small pieces of steppe-lime in the matrix sent from Munich. He was not then aware, however, of the presence of steppe-lime below Bed V, as mentioned in (3) above, so that there is now no necessity for upholding this view.

In order that the important question of the age of the skeleton shall be established on as sure a foundation as possible, the evidence outlined above will be supplemented by the results of a further examination, by Reek and his colleagues, of rock collections from Oldoway and the volcanic highlands to the east. Meanwhile, on the basis of the evidence summarised above, it seems highly probable that the skeleton was intrusive into Bed II and that the date of the intrusion is not earlier than the great unconformity which separates Bed V from the lower series. On the other hand, it seems certain that the skeleton was deposited where it was found before the main