bright hydrogen eruptions on the sun appears to be highly significant in view of the other occurrences to which attention has already been directed in NATURE. It must be mentioned, however, that radio experiments conducted in England on December 30, while the solar eruptions were in progress, indicate that the disturbed conditions of the ionospheric layers evident on December 3 were not reproduced on December 30.

"The Kiss Precise"

IN NATURE of June 20 last, we published some verses by Prof. F. Soddy under this title. Shortly afterwards, Mr. E. B. Wedmore sent two verses generalizing Prof. Soddy's equations for the circle and the sphere to space of n-dimensions, and more recently Mr. C. C. Mason has submitted a verse on similar lines. Prof. Soddy informs us that he received a verse (dated July 17, 1936) from Mr. Thorold Gosset, of 136 Chesterton Road, Cambridge, generalizing his equations, and, in response to his request, Mr. Gosset furnished a formal proof of the proposition later in the same month. Mr. Gosset seems to have extended the geometry of all the semi-regular figures to n-dimensions in a lengthy paper some forty years ago, but it remained unpublished, except for a few results which appeared without proofs in the *Messenger of Mathematics*. The existence of these figures has recently been rediscovered, some in Holland, some in England, and a paper by Dr. Coxeter on the subject has been published by the Royal Society, so that all are now known. Prof. Soddy's development of "The Kiss Precise" and "The Hexlet" appears elsewhere in this issue (p. 77). Dr. F. Morley has also recently furnished a formal proof of the hexlet, which is printed on p. 72. Mr. Gosset's fourth verse to the "Kiss Precise" is appended:

> And let us not confine our cares
> To simple circles, planes and spheres,
> But rise to hyper flats and bends
> Where kissing multiple appears.
> In n-ic space the kissing pairs
> Are hyperspheres, and Truth declares—
> As $n + 2$ such osculate
> Each with an $n + 1$ fold mate
> *The square of the sum of all the bends*
> *Is* n *times the sum of their squares.*

Museums and their Type Specimens

THE *Annals of the Transvaal Museum* (18, 349–413; 1936) contain four papers by Dr. R. Broom. The list of the Karroo reptiles is increased by 15 new genera and 23 new species. Many of these are to be described in further detail elsewhere, and this information leads us to wonder with what object Dr. Broom now publishes abbreviated descriptions, the day for seeking priority in the accounts of new species being assuredly passed. The species are described almost exclusively on their skulls, and most of these, to judge by the figures, were capable of restoration. This process is obviously a fine art as seen in the occiput of *Notœlurops*, pictured as preserved and as restored. Clearly, in dealing with such a large and widely distributed fauna as that of the Karroo, it is best for the collector to reserve his more imperfect specimens rather than to describe such as "types". In this matter of "types" Broom has much to say in his "Review of some Recent Work on South African Fossil Reptiles" where he considers the publications of ten workers. The most prolific of these was Boonstra, who has contributed no less than twenty-four papers in the last six years.

OBVIOUSLY this output can only have been possible on a very different technique from the laborious chipping away of the matrix in which the skull is embedded, this being usually regarded as the safest method in developing a skull. Boonstra worked in the British Museum, and we learn how he dealt with a type specimen of *Theriognathus* Owen (1876), fracturing it in several places with a hammer and chisel. "The specimen now is of more value to the morphologist", but surely such an operation should only have been performed by the skilled preparators of the Museum. In another specimen Boonstra failed to find two small canines which had been figured and so ground down the type to see their roots. Broom regards these operations on type specimens carried out by a visitor as "a gross breach of trust" on the part of a Museum to which "types" are supposed to be sacrosanct. This is a serious statement, damaging in that it is likely to deflect the flow of material to the Museum. Obviously it calls for a statement on behalf of the Museum as to whether the operations are correctly described and were specifically authorized by its responsible officers.

Radio Research in India

MANY readers of NATURE will recall that, during his recent visit to Great Britain, Prof. S. K. Mitra expressed a desire to see a Radio Research Board established in India to carry out research of a fundamental nature on radio communication in a manner analogous to the working of the corresponding British Board. While this scheme had the enthusiastic support of eminent British authorities, there appears to be some difficulty in getting the Government of India to take a favourable view of the project. An article in the *Amrita Bazar Patrika* refers to a speech made recently on this subject in the Physics Department of the University of Allahabad. It is reported that in the opinion of the Government, the research station attached to the All-India Radio Organization will be able to conduct all the research work required for the time being. As Prof. Mitra points out, however, there is a great need for the setting up of a fully equipped Radio Research Board laboratory where more fundamental work can be conducted by experienced workers from the universities without in any way overlapping or interfering with the more applied work of the broadcasting organization. In England, the British Broadcasting Corporation conducts research on its own particular problems independently of the wider and more fundamental work of the Radio Research Board. Arrangements are in force whereby close liaison is maintained between the two organizations as necessary, and this is found to be of mutual advantage.

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