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LXXIV.—Metamynodon bugtiensis, sp. n., from the Dera Bugti deposits of Baluchistan.—Preliminary notice

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their structure at all clearly, it is impossible to say anything as to their nature.

It is very difficult, knowing nothing as to the conditions of the gonads as a whole, to say what the meaning of the observed condition is. In the cases described by Goodrich and Orton, where the gonads were preponderatingly male, we naturally suspect that we are dealing with a condition of protandric hermaphroditism, though it is not impossible that the abnormal gonad was female from its first differentiation. On the whole, the balance of probability seems to me to be in favour of this view in this case also. There is much more male tissue present than female, and the condition of the testes which contain ova resembles rather that of an original male gonad which has been invaded by ovarian tissue than the reverse, the ova being apparently mainly young and having little or no appearance of degeneration. Any attempt at a theoretical interpretation is, I think, better avoided for the present, until we know more of the facts than we do now.

LXXIV.—*Metamynodon bugtiensis*, *sp. n.*, from the *Dera Bugti Deposits of Baluchistan*.—*Preliminary Notice*. By C. FORSTER COOPER, M.A., Superintendent of the University Museum of Zoology, Cambridge.

AMONG the fragments of numerous rhinoceroses found in the deposits of Dera Bugti in Baluchistan is a palate and two other fragments of a form which appears to be sufficiently different from the rest to be described as a new species.

The type-specimen is a palate with six teeth on each side, the last pair being just erupted from their alveoli.

The position of this animal depends somewhat on the correct interpretation of these teeth. If, as is the writer's belief, the last pair represent the third molars, then, from their shape, the specimen must be placed in the neighbourhood of the *Amyndodonts*, with which genus it is provisionally placed, although further material, when found, may demand a new genus for its reception.

The reason for regarding these teeth as the third molars lies in the fact that they occupy all the available space at the back of the series, except for the very small area of the post-alveolar tuberosity. This area on each side, as well as the posterior border of the palate, is unbroken and in good condition. On one side the tuberosity has been sectioned,

and has shown no trace of a tooth, which, if present, must at least have appeared as a germ.

The three anterior teeth are presumed to be the premolars

Fig. 1.

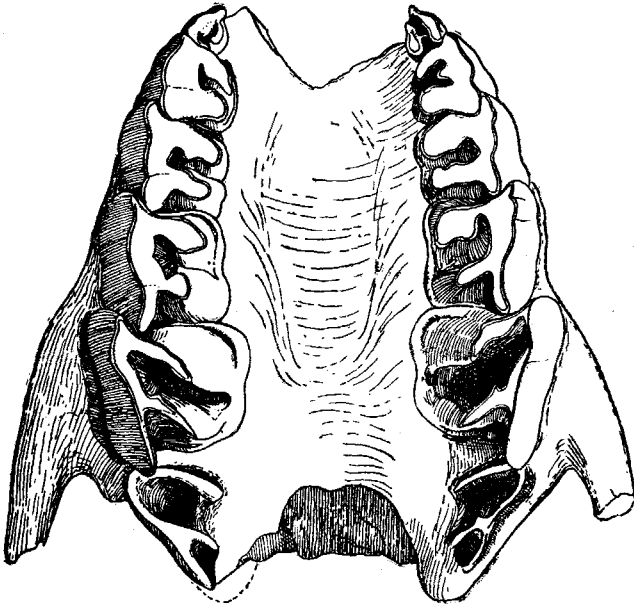


Fig. 2.

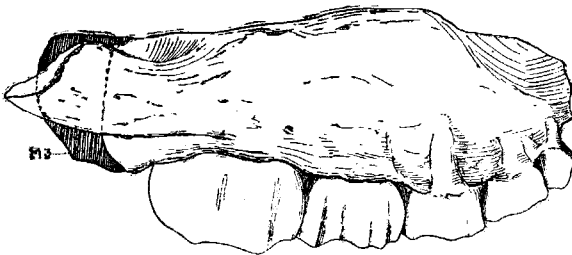


Fig. 1.—View of palate, $\times \frac{1}{4}$. The dotted line behind the last molar on the left (actual right) side shows the part of the alveolar tuberosity which has been sectioned.

Fig. 2.—Side view, $\times \frac{1}{4}$. M_3 marks the position of the third molar lying in its alveolus, from which it has partly been developed. The tooth is shaded dark to show its size.

2, 3, and 4. From the extent to which they are worn, the last premolar being rather more worn than the first molar, and from the fact that the last molar is only just appearing, they might reasonably be considered as milk-teeth. Fortunately, however, there are in the collection two other specimens of the three anterior teeth absolutely similar in size and shape, but one of them rather more and the other rather less worn than those of the type-specimen. These two specimens have been sectioned, and neither of them shows the slightest indication of any replacing teeth. Specimens of comparable age of other forms of rhinoceros from the same deposits show that the fourth premolar comes into full wear after the first three and at the same time as the third molar, and from this point of view the series might be read as four premolars and only two molars; but, if this were the case, the third molar should at least be ready to erupt, which shows that the reading of the last tooth of the series as the third molar is correct. It would appear further that, although the fourth premolar comes into use later than the first molar, and although for a period it shows less wear than the first molar, the wear soon equalizes, and then even reverses. This condition is clearly shown by a young adult specimen in the University Museum of *R. sumatrensis*, where the third molar is just touched by wear and the last premolar and first molar equally worn.

The specimen is broken away in front of the anterior teeth, but there is enough of the alveolar border remaining on one side to show that there was no tooth anterior to the series.

The assumption, therefore, that the teeth represent three premolars and three molars may be taken as being very probable. If this is the case, then the shape of the last molar prevents this form from being placed anywhere except in the neighbourhood of the genus *Amyndon*. The three molars consist of a simple protoloph and metaloph with strong protostyle and metastyle on the ectoloph, the metastyle on the third molar being as strongly marked as on the others. A small crochet is present on the metaloph of the second and third molars, but only towards the top, and would soon disappear in wear. This has happened on the first molar, if one was present. Of the premolars, the third and fourth are molariform. An internal cingulum is present and complete on the first two premolars and on the protoloph of the remaining teeth.

The length of the six teeth is 280 mm., of which the molar series takes 196 mm. The proportional lengths of the premolars and molars is thus not much different to those

given by Scott and Osborn for *Metamynodon**, but in the present specimen the teeth are less compressed antero-posteriorly and are more square in plan.

As nothing is as yet known of the form of the canines and incisors, the attribution of this species to the genus *Metamynodon* is tentative. Another Oriental species—*M. birmanensis*,—smaller than the present one, has been ascribed to this genus by Pilgrim †. It is, however, represented by very fragmentary remains, and seems to be as near to *Cadurcotherium* as to *Metamynodon*.

LXXV.—*Some Remarks about Eastern Hedgehogs.*

By EINAR LÖNNBERG, F.M.Z.S. &c.

WHEN recently classifying some hedgehogs from Eastern Asia, the present author had the occasion to study more closely the literature of this group. Among other papers he also studied an early, but very valuable paper by Sundevall ("Öfversigt af släktet *Erinaceus*," K. Vet.-Akad. Handl. Stockholm, 1841).

In this the author quoted speaks about thirteen different species of hedgehogs, some of which he describes for the first time. These are arranged in two groups, and about them Sundevall expresses his opinion in the following terms: "The known species show such a great agreement in structure that they may be regarded to constitute a single indivisible genus; but, as, nevertheless, some of them, viz. those which in the following constitute the second section, evidently form a small, extremely natural, subordinate group, many naturalists, who love to make new genera, may consider that they ought to separate them as an independent genus, and I wish to their service propose to use for this group the name *Ericius*. It will, however, in such a case be necessary to separate generically in a similar way *E. aethiopicus* and *E. heterodactylus*, which differ as much from each other as from *E. auritus* and *europæus*."

From this it is apparent that Sundevall recognised that the hedgehogs, in spite of their general agreement, could be divided into certain groups. Only for one of these groups he proposed, although with a certain humour, *Ericius* as a name of subgeneric value, but at the same time he admitted

* Scott and Osborn, Harvard Bulletin, vol. xiii. p. 169.

† Pilgrim and Cotter, Rec. Geol. Surv. India, vol. xlvii. part 1 (1916).