

PALAEONTOLOGY*ACERATHERIUM ARALENSE* n. sp.By A. A. BORISSIAK, Member of the Academy

Among the Old World fossil rhinoceroses which because of the fragmentary condition of their remains mostly defy taxonomic grouping, the *Aceratherium lemanense-tetradactylum* group is more sharply outlined. Up to this time its members were known from the West European Tertiary*. Lately, an Asiatic representative of this group (*Ac. Depereti*) has been described from the Dzhilanchik beds (Lower Miocene) of Turgai steppe (1). The form under description seems to belong to the same group. Its remains, comprising an almost complete skull and fragments of another specimen, were found during the excavations of the Aralian locality (*Corbula helmersenii* beds, Upper Oligocene).

All these forms have in common the skull structure: skull dolichocephalic, nasals very long and narrow, nasal notch deep, orbits shifted forwards, frontal region narrow, rhombic, abruptly tapering forwards (to the region of nasals) and backwards, notch of occipital margin deep, occipital wall low, narrow, fossae below the occipital crest deep, etc. The skull presents only small variations of these features in different forms. In the otic region the post-tympanic process is shifted on to the post-glenoid process. A distinctive peculiarity of the skull under description lies in the strongly developed supraorbital rugosities**.

The lateral nasal notch reaches as far back as the boundary P^3-P^4 ; the anterior margin of the orbit lies opposite the front part of M^2 ; infraorbital foramen, at the edge of the nasal notch over P^4 ; hind nasal notch of palate, opposite the middle of M^{2***} .

The most striking feature of the skull described is, however, the pattern of the dentition, *viz.* the premolars. Together with a sub-hypsodont condition of the crown, they display a very slight molarization (the lingual ends of the transverse crests converge, and the deuterococone fuses with the tetartocone, forming the lingual wall of the crown), and a total absence of accessory folds. At the same time they reveal a peculiar specialization, since they bear a third transverse hind wall of the crown. Along with this they fully preserve the common type of the upper premolars of the *Ac. lemanense* group, but one of the tendencies of these teeth, weakly expressed in other forms, attains here the highest development.

In P^2 the third crest is the less pronounced: proto- and metaloph join lingually forming the lingual wall, the hind end of which bends hook-like in labial direc-

*Besides the above cited, also *Ac. platyodon* and *Ac. (Diceratherium) asphaltense* are to be referred to this group.

**These rugosities are regarded as a sexual character

*** Dimensions: general length of skull, 630 mm; maximum width (in orbital region), 233 mm; occipital condyles, 70×45 mm; length of P^2-M^3 , 26, 32, 38, 40, 50, 61 mm, respectively.

tion; a similar hook is directed lingually towards it from the hind end of the ectoloph; these structures, however, are present only at the base of the crown, and only when the latter is much worn they form a crest or a wall closing the posterior valley. In P^3 and P^4 this crest is developed on a level with the proto- and metaloph. On the worn surface it consists of two lamellae of enamel (outer one, the cingulum; the inner, wall of the hind valley), between which penetrates the dentine of the mentioned «hooks» of the ectoloph and the lingual wall. The protoloph and the metaloph in all three teeth join by their lingual ends, but while in P^2 the lingual end of the metaloph is directed somewhat forwards, in P^4 it deviates backwards: the only feature speaking of a greater molarization of P^4 as compared with P^2 , so slight is the molarization of the premolars in the form described. As mentioned above, P^2 displays also the least specialization, the least development of the third crest.

The described hook-like processes of the lingual wall and the ectoloph are present in many other members of the *Ac. lemanense* group, too (e. g. in *Ac. lemanense* from Auvergne, kept in Jardin des Plantes, Paris, No. 2372; München—



Ulm, 1881, IX, 32 c; *Ac. tetradactylum*, Jardin des Plantes, No. 2380; *Ac. platyodon*, Lyon, etc.), but they do not form the hind wall.

At the same time all the elements of the premolar crown of the form described maintain the characteristic traits of the *Ac. lemanense* group: triangular protoloph at the beginning of wearing joined to ectoloph by means of a thin connexion; gradual modelling of the deuterocone from P^2 to P^4 ; metaloph in the form of a narrow (thin), slightly undulating lamella of equal thickness throughout its length, etc.

To achieve the characteristic of the premolars of the described form, it remains to note that they have a small parastyle fold and a prominent cingulum on the front, lingual, and hind sides of the crown.

The molars, too, possess the characteristic features of the teeth of *Ac. lemanense*: a rounded antecrochet larger than the cone of the protoloph (protocone) and as well modelled as that. Its dimensions increase down the crown, i. e. in the more worn M^1 it is larger on the worn crown surface than in M^2 and smallest in M^3 .

Crochet in the described teeth has the form of a small fold; in M^2 (less worn than M^1) the front margin of the metaloph and the lingual one of the ectoloph form four small sharp folds (scalloped); these folds become shallower down the crown and, finally, fade away (thus, they were present possibly in M^1 too, but vanished because of strong wear).

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REFERENCES

- ¹A. Borissiak, Bull. Acad. Sci. URSS, 777 (1927).

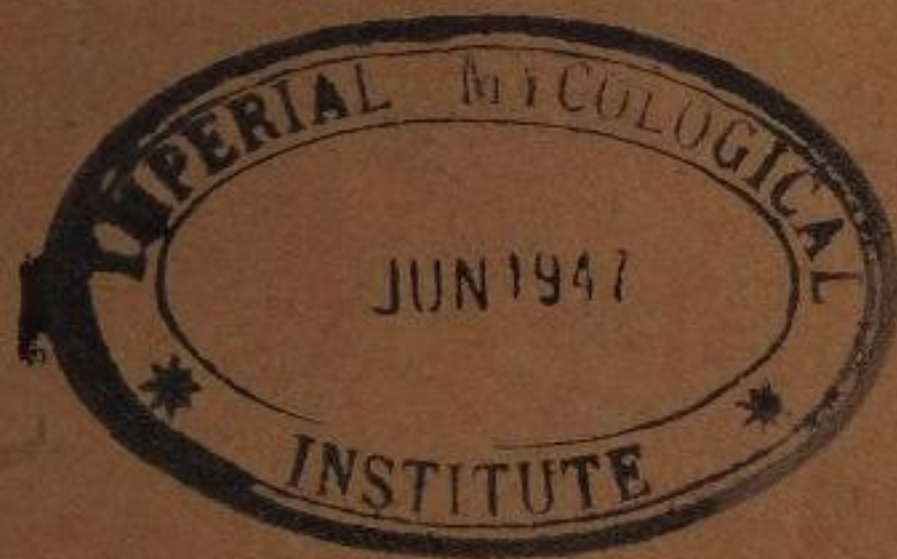
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