

Aceratherium Depereti n. sp. from the Jilančik
beds.

By A. Borisiak (A. Borissiak).

(Présenté par A. Karpinskij, membre de l'Académie des Sciences, le 18 Mai 1927).

The second representative of the Rhinoceroses¹ from the Lower Miocene deposits of the Turgai region belongs to the subfamily *Aceratheriinae*.² It is a large form with elongated skull and long thin limbs. It is represented by a great number of remains: four nearly complete skulls and very numerous bones of the extremities; vertebrae have been least preserved.

Skull. All the skulls are more or less deformed (Pl. I, Fig. 1—2), therefore not all the characters of the skull of the form under description may be fully reconstructed.

The skull is dolichocephalic, with long and narrow nasals. The frontal region is in all specimens inflected, and the occiput squered or laterally distended, the line of the superior profile of the skull being thus distorted. The frontal surface is rhomboidal in shape, with a slight longitudinal inflection; cristae parietales prominently expressed and rapidly uniting into a large and narrow crista sagittalis (its length varying in different skulls). The cranium is very narrow. The occipital shield is apparently feebly deflected backward; it is high and constricted upward; crista occipitalis forms a deep sinuosity directed forward.

The auricular region has not been uniformly preserved; its structure may be represented thus. Proc. paroccipitalis is up to 55 mm long (from the end of proc. posttympanicus) and is a long, straight process, slightly narrowed at its extremity. It is separated by a conspicuous groove from the

¹ See Bull. Acad. Sci., 1927, № p. 273—286.

² This group of Tertiary Rhinoceroses contains a large number of various forms and will probably in future be subjected to further subdivision. See Ringström. Palaeontologia sinica, (C), vol. I, fasc. 4, pp. 114 sqq.

shorter and more massive *proc. posttympanicus* disposed immediately before it. The relation of the latter to the *proc. postglenoideus* in the extant skulls, owing to the deformation not being uniform, is dissimilar: in the majority it abuts on the *processus postglenoideus*, and in one skull alone $\frac{1401}{D506}$ it is apposed to the latter from behind and fuses with it; this latter position must probably be regarded as normal in the skull of the form under discussion. *Proc. postglenoideus* is somewhat shorter and more massive than *proc. paroccipitalis*.

The zygomatic arches are fairly wide (up to 60 *mm* in the widest part) and thick (20—25 *mm* in the part mentioned), are constricted backward, but widen again at the surface of articulation. The anterior margin of the orbit lies opposite the hind part of M^1 (or in the interval $M^1 - M^2$; in one of the skulls it is removed still further back). The posterior margin of the naso-maxillary notch is placed between $P^3 - P^4$ (or P^4 and M^1). Lacrymale in some of the skulls is perfectly visible; it projects beyond the orbit to not more than 20 — 30 *mm*;¹ lacrymal channels ($\frac{1401}{D1150}$) are disposed inside the orbit at a short distance from its margin.

The nasals, narrow and long (280 *mm* in length, 210—220 *mm* from the naso-maxillary notch) are separated from the frontals by a suture forming a wide angle opening forward. United throughout their length they form a slight groove along the median line on the upper surface to which corresponds a swelling below. Towards the lateral margins the nasals thin out and are recurved downward and even slightly inward which gives them the shape of an overturned furrow. Towards the anterior end they are constricted and become thicker, their transverse section thus assuming a semi-circular shape; on the sides of the anterior extremity occur two crescentic indentations which cut it off obliquely.

The maxillare does not offer anything worth noting; the premaxillare forming a groove above the maxillare has been apparently partly preserved (the posterior portion).

Dentition. The premolars are feebly molarised (principally P^4); the features distinguishing them from the molars are most prominently manifested in teeth that are little abraded (cf. Pl. I, Fig. 3, and Pl. II, Fig. 1). They may be characterised by an inconsiderable modelling of the deuterocone and a small development of the antecrochet. Both the crotchet and crista

¹ Short lacrymale in dolichocephaly; cf. Ringström, l. c., p. 28. See also Gregory. Evolution of the Lacrymal Bone, p. 217.

occur, but are not uniformly developed; in most cases they unite and form a mediofossete. The cingulum is well developed.

The molars are characterised by a well modelled (anteriorly and posteriorly) protocone compressed from inward (sometimes even with a small groove along the inner surface). The antecrochet is relatively small, does not fill in the median valley and does not extend to its mouth (with the exception of M³); the crochet is wide and small; the crista is rudimentary. The parastyle is small, the outer ridge being well developed. The cingulum is present on the anterior and posterior faces of the tooth alone.

P¹ — first premolar — the crown is triangularly rounded and slightly elongated. The specimens extant are so much abraded that their structure cannot be ascertained. In one specimen only ($\frac{1401}{D1150}$) may be traced the remnants of a posterior, and possibly median, valley which indicate a considerable development of the metaloph.

P² — second premolar — is of very large size as compared with P¹ (may it not be D¹?). The crown is quadrilateral, narrowing inward with all but equally developed proto- and metaloph; the latter are constricted towards the ectoloph while their inner ends are much swollen; the deuterococone is not modelled on the protoloph, and the antecrochet is represented by a slight swelling; a crochet and crista are present; sometimes ($\frac{1748}{1}$, $\frac{1401}{D506}$, and $\frac{1401}{D1150}$) they fuse and form a round mediofossete; sometimes ($\frac{1401}{D1342}$) they remain disunited in spite of much trituration. The median valley is inconspicuously sigmoidally curved; when much abraded the inner ends of the proto- and metaloph unite ($\frac{1401}{D1150}$), and the valley is closed. The posterior valley is anteroposteriorly elongated. The ectoloph is very wide, forms a short wide parastyle and a weakly expressed anterior ridge on its outer face.

The cingulum is conspicuously developed on the front, back, and inner faces, being lowered anteriorly and raised posteriorly.

P³ — third premolar — is of the same form as the preceding, but slightly constricted backward owing both to the relatively less developed metaloph (as compared with the protoloph), and to the inclination of the posterior part of the ectoloph inward. On the protoloph which is slightly longer and wider than the metaloph, the deuterococone is feebly modelled, whence is more distinctly separated a wide and small antecrochet fusing with the metaloph in specimen subject to much abrasion. The crochet either fuses with a crista or the latter is little developed, and then the crochet is separated from the crista by a narrow fissure; in correspondence with the above a rounded mediofossete ($\frac{1401}{D506}$) is present, or the latter forms a continuation of the median valley ($\frac{1748}{1}$, $\frac{1401}{D1342}$); the latter is slightly curved, narrow, open ($\frac{1401}{D506}$) or closed ($\frac{1748}{1}$, $\frac{1401}{D1342}$, $\frac{1401}{D1150}$). The inner end of the metaloph is slightly bent forward. The posterior valley is present in the form of a fissure elongated (somewhat obliquely) anteroposteriorly. The ectoloph is wide with a large parastyle and a conspicuous external anterior ridge.

Cingulum as in the preceding tooth.

P⁴ — fourth premolar — retains the essential features of the preceding tooth, but is larger; the deuterococone and antecrochet are more conspicuously modelled, the remaining characters are the same.