

The remains of Chalicotherioidea from the Oligocene deposits of Turgai.

By A. Borissiak.

With one plate (VII).

Остатки Chalicotherioidea из олигоценовых отложений Тургайской области.

А. Борисьяк.

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The fauna of the Indricotherium-beds ¹ has provided but scanty remains of this group of Perissodactyla. To this is referred an upper molar tooth considerably worn out, fragments of the lower jaw and several bones of the extremities, also in the form of fragments.

Schizotherium turgaicum n. sp.

Upper molar, M²(?), (Pl. VII, fig. 1) measures 17,5 mm. in length, 17 mm. in breadth, i. e. it is of nearly square, or rather—rhomboid outlines; on account of being considerably worn out it allows to establish only the following characters: the exterior wall is considerably declined interiorly and is composed of two unequal semilunar lobes: the anterior, larger one, is deep with a very strong median ridge; the posterior, smaller one, is set obliquely, flatter, without any traces of a median ridge; the parastyle and mesostyle are nearly equal, the meta-

¹ See Annuaire de la Soc. Paléont. de Russie, v. II, p. 27.

style is absent. The interior half can be reconstructed with great difficulty: its anterior tubercle is larger than the posterior, does



Fig. 1.

not form a crista and is split by a fissure on the interior side; the posterior inner tubercle is compressed in the antero-posterior direction in the form of an oblique crista. The cingulum forms a small hypostyle.

The exterior wall of this tooth does not allow to refer it to any of the representatives of Equidae. The structure of the teeth of Hiracoidea¹ approaches it much closer, especially their interior half (the posterior exterior lobe, however, always has a median ridge), the closest allied being the teeth of the Chalicotheriidae²; the characteristic given to the teeth of this

forms by Depéret is fully in accord with the characters named above, whilst the compressed posterior interior tubercle excludes the possibility of the tooth described being referred to the last named group of Perissodactyla, the Titanotheriidae³. On account of its small dimensions and square outlines it belongs to the most ancient representatives of the Chalicotherioidea: even the form from the Quercy⁴ phosphorites is somewhat larger, still larger is *Schizotherium* (?) sp. mentioned⁵ from the Indian

¹ Andrews. A descriptive Catalogue of the Tertiary vertebrata of the Fayum, 1906, p. 86.

Schlosser. Beiträge z. Kenntn. olig. Säugethiere Fayum,—Beiträge Geol. Palaeont. Oest.-Ung. Orients, XXIV, 1911, p. 29.

² Depéret. Mammifères miocènes Grive-Saint-Alban,—Arch. Mus. Lyon, V.

Osborn, Eomoropus etc.,—Bull. Amer. Mus. N. H., XXXII, 1913, p. 261.

Holland a. Peterson, Osteology of Chalicotheroidea,—Mem. Carnegie Mus., 1914, III, № 2.

³ Depéret, l. c., p. 76.

⁴ Gaudry, Journ. de Zoologie, 1875, p. 523, pl. XVIII, fig. 13; Filhol. Ann. Sc. Géologiques, 1877, VIII, p. 1, pl. XX, fig. 343.

⁵ Pilgrim, New tertiary Mammals,—Rec. G. Survey India, 1910, XL, p. 67.

oligocene deposits. The first of the forms named, in the general outlines of the tooth (M^1), closely resembles the tooth described, the latter differing from it only in the form of the anterior inner tubercle (in the presence of the fissure mentioned already) and in the stronger expressed median ridge on the anterior outer lobe.

The lower jaw (fig. 2) is represented by two fragments, both—of the right side, both with three teeth, P_4 — M_2 , having the length of 15, 18,5 and 23,5 mm. respectively, and the breadth 9,10 and 12 mm. All the teeth are very slightly worn out (M_1 —the most, and P_4 —the least).

P_4 is smaller than the rest, has more rounded semilunar lobes, the posterior of which is considerably smaller than the anterior (weak development of the entoconid); the metaconid is divided from the metastylid by a deep fissure; the latter (metastylid) is in its turn also split by a small fissure; the protoconid and hypoconid are distinctly modelled, the latter being considerably smaller than the former; the cingulum forms a small crista in the antero-exterior angle.

M_1 . The molars are larger with acuter lobes the anterior of which is considerably narrower than the posterior. The metaconid is of relatively smaller dimensions than in P_4 , whilst the metastylid is larger, separated by a deep fissure, but not split in two; the entoconid is large. The cingulum bends round the paraconid, and forms an independent crista on the posterior side. There is a supplementary tubercle in the anterior valley.

M_2 is somewhat larger than M_1 , with a more developed paraconid, a narrower metaconid and a more posteriorly declined entoconid. The cingulum forms a stronger posterior ridge; supplementary tubercles are present.

The deep separation of the inner tubercles (metaconid—metastylid) and the inequality of the coronary lobes¹ prove beyond doubt that these teeth belong to a representative of the group of Chalicotheriidae. Corresponding in size to the upper molar described above these teeth stand in quite similar relations to the known representatives of this group, i. e. they be-

¹ Depéret, l. c., p. 68.