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ENTELODON ORIENTALIS N.SP. (SUIFORMES) FROM
THE OLIGOCENE OF THE GOBI DESERT, MONGOLIA

Abstract. — Two fragments of upper jaws of the genus *Entelodon*, found in the Oligocene of Khoer-Dzan near Dzamyn-Ude, Eastern Gobi Desert, are described. They are attributed to the new species, *Entelodon orientalis* n.sp.

INTRODUCTION

In 1962, the remains of the Oligocene mammals have been found by the present writer in a new locality of Khoer-Dzan near the railroad station Dzamyn-Ude in Eastern Gobi Desert. A fragment of the upper jaw of the entelodont, belonging to the new species, described below, was found among these remains.

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DESCRIPTION

Family *Entelodontidae* Lydekker, 1883

Genus *Entelodon* Aymard, 1847 (= *Elotherium* Pomel, 1847)

Entelodon orientalis n.sp.

(Pl. I, figs. 1-2)

Material. — A fragment of the left-side upper jaw with M^1 — M^3 (holotype) (Coll. No. 27—(1), Biological Section of the Mongolian Academy of Sciences). In addition to the holotype, the collection contains a fragment of the left-side upper jaw with M^1 and M^2 (Coll. No. 27—(2)).

Diagnosis. — A large form (the length of the $M^1 + M^3$ row = 83 mm.). The crowns are low with 6 well-developed, blunt cusps.

The anterior margin of the palatine notch is situated on the level of the middle of M³. Cingulum present on both the anterior and posterior side of the molars. M³ with a protoconule, metaconules are lacking.

Description. — In its dimensions, this species approaches *Entelodon magnum* Aymard. The length of the teeth M¹—M³ is approximately equal to their width. Crowns are low with 6 blunt cusps. The anterior margin of the palatine notch is on the level of M³. The M¹ grinding surface is slightly damaged. The tooth enamel is bluish to blue in colour.

The M¹ crown is trapezoid in outline. The anterior and posterior sides are almost equal in length. This tooth, smaller than M² and M³, has 6 blunt cusps disposed in two longitudinal rows. Cingulum does not occur on the inside, is poorly developed on the posterior side and well-developed in the anterior part. M² with a low crown, long on the anterior and short on the posterior side. Cingulum well-developed, except for the internal and external side of the tooth. The external pair of cusps (para- and hypocone) larger than the internal (proto- and hypocone); hypocone larger than protocone; accessory cusps almost equal in size and situated nearer the lingual side of the crown. The M³ crown identical with that in the former tooth. This tooth is provided with 5 low cusps. Protoconule well-developed, metaconule and talon lacking. Cingulum occurs on the posterior and anterior side of the tooth.

Dimensions are given in Table 1.

Comparisons. — Comparing the new species with *Entelodon magnum* Aymard and with *E. hungaricum* Kretzoi from Western Europe, one may find that its proto- and metaconules are well-developed, while in the latter two species, they are absent from M¹, M² and M³ or are very poorly developed (Kovalevskii, 1875; Kretzoi, 1941). It is impossible to compare

Table 1
Measurements and indexes of teeth of Oligocene entelodontids

Measurements (in mm.) Indexes (in %%)	<i>Entelodon orientalis</i> n. sp. (Khoer-Dzan, Mongolia)					<i>E. major</i> Biriukov (Biriukov, 1961)		
	No. 27-(1)			No. 27(-2)		M ¹	M ²	M ³
	M ¹	M ²	M ³	M ¹	M ²			
1) Max. length of tooth	25	30	27	29	33	28	33	29
2) Max. width of tooth	27	34	30	31	37	32	36	32
3) Max. height of tooth	18	19	18	22	19	21	22	22
4) 2 : 1 index	108.0	113.3	111.1	106.8	112.1	114.3	109.1	110.3
5) 1 : 2 index	92.4	88.2	90.0	93.8	89.1	87.5	91.6	90.6

Table 1 (continued)

Measurements (in mm.) Indexes (in %%)	<i>E. magnum</i> Aymard (Kovalevskii, 1875)			<i>E. diconodon</i> Trofimov (Trofimov, 1952)		<i>E. hungaricum</i> Kretzoi (Kretzoi, 1941)		<i>E. dirus</i> Mat- thew & Gran- ger (M.&G. 1923)
	M ¹	M ²	M ³	P ² sin.	M ² dext.	M ¹	M ²	
1) Max. length of tooth	27	36	33	32	32	34	39	42
2) Max. width of tooth	32	39	36	17	24	34	38	49
3) —	—	—	—	—	—	—	—	—
4) 2 : 1 index	118.5	108.3	108.3	188.4	75.0	100.0	97.0	116.0
5) 1 : 2 index	84.3	92.3	92.3	53.1	133.3	100.0	102.6	85.7

E. orientalis n.sp. with *E. diconodon* Trofimov from Southern Kazakhstan (Chelkar-Teniz) since fragmentary remains of the latter contain only P¹-sin. and M²-dext. (Trofimov, 1952).

The new species differs from *E. dirus* Matthew & Granger from the Oligocene gravels from Houldjin (Inner Mongolia) in the lack of the metaconule on M³ and in considerably smaller dimensions of teeth (Matthew & Granger, 1923). In its dimensions, proportions and distribution of cusps on the molars, *E. orientalis* n.sp. is similar to *E. major* Biriukov (Biriukov, 1961). It differs, however, from it in the presence of a protoconule on M³ and in distinctly shaped accessory cusps. This indicates that *E. orientalis* n.sp. is somewhat more primitive than *E. major* Biriukov.

Remarks. — Eight species of the genus *Entelodon* Aymard are known in the Oligocene of Eurasia. Many of them were erected on the basis of isolated teeth and, therefore, it is difficult to compare them, and also their systematic position is not entirely clear. In particular, this applies to such European species as *E. ronsoni* Aymard, *E. diquelhemi* Repelin, *E. depereti* Repelin and others, whose full tooth rows are unknown (Repelin, 1918). For this reason, a comparison of the new species with the West European ones, mentioned above, was impossible.

Occurrence. — Lower Oligocene, Khoer-Dzan, Eastern Gobi Desert, Mongolia.

LITERATURE CITED

- BIRIUKOV, M. D. 1961. Entelodont (Entelodontidae) iz sredneoligocenovych otloženij verchoviev Žilanšina. — *Mat. istor. fauny i flory Kazachstana*, 3, 11—20, Alma-Ata.
- KOVALEVSKII, V. O. 1875. Osteologia dvuch iskopaemych vidov iz grupy kopytnych Entelodon i Celocus. — *Izv. Imp. Obšč. Lubit. Estestv...*, 16, 1, Moskva.
- KRETZOI, M. 1941. Siebenbürgische Elotheriiden. — *Földt. Közlöny*, 71, 7—12, Budapest.
- MATTHEW, W. D. & GRANGER, W. 1923. The fauna of the Houldjin Gravels. — *Amer. Mus. Novit.*, 97, New York.
- REPELIN, J. 1918. Sur les nouvelles espèces du genre Entelodon Aymard etc. — *Acad. Sci.* 166, Paris.
- TROFIMOV, B. A. 1952. Novye entelodontidy iz Mongolii i Kazachstana. — *Tr. Paleont. Inst. AN SSSR*, 41, 145—154, Leningrad-Moskva.

DEMBERELIJN DASZZEWEG

ENTELODON ORIENTALIS N. SP. (SUIFORMES) Z OLIGOCENU PUSTYNI GOBI, MONGOLIA

Streszczenie

W pracy opisano dwa fragmenty szczęk górnych *Entelodon orientalis* n.sp., pochodzące z utworów oligoceńskich miejscowości Choer Dzan (w pobliżu stacji kolejowej Dzamyn Ude) we Wschodniej Gobi.

Diagnoza: Forma dużych rozmiarów (długość rzędu M^1+M^3 równa 83 mm). Korony niskie, z 6 dobrze wykształconymi, przytępionymi guzkami. Brzeg przedni wcięcia podniebiennego na poziomie środka M^3 . Cingulum występuje zarówno w przedniej, jak i tylnej stronie trzonowców. Protokonul występuje na M^3 , meta-konula brak.

ДЭМБЭРЭЛИЙН ДАШЗЭВЭГ

ENTELODON ORIENTALIS N. SP. (SUIFORMES) ИЗ ОЛИГОЦЕНА ПУСТЫНИ ГОБИ, МОНГОЛИЯ

Резюме

В статье описано два фрагмента верхних челюстей *Entelodon orientalis* n. sp. из олигоценовых отложений местности Хоёр-Дзан (вблизи железнодорожной станции Дзамын-Удэ) в пределах Восточной Гоби.

Диагноз: Форма крупных размеров (длина ряда $M^1 + M^2$ равна 83 мм). Коронки низкие, состоят из шести хорошо выраженных, притупленных бугорксов. Передний край небной вырезки находится на уровне середины M^3 . Воротничек развит на передней и задней стороне коренных зубов. Протоконуль имеется на M^3 , метаконуль отсутствует.

PLATE

Plate I

Entelodon orientalis n.sp.

- Fig. 1. Fragment of the upper jaw with M¹—M³. Holotype. (Coll. No. 27-(1), Khoer-Dzan, Eastern Gobi Desert; a occlusal view, b buccal view; nat. size.
- Fig. 2. Fragment of the upper jaw with M¹—M² (Coll. No. 27-(2), Khoer-Dzan, Eastern Gobi Desert; a occlusal view, b buccal view; nat. size.

