Measurements.—Type: Total length, 176 mm.; tail vertebrae, 97; hind foot, 21.5. Average of 10 adults from Shinumo Creek (3000 feet), north side of Grand Canyon, Arizona: 172.5 (163–178); 98 (91–106); 20.5 (19.5–21). Skull (type): Greatest length, 24.8; zygomatic breadth, 12.2; interorbital breadth, 4.4; length of nasals, 9.8; length of incisive foramina, 4.2; length of palatal bridge, 3.6; maxillary toothrow (alveoli), 3.5.

Remarks.—*Peromyscus c. peridoneus* is distinguished from any of the nearly related forms of *P. crinitus* by a combination of color and cranial details. There is evidence of intergradation with typical *crinitus* toward the north, with *auripectus* toward the east, and with *stephensi* on the west. Specimens from the northern and southern sides of the Grand Canyon appear to be identical.

Specimens examined.—Total number, 36, as follows: Arizona: Fredonia, 1; Grand Canyon (near Bass Camp, 3000–5200 feet), 3; near Grand Canyon Spring, 4000–7500 feet, 9; Betatakin Canyon, 3; Bright Angel Creek, 3 miles above mouth, 1; Bright Angel Trail, south side, 4800–6500 feet, 2; Shinumo Creek, 3000 feet, 12; Nankoweap Valley, 1. **Utah**: Beaver River, near Fort Cameron, 3; Parowan, 1.

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A NEW, LOWER OLIGOCENE, AMYNODONT RHINOCEROS

By Horace Elmer Wood, 2nd

This description of an intermediate link between the American Upper Eocene species of *Amynodon* and *Metamynodon planifrons* of the Middle Oligocene, is an excerpt from an incomplete revision of the Amynodontidae (part of a project which has been assisted by a grant from the Penrose Fund of the American Philosophical Society) and published here at the request of Professor W. B. Scott to render it available for quotation in part III of his report, "The Mammalian Fauna of the White River Oligocene," now in preparation.

Metamynodon chadronensis, new species

Synonymy.—*Metamynodon* sp. Matthew, 1909.

Type and type locality.—Amer. Mus. no. 11,866, consisting of both rami of the lower jaw, with the cheek teeth, from the Chadron Formation (Lower Oligocene) of Quin Draw, South Dakota.

Diagnosis.—$1\frac{?}{?}$, $C\frac{?}{?}$, $P\frac{2}{2}$, $M\frac{3}{3}$; considerably smaller than *M. planifrons*, a shade larger than *Paramynodon cotteri*; lower molars smaller, more brachyodont, less flattened laterally, and more primitive in pattern, than in *M. planifrons*; thin layer of cement on lateral surfaces of cheek teeth.

Matthew (in Osborn, Bull. U. S. Geol. Surv., no. 361, p. 104, 1909) cited *Metamynodon* sp. from the Chadron, evidently on the basis of Amer. Mus. no. 11,866, consisting of a lower jaw lacking the incisors and canines, collected in 1903 by H. F. Wells in the Lower Titanotherium Beds of Quin Draw, 4 miles from the Cheyenne River, Big Badlands, South Dakota. Mr. Wells can hardly be supposed to have been unable to distinguish between Chadron and Brule, and, in any case, the matrix is the typical greenish sandstone which fills channels in the Chadron clays. Preparation of the specimen showed that it is intermediate in size and character between *Paramynodon cotteri* of Burma and *M. planifrons* of the Lower Brule, being closer to the former in size. It is referred to

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Metamynodon on the basis of geographic probabilities, and of its known characters. Whatever genus it best may match when the skull and upper teeth are found, however, it is clear that it represents a new species, intermediate between the most advanced earlier American forms and *Metamynodon planifrons*, and that there is a native American line of amynodonts which is almost monophyletic.

This specimen is slightly larger than *Paramynodon cotteri* and definitely smaller than small individuals of *Metamynodon planifrons*. A thin outer coating of cement appears on the external surfaces of the teeth. $P_{\bar{3}}$ is reduced, as in these two forms, but the talonid crescent is a shade less atrophied than in *Metamynodon*. $P_{\bar{4}}$ is slightly less degenerate than the usual condition in *M. planifrons*, as the paraconid region is not yet reduced to an antero-posterior blade, but still has an internal ridge descending posteriorly and nearly reaching the metaconid. The molars are definitely less hypsodont, are less laterally compressed, and are more like advanced species of *Amynodon* than in *M. planifrons*. Each molar is noticeably smaller than the corresponding tooth in *M. planifrons*, and the accumulated difference for the molar series is striking. The molars have small internal cingula at the outlets of the talonid valleys, producing internal bulges in their outlines; but these bulges are less pronounced, especialy on $M_{\bar{2}}$, than in *M. planifrons*, although better developed than in *P. birmanicus*. $M_{\bar{3}}$ still has the posterior cingulum fairly well developed, as compared with *M. planifrons*; it is further reduced than in *A. intermedius*.

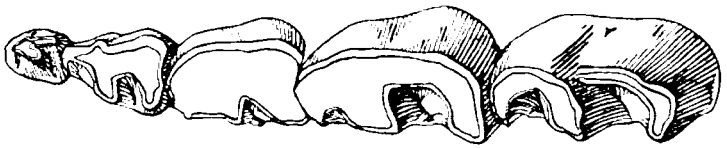

FIG. 1. *Metamynodon chadronensis*, new species, crown view of right $P_{\bar{3}}$ – $M_{\bar{3}}$ of Amer. Mus. no. 11, 866, x½; drawing by Dr. Florence Dowden Wood.

Measurements, in millimeters of holotype of Metamynodon chadronensis, n. sp.

	R.	L.		R.	L.
Jaw below $P_{\bar{2}}$		est. 70	$AP.P_{\bar{4}}$	26.3	26.8
Jaw below $M_{\bar{2}}$ (crushed)	80.2	80.6	$Tr.P_{\bar{4}}$	est. 18.5	19.1
$P_{\bar{3}}$–$M_{\bar{3}}$	183.5	178.3	$AP.M_{\bar{1}}$	33.9	33.5
$P_{\overline{3-4}}$	40.4	41.6	$Tr.M_{\bar{1}}$	25.4	23.5
$M_{\overline{1-3}}$	144.1	141.8	$AP.M_{\bar{2}}$	50.2	47.4
$AP.P_{\bar{3}}$	18.8	17.1	$Tr.M_{\bar{2}}$	27.8	27.7
$Tr.P_{\bar{3}}$	13.3	13.0	$AP.M_{\bar{3}}$	59.0	59.3
			$Tr.M_{\bar{3}}$	24.9	25.8

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