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A NEW OREODONT SLAB

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THE NEBRASKA STATE MUSEUM

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BY ERWIN HINCKLEY BARBOUR
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A slab of pale, reddish-brown sandstone, exhibiting the articulated skeletons of two oreodonts, has been placed on display in the west corridor on the first floor of Morrill Hall. Apparently, a female and well-grown young one lay down together and perished, perhaps from disease, or from chilling winds. They must have been buried quickly, for all of the bones are present, are in perfect condition, and are in articulation, especially in the old one. In the adult the articulation is complete from the ungual phalanges of the two fore-feet to the terminal caudal, even though in the figure the skeleton is somewhat obscured in the pelvic region by the overlying hind quarters of the young animal. The left fore-leg is hidden by the skull. The sternal ribs, as well as the ribs, are in place. The bones are firm, and of ivory white-ness, and show up well against the brownish sandstone. This fine specimen was found in the Gering formation (Lower Miocene) near Birdcage Gap, Morrill County, Nebraska, by the field parties operating there in September 1931, and was dug out later by Mr. and Mrs. C. Bertrand Schultz, students in the University of Nebraska, and assistants in the museum. By them it was later prepared for exhibition.

The sandstone slab is mounted in a panel of cement carefully rubbed down shortly after the initial set. This obviates the use of wooden frames which are always artificial, obtrusive, and distracting. The gray rock-like cement gives a pleasing border with an agreeable contrast to the pale reddish-brown sandstone, and it seems to set off the mount as a whole, beside giving it strength. It is, moreover, in conformity with similar mounts already displayed in the same corridor. The panel is 25 by 54 inches including a 3½ inch margin of cement. The sandstone has been carefully chiseled away around the two skeletons, and is deeply recessed around the smaller bones to give shadows.

The skull of the adult is slightly crushed to one side, and the top is somewhat restored. In the skeleton of the younger animal seven consecutive pre-sacral vertebrae were out of

their true alignment, but have been placed in their approximate positions. All other bones lie as found.

Oreodonts as a group are strictly North American in origin and distribution, none having been found elsewhere. They were called "ruminating hogs" by Dr. Leidy, because they combined characters common to the pig, camel, and deer. "Cud chewing swine" is but another expression of the same idea. The Oreodontidae were mostly small, but they tended to grow larger with time. They varied in size from those as small as terriers to medium sized ones as large as sheep, up to the largest, which must have been like yearling cattle in size, as shown by the unusually large skulls which occur in western Nebraska. The oreodonts have long seemed to be an underestimated group.

In spite of many modifications and changes in size, oreodonts are considered a conservative race, and they remained so from their advent in the Upper Eocene with *Protoreodon* and *Protagriochoerus* the oldest members, to their total extinction in the Middle Pliocene, *Merychyus, Merycochoerus,* and *Metoreodon* being the last survivors. Certain startling transformations are to be noted, but they are confined rigidly to the teeth and skull, for the body reached its fixed form early. A close parallel is realized in the skulls and bodies of the various elephants. Of the family Oreodontidae, there are some twenty genera and over one hundred species. In the genus Promerycochoerus, there are twenty-three species.

The taxonomic position of the Oreodonts is shown in the following condensed tabulation. It will be seen that they occupy a position between the swine on the one hand and the camels and deer on the other.

Order ARTIODACTYLA. The even-toed ungulates.

Section 1. PRIMITIVE ARTIODACTYLS.
Section 2. SUINA. Pig-like artiodactyls.
Section 3. OREODONTA. Primitive American ruminants.
Section 4. TYLOPODA. Camels and llamas.
Section 5. TRAGULINA. Primitive and ancestral ruminants.
Section 6. PECORA. True, or modernized, ruminants such as deer, cattle, and the like.

MEASUREMENTS

	Adult		Young	
Length of skull, greatest	270	mm.	191	mm.
Length of skull, basal	245	mm.	170	mm.
Width of skull, greatest	147	mm.	109	mm.
Diameter of orbit			26	mm.

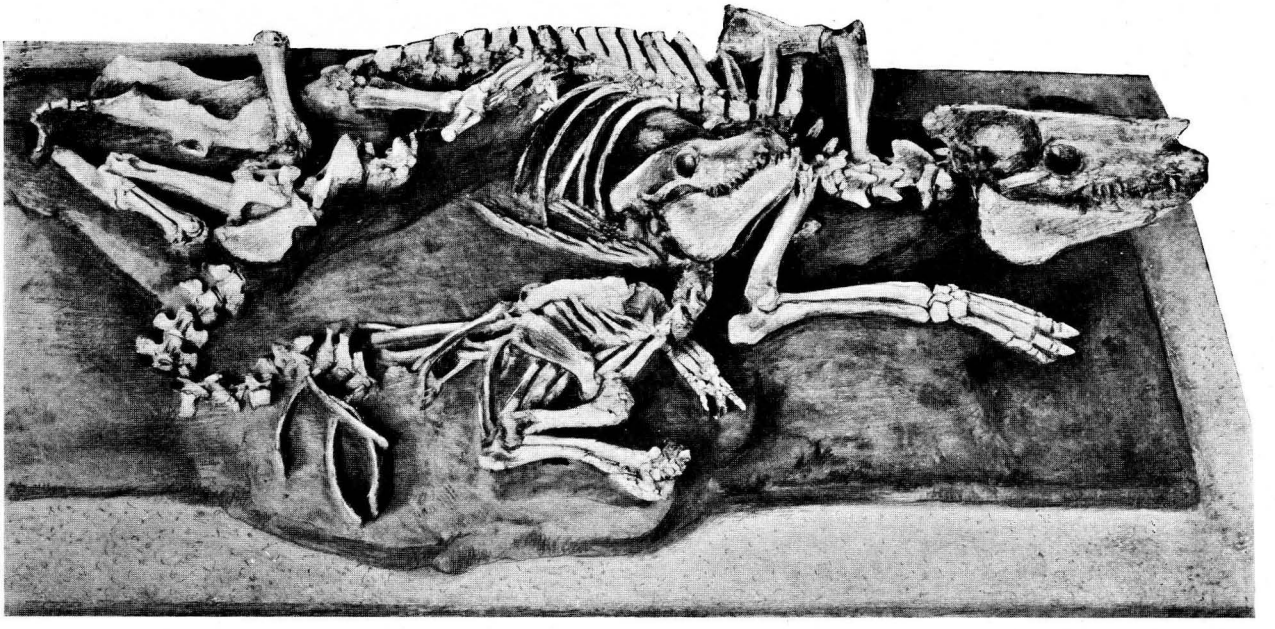

Fig. 162.—A panel mount showing the skeleton of a a female oreodont Promerycochoerus sp. and a well-grown young one, lying upon the pale reddish-brown sandstone out of which they were chiseled. Specimen No. 15-9-13, The Morrill Palaeontological Collections. The Nebraska State Museum, The University of Nebraska.

Length of upper molar series	63	mm.	52	mm.
Length of upper premolar series	58	mm.	46	mm.
Length of mandible, greatest	208	mm.	153	mm.
Depth of mandible from top of coronoid	109	mm.	88	mm.
Length of lower molar series	66	mm.	52+	mm.
Length of lower premolar series	58	mm.	46	mm.
Width of atlas	98	mm.		
Height of axis	60	mm.		
Entire length of skeleton to last caudal	1272	mm.		
Length of scapula	142	mm.	104	mm.
Length of humerus	173	mm.	140	mm.
Length of ulna	195	mm.	150	mm.
Length of radius	148	mm.	115	mm.
Length of manus (total)	146	mm.	140	mm.
Length of pelvis	209	mm.		
Length of femur	195+	mm.	155+	mm.
Length of tibia	182+	mm.	145+	mm.
Length of astragalus	33	mm.	29	mm.
Length of calcanium	64	mm.	51+	mm.
Length of pes (total)	162	mm.	147	mm.
Length of caudals	160	mm.	160	mm.

ACKNOWLEDGMENTS

Especial acknowledgments are due to Mr. S. R. Sweet of Bridgeport, and Mr. Fred Gilman of Redington. Both are vigorous collectors of vertebrate fossils in their respective regions and are students of the subject. They have contributed freely from their private collections to the cabinets of the State Museum. In fact acknowledgments should be extended to citizens everywhere for their friendly cooperation. All museum field work has been a self-supporting institution since its organization in 1891. It seems to be common knowledge that the work is financed by the funds donated by generous citizens. Accordingly the flora, fauna, and resources of the State are being saved without cost to the taxpayer. Many citizens whose means allow, have contributed liberally. Others have rendered an equivalent by donating specimens, and by giving information. It is upon such good will and moral support that the State Museum has been built.

BIBLIOGRAPHY

A complete bibliography of the Oreodontinae may be found in "Second Bibliography and Catalogue of the Fossil Vertebrates of North America" by O. P. Hay, published by Carnegie Institution, Washington, January 1930.

The University of Nebraska,
Lincoln,
March 20, 1932.