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1941

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Schultz, C. Bertrand, "A New Fossil Bovid from Nebraska With Notice of a New Bison Quarry in Texas" (1941). *Bulletin of the University of Nebraska State Museum*. 28.
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BULLETIN OF THE UNIVERSITY OF NEBRASKA
STATE MUSEUM

C. BERTRAND SCHULTZ, DIRECTOR

VOLUME 2 LINCOLN, NEBRASKA, DECEMBER 1941 NUMBER 7

A New Fossil Bovid from Nebraska
With Notice of a New Bison Quarry in Texas

BY ERWIN HINCKLEY BARBOUR AND C. BERTRAND SCHULTZ

A NEW FOSSIL BOVID, *PARABOS DODSONI*,
NEW GENUS AND SPECIES

AN interesting and unique bovid skull was reported to the staff of the University of Nebraska State Museum in 1938 by Mr. Alvin McReynolds of Nehawka, Nebraska. The specimen was found in 1933 in a ravine north of Nehawka by Messrs. Merritt and Harold Dodson, brothers. Although the skull was not in place, it appears to have been washed out of a nearby Pleistocene clay deposit by floodwaters. The specimen is well preserved and is of a dark brown, almost black color. In 1938 it was loaned to the Museum for study and photographing but was not obtained as a permanent acquisition until June 17, 1941, when Messrs. Frank Walker Johnson and C. Bertrand Schultz visited the Dodson brothers at Nehawka and procured the specimen for the Morrill Paleontological Collections.

DESCRIPTION AND DISCUSSION

Parabos dodsoni,¹ new genus and species

Type.—Skull, lacking dentition, No.1-17-6-41, University of Nebraska State Museum.

Locality.—SW $\frac{1}{4}$ of sec. 31, T. 11 N., R. 13 E., 2 $\frac{1}{2}$ mi. N. and $\frac{1}{2}$ mi. W. of Nehawka, Cass County, Nebraska.

Horizon.—Pleistocene (exact age undetermined).

Generic and Specific Characters.—Form and proportions of skull approaching those of *Bos*, but differing in horn-cores and other characters; frontals broad; occipital crest very thick and overhanging; occiput extended, broad, and shallow; horn-cores flat, curving downward, outward,

¹ Named in honor of Merritt and Harold Dodson.



Fig. 24.—*Parabos dodsoni*, new genus and species. Dorsal view of the skull, No. 1-17-6-41, The University of Nebraska State Museum. $\times 1/7$.

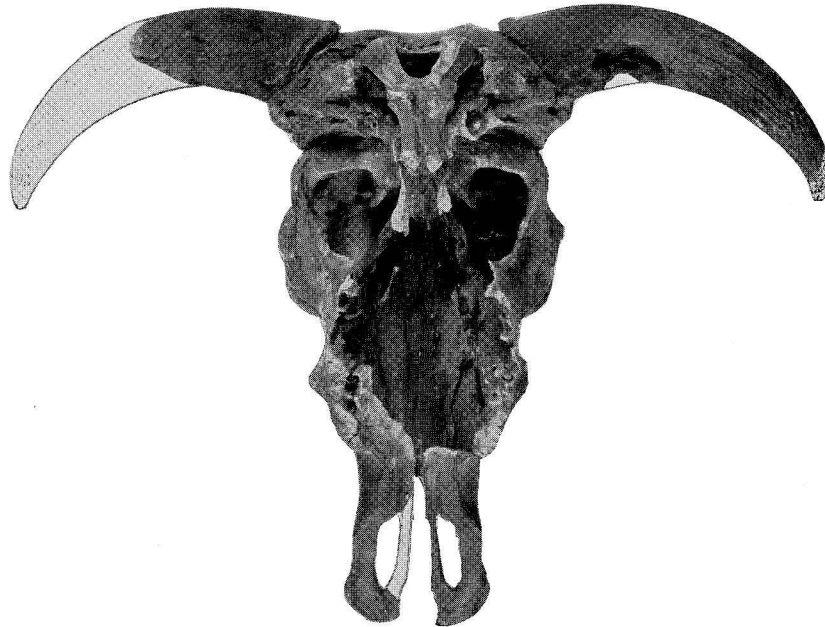


Fig. 25.—*Parabos dodsoni*, new genus and species. Ventral view of the skull. $\times 1/7$.

and forward from skull; horn-core encircled by a very rugose and prominent burr-like ridge at the base.

Measurements.—See table of measurements.

Discussion.—The presence of a *Bos*-like form from the Pleistocene of the Great Plains is something of an anomaly. The specimen does very closely resemble some of the Asiatic bovines, but differs enough to be generically distinct. Comparisons have been made with all material in the University of Nebraska collections, and with the ample material in the American Museum of Natural



Fig. 26.—*Parabos dodsoni*, new genus and species. Posterior view of the skull. $\times 1/7$.

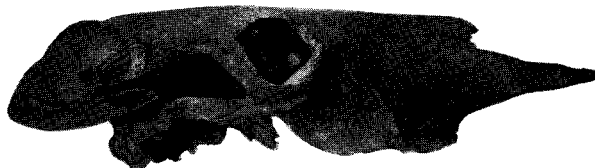


Fig. 27.—*Parabos dodsoni*, new genus and species. Lateral view of the skull. $\times 1/7$.

History which was kindly made available by Dr. H. E. Anthony and the late Dr. Walter Granger. *Parabos* differs distinctly from *Bos*, *Bibos*, *Poephagus*, *Bubalus*, and *Bison*. The horn-cores and the shape of the occiput definitely distinguish the new form from any of the musk ox-like forms. The flattened horn-cores, reminiscent of those of the water buffalo (*Bubalus*), constitute the most distinctive character.

Numerous marks showing the gnawings of rodents may be seen on various parts of the skull. The anterior ends of the nasals have been completely chewed away, as well as a portion of the left horn-core. These gnawings appear to be ancient rather than recent.

MEASUREMENTS

**Measurements of skull of *Parabos dodsoni*, new species, No. 1-17-6-41,
The University of Nebraska State Museum.**

	<i>mm.</i>
Length from posterior of the occipital condyles to anterior of premaxillae.....	505
Length from anterior notch of foramen magnum to anterior of premaxillae.....	469
Length from middle of occipital crest to anterior of premaxillae.....	537
Length from middle of occipital crest to posterior of nasals.....	241
Distance from upper border of foramen magnum to middle of occipital crest.....	117
Distance from top of occipital crest to inferior articular surface of condyles.....	(160)*
Width of occipital region at external auditory meatus.....	265
Width of skull at constriction between orbits and bases of horn-cores.....	210
Distance (min.) between orbits.....	221
Width across facial protuberances.....	190
Distance across skull below infraorbital foramen.....	119
Distance between bases of horn-cores, on anterior side.....	230
Distance between bases of horn-cores, on posterior side.....	150
Diameter of base of horn-cores, fore-and-aft (not including burr or rugose swelling).....	99
Diameter of base of horn-cores, vertical (not including burr or rugose swelling).....	63
Circumference of horn-cores, at base (not including burr or rugose swelling).....	255
Circumference of horn-cores, around burr at base.....	300
Length of curve along outer surface of horn-core.....	(410)
Length of curve along inner surface of horn-core.....	(305)
Distance between tips of horn-cores.....	(740)
Length of nasals.....	(190)
Width (max.) across nasals.....	76
Diameter (max.) of orbits.....	70
Width of occipital condyles.....	107
Length of molar-premolar series, based on alveolar measurements.....	133

* () = approximate.

THE LIPSCOMB BISON QUARRY, LIPSCOMB COUNTY,
TEXAS

In the fall of 1938 a large deposit of bison bones was reported to the University of Nebraska State Museum by Mr. Charles H. Falkenbach of the Frick Laboratory, American Museum of Natural History. The deposit was located on the farm of Mr. Commodore Hopper, 16 miles north of Canadian, near Lipscomb, in Lipscomb County, Texas, on Sand Creek, a branch of Wolf Creek. A preliminary examination had been made by Mr. Falkenbach, who arranged to exchange the prospect with the University of Nebraska for excavating privileges in certain Nebraska quarries. On May 20, 1939, the Texas bison locality was visited by a field party consisting of Messrs. Charles H. Falkenbach, John C. Blick and N. Z. Ward of the Frick Laboratory, and Messrs. E. E. Brier, John Adams, Lynn Robert Wolfe, and C. Bertrand Schultz of the University of Nebraska State Museum.

A careful examination of the bone deposit showed that the remains, although they were very near the present surface of the ground, were well fossilized and at one time had been deeply buried. Several terraces are well developed along Sand Creek and the bones appear to be located in the highest (35 to 45 feet) terrace.

A flint scraper was found *in situ* among the bones and it was at once decided to make further excavations to determine the species of bison and the type of artifact. A field party composed of Messrs. John Adams, William Hendy, and James Crosby was sent from the University of Nebraska to the Lipscomb Bison Quarry, as it is called in the field records. The group arrived at the quarry on June 10 and immediately began excavations. A grooved Folsom-type dart-point was found *in situ* on the first day of excavation. Work at the site continued until August 26, with Messrs. Harry Tourtelot and Robert Kubicek joining the party on July 31. Mr. and Mrs. C. Bertrand Schultz visited the site three different times during the season, and aided in the excavating.

A total of nine essentially complete grooved Folsom points, nine partial Folsom points, four large scrapers or knives, and a snub-nosed scraper were found. A number of chips of flint, including a longitudinal channel flake from a groove of a Folsom point, gave evidence that Early Man probably camped at the site and chipped artifacts there. Charcoal and burned bones were found at various places throughout the quarry, especially along the borders. Some of the skeletons of the bison were almost completely articulated, but the bones around the fringe of the quarry were disarticulated and badly broken. Most of the skulls were

closely associated with each other at the south end of the excavation.

A total of thirty-eight boxes and crates of fossil bison material was collected from the site to add to the Morrill Paleontological Collections. A study of the specimens shows that the bison is identical with the form found at the Folsom quarry in New Mexico, i.e., *Bison antiquus taylori*. The measurements of one of the largest male skulls is given here for reference. A complete report on the bison from the Lipscomb quarry, together with a record of the fossil bison from other localities in America, will be published in a forthcoming paper.

MEASUREMENTS

Measurements of skull and mandible of *Bison antiquus taylori* from Lipscomb County, Texas, No. 1-8-8-39, The University of Nebraska State Museum.

Skull	
	<i>mm.</i>
Length from posterior of the occipital condyles to anterior of premaxillae.....	596
Length from anterior notch of foramen magnum to anterior of premaxillae.....	554
Length from middle of occipital crest to anterior of premaxillae.....	635
Length from middle of occipital crest to posterior of nasals.....	283
Distance from upper border of foramen magnum to middle of occipital crest....	122
Distance from top of occipital crest to inferior articular surface of condyles....	180
Width of occipital region at external auditory meatus.....	296
Width of skull at constriction between orbits and bases of horn-cores.....	330
Distance (min.) between orbits.....	306
Width across facial protuberances.....	217
Distance across skull below infraorbital foramen.....	170
Distance between bases of horn-cores, on anterior side.....	435
Distance between bases of horn-cores, on posterior side.....	405
Diameter of base of horn-cores, fore-and-aft (not including burr or rugose swelling).....	97
Diameter of base of horn-cores, vertical (not including burr or rugose swelling).....	95
Circumference of horn-cores, around burr at base.....	330
Length of curve along outer surface of horn-core.....	(375)*
Length of curve along inner surface of horn-core.....	(310)
Distance between tips of horn-cores.....	(960)
Length of nasals.....	236
Width (max.) across nasals.....	111
Diameter (max.) of orbits.....	78
Width of occipital condyles.....	148
Length of molar-premolar series.....	170
Mandible	
Length from posterior of condyle to anterior of incisors.....	(500)
Depth below anterior of third inferior molar.....	71
Length of inferior molar-premolar series.....	170

* () = approximate.