Art. XXXIV.—*A Fossil Ruminant from Rock Creek, Texas, Preptoceras mayfieldi sp. nov.;* by Edward L. Troxell.

Among the very abundant fossil remains found at Rock Creek there was the skull of a ruminant, and possibly belonging to it were an atlas and some rib fragments. Associated with these bones were parts of *Elephas*, *Mylodon*, *Auchenia* and *Equus*, representing the fauna of the early Pleistocene.

The skull resembles somewhat that of the ox, especially in the general form and position of the horns, which come out in

Fig. 1.

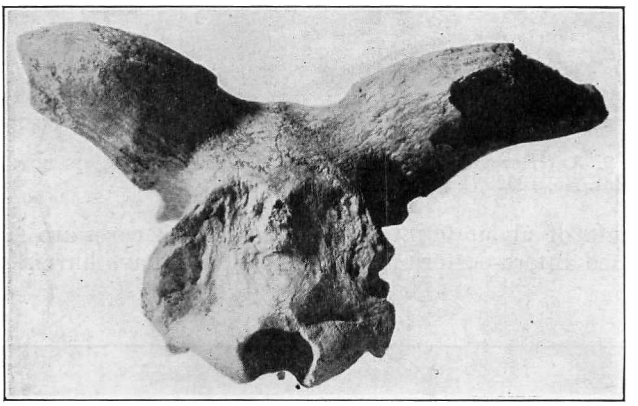

Fig. 1. Posterior view of skull of *Preptoceras mayfieldi*, sp. nov. Holotype, Cat. No. 10920, Yale Museum (× ·25).

the plane of the face, trending upward, then downward and forward. At first it was taken to be the skull of a sheep, but it is found to be very different. It is about one-half larger than a skull of *Ovis rockymontanus* and the horns, which are not so large, do not curve backward nor are they set close together. It is probably allied to a specimen from New Mexico, viz: *Liops zuniensis* Gidley.* But of all known skulls it resembles most that of *Preptoceras sinclairi* Furlong † from the caves of California. It is, therefore, put under that genus.

The new species is named in honor of Mr. Gidley Mayfield, on whose ranch the specimen was found. This is located

* Proc. U. S. Nat. Mus., vol. xxx, 1906, pp. 165–167.
† Univ. of Cal., Bull. Dept. Geol., vol. iv, 1905, pp. 163–169.

about a mile from the famous quarry where ten skeletons of *Equus scotti* have been unearthed.

The horns of the new species arise from the frontal bones at

FIG. 2.

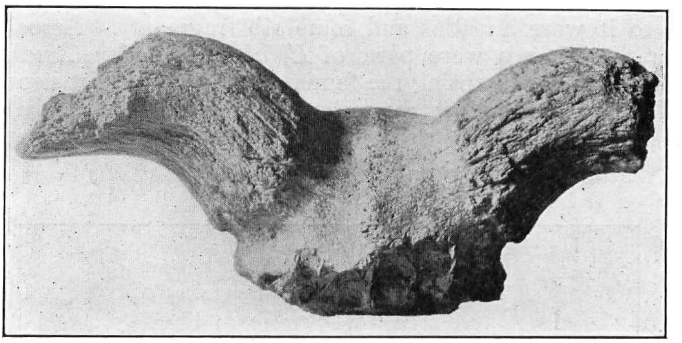

FIG. 2. Anterior view of skull of *Preptoceras mayfieldi*, sp. nov. Holotype, Cat. No. 10920, Yale Museum (× ·25).

an angle of about 90° to each other. The cores are slightly flattened antero-posteriorly and at the bases have burrs.

FIG. 3.

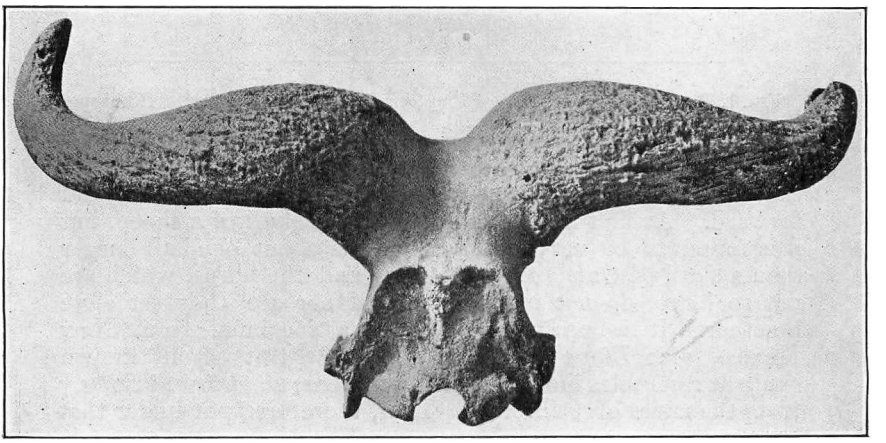

FIG. 3. Posterior view of skull of the type specimen of *Preptoceras sinclairi*, after Furlong (× ·2).

The frontal bones form the crown and join the parietal well back on the head ; the suture lies in general about one centi-

meter above the lambdoid crest. The parietal is not paired but, as in many Artiodactyla, was probably fused early in life. The frontal and squamosal form a deep groove on the side of the head, parallel to the suture, continuing into the orbit anteriorly and ending posteriorly at the ridge which lies along the side of the skull. The outer extremity of the lambdoid crest continues into this sharp ridge, which marks the union of the squamosal, parietal and occipital portion of the skull laterally, giving this region a flat appearance. The crest loops downward in its middle portion to join the central tubercle which formed the attachment for the nuchæ ligamentum—the chord which follows along the back of the neck. Two fossæ are observed on either side of this tubercle. They are shallow, however, since the lambdoid crest does not markedly overhang the occiput. The lambdoid suture below the crest is obscured.

The skull is very deep from a point between the horns to the occipital condyles and in general is very stout. The anterior portion is broken off just above the orbits. A slight rise in the frontals anteriorly suggests that the animal had a rounded forehead. The foramen magnum for the most part opens on the dorsal surface of the occiput.

Dimensions.	mm.
Inter-cornu space	75
Diam. of horn cores ant.-post.	74
" " " " transverse	85
Breadth of forehead, anterior to horns	144
Breadth of cranium, posterior to horns	92
Depth from point between horns to extremity of occipital condyle	167
Width of basi-occipital	55
Cranio-facial angle, about	45°
Occiput-facial angle, about	68½°

The specimen is placed in the genus *Preptoceras* because of the very great general similarity to the type. It differs from *Preptoceras sinclairi* in that its fossæ just beneath the lambdoid crest are not so deep; the lambdoid suture lies near this crest (this is like *Eucratherium*); the horns are smaller, less rounded dorsally and more widely separated; they do not come out "from the extreme posterior and lateral ends of the frontals" as in the type species but are situated three centimeters from the posterior and four from the lateral borders.

The present species differs very greatly from *Liops zuniensis*. The horns of the latter are set wide apart, come out straight from the skull and droop decidedly; they have no burrs on the horns, no true lambdoid crest and the skull generally is smooth in the extreme.

Ovis is frequently mentioned in the literature, but no authentic record of a true fossil sheep can be found earlier than what might well be considered Recent.

The atlas found associated with the skull and corresponding in size has some distinctly camel-like characters. The transverse foramen follows the wall of the lateral process and opens on the edge near the axial articulation. This articular surface is broad and flat and a wide strip extends beneath the neural canal. The atlas is over one third broader than that of a full grown camel, indicating a powerful neck. The animal must have been quite strong, for the skull also is heavy and the horns are large.

The occiput-facial angle as nearly as can be determined is $68\frac{1}{2}°$, showing the great posterior extension of the crest or the low position of the condyles.

The facio-cranial angle is, roughly measured, 45°. Such a great deflection of the face is characteristic of the sheep and is indicative of a grazing adaptation. The angle increases with age but in the adult sheep goes beyond 50°. From the sutures, which are not closely knit, and from this angle the animal is considered as having almost reached maturity.

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