

A NEW OROMERYCID (MAMMALIA, ARTIODACTYLA) FROM THE EARLY OLIGOCENE OF MONTANA

DONALD R. PROTHERO

Department of Geology, Occidental College, Los Angeles, California 90041

ABSTRACT—A new oromerycid, *Montanatylopus matthewi* n. gen., n. sp., is described from the early medial Chadronian (early Oligocene, about 36 Ma) of McCarty's Mountain, Madison County, Montana. It is much larger and has higher crowned teeth than other known oromerycids. *Montanatylopus* is most closely related to *Eotylopus* from the Chadronian of the High Plains and Trans-Pecos Texas.

INTRODUCTION

THE primitive tylopod family Oromerycidae was first recognized by Gazin in 1955. Except for *Eotylopus* and *Prottylopus*, most oromerycids are known only from teeth and jaws. Oromerycids are remarkably rare in the fossil record and are presently known from only five genera: *Merycobunodon* Golz, 1976; *Malquiferus* Gazin, 1955; *Prottylopus* Wortman, 1898; *Oromeryx* Marsh, 1894; and *Eotylopus* Matthew, 1910. Except for *Eotylopus*, oromerycids are restricted to the middle and late Eocene (Uintan-Duchesnean) of North America. *Eotylopus* is known from the latest Eocene (Duchesnean) of California and Texas, and ranges to the mid-Oligocene (latest Chadronian) of the High Plains. Previously, *Eotylopus* was the only Oligocene oromerycid known.

Because they are rare, incompletely known, and primitively quite similar to other late Eocene selenodont artiodactyls, oromerycids have long been poorly understood. Scott (1899, 1940, 1945) originally considered them to be camels, but Matthew (1910) recognized that they were a different group. Gazin (1955) formally created the Family Oromerycidae, and its distinctiveness was recognized by subsequent authors (Wilson, 1974; Golz, 1976; Black, 1978). The derived feature that distinguishes oromerycids from all other selenodont artiodactyls is the deep lingual notch separating the entoconid from the metaconid on lower m3. Oromerycids can also be recognized by their retention of the primitive tylopod condition of bifurcate protocones on the upper P4-M3, which is also found on the most primitive camels (Wilson, 1974).

In 1938, J. Leroy Kay of the Carnegie Museum found this new oromerycid at the McCarty's Mountain locality, near the town of Glen, Madison County, Montana (Figure 1). This locality was first described by Douglass (1905, p. 209-211). According to Wood et al. (1941, p. 25), it "is merely a locality term for Oligocene exposures on its slopes or at its base, in northwestern Madison County, Montana. Douglass divided the exposures into several successive fossiliferous levels, but his unpublished notes have not yet been located; much or all of the Oligocene may be represented." According to Emry, Bjork and Russell (personal commun.), the McCarty's Mountain fauna is probably early medial Chadronian in age, slightly younger than the Yoder local fauna of Wyoming (earliest Chadronian), and slightly older than the Pipestone Springs local fauna (medial Chadronian) of nearby Jefferson County, Montana (Figure 1). This would make the McCarty's Mountain local fauna about 36 Ma in age (Prothero, 1985).

Abbreviations used in this paper are as follows: CM, Carnegie Museum of Natural History; Ma, million years before present; UW, University of Wyoming Museum of Geology. For ease of word processing, the system of dental abbreviations follows Jepsen (1966), with upper teeth indicated by upper case P and M for upper premolars and molars, lower case p and m for lower premolars and molars.

SYSTEMATIC PALEONTOLOGY

Class MAMMALIA Linnaeus, 1758
Order ARTIODACTYLA Owen, 1848
Suborder TYLOPODA Illiger, 1811

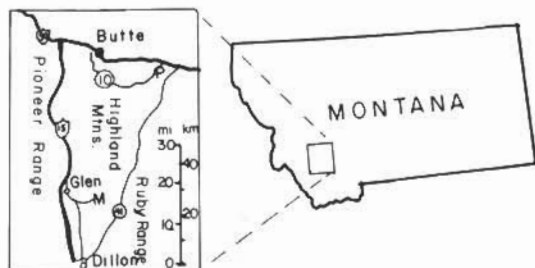


FIGURE 1—Index map of Montana, showing location of McCarty's Mountain local fauna (M) and Pipestone Springs local fauna (P).

Family OROMERYCIDAE Gazin, 1955

MONTANATYLOPUS n. gen.

Figures 2–8

Etymology.—In reference to its locality, McCarty's Mountain, Montana; *-tylopus* (Greek, masculine, "knobby foot"), in reference to its tylopod affinities.

Type and only species.—*Montanatylopus matthewi* n. sp.

Diagnosis.—Distinguished from all other oromerycids by its much larger size (M1–3 length = 50 mm) and relatively hypsodont teeth.

MONTANATYLOPUS MATTHEWI n. sp.

Etymology.—In honor of William Diller Matthew, premier student of the Tylopoda, who first recognized the distinctiveness of the oromerycids.

Holotype.—CM 9918, a nearly complete skeleton. See Table 1 for dimensions.

Horizon and locality.—From the type locality, McCarty's Mountain, Madison County, Montana. A jaw fragment from the Eocene–Oligocene Rubio Peak Formation, southwest New Mexico, may be referable to this taxon (S. Lucas, personal commun.).

Diagnosis.—Same as for genus.

Description.—The skull of *Montanatylopus* (Figures 2.1, 3.1–3.3) lacks only the zygomatic arches and a few anterior teeth. The skull is nearly twice the size of that of *Eotylopus* (Figure 2.4), the largest oromerycid previously known. The rostrum has the same basic shape and curvature of that of *Eotylopus*, although it is a bit broader transversely. The premaxilla extends posterodorsally to the level of P2. There is no facial fossa, and apparently no lacrimal vacuity, although this is difficult to judge, since the anterior portion

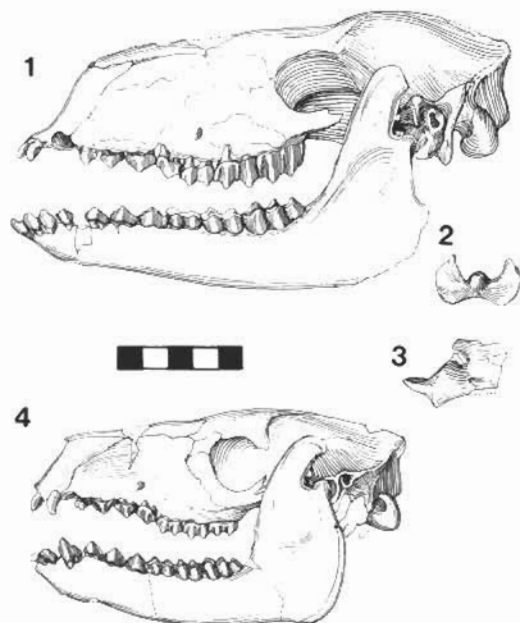


FIGURE 2—*Montanatylopus matthewi*, CM 9918. 1, skull and jaws. 2–3, axis. 4, *Eotylopus reedi* (UW 216), skull and jaws. Scale bar in centimeters.

of the skull is badly fractured, with some bone missing. The infraorbital foramen lies immediately above M1. The orbits flare widely from the side of the skull. The supraorbital ridge projects laterally, and then abruptly tapers back just posterior to the orbit. Weak supraorbital canals are visible near the midline of the skull between the orbits. The braincase is relatively small and tapered posteriorly. The sagittal crest is quite weak, as in *Eotylopus*. The lambdoid crest and occiput are more posteriorly elongated than in *Eotylopus*, even though they are partially broken in CM 9918.

The basicranium is moderately well preserved. The auditory bullae are broken, but were apparently quite small, and may have been filled with spongy bone (as in camels). However, this is difficult to judge because of the poor state of preservation. The hypoglossal foramen is well preserved. There is no sign of the "winglike" basioccipital processes seen in camels and protoceratids. A large groove which apparently represents the medial and posterior lacerate foramina passes medial to the bulla. The external auditory meatus is just slightly above the level of the

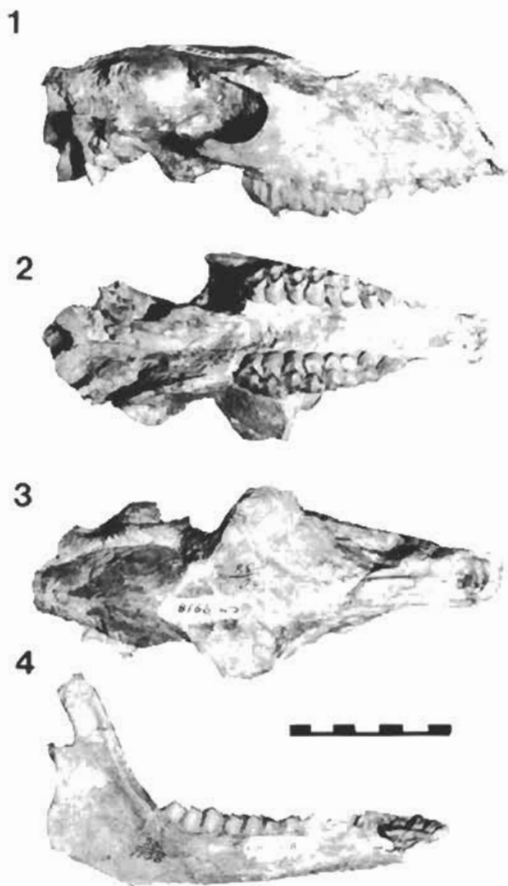


FIGURE 3—*Montanatylopus matthewi*, CM 9918. Skull in 1, right lateral, 2, palatal, 3, dorsal views. 4, right lateral view of mandible. Scale bar in centimeters.

basicranium. It is closed ventrally by the bulla. A large postglenoid foramen and foramen ovale are visible just anterior to the bulla. The glenoid itself is shelflike, but much narrower than in camels. The basisphenoid has a very prominent ventral "keel" that narrows anteriorly. The pterygoid processes are long and flare slightly posterolaterally. The anterior border of the internal nares is at the level of anterior M3.

The upper dentition (Figure 4.1) is remarkably robust and hypsodont for an oromerycid. It is clearly oromerycid, however, since it shows the bifurcate protocones characteristic of that family. I1 and I2 are small and spatulate. There is no trace of the I3 alveolus, and both I3's are missing. Judging from the lack of space for them, they may

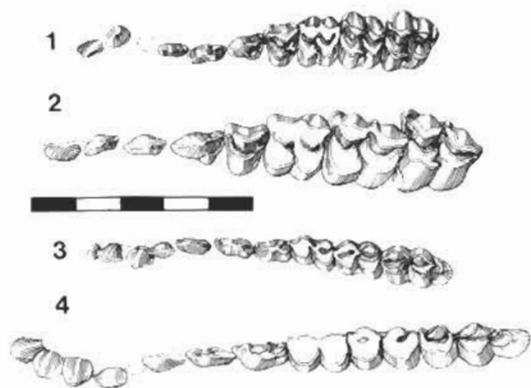


FIGURE 4—Crown views of dentitions. 1, upper teeth of *Eotylopus reedi*, UW 216. 2, upper teeth of *Montanatylopus matthewi*, CM 9918. 3, lower teeth of *Eotylopus reedi*. 4, lower teeth of *Montanatylopus matthewi*. Scale bar in centimeters.

have been absent. There is a large alveolus for the upper canine, although the canine itself is not preserved. There are no significant diastemata between the anterior teeth, or between the cheek teeth. P1 is bladeflike, with a bifurcate anterior ridge. P2 is also bladeflike, with simple ridges. P3 has a slightly bifurcate anterior ridge and a distinct posterolingual cusp. The posterior ridge is flared slightly laterally, and has a faint posterior cingulum. P4 is selenodont and very broad transversely, with a posteriorly bifurcate lingual selene, and faint anterolingual and posterolingual cingula.

The molars are relatively hypsodont compared to those of other oromerycids. They are well worn, so their selenodonty resembles that of camels. Wear has obliterated the bifurcation of the protocones on M1–2, but it is still distinct on M3. The mesostyles are progressively stronger on more posterior molars. The protocones have weak anterolingual cingula, and a faint trace of a lingual cingulum can be seen on the metaconules of M3. The ectolophs are aligned as in *Eotylopus*, but not as straight as in camels. The metastyles of M2–3 have a distinct posterolingually deflected process that nearly touches the posterior lingual selene of the metaconule, and closes the gap between them. The parastyles have a similar lingual process, which abuts the metastyle of the adjacent tooth with wear.

The lower jaws (Figures 3.4, 4.4) show the typical tylopod condition of the long, slender

TABLE 1—Dimensions (in mm) of *Montanatylopus matthewi*, CM 9918.

Skull length (I1 to occipital condyle)	191.8	p3 width	3.9
Facial length (I1–M3)	115.4	p4 length	12.0
Cranial length (M3 to occipital condyle)	77.4	p4 width	5.5
Rostral width at P1	25.0	m1 length	15.0
Maximum width at orbit	82.6	m1 width	7.8
Length upper canine alveolus	8.4	m2 length	16.5
P1–M3 length	90.0	m2 width	8.9
P1–4 length	41.1	m3 length	25.0
M1–3 length	50.0	m3 width	9.7
P1 length	8.8	Atlas length	39.5
P1 width	4.2	Atlas width	43.3
P2 length	11.0	Axis width	33.1
P2 width	3.7	Scapula length	125.8
P3 length	12.1	Scapula, width at neck	20.5
P3 width	6.5	Scapula, maximum width blade	72.0
P4 length	9.7	Humerus length	152.3
P4 width	11.6	Humerus midshaft width	20.4
M1 length	14.1	Humerus distal width	26.3
M1 width	14.8	Ulna length	257.3
M2 length	17.6	Radius length	204.8
M2 width	16.0	Radius-ulna midshaft width	16.5
M3 length	18.0	Radius-ulna distal width	28.2
M3 width	18.4	Metacarpal III length	101.5
Depth of jaw below p2	18.5	Metacarpal III midshaft width	8.0
Depth of jaw below m2	23.3	Metacarpal II length	99.1
Jaw length, i1 to angle	184.0	Metacarpal II midshaft width	4.0
Height jaw, coronoid–base	88.1	Pelvis, sacral width	72.5
Length of mandibular symphysis	24.7	Pelvis, width at acetabulum	75.0
p2–m3 length	87.6	Pelvis, anterior sacrum to pubic symphysis	101.0
p2–4 length	34.8	Femur, distal width	38.7
m1–3 length	55.3	Patella, length	31.8
p2 length	11.4	Patella, width	21.0
p2 width	3.9	Metatarsal III length	134.4
p3 length	12.1	Metatarsal III midshaft width	9.2

coronoid process and the high, rounded anterointernally deflected articular process. The angular process lacks the characteristic dorsal "hook" seen in most camels. The masseteric fossa is very shallow. The symphysis is short, and extends to the level of pl. The ramus is otherwise quite slender and narrow. No mental foramina are preserved.

The three lower incisors and the canine are spatulate in shape, with distinct lingual ridges. They flare from the symphysis without any diastemata. The p1 is missing. The p2 is a bulbous blade, with a divided posterior crest, both wings of which bend lingually. The third lower premolar is similar to p2, except that it is narrow and the posterolingual crest is stronger and more anteriorly oriented. The fourth lower premolar is less bladelike, and has a distinct trigonid formed by the crests that branch lingually off the central cusp. It also has a distinct talonid ridge with a faintly twinned entoconid. The molars are much more hypsodont than in any other oromerycid. The first lower molar is so highly worn that it shows nothing beyond the typical se-

lenodont condition. The second lower molar is also very worn, but does show a distinct groove separating the entoconid and hypoconulid, another distinctive oromerycid feature. The third lower molar is transversely narrowed, and shows the entoconid-hypoconulid groove even better than do the other molars. The hypoconid is separate from the rest of the tooth at the apex, although with greater wear it would merge. The trigonid is open anteriorly, but completely closed posteriorly. The hypoconulid is ridgelike, with a slight lingual curl at its posterior end. Lingual to the hypoconulid two tiny cusps occupy the gap between the entoconid and the hypoconulid.

Postcranial skeleton.—*Montanatylopus matthewi* is known from a postcranial skeleton, which is missing only part of the vertebral column and some of the hind limb bones. The five cervical vertebrae preserved are relatively shorter than those of *Poebrotherium*. This indicates that *Montanatylopus* had a much shorter neck than a camel, a neck more like that of *Eotylopus*.

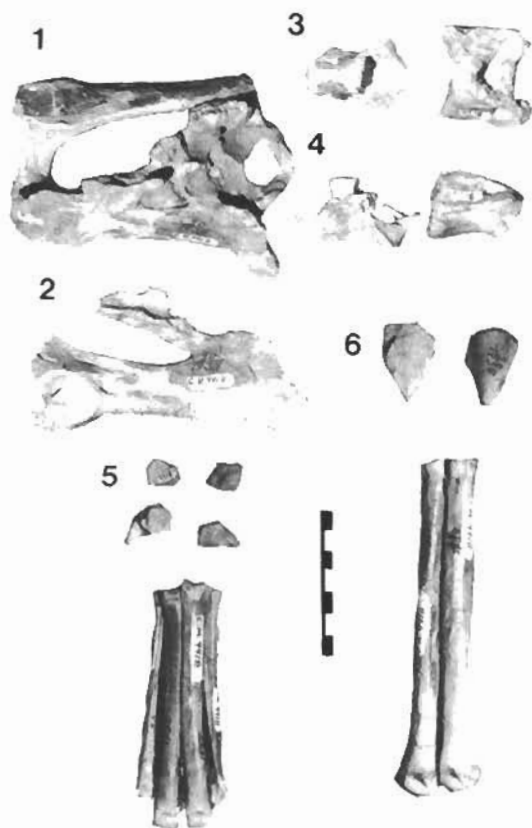


FIGURE 5—Skeleton of *Montanatylopus matthewi*. 1-2, pelvis in dorsal (1) and right lateral (2) views. 3-4, atlas (right) and axis (left) in dorsal (3) and right lateral (4) views. 5, manus: pisiform (upper left); scaphoid (upper right); unciform (lower left); lunar (lower right); metacarpals II-V (bottom). 6, patellae (upper left and right) and metatarsals III-IV (bottom). Scale bar in centimeters.

The atlas (Figures 5.3, 5.4) is much broader, heavier, and more rectangular than a camel atlas. The anterodorsal facets for the occipital condyle are very robust in contrast to the anteroventral facets. The ventral surface of the centrum has no axial ridge. There is almost no trace of a neural arch on the dorsal surface, although there appears to be some breakage in this area. The transverse processes are very narrow and straight sided, giving the atlas a rectangular shape in dorsal view. A deep atlantal foramen for the superior branch of the first spinal nerve perforates the anterior margin of the transverse process just posterior to the anterodorsal articulation with the occipital condyle. The

posterior articulation for the axis is broad and triangular. The vertebralarterial canal does not seem to enter the atlas from behind (as in *Poebrotherium*), but passes laterally, forming a distinct groove just ventral to the base of the transverse process. It then passes up into a foramen under the anteroventral base of the transverse process.

The centrum of the axis (Figures 2.2, 2.3, 5.3, 5.4) is narrow and laterally compressed, although not as long as in camels. The neural arch and posterior articulations are broken. The atlantal facets flare broadly ventrolaterally and are continuous beneath the odontoid process. A shallow trough posteroventral to the odontoid process indicates that these facets were once separate. The odontoid process is short, dorsoventrally convex and turns slightly dorsally.

The three remaining cervicals have a broad anterior facet on the centrum that is shaped like a dorsoventrally compressed oval. There are also separate anterolateral facets. The ventral surface of the centrum is smooth, with no ridges like those seen in camels. The posterior centrum articulation is broadly convex, with a slight ventral point. Most of the transverse processes and neural arch are badly broken, but the postzygapophyses are broad and posterodorsally flared.

The fourth cervical has an even more dorsoventrally flattened anterior articulation of the centrum. The ventral surface of the centrum has a distinct anteroposterior ridge. The posterior articulation of the fourth cervical is more dome shaped than that of the third cervical. The opening for the vertebralarterial canal passes just lateral to the centrum and slightly ventral to the pedicels of the neural arch. Most of the transverse processes and neural arch are broken, except for the pre- and postzygapophyses. The remaining (?fifth) cervical is similar to the fourth, except that it is more crushed and less well preserved.

A few thoracic and lumbar vertebrae are preserved, but largely as centra with most of the processes and projections broken off. The centra have flat, semicircular anterior articulations and slightly concave, laterally broad posterior articulations. Each has a distinct anteroposterior ridge along the ventral surfaces. The prezygapophyses flare more laterally and less anteriorly, as seen in the cervicals. The neural arches are badly broken,

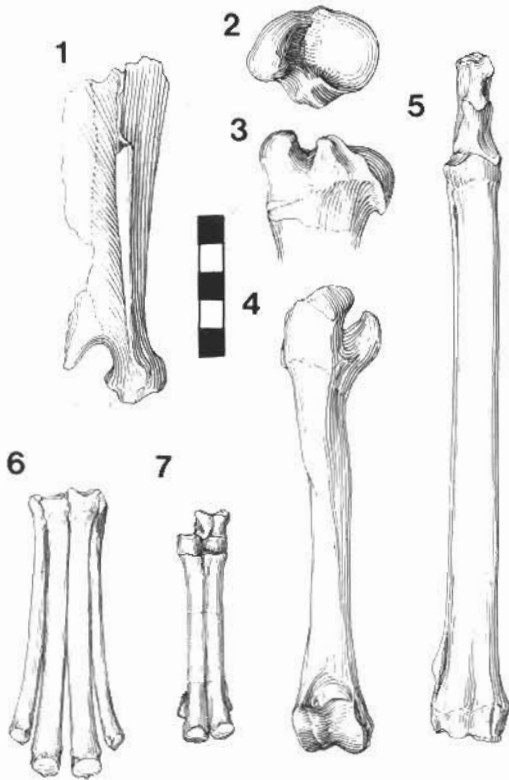


FIGURE 6—Skeleton of *Montanatylopus matthewi*. 1, Scapula. 2-4, humerus in proximal (2), anterior (3), and posterior (4) views. 5, radius-ulna in dorsal view. 6, metacarpals II-V. 7, manus of *Eotylopus reedi*, UW 216.

but diverge posteriorly into two ridges which terminate in the narrow, slightly knoblike postzygapophyses.

The sacrum and pelvis (Figures 5.1, 5.2) are also known in CM 9918. At least four fused vertebrae compose the sacrum. The anterior sacral articulation with the lumbar is broadly oval, dorsoventrally compressed, and slightly convex anteriorly. The contact with the pelvis is broad and includes both the first and second sacra. The iliac blade has a broad, dorsally arcuate flange above the sacral articulation. A laterally flaring process of the iliac blade extends anteriorly to the sacral region. The posterior portion of the ilium is robust, with a broad lateral flare for the acetabulum, which has a strong anterodorsal rim, and a much weaker ventral rim. It is deeply socketed, with a distinct posterior sulcus which begins in the center of the socket and emarginates the posterior rim. The is-

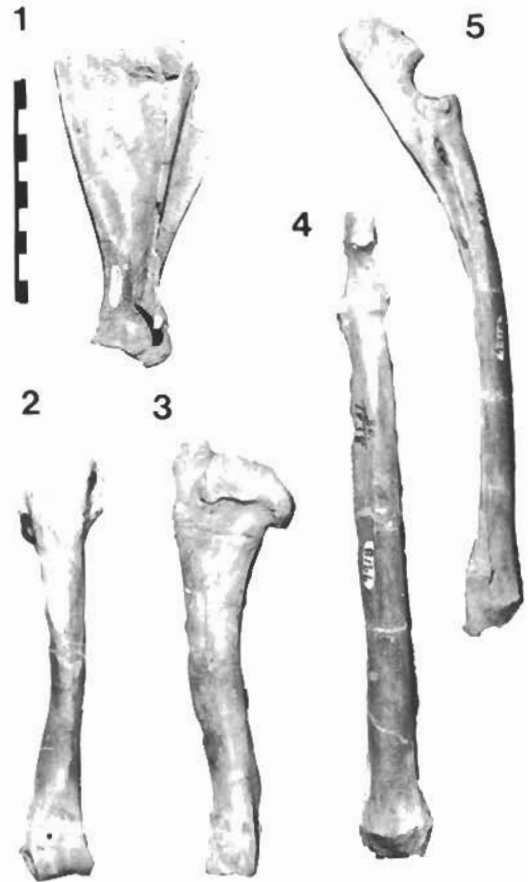


FIGURE 7—*Montanatylopus matthewi*, CM 9918. 1, scapula. 2-3, humerus in posterior (2) and lateral (3) views. 4-5, radius-ulna, radius-ulna in dorsal (4) and lateral (5) views. Scale bar in centimeters.

chial and pubic portions of the pelvis are poorly preserved and mostly restored in plaster.

The scapula (Figures 6.1, 7.1) is very similar in size and shape to the scapula of *Poebrotherium*. The glenoid fossa, however, is more robust, with a blunt, internally flexed coracoid process. The scapular blade is triangular, with strong lateral ridges. It is broken dorsally. The scapular spine is long and slender. The long, anteriorly curved acromion process flares anteriorly from the lateral side of the neck of the scapula. The scapular spine is located about a third of the way back from the anterior edge of the blade. This makes the prespinous fossa much smaller than the spinous fossa. Dorsally, the spine curves posteriorly as it becomes broader.

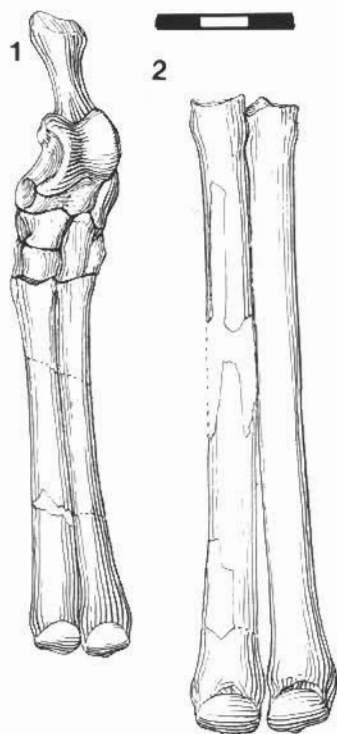


FIGURE 8—Metacarpus of 1, *Eotylopus reedi* (UW 216) and 2, *Montanatylopus matthewi* (CM 9918). Scale bar in centimeters.

The humerus (Figures 6.2–6.4, 7.2, 7.3) is only slightly longer than that of *Poebrotherium*, but is much more robust, especially at its proximal end. The head is very massive and knoblike, and faces less posteriorly than in *Poebrotherium*. The lateral tuberosity is also very massive, projecting only slightly above the head. The medial tuberosity is short but quite strong, with a distinct postero-medial sulcus. As in most primitive artiodactyls, the deltoid crest is very weak and the supinator crest is almost absent. The shaft of the humerus is laterally compressed, rather than circular in cross-section. The trochlea is asymmetrical, with the medial condyle larger than the lateral condyle. The entepicondyle is weak, and lateral to the trochlea there is only a slight depression, with no process. There is almost no intercondylar ridge. The anconeal fossa is short but deep, and is broken through to form a small supratrochlear foramen.

The fused radius-ulna (Figures 6.5, 7.4, 7.5) is longer and more slender than in *Eotylopus*

but more massive than in camels. The olecranon is short and massive, with a distinct posterodorsal flange, as in camels. The sigmoid notch is almost a semicircle, with distinct lateral and medial facets. The head of the radius is square and shallowly concave, with only a slight ridge between the medial and lateral facets. It has a distinct massive bicipital rugosity. The shaft of the radius is slightly narrower than the head, and tapers very little. It is semicircular in cross-section, especially where joined by the flat splint of the ulnar shaft. These two bones are completely fused except near the head of the distal end of the radius. The radius has two distinct carpal facets, which are continuous with a small facet at the distal tip of the splint-like ulna.

The preserved carpus (Figures 5, 6) consists of a scaphoid, lunar, unciform, and pisiform. The scaphoid is square with a broad proximal facet and a trough-shaped distal facet, and has a distinctly hooked plantar process. The distal surface of the lunar has a broad triangular facet for the magnum. The scaphoid facet of the lunar is broad and flat, and the radial facet is more saddle shaped.

The unciform has a broad, flat metacarpal facet distally, and a saddle-shaped facet for the lunar and the cuneiform. The plantar process is knoblike and ventrally hooked. The pisiform has two small facets for articulation with the cuneiform, and an enlarged plantar knob.

Montanatylopus has four metacarpals. The two central metacarpals (III and IV) are the longest and most robust. However, metacarpals II and V are about half as thick as the central metacarpals and almost as long. One isolated phalanx is preserved.

The hind limbs of CM 9918 are poorly preserved. A fragment of the distal end of the femur, and parts of the shaft are known. The rotular trochlea is broad and saddle shaped, with a slightly longer medial rim. The patellae (Figure 5.6) are teardrop shaped, with a sharp proximal point and a flattened distal end. They are irregularly convex on the anterior surface, and nearly flat except for a faint longitudinal ridge on the articular surface.

The tuber is broken from the calcaneum. The sustentacular facet is broad and concave, and the cuboid facet is arcuate, with two distinct surfaces. The fibular facet is large and

projects above the calcaneum with the characteristic tylopod shape. The calcaneum is more massive and wider in the dorsoplantar direction than is seen in camels. In this respect, it is similar to *Eotylopus*. Metatarsals III and IV (Figures 5.6, 8.2) are robust, and about a third longer than their corresponding metacarpals. They are separate, although they have a proximal interlocking ball-and-socket joint. The proximal plantar processes are very long and robust, compared to those in camels. The distal trochleae have distinct medial ridges that become more prominent on the plantar surface. There are distinct dorsal indentations between the shaft and the trochlea.

Discussion.—*Montanatylopus* is unquestionably a new genus of oromerycid, since it shows a number of striking features which readily distinguish it from any other known oromerycid. These include its much larger size, its relatively gracile skeleton, and especially its hypsodont dentition. All other oromerycids have much lower crowned teeth, so *Montanatylopus* converges on camels in its degree of hypsodonty.

Several derived features, such as the loss of the enamel plications on the molars and the larger size, show that *Montanatylopus* is most closely related to *Eotylopus* among the Oromerycidae. In nearly all of its features, *Montanatylopus* is far more derived than any other oromerycid. Many of these derived features converge on the condition seen in camels, so several previous workers misidentified it as a camel. However, the separate hypoconulid and entoconid on m3, and other derived oromerycid features, show clearly that it is not a camel. A full discussion of the relationships of oromerycids will be presented elsewhere.

ACKNOWLEDGMENTS

Mary Dawson and Craig Black graciously permitted me to study CM 9918. I thank Craig Black, Robert J. Emry, David J. Golz, Spencer G. Lucas, and S. David Webb for their helpful comments on the manuscript. Jay Lilgraven provided information on the type

specimen of *Eotylopus reedi*, UW 216. The line illustrations were done for Childs Frick by Hazel de Berard. Clifford R. Prothero and Michael F. Crowe helped with the illustrations. This research was partially supported by the Faculty Research Fund of Knox College. Page charges were provided by the author.

REFERENCES

- BLACK, C. C. 1978. Paleontology and geology of the Badwater Creek area, central Wyoming. Part 14. The artiodactyls. *Annals of the Carnegie Museum*, 47:223–259.
- DOUGLASS, E. 1905. The Tertiary of Montana. *Memoirs of the Carnegie Museum*, 2:203–224.
- GAZIN, C. L. 1955. A review of the upper Eocene Artiodactyla of North America. *Smithsonian Miscellaneous Collection*, 128(8):1–35.
- GOLZ, D. J. 1976. Eocene Artiodactyla of southern California. *Natural History Museum of Los Angeles County, Science Bulletin*, 26:1–85.
- JEPSEN, G. L. 1966. Early Eocene bat from Wyoming. *Science*, 154(3754):1333–1334.
- MATTHEW, W. D. 1910. On the skull of *Apternodus* and the skeleton of a new artiodactyl. *Bulletin of the American Museum of Natural History*, 28:33–42.
- PROTHERO, D. R. 1985. North American mammalian diversity and Eocene–Oligocene extinctions. *Paleobiology*, 11(4):389–405.
- SCOTT, W. B. 1899. The selenodont artiodactyls of the Uinta Eocene. *Transactions of the Wagner Free Institute of Science, Philadelphia*, 6:15–121.
- . 1940. The mammalian fauna of the White River Oligocene. Pt. 4. Artiodactyla. *Transactions of the American Philosophical Society, new series*, 28:363–746.
- . 1945. The Mammalia of the Duchesne River Oligocene. *Transactions of the American Philosophical Society, new series*, 34:209–253.
- WILSON, J. A. 1974. Early Tertiary vertebrate faunas, Vieja Group, Trans-Pecos Texas: Protoceratidae, Camelidae, Hypertragulidae. *Bulletin of the Texas Memorial Museum*, 18:1–83.
- WOOD, H. E., II ET AL. 1941. Nomenclature and correlation of the North American continental Tertiary. *Bulletin of the Geological Society of America*, 52:1–48.

MANUSCRIPT RECEIVED 31 OCTOBER 1984

REVISED MANUSCRIPT RECEIVED 25 JUNE 1985

The author contributed \$500 in support of this article.