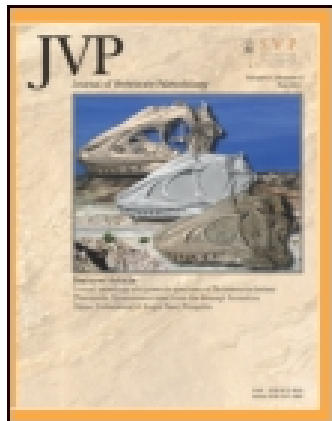


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Correction to the holotype (AMNH FM 9394) of *Merychippus proparvulus* Osborn, 1918 (Perissodactyla, Equidae)

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SHORT COMMUNICATION

CORRECTION TO THE HOLOTYPE (AMNH FM 9394) OF *MERYCHIPPUS PROPARVULUS* OSBORN, 1918 (PERISSODACTYLA, EQUIDAE)

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On a recent research trip to the American Museum of Natural History (AMNH), it was discovered that the holotype of *Merychippus proparvulus* Osborn, 1918:117 (Perissodactyla, Equidae), included postcrania from a camelid. Camelid postcrania originally cataloged with the *M. proparvulus* holotype include a distal metapodial, right calcaneum, and proximal phalanx (Fig. 1). The holotype specimen (upper left tooththrow, cervical, thoracic, and caudal vertebrae, left hind foot [with digits II, III, and IV], and parts of limb bones [Osborn, 1918:pls. 11.3, 15.6, and 54.1, Fig. 91]) and presumably the associated camelid postcrania are from the Pawnee Creek beds, Pawnee Buttes, of

northeastern Colorado (Osborn, 1918). Pawnee Creek is a classic late Barstovian (Miocene) site, dated at 14.5–14 Ma (Tedford, 2004; Tedford et al., 2004).

The three elements have morphology that clearly designates them as not only artiodactyls, but more specifically camelid. The distal metapodial is clearly a fusion of metapodials III and IV over the proximal end and most of the shaft (diagnostic of derived artiodactyls), but the two remain unfused distally, a feature unique to camels and putatively related to their adaptation to a pacing gait (Peterson, 1904; Breyer, 1983; Janis et al., 2002). The calcaneum has wide cuboid facets, the tuber calcis of the

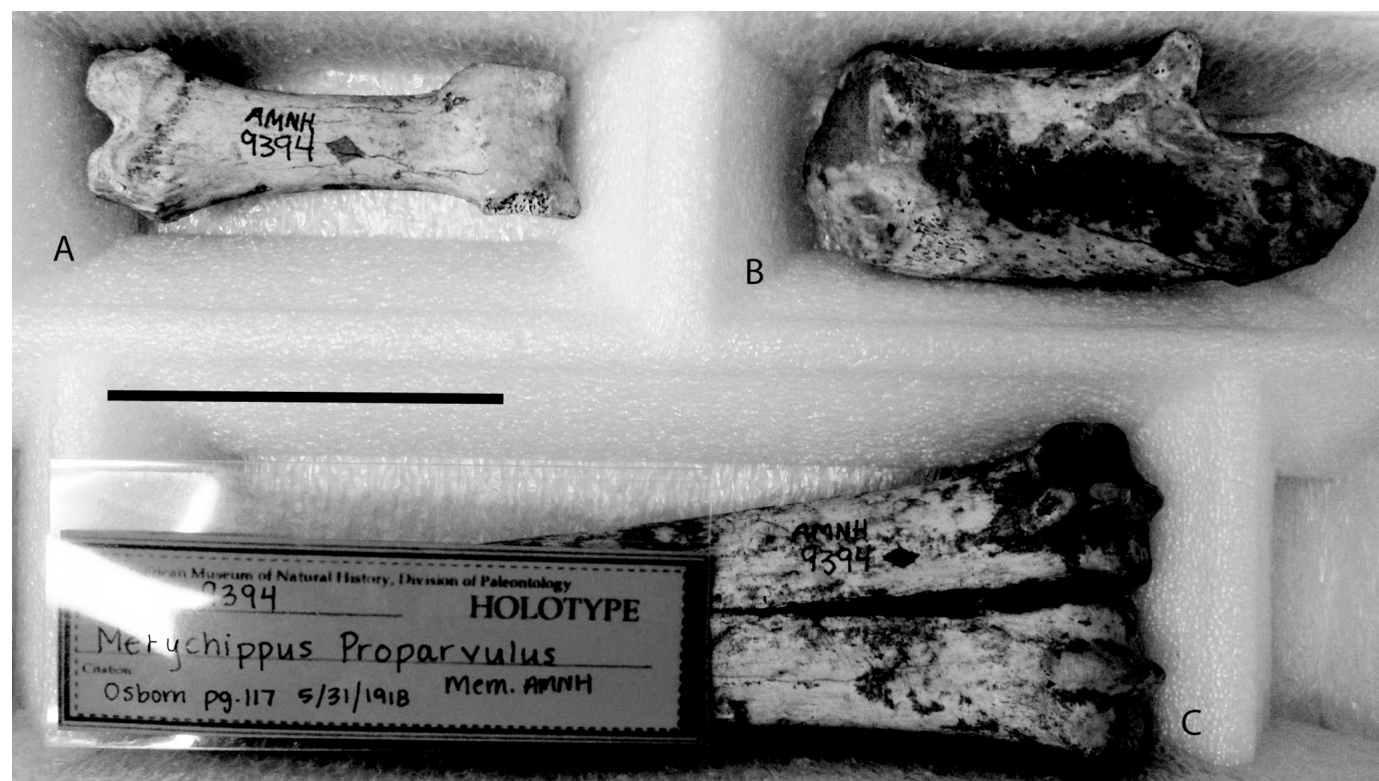


FIGURE 1. Camelid specimens labeled with the same permanent number as the type of *Merychippus proparvulus*, AMNH 9394. **A**, proximal phalanx; **B**, calcaneum; **C**, distal metapodial. Scale bar equals 5 cm.

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calcaneum has a blunt cap, and the corpus calcanei is elongate, all diagnostic features of camelid calcanea (Peterson, 1904; Webb, 1965). The proximal phalanx is elongate and slender with a distal articular surface that extends dorsally onto the volar surface, illustrative of the semidigitigrade posture adopted by camels (Peterson, 1904; Janis et al., 2002). The carinal groove on the posterior border of the proximal articular surface is wide and shallow, also a diagnostic feature of camelid postcrania (Peterson, 1904; Webb, 1965; Breyer, 1983; Janis et al., 2002). The American Museum of Natural History has assigned new numbers to the camelid specimens; AMNH FM 144426 to the phalanx, AMNH FM 144427 to the calcaneum, and AMNH FM 144428 to the metapodial. The original number, AMNH FM 9394, now contains an upper left tooththrow, cervical, thoracic, and caudal vertebrae, left hind foot (with digits II, III, and IV), and parts of limb bones, of which only the foot and tooththrow were figured by Osborn (1918) and other elements that appear to be diagnosable to Equidae, including a row of lower incisors with an associated canine, a partial right upper tooththrow, left radio-ulna, one II phalanx (digit III), one III phalanx (digit III), and an articulated phalanx II and III from digit III. The remainder of the elements (three ribs, several rib fragments, and bone fragments) in this specimen number cannot be assigned with confidence to either Perissodactyla or Artiodactyla, and so we refrain from separating these elements from the original specimen number.

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LITERATURE CITED

- Breyer, J. A. 1983. The biostratigraphic utility of camel metapodials. *Journal of Paleontology* 57:302–307.
- Janis, C. M., J. M. Theodor, and B. Boisvert. 2002. Locomotor evolution in camels revisited: a quantitative analysis of pedal anatomy and the acquisition of the pacing gait. *Journal of Vertebrate Paleontology* 22:110–121.
- Osborn, H. F. 1918. Equidae of the Oligocene, Miocene, and Pliocene of North America, iconographic type revision. *Memoirs of the American Museum of Natural History* 2:1–217.
- Peterson, O. A. 1904. Osteology of *Oxydactylus*, a new genus of camels from the Loup Fork group of Nebraska. *Annals of the Carnegie Museum* 2:434–476.
- Tedford, R. H. 2004. Miocene mammalian faunas, Ogallala Group, Pawnee Buttes area, Weld County, Colorado. *Bulletin of Carnegie Museum of Natural History* 36:277–290.
- Tedford, R. H., B. Albright III, A. D. Barnosky, I. Ferrusquia-Villafraña, R. M. Hunt Jr., J. E. Storer, C. C. Swisher III, M. R. Voorhies, S. D. Webb, and D. P. Whistler. 2004. Mammalian biochronology of the Arikarean through Hemphillian interval (Late Oligocene through Early Pliocene Epochs); pp. 169–231 in M. O. Woodburne (ed.), *Late Cretaceous and Cenozoic Mammals of North America*. Columbia University Press, New York.
- Webb, S. D. 1965. The Osteology of *Camelops*. *Bulletin of the Los Angeles County Museum Science*: Number 1.

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