

New Fossil Mammals Found at Florissant Fossil Beds NM

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New discoveries of fossil mammals in Florissant Fossil Beds National Monument (NM) indicate that the Florissant Formation is late Eocene in age, and correlates with the Chadron Formation in Badlands NP.

Fossil mammals are rare in the Florissant Formation and have been somewhat ambiguous age indicators. Previous to the recent discoveries, mammals from the Florissant Formation have included oreodons (*Merycoidodon*), a horse (*Mesohippus*), a mouse opossum (*Peratherium*), and an unidentified rhinoceros. Of these specimens, only the mouse opossum (*Peratherium* near *P. huntii* (Cope)) has been described in detail (Gazin, 1935). These mammals indicate a Chadronian or Orellian North American Land Mammal Age for the formation. The Chadronian and Orellian are now considered to be latest Eocene and earliest Oligocene age, respectively.

In June and July of 1992, a field crew from the University of Colorado Museum found fossil mammal bones, including a piece of a neck vertebra from a large brontothere, a lower jaw of a *Mesohippus* (Fig. 1), bone fragments from an oreodon-sized animal, and bone fragments and isolated teeth from a small artiodactyl. These fossils occurred in sandstones lateral to the main lake shales and fluvial mudstones below the level of the fossil stupns.

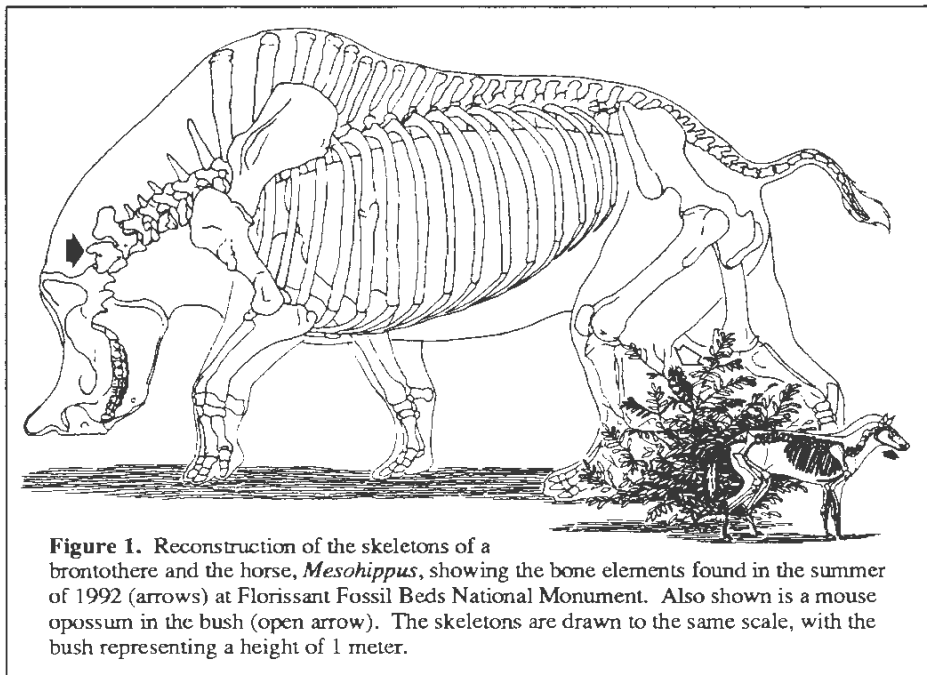


Figure 1. Reconstruction of the skeletons of a brontothere and the horse, *Mesohippus*, showing the bone elements found in the summer of 1992 (arrows) at Florissant Fossil Beds National Monument. Also shown is a mouse opossum in the bush (open arrow). The skeletons are drawn to the same scale, with the bush representing a height of 1 meter.

The co-occurrence of a brontothere, *Mesohippus*, and *Merycoidodon* indicates that the Florissant Formation was deposited at the same time as the Chadron Formation of Badlands NP. The Florissant vertebrate fauna also include fossils of fish and birds, and together they may supplement

paleoenvironmental data provided by the plant and insect fossils.

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Literature Cited

Gazin, C.L., 1935. A marsupial from the Florissant beds (Tertiary) of Colorado: *Journal of Paleontology*, v.9, p 57-62.