A SKULL AND PARTIAL SKELETON OF THE OREODONT MERYCHYUS MAJOR (MAMMALIA: ARTIODACTYLA: MERYCOIDONTIDAE) FROM THE MIOCENE POPOTOSA FORMATION, BOSQUE DEL APACHE NATIONAL WILDLIFE REFUGE, SOCORRO COUNTY, NEW MEXICO

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In February 2008, David Love, Richard Chamberlin, and Colin Cikoski discovered an associated upper and lower jaw of an oreodont, eroding from the wall of an arroyo on the Bosque del Apache National Wildlife Refuge near San Antonio, Socorro County, central New Mexico. In March 2008, Gary Morgan and Warren Slade visited the site and collected the oreodont fossil, consisting of a skull and jaws and associated partial skeleton. The fossil is preserved in an indurated, fine-grained sandstone of fluvial origin derived from the Miocene Popotosa Formation.

Preparation of the oreodont specimen has revealed an almost 100% complete skull and still-attached lower jaw and partial articulated postcranial skeleton consisting of a nearly complete set of cervical, thoracic, lumbar, and sacral vertebrae, most of the ribs (still attached to the thoracic vertebrae), both wrists (distal radius-ulna, carpals, proximal metacarpals), and a partial left hind limb (innominate, femur, tibia, fibula, tarsals). An unusual feature is the preservation of an ossified larynx and the delicate hyoid bones. The Bosque de Apache oreodont is identified as the species *Merychys major* (family Merycoidodontidae, subfamily Ticholeptinae). The skull is one of the largest known for this species and is also characterized by the retracted narial opening, short nasals, long rostral premaxillary suture, broad and shallow lacrimal fossa, shallow zygomatic arch, inflated braincase, long paroccipital and postglenoid processes, and hypsodont dentition, particularly the molars.

The biostratigraphic distribution of *Merychys major* is restricted to the late Miocene, from the early late Clarendonian to the early late Hemphillian North American land mammal ages (about 6-10 Ma). The only absolute age control on the Popotosa Formation in this area is a radiometric date of 8.57 ± 0.26 Ma on a basaltic lava flow that lies within the formation about 1 km north of the oreodont site. The only other vertebrate fauna from the Popotosa Formation is from the Gabaldon Badlands west of Belen in Valencia County, about 100 km north of the oreodont site. The mammalian biostratigraphy of the Gabaldon Badlands fauna indicates a late Miocene age (7-9 Ma; early Hemphillian).


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