

Juvenile Chalicothere found from the Pliocene of Linxia Basin, Northwestern China

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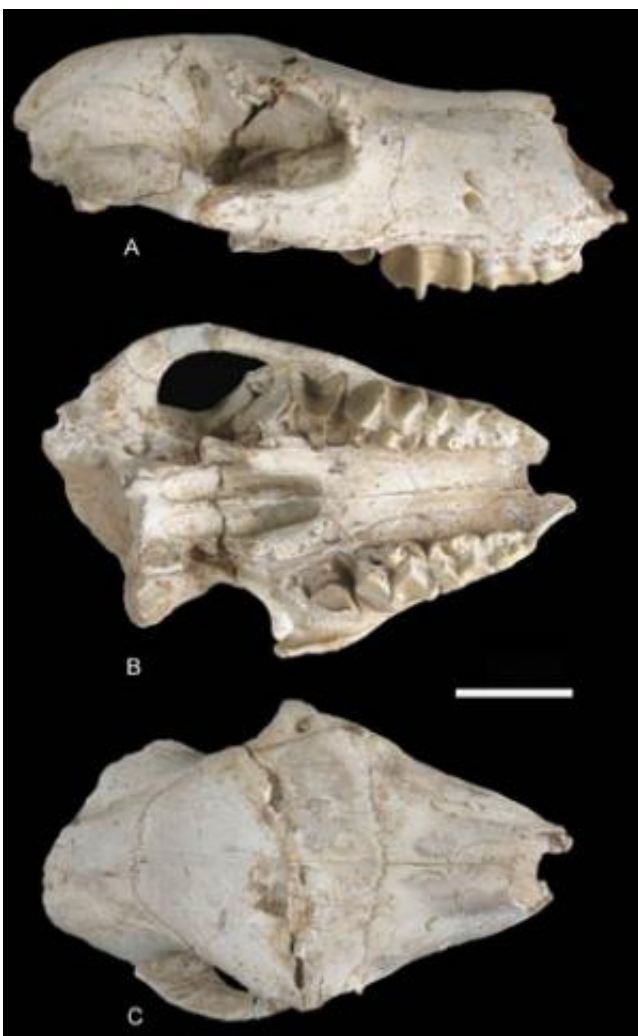


Fig. 1. Skull of *Ancylotherium* sp. from Duikang locality, Linxiao Basin. A. Lateral view. B. Ventral view. C. Dorsal view. Scale bar: 6 cm. Credit: CHEN Shaokun

Fossils of Chalicotheres are generally rare, and only a few poorly preserved specimens have previously been discovered in China. Dr. DENG Tao, Institute of Vertebrate Paleontology and Paleoanthropology (IVPP), Chinese Academy of Sciences, and his team reported a juvenile skull of a chalicothere with its articulated mandible from the Pliocene Duikang locality of Linxia Basin, Guanghe County, Gansu Province, China. This study published online in the journal of *Geobios* 45 (2012), helps better understand the knowledge of the osteology and taxonomy of this animal, and the Pliocene paleoenvironment in the Linxia Basin.

Chalicotheres are a group of extinct and unusual perissodactyls with clawed terminal phalanges. They have low-crowned and quadrate upper molars, and have been found from Asia (Late [Oligocene](#) to Early Pleistocene), Europe (Middle to Late Miocene), and Africa (Early Miocene).

This specimen has high crown and large size of upper molars, obvious crochets on upper milk teeth and metastylids on the lower milk teeth. It can be identified as *Ancylotherium* sp. based on the short symphysis of the mandible and the large size and occlusal structure of the cheek teeth, which are different from any other known species of this genus.

The Duikang locality is located 6.5 km southwest of Guanghe County, Gansu Province. The fossiliferous lens containing *Ancylotherium* was excavated from the bottom of the Hewangjia Formation, about 0.8 m above the Mio-Pliocene boundary.



Fig. 2. Mandible of *Ancylotherium* sp. from Duikang locality, Linxiao Basin. A. Lateral view. B. Occlusal view. Scale bar: 6 cm. Credit: CHEN Shaokun

Comparison studies shows that four other species of *Ancylotherium* are likely from the Gansu, Sichuan, Shanxi and Shaanxi Provinces in [China](#). *Huanghootherium* and *Gansuodon* are synonymous with *Ancylotherium*.

"Considering the associated fossil animals in the Duikang locality, *Hipparion*, *Sinotragus* and *Gazella* indicate an opened grassland environment, while two species of Giraffidae, *Palaeotragus* and

Samotherium, as well as Ancylotherium, are browsers", said first author CHEN Shaokun, a Ph. D. student of the IVPP, "We inferred a subarid steppe environment with mixed small patches of forest in the Linxia Basin during the Early Pliocene."

Provided by Institute of Vertebrate Paleontology and Paleoanthropology

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