

# New species of *Nannocricetus* found in Damiao of Nei Mongol

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Holotype of *Nannocricetus wuae*. Credit: Zhang et al.

Dr. Zhang Zhao-Qun, Institute of Vertebrate Paleontology and Paleoanthropology, Chinese Academy of Sciences, and his colleagues, recently described a new cricetid species of Late Miocene, *Nannocricetus wuae*, from the locality of DM02, near the Damiao Village, Siziwangqi, Nei Mongol, China, as reported in the latest issue of *Vertebrata Palasiatica* 2011.

Cricetinae are well known rodents inhabiting steppe and semi-arid habitats as well as [agricultural land](#) throughout the Palaearctic. The origin of Cricetinae is often associated with Democricetodontini, a

widely distributed tribe in the Northern Hemisphere during the Early and Middle Miocene. Recent molecular study also suggested that the modern Cricetinae diversified during the Late Miocene. However, with the paucity of early late Miocene [fossil records](#), the transition from the ancient to modern group remains unclear.

Recent exploration and study of Chinese late Miocene sediments have improved our knowledge of the early evolutionary stage of Cricetinae. For example, the primitive *Nannocricetus* found from the basal Bahe Formation extended the history of modernized cricetids back to early Late Miocene.

The new species named *Nannocricetus wuae* was found from the locality near Damiao Village along the Shalamurun River, Siziwangqi, Nei Mongol. Zhang and his colleagues said, “this cricetid showing very primitive cricetine characters may shed light on the turnover from ancient *Democricetodontini* to modernized cricetines”.

The new species is characterized by having low crowned molars with conical shaped cusps, single anteroconid on m1 with developed labial and/or lingual flanges, very weak to absent mesolophids on m1, variable mesolophid and very reduced anterolophulid on m2, narrow and slightly bifid anterocone on M1, and relatively long M3. Differing from the pattern of Cricetodontinae, *Nannocricetus wuae* shows great simplification of tooth structure. There is no paracone spur, anteromesoloph, or styles on upper molars, no spur of anterolophulid or stylids on lower molars. Root numbers are conservative, three for upper molars and two for lower molars.

Morphologically, the new species shows close similarity to *Nannocricetus primitivus* and *N. mongolicus*. These three species constitute an endemic group confined to North [China](#), and show progressive evolution in the splitting of the anteroconid on m1, reduction

of the mesoloph, and development of anterolophule on m2/M2 etc. “Based on the evolutionary stage of the new [species](#) and associated fossils,” said the researchers, “we tentatively suggest an earliest Late Miocene age pending further confirmation by systematic study of other taxa and the paleomagnetic data.”

Provided by Institute of Vertebrae Paleontology and Paleoanthropology

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