

Earliest Democricetodon (Cricetid rodent) found in the Early Miocene of the Junggar Basin, China

9 November 2011

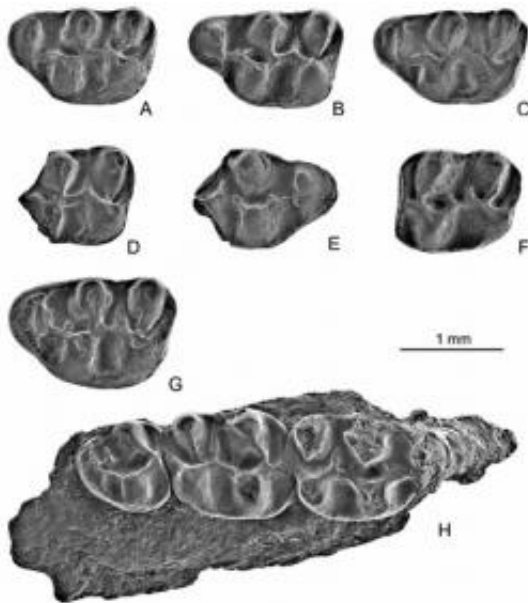


Fig.1 Upper cheek teeth of *Democricetodon sui* sp. nov. (A-F) and *Democricetodon?* sp.(G-H) from the Early Miocene of the Junggar Basin. Credit: Olivier Maridet

According to a paper published in the latest issue of *Vertebrata Palasiatic* 2011(4), palontologists from Institute of Vertebrate Paleontology and Paleoanthropology, Chinese Academy of Sciences, have identified two cricetid rodents (*Democricetodon sui* sp. nov. and *Democricetodon?* sp.) in the Early Miocene of the Junggar Basin, northern Xinjiang, China. The specimens come from two localities within the Suosuoquan Formation, which have been dated by magnetostratigraphy to between 21.9 and 21.16 Ma (Aquitainian), and turn out to be the oldest examples of *Democricetodon* known from central and eastern Asia.

Comparisons with other Early Miocene cricetids and re-examination of the type species of

Spanocricetodon indicate that *D. sui* is characteristic of the Xiejian age in Central Asia. The detailed comparisons confirm that the genus *Spanocricetodon* sensu lato Li (1977) is valid and clearly differs from *Democricetodon* and *Primus*, and show that some species that have previously been assigned to *Spanocricetodon* actually belong to other genera.

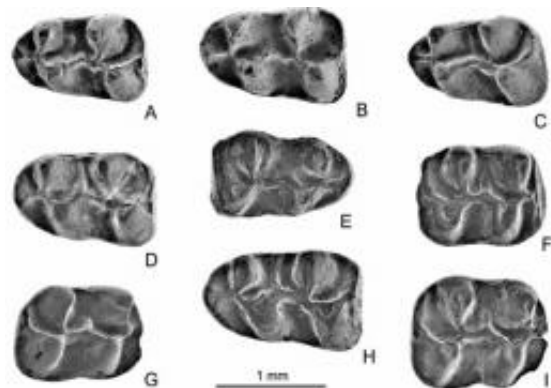


Fig.2 Lower cheek teeth of *Democricetodon sui* sp. nov. (A-G) and *Democricetodon?* sp. (H-I) from the Early Miocene of the Junggar Basin. Credit: Olivier Maridet

Only one species of cricetid, *Eucricetodon* aff. *E. caducus*, is known from the Late [Oligocene](#) of the Junggar Basin. In the regional [fossil record](#), this species does not survive beyond the Oligocene-Miocene boundary, and *Democricetodon sui* is the first cricetid to replace it in the Early Miocene. However, the clear differences between *D. sui* and *Eucricetodon* aff. *E. caducus* from the Late Oligocene of the same region indicate that *D. sui* is unlikely to have originated from the Paleogene cricetids in the region, but probably represents a species that immigrated to Central Asia.

The similarity of *D. sui* to the two Anatolian and

Greek species *D. anatolicus* and *D. doukasi* suggests that the three species are quite closely related, which would imply a rapid dispersion and [diversification](#) of the genus in Eurasia around the Oligocene-Miocene boundary.

"The morphological similarities noticed between *D. sui* and the earliest *Democricetodon* species of Europe and Anatolia imply that this [genus](#) spread quickly across Eurasia soon after its appearance. The abundant samples collected in the Late Oligocene of the Junggar Basin indicate that the presence of *Democricetodon* in this region before the Miocene is unlikely. The morphology of *D. sui* is different in many respects from that of *Eucricetodon* aff. *E. caducus* from the Late Oligocene of the same basin. This difference indicates that *D. sui* is likely an immigrant species in Central Asia", said Dr. Olivier Maridet, the lead author.

All specimens are deposited in the collections of the Institute of [Vertebrate Paleontology](#) and Paleanthropology, CAS. They are catalogued under the numbers IVPP V 17683.1-14 and V 17684.1-4.

More information: The original paper "[Earliest occurrence of *Democricetodon* in China, in the Early Miocene of the Junggar Basin \(Xinjiang\), and comparison with the genus *Spanocricetodon*](#)."

Olivier MARIDET, WU Wen-Yu, YE Jie, BI Shun-Dong, NI Xi-Jun, MENG Jin. *Vertebrata Palasiatica* 2011(4), 393-405"

Provided by Institute of Vertebrae Paleontology and Paleanthropology

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