

**First magnetostratigraphic time frame for the fossiliferous late Eocene – early Oligocene sequence at Ulantatal, Inner Mongolia, China**

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Since the discovery of the mammalian fossils from the Ulantatal region, Inner Mongolia, in 1970, several expeditions have collected fossils from the low-relief exposures in this area. Although the area has produced a significant collection of vertebrate faunas, the stratigraphy, ages and depositional environments have remained poorly known or nearly non-existing. This study presents preliminary results of the stratigraphical investigations from the Ulantatal area and provides age estimations for the fossil-bearing horizons.

Our field investigations in Ulantatal have yielded over 5500 specimens including insectivores, lagomorphs, rodents, artiodactyles, perissodactyls, carnivores etc. The sequence produces fossils along much of the section with richest fossil occurrences in the lower half of the sequence. Lithologically, the sequence shows a rather uniform pattern characterized by interbedded reddish to yellowish brown claystones and siltstones with minor fine-grained sandstones.

Paleomagnetic samples were collected from several local sections 20–25 m thick and analyzed using alternating field demagnetization. Samples yielded characteristic remanent magnetization carried by magnetite. Our magnetic section suggests a correlation in the magnetozones C15n through C9n with an age range of about 35–27 Ma and places the lowermost fossil site in Ulantatal to the latest Eocene.

This correlation places for the first time a precise temporal control on the Oligocene stratigraphy of the Ulantatal area and provides a unique area to investigate in detail the physical and biotic changes during a period of major global paleoenvironmental changes at the Eocene – Oligocene transition.