

LATE-EARLY-MIDDLE PLEISTOCENE RECORDS OF HOMOTHERIUM FABRINI (FELIDAE, MACHAIRODONTINAE) FROM THE ASIAN TERRITORY OF RUSSIA

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The time span of the *Homotherium* occurrence is defined within 3.7 to 0.5 Ma. In the Pliocene and Pleistocene the homotheres inhabited Eurasia, Africa, and North America. The latest homotheres are known as *H. latidens* from the terminal Early to Middle Pleistocene sediments in Europe from England to the Black Sea region (Turner, Antón, 1997; Sotnikova, Titov, 2009), whereas their synchronous analogs in Asia are described as *H. ultimus* in China and *H. teilhardipiveteaui* in Tajikistan (Teilhard de Chardin, 1939; Sharapov, 1989).

In Asian Russia finds of *Homotherium* were recorded in the Kuznetsk Depression (Novosergeevo quarry), near Krasnoyarsk (Kurtak archeological area), in the Adycha River basin, northern Siberia (Kyra-Sullar outcrop), and in the western Transbaikalia in the Zasukhino 2–3 and Kudun localities (Erbaeva et al., 1977; Sotnikova, 1978; Foronova, 1983, 2001).

In the Novosergeevo quarry the lower mandible assigned to *Homotherium* aff. *ultimus* (IGG 3486) was collected nearby the section, in which the Sergeevo Formation deposits corresponding to the upper part of the Matuyama Chron are overlain by the Middle and Late Pleistocene sediments (Foronova, 1998, 2001). The finding of another lower mandible fragment of a small-sized *Homotherium* (IGG 1050) is associated with the Middle Pleistocene deposits of the Berezhkovo section in the Paleolithic Kurtak area (Foronova, 2001). The fragment of humerus of *Homotherium* (PIN 3659–509) encountered on the Adycha River bank at the Kyra-Sullar outcrop, is most likely associated with the Olyor fauna (1.4–0.5 Ma) of northeastern Siberia (Sotnikova, 1978). The material from Transbaikalia is characterized by the most reliable age attribution. Here, the proluvial sequences of the Kudun (Kizhing-Kudun depression) and Zasukhino (Itantsa River basin) localities include postcranial material and crenulated teeth fragments of *Homotherium* together with *Allophaiomys* cf. *pliocaenicus* characterized by the advanced dental characters with differentiated enamel (Erbaeva et al., 1977). In the Transbaikalian stratigraphic scale the Kudun and Zasukhino faunal assemblages are correlated with the uppermost Matuyama Chron and correspond to the uppermost Early Pleistocene (Erbaeva, Alexeeva, 2000).

According to relatively small size of mandible and morphological characters as a moderate development of mental flange and strongly arched incisors and canine series of lower dents, the Siberian homotheres show a clear resemblance with their Pleistocene analogs from China and Tajikistan.

The postcranial material was found in Asia for the first time. It was derived from the Kudun locality in Transbaikalia and is represented by long bones, metacarpal and metatarsal series, as well as carpal and tarsal bones (GIN 971/1442).

The postcranial skeleton of *Homotherium* in Europe is known from the Senèze dated as the Late Pliocene (Ballesio, 1963) and Incarcal, as initial Early Pleistocene (Antón et al., 2005). The detailed skeletal description of American *Homotherium serum* from Freisenhahn Cave (Late Pleistocene) was also published by Rawn-Schatzinger (1992).

According to these authors *Homotherium* had elongated fore and shorter hind limbs and the body with a slightly sloping back resembling that of hyena. Ballesio (1963) and Rawn-Schatzinger (1992) have pointed out the mosaic nature of the morphological characters in *Homotherium* legs, from plantigrade to highly digitigrade and cursorial. The modern analysis suggests that in *Homotherium*, despite all peculiarities of foot bones morphology, the Feline type of legs prevailed (Antón et al., 2005).

Our analysis showed that the Asian homotheres display postcranial features recorded in the European and American forms. The Kudun form was smaller than *Homotherium* from Senèze and had the same size as *Homotherium* from Incarcal. The morphology of the appendicular skeleton in the Asian form demonstrates some proportions and characters reminding of plantigrade or semi-plantigrade stance. Judging from the massive and short calcaneum and astragalus, the *Homotherium* from Kudun was more advanced in the development of plantigrade features than their European analogs.

The finds of *Homotherium* in Siberia are the northernmost in Asia. They indicate that in the Pleistocene the distribution area of these carnivorans covered many Asian regions and reached the northernmost Siberian margins. The revealed Beringian occurrence of *Homotherium* in Eurasia is of extreme importance for the understanding of the Pleistocene faunal exchange between Eurasia and North America.

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