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Chinese Pikermian fauna: its similarity with those of other areas and uniqueness in Late Miocene Eurasia

Mikael Fortelius¹, Mahito Watabe^{2*}

¹University of Helsinki, ²Center of Paleobiological Research

Recent paleontological and geological studies on Pikermian fauna (Hipparion fauna) have been widely and deeply developed in China, based on its chronological frameworks. We carried out phylogenetic analysis on Chinese hipparionines including forms from other Eurasian regions. The result shows some groups of Northern Chinese hipparionines are taxonomically close to the form western and central areas of Eurasia in the same period. This suggests that the arid environments are widely spread in Eurasia at that time. On the other hand, some hipparionine taxa from Northern China are clearly distinct from taxa of western Eurasia, as endemic groups. This endemic forms are possibly more closely related to the North American hipparionines. However, the geological age difference among those localities with endemic and common (widely-distributed) hipparionines. The arid environments created Pikermian fauna occurred in western part of Eurasia in the late Miocene period, and expanded its distribution to eastern Eurasia. Its development in the eastern area is limited.

Keywords: Miocene, Mammals, China, Hipparion, Paleoenvironments