

## Sedimentary environments and Age of the Late Cenozoic Mammalian Fossils from Northeastern Thailand

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The Japan-Thailand expedition surveyed Late Cenozoic basins in Thailand from 1996 to 2002. The Late Cenozoic sediments in Thailand have yielded plenty of vertebrate fossils including hominoids. Mammalian assemblage from Thailand is correlated with those of the Late Cenozoic mammalian fauna from the early to middle Miocene of Siwaliks by previous works. We surveyed the lithostratigraphy, geochronology and vertebrate fauna of new Late Cenozoic sites of Northern and Northeastern Thailand.

At Mae Soi 50km south west of Chiang Mai, a primitive amebelodontid gomphothere (*Archaeobelodon*), for the first time from Southeast Asia, were discovered. The Mae Soi Fauna suggests that this fauna is the end of Early Miocene in age (MN 4). At Chiang Muan Lignite Mine 150km east of Chiang Mai, we found hominoid cheek teeth (the first discovery from the Southeast Asian Miocene), as well as three individuals of primitive tetralophodont gomphothere (*Tertralophodon* cf. *xiaolongtanensis*), rhinocerotid (*Chilotherium*), and suids (*Conohyus* and *Propotamochoerus* / *Hippopotamodon*). The mammalian fauna from the Chiang Muan Formation suggests that this fauna is the end of Middle Miocene in age (MN 7/8). At Sop Mae Tham, we reported a new Late Miocene Fauna including Hipparionini teeth. This fauna was the first Hipparionini record from the Late Cenozoic Southeast Asia. The mammalian fauna from Sop Mae Tham consists of tetralophodont gomphothere (*Tertralophodon*), hipparionin equids, suids (*Propotamochoerus*/*Hippopotamodon*), tragulids, Boselaphini bovids. This mammalian assemblage suggests that the Sop Mae Tham Fauna is early Late Miocene in age (MN 9).

At Tha Chang, near Nakhon Ratchasima, we found new Late Cenozoic mammalian faunas from a number of sand pits. However, almost all materials have no field record. We identified the minimum three geological age assemblages from the collection of Rajabhat Institute of Nakhon Ratchasima. The Middle Miocene mammalian fauna consists of amebelodontid gomphothere (cf. *Protoanancus chinjiensis*) and *Prodeinotherium*. The Late Late Miocene fauna yields *Stegolophodon* cf. *stegodontoides*, primitive *Stegodon*, Hipparion, and primitive *Merycopotamus*. The Early Pleistocene fauna yields advanced *Stegodon* and *Elephas*.