

A new “flying lemur” from the Paleogene of South Asia

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The fossil record of cynocephalid dermopterans, the “flying lemurs”, is very poor. Until now, the only reported specimen is a badly preserved mandible from the Late Eocene of Thailand (Ducrocq et al. 1992). In the same way, the living cynocephalids are represented by only two genera, *Cynocephalus* and *Galeopterus*, from southeastern Asia (Stafford & Szalay 2000). This poor diversity, both for living and extinct forms, and the limited geographical distribution to southeastern Asia strongly question their evolutionary history.

Based on a Master work (Bocat 2002), we recently published a new cynocephalid dermopteran fossil species, *Dermotherium chimaera* (Marivaux et al. 2006), from the Oligocene of South Asia (Pakistan, Thailand). This new species was mainly described using the synchrotron radiation microtomography (at the ESRF, Grenoble, France), to finely observe dental characters with a noninvasive method (Tafforeau et al. 2006).

Dermotherium chimaera strikingly shares plesiomorphic dental characters with the both extant genera, giving some light about their origin. According to a cladistic analysis, *D. chimaera* appears as close to the ancestral morphotype from which the living forms are derived.

Moreover, the historical biogeography of the cynocephalid dermopterans appears to be more complex than thought previously. Their past distribution was clearly widespread in South Asia. This suggests that their extant biogeography in tropical rainforests of southeastern Asia could be a refugium.

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