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A new Paleocene nyctitheriid insectivore from Inner Mongolia (China) and the origin of Asian nyctitheriids

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Nyctitheriids are primitive insectivores that were relatively abundant and diverse in North America and Europe during the middle Paleocene through to the middle Oligocene. The nyctitheriids from Asia are poorly known and show several distinctive characters. Here we describe the late Paleocene *Asionyctia guoi* gen. et sp. nov., the first fairly well known Asian nyctitheriid, from the Subeng locality near the city of Erlianhot (Erenhot) in Inner Mongolia, China. Among its most conspicuous features are the paraconid positioned high on p4, the rather primitive morphology and size of p3, the premolariform P4/p4 and the transverse upper molars with a small, straight postcingulum. Except for the paraconid positioned high on p4, these combined features are also present in other Asian nyctitheriids, but absent in North American or European forms. We performed a cladistic analysis, based on a set of 20 dental characters, to resolve higher-level phylogenetic relations within Nyctitheriidae. The strict consensus tree groups all Asian forms in a single clade, for which we propose the rank of a subfamily and the name Asionyctiinae subfam. nov. Within Nyctitheriidae, a semimolariform P4/p4, as in *Leptacodon tener*, is considered primitive, and we consider the morphologically simplified P4/p4 of Asionyctiinae derived within Nyctitheriidae. Asionyctiinae can be derived from an American, primitive *Leptacodon*-like ancestor migrating into Asia, with the reduction of P4/p4 occurring on the Asian continent. Considering the derived morphology and the relatively high diversity of Asionyctiinae during the Asian late Paleocene, and the inferred conservative nature of the family Nyctitheriidae, we suggest an early Tiffanian time for the migration of nyctitheriids into Asia.

Key words: Mammalia, Nyctitheriidae, Paleocene, Gashatan, Subeng, Inner Mongolia, China.

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