



## A 100 million year old gecko with sophisticated adhesive toe pads, preserved in amber from Myanmar

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### Abstract

A new genus and species of gecko is described from a posterior lower limb and foot, and a partial tail, preserved in Lower Cretaceous amber from Myanmar that is 97–110My old. It appears to be the oldest unequivocal fossil gecko, pre-dating fragmentary skeletal remains from the Upper Cretaceous and being 43–56 My older than *Yanatarogecko* from the Lower Eocene, previously the oldest known gecko preserved in amber. It also provides firm evidence that gekkotans and possibly gekkonids were in Asia at this time. The Myanmar specimen shows, that the distinctive foot proportions and sophisticated adhesive mechanism, involving pads on the toes with transverse lamellae probably bearing numerous hair-like setae found in many modern geckos, had already evolved around 100My ago. The specimen is very small, even compared with juveniles of the smallest living geckos. However, the high numbers of lamellae on its toe pads suggest it is from a juvenile of a species with relatively large adult body size.

**Key words:** Gecko, Gekkota, amber, Myanmar, Lower Cretaceous, adhesive pad

### Introduction

Cretaceous amber from Myanmar includes a plethora of plant and invertebrate remains but vertebrate fossils are rare (Poinar *et al.*, 2006). Here we describe a well preserved foot of a climbing gecko that shows that sophisticated adhesive pads had originated by around 100My ago. As it cannot be assigned to any modern taxon, the specimen is described here as a new genus and species.

### Suborder Gekkota

### Family Gekkonidae?

### Genus *Cretaceogekko* n. gen.

### *Cretaceogekko burmae* n. gen. and n. sp.

(Figs 1–5)

**Material** (Figs 1–5). Holotype: left crus and foot preserved in Cretaceous amber from Myanmar; specimen deposited in the Poinar collection (accession # B-V-4) maintained at Oregon State University, Corvallis, Oregon, U.S.A.

**Type locality and horizon.** The specimen was obtained from an amber mine excavated in the Hukawng Valley in 2001. The mine, now known as the Noiye Bum 2001 Summit Site, is located southwest of Maingkh-