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## A new species of the *Gekko japonicus* group (Squamata: Gekkonidae) from central Laos

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### Abstract

A new species of the *Gekko japonicus* group is described from Khammouane Province, central Laos, based on distinct morphological and molecular features. *Gekko thakhekensis* **sp. nov.** is distinguished from the remaining congeners by a combination of the following characters: size moderate (SVL 67.6–79.2 mm); nares in contact with rostral; internasals absent; postmentals enlarged; interorbital scales between anterior corners of the eyes 22–26; dorsal tubercles absent; ventral scales between mental and cloacal slit 165–174; midbody scale rows 110–116; ventral scale rows 32–40; subdigital lamellae on first toe 11–13, on fourth toe 14–15; finger and toe webbing present at base, about one fifth of length of digits; tubercles on upper surface of fore and hind limbs absent; precloacal pores 1–5 in males; postcloacal tubercles two; tubercles absent on dorsal surface of tail base; subcaudals enlarged; dorsal surface of body with greyish brown blotches. In molecular analyses, the new species is recovered as a sister taxon to *G. scientiaventura*, but the two species are separated by approximately 12% divergence as shown by the partial mitochondrial ND2 gene.

**Key words:** *Gekko thakhekensis* **sp. nov.**, Khammouane Province, karst forest, morphology, molecular phylogeny

### Introduction

The diversity of the genus *Gekko* in Laos is poorly studied. Only three species are currently recognized from this country, namely *Gekko gecko* (Linnaeus), *Gekko scientiaventura* Rösler, Ziegler, Vu, Hermann & Böhme (Teynié & David 2010), and *Gekko petricolus* Taylor (Bain & Hurley 2011). Another gekkonid species, *G. reevesii* (Gray), has been reported to be common in southern China and northern Vietnam (Rösler *et al.* 2011). However, the distribution of this species in Laos needs to be confirmed due to its morphological similarity to *G. gecko* (Linnaeus).

During our recent field surveys in central Laos, two gekkonid specimens were collected in the karst forests of Khammouane Province. Morphologically, these specimens can be assigned to the *Gekko japonicus* group based on the following features: size moderate; nare in contact with rostral; postcloacal tubercles present; webbing between fingers and toes weakly developed; lateral folds without tubercles; subcaudals enlarged; dorsum with large light blotches and bands (see Rösler *et al.* 2011; Nguyen *et al.* 2013). Our molecular data showed that the specimens

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## APPENDIX. *Gekko* specimens examined.

- G. adleri* (25): Vietnam: Cao Bang Province: IEBR A.2012.24 (holotype), ZFMK 93993–93999, IEBR A.2012.25–2012.31, VNMN A.2012.4–2012.6 (paratypes); China: Guangxi: SYS r000456–r0000461, SYS r000263 (paratypes).
- G. canhi* (4): Vietnam: Lang Son Province: IEBR A.0910 (holotype), VNMN 1001–1002 (paratypes); Lao Cai Province: ZFMK 88879 (paratype).
- G. palmatus* (30): Vietnam: Lao Cai Province: IEBR FN.29174; Tuyen Quang Province: IEBR A.0948; Bac Kan Province: IEBR 2301, IEBR A.0950–A.0951; Lang Son Province: IEBR 2474, IEBR 3619–3623, IEBR A.0949, A.0952; Quang Ninh Province: IEBR A.0807; Bac Giang Province: IEBR 3638, 3672; Vinh Phuc Province: IEBR 3223–3224a-c, ZFMK 44210, 59214–59215, 66517, 74552–74553; Hanoi: IEBR LQV3–LQV4; Thanh Hoa Province: IEBR TH.2011.1; Nghe An Province: IEBR A.0953–A.0955; Quang Binh Province: ZFMK 82888, 86434.
- G. scientiadventura* (9): Vietnam: Quang Binh Province: IEBR A.2014.7; PNKB 2011.67; ZFMK 76198 (holotype), ZFMK 76174–76179 (paratypes); ZFMK 80651–80652. Laos: Khammouane Province: VFU 2014.1–2014.2.