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## A new species of the genus *Gekko* Laurenti (Squamata: Sauria: Gekkonidae) from Guangxi, China

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### Abstract

A new species of the genus *Gekko* is described on the basis of six specimens from Wuming county of Guangxi, southern China. *Gekko kwangsiensis* sp. nov. is distinguished from other congeners by a combination of the following characters: body relatively small (SVL 64.2–69.7 mm in adults), slender; nares in contact with rostral; internasal absent or single; postmentals two (rarely three), enlarged; interorbital scales between anterior corners of the eyes 29–31; dorsal tubercle rows 9–11; ventral scales between mental and cloacal slit 185–208; midbody scale rows 143–156; ventral scale rows 41–45; subdigital lamellae on first toe 11–13, on fourth toe 13–18; finger and toe webbing weakly developed; tubercles absent on upper surface of fore limbs and hind limbs; precloacal pores nine or ten in males, absent in females; postcloacal tubercle single; tubercles present on dorsal surface of tail base; subcaudals enlarged; dorsal surface of body with 9 or 10 thin light bands between nape and sacrum, and dorsal surface of tail with remarkable black and white bands. Data on the natural history of the new species are provided, and the number of species in the genus *Gekko* recorded from China is now 17.

**Key words:** *Gekko*, taxonomy, Guangxi Zhuang Autonomous Region

### Introduction

The genus *Gekko* Laurenti currently comprises about 51 species, which are common inhabitants of plains and plateaus across temperate and tropical Asia and the western islands of Oceania (Zhou & Wang 2008; Rösler *et al.* 2011; Uetz & Hošek 2014). Rösler *et al.* (2011) divided the members of *Gekko* into six species groups: *G. gekko*, *G. japonicus*, *G. monarchus*, *G. petricolus*, *G. porosus*, and *G. vittatus* groups on the basis of morphological and preliminary molecular phylogenetic data. The *Gekko japonicus* group is the most diverse group in the genus with a total of 20 recognized species and a wide distribution in eastern Asia, from Japan throughout eastern China southward to Vietnam (Rösler *et al.* 2011; Nguyen *et al.* 2013). The members of this group are characterized by a moderate size; nares usually in contact with rostral; 2–3 nasals; 0–21 rows of dorsal tubercles; 0–32 precloacal pores; 1–4 postcloacal tubercles; the webbing between fingers and toes weakly developed to extensive; lateral folds without tubercles; enlarged subcaudals; and vertebral region with large, light flecks, blotches or bands (Rösler *et al.* 2011).

During recent field work in the karst forests of Guangxi Zhuang Autonomous Region, southern China, we collected six individuals of an unknown species of the genus *Gekko*, which can be assigned to the *Gekko japonicus* group based on morphological features. It differs significantly from all congeners by a combination of morphological and color characteristics and described as new species herein.

### Methods and material

Six individuals were collected from Wuming County, Nanning City, Guangxi Zhuang Autonomous Region, China. All specimens are preserved in 80% alcohol and deposited at the herpetology collection of Kadoorie Farm and Botanic Garden, Hong Kong (KFBG).

*wenxianensis* Zhou & Wang (2–3). In having 9–10 distinct preloacal pores in males, *Gekko kwangsiensis* **sp. nov.** can be easily distinguished from *G. adleri* Nguyen, Wang, Yang, Lehmann, Le, Ziegler & Bonkowski (17–21), *G. chinensis* (Gray) (17–27), *G. palmatus* Boulenger (23–30), *G. scabridus* (10–15, usually 12–13) and *G. similignum* Smith (17), as well as *G. shibatai* Toda, Sengoku, Hikida & Ota, *G. tawaensis* and *G. vertebralis* (adult males lacking distinct preloacal pores in these three species).

From the remaining species, *Gekko kwangsiensis* **sp. nov.** differs from *G. hokouensis* Pope in having more preloacal pores (9–10 *versus* 5–9, usually 6–7 in *hokouensis*), more preorbitals (18–19 *versus* 13 in *hokouensis*), fewer dorsal tubercle rows (9–11 *versus* 12–14 in *hokouensis*), more subdigital lamellae under first and fourth toes (11–13 *versus* 6–9 and 13–18 *versus* 7–9, respectively, in *hokouensis*), and a different dorsal pattern. *Gekko kwangsiensis* **sp. nov.** differs from *G. liboensis* Zhou, Liu & Li in having a relatively smaller body size (adults SVL 64.2–69.7 mm *versus* 76–85 mm in *liboensis*), fewer interorbitals (29–31 *versus* 40 in *liboensis*), more subdigital lamellae under first and fourth toes (11–13 *versus* 8 and 13–18 *versus* 9, respectively, in *liboensis*), dorsal tubercles round and convex (*versus* dorsal tubercles round and flat in *liboensis*), and a different dorsum pattern. *Gekko kwangsiensis* **sp. nov.** differs from *G. yakuensis* Matsui & Okada in having more preloacal pores (9–10 *versus* 6–8 in *yakuensis*), dorsal tubercles present on the dorsal surface of tail base but not extending posteriorly (*versus* paired median tubercles present on the whole length of the original tail in *yakuensis*), and a different dorsal pattern.

## Discussion

With the description of *Gekko kwangsiensis* **sp. nov.**, the total number of species in the genus *Gekko* recorded in China is 17 species: *G. adleri*, *G. auriverrucosus*, *G. chinensis*, *G. gekko* (Linnaeus), *G. hokouensis*, *G. japonicus*, *G. kwangsiensis* **sp. nov.**, *G. kikuchii* (Oshima), *G. liboensis*, *G. melli*, *G. reevesii* (Gray), *G. scabridus*, *G. similignum*, *G. subpalmatus*, *G. swinhonis*, *G. taibaiensis* and *G. wenxianensis* (Zhao *et al.* 1999; Rösler *et al.* 2011; Nguyen *et al.* 2013).

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