



# Article

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## Description of a new species of the genus *Xenophrys* Günther, 1864 (Amphibia: Anura: Megophryidae) from Mount Jinggang, China, based on molecular and morphological data

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### Abstract

A new species, *Xenophrys jinggangensis* **sp. nov.**, is described based on a series of specimens collected from Mount Jinggang, Jiangxi Province, Eastern China. The new species can be easily distinguished from other known congeners by morphology, morphometrics and molecular data of the mitochondrial 16SrRNA gene. The new species is characterized by its small size with adult females measuring 38.4–41.6 mm in snout-vent length and males measuring 35.1–36.7 mm; head length approximately equal to head width; tympanum large and distinct, about 0.8 times of eye diameter; vomerine teeth on two weak ridges; tongue not notched behind; relative finger length  $II < I < IV < III$ ; slight lateral fringes present on digits; toes bases with thick, fleshy web; dorsum with tubercles and swollen dorsolateral folds; large pustules scattered on flanks; and unique color patterns. The new species represents the thirty-first known *Xenophrys* in China.

**Key words:** Megophryidae, *Xenophrys jinggangensis* **sp. nov.**, morphology, mitochondrial DNA, taxonomy

### Introduction

The genus-level classification of frogs in the genera *Megophrys* Kuhl & Van Hasselt, 1822 and *Xenophrys* Günther, 1864, in the family Megophryidae, are poorly understood, and researchers have employed various classification schemes (Rao & Yang 1997; Delorme *et al.* 2006; Li & Wang 2008; Fei *et al.* 2009; Mahony 2011). Pending comprehensive phylogenetic and morphological research, we follow the treatment from Li & Wang (2008) and Pyron *et al.* (2011) that *Xenophrys* is distinguished from *Megophrys* and all previously known *Megophrys* species in China and should be transferred to the genus *Xenophrys*.

Currently, the genus *Xenophrys* contains 42 species and is distributed in Southeast Asia from southern and eastern Himalayan Region to Borneo (Frost 2011). There are 30 species of *Xenophrys* recognized from China; only three *Xenophrys* species are recorded from Eastern China, i.e., *X. boettgeri* (Boulenger, 1899) and *X. kuatunensis* (Pope, 1929) in Mount Wuyi, *X. huangshanensis* (Fei & Ye, 2005) in Mount Huangshan, all having body length shorter than 50 mm. Therefore, the *Xenophrys* diversity is probably underestimated in Eastern China which has extensive mountainous areas and suitable habitats.

During herpetological surveys conducted from 2010 to 2011 on Mount Jinggang (26°13'04"–26°52'30" N; 113°59'12"–114°18'28" E), Jiangxi Province, we found an unknown, relatively small (i.e. body length shorter than 50 mm) species which can be assigned into genus *Xenophrys* on the basis of the following characters: head broad and depressed, tympanum distinct, tubercles on the outer edge of the upper eyelids short, tubercles on the snout absent, no mid-dorsal fold, no black horny spines on dorsum, hindlimbs long, heels overlap (Li & Wang 2008). Herein we describe this new species based on morphological and molecular data.