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Description of a new species of *Microhyla* from Bali, Indonesia (Amphibia, Anura)

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Abstract

We describe a microhylid frog from Bali, Indonesia as a new species, *Microhyla orientalis* **sp. nov.** It belongs to the *M. achatina* group and is close to *M. mantheyi*, *M. malang*, and *M. borneensis*. It is distinguished from its congeners by a combination of the following characters: small size (adult males about 16–17 mm in SVL); a faint vertebral stripe present; a black lateral stripe from behind eye to half length of trunk; snout rounded in profile; eyelid without supraciliary spines; first finger less than one-fifth of third; tips of three outer fingers weakly dilated, forming weak disks, dorsally with median longitudinal groove; outer palmar tubercle single; tibiotarsal articulation reaching up to center of eye; tips of toes distinctly dilated into disks, dorsally with median longitudinal groove; inner and outer metatarsal tubercles present; four or more phalanges on inner and outer sides of fourth toe, and three phalanges on inner side of fifth toe free of web; and tail of larva with a black marking at middle. The male advertisement call of the new species consists of a series of notes each lasts for 0.01–0.08 s and composed of 3–5 pulses with a dominant frequency of 3.2–3.6 kHz. Uncorrected sequence divergences between *M. orientalis* and all homologous 16S rRNA sequences available were >6.6%. At present, the new species is known from rice fields between 435–815 m elevation in Wongaya Gede and Batukaru.

Key words: new species, mtDNA phylogeny, *Microhyla orientalis*, Java, taxonomy

Introduction

The island of Bali is located at the westernmost of the Lesser Sundas. The island is separated in the west from the Java Island, which belongs to the Greater Sundas, by the Strait of Bali with a minimum distance of only 3 km, and in the east from the Lombok Island by the Lombok Strait, with a distance of 35 km (Fig. 1); all of these islands together form a chain-like archipelago. The area of the island is 5,561 km², and many volcanoes are present in the north, and many waterways run in the south (Whitten & Soeriaatmadja 1996).

Considering the small size and topography of the island, the amphibian fauna of Bali is expected to be limited. Indeed, the amphibian fauna of Bali is not diverse and Iskandar (1998) listed only 14 species of anuran from the island: *Leptobranchium hasseltii* Tschudi, *Bufo* (= *Ingerophrynus*) *biporcatus* Gravenhorst, *Bufo* (= *Duttaphrynus*) *melanostictus* Schneider, *Kaloula baleata* (Müller), *Microhyla palmipes* Boulenger, *Oreophryne monticola* (Boulenger), *Rana* (*Aquarana*) *catesbeiana* (Shaw) (introduced, = *Lithobates catesbeianus*), *Rana* (*Hylarana*) *chalconota* (Schlegel), *Rana* (*Hylarana*) *nicobariensis* (Stoliczka), *Fejervarya cancrivora* (Gravenhorst), *Fejervarya limnocharis* (Gravenhorst), *Occidozyga lima* (Gravenhorst), *Occidozyga sumatrana* (Peters), and *Polypedates leucomystax* (Gravenhorst). More recently, McKay (2006) noted 15 anuran species on the island, with *O. lima* being excluded but *O. laevis* (Günther) and *Microhyla achatina* (Tschudi) added to Iskandar's (1998) list. McKay's (2006) *O. laevis* should represent *O. sumatrana* (Eto & Matsui 2012), while *M. achatina* is considered to represent the new species described in this paper.