



## A new species of *Gastrophrynoides* (Anura: Microhylidae): an addition to a previously monotypic genus and a new genus for Peninsular Malaysia

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### Abstract

A new species of microhylid frog of the genus *Gastrophrynoides* is described from Gunung Besar Hantu, in the state of Negeri Sembilan, adding a new generic record to the family Microhylidae of Peninsular Malaysia and an additional species to the previously monotypic genus *Gastrophrynoides*. This new species can be distinguished from its only congener, *G. borneensis* by having an immaculate, grayish brown dorsum (instead of a spotted one); a longer snout (2.6–3.0 vs. 2.0–2.5 times diameter of eye); and a single, large, oval outer metacarpal tubercle beneath the hand (instead of smaller, paired, rectangular outer metacarpal tubercles in *G. borneensis*).

**Key words:** Gunung Besar Hantu, *Gastrophrynoides borneensis*, Negeri Sembilan, frog

### Introduction

*Gastrophrynoides* Noble 1926, as currently constituted, is a monotypic genus containing the species *G. borneensis* (Boulenger 1897). This rare and elusive frog is endemic to Borneo, occurring in Sarawak (Inger 1966) and Sabah (Kueh & Sudin 2008). A single specimen recorded from Sumatra, Indonesia is doubtful and requires further confirmation before it is accepted (Inger 1966).

Frost *et al.* (2006), without comment, removed *Gastrophrynoides* from the subfamily Microhylinae but addressed it no further. Subsequent molecular studies have not addressed this taxon (Van der Meijden *et al.* 2007) due to its rarity, leaving its phylogenetic placement unresolved. Knowledge of the ecology of this frog remains equally limited due to the scarcity of findings. Previous accounts of *G. borneensis* were all from lowland forests less than 500 m a.s.l (Inger & Stuebing 2005), where frogs were found beneath dead leaves on the forest floor or in water-filled holes. More recently, Kueh & Sudin (2008) found a specimen inside a rotting log in a drying stream bed at 878 m elevation in Tawau Hills Park, Sabah.

In April 2008, we obtained three specimens of a strange frog from the top of Gunung Besar Hantu, Negeri Sembilan, Peninsular Malaysia at 800–1400 m elevation (Figure 1). We assigned them to the family Microhylidae owing to their lack of maxillary teeth; lack of parotoid glands; and a firmisternal pectoral girdle with non-overlapping epicoracoids; well developed coracoids reaching the midline of the girdle and scapulae; a large, cartilaginous sternum; and no clavicles or osmosternum. We identified them as belonging to the genus *Gastrophrynoides* on the basis of having completely smooth skin and a long, pointed snout more than twice