

Newly discovered miniature *Microhyla* from Borneo among the world's smallest frogs

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The terms 'diminutive,' 'minute,' or 'miniature' have been applied to a number of amphibian species that are under 15 mm (see Estrada and Hedges 1996; Biju et al. 2007; Duellman and Hedges 2008). The smallest amphibian species are members of the genera *Eleutherodactylus* (fide Estrada and Hedges 1996), *Brachycephalus* (fide Frost et al. 2006), *Noblella* (fide Lehr and Catenazzi 2009), and *Stumpff-*

has an adult SVL range of 10.9–12.0 mm (Vences and Glaw 1991).

A new diminutive species of microhylid frog, *Microhyla nepenthicola* (Figures 1, 2 and 4), from the Summit Trail of Sarawak's Matang Range, in Malaysian Borneo was described by us recently (Das and Haas 2010), and matches the size range shown by the smallest of these frogs (adult males range SVL

Its small size made specimen collection a challenge, and most were collected by being made to jump onto a piece of white cloth, after males were

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tracked down by their calls. Consequently, only a couple females were collected. Larvae were abundant in pitchers, and association between adults and larvae were made by DNA barcoding.

This newly-described species can be diagnosed from its 30 congeners (known from the Indian subcontinent, Indo-Malaya and Indo-China) in showing dorsum with low tubercles that are relatively more distinct on flanks; a weak, broken, mid-vertebral ridge,

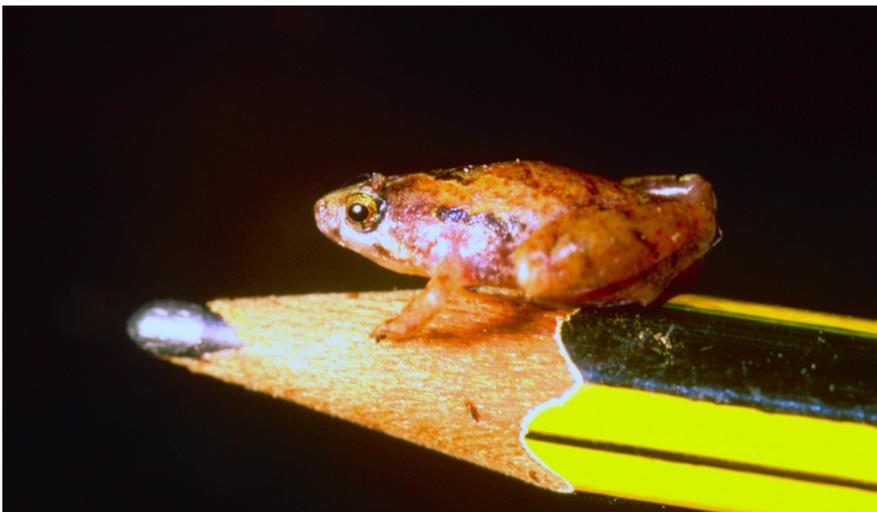


Figure 1. Adult *Microhyla nepenthicola* on pencil © Indraneil Das

fia (fide Vences and Glaw 1991), and among Old World frogs, the smallest member of the microhylid genus *Stumpffia* of Madagascar, *S. pygmaea*,

10.6–12.8 mm). The Bornean species is an obligate of the pitcher plant, *Nepenthes ampullaria*, breeding in senescent or mature pitchers.