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Red Hot Chili Pepper. A New *Calluella* Stoliczka, 1872 (Lissamphibia: Anura: Microhylidae) from Sarawak, East Malaysia (Borneo)

INDRANEIL DAS^{1,5}, PUI YONG MIN¹, WAYNE W. HSU², STEFAN T. HERTWIG³ & ALEXANDER HAAS⁴

¹*Institute of Biodiversity and Environmental Conservation, Universiti Malaysia Sarawak, 94300, Kota Samarahan, Sarawak, Malaysia*

²*Department of Ecology, Evolution & Environmental Biology, Columbia University, 10th Fl. Schermerhorn Ext., 1200 Amsterdam Avenue, New York, NY 10027, U.S.A.*

E-mail: wwh2103@columbia.edu

³*Naturhistorisches Museum der Burgergemeinde Bern, Bernastrasse 15, CH-3005 Bern, Switzerland.*

E-mail: stefan.hertwig@nmbe.ch

⁴*Biozentrum Grindel und Zoologisches Museum Hamburg, Martin-Luther-King-Platz 3, 20146 Hamburg, Germany.*

E-mail: alexander.haas@uni-hamburg.de

⁵*Corresponding author. E-mail: idas@ibec.unimas.my*

Abstract

A new brightly-coloured (olive and red) species of microhylid frog of the genus *Calluella* Stoliczka 1872 is described from the upper elevations of Gunung Penrissen and the Matang Range, Sarawak, East Malaysia (Borneo). *Calluella capsa*, new species, is diagnosable in showing the following combination of characters: SVL up to 36.0 mm; dorsum weakly granular; a faint dermal fold across forehead; toe tips obtuse; webbing on toes basal; lateral fringes on toes present; outer metatarsal tubercle present; and dorsum greyish-olive, with red spots; half of venter bright red, the rest with large white and dark areas. The new species is the eighth species of *Calluella* to be described, and the fourth known from Borneo. A preliminary phylogeny of *Calluella* and its relatives is presented, and the new taxon compared with congeners from Malaysia and other parts of south-east Asia.

Key words: *Calluella capsa* sp. nov., Microhylidae, systematics, new species, Gunung Penrissen, Matang Range, Malaysia

Introduction

The microhylid genus *Calluella* Stoliczka 1872 comprises seven nominal species that are known from southern China, Indo-Malaya and Indo-China (Frost 2013; Inger *et al.* 1999; Das *et al.* 2004). The genus was created to place *Megalophrys guttulata* Blyth 1856, by Stoliczka 1872, originally described as a monotypic genus. With the exception of *C. guttulata* (Blyth 1856) and *C. yunnanensis* Boulenger 1919, members of the genus tend to be rare in collections, with most species known from three or less specimens. This rarity is perhaps due to their fossorial habits within rainforest habitats, and temporally limited appearance on the soil surface. Perhaps as a consequence, as many as three synonyms are on record: *Colpoglossus* Boulenger 1905 (for *C. brooksii* Boulenger 1904), *Dyscophina* van Kampen 1905 (for *C. volzi* van Kampen 1905) and *Calliglutus* Barbour and Noble 1916 (for *C. smithi* Barbour & Noble 1916). The genus *Calluella* was placed in the subfamily Dyscophinae along with the Madagascan *Dyscophus*, although Vences (2004) mentioned that molecular data have failed to clarify their relationship. Subsequently, *Calluella* was transferred to Calluellinae by Fei *et al.* (2005), and on the basis of phylogenetic position to Microhyliinae by Frost *et al.* (2006). More recently, de Sá *et al.* (2012) reported the genus, as currently construed, to be paraphyletic. Pyron and Wiens (2012) suggested a sister-relationship with *Glyphoglossus*, on the basis of sequence data, and together with *Glyphoglossus* and *Microhyla*, forming a well-supported clade within the Microhyliinae (McPartlin 2010).