A new species of Oreophrynella (Anura: Bufonidae) from the Pantepui region of Guyana, with notes on O. macconnelli Boulenger, 1900

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Abstract

Oreophrynella seegobini sp. nov. is described from 2088 m elevation on Maringma tepui in the Pakaraima Mountains of Guyana, at the Guyana-Brazil border. The new species is mainly distinguished from known congeners by small size, indistinct frontoparietal crests, prominent postorbital crests, prominent suborbital crests, well-developed webbing on hand and foot, dorsal skin minutely spiculate with scattered medium to large elevated tubercles, ventral skin anteriorly rugose with few flat granules, posteriorly tuberculate, blackish brown dorsal colour, and dark brownish orange ventral colour. Data on four specimens of O. macconnelli collected on the southeast slope of the tepui are provided.

Key words: Oreophrynella seegobini sp. nov., endemism, Guiana Shield, taxonomy, tepuis

Introduction

The upland and highland genus Oreophrynella currently contains eight species endemic to tepuis and tepui slopes in the Guiana Shield highlands (see Lathrop & MacCulloch 2007 for an updated distribution map of the species of Oreophrynella). The type species for the genus, O. quelchii, was originally described in the preoccupied genus Oreophryne Boettger, 1895 by Boulenger (1895a) and subsequently assigned to the genus Oreophrynella (Boulenger 1895b). Oreophrynella species occur between ca. 1067–2600 m elevation and are readily distinguished from all other bufonids by their small size, thick skin between digits, and opposable toes.

According to Graybeal and Cannatella (1995), the genus is monophyletic; it has been considered the sister taxon of Atelopus + Dendrophryniscus + Melanophryniscus by McDiarmid (1971) and of Dendrophryniscus by Cannatella (1985). The genus was discussed by Señaris et al. (1994), who suggested relationships with Metaphryniscus and Osornophryne, the latter plus Atelopus considered as the sister taxon of remaining bufonids by Frost et al. (2006). Ruiz-Carranza and Hernández-Camacho (1976) discussed striking phenetic similarities with Osornophryne, which according to them are due to evolutionary convergence. Based on morphology, Graybeal (1997) presented a tree suggesting Oreophrynella most closely allied with African and Asian non-Bufo taxa (Didynamipus and Pelophryne, respectively). Combining morphological and molecular data [obtained from O. dendronastes (as Oreophrynella sp)], Pramuk (2006) presented a tree suggesting Oreophrynella most closely allied to Atelopus and Dendrophryniscus.

Most Oreophrynella species were described subsequent to 1990 and our knowledge of these interesting creatures is slowly, but surely increasing as a result of recent collecting efforts in the Pakaraima Mountains of Guyana and Venezuela (Lathrop & MacCulloch 2007, Señaris et al. 1994, 2005).

A recent expedition to Maringma tepui, a sandstone flat-topped table mountain located at the Guyana-Brazil border, has uncovered an additional Oreophrynella species from the tepui summit that is described below. Four specimens of O. macconnelli Boulenger, 1900 were collected on the southeast slope of the tepui and supplementary data on this poorly known taxon are provided.