



Two new frogs of the genus *Platymantis* (Anura: Ceratobatrachidae) from the Isabel Island group, Solomon Islands

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Abstract

We describe two new species of forest frogs in the genus *Platymantis* from the Isabel Island group, Solomon Islands. One new species is a medium-sized, terrestrial form that is morphologically most similar to *P. weberi* (a widespread Solomon Islands species). The other new species is an arboreal frog that is morphologically similar to *Platymantis neckeri* (known from Bougainville, Choiseul, and Isabel islands). Both new species possess unique advertisement calls that distinguish them from all sympatric congeners. Because acoustic characteristics function as the primary mate-recognition signals for anuran species, and are therefore an excellent indicator of the status of unique evolutionary lineages, we recognize each as new species. We diagnose both new species on the basis of their distinctive advertisement calls and in the case of the terrestrial form, by differences in body size, body proportions and skin texture. The diversity of ceratobatrachid frogs of the Solomon islands and Bougainville is underestimated and in need of a comprehensive taxonomic review coupled with a standardized survey of acoustic characters.

Key words: forest frogs, *Platymantis*, Solomon Islands, SW Pacific, advertisement calls, cryptic species diversity

Introduction

The genus *Platymantis* is a diverse assemblage of forest frogs with two centers of diversity: one in the Philippines (28 species; Brown *et al.* 1997; Alcalá & Brown 1998, 1999; Siler *et al.* 2007; Brown & Gonzales 2007), and another in the Solomon-Bismarck-Admiralty archipelagos (26 species; Brown & Tyler 1968; Zweifel 1975; Brown & Menzies 1982a; Allison & Kraus 2001; Foufopoulos & Brown 2004; Brown *et al.* 2006a, b; Richards *et al.* 2007). Seven species occur in the Admiralty Archipelago (Richards *et al.* 2007; Richards, unpublished data) and intervening and fringing island groups have moderate levels of species diversity, including: 2–4 species endemic to eastern Indonesia (Menzies 1982a, 1982b; Edgar & Lilley 1993), seven species on the large island of New Guinea (Zweifel 1969; Allison 1996; Günther 1999, 2006), two species in Fiji (Gorham 1965; Morrison 2003), and one in Palau (Allison 1996; Brown 1997; Crombie & Pregill 1999).

The Solomon Islands (including the biogeographically associated islands of Bougainville and Buka, Papua New Guinea) is home to an impressive array of ceratobatrachid frog diversity: eight species of the genus *Batrachylodes*, four species of *Discodeles*, nine species of *Platymantis* and a single species each in the monotypic genera *Palmatorappia* and *Ceratobatrachus*. Species of the genus *Platymantis* from Solomon Islands include the widespread tree frog *P. guppyi* and widespread ground frogs, *P. solomonis* and *P. weberi*.