



## Two new species of *Platymantis* (Anura: Ranidae) from New Britain

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### Abstract

We redescribe the poorly known *Platymantis akarithymus* and describe two new species of this terrestrial frog genus from the Nakanai Mts. of eastern New Britain Island. All are small inhabitants of the leaf litter. Discovery of the two new species increases the known diversity of the genus on New Britain to 15 species, ten of which we routinely found to occur in syntopy. The two new fossorial species are diminutive and extend the morphological and ecological diversity seen in this assemblage. Several pairs of apparent sibling species are found on New Britain and these are likely the result of geological events that have divided the island into smaller islands in the past. We anticipate that further sibling species will be discovered once the Whiteman Range of western New Britain is properly explored.

**Key words:** frog, sibling species, Nakanai Mountains, Bismarck Archipelago, new species

### Introduction

The genus *Platymantis* is a diverse lineage of 59 species of terrestrial and arboreal, forest-dwelling, direct-developing frogs. The genus ranges from the Philippines east through the islands of Palau, New Guinea, Bismarcks, Admiralties, the Solomons, and Fiji. Greatest diversity is found in the Philippines, with 27 species (Brown and Alcalá, 1970; Brown et al., 1997a, b, 1999a, b), and in the Bismarck and Solomon archipelagoes, with 22 species (Brown, 1965; Brown and Tyler, 1968; Allison and Kraus, 2001; Foufopoulos and Brown, 2004; Brown et al., 2006a, b). The intervening areas of Palau and New Guinea and its immediately adjacent islands are relatively depauperate, with one and seven species, respectively. Finally, two species occupy remote Fiji. This pattern of species-level diversity is unique among amphibians in the Papuan area, which are usually most diverse on New Guinea and less so on immediately adjacent islands.

New Britain is a center of regional diversity in *Platymantis* both with respect to number of species ( $n = 13$ ) and with respect to morphological diversity, which includes terrestrial and arboreal species of widely varying shapes and sizes. Nonetheless, that diversity is still only partially understood, with four new species from that island having been described in the past five years (Allison and Kraus, 2001; Foufopoulos and Brown, 2004; Brown et al., 2006a, b). Herein we describe two more new members of the genus obtained by us on a recent expedition to the Nakanai Mts. of eastern New Britain. Prior to this, we redescribe *Platymantis akarithymus*, a species previously known from only five specimens and closely related to one of our newly discovered species.

### Material and methods

Specimens were collected under relevant national and provincial permits, fixed in 10% buffered formalin, and transferred to 70% ethanol for storage. All length measurements were made with digital calipers or an optical