



## Two new species of *Callulops* (Anura: Microhylidae) from montane forests in New Guinea

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### Abstract

Two new species of microhylid frogs assigned to the genus *Callulops* are described from the mountains of New Guinea. *Callulops fojaensis* **sp. nov.** is known only from mid-montane forest in the Foja Mountains of Papua Province, Indonesian New Guinea, and can be distinguished from congeners by the combination of moderate size, short limbs, slightly expanded finger and toe discs, and uniform brown dorsal and lateral colouration. *Callulops mediodiscus* **sp. nov.** is known from a single site in mid-montane forest in Southern Highlands Province, Papua New Guinea, and can be distinguished from all congeners by its wide finger and toe discs, moderate size and short advertisement call. Description of these two new frog species brings the number of *Callulops* known to 18, of which at least nine are only known from montane regions (>1000 m above sea level).

**Key words:** Central Cordillera, Foja Mountains, Frog, Indonesia, Papua New Guinea

### Introduction

The family Microhylidae is the most ecologically diverse and species-rich component of the New Guinea frog fauna (Menzies 2006; Frost 2011). *Callulops* is a genus of moderate to very large terrestrial microhylids known to occur over a broad range of altitudes across New Guinea and surrounding islands (Menzies 2006). The most comprehensive review of this genus (as *Phrynomantis*, a name now restricted to a group of African frogs) was provided by Zweifel (1972), who described a number of new taxa and provided a key to the recognised species.

On the basis of genetic evidence and following a morphological analysis Günther (2009) removed three species from *Callulops* and placed them in two new genera: *Metamagnusia* (*M. slateri*; also including the newly described *M. marani*) and *Pseudocallulops* (*P. eurydactylus* and *P. pullifer*). Although the taxa left in *Callulops* were not formally diagnosed by Günther (2009) and the monophyly of the species remaining in the genus has not been assessed, most share a number of morphological traits including predominately brownish dorsal colouration, robust body form, moderate to large size, digital discs not or only slightly expanded, and, when discs are present, those on the fingers are narrower than those on the toes (Günther 2009). A number of skeletal features were also considered by Günther (2009) to be characteristic of *Callulops*, but because these were based on analysis of only one species, their overall utility for diagnosing the genus remains uncertain.

Four new species of *Callulops* (*sensu stricto*) have been described in the last two decades (Richards *et. al.* 1995; Kraus and Allison 2003, 2009) and sixteen species are now recognised (Frost 2011). Here we describe two additional species discovered on recent surveys in upland regions of Papua New Guinea and in Papua Province of Indonesian New Guinea.