Two new species of Choerophryne (Anura, Microhylidae) from the northern versant of Papua New Guinea’s central cordillera

AMY IANNELLA1, PAUL OLIVER2,3 & STEPHEN RICHARDS4
1School of Biological Sciences, University of Adelaide, Adelaide, South Australia 5005, Australia
2Research School of Biology, The Australian National University Canberra, Australian Capital Territory 0200 Australia
3Department of Zoology, University of Melbourne, Melbourne, Victoria 3000, Australia
4Herpetology Department, South Australian Museum, Adelaide, South Australia 5000, Australia

Abstract

We describe two new species of small microhylid frogs in the genus Choerophryne from the northern slopes of Papua New Guinea’s central cordillera. Choerophryne epirrhina sp. nov. can be distinguished from congeners by the combination of moderately small size (SUL 14.9–15.0 mm), distinctly elongated snout (OHG/SUL 0.09–0.10), first finger without expanded disk, and advertisement call consisting of 3–4 distinctly pulsed notes repeated in long sequences. Choerophryne grylloides sp. nov. can be distinguished from congeners by the combination of very small size (SUL 12.5 mm), moderately long snout (OHG/SUL 0.08), long legs (TL/SUL 0.42), first finger without expanded disk and advertisement call consisting of 4–5 distinctly pulsed notes, the last of which has many more pulses than preceding notes (9–10 vs. 3–4).

Key words: frog, miniaturisation, systematics

Introduction

Studies over the last decade have revealed an exceptionally high number of previously undescribed frog species from New Guinea, particularly in the family Microhylidae (Günther & Richards 2011; Kraus 2012; Günther et al. 2014). For example, known diversity of the small to very small (11–23 mm SUL) frogs with a distinctive nasal projection in the microhylid genus Choerophryne has more than trebled from three species when the group was reviewed around a decade ago (Kraus & Allison 2001), to eleven in 2014 (Richards & Burton 2003; Richards et al. 2007; Günther 2008; Kraus 2013; Iannella et al. 2014).

The recent discovery that the microhylid genus Albericus is paraphyletic with respect to Choerophryne (Peloso et al. 2015) resulted in the synonymisation of that genus with Choerophryne, further increasing its diversity. However the 11 previously recognised Choerophryne form a morphologically discrete and largely monophyletic clade within the genus (Iannella in prep) that, with the exception of C. bryonopsis (which has a snout projection intermediate between Albericus and Choerophryne; Kraus 2013) is distinguished by a distinctly projecting snout. To distinguish these frogs from the blunt-snouted Choerophryne recently transferred to the genus from Albericus, we refer to them here as ‘long-nosed Choerophryne’.

Long-nosed Choerophryne are most diverse in the lowlands and isolated ranges of northern New Guinea (Kraus & Allison 2001; Günther 2008), but during the last decade three species have been documented from the southern slopes of the main cordillera in central Papua New Guinea (Richards & Burton 2003; Richards et al. 2007; Iannella et al. 2014). Records from the intervening region along the northern versant of the central cordillera are lacking to date. However, recent surveys in the headwaters of the Sepik River have revealed two previously unknown species of long-nosed Choerophryne, representing the first records from the northern slopes of Papua New Guinea’s central mountains. These two new species are described herein.