



A new species of *Leptolalax* (Anura: Megophryidae) from Vietnam and further information on *Leptolalax tuberosus*

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Abstract

We describe a new species of megophryid frog from central Vietnam. *Leptolalax croceus* **sp. nov.** is most similar to *L. tuberosus*, but distinguished from this and all other *Leptolalax* species by its bright orange belly in life and by its unique, complex advertisement call consisting of 4–6 variably pulsed notes with a dominant frequency of 2635–3000 Hz. In contrast, *L. tuberosus* has an advertisement call consisting of a single, weakly pulsed note lasting 54–78 ms with a dominant frequency of 2584–2756.2 Hz. *Leptolalax croceus* **sp. nov.** can be further distinguished from its congeners by a combination of an indistinct tympanum, highly tuberculate dorsum, medium body size (22.2–27.3 mm in 16 adult males), head slightly wider than long, rudimentary webbing between toes I–III, no webbing between toes III–V, no lateral fringing on toes, and no ventrolateral glands. The new species is only known from a single locality in evergreen forest at 1316 m elevation. Males were found calling from leaf litter and low vegetation adjacent to a shallow, rocky stream. We suggest the species should be considered Data Deficient following IUCN's Red List categories.

Key words: Acoustics, Anura, *Leptolalax croceus* **sp. nov.**, *Leptolalax tuberosus*, Vietnam, Southeast Asia

Introduction

The genus *Leptolalax* (Dubois 1983) currently consists of 27 species found in rocky streams in hilly evergreen forest throughout Southeast Asia, southern China and northeastern India (Frost 2010, Rowley *et al.* 2010). *Leptolalax* are small frogs of the forest floor, cryptic in both colouration and behaviour, with advertisement calls easily mistaken for that of an orthopteran. As a result, they are easily overlooked during field surveys. *Leptolalax* are also morphologically cryptic, with species being difficult to distinguish based upon external morphology, especially in preservative. Unsurprisingly, the genus *Leptolalax* contains a high proportion of undiagnosed diversity, with new species continuously being described from throughout their range (eg. Matsui *et al.* 2009; Rowley & Cao 2009; Das *et al.* 2010; Rowley *et al.* 2010; Sengupta *et al.* 2010). Species discovery in the genus has been accelerated by increased survey efforts and the incorporation of molecular and acoustic information in delineating species boundaries.

During recent field work in central Vietnam, we discovered a species of *Leptolalax* superficially resembling *L. tuberosus*, a species recorded from only 11 km away. The new species is distinct in having a bright orange belly, and a relatively complex advertisement call, both of which are unique within the genus. Here we describe this species as new, and provide further information on *L. tuberosus*, including the first description of its advertisement call.