



A new species of *Leptolalax* (Anura: Megophryidae) from central Vietnam

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Abstract

We describe a new species of *Leptolalax* from central Vietnam. *Leptolalax firthi* **sp. nov.** is distinguished from its congeners by a combination of the following characters: an absence of distinct dark brown or black dorsolateral markings; toes with rudimentary webbing and wide lateral dermal fringes in males and weak or absent lateral dermal fringes in females; most males with wide lateral dermal fringes on Finger II; medium size (26.4–29.2 mm in 21 adult males, 25.7–36.9 mm in 14 females); and near immaculate white chest and belly. The male advertisement call of the new species, consisting of 2–5 notes with a dominant frequency of 5.4–6.6 kHz (at 18.3–21.2° C) is also unique among *Leptolalax* species for which calls are known. Uncorrected sequence divergences between *L. firthi* and all homologous 16S rRNA sequences available were >10%. At present, the new species is known from montane evergreen forest between ~860–1720 m elevation in Kon Tum and Quang Nam Provinces. The extreme sexual dimorphism observed in *L. firthi* in terms of lateral dermal fringing, a morphological character often used to distinguish *Leptolalax* species, highlights the importance of ensuring interspecific comparisons in the genus are performed separately for each sex.

Key words: Bioacoustics, Kon Tum Plateau, *Leptolalax firthi* **sp. nov.**, Southeast Asia, sexual dimorphism

Introduction

The genus *Leptolalax* Dubois 1983 is an increasingly diverse group of small frogs, currently comprising 33 species (Frost 2011; Ohler *et al.* 2011; Rowley *et al.* 2011). Frogs in the genus inhabit the forest floor and rocky streams in hilly evergreen forest throughout Southeast Asia, southern China and northeastern India (Frost 2011). Over a quarter of all *Leptolalax* species have been described since 2010 (Frost 2011; Ohler *et al.* 2011; Rowley *et al.* 2011), a result of both increased survey efforts in the region and the addition of acoustic and molecular data in delineating species boundaries in the genus.

Here we describe a new, medium-sized *Leptolalax* species from central Vietnam. The species is distinguished from its congeners on the basis of morphological, molecular and bioacoustic differences.

Materials and methods

We recorded morphological data from specimens fixed in 10% formalin and then stored in 70% ethanol. Specimens were deposited at the Australian Museum (AMS) and the North Carolina Museum of Natural Sciences (NCMSM). Some specimens currently at the AMS will be deposited at the University of Science, Ho Chi Minh City (UNS) and have been cross-catalogued at both institutions. In these instances, voucher numbers are reported as UNS/AMS. Morphometric data were taken (to the nearest 0.1 mm) with digital callipers. Measurements include snout-vent length (SVL); head length from tip of snout to rear of jaws (HDL); head width at commissure of jaws (HDW);