



## A new species of *Leptolalax* (Anura: Megophryidae) from the highest mountain in Indochina

JODI J. L. ROWLEY<sup>1,2</sup>, VINH QUANG DAU<sup>3</sup> & TAO THIEN NGUYEN<sup>4</sup>

<sup>1</sup>Australian Museum Research Institute, 6 College St, Sydney, NSW, 2010, Australia. E-mail: [jodi.rowley@austmus.gov.au](mailto:jodi.rowley@austmus.gov.au)

<sup>2</sup>School of Marine and Tropical Biology, James Cook University, Townsville, QLD, 4811, Australia

<sup>3</sup>Institute of Ecology and Biological Resources, 18 Hoang Quoc Viet, Hanoi, Vietnam

<sup>4</sup>Vietnam National Museum of Nature, Vietnam Academy of Science and Technology, 18 Hoang Quoc Viet, Hanoi, Vietnam

Corresponding author: Jodi J. L. Rowley

E-mail: [Jodi.Rowley@austmus.gov.au](mailto:Jodi.Rowley@austmus.gov.au)

Phone: +61 2 9320 6014

### Abstract

We describe a new species of *Leptolalax* from northern Vietnam. *Leptolalax botsfordi* **sp. nov.** is distinguished from its congeners by a combination of (1) supra-axillary and ventrolateral glands present; (2) dark brownish red ventral surface with white speckling; (3) medium body size for the genus (29.1–32.6 mm in 7 adult males, 30.0–31.8 mm in 2 females); (4) black markings on the flanks absent; (5) toes with rudimentary webbing and weak lateral fringing; (6) large pectoral glands (1.1–1.9 mm; 4–6% SVL) and femoral glands (2.4–4.3 mm; 7–14% SVL); and (7) an advertisement call with a dominant frequency of 2.6–3.2 kHz (at 14.0° C). At present, the new species is known only from upper montane forest between 2,795–2,815 m elevation on Mount Fansipan, Hoang Lien National Park. To our knowledge, *Leptolalax botsfordi* **sp. nov.** occurs at higher elevations than any other species in the genus. If *L. botsfordi* **sp. nov.** is truly restricted to a narrow, high-elevation band, it is likely to be particularly vulnerable to the effects of climate change. The new species also faces the immediate threat of habitat degradation and pollution due to tourist activity.

**Key words:** Bioacoustics, Mount Fansipan, *Leptolalax botsfordi* **sp. nov.**, Southeast Asia

### Introduction

The genus *Leptolalax* Dubois 1983 is an increasingly diverse group of small-bodied frogs (SVL < 60 mm), currently comprising 37 species (Dehling 2013; Frost 2013). Frogs in the genus inhabit the forest floor and rocky streams in hilly evergreen forest throughout Southeast Asia, southern China and northeastern India (Frost 2013). Over a third of all *Leptolalax* species have been described in the last five years, 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 species of *Leptolalax* from upper montane forest on Mount Fansipan in northern Vietnam, the highest mountain in Indochina. The new species occurs at higher elevations than other *Leptolalax* species known from Mount Fansipan and surrounds (Bourret 1937; Ohler *et al.* 2000) and is distinguished from all congeners on the basis of morphological 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 Vietnam National Museum of Nature (VNMN) and the Australian Museum (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); snout length from tip of snout to anterior corner of eye (SNT); diameter of exposed portion of eyeball (EYE);

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