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A new species of *Leptolalax* (Anura: Megophryidae) from the western Langbian Plateau, southern Vietnam

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Abstract

We describe a new species of megophryid frog from Loc Bac forest in the western part of the Langbian Plateau in the southern Annamite Mountains, Vietnam. *Leptolalax pyrrhops* **sp. nov.** is distinguished from its congeners by a combination of the following morphological attributes: (1) presence of distinct dark brown/black dorsolateral markings, including blackish spots on flanks and dark canthal and/or temporal streaks; (2) rudimentary webbing on toes; (3) tympanum externally distinct; (4) dorsal skin finely shagreened with numerous small tubercles and pustules; (5) medium size for the genus (30.3–33.9 mm in 2 adult males, 30.8–34.3 mm in 7 females); (6) grey-pinkish to dark brownish-violet chest and belly with numerous whitish speckles, also covering the lateral sides of body; (7) ventrolateral glands small, indistinct, do not form a distinct line; (8) pectoral glands comparatively small, comprising 1–3% of adult SVL; (10) iris bicolored, typically bright orange-red in upper two-thirds, fading to silvery green in lower third. The male advertisement call of the new species is also unique among those *Leptolalax* species for which calls are known, with a single long 'introductory' note, consisting of 5–12 pulses, followed by of 4–5 predominantly single-pulsed notes, and an average dominant frequency of 1.91–2.23 kHz. From the morphologically similar *L. applebyi*, *L. melicus* and *L. bidoupsensis*, *Leptolalax pyrrhops* **sp. nov.** can be further distinguished by 13.5%, 13.7% and 10.3% sequence divergence at the 16S rRNA mtDNA gene. At present, the new species is known from montane evergreen forest between 800–1100 m elevation. We suggest the species should be considered as Data Deficient following IUCN's Red List categories. To date our finding represents the southernmost known record of the genus *Leptolalax* from Vietnam.

Key words: Indochina, Annamite mountains, Southeast Asia, Truong Son, Da Lat Plateau, taxonomy, new species 16S rRNA, advertisement call, microendemism, *Leptolalax pyrrhops* **sp. nov.**

Introduction

The Langbian, or Da Lat Plateau, forms the southernmost edge of the Annamite Mountains, or Truong Son Range, a mountain chain spanning the breadth of Indochina, including parts of Vietnam, Laos and Cambodia. The Plateau is known for its high herpetofaunal diversity, a significant portion of which has been discovered only recently (e.g., Rowley *et al.* 2010d, 2011a, 2011b; Stuart *et al.* 2011; Orlov *et al.* 2012; Chan *et al.* 2013; Vassilieva *et al.* 2014; Poyarkov *et al.* 2014). Despite this increase in species discoveries, many areas of the Annamites have received little scientific attention yet. The need for biological exploration in this region is made more urgent given the ongoing loss of natural habitats due to logging and other human activities (Meijer 1973; De Koninck 1999; Laurance 2007; Meyfroidt & Lambin 2008).

presently belonging to the Loc Bac Forestry Enterprise; this is the southernmost record of the genus in Vietnam and in Indochina. Recently, a new frog species *Kalophrynus cryptophonus* Vassilieva, Galoyan, Gogoleva & Poyarkov, 2014 (Microhylidae) was described from the same woodland area (Vassilieva *et al.* 2014), and is assumed to be endemic to the area. Our field surveys in 2012 and 2013 indicate that the area of Loc Bac forest hosts a considerable herpetofaunal diversity, including some rare and narrow-ranged species of amphibians and reptiles (such as *Theلودerma bambusicola* Orlov, Poyarkov, Vassilieva, Ananjeva, Nguyen, Sang & Geissler, 2012, *Kaloula indochinensis* Chan, Blackburn, Murphy, Stuart, Emmett, Ho et Brown, 2013, *Cyrtodactylus bugiamapensis* Nazarov, Poyarkov, Orlov, Phung, Nguyen, Hoang et Ziegler, 2012, *Cyrtodactylus irregularis* Smith, 1921; see Orlov *et al.* 2012; Chan *et al.* 2013; Nazarov *et al.* 2012). Nevertheless, the surveyed territory does not belong to any protected area at present and is under immediate threat from intensive logging undertaken by the Loc Bac Forestry Enterprise. Given the apparently significant biodiversity of the area, much of which is likely to remain undiscovered, we urge that the area be considered for protected area status.

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