



Two sympatric new species of *Phrynopus* (Anura: Strabomantidae) from Yanachaga Chemillén National Park (central Peruvian Andes)

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Abstract

Two sympatric new species of *Phrynopus* (Anura: Strabomantidae) are described from elfin forests and puna grasslands (3363–3589 m) of the eastern slopes of the Andes of Departamento Pasco in central Peru. *Phrynopus miroslawae* **sp. nov.** is a medium-sized species characterized by lacking vomerine teeth and tympanic membrane, and by having dorso-lateral folds, areolate ventral skin, dorsum gray with black spots, venter cream with small scattered black blotches, and iris bronze. *Phrynopus nicoleae* **sp. nov.** is a small species characterized by lacking tympanic membrane and by having vomerine teeth, an X-shaped middorsal fold, ventral skin areolate, dorsum tan with black stripes and bluish tubercles, and iris bronze with black reticulations.

Key words: Andes, Anura, new species, Peru, *Phrynopus*

Introduction

Frogs of the genus *Phrynopus* Peters as defined by Lynch (1975) occurred along the Andes of Colombia, Ecuador, Bolivia and Peru, between 1000 and 4400 meters above sea level (m a.s.l.) (Lehr et al. 2005; Lynch 1975; Lehr 2006; De la Riva, 2007). However, the genus proved to be non monophyletic (Darst & Cannatella, 2004; Duellman & Hedges, 2005; Frost et al., 2006; Lehr et al., 2005; Heinicke et al., 2007) and recent molecular data indicate that it is restricted to central Peru only (departments of La Libertad, Huánuco, Pasco, Junín and Ayacucho) (Hedges et al., 2008; Duellman & Hedges, 2008). With 19 species currently recognized, many of them described during the last 15 years, *Phrynopus* is one of the most speciose groups of frogs in humid paramo and cloud forest habitats of the Andes. The actual diversity of this genus is far from being well known, and new species are found as herpetological surveys are carried out in previously unexplored or poorly known areas. Yanachaga Chemillén is a Peruvian National Park in Departamento Pasco, in which there is a remarkable diversity of amphibians. New species of anurans, including *Phrynopus*, have been described from the area (e.g., Hedges, 1990; Duellman & Hedges 2005, 2008). During intensive fieldwork in August and September 2007 in the park, several new species of frogs were discovered, among them, two new *Phrynopus* that are described herein. With these additions, the diversity of the genus *Phrynopus* raises to 21 species.

Material and methods

Specimens were fixed in 10% formalin and preserved in 70% ethanol. The format for the description follows that of Lynch (1975). Specimens examined are listed in the Appendix. Measurements were taken with a digi-