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A new species of the *Pristimantis orestes* group (Amphibia: Strabomantidae) from the high Andes of Ecuador, Reserva Mazar

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Abstract

We describe a new *Pristimantis* from La Libertad and Rumiloma, Reserva Mazar, Andes of Southeastern Ecuador, at elevations between 2895–3415 m. This species is assigned to the *P. orestes* group, from whose members it differs by its small body size (adult males ≤ 18.1 mm; adult females ≤ 23.7 mm), usually reticulated ventral pattern, and visible tympanum. The vocalization of the new species consists of a series of calls; each call is composed by a pulsed, non-modulated note in frequency, and with a dominant frequency of 3122–3171 Hz. A molecular phylogeny based on a fragment of the mitochondrial gene 12S shows that the new species is sister to *Pristimantis simonbolivari*.

Key words: Cañar, New species, *Pristimantis orestes* Group, Reserva Mazar

Resumen

Se describe una nueva especie de rana del género *Pristimantis* de las localidades de La Libertad y Rumiloma, Reserva Mazar, Andes del sureste del Ecuador, a elevaciones de 2895–3415 m. La especie es asignada al grupo *P. orestes*, de cuyos miembros difiere por su pequeño tamaño (LRC en hembras ≤ 23.7 mm; en machos, ≤ 18.1 mm), vientre normalmente reticulado, y tímpano visible. La vocalización de anuncio de la nueva especies consiste de una serie de cantos; cada canto está compuesto por una nota pulsada, sin modulación de frecuencia y con una frecuencia dominante de 3122–3171 Hz. Una filogenia molecular inferida a partir de un fragmento del gen mitochondrial 12S muestra que la especie nueva es hermana a *Pristimantis simonbolivari.*

Palabras claves: Cañar, Especie nueva, Grupo *Pristimantis orestes*, Reserva Mazar

Introduction

The diversity of *Pristimantis*, currently with 449 species (AmphibiaWeb 2012), seems to be limitless. In only 12 years (since 2000), 97 species of this genus have been described (updated from Frost 2011) and there is no reason to think that the description rate will slow down, especially with the advent of molecular techniques, which have facilitated the discovery of cryptic diversity (e.g., Stuart *et al.* 2006; Fouquet *et al.* 2007; Elmer *et al.* 2007; Castroviejo *et al.* 2011).

The diversity of *Pristimantis* seems to be catalyzed by a combination of geographic and biological variables. The topographic and ecological complexity of the Andes has been proposed to favor allopatric speciation, both through niche conservatism or ecological shift (Graves 1988; Lynch & Duellman 1997). Additionally, allopatric speciation seems to be a very likely mechanism in groups that present low dispersal abilities and are sensitive to climatic factors, such as humidity and temperature (Wiens 2004).

In Ecuador, the exploration of Andean forests has resulted in the discovery of several new species of *Pristimantis* in recent years (e.g., Guayasamin & Funk 2009; Yánez-Muñoz *et al.* 2010; Reyes-Puig *et al.* 2010;

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