



The amphibian community at Yanayacu Biological Station, Ecuador, with a comparison of vertical microhabitat use among *Pristimantis* species and the description of a new species of the *Pristimantis myersi* group

JUAN M. GUAYASAMIN¹ & W. CHRIS FUNK²

¹ Museo de Zoología QCAZ, Escuela de Ciencias Biológicas, Pontificia Universidad Católica del Ecuador, Apartado 17-01-2184, Quito, Ecuador. E-mail: jmguasamin@gmail.com

² Department of Biology, Colorado State University, Fort Collins, CO, USA; Email: Chris.Funk@colostate.edu

Abstract

We provide information regarding the composition of the amphibian community at Yanayacu Biological Station, on the Amazonian slopes of the Andes of Ecuador, and describe a new species of *Pristimantis* that is referred to the *P. myersi* group. The new species is distinguished from other species of the group mainly by its color pattern, and by lacking ulnar and tarsal tubercles. The advertisement call of the new species has two distinct call types, a short call with 1–3 pulses and a long call with a mean of 15.5–18.9 more rapid pulses, which are often produced together in long call series. Finally, we analyze the microhabitat use of *Pristimantis* species found at Yanayacu and find that there is significant variation in vertical habitat use among *Pristimantis*, highlighting the ecological diversity of sympatric species.

Key words: Anura, Ecuador, microhabitat, new species, *Pristimantis bicantus*, *Pristimantis myersi*, Strabomantidae, Yanayacu Biological Station

Resumen

Se presenta información sobre la composición de la anfibios de la Estación Biológica Yanayacu, ubicada en la vertiente amazónica de la Cordillera de los Andes del Ecuador. Se describe una nueva especie de *Pristimantis*, asignada al grupo *Pristimantis myersi*. Esta especie se distingue de otras similares principalmente por su patrón de coloración y por carecer de tubérculos ulnares y tarsales. La nueva especie tiene dos tipos de cantos de anuncio claramente diferenciables, un canto corto de 1–3 pulsos y uno largo con una media de 15.5–18.9 pulsos producidos más rápidamente, los cuales están agrupados en prolongadas series de cantos. Finalmente, se analiza el microhábitat de las especies simpátricas de *Pristimantis* de Yanayacu y se concluye que existe una variación significativa en el uso del estrato vertical del bosque. Estos resultados resaltan la diversidad ecológica de este grupo de anuros.

Palabras clave: Anura, Ecuador, Especie Nueva, microhabitat, *Pristimantis bicantus*, *Pristimantis myersi*, Estación Científica Yanayacu, Strabomantidae

Introduction

South America maintains an incredible diversity of amphibians (Duellman 1999). Among them, a clade of direct-developers, the terraranans, usually are the most abundant and species-rich group in Andean cloud forests (Lynch & Duellman 1997; Heinecke *et al.* 2007; Hedges *et al.* 2008). The taxonomy of terraranans, especially that of *Pristimantis*, is a challenge taxonomically because of their high diversity, intraspecific variation, the relatively few external morphological characters available to distinguish among them, and the lack of field guides. In Ecuador, there are few studies that attempt to report information on the diversity and