

A new species of *Pristimantis* (Amphibia: Anura: Strabomantidae) from the Río Abiseo National Park, Peru

EDGAR LEHR^{1, 4}, CINDY GREGORY^{1, 2} & ALESSANDRO CATENAZZI³

¹ Department of Biology, Illinois Wesleyan University, P.O. Box 2900, Bloomington, IL 61701, USA

² Southern Illinois University School of Medicine, Springfield, IL 62794-9620, USA

³ Department of Zoology, Southern Illinois University, Carbondale, IL 62901, USA

⁴ Corresponding author E-mail: elehr@iwu.edu

Abstract

We describe a new species of *Pristimantis* from the Río Abiseo National Park in the Andes of northern Peru. Specimens were collected from 2650 to 3000 m elevation. The new species has a snout–vent length of 24.9–34.2 mm (n = 7) in adult females, and 15.3–23.5 mm (n = 29) in adult males. It differs from other species of *Pristimantis* in having the snout with a broad, slightly upwards curved, fleshy process. The most similar species, *P. phoxocephalus* has the snout with a vertical fleshy keel, but differs from the new species by being larger (female SVL up to 38.4 mm vs. 34.2 mm), by having prominent dentigerous processes of vomers (minute in the new species), by lacking an inner tarsal fold (present), by lacking heel tubercles (present), and by having the dorsum in life grey, red or brown and the groin with black and orange or yellow mottling, whereas in the new species the dorsum is rusty reddish-brown with lighter blotches or tannish-brown chevrons, and the groin tan with pale brown flecks.

Key words: *Pristimantis*, new species, Andes, Peru, Río Abiseo National Park

Resumen

Describimos una nueva especie de *Pristimantis* del Parque Nacional Río Abiseo en los Andes del norte de Perú. Los especímenes tipo fueron colectados a elevaciones entre 2650 y 3000 m. La nueva especie tiene una longitud hocico-cloaca (LHC) de 24.9–34.2 mm (n = 7) en las hembras y de 15.3–23.5 mm (n = 29) en los machos. Se diferencia de otras especies de *Pristimantis* por tener una proyección dermal carnosa extendida y ligeramente curvada hacia arriba en la punta del hocico. La especie más similar, *P. phoxocephalus* tiene una proyección dermal vertical en el hocico, pero difiere de la nueva especie por su mayor tamaño (LHC en hembras hasta 38.4 mm vs. 34.2 mm), por tener los procesos vomerianos prominentes (diminutos en la nueva especie), por carecer de un pliegue tarsal interno (presente), por no tener tubérculos en el talón (presentes), y por tener una coloración gris, roja o marrón en la espalda, e ingles negras moteadas de amarillo o naranja, mientras que la nueva especie tiene la espalda de color rojizo-marrón con manchas más claras o chevones marrones, e ingles de color café salpicado de manchitas más claras.

Introduction

The Río Abiseo National Park (Fig. 1) is located in the eastern slopes of the Andes at 7°45'S and 77°30'W in the San Martín Region of northern Peru (SERNANP 2010). The park covers an area of approximately 2,745 km² including 70% of the Abiseo river basin, tributary to the Huallaga river (SERNANP 2010). Elevations inside the park range from 350 m to 4200 m (SERNANP 2010). Expeditions to montane habitats in the Río Abiseo National Park from 1987 to 2000 led to the collection of various new anuran species (e.g., *Gastrotheca phelloderma*, Lehr & Catenazzi 2011) and a large series of *Pristimantis*. Because over a fifth of Peru's 538 species of amphibians (Aguilar *et al.* 2010) belong to the terrestrial-breeding genus *Pristimantis*, the classification of potentially new species can be difficult. However, when a species has unique conspicuous characters that facilitate differentiation

Remarks

While snout protuberances serve well as a taxonomic character, nothing is known about their function, but a tactile function during courtship behavior or parental care could be possible. *Pristimantis deyi* seems to be abundant in the Río Abiseo National Park and we propose the IUCN threat status of this species as of least concern. However, since the specimens were collected decades ago, a re-evaluation of the population of this species would be important. While protected areas can prevent habitat destruction, it does not provide borders for diseases such as the chytrid fungus that is considered responsible for anuran population declines in Manu National Park in southern Peru (Catenazzi *et al.* 2011). Duellman & Lehr (2009) reported that 51% of the species of *Pristimantis* in Peru occur in protected areas. Many of the protected areas in Peru are still unexplored and likely harbour new species. Currently, there are 122 species of *Pristimantis* known from Peru (AmphibiaWeb 2013, this paper) and further species will be added in the near future.

Acknowledgements

We thank J. Cordova (MUSM, Lima) and R. Brown (KU) and A. Campbell (KU) for loan of material, and A. Brus for taking photos of preserved specimens.

References

- Aguilar, C., Ramírez, C., Rivera, D., Siu-Ting, K., Suarez, J. & Torres, C. (2010) Peruvian Andean amphibians outside Natural Protected Areas: Threats and conservation status. *Revista Peruana de Biología*, 17, 005–028.
- AmphibiaWeb (2013) Information on amphibian biology and conservation. Web application, 2013 AmphibiaWeb, Berkeley, California. Available from: <http://amphibiaweb.org/> (Accessed 27 May 2013)
- Blackburn, D.C. & Wake, D.B. (2011) Class Amphibia Gray, 182. In: Zhang, Z.-Q. (Ed.) Animal biodiversity: An outline of higher-level classification and survey of taxonomic richness. *Zootaxa*, 3148, 39–55.
- Catenazzi, A., Lehr, E., Rodríguez, L.O. & Vredenburg, V.T. (2011) *Batrachochytrium dendrobatidis* and the collapse of anuran species richness and abundance in the upper Manu National Park, southern Peru. *Conservation Biology*, 25, 382–391. <http://dx.doi.org/10.1111/j.1523-1739.2010.01604.x>
- Duellman, W.E. & Lehr, E. (2009) *Terrestrial-breeding Frogs (Strabomantidae) in Peru*. Natur und Tier-Verlag, Münster, Germany, 382 pp.
- Hedges, S.B., Duellman, W.E. & Heinicke, M.P. (2008) New World direct-developing frogs (Anura: Terrarana): Molecular phylogeny, classification, biogeography and conservation. *Zootaxa*, 1737, 1–182.
- Köhler, J., Morales, V.R., Lötters, S., Reichle, S. & Aparicio, J. (1998) A new green species of frog, genus *Eleutherodactylus*, from Bolivia and Peru (Amphibia, Anura, Leptodactylidae). *Studies on Neotropical Fauna and Environment*, 33, 93–99. <http://dx.doi.org/10.1076/snfe.33.2.93.2158>
- Lehr, E. & Catenazzi, A. (2011) A new species of marsupial frog (Anura: Hemiphractidae: *Gastrotheca*) from the Río Abiseo National Park in Peru. *Herpetologica*, 67 (4), 449–459. <http://dx.doi.org/10.1655/herpetologica-d-11-00002.1>
- Lynch, J.D. (1979) Leptodactylid frogs of the genus *Eleutherodactylus* from the Andes of southern Ecuador. *Miscellaneous Publications of the Museum of Natural History, University of Kansas*, 66, 1–62.
- Lynch, J.D. & Duellman, W.E. (1997) Frogs of the genus *Eleutherodactylus* in western Ecuador: Systematics, ecology, and biogeography. *Special Publication Natural History Museum University of Kansas*, 23, 1–236.
- SERNANP (2010) Áreas Naturales Protegidas. Guía oficial. SERNANP and PROFONANPE, Lima, Peru, 344 pp.
- Venegas, P.J. (2007) A new species of *Eleutherodactylus* (Anura: Leptodactylidae) from the Cordillera Central in northern Peru. *Journal of Herpetology*, 41, 394–400. [http://dx.doi.org/10.1670/0022-1511\(2007\)41\[394:ansoea\]2.0.co;2](http://dx.doi.org/10.1670/0022-1511(2007)41[394:ansoea]2.0.co;2)