



<http://dx.doi.org/10.11646/zootaxa.3838.2.5>

<http://zoobank.org/urn:lsid:zoobank.org:pub:B894CD48-9E9E-4C38-B775-02836E09B8B7>

A new species of *Phrynopus* (Anura: Craugastoridae) from the central Peruvian Andes

LUIS MAMANI^{1*} & SERGIO MALQUI¹

¹Museo de Historia Natural, Universidad Nacional de San Antonio Abad del Cusco. Plaza de Armas s/n (Paraninfo Universitario), Cusco, Peru.

*Corresponding author E-mail: luismamani@gmail.com

Abstract

We describe a new species of *Phrynopus* from the humid grassland of Distrito de Comas, Provincia Concepcion, Department of Junin. The new species is diagnosed by the lack of dentigerous processes of vomers, tympanic annulus and membrane imperceptible through the skin, males with nuptial pads and vocal slits, warty dorsal skin, and aerolate throat, belly and ventral surfaces of thighs, by possessing pronounced subconical tubercles in the post-tympanic area, by having rounded finger and toe tips with no disc structure, and by its overall dark brown to black coloration with few white and yellow spots in the dorsum and a dark-brown belly with white to gray blotches. Specimens were found under stones at a single area of the central Peruvian Andes at elevations between 4205–4490 m.a.s.l. The eggs had an average diameter of 4.3 mm. With the description and naming of the new species, the genus *Phrynopus* now contains 26 species, all of them endemic to Peru, and five of which are restricted to Departamento Junin.

Key words: Andes, Anura, humid grassland, Junin, new specie, Peru, *Phrynopus*, terraranas.

Resumen

Describimos una nueva especie de *Phrynopus* de los pajonales húmedos del Distrito Comas, Provincia La Concepción, Departamento de Junín. La nueva especie se caracteriza por la ausencia de dientes vomerianos, porque el tímpano y el anillo timpánico no se observan a través de la piel, por la presencia de callos nupciales y hendiduras bucales en los machos, por poseer dedos de puntas redondeadas y carentes de discos, por su piel dorsal verrugosa y su vientre, garganta y zonas ventrales de los muslos areolados, y por la presencia de tuberculos subcónicos conspicuos sobre la piel que cubre la zona post-timpánica, por su coloración marrón negruzco con algunas manchas blancas o amarillentas en los flancos y por su vientre marrón oscuro con pequeñas manchas blancas o grisáceas irregulares. Sólo se encontraron especímenes en una única localidad de los Andes centrales de Perú, bajo piedras, a altitudes entre 4205–4490 m.s.n.m. Los huevos son crema no pigmentados de 4.3 mm de diámetro. Con la nueva especie la diversidad del genero *Phrynopus* se incrementa a 26 especies, todas endémicas de Perú, y cinco de las cuales se distribuyen en el Departamento de Junín.

Introduction

Frogs of the genus *Phrynopus* Peters 1874 are distributed between 2220–4400 m a.s.l along the Amazonian versant of the Andes, where they inhabit humid grassland and cloud forests (Duellman & Lehr 2009; Lehr & Oroz 2012). They are all restricted to the central Andes of Peru (Duellman & Lehr 2009) in departments La Libertad, Huánuco, Pasco and Junin (*Phrynopus ayacucho*, the only species thought to occur in Ayacucho, was recently transferred to *Oreobates* [Padial *et al.* 2012]). Twenty-five species are currently recognized in this genus (Hedges *et al.* 2008; Duellman & Lehr 2009; Lehr & Oroz 2012; Frost 2014) and four of them (*P. juniniensis*, *P. montium*, *P. oblivious*, and *P. peruvianus*) have been recorded in Departamento Junin, all in humid grassland of the high Andes above 3000 m a.s.l. (Shreve 1938; Lehr 2007; Peters 1873; Duellman & Lehr 2009). Nonetheless, many regions from the Central Andes of Peru remains unexplored by herpetologists and fieldwork in those areas is likely to

Provincia Concepcion, Departamento Junin, Peru, at elevations between 4205 to 4490 m a.s.l. (Fig. 3). This species inhabits high mountain humid grassland (Fig. 4). The record of *P. chaparroi* at 4490 m constitutes the highest distribution record for members of the genus, followed by *P. pesantesi* (4390 m) (Lehr et al 2005), and *P. bufoides* (4100 m). Also, *P. chaparroi* is the species of *Phrynopus* with the southernmost distribution. Of the five species registered for Departamento Junin, four (*Phrynopus juniniensis*, *P. montium*, *P. oblivious*, and *P. peruvianus*) are distributed within Provincia Tarma, and *Phrynopus chaparroi* is restricted to Provincia La Concepcion.

Conservation. We propose to categorize this species as “Endangered” in the Peruvian official list of threatened species managed by Dirección General Forestal y Fauna Silvestre (DGFFS). Likewise, we propose the same category (B2ab(ii,iii)) within the IUCN Red List. Our proposal is based on the following facts: the range of the species is smaller than 500 km², this specie has been recorded only from the type locality, its population size seems to be small, and its habitat is threatened by mining activities and the increasing human activity in the area.

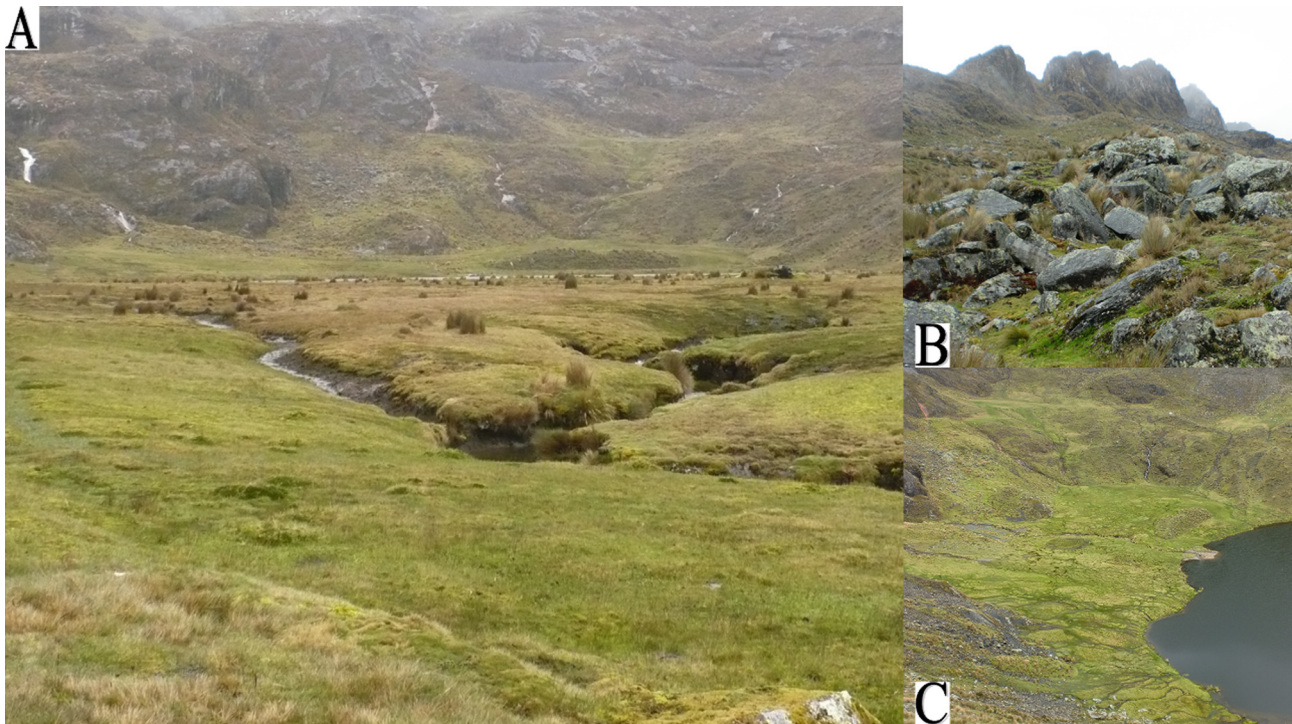


FIGURE 6. A view of the habitat at the type locality of *Phrynopus chaparroi* sp. nov. in humid grassland: habitats (A, B), Lagoon Sinaycocha (C).

Acknowledgments

We thank J.C. Chaparro, O. Aguilar and Rocio Orellana (MHNC), for providing material for this study. To Sinaycocha Mining Company and the Company VBA Consultant Service SAC for providing all the facilities that made possible this study. To Edgar Lehr and Jose Manuel Padial for reading and correcting a draft of our manuscript.

References

- Chaparro, J.C., Padial, J.M. & De la Riva, I. (2008) Two sympatric new species of *Phrynopus* (Anura: Strabomantidae) from Yanachaga Chemillen National Park (central Peruvian Andes). *Zootaxa*, 1761, 49–58.
- Duellman, W.E. (2000) Leptodactylid frogs of the genus *Phrynopus* in northern Peru with descriptions of three new species. *Herpetologica*, 56, 273–285.
- Duellman, W.E. & Hedges, S.B. (2008) Two minute species of *Phrynopus* (Lissamphibia: Anura) from the Cordillera Oriental in Peru. *Zootaxa*, 1675, 59–66.
- Duellman, W.E. & Lehr, E. (2009) *Terrestrial-Breeding Frogs (Strabomantidae) in Peru*. Natur- und Tier-Verlag, Naturwissenschaft, Münster, 382 pp.

- Hedges, S.B. (1990) A new species of *Phrynopus* (Anura: Leptodactylidae). *Copeia*, 1990, 108–112.
<http://dx.doi.org/10.2307/1445826>
- Frost, D.R. (2014) Amphibian Species of the World: an Online Reference. Version 6.0 (accessed June 15 2014). Electronic Database accessible. American Museum of Natural History, New York, USA. Available from: <http://research.amnh.org/herpetology/amphibia/index.html> (accessed 18 June 2014)
- 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.
- Lehr, E. (2001) A new species of *Phrynopus* (Anura: Leptodactylidae) from the eastern Andean slopes of central Peru. *Salamandra*, 37, 11–20.
- Lehr, E. (2007) New eleutherodactyline frogs (Leptodactylidae: *Pristimantis*, *Phrynopus*) from Peru. *Bulletin of the Museum of Comparative Zoology*, 159, 145–178.
[http://dx.doi.org/10.3099/0027-4100\(2007\)159\[145:neflpp\]2.0.co;2](http://dx.doi.org/10.3099/0027-4100(2007)159[145:neflpp]2.0.co;2)
- Lehr, E. & Aguilar, C. (2002) A new species of *Phrynopus* (Amphibia, Anura, Leptodactylidae) from the puna of Maraypata (Departamento de Huanuco, Peru). *Zoologische Abhandlungen. Staatliches Museum für Tierkunde in Dresden*, 52, 57–64.
- Lehr, E. & Aguilar, C. (2003) A new species of *Phrynopus* (Amphibia, Anura, Leptodactylidae) from the puna of Maraypata (Departamento de Huánuco, Peru). *Zoologische Abhandlungen. Staatliches Museum für Tierkunde in Dresden*, 53, 87–92.
- Lehr, E., Aguilar, C. & G. Köhler, G. (2002) Two sympatric new species of *Phrynopus* (Anura: Leptodactylidae) from a cloud forest in the Peruvian Andes. *Journal of Herpetology*, 36, 208–216.
<http://dx.doi.org/10.2307/1565993>
- Lehr, E., Köhler, G. & Ponce, E. (2000). A new species of *Phrynopus* from Peru (Amphibia, Anura, Leptodactylidae). *Senckenbergiana Biologica*, 80, 205–212.
- Lehr, E., Lundberg, M. & Aguilar, C. (2005) Three new species of *Phrynopus* from central Peru (Amphibia: Anura: Leptodactylidae). *Copeia*, 2005, 479–491.
<http://dx.doi.org/10.1643/ch-04-278r2>
- Lehr, E., Moravec, J. & Cusi, J.C. (2012) Two new species of *Phrynopus* (Anura, Strabomantidae) from high elevations in the Yanachaga-Chemillén National park in Peru (Departamento de Pasco). *ZooKeys*, 235, 51–71.
<http://dx.doi.org/10.3897/zookeys.235.3885>
- Lehr, E. & Oróz, A. (2012) Two new species of *Phrynopus* (Anura: Strabomantidae) from the Cordillera de Carpish in central Peru (Departamento de Huanuco). *Zootaxa*, 3512, 53–63.
- Padial, J.M., Chaparro, J.C., Castroviejo-Fisher, S., Guayasamin, J.M., Lehr, E., Delgado, A.J., Vaira, M., Teixeira jr, M., Aguayo, R. & De la Riva, I. (2012) A revision of species diversity in the Neotropical genus *Oreobates* (Anura: Strabomantidae), with the description of three new species from the Amazonian slopes of the Andes, and the proposal of candidate species. *American Museum Novitates*, 3752, 1–55.
<http://dx.doi.org/10.1206/3752.2>
- Peters, W.C.H. (1873) Über zwei Giftschlangen aus Afrika und über neue oder weniger bekannte Gattungen und Arten von Batrachiern. *Monatsberichte der Königlichen Preussische Akademie des Wissenschaften zu Berlin*, 1873, 411–418.
- Shreve, B. (1938) A new *Liolaemus* and two new *Syrhropus* from Peru. *Journal of the Washington Academy of Sciences*, 28, 404–407.
- Trueb, L. & Lehr, E. (2008) A new species of *Phrynopus* (Anura, Strabomantidae) from Peru, with comments on the osteology of the genus. *Phyllomedusa*, 7, 11–24.
<http://dx.doi.org/10.11606/issn.2316-9079.v7i1p11-24>

Appendix.

Type specimens examined

- Phrynopus auriculatus*: PERU: Departamento Pasco, Provincia Oxapampa, Distrito Oxapampa, Type locality: Abra Esperanza 2790 m a. s.l., (10°31'54.7" S, 75°20'59.3" W), MHNC 6471 (paratopotype).
- Phrynopus mirosławae*: PERU: Departamento Pasco, Provincia Oxapampa, Distrito Huancabamba, Type locality: Santa Barbara, 3363 m a.s.l., (10°20'13.8" S, 75°38'47.3"W), MHNC 6469 (holotype).
- Phrynopus nicoleae*: PERU: Departamento Pasco, Provincia Oxapampa, Distrito Huancabamba, Type locality: Santa Barbara 3589 m a.s.l., (10°20'36.3" S, 75°38'17.9"W), MHNC 6441 (holotype).
- Phrynopus tribulosus*: PERU: Departamento Pasco, Provincia Oxapampa, Distrito de Oxapampa, Type locality: Refugio Cedro 2600 m a.s.l., (10°32'42.5" S, 75°21'29.8"W), MHNC 7166, MHNC 7167 (paratopotypes).