



Description of new andean species of the genus *Phymaturus* (Iguania: Liolaemidae) from Northwestern Argentina

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Abstract

As a result of several field trips and studies of collections of *Phymaturus* samples from Andean areas of central western Argentina (San Juan province), we discovered two populations that exhibit a particular character combination not seen in other species formally recognized in the literature. Based on a detailed analysis of an extended list of morphological characters (93), including scalation, color pattern, gular and nuchal folds, precloacal pores, and morphometric data, we conclude that these populations represent independent lineages that deserve to be considered as new species. According to the most recent revision of the genus and considering the descriptions made in another recent contribution, the taxonomic composition of the genus was increased to 38 species. In this study we provide the formal description of two additional new taxa, including their diagnosis and detailed comparisons with other members of their species group. The two new species belong to the *palluma* group, and can be assigned to the Puna subclade because they present the typical dorsal “spray” pattern. Other characters described in this study suggest their close phylogenetic relationship with other species of this subclade inhabiting the southern Puna region of Argentina, such as *Phymaturus punae*. Within the Puna subclade, *Phymaturus aguanegra* **sp. nov.** differs from all other members (*P. antofagastensis*, *P. denotatus*, *P. laurenti*, *P. punae*, *P. extrilidus*, *P. mallimaccii* and *P. paihuanense*) exhibiting the following combination of diagnostic characters: a complete melanism over the dorsum of neck, the presence of enlarged scales at the base of tail in males, having strongly keeled tarsal scales, lacking enlarged scales on the anterior margin of the antehumeral fold and centre of chest, females without flank coloration, a vertebral dark gray stripe usually present on the dorsum, females exhibiting a tricolor dorsal pattern, with two types of brown and scattered feriferous oxide spots, and the absence of a scapular spot. *Phymaturus williamsi* **sp. nov.** differs from all other members of the Puna clade because: exhibits an “aggregate” dorsal pattern, unlike the homogeneous spray of most Puna species, lacks enlarged scales on the anterior margin of the antehumeral fold and in the centre of chest, flank coloration in females is absent, females of *Phymaturus williamsi* **sp. nov.** lack white transversal stripes on the dorsal pattern, preocular scale in contact with canthal scale in *Phymaturus williamsi* **sp. nov.**, rostral scale can be divided in *Phymaturus williamsi* **sp. nov.** and shows the largest number of scales counted around midbody within the Puna subclade ($x = 213.4; 186-235$).

Key words: *Phymaturus aguanegra*, *Phymaturus williamsi*, Andes, San Juan, Argentina

Resumen

Como resultado de varios viajes de campo y del estudio de colecciones de muestras de *Phymaturus* provenientes de áreas andinas del centro oeste de Argentina (provincia de San Juan) descubrimos dos poblaciones que exhiben una particular combinación de caracteres no observada en otras especies formalmente reconocidas en la literatura. Después de un detallado análisis de una lista extensa de caracteres morfológicos (93) incluyendo escamación, patrón de coloración, pliegues guiales y bucales, poros precloacales, y datos morfométricos, concluimos que estas poblaciones representan linajes independientes que merecen ser considerados como nuevas especies. De acuerdo con la revisión más reciente del género y considerando las descripciones realizadas en otra contribución reciente, la composición del género fue elevada