



A new species of *Rhinella* (Anura: Bufonidae) from Ischigualasto Provincial Park, San Juan, Argentina

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Abstract

A new species of bufonid frog, *Rhinella bernardoi* sp. nov., belonging to the *granulosa* group, is described from moderately high elevation (1400 m) at Ischigualasto Provincial Park, San Juan, Argentina. The morphology of the new species is compared to and diagnosed from other closely related species of the same group (*R. bergi*, *R. fernandezae*, and *R. granulosa*). We also describe the osteology of the skull and the vertebral column of the new species and present data on its geographic distribution and natural history.

Key words: Argentina, Bufonidae, Ischigualasto, *Rhinella* sp. nov., San Juan

Introduction

The frog family Bufonidae has a cosmopolitan distribution, except for Australia, Madagascar, and the Oceanic region, although several species have been widely introduced even into non-native areas (Frost 2009). Cei (1980) assigned most Argentine bufonids into seven species groups or genera. The *arenarum* group is composed of *Rhinella arenarum* (formerly *Bufo arenarum*) and *R. rufus* (*B. rufus*); the *marina* group includes *R. icterica* (*B. ictericus*) and *R. schneideri* (*B. paracnemis*); the monotypic *crucifer* group includes *R. crucifer*, and the *okendeni* group including *R. gnustae* (*B. gnustae*). Along the Andes mountain range in western Argentina, a series of species comprising the *spinulosa* group occur at different elevations, including *R. spinulosa* (*B. spinulosus*), *R. rubropunctata* (*B. rubropunctatus*), and one endemic species from Córdoba and San Luis: *R. achalensis* (*B. achalensis*) (Cei 1980; Gallardo 1986; Cei 1987; Lavilla & Cei 2001). The first taxonomic revision of the *granulosa* group was carried out by Gallardo (1965), who recognized nine species (*Bufo azarai*, *B. barbouri*, *B. beebei*, *B. goeldii*, *B. humboldti*, *B. lutzi*, *B. merianae*, *B. mini*, *B. mirandaribeiroi*) and also the subspecies *B. granulosa fernandezae*, *B. g. dorbignyi*, *B. g. major*, and *B. g. pygmaeus*, which were later elevated to species (Cei 1968; Cei 1972).

Frost *et al.* (2006) reorganized the Neotropical *Bufo* into several new genera, including *Chaunus*, which was the name attributed to a South American clade within *Bufo* sensu lato. Chaparro *et al.* (2007) transferred all *Chaunus* to *Rhinella* because the former was not found to be monophyletic in their analysis. Currently, the *granulosa* group is composed of six species: *Rhinella bergi*, *R. dorbignyi*, *R. fernandezae*, *R. granulosa*, *R. beebei*, *R. pygmaea* (Frost, 2009). In Argentina, the *granulosa* group is represented by *R. bergi*, *R. dorbignyi*, *R. fernandezae*, *R. granulosa*, and *R. pygmaea*; the latter species has been observed in Argentina by Cei (1980) in the provinces of Corrientes, Chaco, and Santa Fé. In her taxonomic review of the *granulosa* group, Narváez (2003) considered the geographic distribution of *R. pygmaea* to be restricted to Río de Janeiro, Brazil. All *Rhinella* in the *granulosa* group are small, have rugose skin covered with keratinized tubercles, and have digging habits (Narváez 2003). Morphological synapomorphies of this group include the prenasal