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Rhinella kuka (Anura: Bufonidae): a new altitudinal record in Bolivia

Rhinella kuka (Anura: Bufonidae): un nuevo récord altitudinal en Bolivia

Pedro Gómez-Murillo*^{ORCID}, Oliver Quinteros-Muñoz^{ORCID}

Museo de Historia Natural Alcide d'Orbigny. Casilla 843, Cochabamba, Bolivia.

* Correspondence: <pedrosquamata@gmail.com>

Abstract

Rhinella kuka Köhler, Vences, Padial, Plewnia, Lötters, 2023, a species in the *R. veraguensis* group, is endemic to Bolivia and has been registered in the departments of Cochabamba and La Paz (possibly also Beni) within a known altitudinal range of 800 to 1650 m asl. In this work we present a low altitude record for this species from the Andean foot, Provincia Chapare, Departamento Cochabamba, at 307 m asl.

Keywords: Altitudinal range, Amphibia, Chapare, Cochabamba, new record.

Resumen

Rhinella kuka Köhler, Vences, Padial, Plewnia, Lötters, 2023, una especie del grupo *R. veraguensis*, endémica para Bolivia y se ha registrado en los departamentos de Cochabamba y La Paz (posiblemente también en Beni) dentro de un rango altitudinal conocido de 800 a 1650 m s. n. m. En este trabajo presentamos el registro altitudinal más bajo para esta especie en el piedemonte andino, provincia del Chapare, departamento de Cochabamba, a 307 m s.n.m.

Palabras clave: Amphibia, Chapare, Cochabamba, nuevo registro, rango altitudinal.

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Figure 1. *Rhinella kuka*, photographed at Villa Tunari, Cochabamba, Bolivia. Photograph by Pedro Gómez-Murillo.

Figura 1. *Rhinella kuka*, fotografiado en Villa Tunari, Cochabamba, Bolivia. Fotografía por Pedro Gómez-Murillo.

True toads of the genus *Rhinella* are among the most common and diverse groups of Neotropical anurans. These toads are widely distributed throughout South America, inhabiting a great diversity of environments and ecoregions (Pereyra et al., 2021). Twenty nominal species of *Rhinella* are currently recognized in Bolivia): *R. altiperuviana*, *R. amboroensis*, *R. arenarum*, *R. diptycha*, *R. exostosica*, *R. justinianoi*, *R. kuka*, *R. major*, *R. marina*, *R. mirandaribeiroi*, *R. poeppigii*, *R. quechua*, *R. roqueana*, *R. rumbolli*, *R. spinulosa*, *R. stanlaidi*, *R. tacana*, *R. teotoniensis* and *R. veraguensis* (AmphibiaWeb, 2025; Frost, 2025).

Rhinella kuka Köhler, Vences, Padial, Plewnia, Lötters, 2023 is an endemic species from the humid montane forest (Yungas) of the departments of Cochabamba and La Paz in Bolivia. In Cochabamba its distribution has been confirmed in Carrasco National Park, and Isiboro Sécure National Park, from a locality at the border to the Beni department. These toads inhabit well-preserved forests (primary and secondary) with steep slopes and abundant rainfall, crossed by small streams and are mainly terrestrial. Some individuals have been observed to be active at night on the ground, often on roads and in ditches during rains. The habitat lacks stagnant water bodies but contains numerous small streams (Köhler et al., 2023).

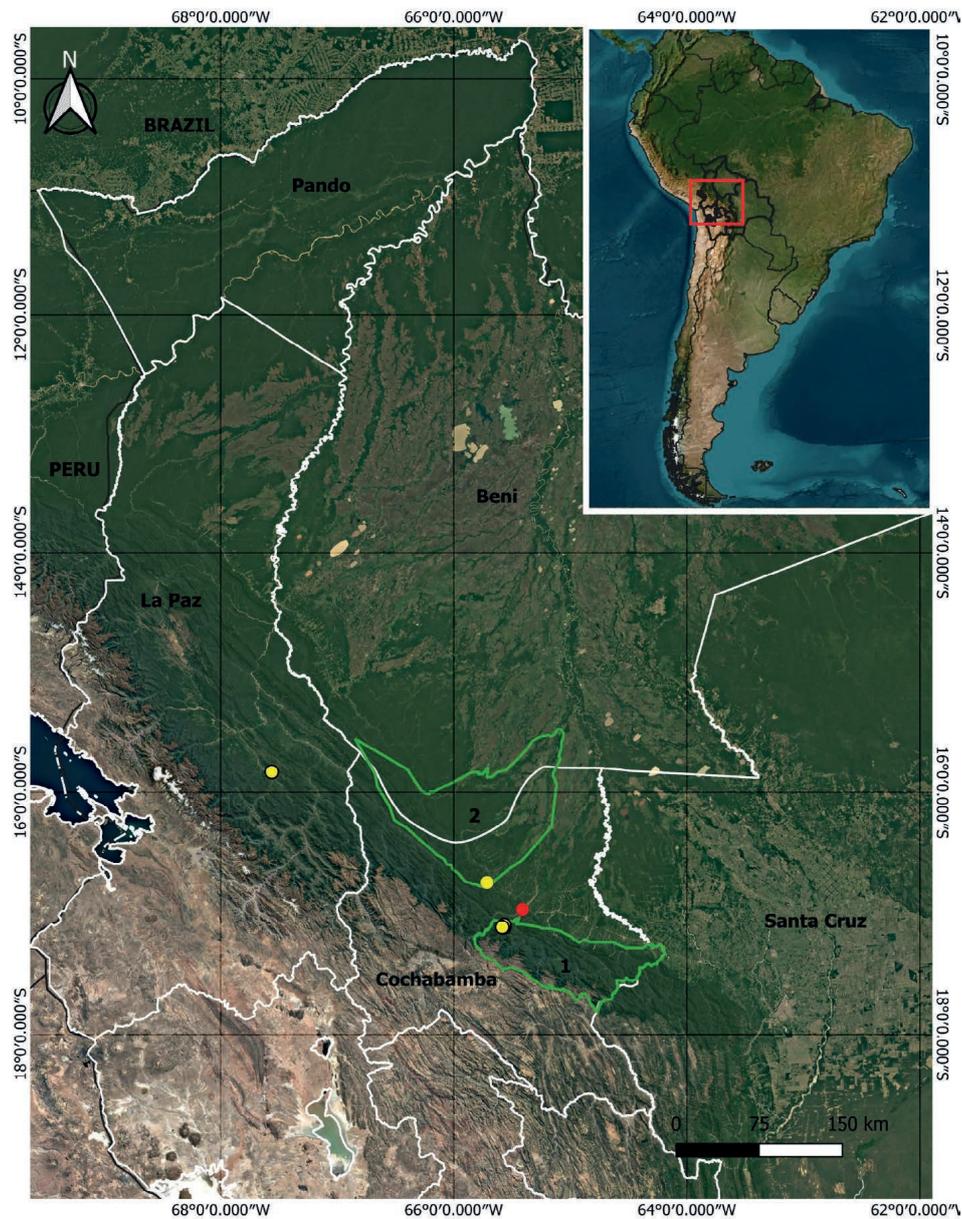


Figure 2. Map central Bolivia showing the knowing geographic distribution of *Rhinella kuka* in Bolivia (red circle = new record; yellow dots = previous records in Cochabamba and La Paz; green polygons = national protected areas: 1. Carrasco and 2. Isiboro Séure).

Figura 2. Mapa del centro de Bolivia que muestra la distribución geográfica de *Rhinella kuka* en Bolivia. (círculo rojo = nuevo registro; puntos amarillos = registros previos en Cochabamba y La Paz; polígonos verdes = Áreas Nacionales Protegidas: 1. Carrasco y 2. Isiboro Séure).

During a monitoring trip on October 16, 2017, an active adult individual (Figure 1) was found among the leaf litter in a mature secondary forest adjacent to a dirt road in Villa Tunari (16°97'S/65°41'W, 307 m asl; Figure 2) Chapare Province, Cochabamba, Bolivia, in the Southwest Amazon ecoregion (Ibisch and Mérida, 2003). Photograph were taken *in situ*, the specimen was not collected.

The following combination of characters described below for *R. kuka* is derived from the photographic record and consists with those described by Quinteros-Muñoz (2010); Köhler et al. (2023): (1) Medium-sized species; (2) cantus rostralis concave in dorsal view and sharp in profile; supratympanic and postorbital crests short; (3) tympanic membrane and tympanic annulus distinct; (4) parotoid glands elongated; (5) dorsum of the body covered with spiny, keratinized tubercles; limbs long and slender; lateral line of conical, elongated, and raised tubercles; (6) dorsum reddish to orange brown.

The available information on *R. kuka* in Bolivia only comes from the work of Quinteros-Muñoz (2010) and Köhler et al. (2023). According to this information, the distribution of *R. kuka* in Bolivia primarily encompasses the montane forests (Yungas) of Bolivia. The altitudinal range of this species was known to include elevations between 800 and 1650 m asl. Through the information presented and the reference material cited in this work, we confirm the lowest recorded for this species at 307 m asl.

In an analysis of amphibian diversity and conservation in Bolivia, De La Riva and Reichle (2014) found that habitat loss due to deforestation and agriculture, water pollution, and chytridiomycosis were the main causes of amphibian decline in Bolivia. It is important to note that this work increases our knowledge of *R. kuka*, as it represents a wider range compared to that reported by Köhler et al. (2023). Therefore, this species may exhibit greater adaptation to changes in its environment and/or to potential threats. This would be especially true since the specimen was recorded in a disturbed habitat, such as the Andean foot. As of 2025, *R. kuka* had not been assessed by the IUCN Red List of Threatened Species.

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