

Liolaemus stolzmanni (Steindachner, 1891) (Squamata: Liolaemidae): Distribution update

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ABSTRACT: *Liolaemus stolzmanni* (Steindachner, 1891), formerly recognized as *Phrynosaura reichei*, is endemic of the Atacama Desert of northern Chile. The distribution of this species has been historically documented from the Tacna Department in Peru to the Atacama Region in Chile; however, new species have been described in some of these sites, and *L. stolzmanni* does not exist in those localities. An updated distribution map and new specific locations for *L. stolzmanni* are given based on new observations and/or collections in Tarapacá Region.

Liolaemus stolzmanni (Steindachner, 1861) has been difficult to study because its nomenclature has not been clear due to an historical confusion that has recently been clarified by Langstroth (2011) that synonymy *L. reichei* (Werner, 1907) in to this species. Additionally, the nomenclature was complicated by a limited availability of specimens in collections (Donoso-Barros 1969; Núñez *et al.* 1997) and a small and contradictory list of localities. Steindachner's types had the vague locality of "Hoch Peru", which led to considerable misunderstanding. Werner (1907) described *Phrynosaura reichei* from the Tarapacá Region, without a specific locality. Later Donoso-Barros (1969; 1970) reported that the type locality is the "Oasis de Pica", without justification. This species was considered endangered for of the infrequency of observations (Donoso-Barros 1958), also quite rare and the number of known specimens are very low (Donoso-Barros 1969; Núñez *et al.* 1997). Donoso-Barros (1969) indicated that the decrease in Tamarugo forest would have affected this species; however, there are no published localities of this species from this ecosystem, and on several trips to the Pampa del Tamarugal the authors has not found any *Liolaemus*. Mann (1964) identified this lizard to be a member of the "climax desert" community in a fog ecosystem dominated by *Tillandsia* bromeliads. Pinto (2005) considered this species as part of the fauna associated with northern Chile tillandsiales without giving specific locations. Cereceda *et al.* (1999) did not record it in the Cerro Guatalaya tillandsial, while Guzman *et al.* (2007) found it at Cerro Minas Viejas, in front of Guatalaya (2.5 km distance). This species has been reported from the Tacna Department of Southern Peru to the Atacama Region in Chile (Werner 1907; Donoso-Barros 1958; 1969; Núñez *et al.* 1997), however, some of the localities cited previously for *L. stolzmanni* are for populations that were later described as new species. The inland population of Arica (Poconchile) was described as *L. poconchilensis* Valladares 2004

and Langstroth (2011) confirmed that specimens of Tacna correspond to the same. The *Liolaemus* species of the phrynosauroid morphology known presently from localities previously cited for *L. stolzmanni* in the Antofagasta Region are *L. audituvelatus* (Núñez and Yáñez, 1983) from the Salar de Atacama, *L. torresi* (Núñez, Navarro, Garín, Pincheira-Donoso and Meriggio, 2003) from the environs of Calama (Núñez *et al.* 2003) and *L. manueli* (Núñez, Navarro, Garín, Pincheira-Donoso and Meriggio, 2003) from the Atacama Region (Núñez *et al.* 2003; Valladares-Faúndez 2011).

Langstroth (2011) determined the type locality to be "Deserts of Iquique, Tarapacá Region, Chile", without further specifications. In this study we provide specific localities in the vicinity of Iquique (Herpetology Image Collections at Smithsonian Institution National Museum of Natural History USNM Herp Image 2750–2755), near tillandsiales.

The specie has not been found by the author in the Quebrada de Tarapacá, Guatacondo, or the Oasis de Pica, leaving these localities as doubtful because is necessary the confirmation of the presence of this species in those places. As shown on the map (Figure 1), confirmed localities here for *L. stolzmanni* are Cerro Minas Viejas (Guzmán *et al.* 2007; Figure 2A), Cerro Guatalaya, Alto de Punta Gruesa (Figure 2B), Alto Patache (Langstroth 2011), Alto Guanillo (Núñez *et al.* 1997) and Alto Chipana (Figure 2C), while Hornitos is reported previously (Núñez *et al.* 1997). These localities correspond to floral formations (Luebbert and Plissock 2006) denominated "Desierto absoluto" from Iquique, specifically in the district of Alto Hospicio, and "Matorral desértico", leaving most of the localities outside of these floral formations as unconfirmed. *L. stolzmanni* has been found in many tillandsiales (Figure 3A) and close to fog oases (Figure 3B) of the Tarapacá Region, therefore these ecosystems are good places to search, collect and study.

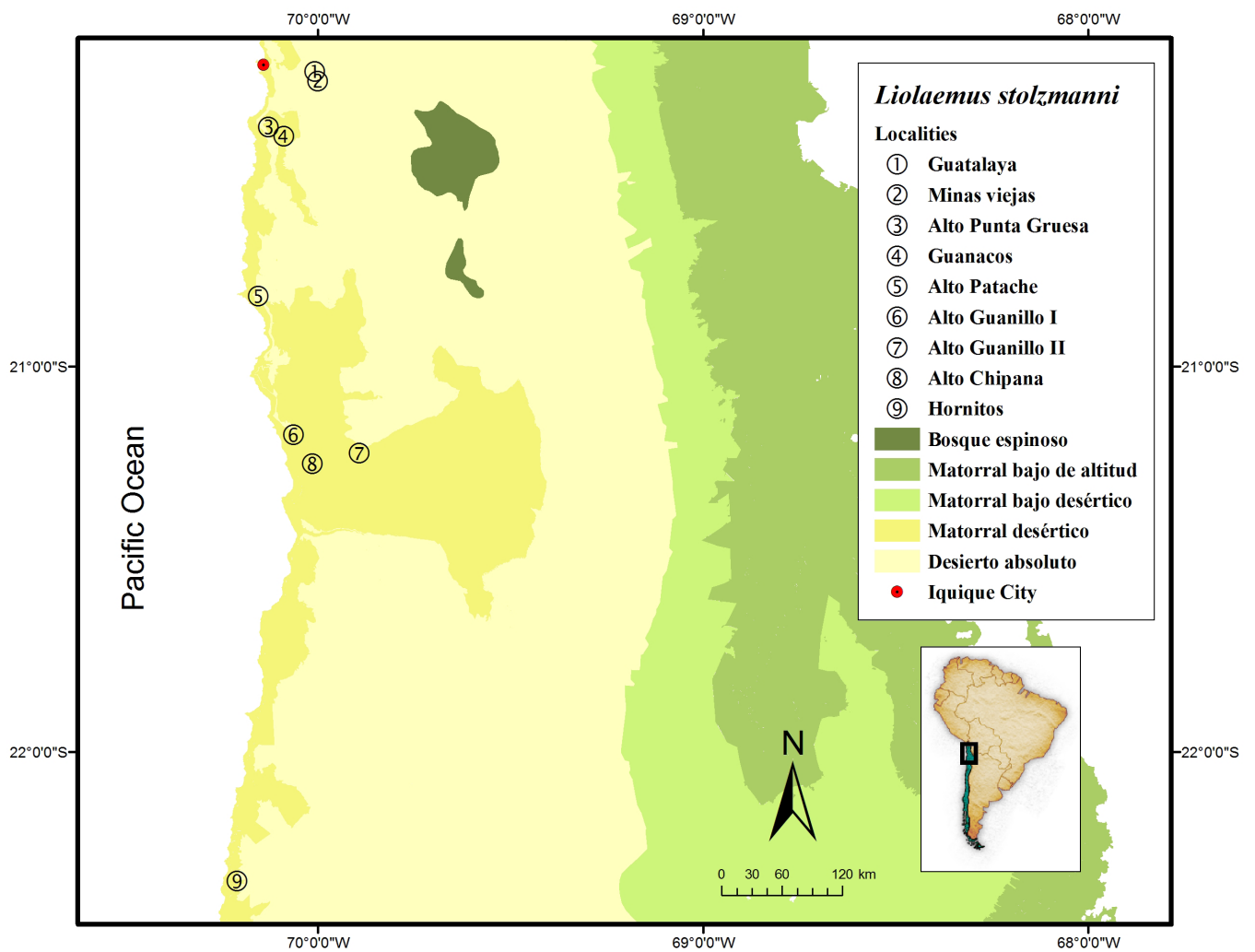


FIGURE 1. Geographic distribution map of *Liolaemus stolzmanni*. New localities are Cerro Guatalaya (954 m), Alto de Punta Gruesa (1018 m), Alto Guanillo (800 – 815 m) and Alto Chipana (863 m).



FIGURE 2. *L. stolzmanni*. A) Juvenile (USNM Herp Image 2753) from Cerro Minas Viejas, B) adult from Alto Punta Gruesa (USNM Herp Image 2754) and C) Alto Chipana (USNM Herp Image 2751).



FIGURE 3. A) Minas Viejas tillandsial and B) Alto Punta Gruesa Oases.

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