

Filling gaps and a new state record of *Xenopholis scalaris* (Wucherer, 1861) (Serpentes: Dipsadidae)

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Abstract: We present the first record of the Dipsadidae snakes *Xenopholis scalaris* for the state of Rio de Janeiro and a general distribution map for this species. This record for the Brazilian Atlantic Forest expands the known geographical distribution of *X. scalaris* and reveals that its populations might not be isolated or disjunctive, but rather rare in this biome. We also provide some recommendations for future conservation of *X. scalaris*.

Key words: geographic distribution, reptile, Rio de Janeiro, snakes

The genus *Xenopholis* Peters, 1869 represents a monophyletic clade recently allocated to the Dipsadidae family, although its exact position and relationships within the group remain uncertain (Grazziotin et al. 2012). Specimens of *Xenopholis* can be found in forested and open areas of Paraguay, Bolivia, Peru, Colombia, Ecuador, French Guyana, Brazil (Uetz and Hošek 2014), and includes the species *X. scalaris* (Wucherer, 1861), *X. undulatus* (Jensen, 1900) and *X. werdingorum* Jansen, Álvarez & Köhler, 2009.

Xenopholis scalaris is a small-sized species with total lengths from 300 to 335mm, oviparous, terrestrial and prey mostly on frogs (Cunha and Nascimento 1993; Martins and Oliveira 1998; Argôlo 2004). Wucherer (1861) described the species based on two syntypes from the municipalities of Canavieiras and Mata de São João, both in the state of Bahia, Brazil and so far, no lectotype was assigned. It occurs in the Amazon and Atlantic Forest biomes but it is a rare sight in scientific collections (Dixon and Soini 1986; Cunha and Nascimento 1978; Martins and Oliveira 1998; Argôlo 2004). The species has

been recorded for Colombia (Pérez-Santos and Moreno 1988), Ecuador (Pérez-Santos and Moreno 1991), Peru (Schlüter et al. 2004), Bolivia (Harvey et al. 1998), French Guyana (Starace 1998) and from the Brazilian states of Acre, Amazonas, Rondônia, Pará, Mato Grosso, Bahia and São Paulo (Wucherer 1861; Cunha and Nascimento 1993; Silva Jr 1993; Waldez and Vogt 2009; Bernarde and Abe 2010; Bernarde et al. 2011; Zaher et al. 2011). In this study, we present a new record of *X. scalaris* from an Atlantic Forest area in southeastern Brazil.

The voucher specimen (Figure 1) was captured by a citizen inside his residence on January, 2015 at Inhomirim Village, Raiz da Serra, municipality of Magé, state of Rio de Janeiro, southeastern Brazil (22°34' S, 043°11' W, 33 m above sea level) and donated to the Instituto Vital Brazil, Niterói, Rio de Janeiro.



Figure 1. The voucher specimen of *Xenopholis scalaris* (IVB 3522).

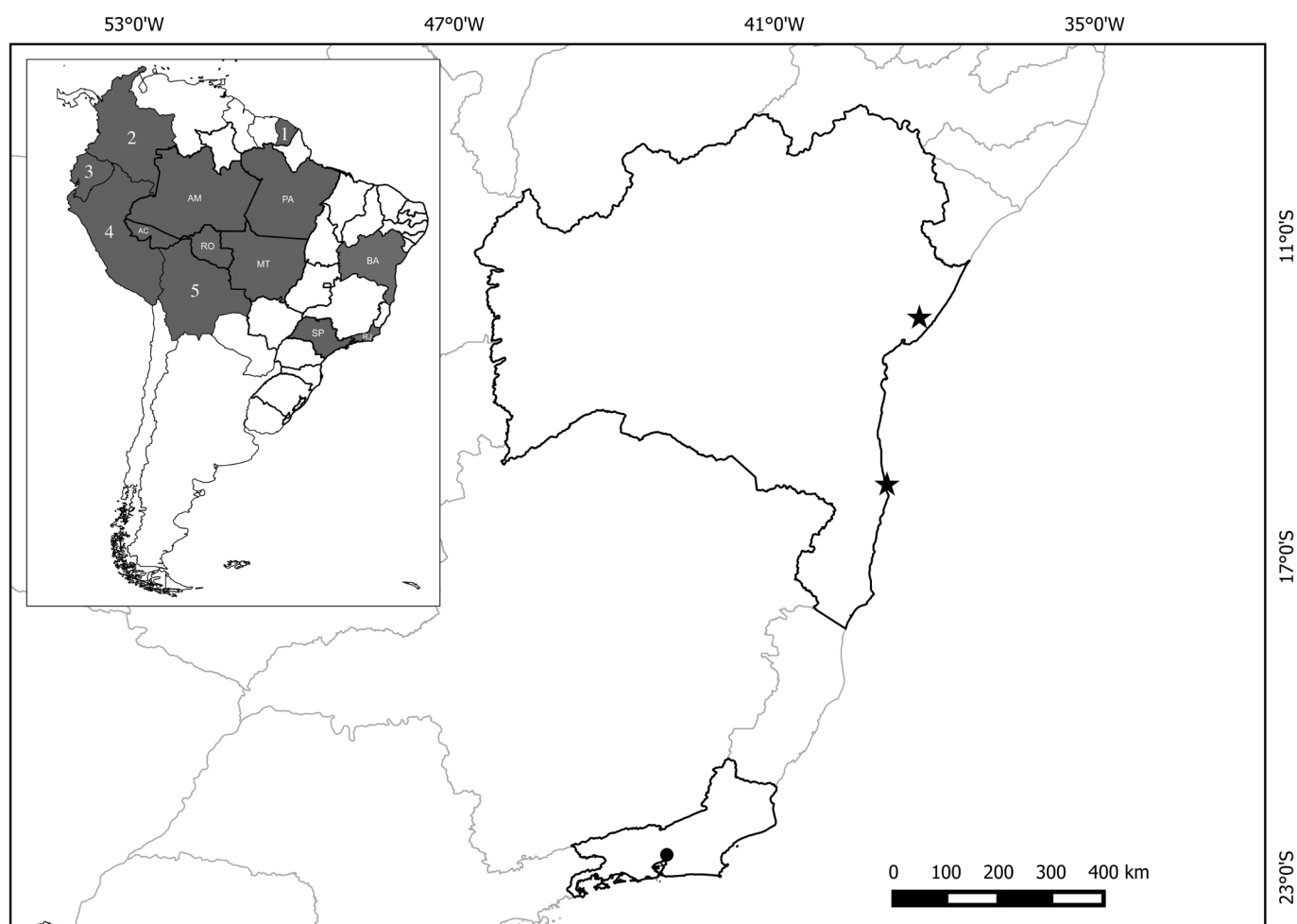


Figure 2. Distribution map of *Xenopholis scalaris*. 1: French Guiana, 2: Colombia, 3: Equador, 4: Peru, 5: Bolivia. Brasil; BA: Bahia, SP: São Paulo, MT: Mato Grosso, RO: Rondônia, PA: Pará, AC: Acre, AM: Amazonas. Stars: Type localities of the syntypes, municipality of Mata de São João, northern of Bahia state; municipality of Canavieiras, southern of Bahia state. Solid circle: new state record of *X. scalaris*, municipality of Magé, state of Rio de Janeiro.

The Inhomirim Village area is located in the Petrópolis Environmental Protected Area (APA), which connects the Serra dos Órgãos National Park, Tinguá Biological Reserve and Araras Biological Reserve, forming a large Atlantic Forest fragment. The voucher specimen of *X. scalaris* IVB 3522 is housed at Coleção Científica Instituto Vital Brazil, Niterói, Rio de Janeiro.

The specimen is an adult male, with a total length of 365 mm; the largest size documented; snout-vent length 299 mm, tail length 66 mm, head length 12.7 mm and width 5.0 mm, snout length 4.0 mm and width 4.2 mm, dorsal scale rows 17-17-17, number of ventral scales 130 and subcaudal scales 36 (Figure 1). Morphometric and scutellation data follows Dowling (1951) and Peters (1964). Measurements were taken using a digital caliper to the nearest 0.1 mm, except for snout-vent length (SVL) and tail length (TL), which were taken with a flexible ruler to the nearest millimeter. The identification of *X. scalaris* specimen IVB 3522 was made based on literature (Wucherer 1861; Starace 1998; Cunha and Nascimento 1993; Argôlo 2004; Jansen et al. 2009) and confirmed by Dr. Thales de Lema.

This new state record (Figure 2) is located 879 km and 1,223 km southeast from the type localities of Canavieiras and Mata de São João, respectively, filling a distributional gap between the states of Bahia and São Paulo. This new report can indicate that the populations might not be disjunctive in Atlantic Forest, but rather rare in such biome. According to the IUCN (2014), the conservation status of *X. scalaris* is of Least Concern, which means the species is not likely threatened. Nevertheless, considering that the populations of *X. scalaris* are forest-dependent and probably rare in Atlantic Forest, a biome under continuous threat by deforestation and human disturbances, we recommend *X. scalaris* to be included in regional Red Lists along the Brazilian Atlantic Forest.

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