

Scinax garbei (Miranda-Ribeiro, 1926) (Amphibia: Anura: Hylidae): Distribution extension for Brazilian Amazonia and first record in the state of Amapá

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ABSTRACT: The geographic distribution of *Scinax garbei* includes Bolivia, Colombia, Ecuador, Peru, Venezuela, and Brazil (eastern and western regions). In this study, we present an extension of the geographic distribution in the Brazilian Amazonia and the first record of the species in the state of Amapá. The new record was obtained at Parque Natural Municipal do Cancão, in the municipality of Serra do Navio, state of Amapá, Brazil.

The hylid frog genus *Scinax* Wagler, 1830 is one of the most abundant and conspicuous groups of frogs in the Neotropics (De la Riva *et al.* 1994) and, as currently defined, is the most species-rich (111 spp.) genus within Hylinae (Faivovich *et al.* 2010; Nunes and Pombal 2011; Frost 2013). This genus is divided in seven phenetic groups: *S. catharinae*, *S. perpusillus*, *S. rizibilis*, *S. rostratus*, *S. ruber*, *S. staufferi* and *S. x-signatus* groups (Duellman and Wiens 1993).

The *Scinax rostratus* group contains 10 species: *S. boulengeri* (Cope, 1887), *S. constrictus* Lima, Bastos & Giaretta, 2004, *S. garbei* (Miranda-Ribeiro, 1926), *S. jolyi* Lescure & Martin, 2000, *S. kennedyi* (Pyburn, 1973), *S. nebulosus* (Spix, 1824), *S. pedromedinae* (Henle, 1991), *S. proboscideus* (Brongersma, 1933), *S. rostratus* (Peters, 1863), and *S. sugillatus* (Duellman, 1973) (Moravec *et al.* 2009; Sturaro *et al.* 2010). *Scinax garbei* differs from the other species of the group by its large size (maximum SVL in males 46 mm, in females 48 mm), pointed snout with nostrils on the extremity, prominent conical tubercles on the upper eyelid and around the lower lip, and a flattened head with a triangular mark in relief on the dorsal surface between the eyes. The dorsum is light to dark brown with darker spots. The inguinal region is green and this coloration may extend over the lateral surface of the body. Thighs have a longitudinal green stripe, and transverse alternating black and light-brown to yellow stripes (Duellman and Wiens 1993; Lima *et al.* 2005) (Figure 1).

Scinax garbei is known from Ecuador, adjacent Peru, Bolivia, Colombia and Venezuela (Duellman and Wiens 1993; La Marca *et al.* 2004; Frost 2013). In Brazilian Amazonia, it has been recorded from Amazonas (Lima *et al.* 2005; França and Venâncio 2010; Pantoja and Fraga 2012) and Pará states (Caldwell and Araujo 2005; Avila-Pires *et al.* 2010; Barros *et al.* 2010; Mendes-Pinto and Souza 2011; Pinheiro *et al.* 2012). In this study, we present the first record of the species in the state of Amapá, extending the species distribution in the Brazilian Amazonia by *ca.*

525 km northward from the two localities in the state of Pará: Rio Xingu and Rio Curuá-Una (Figure 2).

During fieldwork on July 25th 2012, at 21:30h, in Parque Natural Municipal do Cancão (0.911833° N, 52.002056° W, datum: WGS84), municipality of Serra do Navio, state of Amapá, males of *Scinax garbei* were found calling under the marginal vegetation of ponds. The Parque Natural Municipal do Cancão was created in 2007 and has an area of 370.26 ha of Amazon forest. The locality presents transitional vegetation between the Cerrado and Amazonian Domains with permanent and temporary ponds during the rainy season that extends from February to June (Drumond *et al.* 2008). At the same pond the following species were calling: *Dendropsophus leucophyllatus* (Beireis, 1783), *Hypsiboas cinerascens* (Spix, 1824), *H. multifasciatus* (Gunther, 1859"1858"), *Phyllomedusa hypochondrialis* (Daudin, 1800) and *Scinax nebulosus* (Spix, 1824).



FIGURE 1. Adult male of *Scinax garbei* from the municipality of Serra do Navio, Amapá state, Brazil.

The species identification was confirmed by comparison analysis of the external morphology and its description by Ulisses Caramaschi (Museu Nacional do Rio de Janeiro). Collected specimens were deposited in the Amphibian Collection of the Universidade Federal

do Amapá (CDLZUNIFAP 159). The collection permit for zoological material was provided by Instituto Chico Mendes (ICMBio) – Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis (IBAMA) (Proc. number 32651-1).

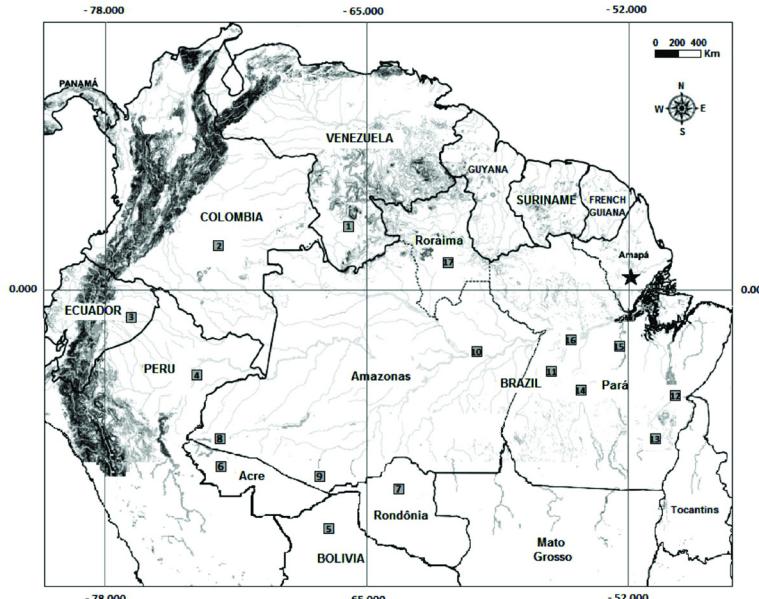


FIGURE 2. Geographic distribution of *Scinax garbei*. **1.** Venezuela; **2.** Colombia; **3.** Ecuador; **4.** Peru; **5.** Bolivia; **Brazil: Acre state - 5.** Reserva Extrativista Riozinho da Liberdade, Igarapé Esperança ($07^{\circ}57'20"S, 72^{\circ}04'37"W$) (Bernarde *et al.* 2011); **7.** Rondônia (Bernarde 2007; Piatti *et al.* 2012); **Amazonas state - 8.** Reserva Extrativista do Rio Gregório, Juruá Basin (Pantoja and Fraga 2012); **9.** Municipality of Boca do Acre (França and Venâncio 2010); **10.** Reserva Florestal Adolpho Ducke ($03^{\circ}05'S, 60^{\circ}00'W$) (Lima *et al.* 2005); **Pará state - 11.** REBIO Maicuru ($0^{\circ}49'43.03"N, 53^{\circ}55'52.32"W$) (Ávila-Pires *et al.* 2010); **12.** FLONA do Trairão ($04^{\circ}37'6"S, 55^{\circ}28'40"W$) (Mendes-Pinto and Souza 2011); **13.** Carajás National Forest ($05^{\circ}52' - 06^{\circ}33'S, 49^{\circ}53' - 50^{\circ}45'W$) (Pinheiro *et al.* 2012); **14.** Riozinho Anfrísio Extractive Reserve ($4^{\circ}45'33.98"S, 54^{\circ}39'18.28"W$) (Barros *et al.* 2010); **15.** Rio Xingu near Cachoeira Juruá ($03^{\circ}22'S, 51^{\circ}51'W$) (Caldwell and Araújo 2005); **16.** Rio Curuá-Una ($03^{\circ}9'S, 54^{\circ}50'W$) (Caldwell and Araújo 2005); **Star.** Municipality Serra do Navio, Amapá state (new record, this study).

ACKNOWLEDGMENTS: We thank Ulisses Caramaschi for help with the identification of the specimens. Collecting was done with permits issued by Chico Mendes Institute for Biodiversity Conservation (ICMBio, process number 32651-1). The Prefeitura Municipal de Serra do Navio gave permission to work in the Parque Natural Municipal do Cancão, and Marcela Marins (ICMBio) and Pró-Reitoria de Extensão e Assuntos Comunitários (PROEAC/UNIFAP) provided logistical support. Daniel Valentim, Mayara Furtado, Naziel Souza, Raimundo Baia and Lígia Dias from University of Amapá provided valuable assistance in the field.

LITERATURE CITED

- Ávila-Pires, T.C.S., M.S. Hoogmoed and W.A. Rocha. 2010. Notes on the Vertebrates of northern Pará, Brazil: a forgotten part of the Guianan Region, I. Herpetofauna. *Boletim Museu Paraense Emílio Goeldi, Ciências Naturais* 5(1): 13–112.
- Barros, F.B., L. Vicente and H.M. Pereira. 2010. *Amphibians of the Riozinho do Anfrísio Extractive Reserve, Pará*. Rapid Color Guide # 271 web version 1 08/2010. Accessible at http://fm2.fieldmuseum.org/plantguides/guide_pdfs/271-01.pdf. Captured on 18 April 2013.
- Bernarde, P.S. 2007. Ambientes e temporada de vocalização da anurofauna no Município de Espigão do Oeste, Rondônia, Sudoeste da Amazônia, Brasil (Amphibia: Anura). *Biota Neotropica* 7(2): 1–6.
- Bernarde, P.S., R.A. Machado and L.C.B. Turci. 2011. Herpetofauna da área do Igarapé Esperança na Reserva Extrativista Riozinho da Liberdade, Acre - Brasil. *Biota Neotropica* 11(3): 117–144.
- Caldwell, J.P. and M.C. Araújo. 2005. Amphibian faunas of two Eastern Amazonian rainforest sites in Pará, Brazil. *Occasional Papers Sam Noble Oklahoma Museum of Natural History* 16: 1–41.
- De La Riva, I., R. Marquez and J. Bosch. 1994. Advertisement calls of Bolivian species of *Scinax* (Amphibia, Anura, Hylidae). *Bijdragen tot de Dierkunde* 64: 75–85.
- Drummond, J.A., T.C.A. Dias and D.M.C. Brito. 2008. *Atlas das Unidades de conservação do Estado do Amapá*. Macapá: MMA/IBAMA/GEA/SEMA, CD-ROM.
- Duellman, W.E. and J.J. Wiens. 1993. Hylid frogs of the genus *Scinax* Wagler, 1830, in Amazonian Ecuador and Peru. *Occasional Papers of the Museum of Natural History* 153: 1–57.
- Faivovich, J., J.L. Gasparini and C.F.B. Haddad. 2010. A new species of the *Scinax perpusillus* group (Anura: Hylidae) from Espírito Santo, Brazil. *Copeia* 2010: 97–10.
- França, F.G.R. and N.M. Venâncio. 2010. Reptiles and amphibians of a poorly known region in southwest Amazonia. *Biotemas* 23(3): 71–84.
- Frost, D.R. 2013. *Amphibian Species of the World: an Online Reference*. Version 5.6. Accessible at <http://research.amnh.org/vz/herpetology/amphibia/>. Captured on 30 March 2013.
- La Marca, E., C. Azevedo-Ramos, L.A. Coloma and S. Ron. 2004. *Scinax garbei*, in: IUCN 2012. *IUCN Red List of Threatened Species*. Version 2012.2. Accessible at <http://www.iucnredlist.org>. Captured on 26 April 2013.
- Lima, A.P., W.E. Magnusson, M. Menin, L.K. Erdmann, D.J. Rodrigues, C. Keller, C. and W. Hodl. 2005. *Guia de sapos da Reserva Adolpho Ducke, Amazônia Central*. Manaus, Áttema Design Editorial. 168 pp.
- Mendes-Pinto, T.J. and S.M. Souza. 2011. Preliminary assessment of amphibians and reptiles from Floresta Nacional do Trairão, with a new snake record for the Pará state, Brazilian Amazon. *Salamandra* 47(4): 199–206.
- Moravec, J., I.A. Tuanama, P.E. Pérez and E. Lehr. 2009. A new species of *Scinax* (Anura: Hylidae) from the area of Iquitos, Amazonian Peru. *South American Journal of Herpetology* 4(1): 9–16.
- Nunes I. and J.P. Pombal Jr. 2011. A new snouted treefrog of the speciose genus *Scinax* Wagler (Anura, Hylidae) from northeastern Brazil. *Herpetologica* 67(1): 80–88.
- Pantoja, D.L. and R. de Fraga. 2012. Herpetofauna of the Reserva Extrativista do Rio Gregório, Juruá Basin, southwest Amazonia, Brazil. *Check List* 8(3): 360–374.
- Piatti, L., P.M.O. Amaro, J.F.J. Araújo, V.Q.A. Sanches and P.S. Bernarde. 2012. Anurans of a disturbed area in Jarú, Rondônia, Brazil. *Check List* 8(1): 83–87.
- Pinheiro, L.C., Y.O.C. Bitar, U. Galatti, S. Neckel-Oliveira, M.C. Santos-Costa. 2012. Amphibians from southeastern state of Pará: Carajás Region, northern Brazil. *Check List* 8(4): 693–702.
- Sturaro, M.J., J.F.M. Sarmento, A.A. Lima, H.M., Chalkidis and R.A.T. Rocha. 2010. New records and distribution of the treefrog *Scinax rostratus* (Peters, 1863) (Amphibia: Anura: Hylidae). *Herpetology Notes* 3: 161–166.

RECEIVED: April 2013

ACCEPTED: February 2014

PUBLISHED ONLINE: May 2014

EDITORIAL RESPONSIBILITY: Raul Maneyro