Herpetology Notes, volume 12: 389-390 (2019) (published online on 15 April 2019)

New state record in Brazil and first report to Bolivia of *Scinax constrictus* Lima, Bastos & Giaretta, 2004 (Anura, Hylidae)

Eric Ragalzi[1,*], Matheus O. Neves[1], Rossy Montaño[2], and Diego J. Santana[1]

The genus *Scinax* Wagler, 1830 is distributed from eastern and southern Mexico to Argentina and Uruguai, and the Caribbean region (Frost, 2018). Previously, *Scinax* was divided into two clades, based on morphological and molecular data: *S. catharine* and *S. ruber* (Faivovich, 2002). Then, Faivovich et al. (2005) divided the *S. ruber* clade into two groups: *S. rostratus* and *S. uruguayus*. Within the *S. rostratus* species group, *S. constrictus* Lima, Bastos and Giaretta, 2004, is an endemic species from the Brazilian Cerrado (Valdujo et al., 2012). *S. constrictus* is characterized by presence of jaw tubercles, a triangular mark between the eyes, two separate tubercles above the cloaca in females, and a discrete anal flap in males, besides other osteological and miological characteristics (Duellman, 1973; Faivovich, 2002; Lima et al., 2004; Faivovich, 2005). Until now, most records were reported on Tocantins and Goiás state (Lima et al., 2004; Vaz-Silva et al., 2006; Campos and Vaz-Silva, 2010; Valdujo et al., 2011; Melo et al., 2013), only one record in Minas Gerais state (Neves et al., 2014) and one in Mato Grosso do Sul state (Carvalho et al., 2006).

During recent amphibian surveys, collecting from the Upper Paraguay River Basin (Coleção Herpetológica da Universidade de Brasília – CHUMB, Brasília, Brazil; Coleção Zoológica de Referência da Universidade Federal de Mato Grosso do Sul – ZUFMS-AMP, Campo Grande, Brazil; and Colección Herpetológica del Museo de Historia Natural Noel Kempff Mercado – MNKA, Santa Cruz de La Sierra, Bolivia), we found nine new *S. constrictus* sightings (Figure 1). Four were from Mato Grosso do Sul state, Brazil: (1) Serra do Amolar in Corumbá municipality (-18.0340ºS, -57.5012ºW), (2) Ladário (-19.1078ºS, -57.5815ºW),

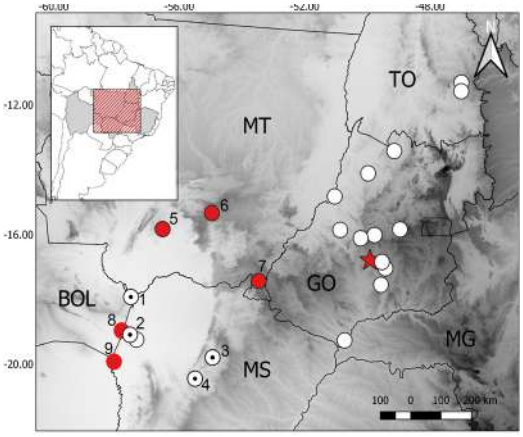

Figure 1. Current distribution map of *Scinax constrictus*: Bolivia in Santa Cruz department (SC) and Brazil in states of Mato Grosso (MT), Mato Grosso do Sul (MS), Minas Gerais (MG), Goias (GO) and Tocantins (TO). Red star: municipality of Palmeiras, state of Goiás (type locality) (Lima et al., 2004). White circle: records found in the literature (Lima et al., 2004; Carvalho et al., 2006; Vaz-Silva et al., 2006; Campos and Vaz-Silva, 2010; Valdujo et al., 2011; Melo et al., 2013; Neves et al., 2014). Spotted white circle: new reports to Mato Grosso do Sul state, (1) Serra do Amolar in Corumbá municipality, (2) Ladário, (3) Corguinho, (4) Aquidauana. Red circle: new records to Mato Grosso state, (5) Nossa Senhora do Livramento, (6) Campo Verde, (7) Alto Araguaia; and German Bush province, Bolivia, (8) Laguna Cáceres and (9) Puerto Bush.

[1] Universidade Federal de Mato Grosso do Sul, Instituto de Biociências, Cidade Universitária, 79070-900 Campo Grande, MS, Brazil.

[2] Museo de Historia Natural Noel Kempff Mercado, Av. Irala 565 - casilla 2489, Santa Cruz de la Sierra, Bolivia.

* Corresponding author. E-mail: ericragg@gmail.com

(3) Corguinho (-19.8016ºS, -54.9400ºW) and (4) Aquidauana (-20.4551ºS, -55.4984ºW). Three were from Mato Grosso state, Brazil: (5) Nossa Senhora do Livramento (-15.8140ºS, -56.5310ºW), (6) Campo Verde (-15.3480ºS, -54.9610ºW) and (7) Alto Araguaia (-17.4440ºS, -53.4680ºW). Finally, there were from two records from Santa Cruz Department, Bolívia: (8) Laguna Cáceres (-18.9743ºS, -57.7748ºW) and (9) Puerto Bush (-20.0663ºS, -58.0355ºW) in the German Bush province.

Based on these records, we were able to define a wider distribution of *S. constrictus* within the state of Mato Grosso do Sul, where until previously there had only been a single record from Corumbá municipality. In addition, with the records of the species from the state of Mato Grosso, we add a new state record. Moreover, this is the first record of *S. constrictus* from Bolivia. This work highlights the importance of scientific collections and the documentation of voucher specimens with correct collection data such as location, GPS coordinates and sampling dates. Furthermore, such records contribute to better delimit *S. constrictus* occurrence, which aids to fill one more gap in order to decrease the "Wallacean shortfall" (Whittaker et al., 2005).

Acknowledgements. We thank Guarino R. Colli and Rafael Dias (CHUMB), Kathia Rivero (MNKA), and Francisco S. Neto, Liliana Piatti and Thomaz R. F. Sinani (ZUFMS) for assistance with the collections. Matthijs Strietman and Ricardo Koroiva for reviewing the manuscript. ER and MON thank CNPq (Conselho Nacional de Desenvolvimento Científico e Tecnológico) and CAPES (Coordenação de Aperfeiçoamento de Pessoal de Nível Superior) respectively for their current scholarhips. DJS thanks CNPq for his research fellowship (311492/2017-7).

References

Campos, F.S., Vaz-Silva, W. (2010): Temporal and spatial distribution of anuran fauna in different environments in Hidrolândia, Goiás State, Central Brazil. Neotropical Biology and Conservation **5**: 179–187.

Carvalho, R.R., Galdino, G.A.B., Ávila, R.W. (2006): Geographic Distribution: *Scinax constrictus*. Herpetological Review **37**: 103.

Duellman, W.E. (1973): Descriptions of new hylid frogs from Colombia and Ecuador. Herpetologica **29**: 219–227.

Duellman, W.E., Marion, A.B., Hedges, B. (2016): Phylogenetics, classification, and biogeography of the treefrogs (Amphibia: Anura: Arboranae). Zootaxa **4104**: 1–119.

Faivovich, J. (2002): A cladistic analysis of *Scinax* (Anura: Hylidae). Cladistics **18**: 367–393.

Faivovich, J., Haddad, C.F.B., García, P.C.A., Frost, D.R., Campbell, J.A., Wheeler, W.C. (2005): Systematic review of the frog family Hylidae, with special reference to Hylinae: phylogenetic analysis and taxonomic revision. Bulletin of the American Museum of Natural History **294**: 1–240.

Frost, D.R. (2018): Amphibian Species of the World: an Online Reference. Version 6.0. Available at: http://research.amnh.org/herpetology/amphibia/index.html. Accessed on 9 July 2018. American Museum of Natural History, New York, USA.

Lima, L.P., Bastos, R.P., Giaretta, A.A. (2004): A new *Scinax* Wagler, 1839 of the *S. rostratus* group from central Brazil (Amphibia, Anura, Hylidae). Arquivos do Museu Nacional, Rio de Janeiro **62**: 505–512.

Melo, M., Fava, F., Pinto, H.B.A., Bastos, R.P., Nomura, F. (2013): Anuran diversity (Amphiba) in the Extractivist Reserve Lado do Cedro, Goiás. Biota Neotropica **13**: 205–217.

Neves, M.O., Pereira, E.A., Rocha, L.C.F., Vasques, J.B., Santos, P.S. (2014): Distribution extension of *Scinax constrictus* Lima, Bastos & Giareta, 2004 (Amphibia, Hylidae): New state record in Brazilian Cerrado. Herpetology Notes **7**: 745–746.

Valdujo, P.H., Camacho, A., Recoder, R.S., Teixeira Junior, M., Ghellere, J.M.B., Mott, T., Nunes, P.M.S., Nogueira, C., Rodrigues, M.T. (2011): Amphibians from Estação Ecológica Serra Geral do Tocantins, Jalapão region, Tocantins and Bahia States. Biota Neotropica **11**: 251–261.

Valdujo, P.H., Silvano, D.L., Colli, G., Martins, M. (2012): Anuran species composition and distribution patterns in brasilian Cerrado, a neotropical hotspot. South American Journal of Herpetology **7**(2): 63–78.

Vaz-Silva, W., Poli, F.C., Santos, F.J.M. (2006): Amphibian, *Scinax constrictus*: distribution extension. Check List **2**: 34–35.

Whittaker, R.J., Araújo, M.B., Jepson, P., Ladle R.J., Watson, J.E.M., Willis K.J. (2005): Conservation biogeography: assessment and prospect. Diversity and Distributions **11**: 3–23.

Appendix 1

Material examined in zoological collections: *Scinax constrictus*: in Mato Grosso do Sul state, Brazil: Aquidauana municipality: ZUFMS-AMP11075, ZUFMS-AMP11076; Campo Verde municipality: CHUNB 37452, 37453, 37458; Corguinho municipality: ZUFMS-AMP10753; Serra do Amolar, Corumbá municipality: ZUFMS-AMP 5123, 5124, 5125, 5188; Ladário municipality: ZUFMS-AMP 2064, 2065, 2066, 2067; in Mato Grosso state, Brazil: Alto Araguaia municipality: CHUNB 25961; Nossa Senhora do Livramento municipality: CHUNB 65062; in Santa Cruz Department, Bolivia: Laguna Caceres and German Bush Province: MNKA 2385, 2634, 2664, 3297, 3298, 3299.

Accepted by Michael Jowers