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NOTES ON GEOGRAPHIC DISTRIBUTION

Amphibia, Anura, Hylidae, *Trachycephalus nigromaculatus* Tschudi, 1838: Distribution extension

Iuri Ribeiro Dias, Tatiana Raquel Alves Vilaça, Juliana Rodrigues do Santos Silva, Rosana Silva Barbosa and Mirco Solé *

Universidade Estadual de Santa Cruz, Programa de Pós-Graduação em Zoologia. Rodovia Ilhéus-Itabuna, km 16. CEP 45662-900. Ilhéus, BA, Brazil.
* Corresponding author. E-mail: *mksole@uesc.br*

ABSTRACT: The geographic distribution of *Trachycephalus nigromaculatus* inside the state of Bahia, Brazil, is extended to the RPPN Serra Bonita in the municipality of Camacan and another area in the municipality of Boa Nova, a transition zone between the Atlantic Rainforest and Caatinga biomes.

The genus *Trachycephalus* Tschudi, 1838 contains 12 species: *T. atlas* Bokermann, 1966, *T. coriaceus* (Peters, 1867), *T. dibernardoi* Kwet and Solé, 2008, *T. hadroceps* (Duellman and Hoogmoed, 1992), *T. imitatrix* (Miranda-Ribeiro, 1926), *T. jordani* (Stejneger and Test, 1891), *T. lepidus* (Pombal, Haddad and Cruz, 2003), *T. mambaiensis* Cintra, Silva, Silva-Jr., Garcia and Zaher, 2009, *T. mesophaeus* (Hensel, 1867), *T. nigromaculatus* Tschudi, 1838, *T. resinifictrix* (Goeldi, 1907), and *T. venulosus* (Laurenti, 1768). Its distribution ranges from the mexican lowlands to South America east of the Andes, with its southernmost extension in north-eastern Argentina (Frost 2010) Most species within the genus are explosive breeders (Zweifel 1964; Schiesari and Moreira 1996; Kwet and Di-Bernardo 1999), with *T. resinifictrix* being an exception, as this species shows a prolonged reproduction period (Schiesari *et al.* 2003).

Trachycephalus nigromaculatus is a large treefrog that occurs in restinga (sandy coastal plain vegetation) areas, occupying the central core of bromeliad plants, but also in forests, where it inhabits tree holes (Izecksohn and Carvalho-e-Silva 2001). Males can be found calling inside ponds, at pond margins or on branches of trees (Abrunhosa *et al.* 2001). Its tadpole was described by Wogel *et al.* (2000).

This species is distributed in the coastal areas of São Paulo, Rio de Janeiro and Espírito Santo states and inland Minas Gerais and Goiás states (Frost 2010; Izecksohn and Carvalho-e-Silva 2001). It was recently reported in the municipality of Potiraguá, representing the first record for the state of Bahia (Freitas and Lima 2009).

On 19 February 2009, during fieldwork in the municipality of Boa Nova, Bahia (14°19'33.3" S, 40°12'50.5" W, 870 m a.s.l.), an adult *Trachycephalus nigromaculatus* was found inside a bromeliad in a saxicolous habitat. On 3 May 2009, another specimen was collected in a "cabruca" (a cacao plantation in which some old grown native trees of the Atlantic forest are preserved to shade the cacao trees), inside the RPPN (Private Reserve of Natural Heritage) Serra Bonita, municipality of Camacan, Bahia (15°24'48" S, 39°34'16.8" W, 455 m a.s.l.) (Figure 1). This specimen was found resting during the day inside a rotten cacao fruit, two meters above the ground. The cacao capsule had a hole on one side and the cupped inside had accumulated some water These two records extend the known distribution 160 km northward from Potiraguá (Figure 2). Both specimens were deposited in the Museu de Zoologia da Universidade Estadual de Santa Cruz (MZUESC 7464 and MZUESC 7549). The permit to collect the frogs was issued by ICMBio (number 13708-1). The correct taxonomic identification was verified by Ulisses Caramaschi (Museu Nacional do Rio de Janeiro).

Trachycephalus nigromaculatus is known to inhabit dry lowland areas (Rocha *et al.* 2004), mostly restingas near the shoreline, but has also been recorded in the Atlantic Rainforest and the Cerrado. The specimen encountered in the RPPN Serra Bonita was found on a slope at 455 m elevation. This RPPN is characterized by abrupt changes

FIGURE 1. Adult *Trachycephalus nigromaculatus* from RPPN Serra Bonita, municipality of Camacan, Bahia, Brazil.

in elevation along an altitudinal gradient from 200-950 m. The city of Boa Nova is located on the southern Bahia highlands. The specimen collected there was found at 870 m elevation, indicating that *T. nigromaculatus* can also be found in higher areas.

Figure 2. Geographic distribution of *Trachycephalus nigromaculatus* in the state of Bahia. The green area represents the Atlantic Rainforest biome, the yellow area the Caatinga biome and the red area the Cerrado biome. Triangle: Potiraguá (Freitas and Lima 2009), square: new record for the RPPN Serra Bonita, Camacan, circle: new northern distribution limit for the species at Boa Nova.

In the inland regions of Bahia state another species of the genus *Trachycephalus* can be found. According to its original description *T. atlas* is similar to *T. nigromaculatus*, however *T. atlas* does not have red spots during life and differences in skull morphology exist between both species (Bokermann 1966).

Our new records, aside from expanding the known distribution of *T. nigromaculatus*, reveal also the high plasticity of this species by being present in areas with a much higher elevation as previously reported. Moreover, it is reaching the borders of a completely different biome, the Caatinga, as Boa Nova is characterized as a transition area between this biome and the Atlantic Rainforest. As *T. nigromaculatus* is an explosive breeder that lives in the canopy during most of its life, it is hardly ever found during rapid amphibian surveys or short-term fieldworks. We presume that it is more widely distributed through Bahia state than previously thought.

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Literature Cited

Abrunhosa, P.A., H. Wogel and J.P. Pombal Jr. 2001. Vocalização de quatro espécies de anuros do Estado do Rio de Janeiro, Sudeste do Brasil (Amphibia, Hylidae, Leptodactylidae). *Boletim do Museu Nacional (N.S.) Zoologia* 472: 1-12.

Bokermann, W.C.A. 1966. Una nueva especie de *Trachycephalus* da Bahia, Brasil (Amphibia, Hylidae). *Neotropica* 12(39): 210-124.

Freitas, M.A. and T.O. Lima. 2009. *Trachycephalus nigromaculatus* (Black-spotted Casque-headed Treefrog). *Herpetological Review* 40(3): 363

Frost, D.R. 2010. *Amphibian Species of the World: an Online Reference. Version 5.4 (08 April, 2010)*. Electronic Database accessible at http://research.amnh.org/vz/herpetology/amphibia/ American Museum of Natural History, New York, USA. Captured on 10 April 2010.

Izecksohn, E. and S.P. Carvalho-e-Silva. 2001. *Anfíbios do Município do Rio de Janeiro.* Rio de Janeiro: Editora UFRJ. 147 p.

Kwet, A. and M. Di-Bernardo. 1999. *Pró-Mata – Anfíbios, Amphibien, Amphibians.* Porto Alegre: EDIPUCRS. 107 p.

Rocha, C.F., S.P. Carvalho-e-Silva and M.V. Sluys. 2004 *Trachycephalus nigromaculatus. In* IUCN 2009. *IUCN Red List of Threatened Species. Version 2009.1*. Accessible at www.iucnredlist.org. Capture on 01 November 2009.

Schiesari, L.C. and G. Moreira. 1996. The tadpole of *Phrynohyas coriaceae* (Hylidae) with comments on the species reproduction. *Journal of Herpetology* 30(3): 404-407.

Schiesari, L., M. Gordo and W. Hödl. 2003. Treeholes as calling, breeding, and developmental sites for the Amazonian Canopy Frog, *Phrynohyas resinifictrix* (Hylidae). *Copeia* 2: 263-272.

Wogel, H., P.A. Abrunhosa and J.P. Pombal Jr. 2000. Girinos de cinco espécies de anuros do sudeste do Brasil (Amphibia: Hylidae, Leptodactylidae, Microhylidae). *Boletim do Museu Nacional* 427: 1-16.

Zweifel, R.G. 1964. Life History of *Phrynohyas venulosa* (Salientia: Hylidae) in Panamá. *Copeia* 1: 201-208.

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