

Amphibia, Anura, Hylidae, *Dendropsophus novaisi* (Bokermann, 1968) Distribution extension and geographic distribution map

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ABSTRACT: A new locality is presented for *Dendropsophus novaisi* in the municipality of Jeremoabo, Bahia, in the Brazilian northeast. This new site represents the first record of the species within a conservation unit, the Raso da Catarina Ecological Station, and extends its known geographic range approximately 436 km north and west of the type locality.

The genus *Dendropsophus* Fitzinger, 1843 is composed of 91 species (Frost 2011) arranged in nine groups (Faivovich *et al.* 2005). The *Dendropsophus marmoratus* group is composed of eight species, which range from northeastern Brazil to eastern Bolivia, and from the Guianas to southeastern Peru (Frost 2011). This group consists of *Dendropsophus acreanus* (Bokermann, 1964), *D. dutrai* (Gomes and Peixoto, 1996), *D. marmoratus* (Laurenti, 1768), *D. melanargyreus* (Cope 1887), *D. nahdereri* (Lutz and Bokermann, 1963), *D. novaisi* (Bokermann, 1968), *D. seniculus* (Cope, 1868), and *D. soaresi* (Caramaschi and Jim, 1983).

Dendropsophus novaisi (Bokermann 1968) is a small-bodied species (SVL 31-36 mm in males and 30-36 in females) found in rocky outcrops in the semi-arid Brazilian Caatinga biome, where it may reproduce in temporary pools (Peixoto and Pimenta 2004). Prior to the present study, was known from only two localities – Maracás, a municipality in the Brazilian state of Bahia (type locality) and Pedra Azul in the state of Minas Gerais (Bokermann 1968; Peixoto and Pimenta 2004). As little is known of its geographic range, population status, ecological characteristics or even whether it occurs in any protected areas, Dendropsophus novaisi is listed as Data Deficient by the IUCN (Peixoto and Pimenta 2004).

During fieldwork conducted between March, 2010, and February, 2011, nine specimens of *D. novaisi* (Figure 1) were captured in an artificial pool located within the Raso da Catarina Ecological Station (E.E. Raso da Catarina) in Jeremoabo, Bahia, Brazil (09°55′01.0″ S, 38°41′55.6″ W; elevation: 444 m). This protected area is covered with typical open arboreal Caatinga vegetation with palms (Melo and Andrade 2007). The pool forms an ellipse, with an area of 885.5 m² and a maximum depth of 1.5 m during the rainy season. The surrounding vegetation is dominated by plants of the families Capparaceae, Convolvulaceae, Cucurbitaceae, Cyperaceae, Euphorbiaceae, Fabaceae,

and Gramineae. All the male specimens (n = 7) were captured when vocalizing at nightfall, when they were found either on the ground or on perches in bushes and saplings between 0.1 m and 3.0 m above the ground. Reproductive activity was observed only during periods of intense precipitation, indicating an explosive breeding pattern (*sensu* Wells 1977) typical of the species of the *Dendropsophus marmoratus* species group (Bertoluci 1998; Canelas and Bertoluci 2007; Orrico *et al.* 2009).



FIGURE 1. Adult male *Dendropsophus novaisi* (C1750) from the E.E. Raso da Catarina, in the municipality of Jeremoabo in the Brazilian state of Bahia. Photo by CRS-S.

Identification of the species was based on Bokermann (1968) and comparisons with specimens deposited in the herpetological collection of Feira de Santana State University (UEFS). The specimens collected in the present study were deposited in this collection, under catalog numbers MUEFS 3733-3736, and at the Federal University of Sergipe, under numbers C1742-C1744, C1750, and C1759. Specimen collection was authorized by the Brazilian Federal Environment Institute (IBAMA), by the concession of permit # 22094-2, issued by Instituto Chico Mendes de Conservação da Biodiversidade (ICMBio).

This is the second record of *Dendropsophus novaisi* from the Brazilian state of Bahia, although this site is 436 km north and west of the type locality (Figure 2). In addition to this considerable extension in its known distribution, confirmation of the occurrence of the species in the E.E. Raso da Catarina, an integral protected area, represents a significant advance for the conservation of the species. The available data on *D. novaisi* indicates that the species may occur throughout much of the southern extreme of the Caatinga dominion (*sensu* Ab'Sáber 1977), and that the lack of records from other sites within this region may be due to insufficient sampling effort, especially considering that the species of the *D. marmoratus* group appear to be explosive breeders (Orrico et al. 2009).

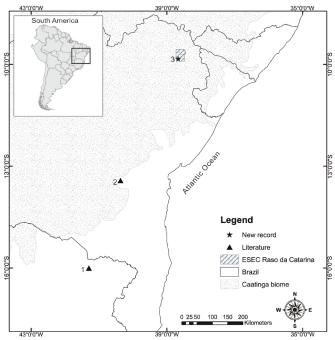


FIGURE 2. Known geographic distribution of *Dendropsophus novaisi*: 1. Pedra Azul (Minas Gerais), 2. Maracás (Bahia), 3. E.E. Raso da Catarina (Bahia).

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LITERATURE CITED

Ab'Saber A.N. 1977. Os domínios morfoclimáticos na América do Sul. Primeira aproximação. *Geomorfologia* 52: 121.

Arzabe, C. 1999. Reproductive activity patterns of anurans in two different altitudinal sites within the Brazilian Caatinga. *Revista Brasileira de Zoologia*. 16 (3): 851-864.

Bertoluci, J. 1998. Annual patterns of breeding activity in Atlantic Rainforest anurans. *Journal of Herpetology* 32(4): 607-611.

Bokermann, W.C.A. 1968. Three new *Hyla* from the Plateau of Maracás, central Bahia, Brasil. *Journal of Herpetology* 1(1-4): 25-31.

Canelas, M.A.S. and J. Bertoluci 2007. Anurans of the Serra do Caraça, southeastern Brazil: species composition and phenological patterns of calling activity. *Iheringia, Série Zoolologia* 97(1): 21-26.

Faivovich, J., C.F.B. Haddad, P.C.A. Garcia, D.R. Frost, J.A. Campbell, and W.C. Wheeler. 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. 2011. Amphibian species of the World: an online reference version 5.5 (12 May, 2011). Electronic Database accessible at http://research.amnh.org/herpetology/amphibiam/index.php. American Museum of Natural History, New York, USA. Captured on 28 July, 2011.

Melo, J.I.M. and W.M., Andrade. 2007. Boraginaceae s.l. A. Juss. em uma área de Caatinga da ESEC Raso da Catarina, BA, Brasil. *Acta Botanica Brasilica*. 21(2): 369-378.

Orrico, V.G.D., R. Lingnau and L.O.M. Giasson. 2009. The advertisement call of *Dendropsophus nahdereri* (Anura, Hylidae, Dendropsophini). *South American Journal of Herpetology* 4(3): 295-299.

Peixoto, O.L. and B., Pimenta. 2004. *Dendropsophus novaisi. In* IUCN 2011. *IUCN Red List of Threatened Species.Version 2011.1*. Electronic database accessible at www.iucnredlist.org. Captured on 26 July 2011.

Wells, K.D. 1977. The social behaviour of anuran amphibians. *Animal Behaviour* 25(3): 666-693.

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