

NOTES ON GEOGRAPHIC DISTRIBUTION

Amphibia, Anura, Hylidae, *Dendropsophus ruschii* (Weygoldt & Peixoto, 1987): Rediscovery of Ruschi's treefrog in an Atlantic Rainforest remnant in Espírito Santo, Brazil

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Ruschi's treefrog, *Dendropsophus ruschii* (Figure 1), is a species endemic to the Atlantic Rainforest in the Espírito Santo state, southeastern Brazil. All known specimens were collected in this forest formation, at elevations around 800 m (Weygoldt and Peixoto 1987; Frost 2004).



Figure 1. Adult specimen of *Dendropsophus ruschii* from Pedra Azul, Domingos Martins, Espírito Santo state, Brazil. CFBH 10584 (photo: J.L. Gasparini).

Dendropsophus ruschii was described in 1987 based on some specimens collected in the early 80's at the municipalities of Domingos Martins and Santa Teresa, Espírito Santo state, but no exact locality was assigned (Weygoldt and Peixoto 1987). In the original description, the species was tentatively placed in the *Dendropsophus parviceps* group (Weygoldt and Peixoto 1987). After an extensive taxonomic review of the family Hylidae by Faivovich et al.

(2005), the *D. parviceps* group was maintained as it was before the revision, although the authors expressed their skepticism regarding its monophyly.

Due to the small known geographical range (Figure 2) and the restricted habitat preferences, *Dendropsophus ruschii* was considered as vulnerable to extinction in the list of threatened species of the Espírito Santo state (Espírito Santo 2005). The species was listed as "Data Deficient" in the IUCN threatened species list (IUCN et al 2006) and was not included in the national red list (Fundação Biodiversitas 2005).

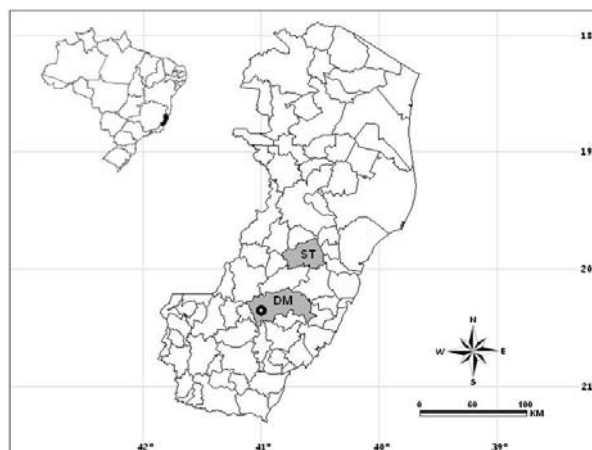


Figure 2. Espírito Santo State map, showing the municipalities where *Dendropsophus ruschii* occurs, according to the original species description (in gray). Black circle shows the locality of the reencounter. DM: Domingos Martins; ST: Santa Teresa.

Until now, the species was known only from the type series (Holotype: EI 7741, Paratypes: EI 7742, MZUSP 63322, MZUSP 63323, USNM number not given in the original description). Recently, in February 2005, we rediscovered the species in a forest remnant near the Parque Estadual da Pedra Azul (approximately 20°24'S, 41°01'W), in the municipality of Domingos Martins, montane region of Espírito Santo (aprox. elevation of 1200 m). In this locality, we found an apparently stable population with many adults, including calling males, juveniles, and froglets.

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The state of Espírito Santo is entirely inserted in the Atlantic Rainforest Biome and therefore holds a great natural richness despite the high degree of degradation (Pombal-Jr et al. 2003; Ramos and Gasparini 2004). Furthermore, many forest remnants in the state were not adequately sampled yet, including areas in Domingos Martins, Santa Teresa and nearby municipalities. This new record reinforces the need of new surveys, because more populations of this species may exist in other forested areas near Pedra Azul.

As pointed by Pimenta et al. (2005), the current knowledge about amphibian diversity in Brazil is still far from the ideal and therefore the inclusion or not of species in threatened species lists should be done with extreme caution. Some specialists have used threatened species lists to evaluate changes in the status of species populations (see Possingham et al. 2002; Stuart et al. 2004). Such studies are reliable only when comprehensive data on well-studied groups are obtained and continuously updated, thus allowing robust comparisons over time and space (see revision in Possingham et al. 2002). This is not the case of Brazilian amphibians. The work by Stuart et al. (2004) prematurely reported on declining species based simply on the change of threat category in threatened species lists over the years. They reported, for example, on the decline of *Scinax heyeri*, a species known only from the four type specimens (Pimenta et al. 2005). If that was true, then several other species only known from their type specimens should also be considered as rapidly declining, including *Hyophryne histrio*, *Paratelmatobius gaigeae*, *Rhamphophryne proboscidea* and *Dendropsophus ruschii*; all of them were rediscovered in the last three years (Feio et al. 2003; Dixo 2004; Zaher et al. 2005).

The inclusion of *D. ruschii* in the red list of the Espírito Santo state (Espírito Santo 2005) and the suggestion made by IUCN et al. (2006) that the species should be listed as endangered seemed to be precipitated. Furthermore, we do not consider this to be a rare species, since several individuals were seen in latter fieldtrips (September 2005 and March 2006) to the rediscovery site. We suggest the maintenance of the species in the Data Deficient category until more accurate

information about the species distribution and abundance is available.

The high number of Brazilian species only known from their type-localities (109 in the last revision made by Pimenta et al. 2005) and the high number of new species being discovered in already well explored areas (for examples see Cruz et al. 2000; Haddad and Sazima 2004; Cruz et al. 2005; Napoli 2005) illustrates the lack of knowledge regarding the actual conservation status of the Brazilian anuran fauna. Thus, new surveys, as well as studies on population ecology of anurans, are fundamental to gather more information on the conservation status of this and other frog species.

Voucher specimens were deposited at the Amphibian Collection of the Universidade Estadual Paulista, Rio Claro, São Paulo, Brazil (CFBH 10852-54).

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Literature Cited

- Cruz, C. A. G., G. M. Prado, and E. Izecksohn. 2005. Nova espécie de *Proceratophrys* Miranda-Ribeiro, 1920 do sudeste do Brasil (Amphibia, Anura, Leptodactylidae). Arquivos do Museu Nacional 63(2): 289-295.
- Cruz, C. A. G., U. Caramaschi, and A. G. Dias. 2000. Espécie nova de *Hyla* Laurenti, 1768 do Estado do Rio de Janeiro, Brasil (Amphibia, Anura, Hylidae). Boletim do Museu Nacional N S Zoologia 434: 1-8.
- Dixo, M. 2004. Rediscovery of *Hyophryne histrio* (Anura, Microhylidae) in Atlantic Forest remnants of Bahia, northeastern Brazil. Phyllomedusa 3(1): 77-79.
- Espírito Santo. 2005. Lista Estadual da Fauna Ameaçada de Extinção. Decreto de lei

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- número 1499-R de 13 de junho de 2005. Diário Oficial, Vitória, Espírito Santo, 14 de Junho de 2005: 4-9.
- 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.
- Feio, R. N., B. V. S. Pimenta, and D. L. Silvano. 2003. Rediscovery and biology of *Rhombophryne proboscidea* (Boulenger, 1882) (Anura, Bufonidae). *Amphibia-Reptilia* 24(1): 108-112.
- Frost, D. R. 2004. Amphibian Species of the World: an online reference. Version 3.0. Electronic Database accessible at <http://research.amnh.org/herpetology/amphibia/index.html>. American Museum of Natural History, New York, USA. Captured on 14 July 2006.
- Fundação Biodiversitas. 2005. Lista da fauna brasileira ameaçada de extinção: incluindo as espécies quase ameaçadas e deficientes em dados. Belo Horizonte. Fundação Biodiversitas. 160 p.
- Haddad, C. F. B. and I. Sazima. 2004. A new species of *Physalaemus* (Amphibia; Leptodactylidae) from the Atlantic forest in southeastern Brazil. *Zootaxa* 479: 1-12.
- IUCN, Conservation International, and NatureServe. 2006. Global Amphibian Assessment. Accessible at <http://www.globalamphibians.org>. Captured on 09 July 2006.
- Napoli, M. F. 2005. A new species allied to *Hyla circumdata* (Anura: Hylidae) from Serra da Mantiqueira, southeastern Brazil. *Herpetologica* 61(1): 63-69.
- Pimenta, B. V. S., C. F. B. Haddad, L. B. Nascimento, C. A. G. Cruz, and J. P. Pombal-Jr. 2005. Comment on "Status and Trends of Amphibian Declines and Extinctions Worldwide". *Science* 309 (1999). Accessible at <http://www.sciencemag.org/cgi/content/full/309/5743/1999b>. Captured on 15 October 2005.
- Pombal-Jr., J. P., G. M. Prado, and C. Canedo. 2003. A new species of giant torrent frog, genus *Megaelosia*, from the Atlantic Rain Forest of Espírito Santo, Brazil (Amphibia: Leptodactylidae). *Journal of Herpetology* 37(3): 453-460.
- Possingham, H. P., S. J. Andelman, M. A. Burgman, R. A. Medellín, L. L. Master, and D. A. Keith. 2002. Limits to the use of threatened species lists. *Trends in Ecology and Evolution* 17(11): 503-507.
- Ramos, A. D. and J. L. Gasparini. 2004. Anfíbios do Goiapaba-Açu, Fundão, Estado do Espírito Santo. Espírito Santo. Gráfica Santo Antônio. 76 p.
- Stuart, S. N., J. S. Chanson, N. A. Cox, B. E. Young, A. S. L. Rodrigues, D. L. Fischman, and R. W. Waller. 2004. Status and trends of amphibian declines and extinctions worldwide. *Science* 306: 1783-1786.
- Weygoldt, P. and O. L. Peixoto. 1987. *Hyla ruschii* n. sp. a new frog from the Atlantic Forest domain in the State of Espírito Santo, Brazil (Amphibia, Anura, Hylidae). *Studies on Neotropical Fauna and Environment* 22(4): 237-247.
- Zaher, H., E. Aguiar, and J. P. Pombal-Jr. 2005. *Paratelmatobius gaigeae* (Cochran, 1938) re-discovered (Amphibia, Anura, Leptodactylidae). *Arquivos do Museu Nacional* 63(2): 321-328.

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