

NOTES ON GEOGRAPHIC DISTRIBUTION

Amphibia, Anura, Bufonidae, *Rhinella pygmaea*: Distribution extension and geographic distribution map

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Rhinella pygmaea (Myers and Carvalho, 1952) is a small Bufonidae in comparison with other congener species. On the original description, type locality was designated as São João da Barra, at the mouth of Paraíba do Sul river (right bank), northern coast of state of Rio de Janeiro. Its occurrence was also reported from *Restinga de Marambaia*, southern coast of the state (Myers and Carvalho 1952). In other studies, *R. pygmaea* was considered an endemic species to the *restinga*, and registered

from the localities of Jurubatiba, Grussaí, Marambaia, Maricá, and Arraial do Cabo to São João da Barra, all along the coast of the state of Rio de Janeiro (Carvalho-e-Silva and Carvalho-e-Silva 1994; Carvalho-e-Silva et al. 2000; Isecksohn and Carvalho-e-Silva 2001; Rocha et al. 2003; Rocha et al. 2005; Rocha et al. 2008). However, recently this species was registered from municipality of Mimoso do Sul, state of Espírito Santo, in the Atlantic Forest biome (Silva et al. 2007).



Figure 1. Specimen of *Rhinella pygmaea* collected at Lagoa de Cima.

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In this study, *R. pygmaea* is reported from three new localities of Atlantic Forest in northern state of Rio de Janeiro, in semideciduous seasonal forest formations, and an updated geographic distribution map is presented. Records were obtained from field sampling and analysis of *Coleção Herpetológica do Museu Nacional / Universidade Federal do Rio de Janeiro* (MNRJ). Voucher specimens were settled in this collection.

During a research on the anurofauna composition in sub-basins of Muriaé and Guaxindiba rivers, northern state of Rio de Janeiro, *R. pygmaea* (Figure 1) was collected at *Lagoa de Cima*

(21°45'29" S, 41°31'45" W, 8 m), municipality of Campos dos Goytacazes, on 09 May 2008 (MNRJ 53480-53481, 53484-53495) and at *Estação Ecológica de Guaxindiba* (21°25'45" S, 41°04'56" W, 11 m), municipality of São Francisco do Itabapoana, on 06 April 2008 (MNRJ 45722-45723). Moreover, at MNRJ collection there are specimens of *R. pygmaea* collected in 14 October 2007 and 12 December 2007 from *Pequena Central Hidrelétrica* (PCH) *Pedra do Garrafão*, at the boundaries between Campos dos Goytacazes (Rio de Janeiro) and Mimoso do Sul (Espírito Santo) municipalities (MNRJ 50984-88) (Figure 2).

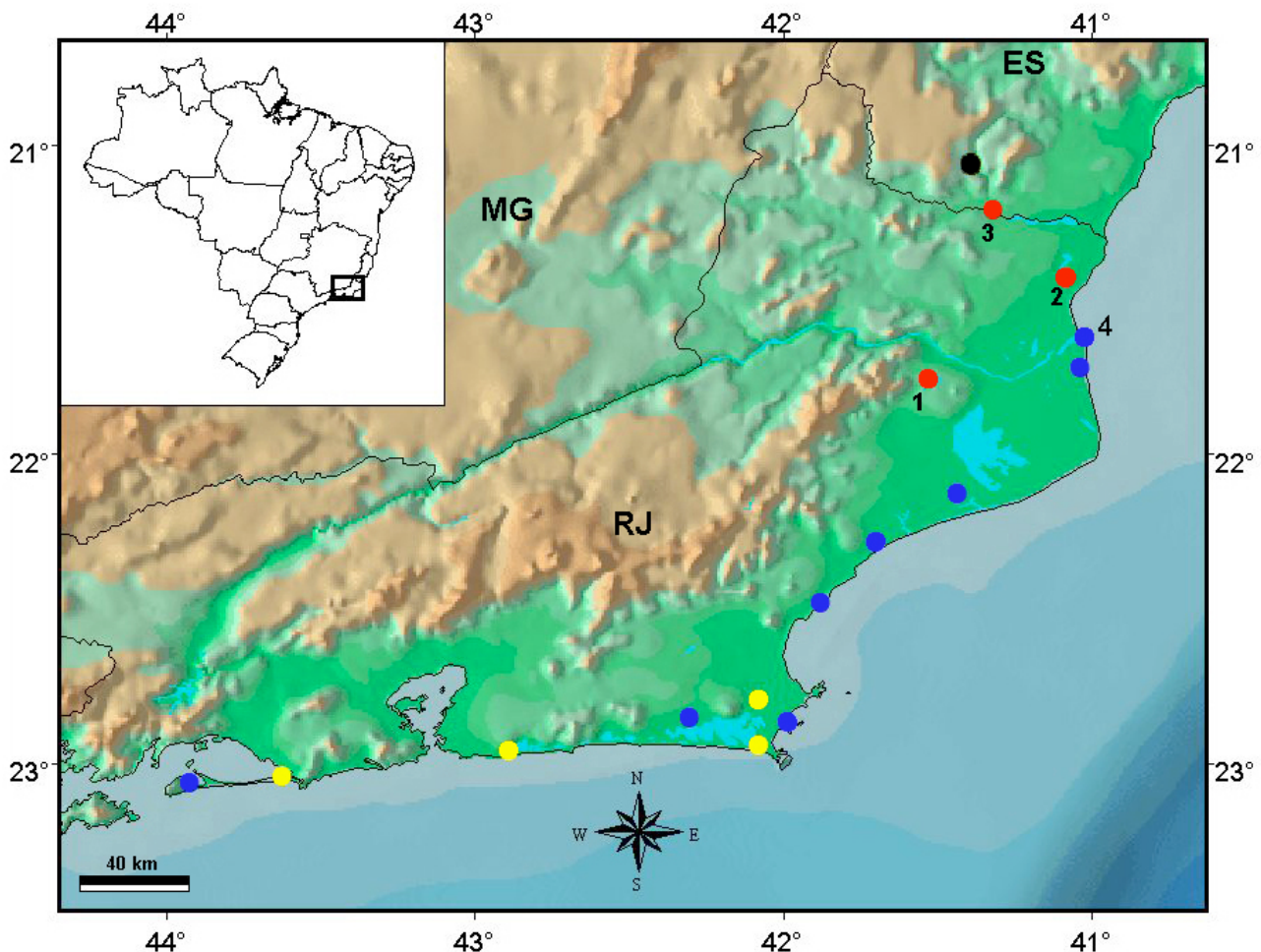


Figure 2. Geographic distribution of *Rhinella pygmaea*. Red dots – new records in semideciduous seasonal forest; black dot – literature record in (Silva *et al.* 2007); blue dots – MNRJ collection's records from *restinga* areas; yellow dots – literature records in *restinga* (Myers and Carvalho 1952; Carvalho-e-Silva *et al.* 2000). Localities: 1 – *Lagoa de Cima*, Campos dos Goytacazes, state of Rio de Janeiro (RJ); 2 – *Estação Ecológica de Guaxindiba*, São Francisco do Itabapoana, RJ; 3 – PCH *Pedra do Garrafão*, boundary between Campos dos Goytacazes, RJ and Mimoso do Sul, state of Espírito Santo (ES); 4 – São João da Barra, RJ (type-locality).

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These three new localities where *R. pygmaea* were registered belong to the Atlantic Forest domain, with secondary formations of semideciduous seasonal forest. *Estação Ecológica de Guaxindiba* is located in coastal lowlands; *lagoa de Cima* is a great natural lagoon situated at inner continental lowlands, around 50 km from the coast; and *PCH Pedra do Garrafão* is placed on lowland of Itabapoana river valley, around 40 km from the shore and around 20 km southern from where *R. pygmaea* was registered in state of Espírito Santo (Mimoso do Sul). In *Estação Ecológica de Guaxindiba*, *R. pygmaea* was found on a temporary puddle at the border of a great forested fragment, and in *Lagoa de Cima*, it was collected in reproductive activity in swamps surrounded by a small forest fragment (Figure 3). In addition, there are registers from eight *restinga* localities in state of Rio de Janeiro, from MNRJ collection (Figure 2).

Based on these recent records, we are able to conclude that *R. pygmaea* is not endemic from *restinga*, but occurs in coastal ecosystems formations, especially *restinga* and semideciduous seasonal forest of Atlantic Forest. It is distributed from the south coast of the state of Rio de Janeiro (Marambaia Island, municipality of Mangaratiba) to southern Espírito Santo (Mimoso do Sul), along the coast and inner lowlands.



Figure 3. Environments where *Rhinella pygmaea* was collected in *Lagoa de Cima* (A) and *Estação Ecológica de Guaxindiba* (B).

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Literature Cited

- Carvalho-e-Silva, S. P. and A. M. P. T. Carvalho-e-Silva. 1994. Données sur la biologie et description des larves de *Bufo pygmaeus* Myers et Carvalho (Amphibia, Anura, Bufonidae). *Revue Française d'Aquariologie* 21(1-2): 53-56.
- Carvalho-e-Silva, S. P., E. Izecksohn and A. M. P. T. Carvalho-e-Silva. 2000. Diversidade e ecologia de anfíbios em restingas do sudeste brasileiro; p. 89-97 In F. A. Esteves and L. D. Lacerda (ed.). *Ecologia de Restingas e Lagoas Costeiras*. Macaé: NUPEM/UFRJ.
- Izecksohn, E. and S. P. Carvalho-e-Silva. 2001. *Anfíbios do Município do Rio de Janeiro*. Rio de Janeiro: Editora UFRJ. 147 p.
- Myers, G. S. and A. L. Carvalho. 1952. A new dwarf toad from Southeastern Brazil. *Zoologica* 37(1): 1-3.
- Rocha, C. F. D., F. H. Hatano, D. Vrcibradic and M. Van Sluys. 2008. Frog species richness, composition and β -diversity in coastal Brazilian restinga habitats. *Brazilian Journal of Biology* 68(1): 101-107.

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Rocha, C. F. D., H. G. Bergallo, M. A. S. Alves and M. V. Sluys. 2003. A biodiversidade nos grandes remanescentes florestais do Estado do Rio de Janeiro e nas restingas da Mata Atlântica. São Carlos: Rima Editora. 134 p.

Rocha, C. F. D., M. Van Sluys, H. G. Bergallo and M. A. S. Alves. 2005. Endemic and threatened tetrapods in the restingas of the biodiversity corridors of Serra do Mar and of the Central da

Mata Atlântica in Eastern Brazil. Brazilian Journal of Biology 65(1): 159-168.

Silva, G. R., S. P. Carvalho-e-Silva and A. M. P. T. Carvalho-e-Silva. 2007. *Chaunus pygmaeus*: geographical distribution. Herpetological Review 38(1): 97.

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Appendix 1. Voucher specimens of *Rhinella pygmaea* from restinga localities in state of Rio de Janeiro, Brazil, deposited in *Coleção Herpetológica do Museu Nacional / Universidade Federal do Rio de Janeiro* (MNRJ).

Municipality of Araruama: Areial (50821-24). Municipality of Cabo Frio (54957); Restinga de Peró (47533-34). Municipality of São João da Barra (MNRJ 2243, 2269); Atafona (3365, 32533-35); Grussaí (23745-60, 32446-53, 39705-43, 55264-65, 55611, 58281-90). Municipality of Macaé (43816). Municipality of Mangaratiba: ilha da Marambaia (20056, 20084). Municipality of Rio das Ostras: *Área de Relevante Interesse Ecológico Itapebussus* (38203-04). *Parque Nacional Restinga de Jurubatiba* (53976-77).