

Phyllodytes luteolus (Anura, Hylidae) as an Alien Species in the Rio de Janeiro municipality, State of Rio de Janeiro, Southeastern Brazil

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Phyllodytes luteolus (Wied-Neuwied, 1824) (Figure 1) is a Hylidae species generally found in bromeliads (Bokerman, 1966; Giaretta, 1996). The species occurs along the Brazilian coast with records in Paraíba, Bahia, Espírito Santo, Alagoas, and Minas Gerais (Frost, 2010). Myers (1946) mentioned the occurrence of *P. luteolus* in the municipality of Rio de Janeiro, however Lutz (1954), rearranging the species list of amphibians of Rio de Janeiro (former Distrito Federal), stated that the species does not occur within the political limits of the municipality of Rio de Janeiro. More recently, Izecksohn and Carvalho-e-Silva (2001) reported that species of the genus *Phyllodytes* have been introduced in the municipality by bromeliad collectors, in the neighborhoods of Vargem Grande and Guaratiba, nevertheless, in the same work, the authors mentioned that there would be no evidences of established populations of *P. luteolus*.

This work was carried out at the square of Pontal beach, at Recreio neighborhood (23°1'55.38"S, 43°28'15.51"W). The study site of ca. 60 m² was covered with several planted bromeliads. At June 5th, 2007, around 8:00 pm, the author ROLS was able to observe about eight to ten adult calling males of *P. luteolus* from the local bromeliads at Pontal beach (Figure 2). On February 16th, 2008 at 04:00 pm, we were able to observe around 14 specimens, both adults and tadpoles. In a third occasion on September 19th, 2009 around 03:00 pm, 30 to 40 specimens comprising both adults and tadpoles were observed. Ten adult specimens of *P. luteolus* were collected as voucher specimens (five on February 16th, 2008 (MNRJ 5122-26) and five more on September 19th, 2009 (MNRJ 60213-17), all housed

at the amphibian collection of the Museu Nacional of the Universidade Federal do Rio de Janeiro (MNRJ). Collection permits were issued by the Instituto Brasileiro do Meio Ambiente e Recursos Naturais Renováveis (IBAMA; permit # 14590-1) and IEF/RJ (IEF/RJ N° 013/2008).

Probably the species were brought to the region within imported and planted bromeliads. There are other cases of amphibians introduced via plants such as *Eleutherodactylus* spp. (Kraus et al., 1999) and *Phyllodytes* spp. (Izecksohn and Carvalho-e-Silva, 2001). For instance, in the late 1980s, the Coqui Frog, *Eleutherodactylus coqui* Thomas, 1966, endemic to Puerto Rico (Beard et al., 2009), was accidentally introduced to Hawai'i via horticultural trade (Kraus et al., 1999) and has subsequently established vital, quickly expanding populations (Kraus et al., 1999; Kraus and Campbell, 2002; Kraus, 2003). Now, *E. coqui* is considered an invasive pest because it has affected negatively the local homeowners and commerce (Kraus and Campbell, 2002; Kaiser and Burnett, 2006; Beard et al., 2009).

In Rio de Janeiro state, other cases of introduced species have been reported in the last years. Salles et al. (2009) reported *Lithobates catesbeianus* well established and



Figure 1. *Phyllodytes luteolus* - Adult male collected at square of Pontal beach, Recreio, municipality of Rio de Janeiro, at October 21th, 2009.

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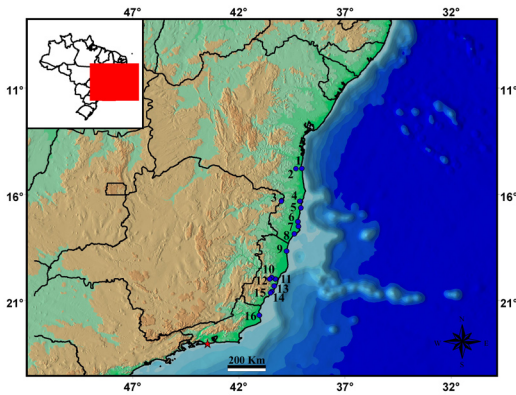


Figure 2. Map distribution of *Phyllodytes luteolus*. Red stars = Alien population of *Phyllodytes luteolus* at Pontal beach, Recreio, Rio de Janeiro, RJ (this study). Blue dots – Distribution of the species based on literature – 1. Ilhéus, BA (Peixoto et al., 2003); 2. Itabuna, BA (Peixoto et al., 2003); 3. Salto da Divisa and Jequitinhonha, MG (Feio and Caramaschi, 2002); 4. Porto Seguro, BA (Peixoto et al., 2003); 5. Trancoso, BA (Rocha et al., 2008); 6. Prado, BA (Peixoto et al., 2008); 7. Restinga de Alcobaça (Peixoto et al., 2008); 8. Nova Viçosa, BA (Caramaschi et al., 2004); 9. Guriri, ES (Rocha et al., 2008); 10. Fundão, Médio Goiapaba-açu, ES (Peixoto et al., 2003); 11. Vila Velha, Pontal da Fruta, ES (Peixoto et al., 2003); 12. Santa Teresa, Médio Goiapaba-açu, ES (Peixoto et al., 2003); 13. Vitória, ES (Peixoto et al., 2003); 14. Setiba, ES (Rocha et al., 2008); 15. Guarapari, ES (Peixoto et al., 2003); 16. São João da Barra, RJ (Vrcibradic et al., 2006; Rocha et al., 2008).

breeding at the Parque Natural Municipal da Taquara, municipality of Duque de Caxias. Izecksohn and Carvalho-e-Silva (2001) also reported the introduction of *Phyllodytes* spp. genus in Rio de Janeiro municipality, however, the authors at that time had no confirmed data on the adaptation of the species in the region.

Our record at Praia do Pontal, RJ, of *Phyllodytes luteolus* population is ca. 290 km NE from Grussaí, municipality of São João da Barra, state of Rio de Janeiro (Dot 16, Figure 2), the southernmost record of the species inhabiting a natural environment. The introduction of bromeliads can accidentally bring bromeliculous or bromeligenous amphibians (Izecksohn and Carvalho-e-Silva, 2001), and once introduced, these species can establish, as for the population of *P. luteolus* in Pontal da Barra population that we report here.

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