



Description, microhabitat and temporal distribution of the tadpole of *Proceratophrys tupinamba* Prado and Pombal, 2008

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Abstract

We present a description of the external morphology of the tadpoles of *Proceratophrys tupinamba*, and provide information on its temporal distribution and microhabitat use. *Proceratophrys tupinamba* differs from other larvae of species in the genus *Proceratophrys* described by the tooth row, which is similar to that of *P. appendiculata*. Comparing our description to the description of *P. appendiculata*, some differences are observed in the body proportion. Tadpoles were most abundant during the wet season (October-March), and it was positively related with average monthly rainfall. Tadpoles of *P. tupinamba* are benthonic and occur more often in lentic portions of the stream. They were found most frequently exposed on the sand, which also represented the most available microhabitat among those sampled in the stream studied.

Key words: *Proceratophrys tupinamba*, tadpole, temporal distribution, microhabitat use, Ilha Grande, Atlantic rainforest

The genus *Proceratophrys* currently comprises 21 species distributed in Brazil, northeastern Argentina and Paraguay (Frost, 2010; Cruz & Napoli, 2010). Species in the genus are grouped in four groups (*P. boiei*, *P. appendiculata*, *P. cristiceps* and *P. biggibosa* group). *Proceratophrys tupinamba*, related to *P. appendiculata* complex (Cruz & Napoli, 2010), is restricted to the Atlantic forest of Ilha Grande, Municipality of Angra dos Reis, Rio de Janeiro, Brazil (Prado & Pombal 2008) and is the only species of this genus occurring in the island. Few studies provide some information regarding the ecology of this species (Rocha *et al.* 2000; 2001; Boquimpani-Freitas *et al.* 2002). The density estimated for the adult individual of the species in the area studied in the island is relatively low, one individual per 500 m² of forest floor (Rocha *et al.* 2000; 2001). However, available information regards only adults, with no data on the species' tadpole, which till now remained undescribed. Here we present the first study addressing tadpoles of *P. tupinamba*, describing its tadpole and providing information on its temporal distribution and microhabitat use.

Tadpoles were collected at Parque Estadual da Ilha Grande (PEIG), Municipality of Angra dos Reis, State of Rio de Janeiro, in a creek (23°10'73.3"S 44°12'26.5"W; 233 m above sea level), from the Andorinha stream's catchment at the oceanic side of the island. They were identified based on other tadpoles collected in the same stream in advanced stages of development (up to stage 42) and that *P. tupinamba* is the only species of *Proceratophrys* that can be found there, including adult forms in calling activity in rainy season. From September 2007 to July 2009, tadpoles were systematically searched in three sections (length = 2 m) of the creek during 10 minutes per section. Tadpoles were classified according to their developmental stage (Gosner 1960) and grouped in three classes: Class I—tadpoles without apparent limbs (up to stage 25); Class II—tadpoles with developing hind limbs and no fore limbs (stages 26 to 41); and Class III—tadpoles with well-developed hind limbs and developing fore limbs (stages 42 to 46). Microhabitats used by the tadpoles were recorded visually at the moment of the sampling. Data on rainfall for the area were obtained at the Central