



A new species of stream-dwelling frog of the genus *Cycloramphus* (Anura, Cycloramphidae) from the State of Rio de Janeiro, Brazil

HELIO RICARDO DA SILVA & DAIANE OUVERNAY

Universidade Federal Rural do Rio de Janeiro, Instituto de Biologia, Caixa Postal 74524, CEP 23851-970, Seropédica, RJ – Brasil.
E-mail: heliorsilva@gmail.com, daianeouvernay@bol.com.br

Abstract

A new anuran species, *Cycloramphus lithomimeticus* sp. nov., of the *C. granulosus* species group is described from the Municipality of Itaguaí, in the State of Rio de Janeiro, Brazil (22°54'3.44"S; 43°53'34.59"W, 160 m). The new species is distinguished from all other species in the *C. granulosus* group (and many others in the genus) by lacking inguinal macro glands (on males). We also present data on its natural history, a few aspects of its osteology, tadpole, and discuss evidence for the relationships of the genus based primarily on the morphology of the tadpole.

Key words: Atlantic Forest; Brazil; *Cycloramphus granulosus* group, tadpole, *Cycloramphus* relationships

Introduction

The cycloramphid genus *Cycloramphus* Tschudi, 1838 comprises 27 species, all endemic to the Atlantic Forest of Brazil (Weber *et al.* 2011; Verdade & Rodrigues 2003) with a distribution extending from the State of Bahia in the northeastern (Heyer 1988) to the State of Rio Grande do Sul, in the south (Garcia & Vinciprova 1998). An unpublished phylogeny based on morphology recovered two groups within the genus (Verdade 2005). One associated with forest floor litter, with terrestrial eggs and endotrophic tadpoles that complete their development in terrestrial humid habitats (Heyer & Crombie 1979, Verdade & Rodrigues 2003). The other group is composed of species that lay eggs on logs or rocks in the splash zones of rivers and streams running in steep terrain and have tadpoles that feed and swim on films of water running alongside waterfalls (Lutz 1929; Heyer 1983, Giaretta & Cardoso 1995; Giaretta & Facure, 2003). A more traditional and phenetic approach to the taxonomy of *Cycloramphus* further subdivided the genus into five groups as presented by Heyer (1983) based on an early proposal by Bokermann (1951): *C. bolitoglossus* and *C. eleutherodactylus* species groups are forest litter dwellers, whereas *C. ohausi*, *C. granulosus*, and *C. fuliginosus* species groups are stream dwellers. Within the latter group, species in the *C. granulosus* group are recognized based on the absence of webbing between toes and granulate skin texture (Heyer 1983).

While in the last nine years three new species of the terrestrial *Cycloramphus eleutherodactylus* species group have been discovered and described (Verdade & Rodrigues 2003; Brasileiro *et al.* 2007; Weber *et al.* 2011), no species has been described that belongs to the more aquatic groups of species. One possible explanation for that may relate to differential collecting efforts. While lots of new Atlantic forest localities have been inventoried with direct search and pitfall traps, which increases the chances of finding terrestrial forms, rivers running along scarped terrain, with many steep waterfalls have been less surveyed, possibly due to the risk of accidents associated with working at these sites.

In a recent survey of frogs in a well preserved area of coastal forest in the metropolitan area of the city of Rio de Janeiro, a Brazilian city that has been surveyed for frogs for over two centuries, we found juvenile and tadpoles of species of *Cycloramphus* with free toes, belonging to the *Cycloramphus granulosus* group. The main river draining the surveyed area is called Itinguçu (or Itingussu). Although it runs on steep landscape, we had the opportunity to survey it, near some of its waterfalls, at night, and also collected additional adult specimens. Herein we describe this population as a new species.