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Description of the tadpole of *Leptodactylus vastus* (Anura: Leptodactylidae)

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Abstract

The Neotropical frog *Leptodactylus vastus* belongs to the *L. pentadactylus* group, a group that currently contains 14 species, and of which nine tadpoles have been described. The tadpoles of *L. vastus* described here are generally much smaller than tadpoles of the other species described. The oral disk of *L. vastus* tadpoles is almost anteriorly placed, similar to other tadpoles in the group except for *L. lithonaetes* and *L. rugosus*, and the rows of marginal papillae in *L. vastus* are different from those in the other species. The tadpoles of *L. vastus* have a 1/2(1) LTRF similar to that of *L. labyrinthicus* and amazonian *L. pentadactylus*, whereas other species in the group show different arrangements of the tooth rows. The internal oral characteristics of the tadpole of *L. vastus* differs from *L. knudseni* and *L. pentadactylus* by having four infralabial papillae, possess 4–5 prepocket papillae surrounded by postulations and the buccal roof arena is circular, surrounded by two long papillae and 4–6 smaller papillae. The tadpoles of *L. vastus*, in general, possess a set of morphological characteristics that are very similar to those of other species of the *L. pentadactylus* group, and some of them are probably related to tadpole ecology.

Key words. Description, tadpole, *Leptodactylus vastus*, Atlantic Rain Forest, northeastern Brazil

Introduction

Frogs species belonging to the *Leptodactylus pentadactylus* group are distributed throughout Central and South America and occupy a large number of niches in forest and open habitats (Heyer 2005). This group is currently represented by 14 species, and tadpoles of nine species have been described so far (Heyer 2005). The systematics of this group is complex because the vocalization patterns and morphological differentiation of the adults do not always allow for an unequivocal identification of the different species (Heyer 1979; 2005). An example is *L. labyrinthicus*, which was formerly considered widely distributed throughout Brazil and occurring in the *Cerrado* (savanna), *Caatinga* (drylands) and the Atlantic Rain Forest (Heyer 1979). A more recent study, however, has demonstrated that *L. labyrinthicus* actually represents two different species, with the populations from northeastern Brazil now being considered as *L. vastus* A. Lutz, 1930 and the populations from the southern and southeastern part of the country considered as *L. labyrinthicus* (Heyer 2005).

In the light of the small morphological differences among many of these frogs and the taxonomic problems thus caused, tadpole morphology has the potential of providing important taxonomic information and broadening our knowledge of the phylogenetic relationships within this group (Haas 2003). According to Heyer (1995), some species of the genus *Leptodactylus* can be better identified using tadpole morphological features. The morphological variations observed in anuran larvae and the differentiation in habitat use of species belonging to the *L. pentadactylus* group may help our understanding on the evolutionary patterns of this group and in recognizing composite species (Heyer 2005).

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