



## A new species of *Simpsonichthys* (Cyprinodontiformes: Rivulidae) from the rio São Francisco basin, northeastern Brazil

DALTON TAVARES BRESSANE NIELSEN<sup>1</sup>, OSCAR AKIO SHIBATTA<sup>2</sup>, ROGÉRIO DOS REIS SUZART<sup>1</sup> & AMER FAOUR MARTÍN<sup>1</sup>

<sup>1</sup>Av. Independência, 531, ap. 21-B, 12031-000, Taubaté, SP. E-mail: dnielsen@uol.com.br

<sup>2</sup>Museu de Zoologia, Departamento de Biologia Animal e Vegetal, Centro de Ciências Biológicas, Universidade Estadual de Londrina, 86051-990, Londrina, PR.

Corresponding author. E-mail: shibatta@uel.br

### Abstract

*Simpsonichthys lopesi* n. sp. is described from a temporary pool located in the São Francisco river basin. This species is distinguished from remaining species, except *S. adornatus*, by the large number of dorsal fin rays, which makes possible a large dorsal fin base length that begins well anterior to the middle of the body, before the vertical line through the pelvic fin. This species differs from *S. adornatus* by the color pattern of the anal fin, which may have yellow stripes or light dots (vs. small light points), and also by the lower number of dorsal fin rays.

**Key words:** Annual fishes, Neotropical region, temporary pools

### Resumo

*Simpsonichthys lopesi* n. sp. é descrita de uma poça temporária localizada na bacia do rio São Francisco. A espécie distingue-se das demais, exceto *S. adornatus*, pelo grande número de raios da nadadeira dorsal, o que confere grande comprimento da base dessa nadadeira que se inicia muito antes da metade do corpo, antes da nadadeira pélvica. Difere de *S. adornatus* pelo padrão de colorido da nadadeira anal, que pode apresentar listras amareladas ou manchas claras (vs. pequenas pintas claras), e também pelo menor número de raios da nadadeira dorsal.

### Introduction

*Simpsonichthys* Carvalho, 1959 is the South American annual fish genus with the highest number of species. The 53 species (Nielsen 2008; Costa 2008; Costa & Brasil 2008) occur mostly in the Central and Northern regions of Brazil, in the São Francisco, Araguaia-Tocantins, Paraná-Paraguai, Xingú and Madeira river basins.

According to Costa (2006), *Simpsonichthys* species are characterized by their small pointed process on the dorsal portion of the palatine, unbranched rays on the tip of the dorsal and anal fins in males, and overlapping E-scales. They are considered annual fishes for living in temporary habitats and resist desiccation by laying their eggs on the substratum. Their eggs develop slowly and undergo stages of developmental arrest or diapause (Myers 1952; Wourms 1972).

The systematics of *Simpsonichthys* has been frequently modified in the last few years (Costa 1995; 1998; 2006). After a phylogenetic analysis based on 116 characters, five subgenera were proposed by Costa (2006): *Simpsonichthys*, *Spectrolebias*, *Xenurolebias*, *Ophthalmolebias* and *Hypsolebias*. The subgenus *Hypsolebias* contains four monophyletic groups of species: *S. notatus*, *S. magnificus*, *S. antenori* and *S. flammeus* groups. The *S. magnificus* group is especially relevant here, for it includes six species that are all from the rio São