



<http://dx.doi.org/10.11646/zootaxa.3784.3.5>

<http://zoobank.org/urn:lsid:zoobank.org:pub:EE171329-9D0F-4255-A7B7-C1C1A0E1D4CD>

## A new species of *Anacanthoroides* and redescription of *Apedunculata discoidea* (Monogenoidea) parasitizing *Prochilodus argenteus* (Actinopterygii) from the São Francisco River, Brazil

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### Abstract

*Anacanthoroides sanctifrancisci* n. sp. from the gills of ‘curimatã-pacú’, *Prochilodus argenteus* from the São Francisco River, Brazil, is described and illustrated. *Anacanthoroides*, monotypic, is represented by *Anacanthoroides mizellei*. The new species can be distinguished from *A. mizellei* by the presence of a pair of muscular pseudosuckers in the anterior region of the body, an accessory piece not articulated to the male copulatory organ and the number of rings in the male copulatory complex. *Apedunculata discoidea* is redescribed and recorded in the gills of *P. argenteus*. The generic diagnosis of *Apedunculata* is amended. Both genera are recorded for the first time in the São Francisco River basin.

**Key words:** Amended diagnose, *Anacanthoroides*, *Apedunculata*, freshwater, new species, redescription

### Introduction

Prochilodontids are amongst the most conspicuous, abundant and well-distributed fishes in the rivers of Latin America that flow into the Atlantic Ocean (Sivasundar *et al.* 2001). This family comprises 21 species distributed in three genera: *Ichthyoelephas* Posada, *Semaprochilodus* Fowler and *Prochilodus* Agassiz in Spix & Agassiz (Castro & Vari 2003). *Prochilodus* comprises 13 species of migratory fish (Castro & Vari *op. cit.*) that, in most watersheds, is represented by a single species (Sivasundar *et al. op. cit.*). An exception is the São Francisco River basin, where two native species are known: *Prochilodus argenteus* Spix & Agassiz and *Prochilodus costatus* Valenciennes (Froese & Pauly 2013).

Species of *Prochilodus* are the type host of some monogenoideans. *Rhinonastes pseudocapsaloideum* Kritsky, Thatcher & Boeger, 1988 was collected in the nasal cavity of *Prochilodus nigricans* Spix & Agassiz from Janauacá Lake, near Manaus, Amazonas, Brazil (Kritsky *et al.* 1988). *Anacanthoroides mizellei* Kritsky & Thatcher, 1976 and *Tereancistrum ornatus* Kritsky, Thatcher & Kayton, 1980 were collected and described from the gills of *Prochilodus reticulatus* Valenciennes from Colombia (Kritsky & Thatcher 1976; Kritsky *et al.* 1980). *Prochilodus lineatus* Valenciennes, from the Paraná River basin, is the type host of seven species of monogenoideans: *Tereancistrum toksonum* Lizama, Takemoto & Pavanelli, 2004; *Tereancistrum curimba* Lizama, Takemoto & Pavanelli, 2004, *Protorhinoxenus prochilodi* Domingues & Boeger, 2005, *Apedunculata discoidea* Cuglianna, Cordeiro & Luque, 2009 and *Tereancistrum pirassununguensis* Cepeda, Ceccarelli & Luque, 2012 from the gills; *Kritskyia boegeri* Takemoto, Lizama & Pavanelli, 2002 from the urinary bladder; and *Rhinoxenus curimbatae* Domingues & Boeger, 2002 from the nasal cavity. Lizama *et al.* (2005) recorded *Gyrodactylus* sp. in the nasal cavity, *K. boegeri* in the urinary bladder, and *T. curimba*, *T. toksonum*, *Tereancistrum* sp., *Anacanthoroides* sp., *R. pseudocapsaloideum* and an undetermined Ancyrocephalidae species in the gills of *P. lineatus* from the Paraná River basin.

Two papers describing monogenoideans of fishes from the São Francisco River have been published (Monteiro

The redescription of *A. discoidea* became necessary because some characters that were listed as diagnostic were not in agreement with those observed during the examination of type series and specimens collected in *P. argenteus*. In the description of *A. discoidea*, the authors mentioned the U-shaped ventral bar, but it is V-shaped with an elongated orifice in the central region that was not mentioned; however, this has been represented in the illustration of an entire specimen and observed in the type specimens and specimens from *P. argenteus*. The dorsal bar was characterized by the presence of median undulations, but in reality it is provided with two short projections located in the median region, oriented toward the posterior region of the body.

The record of *A. discoidea* in *P. argenteus* in the São Francisco watershed consists of a new host and locality for the species. It is likely that this species also occurs in this host or other *Prochilodus* species in other watersheds, but only future studies will elucidate the true distribution of this species.

## Acknowledgments

The authors gratefully acknowledge the following for their support during this study: Dr. Yoshimi Sato, leader of the CIRPA/CODEVASF, Três Marias, Minas Gerais, to the Agreements CEMIG-GT/CODEVASF and Universidade Federal Rural do Rio de Janeiro/IBAMA, Minas Gerais, for providing logistical and material support during the collection of hosts; Dr. Marcelo Knoff (curador da Coleção Helminológica do Instituto Oswaldo Cruz) for allowing us to examine *Apedunculata discoidea* specimens in their care; and Abner Chiquieri, Departamento de Línguas, Universidade Federal Rural do Rio de Janeiro, Seropédica, for his advice on the formation of the specific name of the new species. This study was supported by CAPES (Coordenação de Aperfeiçoamento de Pessoal de Nível Superior) (Edital Parasitologia Básica 032/2010).

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