

**Bacciger pelloneae** n. sp. (Trematoda, Fellodistomidae) from a freshwater fish, **Pellona castelnaeana** Valenciennes of Rondônia State, Brazil

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## ABSTRACT

*Bacciger pelloneae* n. sp. (Trematoda, Fellodistomidae) is described from the intestinal tract of a freshwater fish, *Pellona castelnaeana* Valenciennes, from the Brazilian state of Rondônia. The new species is similar to the type species of the genus, *B. bacciger* (Rudolphi, 1819) Nicoll, 1914, but differs from it in having a post-testicular, lobate ovary, intertesticular ceca and an acetabulum that is smaller than the genus to be reported from South America and the first from freshwater.

Key-words: Trematode, Fellodistomidae, fish parasite, Rondônia, Brazil, Amazônia

## INTRODUCTION

According to Margolis and Ching, 1965, the genus **Bacciger** ranges from the Black and Azov Seas through the Mediterranean and northward in the Atlantic ocean to the British Isles. Only two species are known from these Northern waters and an additional species has been reported from the Caribbean Sea near Jamaica. The known definitive hosts are all mugiliform or clupeiform fish. The present paper describes an additional species of **Bacciger** from a Brazilian freshwater Clupeidae.

## MATERIAL AND METHODS

Fish hosts were eviscerated and the intestinal tracts were opened and placed in a 1:4000 formalin/water solution. After 30 minutes, enough formalin was added to bring the concentration of the solution up to about 10%. Trematodes were stained in 95% alcohol containing equal amounts of eosin and orange-g stains. They were then dehydrated in pure phenol and cleared in methyl salicylate. Whole mounts were made in Canada balsam. The drawing was made with the aid of a Zeiss drawing tube. Measurements were made with a measuring ocular and are given in micrometers (m). The means are followed by the extremes enclosed in parentheses.

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## Systematic Section

Fellodistomidae Nicoll, 1913

**Bacciger** Nicoll, 1914

Generic diagnosis (modified after Margolis and Ching, 1965): Fellodistomidae. Body small, ovoid; tegument with or without spines. Oral sucker terminal or subterminal; acetabulum in middle third of body. Prepharynx absent; pharynx small; esophagus distinct; ceca reaching to level of testes or beyond, bifurcation preacetabular. Genital pore median, between acetabulum and bifurcation. Cirrus sac ovoid, dorsal or anterodorsal to acetabulum, containing bipartite or saccular seminal vesicle and prostatic cells. Testes symmetrical, in middle third of body, pre or postacetabular. Ovary spherical or lobate, inter or post-testicular. Seminal receptacle and Laurer's canal present. Vitellaria of two clusters of large follicles in acetabular or preacetabular lateral areas. Uterus mainly postacetabular, filling most of hindbody. Eggs small, numerous. Excretory vesicle V or Y-shaped, with short stem and long arms. Parasitic in intestine or stomach of marine and freshwater fish.

Type species: **B. bacciger** (Rudolphi, 1819) Nicoll, 1914.

Other species: **B. nicolli** Palombi, 1934; **B. opisthonemae** Nahhas and Cable, 1964; **B. pelloneae** n. sp.

**Bacciger pelloneae** n. sp. (fig. 1)

Host: **Pellona castelnaeana** Valenciennes; Clupeidae.

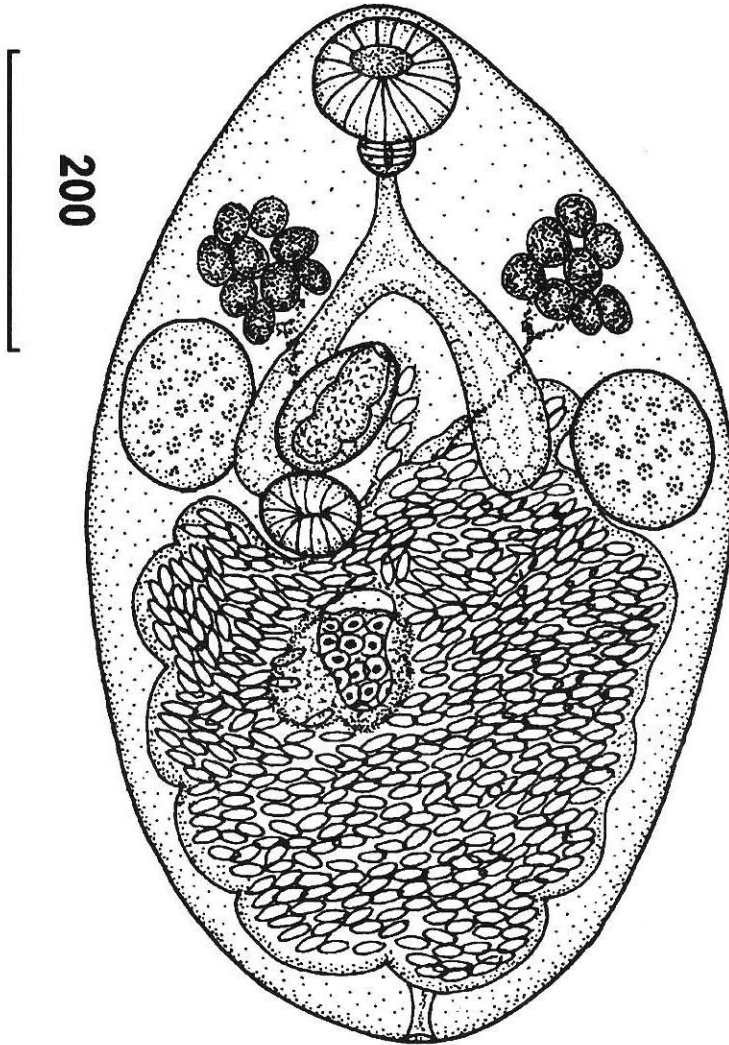
Site: Intestinal tract.

Locality: Guaporé River, Rondônia State, Brazil.

Holotype and 7 paratypes: Instituto Nacional de Pesquisas da Amazônia, Manaus, AM, Brazil: 2 paratypes; University of Nebraska State Museum, Harold W. Manter Laboratory, Lincoln, Nebraska.

Etymology: The species name is formed from the generic name of the host fish.

Figura 1 – *Bacciger pellationae* n. sp. (ventral view)



Species diagnosis (10 specimens measured): Body small, ovoid, little flattened, 651 (602-742) long by 420 (350-490) wide; tegument spinous. Oral sucker larger than acetabulum, slightly wider than long, measures 81 (72-88) long and 93 (82-105) wide. Prepharynx absent. Pharynx spherical, 40 (30-50) in diameter. Esophagus 49 (27-72) in length; bifurcation midway between oral sucker and acetabulum; ceca short, intertesticular, terminating at level of equator; ceca measure 42 (33-50) in maximum diameter. Acetabulum small, equatorial, measures 68 (50-94) in diameter. Testes payroll, lateral, equatorial or pre-equatorial; right testis measures 151 (137-176) long and 111 (66-138) wide; left testis measures 149 (110-165) long and 105 (88-138) wide. Cirrus sac ovoid, contains saccular seminal vesicle, measures 100 (82-116) long by 70 (55-82) wide; genital pore between bifurcation and acetabulum. Ovary postequatorial, median weakly lobate, measures 122 (110-138) long and 123 (100-150) wide. Vitellaria of few large follicles in two compact masses, situated on either side of bifurcation; follicles measure 45 (36-66) in diameter. Uterus fills most of posterior half of body; eggs numerous, measure 37 x 22 (28-44 x 19-28). Excretory vesicle not observed; pore terminal.

## DISCUSSION

Margolis and Ching (1965) recognized three species in the genus *Bacciger*, namely; *B. bacciger* Nicoll, 1914 (type), *B. nicolli* Palombi, 1934, and *B. opisthonemae* Nahhas and Cble, 1964. Yamaguti (1917) accepted two of these species in the same genus but he transferred *B. nicolli* to *Pseudobacciger* Nahhas and Cable, 1964.

Present specimens most resemble the type, *B. bacciger*, but they differ from it in a number of important ways. The new species has a lobate ovary that is well posterior; to the testes, rather than between them. The acetabulum is considerably smaller than the oral sucker and not subequal as in the type. Also, the testes of *B. pellowae* n. sp. are more anterior and the ceca extend down between them. No representative of this genus has previously been reported from freshwater or from South America.

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## RESUMO

*Bacciger pellowae* n. sp. (Trematoda, Fellodistomidae) é descrito do trato intestinal de um peixe de água doce, *Pellona castelnaeana* Valenciennes, do estado de Rondônia. A nova espécie é semelhante a espécie tipo *B. bacciger* (Rudolphi, 1819) Nicoll, 1914, mas se distingue por ter um ovário lobado e pós-testicular, cecos intertesticulares e acetábulo menor que a ventosa oral. A nova espécie é o primeiro representante do gênero a ser encontrado na América do Sul e o primeiro de água doce.

## Literature Cited

- Margolis, L. and H. L. Ching. 1965. Review of the trematode genera *Bacciger* and *Pentagramma* (Fellodistomatidae) and description of *P. petrowi* (Layman, 1930) n. comb. from marine fishes from the Pacific coast of Canadá. *Canadian Journal of Zoology* 43:381-405.
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