

A new species of *Dadayi* Fukui, 1929 (Digenea: Cladorchiidae), parasite of the intestinal tract of *Metynnis maculatus* (Kner, 1858) (Characidae) from the Upper Paraná River floodplain, Brazil

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ABSTRACT. A new species of Cladorchiidae (Trematoda, Digenea) was found in the intestinal tract of freshwater fish “pacu peva”, *Metynnis maculatus* (Kner, 1858) from the Upper Paraná River floodplain, southern Brazil. The new species was classified in the genus *Dadayi* Fukui, 1929 by having non-lobate testis and a ventro-terminal acetabulum with postero median notch on rim, characters of the genus which has only two previously known species. Some characters that differ the new species from *D. marenzelleri* (Daday, 1907) and *D. pacuensis* Thatcher, 1996 are: ceca not reaching acetabulum, vitellaria of limited extension, not reaching the level of posterior testis and the presence of two different egg sizes in two different maturity stages.

Key words: *Metynnis maculatus*, Digenea, *Dadayi*, Upper Paraná River floodplain, Brazil.

RESUMO. Uma nova espécie de *Dadayi* Fukui, 1929 (Digenea: Cladorchiidae) parasita do trato intestinal de *Metynnis maculatus* (Kner, 1858) (Characidae) da planície de inundação do alto rio Paraná, Brasil. Uma nova espécie de Cladorchiidae (Trematoda, Digenea) foi encontrada no trato intestinal do peixe de água-doce “pacu peva”, *Metynnis maculatus* (Kner, 1858) na planície de inundação do Alto Rio Paraná, Brasil. A nova espécie foi classificada no gênero *Dadayi* Fukui, 1929 por apresentar testículos não lobados e acetábulo ventro-terminal com um “entalhe” postero-mediano na margem interior, características do gênero que possui apenas duas espécies conhecidas. Algumas características que diferem a espécie nova de *D. marenzelleri* (Daday, 1907) e *D. pacuensis* Thatcher, 1996 são cecos não alcançando o acetábulo, vitelária de extensão limitada e não atingindo o nível do testículo posterior e a presença de dois tamanhos diferentes de ovos em dois estágios de maturação diferentes.

Palavras-chave: *Metynnis maculatus*, Digenea, *Dadayi*, planície de inundação do alto rio Paraná, Brasil.

Introduction

Metynnis maculatus (Kner, 1858) is a small, pelagic freshwater fish, popularly known as “pacu peva”, with feeding based on benthic algae and found in Paraná and Amazon River basins. There are only a few studies about this species and none about its helminth parasites. Helminth specimens in the pacu peva's intestinal tract were found in the region of Porto Rico, state of Paraná, and classified in the genus *Dadayi* Fukui, 1929. The present study describes the new species.

Material and methods

Ten fish hosts were collected in the Upper Paraná River floodplain, near Porto Rico, in March

2003. The fishes were identified by technicians of Nupélia ichthyology museum and necropsied, with their organs analyzed, as well as the body cavity. The helminths were removed still alive, compressed between slides immersed in AFA and later transferred to 70% alcohol. Specimens were stained with acetic carmine and cleared with beechwood creosote. The permanent slides preparations used Canada balsam (see Eiras *et al.*, 2000). Illustration was done using a drawing tube and a NIKON YS 2 microscope. Measurements were taken in millimeters and expressed as the mean, followed by the number of specimens measured and the range between parentheses. The bibliography used was Sey (1991) and Thatcher (1991 and 1993).

Results

Cladorchiidae Southwell & Kirshner, 1937

***Dadayi* Fukui, 1929**

***Dadayi* *pacupeva* n. sp. (Figure 1)**

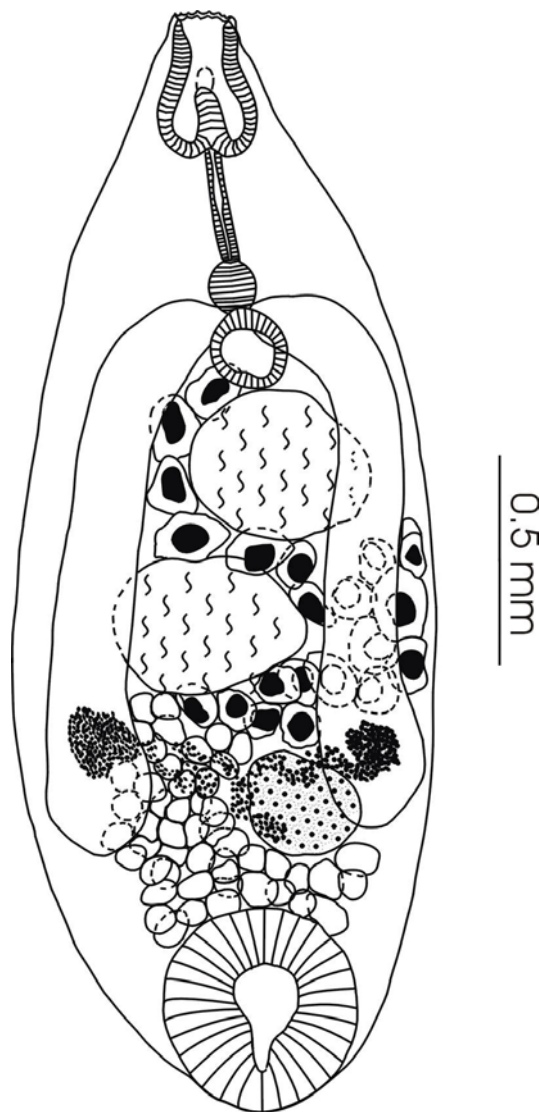


Figure 1. *Dadayi pacupeva* n. sp. ventral view.

[Based upon 17 specimens] Body cylindrical, slightly flattened, 2.34 (n=15, 1.25-3.97) mm long and 0.74 (n=17, 0.24-1.25) mm wide. Oral sucker terminal 0.32 (n=12, 0.23-0.47) long and 0.22 (n=12, 0.16-0.29) wide, with external diverticula 0.15 (n=8, 0.14-0.17) long and 0.12 (n=8, 0.09-0.14) wide. Esophagus with bulb ovoid 0.13 (n=9, 0.01-0.19) long and 0.09 (n=8, 0.05-0.12) wide. Ceca thick, 0.15 (n=14, 0.01-0.25) in maximum diameter, not reaching acetabulum. Acetabulum

subterminal 0.42 (n=17, 0.24-0.62) long and 0.42 (n=17, 0.26-0.62) wide, without visible transverse tegumental ridges in interior bottom surface. Testis subspherical, entire, tandem, in the middle third of body, non-lobate; anterior testis 0.31 (n=12, 0.11-0.50) long and 0.34 (n=12, 0.12-0.50) wide; posterior testis 0.30 (n=12, 0.10-0.45) long and 0.32 (n=12, 0.13-0.49) wide. Cirrus sac absent. Genital sucker with thick muscular walls, immediately postbifurcal 0.10 (n=10, 0.04-0.18) long and 0.22 (n=10, 0.05-0.43) wide. Ovary spherical, in posterior one third of body, near acetabulum, lateral to midline, 0.24 (n=9, 0.14-0.30) long and 0.26 (n=9, 0.11-0.28) wide. Vitellaria of limited extension, on either side of the body, antero-lateral to ovary, not reaching the posterior testis level, 0.19 (n=3, 0.18-0.20) in diameter. Uterus filled with few ovoid eggs in the middle third of the body 0.11 (n=11, 0.06-0.16) long and 0.14 (n=11, 0.07-0.21) wide and numerous smaller spherical eggs in the posterior one third of the body, 0.04 (n=9, 0.02-0.05) in diameter.

Type host: *Metynnis maculatus* (Kner, 1858) (Characidae): "pacu peva".

Type-locality: Upper Paraná River floodplain, Brazil.

Site of infection: Intestinal tract.

Prevalence: 70% (7 of 10 fishes examined).

Mean intensity: 25.28.

Specimens deposited: CHIOC no. 36394a (holotype); nos. 36394b and 36395 (paratype).

Etymology: The specific name refers to the popular name of the host.

Remarks

Dadayi pacupeva n. sp. has an elongate, conical body, subspherical testis, genital sucker present and ventro-terminal acetabulum with postero median notch on rim, which allows its classification in the genus *Dadayi*. However, there are other important characters that differ it from the two known species *Dadayi marenzelleri* (Daday, 1907) Fukui, 1929 and *Dadayi pacuensis*, described by Thatcher et al. (1996), such as: ceca not reaching acetabulum, genital sucker about half the size of the other species, medium-sized acetabulum, vitellaria of limited extension and not reaching posterior testis level, two different egg sizes in two different maturity stages and absence of visible transverse tegumental ridges in the acetabulum interior bottom surface.

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