

A NEW SPECIES OF *PSEUDOTAGIA* YAMAGUTI, 1963 (MONOGENEA: MACROVALVITREMATIDAE) PARASITIC ON *ORTHOPRISTIS RUBER* (CUVIER) (OSTEICHTHYES: HAEMULIDAE) FROM THE BRAZILIAN COAST

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SUMMARY: A new species of *Pseudotagia* parasitic on the haemulid fish *Orthopristis ruber* from the State of Rio de Janeiro, Brazil, is described and illustrated. This species can be differentiated from the other known species of *Pseudotagia* by the location of the vaginal pores and by the characteristics of the antero and posterolateral sclerites of the clamps.

KEY WORDS: Monogenea - Macrovalvitrematidae, *Pseudotagia rubri* n. sp., Haemulidae, marine fishes, Atlantic Ocean, Brazil

INTRODUCTION

Studies about macrovalvitrematid monogeneans parasitic on marine fishes from Brazil are scanty. To date, only three species were recorded. KOHN *et alii* (1984), recorded *Pseudotagia cupida* Hargis, 1956 on *Haemulon sciurus* Shaw from the State of Rio de Janeiro, however, according to Menezes & Figueiredo (1980) *H. sciurus* does not occur in the southeastern Brazilian coast. An analysis of the description given by KOHN *et alii* (1984) and the examination of the numerous specimens of this monogenean collected from *Orthopristis ruber* (Cuvier, 1830) a common haemulid fish species from the same locality, resulted in the proposition of a new species of *Pseudotagia* which is described and illustrated in the present paper.

MATERIALS AND METHODS

The specimens studied are part of the material collected from 162 specimens of *Orthopristis ruber* (Cuvier), caught at Itacuruçá, Sepetiba Bay, State of Rio de Janeiro, Brazil (22° 51'S, 43° 56'W), between April 1991 and April 1992. The fishes measured 11.5 to 32 cm of total length and weighed 25 to 410 g. The monogeneans were removed from the gills, washed in 0.65% saline solution, fixed in 5% formaline or AFA and preserved in 70% ethyl alcohol. The parasites were stained with Gomori's trichrome or Mayer's carmalumen and mounted in Canada balsam. A drawing tube was used in the preparation of the illustrations. Measurements were made in

micrometers (µm), unless otherwise indicated, and the range is followed by the mean within parentheses. The terms prevalence, intensity, and mean intensity of infestation were used according to MARGOLIS *et alii* (1982). The holotype and paratypes were deposited in the Helminthological Collection of the United States National Museum (USNM), Beltsville, MD, USA. Some paratypes were deposited in the Coleção Helmintológica da Fundação Instituto Oswaldo Cruz (CHIOC), Rio de Janeiro, RJ, Brazil.

DESCRIPTION

Pseudotagia rubri n. sp.
(Figs. 1-6)

DESCRIPTION (based on ten specimens mounted *in toto*, ten measured): Macrovalvitrematidae. Macrovalvitrematinae. Total length (Fig. 1) 1.24-1.83 mm (1.53 mm), maximum width (at the ovary level), 220-366 (302.5). Haptor subrectangular, 329-403 (367.5) long, with eight clamps in the extremity of short peduncles. Two anterior pairs with equal size, 88-139 (114.1) long, 44-73 (55) wide; third pair smaller, 88-110 (106) long, 44-58 (52) wide; fourth pair smaller than others, 66-88 (69) long, 36-44 (43) wide. Anterior clamps (Figs. 2, 4) with midsclerite long, slender, anterior extremity slightly modified, posterior extremity bifurcated, central portion with conspicuous dilation; anterolateral sclerites slightly curved, with round extremities, length approximately equal to half of midsclerite's length; posterolateral sclerites divided, anterior portion slender,

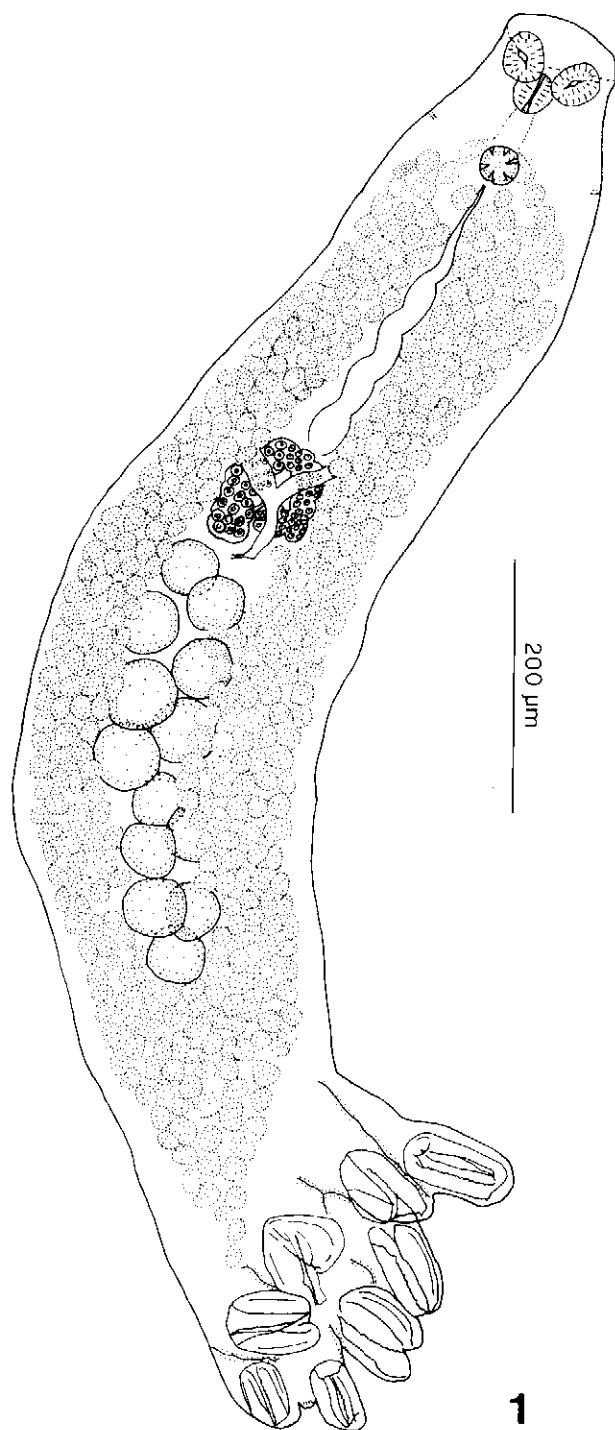


Fig.1. *Pseudotagia rubri* n. sp. — holotype, entire worm, ventral view.

curved, posterior portion robust, subtriangular, articulated to posterior extremity of midsclerite by two pleats of the dorsal valve; sclerotized, rectangular structure, with round margins articulating the valves, related to midsclerite, anterolateral sclerite and anterior portion of posterolateral sclerites. Clamps with conspicuous ornamentations on the valves, consisting of slightly sclerotized membranes with tucked edges, round, related with anterolateral sclerites. Posterior clamps (Fig. 3), similar to anterior; membranes among sclerites without round, tucked edges. Terminal appendix with two pairs of hooks (Fig. 5), internal pair 13 long ($n=3$), with shaft straight, long, curved shank and point; external pair straight, 11 long ($n=4$). Mouth subterminal, 91.5-120.8 (105.5) in diameter; buccal organs 51.1-73 (62.0) in diameter; pharynx ovoid, 51.2-69.5 (60.5) long, 38.4-55 (46.4) wide; ceca bifurcating at genital atrium level, not confluent posteriorly. Testes subspherical, postovarian, 10-13 (11) in number, 66-88 (73) long, 58-80 (65) wide, filling intercecal space, vas deferens wide, sinuous; genital atrium (Fig. 6) subspherical, 31-38 (36) in diameter, with 6 (8 in one specimen) curved spines. Ovary slightly preequatorial, curved; oviduct and genito-intestinal duct not observed; vaginae with laterodorsal pores, at genital atrium level; vitellaria lateral, distributed from genital atrium level to anterior part of the haptor; eggs fusiform, with one filament in each pole, 168 long, 78 wide ($n=3$), collapsed.

Taxonomic summary

Synonym: *Pseudotagia cupida* of KOHN *et alii* (1984) and *P. cupida* of KOHN *et alii* (1992).

Type host: *Orthopristis ruber* (Cuvier).

Site of infestation: gills.

Type locality: Itacuruçá, Sepetiba Bay, State of Rio de Janeiro, Brazil.

Prevalence: 59.2%.

Intensity of infestation: 637, in 96 hosts.

Mean intensity of infestation: 6.6.

Specimens deposited: USNM holotype N° 83185, paratype N°s 83186 (two slides) and 83187; CHIOC paratype N°s 33100, 33101, and 33102.

Etymology: the specific name *rubri* refers to the specific name of the fish host.

Remarks

The genus *Pseudotagia* Yamaguti, 1963 has two species: *P. cupida* (HARGIS, 1956) and *P. clathratus* Cranc, 1972. *Pseudotagia cupida* is a parasite of *Orthopristis chrysopterus* (Linnaeus) from the North American Atlantic Ocean (HARGIS, 1956; Overstreet, 1978). This species can be separated from the new species by: 1. the location of the vaginal pores (distant from the genital atrium in *P. cupida*, to genital atrium level in the new species); and 2. the vitellaria

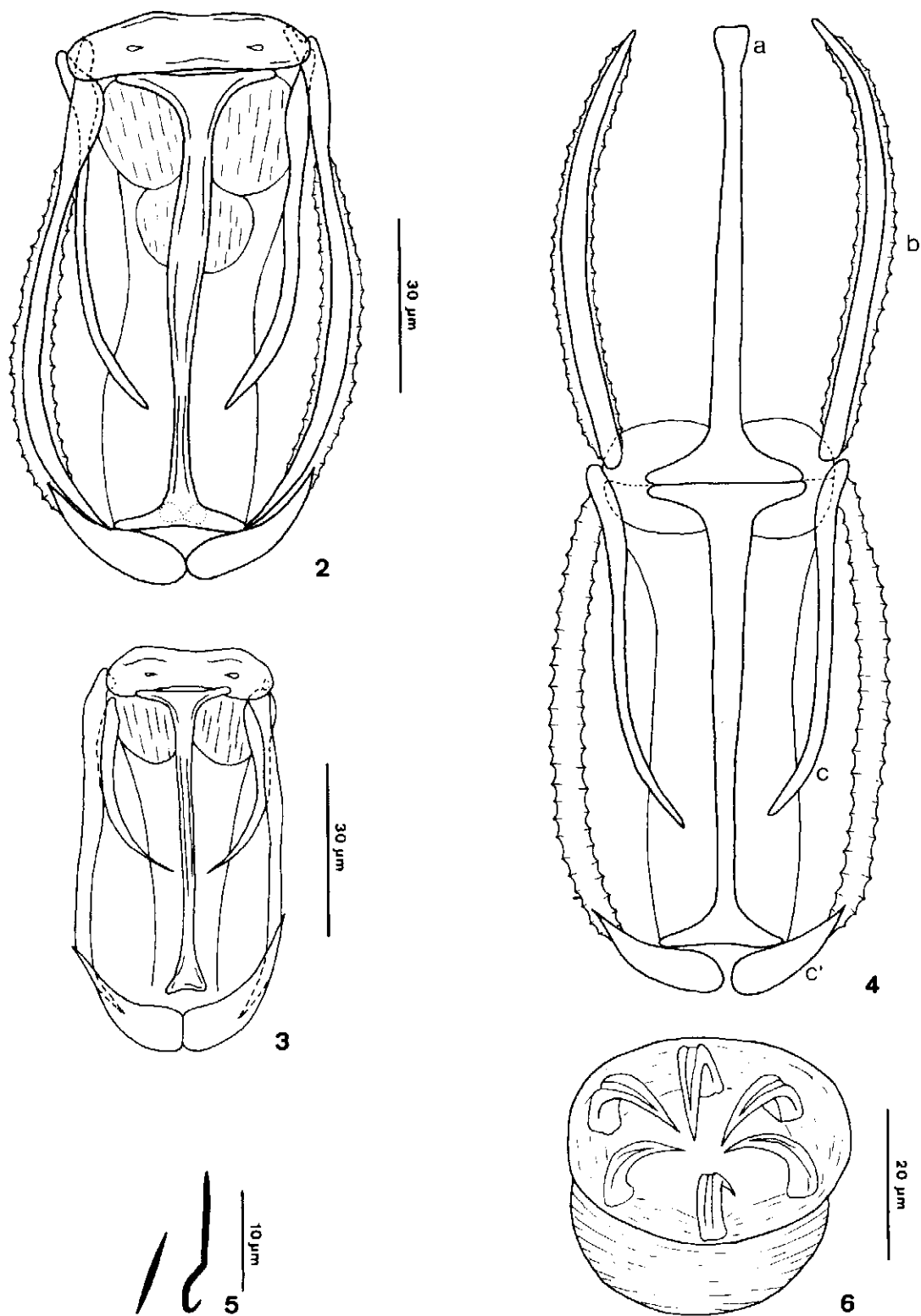


Fig.2-6. *Pseudotagia rubri* n. sp.

Fig.2. Anterior clamp. Fig.3. Posterior clamp. Fig.4. Anterior clamp, open, diagrammatic drawing. Fig.5. Hooks of the terminal appendix. Fig.6. Genital atrium. a: midsclerite. b: anterolateral sclerite. c: posterolateral sclerite, anterior portion. c': posterolateral sclerite, posterior portion.

distribution pattern (from the ovary level to the haptor in *P. cupida*, from the genital atrium level to the haptor in the new species).

Pseudotagia clathratus was described by CRANE (1972) with specimens collected on the serranid fish *Paralabrax clathratus* (Girard) from the North American Pacific Ocean. This species can be differentiated from *P. rubri* n. sp. by: 1. the clamp structure (anterolateral and posterolateral sclerites fused in *P. clathratus*, not fused in the new species), 2. the testes number (15-25 in *P. clathratus*, 11-13 in the new species), and 3. the ovary position (post-equatorial in *P. clathratus*, slightly pre-equatorial in the new species).

KOHN *et alii* (1984), recorded *P. cupida* from a haemulid fish from Rio de Janeiro, State of Rio de Janeiro, Brazil. Later, KOHN *et alii* (1992) recorded one specimen of the same species from the serranid fish *Diplectrum* sp., in the same locality. The analysis of the information presented by these authors, demonstrated that, in fact, their specimens correspond to another *Pseudotagia* species with equal characteristics of the new species described in the present paper.

SUMÁRIO

Uma nova espécie de *Pseudotagia* parasita do peixe haemulídeo *Orthopristis ruber* da Baía de Sepetiba, Estado do Rio de Janeiro, Brasil, é descrita e ilustrada. A nova espécie pode ser diferenciada das demais espécies de *Pseudotagia* pela localização dos poros vaginais e pelas características dos escleritos antero- postero-laterais dos grampos.

PALAVRAS-CHAVE: Monogenea, Macroalvitrematidae, *Pseudotagia rubri* n. sp., Haemulidae, peixes marinhos, Oceano Atlântico, Brasil.

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