

A NEW SPECIES OF *PROBURSATA* BRAVO-HOLLIS, 1984 (MONOGENEA: HETERAXINIDAE: HETERAXININAE) PARASITE OF *OLIGOPLITES* SPP. (OSTEICHTHYES: CARANGIDAE) FROM THE COAST OF THE STATE OF RIO DE JANEIRO, BRAZIL

RICARDO M. TAKEMOTO*; J. F. R. AMATO** & JOSÉ LUIS LUQUE***

Curso de Pós-Graduação em Medicina Veterinária, Parasitologia Veterinária, Universidade Federal Rural do Rio de Janeiro **Pesquisador Aposentado do CNPq, Departamento de Biologia Animal, UFRRJ, BR-465 km 7, Caixa Postal 74512, Seropédica, RJ, 23851-970, Brasil

Probursata brasiliensis n. sp., a gill filament parasite of carangid fishes, *O. palometa* (Cuvier), *Oligoplites saurus* (Bloch & Schneider), and *O. saliens* (Bloch), from the Brazilian coast, is described and illustrated. The new species differs from *Probursata veraecrucis* Bravo-Hollis, 1984, the type and only species of this genus by the presence of spines in the auricular expansions of the genital atrium, by the trifurcate supplementary process of the clamp's midsclerite, and by having a larger number of testes and clamps. This is the first record of the genus *Probursata* Bravo-Hollis, 1984, in the South Atlantic Ocean.

Key words: Monogenea – *Probursata brasiliensis* n. sp. – Carangidae – *Oligoplites* – Brazil

The genus *Probursata* Bravo-Hollis, 1984 comprises, at the moment, only one species, *P. veraecrucis* Bravo-Hollis, 1984, collected from the gill filaments of *Oligoplites saurus* (Bloch & Schneider) in the Mexican Atlantic Ocean. During a parasitological survey of fishes of the genus *Oligoplites* Gill from Sepetiba Bay, State of Rio de Janeiro, specimens of a new species of *Probursata* were collected from the gill filaments of *O. palometa* (Cuvier), *O. saurus*, and *O. saliens* (Bloch). This parasite is herein described, illustrated, and compared with the type species of the genus.

MATERIALS AND METHODS

The specimens studied are part of the material collected along 157 necropsies of "guaiviras", *Oligoplites* spp. (84 *O. palometa*, 37 *O. saurus*, and 36 *O. saliens*). The fishes examined were obtained at Itacuruçá (22° 61'S,

43° 56'W), Sepetiba Bay, State of Rio de Janeiro, Brazil. The fishes measured: *O. palometa* – 16.5 to 49 cm; *O. saurus* – 15 to 37 cm; *O. saliens* – 20 to 49 cm in total length; and weighted: *O. palometa* – 40 to 1320 g; *O. saurus* – 40 to 630 g; *O. saliens* – 120 to 1350 g. The collection, preparation, and mounting of the parasites in permanent slides were carried out according to Amato et al. (1991). Illustrations were prepared with a drawing tube. Measurements are given in micrometers unless otherwise stated as ranges with the mean between parentheses. The terms prevalence, intensity of infestation, and mean intensity of infestation agree with the recommendations of Margolis et al. (1982). The holotype and some paratypes were deposited in the Coleção Helminológica do Instituto Oswaldo Cruz (CHIOC), Rio de Janeiro, RJ, Brazil. Some paratypes were also deposited in the Helminthological Collection of the United States National Museum (USNM), Beltsville, Maryland, USA. Twenty two of the fishes studied were identified and deposited in the Seção de Peixes do Museu de Zoologia da Universidade de São Paulo (USP), while the remaining ones were identified in the laboratory according to Menezes & Figueiredo (1980).

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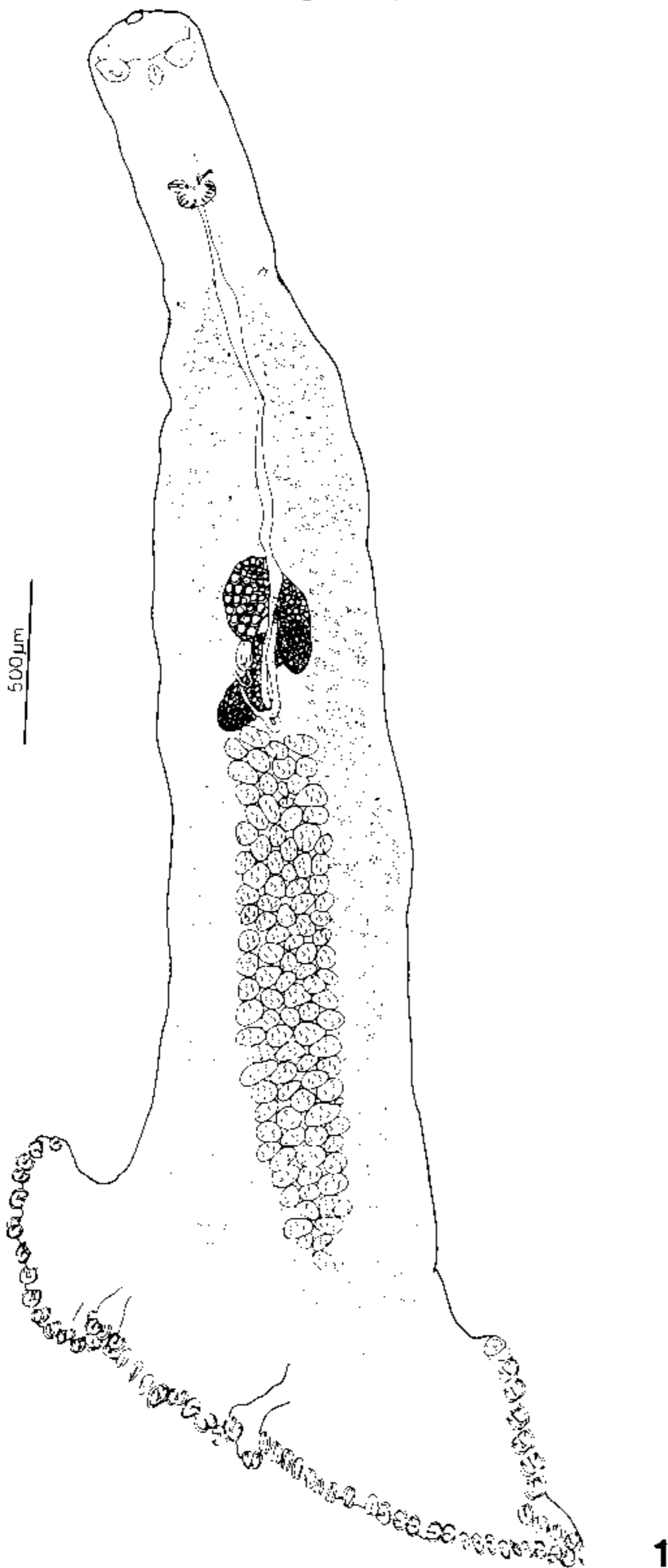
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DESCRIPTION

Probursata brasiliensis n. sp.
(Figs 1-6)

Probursata brasiliensis n. sp. – Fig. 1: holotype, ventral view.

DESCRIPTION (based on 24 specimens, mounted *in toto*, 11 measured: 7 from *O. palometa*, 2 from *O. saurus*, 2 from *O. saliens*): Heteraxinidae, Heteraxininae. Body elongate, anterior end round, 3.53–5.54 mm (4.10 mm) in total length, 384–805 (639) wide, at testicular level. Haptor triangular, asymmetric, anfitipic, 0.93–1.46 mm (1.24 mm) long, 0.67–

2.01 mm (1.39 mm) wide, with two rows of sessile clamps, longest row with 43–54 (48) clamps, and shorter row with 8–16 (11) clamps. Larger clamps 43.9–62.2 (52.6) long, 47.6–67.7 (57.9) wide, smaller clamps 32.9–49.4 (41.9) long, 38.4–54.9 (45.4) wide; each clamp with midsclerite bifurcate in the extremities; anterior half of midsclerite with wavy margins; supplementary process lightly sclerotized, trifurcate; anterolateral and posterolateral sclerites unequal, with bifid distal tips (arrows in Figs. 2 and 3); lightly sclerotized ribs present. Mouth subterminal, apical organ present, with two lateral cephalic glands; buccal organs, 60.4–100.6 (84.7) long, 38.4–75.0 (58.1) wide; pharynx ovate, 42.1–62.2 (50.9) long, 36.6–47.6 (41.9) wide; esophagus 255.5–365.0 (301.9) long; intestinal ceca ramified, extending to midregion of haptor. Testes postovarian, 58–153 (89) in number, 40.3–76.9 (60.6) in diameter; vas deferens opening at base of genital atrium; genital atrium 67.7–106.5 (84.5) long, 95.2–124.4 (116.9) wide, at the level of cecal bifurcation, surrounded by muscle fibers, with muscular auricular expansions, each expansion with 9 spines in convex margin and two, sickle-shaped sclerites with curved portions penetrating genital atrium, one shorter, another longer, slender, reaching outer margin of auricular expansions; genital atrium wall with 11 spines in each side, decreasing in size anteriorly, in radial transverse direction whose curved points project into central space. Ovary in posterior region of first half of body, double inverted “U” shaped; seminal receptacle sacular, 64–139.1 (100.2; n = 9) long, 40.3–69.5 (57.3; n = 9) wide, genito-intestinal canal present, receiving tick-walled duct from seminal receptacle; vitellaria extending from level of vaginal pores to central region of haptor or level of first clamp in shorter row; common viteline duct ventral to ovary, opening into oviduct to form the ootype from where follows the uterus; two dorsolateral vaginae, opening posteriorly to genital atrium; eggs not observed.

Taxonomic summary

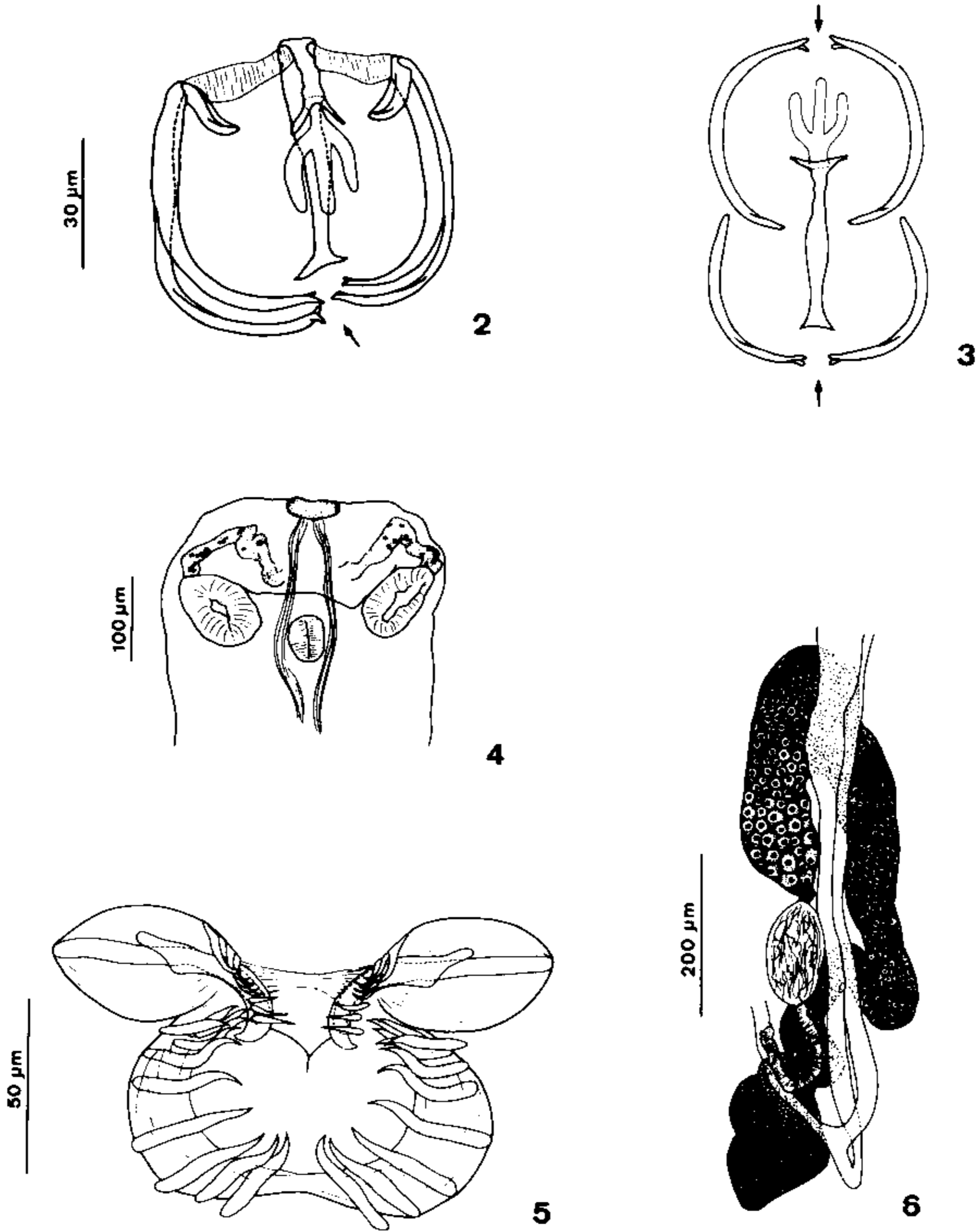
Type host: *Oligoplites palometa* (Cuvier).

Other hosts: *O. saliens* (Bloch) and *O. saurus* (Bloch & Schneider).

Site of infestation: gill filaments.

Type locality: Itacuruçá, Sepetiba Bay, RJ, Brazil.

Prevalence: 75% in *O. palometa*, 59.4% in *O. saurus*, and 19.4% in *O. saliens*.



Probursata brasiliensis n. sp. – Fig. 2: clamp. Fig. 3: clamp, diagrammatic. Fig. 4: anterior region. Fig. 5: genital atrium. Fig. 6: ovarian region.

Intensity of infestation: 196 in *O. palometa*, 56 in *O. saurus*, and 11 in *O. saliens*.

Mean intensity of infestation: 3.1 in *O. palometa*, 2.5 in *O. saurus*, and 1.6 in *O. saliens*.

Specimens examined: *Probursata veraecrucis* Bravo-Hollis, 1984 – UNAM paratypes 233-21 (two slides), paratypes 233-22 (two slides).

Specimens deposited: USNM – paratype Nos 82854, 82855, 82856, 82857, 82858; CHIOC – Holotype, No 33069 – paratype Nos 33053a and b, 33054, 33055, 33056, 33057.

Etymology: The specific name *brasiliensis* refers to the first record of the genus *Probursata* in the Brazilian coast.

Remarks

Probursata brasiliensis n. sp. differs from *P. veraecrucis* by having a different genital atrium where the auricular expansions are larger and offset from the atrium itself. Also, the auricular expansions in *P. brasiliensis* n. sp. have nine sclerites in each of the internal folds, while *P. veraecrucis* has none. *Probursata brasiliensis* n. sp. has two sclerites with different shapes supporting the auricular expansions, while *P. veraecrucis* has one. *Probursata*

brasiliensis n. sp. also differs from *P. veraecrucis* by having a larger number of testes, 58 to 153 against 14 to 49. Finally, the Brazilian species now described differs from *P. veraecrucis* in many aspects of the clamps. First, and most important, *P. brasiliensis* n. sp. has a supplementary trifurcate process in the anterior extremity of the midsclerite, while *P. veraecrucis* has a bifurcate supplementary process. Moreover, the anterolateral and the posterolateral sclerites of *P. brasiliensis* n. sp. have the distal tips bifid, condition not observed in the paratypes of *P. veraecrucis* and not mentioned by Bravo-Hollis (1984). Although the number of clamps can vary within the same species it is influenced by many environmental conditions and also by the host, etc. *Probursata brasiliensis* n. sp. has so many more clamps in both rows than *P. veraecrucis* (*P. veraecrucis* has 5 to 9 clamps in the short row, while *P. brasiliensis* n. sp. has 8 to 16 clamps, and *P. veraecrucis* possess 29 to 47 clamps the longer row, while *P. brasiliensis* n. sp. has 43 to 54) that it should be listed as another character which helps to differentiate these two species of *Probursata*.

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