

NEW HOST RECORDS FOR DIGenea PARASITES OF BRAZILIAN MARINE FISHES

Novos hospedeiros para parasitas Digenea de peixes marinhos brasileiros

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RESUMO

Quatro espécies de trematódeos Digenea são referidos em diferentes espécies de Lutjanidae, representando novos hospedeiros. *Aponurus laguncula* Looss, 1907 (Lecithasteridae) e *Prosogonotrema bilabiatum* Pérez-Vigueras, 1940 (Sclerodistomidae) em *Rhomboplites aurorubens* (Cuvier, 1829); *Pacificreadium serrani* (Nagaty & Abdel-Aal, 1962) (Opecoelidae) em *Ocyurus chrysurus* (Bloch, 1791) e *Brachyphallus parvus* (Manter, 1947) (Hemiuridae) em *Lutjanus synagris* (Linnaeus, 1758).

Palavras-chaves: *Digenea*, *Aponurus laguncula*, *Prosogonotrema bilabiatum*, *Pacificreadium serrani*, *Brachyphallus parvus*, *Parasitas de Peixes*, Brasil.

ABSTRACT

Four species of known Digenea are reported from different Lutjanidae fish species, representing new host records. *Aponurus laguncula* Looss, 1907 (Lecithasteridae) and *Prosogonotrema bilabiatum* Pérez-Vigueras, 1940 (Sclerodistomidae) in *Rhomboplites aurorubens* (Cuvier, 1829); *Pacificreadium serrani* (Nagaty & Abdel-Aal, 1962) in *Ocyurus chrysurus* (Bloch, 1791) and *Brachyphallus parvus* (Manter, 1947) (Hemiuridae) in *Lutjanus synagris* (Linnaeus, 1758).

Key Words: *Digenea*, *Aponurus laguncula*, *Prosogonotrema bilabiatum*, *Pacificreadium serrani*, *Brachyphallus parvus*, *Fish Parasites*, Brazil.

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INTRODUCTION

The knowledge of the parasite fauna of fishes of economic value is very important, considering the large number of exported fish species. In this paper, three species of Lutjanidae: *Rhomboplites aurorubens* (Cuvier, 1829), *Ocyurus chrysurus* (Bloch, 1791) and *Lutjanus synagris* (Linnaeus, 1758), marine fishes usually exported to United States of America, Europe and Japan, were examined for helminth parasites. *L. synagris*, popularly known in Brazil as "ariocó", is found over all types of bottom, but mainly in coral reef areas and on vegetated sand grounds, extending northward to North Carolina (USA) and southward to southeastern Brazil. *R. aurorubens*, known as "realito", found in moderately deep waters northward to North Carolina (USA) and southward to Rio de Janeiro (Brazil). *O. chrysurus*, vulgarly known as "guaiuba" is found in costal waters, extending northward to Massachusetts (USA) and southward to southeastern Brazil (Fischer, 1978). In this paper are reported new host records to four species of Digenea.

MATERIAL AND METHODS

The fishes were obtained with export fish industries from Rio de Janeiro and Espírito Santo States and carried to the laboratory to be examined. The parasites collected were fixed in AFA (ethanol, formalin, acetic acid) under slight cover-slip pressure; whole-mounts were stained in an Langeron's alcoholic acid carmine, cleared in beechwood creosote, and mounted in Canada balsam. Measurements in micrometers, unless otherwise stated, are quoted as the ranges with the means in parenthesis. Material studied is deposited in the Helminthological Collection of the "Instituto Oswaldo Cruz" (CHIOC), Rio de Janeiro, Brazil.

RESULTS AND REMARKS

LECITHASTERIDAE Odhner, 1905

Aponurus laguncula Looss, 1907

Host: *Rhomboplites aurorubens* (Cuvier, 1829) (Lutjanidae).

Site of infection: intestine.

Intensity of infection: 10 out of 18 fish examined were parasitized with 2-4 trematodes, with a total of 137 worms collected.

Voucher specimens deposited: CHIOC n° 36.376 (a-f), 36.377 (a-b), 36.378.

Measurements based on 10 mature specimens: Body 0,85-1.07 mm (0.93mm) in length by 0,17-0,25

mm (0,21mm) in width; oral sucker 70-87 (78) x 77-90 (84); ventral sucker 147-192 (170) x 125-175 (158); sucker-width ratio 1:0.9-1.9 (1:1.7); pharynx 25-45 (35) x 42-52 (47); seminal vesicle 62-97 (73) x 50-75 (63); ovary 60-87 (73) x 52-112 (78); anterior testis 60-97 (78) x 62-102 (85); posterior testis 55-122 (81) x 70-122 (78); eggs 27-35 (29) x 10-17 (16).

A. laguncula was reported in several hosts in Europe, Asia, Africa, South and North Americas. In South America it was referred in Argentina by Szidat (1961) in *Paralichthys patagonicus* Jordan & Goss, 1886. In Brazil it was redescribed for the first time by Fernandes *et al.* (1985) in *Chaetodipterus faber* (Broussonet, 1782), *Scomber japonicus* Houttuyn, 1780, *Trachurus lathami* Nichols, 1920 and *Umbrina coroides* (Cuvier, 1830) from Rio de Janeiro State and by Pereira *et al.* (2000) from *Micropogonias furnieri* (Desmarest, 1823) from Rio Grande do Sul State. Our specimens agree with those referred by Pereira *et al.* (2000). *R. aurorubens* represents a new host record for this species.

SCLERODISTOMIDAE Odhner, 1927

Prosogonotrema bilabiatum Pérez-Vigueras, 1940

Host: *Rhomboplites aurorubens* (Cuvier, 1829) (Lutjanidae).

Site of infection: stomach.

Intensity of infection: 7 out of 18 fish examined were parasitized by 1-22 specimens in a total of 69.

Voucher specimens deposited: CHIOC n° 36.379 (c-i), 36.380 (a, b, d), 36.381, 36.382.

Measurements based on 10 mature specimens: Body 6.16-9.16 mm (7.20 mm) by 3.38-4.46 mm (3.82 mm); ventral sucker 2.07-2.87 mm (2.34 mm) x 2.10-2.92 mm (2.38 mm); oral sucker 460-800 (610) x 690-1050 (793); sucker-width ratio 1:2.3-3.8 (1:3.0); pharynx 210-380 (287) x 300-450 (350); ovary 420-650 (510) x 400-790 (574); anterior testis 440-630 (525) x 540-780 (653); posterior testis 470-740 (556) x 520-800 (644); eggs 20-30 (26) x 10-17 (13).

Four immature specimens measure: Body 4.93-6.01 mm (5.25 mm); width 2.23-2.69 mm (2.42 mm); ventral sucker 1.50-1.70 mm (1.57 mm) x 1.50-2.25 mm (1.55 mm); oral sucker 390-460 (415) x 350-530 (452); sucker-width ratio 1:2.9-4.3 (1:2.9); pharynx 240-260 (250) x 200-240 (220); ovary 90-150 (117) x 120-210 (152); anterior testis 280-330 (295) x 260-350 (300); posterior testis 240-300 (265) x 240-280 (260).

P. bilabiatum was originally described in Cuba by Pérez-Vigueras (1940) from *O. chrysurus* and posteriorly in Panama from the same host by Sogandares-Bernal (1959). Manter (1969) redescribed it from *Lutjanus amabilis* De Vis, 1884 and *Platax pinnatus* (Linnaeus, 1758) from Australia. In South America, *P. bilabiatum* was referred in

Venezuela by Nasir (1973) parasitizing *Lutjanus griseus* (Linnaeus, 1758) and in Brazil in *Chaetodipterus faber* (Broussonet, 1782) by Amato (1983) and by Cezar & Luque (1999).

Our mature specimens are more similar in length to the specimens of Nasir (1973) and larger than those described by the other authors. In this opportunity, we refer *R. aurorubens* as a new host for *P. bilabiatum*.

OPECOELIDAE Ozaki, 1925

Pacificreadium serrani (Nagaty & Abdel-Aal, 1962) Durio & Manter, 1968

Host: *Ocyurus chrysurus* (Bloch, 1791) (Lutjanidae).
Site: Intestine.

Intensity of infection: one out of 14 fishes examined was parasitized by one single mature specimen.

Voucher specimen deposited: CHIOC nº 36.383.

Main measurements: Body 4.27 mm long by 1.00 mm width; oral sucker 275 x 250; ventral sucker 430 x 450; sucker-width ratio 1:1.8; pre-pharynx 90; pharynx 160 x 180; ovary 300 x 160; cirrus pouch 510 x 220; anterior testis 500 x 380; posterior testis 550 x 410; eggs 80-90 (82) x 40-50 (44).

P. serrani was originally described from *Serranus* sp. from the Red Sea, in the genus *Hamacreadium* Linton, 1910. Durio & Manter (1968) redescribed it in *Epinephelus* sp. from New Caledonia and in *Epinephelus merra* Bloch, 1793 and *Plectropomus maculatus* (Bloch, 1790) from Australia. In Brazil it was reported by Fábio (2001) in *Cephalopholis fulva* (Linnaeus, 1758) from Rio de Janeiro State. *O. chrysurus* represents a new host record for this species.

HEMIURIDAE Loos, 1899

Brachyphallus parvus (Manter, 1947) Skrjabin & Guschanskaya, 1955

Host: *Lutjanus synagris* (Linnaeus, 1758) (Lutjanidae).

Site: stomach.

Intensity of infection: one out of 5 fishes examined harbored one trematode.

Voucher specimen deposited: CHIOC nº: 36.384.

Main measurements: Body 1.75 mm long by 0.55 mm width; oral sucker 95 x 105; ventral sucker 245 x 250; sucker-width ratio 1:2.3; pharynx 50 x 60; ovary 140 x 175; vitellines 105-130 x 135-150; anterior testis 175 x 165; posterior testis 160 x 175; eggs 15-17.5 (17) x 10 (10).

B. parvus, a cosmopolitan species, in South America was referred in Argentina by Tanzola *et al.*

(1997) in *Porichthys porosissimus* (Valenciennes, 1837), in Chile by Oliva (2001) in *Macruronus magellanicus* (Lönnberg, 1907) and in Falkland by Gaevskaya & Kovaleva (1978) in the same host. In Brazil, it was described from *Pomatomus saltator* (Linnaeus, 1766) (= *P. saltatrix*) by Travassos *et al.* (1967), Rego *et al.* (1983) and Luque & Chaves (1999) and in *C. fulva* by Fábio (2001). In this paper *B. parvus* is referred in a new host.

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