Digenea (Trematoda) of *Micropogonias furnieri* (Desmarest) (Perciformes, Sciaenidae) from Rio Grande do Sul, Brazil

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ABSTRACT. **Digenea (Trematoda) of *Micropogonias furnieri* (Desmarest) (Perciformes, Sciaenidae) from Rio Grande do Sul, Brazil.** *Micropogonias furnieri* (Desmarest, 1823) from the coast of Rio Grande do Sul State were examined and six trematodes species were recovered: *Aponurus laguncula* Looss, 1907, *A. pyriformis* (Linton, 1910), *Monascus filiformis* (Rudolphi, 1819), *Opecoeloides catarinensis* Amato, 1983, *O. stenosomae* Amato, 1983, and *Pachycreadium gastrocotylum* (Manter, 1940). All species are registered for the first time in Rio Grande do Sul State and *M. furnieri* represents a new host record for *A. laguncula*, *A. pyriformis* and *M. filiformis*.
KEY WORDS. Trematoda, Digenea, *Micropogonias furnieri*, Rio Grande do Sul State

Micropogonias furnieri (Desmarest, 1823) has a wide geographical distribution in the South Atlantic Ocean, representing an important fishing resource in the Southern coast of Brazil, Uruguay and Argentina (VAZZOLER 1991).

Previous studies on digenetic trematodes from this host in Brazil were presented by AMATO (1982b; 1983a,b) from Santa Catarina State, WALLET & KOHN (1987) and FERNANDES & GOULART (1992) from the Rio de Janeiro State. PEREIRA JR. *et al.* (1996) recorded the presence of metacercariae of *Bucephalus varicus* Manter, 1940, for the same sample group of host studied herein.

Considering that all the found species, have already been described, in this study only measures and more important featurers are presented and discussed.

MATERIAL AND METHODS

One hundred and thirty three specimens of *Micropogonias furnieri* with standard length ranging from 7,3 to 59,5 cm were examined. The fishes were caugth from industrial landing in the Rio Grande City. The trematodes collected were fixed unpressed in AFA (ethanol, formalin, acetic acid), stained with Semichon's carmine, dehydrated in an graded ethanol series, cleared with beechwood creosote and

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mounted in Canada balsam. Measurements are given in micrometers unless otherwise indicated and when more than three, the mean are displayed in parentheses, followed by the number of specimens measured. Representative voucher specimens were deposited in the Helminthological Collection of the Instituto Oswaldo Cruz (CHIOC), in Rio de Janeiro.

RESULTS AND REMARKS

Lecithasteridae Odhner, 1905

Aponurus laguncula Looss, 1907

Measurements (based on 11 specimens). Body 0.57-1.31mm (1.04) x 0.14-0.29mm (0.19) n: 11; oral sucker 58-98 (85) x 54-97 (81) n: 10; pharynx 25-51 (38) x 21-56 (41) n: 9; ventral sucker 86-191 (145) x 96-225 (149) n: 10; sucker width ratio 1:1.6-2.2 (1:1.8) n: 10; seminal vesicle 65-84 (77) x 30-49 (42) n: 6; anterior testis 61-136 (96) x 54-98 (85) n: 6; posterior testis 51-122 (90) x 58-105 (88) n: 8; ovary 82-112 (105) x 86-129 (108) n: 5; eggs 23-32 (29 x11-16 (14) n: 44.

Specimens deposited. CHIOC 34122; 34123 a-b; 34124; 34125 a-g.

This trematode has been already reported for several hosts from Europe, Asia, Africa, and from North and South America. FERNANDES *et al.* (1985) reported this species for the first time in Brazil for *Chaetodipterus faber* (Broussonet, 1782) (Ephippididae), *Scomber japonicus* Houttuyn, 1780 (Scombridae), *Trachurus lathami* Nichls, 1920 (Carangidae) and *Umbrina coroides* (Cuvier, 1830) (Sciaenidae), from Rio de Janeiro State. In South America it was also reported from Argentina in *Paralichthys patagonicus* Jordan & Goss, 1886 (Bothidae) by SZIDAT (1961).

The present record of *Aponurus laguncula* in *Micropogonias furnieri*, from Rio Grande do Sul State represents a new host and a new locality for this species.

The studied specimens are smaller but similar to those referred by FERNANDES *et al.* (1985).

Aponurus pyriformis (Linton, 1910) Overstreet, 1973

Measurements (based on two specimens). Body 0.88-1.00mm x 0.38-0.41mm; oral sucker 86-97 x 90-112; pharynx 48-56 x 60-63; ventral sucker 172-221 x 191-225; sucker width ratio 1:2; seminal vesicle 58-140 x 44-68; testes 112-131 x 105-127; ovary 105-120 x 131-138; eggs 28-39 x 16-23 (31 x 22) n: 12.

Measurements (based on two specimens without eggs). Body 0.85-0.87 x 0.32-0.34; oral sucker 78-93 x 82-105; pharynx 45-52 x 56-60; ventral sucker 172-202 x 180-198; sucker width ratio 1:1.9-2; seminal vesicle 25-54 x 30; anterior testis 93-123 x 131; posterior testis 112-131 x 97-120; ovary 86-117 x 63-82.

Specimens deposited. CHIOC 34126 a-d.

This species was already reported for Brazil and has been found in several hosts from different localities. In Espírito Santo State it was recovered from the stomach of *Paralichthys brasiliensis* (Ranzani, 1840) (Bothidae), *Diapterus olisthostomus* (Goode & Bean, 1882) (Gerreidae), *Umbrina coroides* and *Haemulon*

sp. (Pomadasyidae) by TRAVASSOS *et al.* (1965, 1966, 1967). AMATO (1983b) found it in *Orthopristis ruber* (Cuvier, 1880) (Pomadasyidae), *Eucinostomus melanopterus* ((Blecker, 1863) (Gerreidae), *Archosargus rhomboidalis* (Linnaeus, 1758) (Sparidae) and *Isopisthus parvipinnis* (Cuvier, 1830) (Sciaenidae) from Santa Catarina State. In Rio de Janeiro State this species was referred in *Haemulon sciurus* (Shaw, 1803) by KOHN *et al.* (1982) and in *H. aurolineatum* Cuvier, 1829 (Pomadasyidae) by FERNANDES *et al.* (1985).

In the present study, *Aponurus pyriformis* is recorded in the stomach and caeca of *Micropogonias furnieri* from Rio Grande do Sul State, what represents a new locality in Brazil for this trematode.

Fellodistomidae Nicoll, 1913
Monascus filiformis (Rudolphi, 1819) Looss, 1907

Measurements (based on three specimens): Body 1.54-2.41mm x 0.23-0.26mm; oral sucker 161-213 x 105-110; pharynx 115-129 x 79-101; ventral sucker 112-131 x 108-145; sucker width ratio 1:1-1.3; cirrus-sac 258-307 x 75-101; seminal vesicle 131-138 x 49-52; anterior testis 135-198 x 138-191; posterior testis 150-232 x 108-172; ovary 120-145 x 116-129; eggs 35-39 x 16-23 (37 x18) n: 10.

Specimens deposited: CHIOC 34127 a-c.

Monascus filiformis, type species of the genera, was described for the first time in Brazil as *Monascus netoi* (TRAVASSOS *et al.* 1965) recovered in the intestine of *Oligoplites saurus* (Bloch & Schneider, 1801) (Carangidae), from the coast of Espírito Santo State. It was recorded for *Chloroscombrus chrysurus* (Linnaeus, 1766) (Carangidae) from Santa Catarina State (AMATO 1982a) and *Peprilus paru* Linnaeus, 1758 (Stromateidae) from Rio de Janeiro State (WALLET & KOHN 1987).

GIBSON & BRAY (1980) considered *Monascus netoi* as a synonym of *M. filiformis*. AMATO (1982a) proposed *M. americanus* from the intestine of *Trachurus lathami* from Santa Catarina State. GAEVSKAYA (1989) considered *M. americanus* as a synonym of *M. filiformis*, based on the wide morphologic variation of this species in different parts of the Atlantic Ocean.

In South America this species was also reported for Venezuela by NASIR & GOMEZ (1977) and for Argentina by GIROLA *et al.* (1992) and MARTORELLI & CREMONTE (1998) in *Trachurus lathami*.

This record of *Micropogonias furnieri* represents a new host to *Monascus filiformis*.

Opecoelidae Ozaki, 1925
Opecoeloides catarinensis Amato, 1983

Measurements (based on five specimens). Body 1.47-2.98 mm (2,21) x 0.32-0.41 mm (0.36) n: 4; oral sucker 108-153 x 110-150 (130 x 133) n: 5; prepharynx 7-52 (27) n: 5; pharynx 96-146 x 101-150 (125 x 127) n: 5; oesophagus 82-191 (130) n: 5; ventral sucker 129-206 x 136-187 (167 x 166) n: 4; sucker width ratio 1:1.2-1.3 (1:1.2) n: 4; anterior testis 168-210 x 150-187 (185 x 169) n: 5;

posterior testis 176-255 x 161-210 (184) n: 5; ovary 108-150 x 90-112 (129 x 100) n: 5; eggs 51-70 x 26-39 (63 x 31) n: 17.

Specimens deposited. CHIOC 34128; 34129 a-b; 34130 a-b.

This species was described based on specimens collected from the intestine of *Micropogonias furnieri* (type-host), *Cynoscion leiarchus* (Cuvier, 1830) (Sciaenidae) and *Paralonchurus brasiliensis* (Steindachner, 1875) (Sciaenidae) from Santa Catarina State. AMATO (1983a) in the original description, considered the specimens described by SIDDIQI & CABLE (1960) as *Opecoeloides* sp.. from the intestine of *Centropomus ensiferus* Poey, 1860 (Centropomidae) and *Trichiurus lepturus* Linnaeus, 1758 (Trichiuridae) from Porto Rico, synonyms of *O. catarinensis*.

The specimens collected from *Micropogonias furnieri* from the coast of Rio Grande do Sul State are similar to those described by AMATO (1983a), although some specimens are larger.

Opecoeloides stenosomae Amato, 1983

Measurements (based on three specimens). Body 1.56-1.97mm x 0.32-0.48mm; oral sucker 108-135 x 93-123; prepharynx 22-52; pharynx 93-138 x 112-131; oesophagus 191; ventral sucker 131-195 x 127-195; sucker width ratio 1:1.2-1.6; anterior testis 140-185 x 157-194; posterior testis 112-176 x 142-157; ovary 136-140 x 84-98; eggs 51-65 x 35-39 (61 x 36) n: 9.

Specimens deposited: CHIOC 34131; 34132; 34133.

Opecoeloides stenosomae was described based on specimens collected from the intestine of *Micropogonias furnieri* caugth in Santa Catarina State (AMATO 1983a). In this paper it is also found in the type host, from Rio Grande do Sul State.

The specimens studied are in agreement with those of the original description, however they are smaller.

Pachycreadium gastrocotylum (Manter, 1940) Manter, 1954

Measurements (based on four specimens). Body 1.01-1.15mm (1.08) x 0.62-0.72mm (0.67) n: 4; oral sucker 131-202 x 176-270 (164 x 204) n: 4; prepharynx 11-18; pharynx 90-131 x 112-165 (110 x 135) n: 4; ventral sucker 270-401 x 198-373 (330 x 266) n: 4; sucker width ratio 1:1-1.6 (1:1.2); cirrus-sac 292-382 x 60-93 (352 x 76); anterior testis 116 x 138-157; posterior testis 120-168 x 138-195 (143 x 174); eggs 70-90 x 37-56 (78 x 44) n: 8.

Specimens deposited: CHIOC 34134; 34135 a-c.

Pachycreadium gastrocotylum was described by MANTER (1940) for specimens recovered from *Calamus brachysomus* (Lockington) (Sparidae) from the Galapagos Island. In South America this species was reported for Argentina from *Micropogonias furnieri* (= *M. opercularis*) by SURIANO (1966), and from *Pagrus pagrus* (Linnaeus, 1758) (Sparidae) by SCHULZE (1970). In Brazil, this trematode was reported by FERNANDES & GOULART (1992) parasitizing the intestine of *M. furnieri* and *Stellifer rastrifer* (Jordan, 1889) (Sciaenidae), from Rio de Janeiro State. The specimens examined are in agreement with the specimens studied by FERNANDES & GOULART (1992).

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