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Neochasmus sogandaresi n. sp. (Trematoda: Cryptogonimidae) from the Striped Bass in Mississippi¹

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Abstract

The cryptogonimid trematode *Neochasmus sogandaresi* n. sp. is described from the intestine and pyloric caeca of a single specimen of the striped bass *Morone saxatilis* (Walbaum, 1792) from the West Pascagoula River in Mississippi. The species is 1.3–1.7 mm long and has 31–37 oral spines, a sucker width ratio of 1:0.45–1:0.54, a forebody 13–18% of the body length, and an elongated muscular pad. It is compared with the five other species in the genus.

Several specimens of a new species of *Neochasmus* Van Cleave & Mueller, 1932, were collected from a 37 cm specimen of the striped bass *Morone saxatilis* (Walbaum) caught 19 February 1970 at the mouth of an oxbow lake on the West Pascagoula River in Mississippi. The fish had been released in adjacent waters a year earlier by Mr. Thomas D. McIlwain when it was between 8 and 18 cm long. It had been fed commercial feed. Because of the numerous specimens present and the presence of a small native population in the same locality (McIlwain, 1967), the striped bass probably represents a normal host for the trematode.

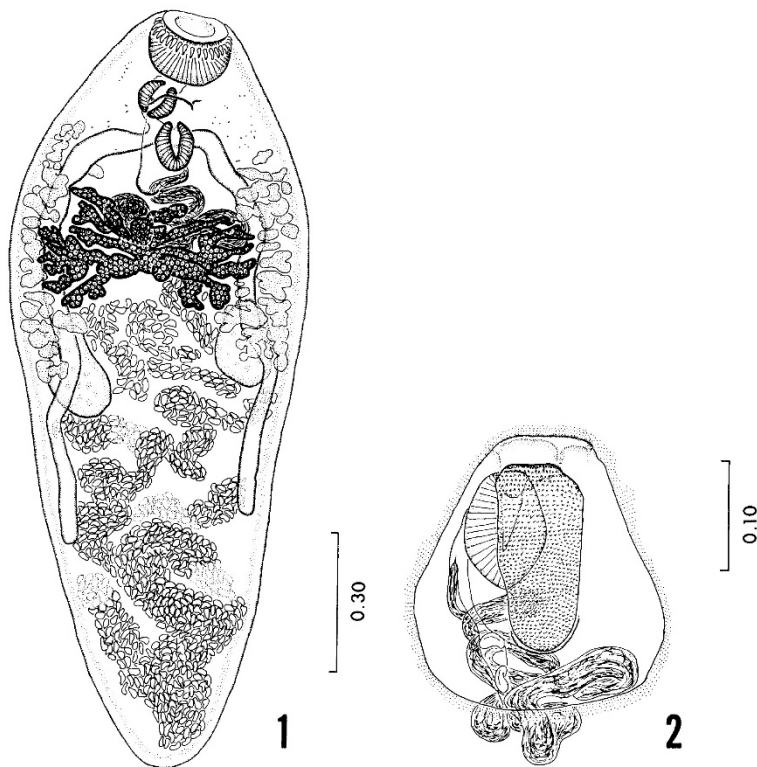
Materials and Methods

The host's fresh viscera were donated by Mr. McIlwain. Worms were fixed in hot AFA and stained with Van Cleave's hematoxylin. Figures were drawn with the aid of a camera lucida and measurements are in micra unless stated otherwise.

Results

*Neochasmus sogandaresi*² n. sp.

Description (based on 9 mature specimens): Body elongate, tapered more posteriorly than anteriorly, 1.35–1.66 mm long by 470–655 wide. Tegument covered with minute spines except on area adjacent to muscular pad (= vestigial gonotyl). Eyespot pigment dispersed in forebody. Oral sucker retractile into anterior end of body, wider than long, 121–168 long by 156–189 wide; with 31–37 oral spines up to 28 in length, in single row. Acetabulum deeply embedded, longer than wide, 100–114 long by 81–93 wide. Sucker width ratio 1:0.45 to 1:0.54. Forebody 205–270 long or 13–18% of body length. Prepharynx shorter than pharynx. Pharynx 58–86 long by 67–86 wide. Esophagus usually inconspicuous, shorter than pharynx. Intestinal bifurcation near level of anterior border of acetabulum; caeca ending 26–39% of body length from posterior end, overlapping testes ventrally.



Figures 1–2. *Neochasmus sogandaresi* (Scale values are millimeters). 1. Ventral view of holotype. 2. Ventral view of terminal reproductive organs and overlaying muscular pad.

Testes lateral, symmetrical or nearly so, elongate; left testis 170–222 long by 86–145 wide; right testis 154–212 by 100–145. Posttesticular space 44–58% of body length. Muscular pad thick, elongated, 161–257 long, extending from ahead of to beyond acetabulum, covered with spines. Seminal vesicle long and sinuous, extending between acetabulum

and anterior portion of ovary. Ventrogenital sac extremely muscular, opening anterior to acetabulum where prominently lobed.

Ovary multilobed, pretesticular, extending to and sometimes appearing similar to vitelline follicles. Seminal receptacle spherical or elongate, usually slightly larger than pharynx, 70–187 long by 67–98 wide, at anterior border of either side of ovary. Mehlis's gland dorsal to ovary. Laurer's canal present. Vitellaria as follicles and finger-like projections in lateral fields, extending between level of acetabulum and middle or posterior portion of testes. Uterus occupying most of body space posterior to and between testes; emptying, along with male duct, into long tubular genital atrium. Atrium opening into ventrogenital sac. Eggs partially collapsed, 21–28 long by 12–16 wide.

Excretory vesicle with prominent arms extending to pharyngeal level.

Type host: *Morone saxatilis* (Walbaum).

Sites: Intestine and pyloric caeca.

Locality: Mouth of Moon Lake on West Pascagoula River, Mississippi.

Holotype: USNM Helm. Coll. No. 71655; *Paratype:* No. 71656.

Discussion

Five other species of *Neochasmus* are known. Only two, *N. labeosus* Bennett, 1935, from the water-snake *Natrix rhombifera*, and *N. magnus* Winter, 1958, have over 27 oral spines. *Neochasmus labeosus* differs from the present species by not possessing the thick muscular pad and having more extended vitellaria and a relatively longer forebody. In *N. magnus*, the seminal receptacle is much larger and located near the posterior rather than anterior portion of the ovary, the tegumental spines are only on the anterior portion of the body, and the vitellaria do not reach the acetabular level. *Neochasmus sogandaresi* differs from the other three species, *N. ictaluri* Sogandares-Bernal, 1955, *N. umbellus* Van Cleave & Mueller, 1932, and *N. microvatus* (Tubanguí, 1928) Tubanguí & Masiluñgan, 1944, by being larger, having a greater number of oral spines, having an elongated muscular pad, and by other individual differences.

Notes

1. This study was conducted in cooperation with the Department of Interior, Bureau of Commercial Fisheries, under Public Law 88-309, Project 2-85-R; and Bureau of Sports Fisheries and Wildlife, jointly with Bureau of Commercial Fisheries, under Public Law 89-304, Project AFCS-1-3.
2. This species is named in honor of Dr. Franklin Sogandares-Bernal in recognition of his fine contributions to our knowledge of the Trematoda.

Literature Cited

- McIlwain, T. D. 1967. Distribution of the striped bass, *Roccus saxatilis* (Walbaum) in Mississippi waters. Proc. 21st Ann. Conf. Southeastern Assoc. Game Fish Comm., year 1967, pp. 254–257.