Bull. Natn. Sci. Mus., Tokyo, Ser. A, 13 (4), pp. 137–140, December 22, 1987

A New Fellodistomid Trematode from Acanthurid Fish of Southern Japan

By

Masaaki MACHIDA

Department of Zoology, National Science Museum, Tokyo

Abstract *Allosteringophorus prionuri* gen. et sp. n. (Trematoda, Fellodistomidae) is described for specimens collected from the intestine of the acanthurid fish, *Prionurus microlepidotus*, from southern Japan. The new genus is distinguished from all other genera of Fellodistomidae by having caeca ending at the posterior extremity, testes lying in tandem in the anterior hindbody, a posttesticular ovary, a unipartite seminal vesicle, and vitellaria extending from the postacetabular level to the posterior testis.

This report deals with a new fellodistomid trematode from an acanthurid fish from southern Japan. The trematodes were washed in saline, fixed in acetic sublimate or alcohol-formalin-acetic acid (AFA) under slight pressure, stained with Heidenhain's hematoxylin and mounted in balsam. The specimens are deposited in the collection of the National Science Museum, Tokyo (NSMT).

Family Fellodistomidae

Allosteringophorus prionuri gen. et sp. n.

(Figs. 1–3)

Host. *Prionurus microlepidotus* LACÉPÈDE (Acanthuridae).

Site. Intestine.

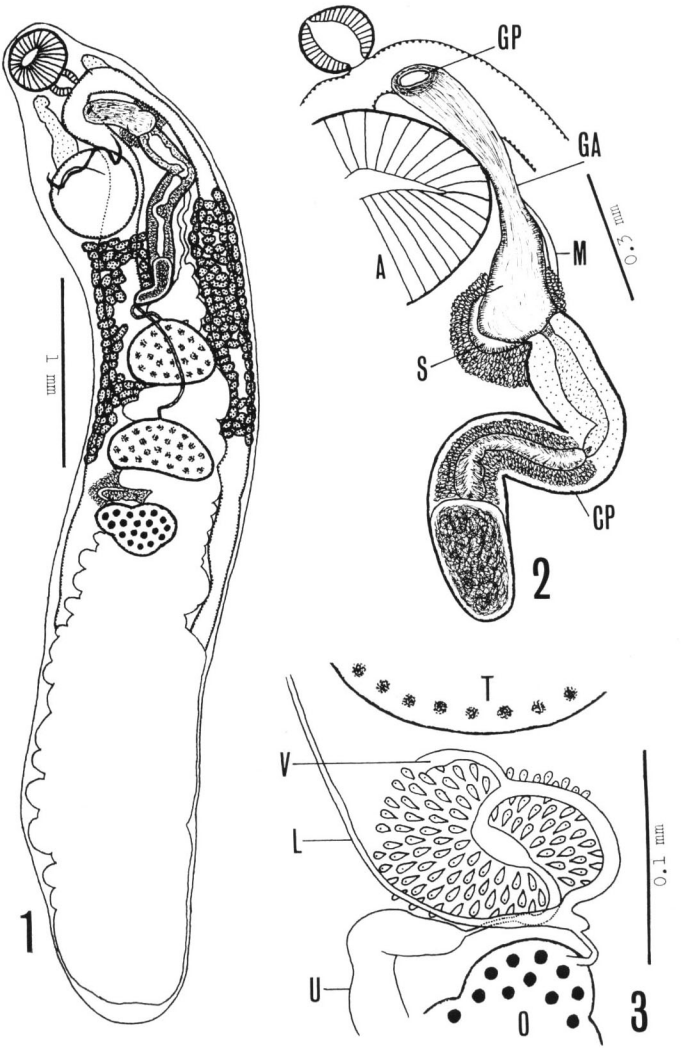
Locality. Tsushima (type locality), Kushimoto & Amami-oshima.

Date. 3 & 5-V-1974, 27-X-1979 & 13-XI-1985.

Specimen No. NSMT-Pl 1638 (holotype), 1651, 2277 & 3163.

Description. Based on 19 specimens. Body elongate, rather thick, anterior end tapering, posterior end broadly rounded; length 4.03–7.10 mm; greatest width 0.82–1.26 mm at mid- or postacetabular level. Cuticle aspinose. Oral sucker subterminal, spherical, 224–332 × 265–393 μm; prepharynx absent; pharynx ovoid, 117–194 × 112–230 μm, protruding into the base of oral sucker; esophagus very short, up to 67 μm long, usually not recognizable; caeca extending to posterior extremity of body. Acetabulum rounded, 357–525 × 418 × 597 μm, slightly pulled back into body. Forebody 11–18% of body length. Sucker ratio 1 : 1.3–1.8.

Testes smooth, wider than long, tandem between cirrus pouch and ovary, contiguous or separated by uterus; the anterior 250–459 × 362–612 μm; the posterior



Figs. 1–3. *Allosteringophorus prionuri* gen. et sp. n. —— 1. Entire worm, ventral view (holotype, NSMT-Pl 1638). 2. Male terminal genitalia, ventral view (NSMT-Pl 1651). 3. Ovarian complex, ventral view (immature worm, NSMT-Pl 2277). A, Acetabulum; CP, cirrus pouch; GA, genital atrium; GP, genital pore; L, Laurer's canal; M, metraterm; O, ovary; S, saccular outgrowth; T, testis; U, uterus; V, vitelline duct.

285–418×479–623 μm. Vas efferens arising from anterior end of each testis. Vas deferens and external seminal vesicle lacking. Cirrus pouch elongate, a little winding or sigmoid, 0.88–1.55×0.12–0.25 mm, containing elliptical unipartite seminal vesicle 128–561×78–214 μm, slender pars prostatica 372–862 μm long, prostatic cells, and cirrus 266–570 μm long. Genital atrium short to long, 0.33–0.66 mm long, the base

of which is provided with a saccular outgrowth surrounded by glandular cells. Genital pore submedian, usually slightly sinistral, just posterior to caecal bifurcation.

Ovary trilobed, 224–393×341–495 μm, submedian, posterior to and a little separated from rear testis, about equator of body (41–60% of body length). Oviduct arising from anterior end of ovary, giving off Laurer's canal and then joining with vitelline duct. Mehlis' glands between posterior testis and ovary. Seminal receptacle lacking. Laurer's canal running forward, but the opening not made out. Vitellaria tubuloacinous, lateral, from postacetabular level to near or beyond posterior testis. Uterus descending to posterior extremity of body, filling almost all available space posterior to ovary, and then running forward dorsal to ovary and testes. Sperms filling in proximal end of uterus. Metraterm poorly developed, lying parallel to posterior half of genital atrium and united with it at the middle. Uterine eggs numerous, small, operculate, 27–34×15–20 μm. Excretory vesicle Y-shaped; pore terminal; vesicle bifurcating at a level midway between anterior testis and acetabulum; arms extending to pharyngeal level.

Allosteringophorus gen. n.

Fellodistomidae, Fellodistominae. Body elongate, aspinose. Oral sucker subterminal; pharynx protruding into the base of oral sucker; esophagus very short, usually unrecognizable; caeca terminating posterior extremity. Acetabulum larger than oral sucker, located near anterior extremity. Testes tandem, postacetabular. Cirrus pouch elongate, extending well posterior to acetabulum, containing unipartite seminal vesicle, pars prostatica with prostatic cells, and cirrus. Genital atrium short to long, provided at the base with saccular outgrowth. Genital pore submedian, posterior to caecal bifurcation. Ovary trilobed, posttesticular. Laurer's canal present. Seminal receptacle absent. Uterus reaching posterior extremity. Receptaculum seminis uterium present. Metraterm poorly developed, united with genital atrium at the middle. Vitellaria lateral, from postacetabular level to posterior testis. Excretory vesicle Y-shaped, arms extending to pharyngeal level. Parasitic in intestine of marine teleosts.

Type species: *Allosteringophorus prionuri* sp. n.

Discussion. The present new genus is distinguished from all other genera of Fellodistomidae by having caeca ending at the posterior extremity, testes lying in tandem in the anterior hindbody, a posttesticular ovary, a cirrus pouch reaching well posterior to the acetabulum, a unipartite seminal vesicle, and vitellaria extending from the postacetabular level to the posterior testis.

According to YAMAGUTI (1971), the members of the subfamilies Antorchiinae and Baccigerinae of Fellodistomidae have posttesticular ovary. On this point, the present new genus coincides with them, but it is quite different from the genera belonging to the subfamilies Antorchiinae and Baccigerinae in the general structure. The members of the latter two subfamilies have short caeca, compact vitellaria, and a

convoluted tubular seminal vesicle in the Antorchiinae and a bipartite one in the Baccigerinae. On the other hand, the present genus resembles the members of the subfamily Fellodistominae in the general structure except the latter has a pretesticular ovary and a bipartite seminal vesicle (YAMAGUTI, 1971; BRAY & GIBSON, 1980). I provisionally place the present genus in the subfamily Fellodistominae.

References

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YAMAGUTI, S., 1971. Synopsis of Digenetic Trematodes of Vertebrates. 1074 pp., 349 pls. Tokyo, Keigaku Publ.