

***Gonocerca oshoro* sp. n. (Trematoda : Hemiuridae) from the ovary of the rat tail, *Nematonurus pectoralis* from the Gulf of Alaska**

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A number of large trematodes were collected from the ovary of the rat tail, *Nematonurus pectoralis* (Gilbert), caught from the depth of 446 m in the Gulf of Alaska (57°57'N, 137°03'W), by the trawl net of the T. S. "Oshoro Maru" of Hokkaido University, in July 14, 1968. Further studies showed them to be an apparently undescribed species of *Gonocerca* Manter, 1925.

A single host fish was infected with 13 trematodes. Two specimens were flattened, fixed by 10% formalin, stained in Delafield's hematoxylin and Semichon's carmine respectively and mounted in balsam. Another two were sectioned longitudinally and transversely respectively at 10  $\mu$ , and stained with hematoxylin and eosin for the studies of the internal morphology. Drawings were made by the aid of a microprojector.

***Gonocerca oshoro* sp. n.**

*Description*: Body subcylindrical, largesized form, tapering anteriorly, broadly rounded posteriorly. Cuticle smooth. Tail appendage lacking. Ventral sucker slightly post-equatorial, small, as large as oral sucker or little larger than the latter. Mouth opening subterminal, overlapped dorsally by lip-like projection of body. Oral sucker embedded in body. No prepharynx, muscular pharynx immediately posterior to oral sucker, short esophagus. Intestine bifurcating posteriorly to esophagus, and its undulating simple ceca reaching to posterior end of body.

Gonads crowded together posterior to ventral sucker. Genital pore ventral, median, close behind mouth opening. Ovary ir-

regularly lobed, median, anterior to testes. Vitellaria lobed deeply to four to six lobes, juxtapose, lateral to ovary, outer to ceca. Ootype dorsal or anterodorsal to ovary. Laurer's canal winding, opening dorsally between testes. Receptaculum seminis absent. Uterus entirely anterior to ovary, inner to ceca or overlapping the latter. Eggs large, numerous, operculate, lacking filament, light yellow and with fully developed ciliated miracidium. Testes large, rounded, slightly diagonal, in extreme posterior part of body. Seminal vesicle tubular, tapering anteriorly, located just posteroventrally to intestinal bifurcation. Prostate gland short, free in

Table 1. Measurements of two whole mounted specimens of *Gonocerca oshoro* sp. n.

	Paratype	Holotype
Length	28.2 mm	29.7 mm
Width	8.5	8.0
Ant. end to post. edge vent. sucker	15.8	17.4
Oral sucker	1.0×1.2	1.1×1.4
Ventral sucker	1.4×1.5	1.7×1.6
Sucker ratio*	1 : 1.4	1 : 1.5
Testes	R 2.5×4.6 L 2.9×2.6	2.0×2.0 1.6×1.7
Vitellaria	R 1.5×1.3 L 1.8×1.2	1.3×1.5 1.2×1.5
Pharynx	0.4×0.4	0.5×0.5
Ovary	1.1×1.2	0.9×1.0
Eggs**		61.5 (57-65) ×28.3 (26-31) $\mu$

\*—Comparison of maximum transverse diameter,  
\*\*—30 eggs in the upper part of uterus were measured.

R: right, L: left

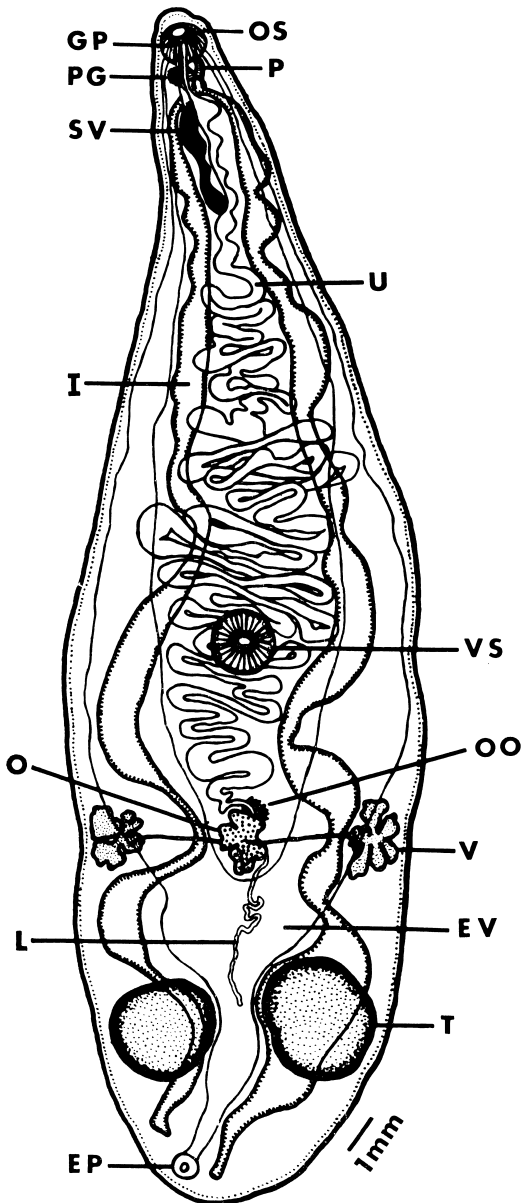


Fig. 1. *Gonocerca oshoro* sp. n. from *Nematonurus pectoralis*. Ventral view. EP: excretory pore, EV: excretory vesicle, GP: genital pore, I: intestine, L: Laurer's canal, O: ovary, OO: ootype, OS: oral sucker, P: pharynx, PG: prostatic gland, SV: seminal vesicle, T: testis, U: uterus, V: vitellarium, VS: ventral sucker.

parenchyma, located ventrally to pharynx, anterior to seminal vesicle. Cirrus pouch absent. Genital sinus short.

Excretory vesicle Y-shaped, between two testes, bifurcating just posteriorly to ovary, and its branches running forwards laterally, and uniting dorsally to Oral sucker. Excretory pore lying at slightly subterminal of posterior end of body, and leading into a spherical bladder with tall cylindrical epithelium.

Measurements on two whole mounted specimens are given in Table 1. The name *oshoro* refers to the T. S. "Oshoro Maru".

Host: *Nematonurus pectoralis* (Gilbert)

Location: Ovary

Locality: Gulf of Alaska

Holotype: Nat. Sci. Mus. Tokyo, Dept. Zool., NSMT-Pl.-25.

#### Discussion

In the genus *Gonocerca* Manter, 1925, six species have been described: *G. phycidis* Manter, 1925; *G. kobayashii* (Layman, 1930) Manter, 1934; *G. crassa* Manter, 1934; *G. macroformis* Wolfgang and Myers, 1954; *G. lobata* Byrd, 1963; and *G. trematomi* Byrd, 1963. The present new species *Gonocerca oshoro* is similar to *G. kobayashii* and *G. lobata* in having the lobed vitellaria, but it can be separated from four other members that lack the lobed vitellaria. *G. kobayashii* was described from the stomach of *Myxocephalus raninus* in Peter the Great Bay by Layman (1930), and from the esophagus and the stomach of *Dasycottus setiger* and *Cottunculus* sp. in Toyama Bay of Japan by Yamaguti (1934). *G. oshoro* differs from *G. kobayashii* in a much larger body size, a body form tapering anteriorly and ending broadly posteriorly, smaller sucker ratio, more deeply lobed vitellaria, larger eggs, and its location in the host. *G. lobata* was reported from the lower intestine of *Trematomus bernacchii* and *T. hansonii* in the Antarctic by Byrd (1963). This species is characterized by deeply and symmetrically four-lobed vitellaria, and a pre-equatorial ventral sucker.

*G. oshoro* is different from *G. lobata* in a much larger body size, a more attenuated form of the anterior body, a post-equatorial and smaller ventral sucker as compared with the body width, not symmetrically lobed vitellaria, smaller eggs, and its location in the host.

*G. macroformis* was described from the ovary of cod, witch and plaice flounders from Newfoundland by Wolfgang and Myers (1954). This species is characterized by the peculiar construction of the anterior portion of the ceca, a post-equatorial ventral sucker, a large body size, a body form, and its location in the host. *G. oshoro* resembles *G. macroformis* in a larger body size, a body form, and its location in the host. But the former is distinguished from the latter in having a smaller ventral sucker as compared with the body width, larger eggs, and particularly in having deeply lobed vitellaria, and in lacking the construction of the anterior portion of the ceca.

### Summary

*Gonocerca oshoro* sp. n. (Trematoda: Hemiuridae) is described from the ovary of the rat tail, *Nematonurus pectoralis* (Gilbert) caught by trawl net from the depth of 446 m in the Gulf of Alaska. It differs from six known species of *Gonocerca* Manter, 1925, in having a larger body size, a body form tapering anteriorly and broadly rounded posteriorly, a smaller ventral sucker as compared with the body width, not symmetrically, much (four to six lobes) and deeply

lobed vitellaria, simple ceca, and its location in the ovary of the host.

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アラスカ湾産ムネダラ *Nematonurus pectoralis* の卵巣寄生吸虫 *Gonocerca oshoro* sp. n.  
(Trematoda : Hemiuridae) について

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北海道大学水産学部所属練習船おしよ丸の第28次(1968年)北洋航海の際に、アラスカ湾内でトロール操業実習を行なったが、このときにとれたムネダラ *Nematonurus pectoralis* (Gilbert) (57°57'N, 137°03'W, 深度 446 m, 7月14日)の1匹の卵巣から大形吸虫13匹を見出した。検索の結果、この吸虫は *Gonocerca* Manter, 1925 に属する未記載種であることが判明した。

*Gonocerca* 属には既に6種が記載されている：*G. phycidis* Manter, 1925; *G. kobayashii* (Layman, 1930) Manter, 1934; *G. crassa* Manter, 1934; *G.*

*macroformis* Wolfgang and Myers, 1954; *G. lobata* Byrd, 1963; それに *G. trematomi* Byrd, 1963. ムネダラ寄生の *Gonocerca oshoro* sp. n. は、からだか極めて大きいこと、体形は前方が細まって後方が幅広く鈍端であること、腹吸盤は体幅に比べて極めて小さいこと、卵黄腺は多数に(4から6葉に)不均斉にそして深く分葉していること、小腸盲嚢が単純であること、寄生部位が卵巣内であることなどの特徴をもつていて、これらの点で6つの既知種とは区別される。