

**A New Species of the Genus *Diplosetis* (Acanthocephala, Diplosetidae)
from a Wrasse of Southern Japan**

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Abstract

A new species of acanthocephalan belonging to the family Diplosetidae, *Diplosetis ikedai*, is described from the intestine of a wrasse, *Cirrhilabrus cyanopleura*, caught off the Amami-oshima Island, southern Japan. It differs from others in the genus *Diplosetis* in that the proboscis hooks differ much more in size from the apical to the basal, the lemnisci extend well posterior to the proboscis sheath, the deferent duct is saccular, and the female has a conical process in the fore part of the trunk.

Key words: acanthocephalan, *Diplosetis ikedai* sp. nov., *Cirrhilabrus cyanopleura*, Japan

During the course of a study of the parasitic helminths in marine fishes caught off the Amami-oshima Island in the northern Ryukyus, Japan, a new species of acanthocephalan belonging to the genus *Diplosetis* was detected from the intestine of a wrasse, *Cirrhilabrus cyanopleura*.

The acanthocephalans were fixed in AFA or 70% ethanol under slight pressure, stained with Heidenhain's hematoxylin and mounted in balsam. The specimens are deposited in the National Science Museum, Tokyo (NSMT).

Family Diplosetidae
Diplosetis ikedai sp. nov.
(Figs. 1–5)

Habitat. Intestine of *Cirrhilabrus cyanopleura* (Bleeker) (Labridae).

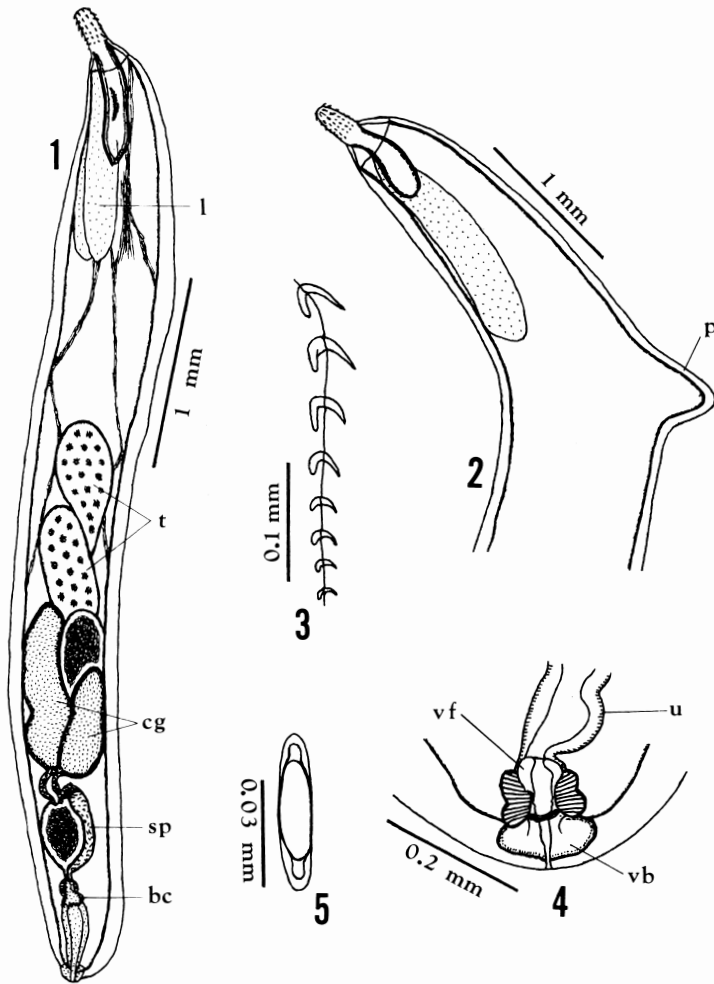
Locality. Off the Amami-oshima Island, southern Japan.

Date. 5-III-1991.

Specimen No. Holotype male (NSMT-As 2157H), 6 paratype males and 4 paratype females (NSMT-As 2157P).

Description. Male. Based on 7 specimens. Trunk claviform, unarmed, 3.6–4.9 mm in length, with maximum width of 0.65–0.83 mm

at anterior 1/3 of the trunk. Hypoderm thick, up to 0.14 mm. Neck truncated conical, 0.09–0.12 mm long. Proboscis subcylindrical, 0.20–0.23 × 0.08–0.12 mm, with 12 longitudinal rows of 7–8 hooks each; apical hooks slender, 30–38 μm long; subapical hooks rather stout, 38–40 μm long; basal hooks smallest, 11–13 μm long. Proboscis sheath spindle-shaped, double-walled, 0.45–0.55 × 0.10–0.17 mm. Ganglion fusiform, 0.10–0.23 × 0.02–0.04 mm, in the near middle of proboscis sheath. Lemnisci 0.50–1.07 × 0.15–0.32 mm, usually extending well posterior to proboscis sheath. When the proboscis is invaginated in the sheath, the lemnisci do not extend but become thick. Testes longitudinally elongated, mutually diagonal, located in middle third of trunk, or occasionally more anteriorly or posteriorly; the anterior 0.70–1.03 × 0.27–0.55 mm and the posterior 0.66–0.97 × 0.28–0.51 mm. Cement glands two in number, elliptical, obliquely juxtaposed, just posterior to the rear testis or overlapping partly the posterior end of testis, one is slightly larger than the other; larger one 0.80–1.60 × 0.20–0.40 mm and smaller one 0.63–1.40 × 0.29–0.38 mm. Deferent duct saccular, seems as if seminal vesicle, 0.70–1.38 × 0.17–0.40 mm, lying between the cement glands. Seminal vesicle 0.36–0.60 × 0.15–0.23 mm, parallel to Säfftigen's pouch. Säfftigen's pouch elongated, 0.40–0.80 × 0.09–0.15 mm. Bursal cap 0.18–



Figs. 1–5 *Diplosetis ikedai* sp. nov. – 1. Male. 2. Anterior end of female. 3. Proboscis hooks of female. 4. Posterior end of female. 5. Egg. bc, bursal cap; cg, cement gland; l, lemniscus; p, process; sp, Säfteigen's pouch; t, testis; u, uterus; vb, vaginal bulb; vf, vaginal funnel.

0.26 mm wide, with about 15 digitiform rays. Copulatory bursa 0.35–0.39 mm wide.

Female. Based on 4 specimens. Trunk slender, 17.5–21.5 mm long and 0.87–1.05 mm wide near the middle, with a conical process of 0.40–0.45 mm long situated laterally 2.1–2.3 mm (11–13%) from the anterior end of trunk. Hypoderm up to 0.32 mm thick. Neck 0.11–0.16 mm long. Proboscis 0.26–0.29 × 0.12–0.17 mm. Proboscis hooks arranged as in male, become progressively smaller as they go from the apical to the basal; apical hooks 40–44 μ m long,

subapical hooks 37–40 μ m long and basal hooks 6–11 μ m long. Proboscis sheath 0.52–0.66 × 0.17–0.22 mm. Ganglion 0.20–0.25 × 0.03–0.05 mm. Lemnisci 2.00–2.13 × 0.21–0.33 mm. Free ovarian ball up to 0.40 mm long. Uterus slender, 4.8–5.4 mm long, extending 23–30% of body length from the posterior end of trunk. Vaginal funnel 66–92 × 62–72 μ m. Vaginal sphincter 92–113 × 123–158 μ m. Vaginal bulb 66–87 × 107–138 μ m. Vulva terminal. Eggs elliptical, three-shelled; outer shell 45–53 × 10–13 μ m; middle shell 37–42 μ m long, with polar pro-

longations; inner shell 28–31 μm long.

Remarks. The genus *Diplosentis* contains two species: *D. amphacanthi* Tubangui et Masilungan, 1937 from *Amphacanthus* (= *Siganus*) *oramin* of the Philippines and *D. manteri* Gupta et Fatma, 1979 from *Arius arius* of India. The latter species was described based on only one male specimen. The present new species resembles *D. amphacanthi* in general anatomy, but differs from the latter in that the proboscis hooks differ much more in size from the apical to the basal, the lemnisci usually extend well posterior to the proboscis sheath, the deferent duct expands like a seminal vesicle, and the female possesses a conical process in the fore part of the trunk. The function of the process is unknown.

Acknowledgements

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References

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