AUSTRALIAN ACANTHOCEPHALA, No. 11

by S. J. Edmonds*

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SUMMARY

Two new species of Acanthocephala are described from Australian fish: *Telosentis australiensis* from *Anguilla reinhardtii* Steindachner and *Neogorgorhynchus robustus* from *Siganus lineatus* (Cuvier and Valenciennes).

Telosentis australiensis n.sp.

Figs. 1-5

Telosentis Van Cleave, 1923; Golvan, 1960.

Host and Locality—One male and two female specimens collected by F. A. Ballantyne, Oct., 1962, from the small intestine of *Anguilla reinhardtii* Steindachner at Moggil Creek, Brisbane, Australia (specimens sent for identification by Dr. J. Pearson, Dept. of Parasitology, University of Queensland).

Description—The length of the trunk of the male is 4·0 mm. and its maximum width in the middle of the trunk is 0·6 mm. The length of the females is 5·1-5·6 mm. and their maximum width in the anterior half of the trunk is 0·65-1·00 mm. The anterior region of the trunk is armed with numerous rows of posteriorly directed spines which extend for about one-third of the way along the ventral surface. They are about 25-30 μ long. The introvert of the male is almost cylindrical; its length is 0·72 mm. and maximum width 0·14 mm. The maximum length of the introvert of the female is 0·78 mm. and the maximum width 0·18 mm. The introvert is armed with 16 longitudinal rows of 23-26 hooks per row. The size and shape of some of the hooks is shown in Fig. 3. The hooks on the anterior two-thirds of the introvert are largest and possess rooting processes. The most posterior hook of each longitudinal row is slightly larger than those immediately anterior to it. The difference in the size of the dorsal and ventral hooks that is found in *T. exiguus* (von Linstow, 1901) and in *T. tenuicornis* (Van Cleave, 1918) is not noticeable in the Australian specimens.

Although the body wall is thick, the outer epidermal layer itself seems to be thin and easily distorted. The receptaculum is 1·2-1·5 mm. long and double walled. The lemnisci are as long as or slightly longer than the receptaculum. The testes are ellipsoidal and about 0·3 mm. long; they lie almost one behind the other. The cement glands are long pyriform and pressed closely together; their number was not able to be determined. The uterus is long and the vaginal complex consists of two bulbs. No genital spines were observed in the female and only four in the posterior region of the male. The eggs are spindle-shaped (55-56) μ long and (10-13) μ wide, and the female aperture is subterminal.

Systematic Position—The generic position assigned to these specimens is not altogether satisfactory. They closely resemble species of the genus *Telosentis* Van Cleave, 1923, but the female lacks genital spines, the presence of which is a generic character. Golvan (1960, p. 159) says that the genital spines of *Telosentis* are fragile. This being so, I prefer to place them in the genus *Telosentis* rather than create another genus within the family *Rhadinorhynchidae* to contain them.

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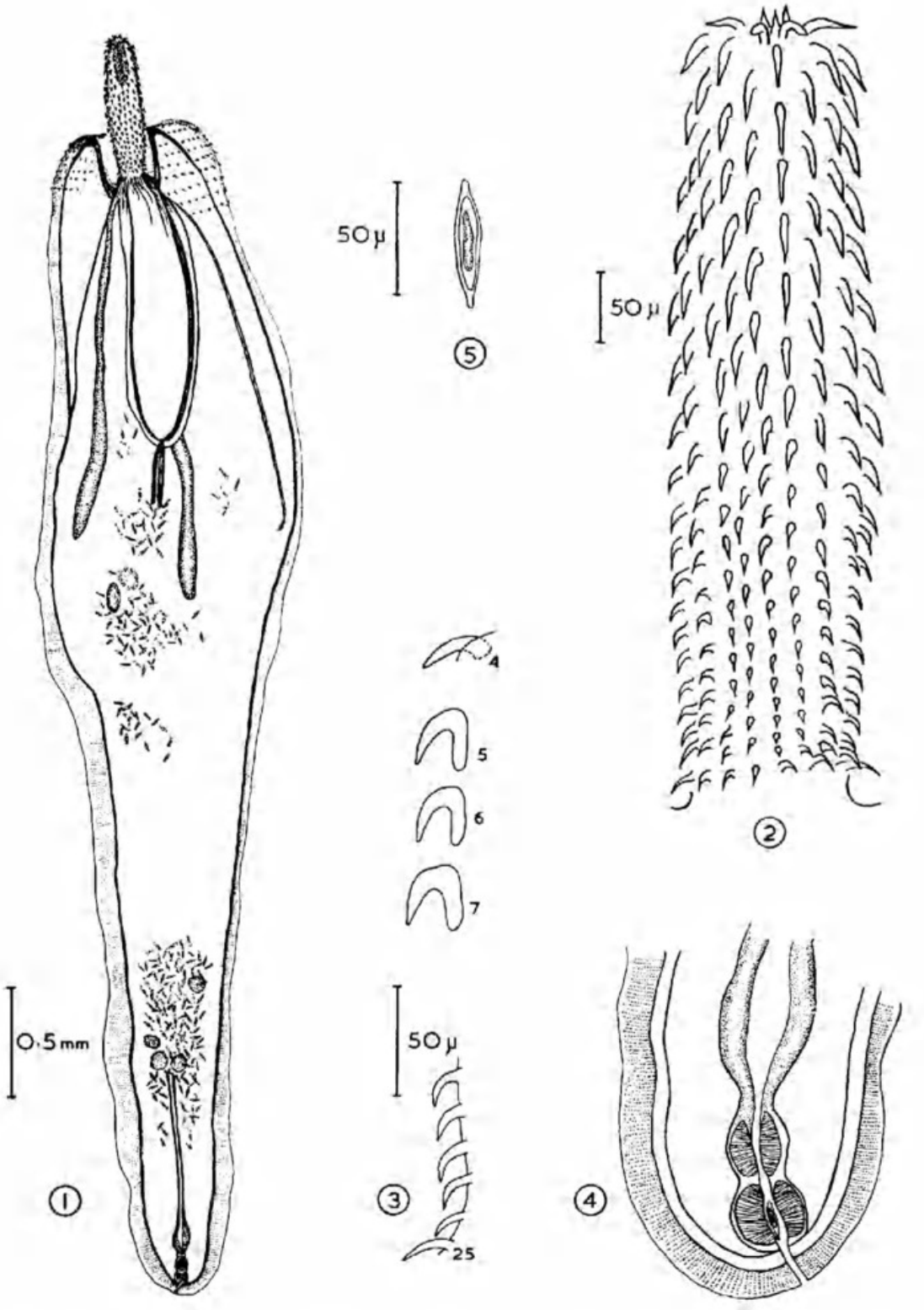


Figs. 1-5. *Telosentis australiensis*. 1, female; 2, introvert of female; 3, some introvert hooks; 4, posterior region of female; 5, egg.

The specimens differ from (1) *T. molini* Van Cleave, 1923, the introvert of which is armed with 12 longitudinal rows of 20 hooks and (2) *T. exiguus* (von Linstow, 1901) armed with 12 rows of 16-18 hooks. They are closely related to *T. tenuicornis* (Van Cleave, 1918), the introvert of which is armed with 10-14 rows of 26 hooks. The introvert of the Australian specimens, however, possesses more longitudinal rows of hooks than *T. tenuicornis* (Van Cleave, 1918, Plate III B) and the spines on the anterior region of the trunk are relatively smaller but far more numerous than those of *T. tenuicornis* as shown by Van Cleave (1918, Plate III, Fig. 3). For these reasons they are regarded as a new species.

Type Specimen—Australian Museum, Sydney.

Type Host—Anguilla reinhardtii.

Neogorgorhynchus robustus n.sp.

Figs. 6-9

Neogorgorhynchus Golvan, 1960, pp. 150-151.

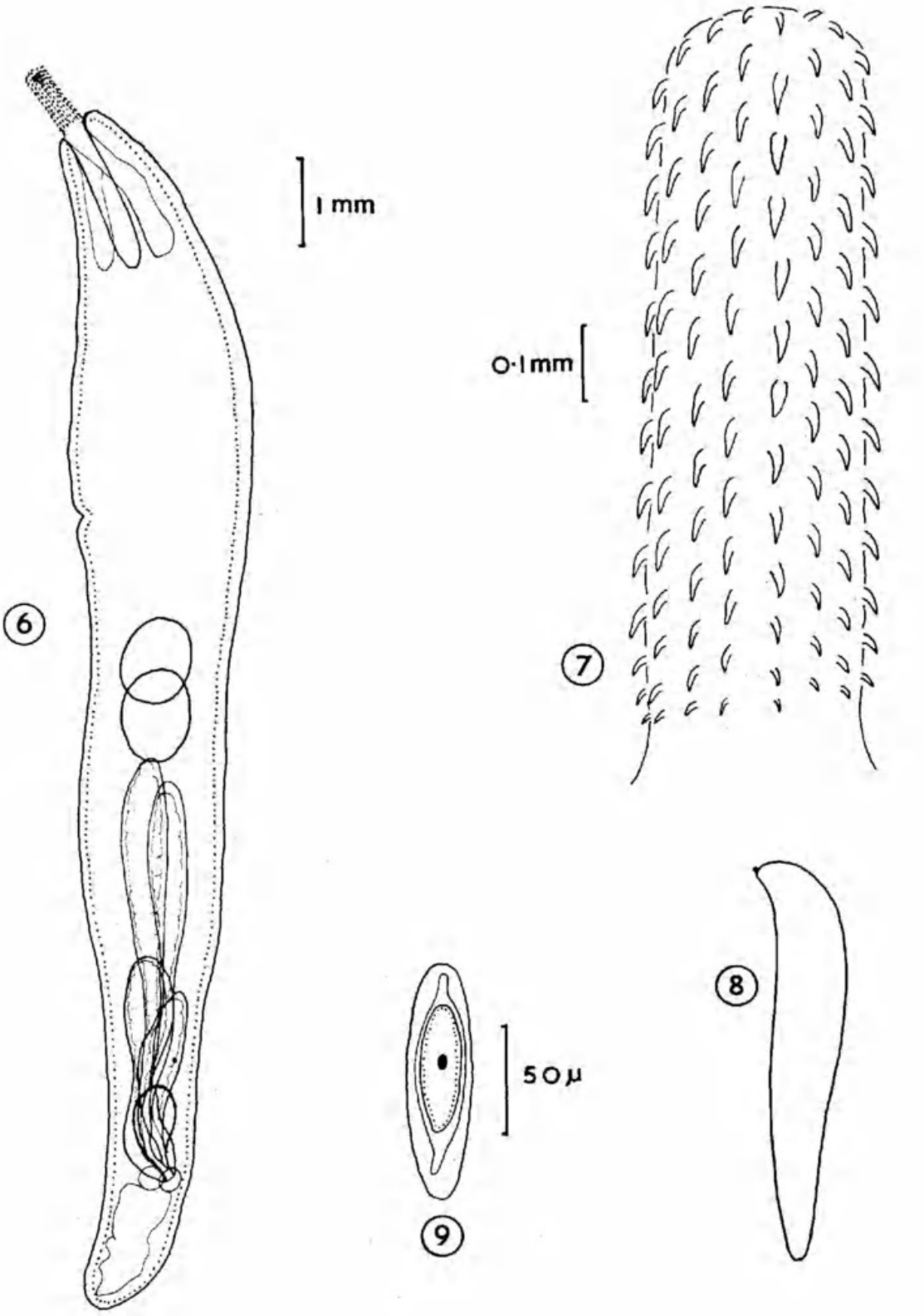
Host—One male and four female specimens were collected from the intestine of the fish, *Siganus lineatus* (Cuv. et Val.). Collector Dr. J. Pearson (University of Queensland), June 2, 1956.

Locality—Heron Is., Queensland.

Description—The specimens show marked sexual dimorphism, the females being about two and a half times as long as the males. The trunk of both sexes is stout and curved ventrally to some extent in the anterior region. Posteriorly it tapers gradually. Two lateral lacunae show up clearly in the body wall of each of the specimens.

The trunk of the male is 15 mm. long and its maximum width—in the middle of the trunk—is about 2 mm. A cylindrical introvert arises somewhat ventrally from the anterior region of the trunk. Compared with the size of the trunk the introvert is small. The armed part is 0·75 mm. long and 0·25 mm. wide, and there is a short unarmed section about 0·08 mm. long. The former bears 14 longitudinal rows each containing 12-13 hooks per row. The posteriorly placed hooks are smallest. The trunk is without spines. The receptaculum is double-walled, 2·2 mm. long and 0·3 mm. wide. The lemnisci are short and sac-like. The testes are ellipsoidal and 1·2-1·5 mm. long. They overlap slightly. There are four cement glands that are arranged in pairs and that arise at different levels. The genital opening is terminal.

The trunk of the female is 28-37 mm. long and about 3·5 mm. wide in the mid-region. The fully extended introvert is cylindrical, 0·9-1·0 mm. long and about 0·3 mm. wide. There is in addition a short unarmed section 0·05-0·08 mm. long. The introvert is armed with 14-16 longitudinal rows each of 12-14 hooks per row. A double-walled receptaculum is 2·4-2·8 mm. long and 0·35 mm. wide. The lemnisci are stout and sac-like and about as long as the receptaculum. The female genitalia are about 4-5 mm. long and the anal aperture is sub-terminal. Ripe eggs are (100-115) μ long and (22-29) μ wide and have polar prolongations of the middle shell.



Figs. 6-9. *Neogorgorhynchus robustus*. 6, male; 7, introvert; 8, female; 9, egg.

Systematic Position

These specimens from Queensland closely resemble *Neogorgorhynchus aspinosus* (Fukui and Morisita, 1938) from the fish, *Teuthis fuscescens*. The introvert of *N. aspinosus* according to Fukui and Morisita (1938) and Yamaguti (1939) is armed with 17-18 longitudinal rows of 16-19 hooks per row while that of the specimens from *Siganus lineatus* is armed with 14-16 rows of 12-14 hooks per row. The introvert of *N. nudus* (Harada, 1938), the only other species in this genus, is armed with 14 longitudinal rows of 24-25 hooks per row. For these reasons the specimens from *Siganus lineatus* are regarded as new and because they are stout are given the specific name *robustus*.

Type Specimen—Australian Museum, Sydney.

Type Host—*Siganus lineatus*.

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