

AUSTRALIAN ACANTHOCEPHALA, No. 14. ON TWO SPECIES OF *PARARHADINORHYNCHUS*, ONE NEW

by S. J. EDMONDS*

Summary

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A new species of Acanthocephala, *Pararhadinorhynchus coorongensis*, is described from the fish *Aldrichetta forsteri* (Cuvier & Valenciennes) from South Australia.

Introduction

Johnston & Edmonds (1947) erected a new genus *Pararhadinorhynchus* based on *P. mugilis*, a parasite from *Mugil cephalus* Linnaeus. On several occasions during the last ten years, a second species of the same genus has been found in South Australia in the mullet *Aldrichetta* (= *Agonostomus*) *forsteri* (Cuvier & Valenciennes). The new species is described here and the re-checked dimensions of the introvert and egg of *P. mugilis* are given. How specific the two parasites are in their distribution is not clear because collectors have sometimes confused the two hosts. The identifications of the fishes carrying the parasites are based on the descriptions given by Scott (1962).

Pararhadinorhynchus coorongensis n.sp.

FIGS. 1–5

Host: *Aldrichetta forsteri* (Cuvier & Valenciennes).

Localities: (1) Coorong, S.A.; coll. J. Harris, 1962. (2) Port Willunga, S.A.; coll. T. H. Johnston, 1927: (H.C. 1055). (3) Fish from Adelaide Fish Market (class material, coll. S. J. Edmonds, 1969, 1971). (4) Fish from Adelaide Fish Market: coll. H. Manter, 1967.

Type specimens (male and female): Australian Museum, Sydney.

Description: Size moderate; shape cylindrical to sub-spindle-like, slightly broader in anterior third or quarter. Posterior region may taper

slightly. Posterior extremity sometimes rounded or slightly swollen.

Trunk of female 9–15 mm long x 0.45–0.55 mm. Trunk of male 7–11 mm x 0.40–0.70 mm. Trunk without spines.

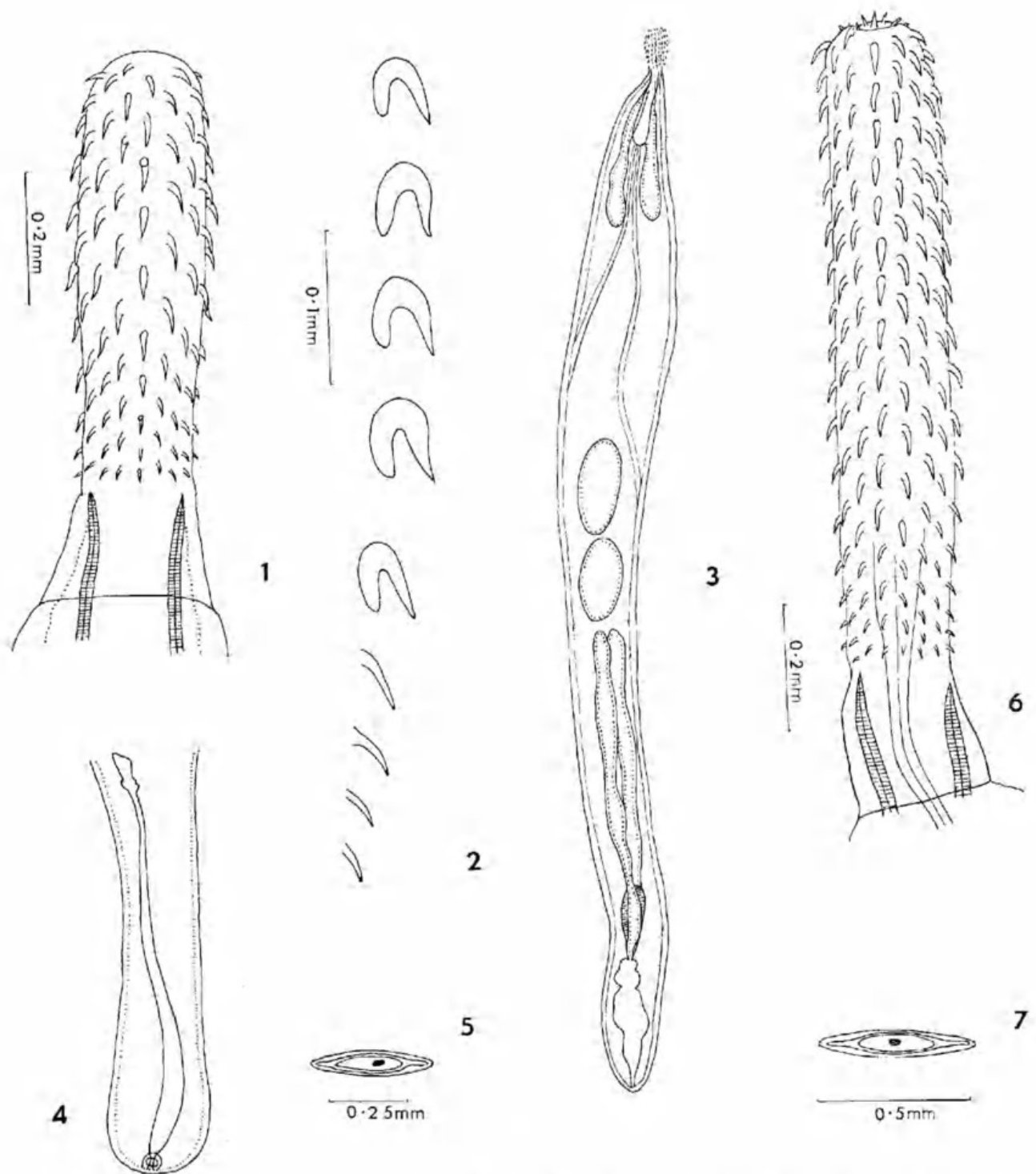
Introvert cylindrical to club-shaped; the part bearing hooks 0.51–0.62 mm long in female and 0.50–0.58 mm in male. Maximum width 0.15–0.22 mm in female and 0.12–0.23 mm in male. Fourteen to sixteen, usually 16, longitudinal rows of 8–10, usually 9, hooks per row (Fig. 2). Short unarmed neck (0.15 mm long) in some specimens. Introvert sheath double walled, 0.6–0.8 mm long x 0.18–0.26 mm wide. Lemnisci about twice as long as sheath and usually slightly swollen posteriorly. Position of brain not known.

Female complex relatively long, 2.8–3.4 mm. Female aperture terminal. Ripe eggs, possessing prolongations of middle shell, 0.042–0.046 mm x 0.008–0.010 mm.

Testes ellipsoidal to subglobular and placed in tandem; anterior one 0.45–1.05 mm x 0.35–0.45 mm and posterior one 0.50–0.91 mm x 0.34–0.43. Cement glands, two, long and slender, sometimes constricted at some points. Male aperture terminal. No genital ganglion, like that found in male specimens of *P. mugilis*, present.

Systematic position: The specimens fall within the order Palaeacanthocephala Meyer. *P. coorongensis* differs from *P. mugilis* Johnston & Edmonds, 1947, the latter possessing a

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Figs. 1-5. *Pararhadinorhynchus coorongensis*. Fig. 1.—Introvert. Fig. 2.—Row of nine hooks. Fig. 3. Male. Fig. 4.—Posterior of female. Fig. 5.—Egg.

Figs. 6-7. *Pararhadinorhynchus mugilis*. Fig. 6.—Introvert. Fig. 7.—Egg.

longer introvert armed with 18 longitudinal rows of 16–17 hooks per row. It also differs from *Diplosetis amphacanthi* Tubangui & Masilungan, 1937, in which the introvert bears 12 longitudinal rows of 8–9 hooks per row and in which the lemnisci are enclosed in a membranous sac.

P. coorongensis is the second acanthocephalan species found in *A. forsteri*. *Neoechinorhynchus aldrichettae* Edmonds (1971) is the other.

***Pararhadinorhynchus mugilis* Johnston & Edmonds, 1947: 15.**

FIGS. 6–7

The material from which the type description was made contained only two specimens

with everted introverts. Recently a few more specimens in a fully extended condition became available and consequently the measurements given in 1947 have been rechecked. The host was the type host, *Mugil cephalus* Linnaeus.

Introvert (Fig. 6) cylindrical. Length of armed region 0.88–0.94 mm and width 0.16–0.25 mm. Sixteen to eighteen, usually 18, longitudinal rows of 16–17, usually 17, hooks per row. Unarmed neck, 0.15–0.25 mm long. Ripe eggs, with polar prolongations of the middle shell, measure 0.052–0.056 mm x 0.013–0.015 mm.

Type specimens (male and female): Australian Museum, Sydney (not the South Australian Museum, as stated by Johnston & Edmonds 1947).

References

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