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Gerald D. Schmidt

University of Northern Colorado

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Acanthobothrium urolophi sp. n., a Tetrphyllidean Cestode (Oncobothriidae) from an Australian Stingaree

GERALD D. SCHMIDT

Department of Biology, University of Northern Colorado, Greeley, Colorado 80631

ABSTRACT: *Acanthobothrium urolophi* sp. n. is described from a common stingaree, *Urolophus testaceus*, from South Australia. It differs from all other species in being apolytic and acraspedote, in having hooks 105–115 μ long, one accessory sucker 80–90 wide on each bothridium, and 40–72 testes in two longitudinal rows.

This report is based upon four specimens recovered from the spiral valve of a common stingaree, *Urolophus testaceus*, which I speared at Glenelg Beach near Adelaide, South Australia, in January 1970. They represent a new species and are the basis of the following measurements and description. All measurements are in microns unless otherwise stated.

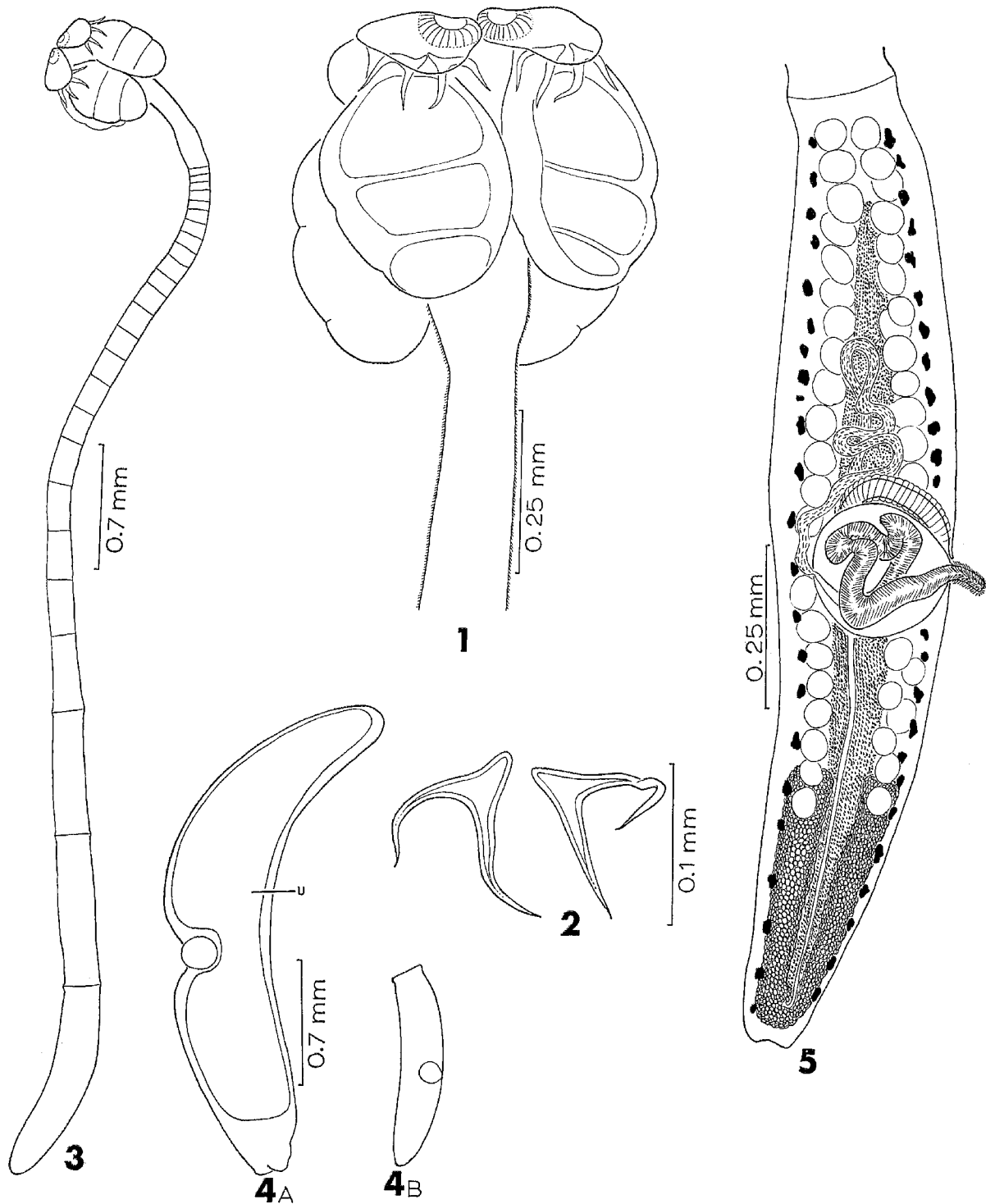
Acanthobothrium urolophi sp. n. (Figs. 1–5)

Description

Scolex (Fig. 1) broad, clearly set off from peduncle, 360 to 440 long, 440 to 640 greatest width. Four bothridia present, each 400 to 410 long, 280 to 320 greatest width. Each bothridium with three loculi of the following lengths: anterior 150 to 200, middle 100 to 130, posterior 80 to 90. Muscular pad present

on anterior end of each bothridium, each with single accessory sucker 80 to 90 wide. Two bifurcated hooks (Fig. 2) present at base of each muscular pad. Handle of hook 25 to 30 long, inner prong 75 to 80 long, outer prong 75 to 90 long. Total hook length (from tip of outer prong to tip of handle) 105 to 115. Tips of prongs very delicate. Peduncle 560 to 720 long (measured from base of scolex to first discernible segmentation), covered with minute spines.

Strobila (Fig. 3) thin, delicate, apolytic, acraspedote, 8.0 to 9.5 mm long, with 23 to 26 proglottids. Last three proglottids mature, 1.3 to 1.5 mm long, 275 to 300 greatest width. Proglottids continue growth after detaching (Figs. 4A, 4B); when gravid they measure 2.7 to 3.8 mm long, 400 to 560 greatest width. Reproductive systems (Fig. 5) protandrous. Genital pores about equatorial in mature seg-



Figures 1-5. *Acanthobothrium urolophi* sp. n. from an Australian stingaree. 1. Scolex. 2. Scolex hooks. Bent prong on right hook is an artifact. 3. Entire worm. 4A. Gravid proglottid. u—uterus. 4B. Mature proglottid, same scale as 4A. 5. Mature proglottid.

ments, at about posterior third in gravid segments, irregularly alternating. Genital atrium absent.

MALE GENITALIA: Forty to 72 testes, arranged in two longitudinal rows. Each testis 40 to 100 wide in mature segment. When first discernible, about 40 testes are present, increasing to about 70 as proglottid matures. Twenty-one to 40 testes on aporal side, 13 to 31 prevaginal on poral side, 6 to 11 postvaginal on poral side. Cirrus pouch spheroid, thin-walled, 100 to 200 wide. Vas deferens anterior to cirrus pouch when filled with sperms. Cirrus long, slender, covered with small spines of similar size and shape throughout its length. Cirrus present only in mature proglottids, apparently being lost at copulation, although not seen in the vaginas of gravid proglottids.

FEMALE GENITALIA: Ovary at posterior end of segment, U-shaped with two anteriorly directed lobes that do not reach level of cirrus pouch, 280 to 320 total length. Vitelline follicles small, few, lateral. Distal end of vagina ventral or anterior to cirrus pouch, with thick cuticular lining and muscular walls. Proximal portion of vagina thin-walled. Seminal receptacle not seen. Uterus a median, longitudinal tube, becoming a thin-walled sac when gravid. Eggs spherical, about 46 wide (only very young eggs were not collapsed during preparation for slides).

TYPE HOST: Common stingaree, *Urolophus testaceus* (Muller et Henle) (Myliobatiformes: Urolophidae).

LOCATION: Spiral valve.

TYPE LOCALITY: Glenelg, South Australia (Gulf of St. Vincent).

TYPE SPECIMENS: USNM Helm. Coll. holotype No. 72284, 3 paratypes No. 72285.

REMARKS: Much attention has been centered on this genus in recent years. Goldstein (1967, 1969) and Williams (1969) have offered extensive reviews of the more than 70 species within it.

Four species have been reported from rays of the family Urolophidae. *Acanthobothrium dasybati* Yamaguti, 1934 was reported from *Urolophus fuscus* Garmen, from Japan (Yamaguti, 1952; and *A. crassicolle* Wedl, 1855, *A. dujardini* Beneden, 1849, and *A. parviuncinatum* Young, 1954, from *Urolophus halleri* (Cooper), all from California (Young, 1954).

Acanthobothrium urolophi sp. n. differs from

A. dasybati in having an accessory sucker on the anterior part of each bothridium, which *A. dasybati* lacks, and in being apolytic with few segments while *A. dasybati* has a strobila of up to 80 segments.

Acanthobothrium urolophi has hooks 105 to 115 long and 40 to 72 testes, while *A. crassicolle* has hooks 180 to 230 long and 100 to 153 testes; *A. dujardini* has hooks 180 to 210 long and 20 to 38 testes; and *A. parviuncinatum* has hooks 87 long and 12 to 14 testes per segment. *Acanthobothrium urolophi* thus appears to differ significantly from other species reported from Urolophidae.

Williams (1969) discussed host specificity of this genus in considerable detail, concluding that it is nearly absolute. Although it is doubtful that *A. urolophi* would occur in other families of rays, I further compared it with published descriptions of all other species from elasmobranchs and found none with the combination of characters typical of *A. urolophi*: (1) apolytic; (2) 40 to 72 testes in two longitudinal rows; (3) hooks 105 to 115 in total length; (4) postvaginal testes present; and (5) one accessory sucker present on each bothridium.

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