Phyllobothrium kingae sp. n., a Tetraphyllidean Cestode from a Yellow-spotted Stingray in Jamaica

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ABSTRACT: Phyllobothrium kingae sp. n. is described from Urolophus jamaicensis from Discovery Bay, Jamaica. It is most similar in size of strobila and number of testes to P. biacetabulum Yamaguti, 1960, but differs from that species in having bilaterally expanded bothridia, each with about 60 loculi and a single accessory sucker, compared with rounded bothridia having about 40 loculi and a double accessory sucker. This is the first species of Phyllobothrium from the Urolophidae.

This report is based upon four specimens recovered from the spiral valve of a yellow-spotted stingray, Urolophus jamaicensis, which I speared at Discovery Bay, Jamaica, in March 1977. They represent a new species and are the basis for the following measurements and description. All measurements are in micrometers unless otherwise stated.

Phyllobothrium kingae sp. n. (Figs. 1-4)

DESCRIPTION: Scolex (Fig. 1) with four stalked bothridia, 0.88 to 1.32 mm long by 0.88 to 1.38 mm wide, measured from extremities of bothridia. Each bothridium (Fig. 2) bilaterally expanded, with about 60 weak, marginal loculi and a single, median, proximal accessory sucker which is 70 to 80 by 65 to 90. Bothridia 400 to 450 long by 0.88 to 1.12 mm wide. Peduncle of scolex 160 to 200 long by 170 by 200 wide. Neck absent.

Strobila delicate, about 10 mm long, consisting of 30 to 35 proglottids. Proglottids acraspedote, apolytic. Mature proglottids (Fig. 3) 1.15 to 1.75 mm long, 150 to 200 greatest width. Gravid proglottid (Fig. 4) (attached to strobila) 2 mm long, 440 to 460 greatest width. Reproductive systems protandrous. Genital atrium absent. Genital pores post-equatorial, one fourth to one third from posterior end, irregularly alternating.

MALE GENITALIA: 26 to 32 testes in two longitudinal rows, 12 to 16 aporal, 14 to 16 poral, none located posterior to cirrus pouch. Each testis 50 to 70 wide in mature segment.

Cirrus pouch ovoid, thick-walled, 100 to 120 long, 80 to 90 wide, containing a short ejaculatory duct. Vas deferens posterior to cirrus pouch. Cirrus short, apparently unarmed but spines may have been lost. Cirrus pouch and cirrus present only in mature and gravid segments.

FEMALE GENITALIA: Ovary near posterior end of segment, U-shaped with two equal, anteriorly directed lobes that nearly reach level of cirrus pouch, 320 to 480 long, 95 to 150 across tips of both anterior lobes. Vitelline follicles few, small, lateral. Distal end of vagina anterior to cirrus pouch, with thick lining and muscular wall. Proximal portion of vagina thin-walled. Seminal receptacle small. Uterus a median, longitudinal tube, becoming a thin-walled sac filled with eggs anterior to cirrus pouch (Fig. 4). Eggs collapsed during preparation for slides so could not be measured.

TYPE HOST: Yellow-spotted stingray, Urolophus jamaicensis (Cuvier, 1817).

LOCATION: Spiral valve.

TYPE LOCALITY: Discovery Bay, Jamaica.

TYPE SPECIMENS: USNM Helm. Coll. holotype no. 74636; 3 paratypes no. 74637.

ETYMOLOGY: The species is named in honor of Ms. Kinga Kovacs, my diving buddy during two expeditions to Jamaica.

Remarks

Phyllobothrium was reviewed by Williams (1968) who retained 22 species as provisionally valid. The only species added since that monograph is P. piriei Williams, 1968. The present species was compared with descriptions of all of these, as well as those of Crosso-
Phyllobothrium kingae sp. n. from a Jamaican stingray. 1. Scolex. 2. Bothridium. 3. Mature proglottid. 4. Gravid proglottid (bottom) attached to a nearly mature proglottid (top), showing disparity of size. The black area illustrates the gravid uterine bothrium Linton, 1889, which are similar to Phyllobothrium.

The size and shape of the bothridia of P. kingae are most similar to those of P. lactuca Beneden, 1849, a common parasite of elasmobranchs, with apparently world-wide distribution. That species, however, has a strobila up to 150 mm long, and about 200 testes, compared with a strobila only 10 mm long, and 26 to 32 testes for P. kingae.

In size of strobila and number of testes, P. kingae is most similar to P. biacetabulum Yam-
guti, 1960 from *Rhinobatus schlejeli* from the Inland Sea, Japan. The strobila of that species is 3.5 to 8.5 mm long and it has 18 to 30 testes. However, its bothridia are nearly circular, and each has about 40 marginal loculi, compared with 60 in *P. kingae*. Further, there are two fused accessory suckers, one behind the other, compared with a single, simple sucker in the case of *P. kingae*.

It is therefore clear that the specimens from *Urolophus jamaicensis* represent a species new to science. The fact that this is the first species in the genus to be described from any member of the Urolophidae supports this conclusion as there is very high host specificity in *Phyllobothrium* (Williams, 1968).

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**Literature Cited**