

With the description of *Calyptrobothrium chalarosomum* n. sp. (see below), the genus thus consists of three species at the present time, and their distinctions are indicated in the discussions following the descriptions of each.

***Calyptrobothrium riggii* Monticelli, 1893. (Figs. 22, 23)**

Syn: *Calyptrobothrium occidentale* Linton, 1901 *pro parte*.

Calyptrobothrium minus Linton, 1907.

Phyllobothrium riggii Southwell, 1925 *pro parte*.

Phyllobothrium riggii Williams, 1958 *pro parte*.

Phyllobothrium riggii Yamaguti, 1959 *pro parte*.

HOST: *Torpedo fairchildi* Hutton.

LOCALITY: Cook Strait; Oamaru Harbour.

HABITAT: Spiral valve.

DESCRIPTION. One unsegmented strobila and several free, mature proglottids of this species were obtained from an electric ray in which several strobilae and free proglottids of *C. occidentale* were also present. The species is apparently extremely hyperapolytic as is *C. occidentale*. The description is based on observations of the living specimen and on five stained, mounted free proglottids.

Scolex and Neck. In living worms the bothridia appear relatively thin and delicate, but are highly active with a prominent anterior sucker relatively small in comparison to other species of the genus. The bothridia act together crosswise rather than in dorsal and ventral pairs, and when the worm is placed in sea water, can be seen continually to extend beyond the tip of the scolex and then to contract and withdraw as the other pair extends forward.

In stained and mounted specimens the bothridia are 0.585–0.690mm long and the anterior sucker 0.175mm in maximum diameter. The bothridia are free of the cephalic peduncle for a considerable portion of their length and their abothrial surfaces, as well as the surface of the neck, are covered with short, hair-like spines. The total length of the single strobila obtained is 7.3mm.

Free Proglottid: External Characters. Free proglottids measure 1.3–2.4mm long by 0.4–0.7mm wide. They are widest at the level of the genital atrium, whose lips protrude markedly, giving the proglottid a wedge shape. A well defined portion of the anterior end is devoid of genitalia and gives the rounded tip of the proglottid a distinctly clear appearance.

Male Genitalia. The testes are spherical, entire and occur generally in two layers; they number 61–64 and are 0.084–0.091mm in diameter. No testes occur in the area bounded by the vagina, ovary and poral border of the proglottid, and only a few occur posterior to the level of the cirrus pouch on the aporal side of the proglottid. The vas deferens is formed of several thin coils filling the space between the end of the cirrus pouch and the curve of the vagina as it turns posteriorly. The cirrus pouch is voluminous, 0.255–0.450mm long by 0.105–0.180mm wide, and is flexed anteriorly in the proglottid at an angle of approximately 45° from the genital atrium; its proximal two-thirds is filled with the numerous coils of the ejaculatory duct, while the remainder is occupied by the two or three coils of the cirrus. The latter is lined with relatively long, slender, slightly recurved spines. The gonopore is situated in the posterior third of the proglottid margin.

Female Genitalia. The thick-walled, narrow vagina opens directly into the back wall of the genital atrium, anterior to the cirrus opening, and extends inward around the anterior wall of the cirrus pouch to the middle of the proglottid, whence it turns posteriorly and extends as a thin-walled, narrow tube to the ovarian isthmus. At this point it expands for a short distance before joining the oviduct. The ovary is formed of thin, lateral, bifurcate lobes composed of densely staining follicles joined at their midpoint by a somewhat thicker isthmus. The vitellaria are composed of densely staining bundles of follicles disposed in broad "C" shaped bands which follow the curve of the proglottid edge on each side; on the poral side the vitelline band is discontinuous above and below the cirrus pouch and genital atrium, and both extend from behind the ovary to slightly beyond the anterior limits of the testes. No fully developed uterus or egg capsules were observed in the proglottids recovered; in one proglottid an empty, ovoid, thin-walled uterus fills the space between the anterior border of the cirrus pouch and the ovarian isthmus.