

A NEW SPECIES OF CESTODE, CREPIDOBOTHRIMUM AMPHIUMAE, FROM AMPHIUMA TRIDACTYLUM

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An examination of the intestinal contents of *Amphiuma tridactylum* from Louisiana reveals the presence of some cestodes, which are herein described as a new species. I wish to express appreciation to Dr. B. P. Young for suggestions and to Dr. H. D. Reed for the source of material.

After investigating numerous sources of literature, I have been unable to find a record of any cestode previously described from this urodele. Several cestodes have been described from amphibians and reptiles, and in LaRue's monograph (1914) they are included in the family Proteocephalidae, genus *Ophiotaenia*. Woodland (1925) strongly criticizes the characters and system used by LaRue in his part on classification and points out that *Ophiotaenia* has been shown to be synonymous with *Crepidobothrium*. *Ophidotaenia* (Beddard, 1913) is also shown to be synonymous with the former genus. Meggitt (1927) says that Lühe (1899) has correctly shown that the generic name *Protocephalus*, which has been applied to forms of this group, is invalid. Woodland would base the classification on the relation of the genital organs to the muscle sheath and also would place a large number of species in the genus *Proteocephalus*, with *Crepidobothrium* as a provisional group. The account given by Ward and Whipple (1918) is now somewhat incomplete. Meggitt (1927) gives a tentative system of classification of the group and an excellent summary of the known species. The forms in the genus *Ophiotaenia* are distributed by him among the genera *Crepidobothrium* and *Ichthyotaenia*.

Ophiotaenia has been reported from several urodeles and anurans: *O. filaroides* (LaRue, 1909) from *Ambystoma tigrinum*; *O. longbergii* (Fuhrman, 1895) from *Necturus maculosus*; *O. cryptobranchi* (LaRue, 1911) from *Cryptobranchus allegheniensis*, *O. magna* (Hanum, 1925) from *Rana catesbeiana*; and *O. hylae* (Johnson, 1912) from a *Hyla* from Australia. The characters of the genus *Crepidobothrium* given by Meggitt are as follows:

Genus CREPIDOBOTHRIMUM Monticelli, 1900

Generic diagnosis.—Scolex with or without apical organ of various shapes, never with a rostellum armed with hooks. Surface of scolex and suckers sometimes covered with spines. Testes in two lateral fields with an occasional tendency to coalesce anteriorly. Vagina anterior or posterior to cirrus sac, usually with a well-developed sphincter.

Type species.—*C. gerrardi* Baird, 1860.

CREPIDOBOTHRIMUM AMPHIUMAE, new species

Specific diagnosis.—*Crepidobothrium*: Length up to 25 cm. Scolices 280μ to 640μ long by 400μ to 480μ wide. Apparently no apical organ is present. Sucker 160μ in diameter. Strobilization is marked in two compressed specimens at 60μ and 180μ from the scolex. The immature proglottids at a distance of 6 mm from the scolex are 300μ long and 720μ to 810μ wide, when prepared with some compression. The mature proglottids (pl. 1, fig. 6) at a distance of 25 cm from the scolex are 800μ to 1.04 mm long and 960μ to 1.52 mm wide. The ripe, or gravid, proglottids (pl. 1, figs. 7, 8) are 1.6 mm to 1.9 mm wide and 4.4 mm to 4.6 mm long. The genital pore is in the anterior fifth of the gravid proglottid. There is a common sinus for the openings of the cirrus sac and vagina. The genital opening alternates irregularly. The cirrus is frequently protruded. (Pl. 1, fig. 4.) The cirrus is unarmed. The cirrus pouch is 320μ to 490μ long and 80μ to 160μ wide. The genital ducts lie between the excretory ducts. The vas deferens consists of three coils within the cirrus pouch and several outside. Testes are about 50 to 70 in number, in each field on both sides of the uterus with a few approaching the midline. The vagina is always anterior to the cirrus pouch; it does not cross the pouch and is without convolutions. The ovary in the ripe proglottid has an anterior-posterior length of 830μ . There are about 50 to 65 uterine pouches on each side. A uterine pore is present in the posterior part of the proglottid.

Host.—*Amphiuma tridactylum*.

Location.—Middle intestine.

Distribution.—Louisiana.

Type specimen.—U.S.N.M. Helm. Coll. No. 8118.

Remarks.—*Crepidobothrium amphiumae* as just described falls within group E of the genus according to Meggitt (1927), because of the number of uterine diverticula (100 to 130), which exceeds 25, and the number of testes (100 to 140). *C. lonnbergii* has approximately the same number of testes, but the vagina and cirrus alternate in position, the uterine diverticula are less, and an apical organ is present.

C. cryptobranchii also falls within this group (E) but has not been placed there by Meggitt because the description was lacking. It differs from the one described in the alternating position of the vagina and the smaller number of uterine diverticula. There is a close similarity to *Ichthyotaenia filaroides*, but the number of uterine diverticula, measurements, and apex of the scolex are points of differentiation. *C. magnum* has the genital pore located between the first and middle third of the segment, less uterine diverticula, and the vagina anterior or posterior to the cirrus pouch. *Ichthyotaenia hylae* has the vagina anterior to the cirrus pouch, but the number of the testes and uterine diverticula is less.

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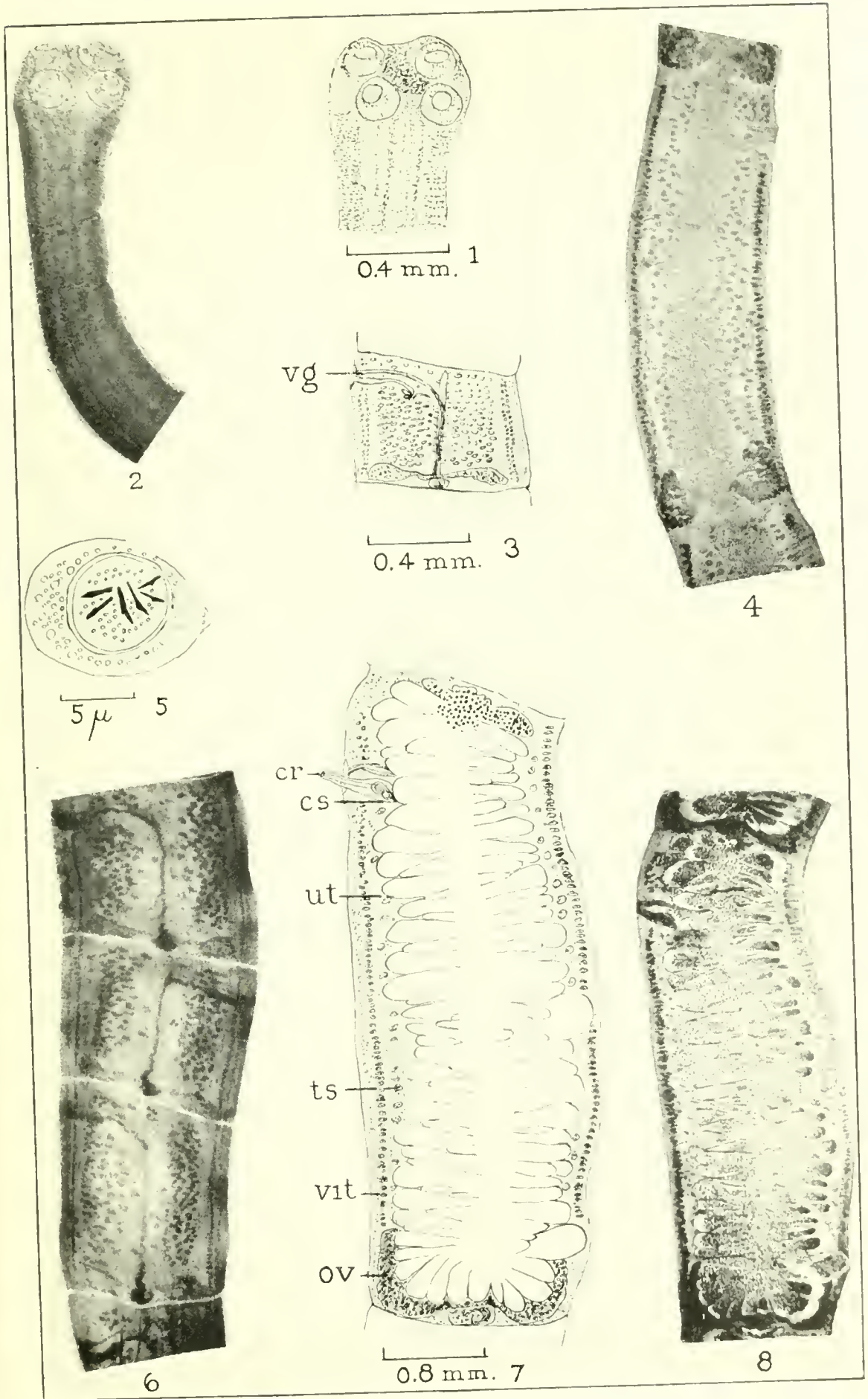
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CREPIDOBOTHRIMUM AMPHIUMAE. NEW SPECIES

1, Scolex; 2, scolex, $\times 28$; 3, mature segment from the anterior part of the worm; 4, nearly ripe proglottid with cirrus protruded, $\times 15$; 5, egg containing the onchosphere; 6, mature proglottid, $\times 28$; 7, ripe proglottid; 8, ripe proglottid, $\times 15$.
 ABBREVIATIONS: *cs*, cirrus sac; *cr*, cirrus; *ts*, testes; *ut*, uterus; *ov*, ovary; *vg*, vagina; *vit*, vitellaria.