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A NEW SPECIES OF TREMATODE FROM THE MUD-EEL
(SIREN LACERTINA)

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AN EXAMINATION of material scraped from the intestinal mucosa of the mud-eel (*Siren lacertina* Linnaeus) disclosed the presence of a minute trematode, herein described as a new species of the genus *Cercorchis* Lühe, 1900.

The confusion of the genera *Cercorchis* and *Telorchis* Looss, 1899, appears to have been settled by Perkins (1928), who raised *Cercorchis* to full generic rank. Harwood (1932) accepts this distinction and points out the necessity of transferring all North American species of the genus *Telorchis* to *Cercorchis*. Stunkard (1916) described *T. corti*, *T. lobosus*, *T. medius*, and *T. diminutus*; MacCallum (1918) *T. insculpti*, *T. pallidus*, *T. chelopi*, and *T. guttati* from turtles; Chandler (1923) *T. stunkardi* from *Amphiuma means*; Perkins (1928) *C. necturi* from *Necturus maculosus*; Ingles (1930) *T. stenorura* from *Clemmys marmorata*; Mehra and Bokhari (1931) *C. dhongokii* from the tortoise *Kachuga ahongoka* of India; Harwood (1932) *C. texanus* and *C. bairdi* from reptiles; Bennett (1935) *C. singularis* from two genera of turtles (with a discussion of the genera as defined by Perkins); and Byrd (1936) *C. kinosterni* from the mud turtle. No claim of completeness is vouched for in the list given. The relationship that exists between *Siren* and *Amphiuma*, including also the proximity of habitat of these and the mud turtle *Kinosternon*, does not necessarily mean that the

species of *Cercorchis* inhabiting them are the same. From the standpoint of morphology the species from *Siren lacertina* differs considerably from the numerous drawings and descriptions of the species studied.

Family TELORCHIIDAE Stunkard, 1924

Subfamily TELORCHIINAE Looss, 1899

Genus CERCORCHIS Lühe, 1900

CERCORCHIS SIRENIS, new species

PLATE 11

Specific diagnosis.—The mature worms available for study have a length of 0.78 to 1.56 mm and a width of 0.19 to 0.31 mm at the anterior edge of the acetabulum. In thickness they measure about 0.11 to 0.14 mm near the acetabulum. Spinacion is marked at the anterior end. The ends in the fixed specimens taper somewhat and are slightly flattened or rounded. The oral sucker is 0.11 by 0.09 to 0.13 by 0.11 mm in diameter. The prepharynx is approximately 0.01 mm in length. The pharynx is somewhat oblong and is 0.03 by 0.04 to 0.04 by 0.04 mm. The esophagus is 0.02 to 0.03 mm in length. The intestinal caeca end very little cephalad or caudad of the posterior testis. The acetabulum is 0.10 mm in diameter if circular, or 0.12 by 0.11 to 0.12 by 0.09 mm in diameter if somewhat elliptical in outline. The spherical ovary is about 0.06 mm in diameter and is located slightly anterior of the middle of the organism or central in position. The vitellaria are arranged in follicles and extend from the posterior border of the acetabulum to the anterior border of the anterior testis. The posterior part of the vagina, or metraterm, runs ventral to the cirrus sac, the latter crossing over the former. The cirrus sac, including the seminal vesicle and prostate parts, extends in waves from the posterior dorsal border or middle of the ovary to the genital pore, into which it opens jointly with the vagina. The large genital pore is located at the anterior left border of the acetabulum. The ova in a collapsed condition are 13μ by 39.6μ and in the more normal shape 19.8μ by 36.3μ to 16.5μ by 42.3μ . The testes, which are not uniformly spherical, are located near the caudal end and the posterior one is slightly larger than the anterior. The anterior testis measures 0.04 by 0.07 to 0.8 by 0.11 mm and the posterior 0.06 by 0.10 mm.

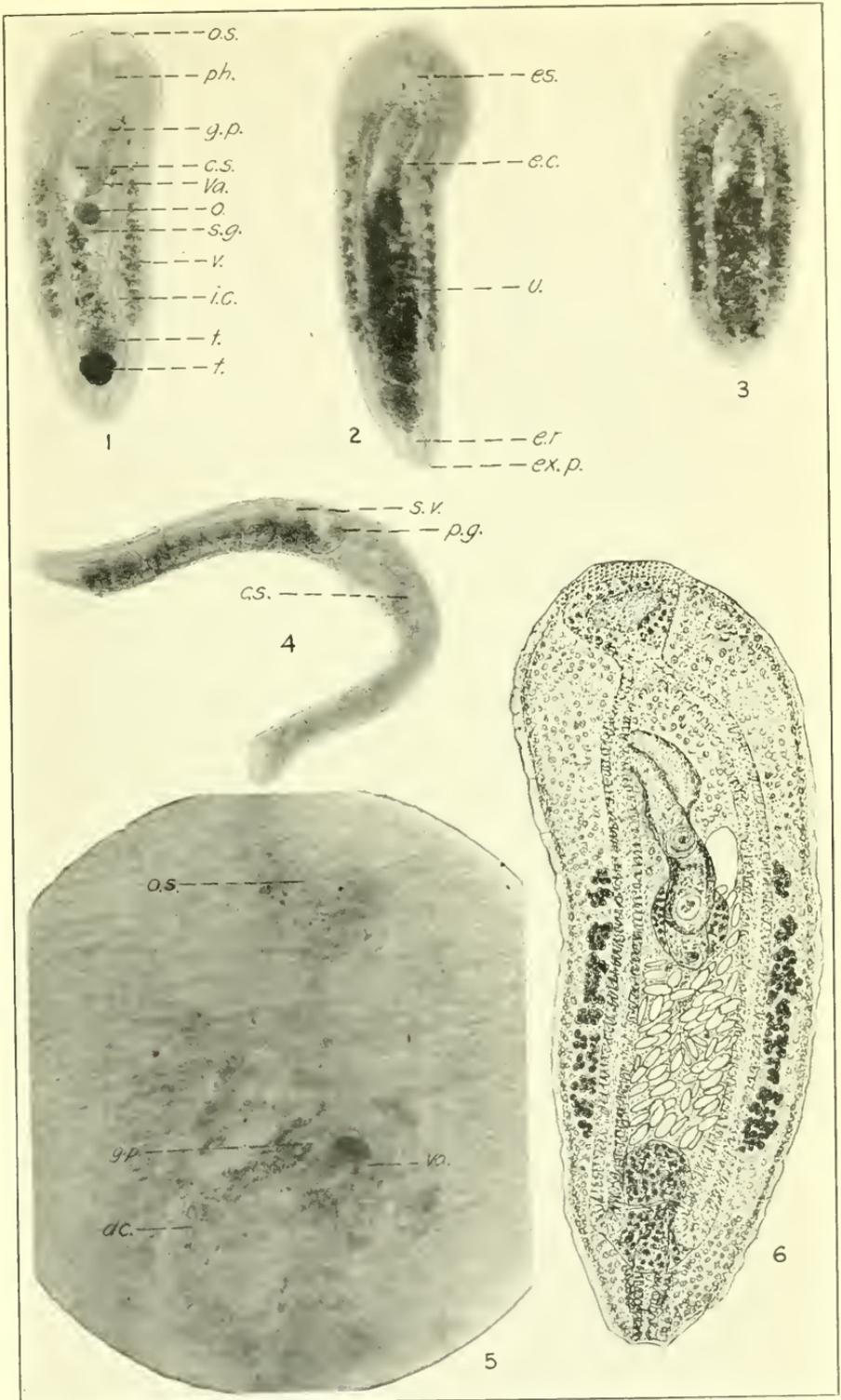
Host.—*Siren lacertina* Linnaeus.

Habitat.—Intestine.

Locality.—Southeastern United States.

Type specimens.—U.S.N.M. Helm. Coll. no. 9021.

Remarks.—Fixation may result in a slight change in the size or contour of the organs as it does in the contour of the body. An



CERCORCHIS SIRENIS, NEW SPECIES.

FOR EXPLANATION OF PLATE SEE BOTTOM OF PAGE 226

gotype, Laurer's canal, seminal receptacle, oviduct, and vitelline receptacle have not been observed or are not clearly defined. In *C. sirenis* the esophagus is shorter, and the caeca do not terminate regularly in the intertesticular zone as in *T. parvus* Braun, 1901. There is considerable variation between this species and *T. medius*, *T. corti*, *T. lobosus*, and *T. diminutus* described by Stunkard (1916). Although the measurements approach the last-named species, the caeca of *C. sirenis* do not extend so far posterior, the esophagus is shorter, the cirrus sac extends to the ovary, and the vitellaria are grouped. The size of the body and various organs, including the shorter caeca of *C. sirenis*, separates it from *T. insculpti*, *T. pallidus*, *T. guttati*, and *T. chelopi* described by MacCallum (1918). The caeca do not extend so far caudad of the posterior testis, the length is much less, and the ova are smaller in the collapsed and noncollapsed condition than is given by Chandler (1923) for *T. stunkardi* from *A. means*. The species is much smaller than *C. necturi* described by Perkins (1928) and also it differs in having a prepharynx, smaller pharynx, shorter esophagus, less caudad caeca, and ova, ovary, testes, and other organs of noticeable differences of dimensions. In contrast with *T. stenonura*, a species that apparently belongs in *Cercorchis*, recorded from *Clemmys marmorata* by Ingles (1930), the smaller size, shorter caeca, and location of the genital pore are points of difference. When compared with *C. texanus*, *C. bairdi*, and *C. singularis*, the more minute size and the more cephalad caeca of *C. sirenis* are very noticeable points that distinguish it from the descriptions given by Harwood (1932) and Bennett (1935) of these species. Compared with *C. kinosterni*, recently described by Byrd (1936), the esophagus of *C. sirenis* is much shorter, the caeca extend less posterior, and the vitellaria are more anterior. In this last comparison the differences in measurements of some of the organs and the bodies are not large. Other differences of the measurements of organs are probably more or less important for all species concerned. The drawing (pl. 11, fig. 6) was made with the camera lucida.

Keys to the species of *Telorchis* are given by Goldberger (1911) and Dollfus (1929). Perkins (1929) gives a key to *Cercorchis*, which includes transfers from the genus *Telorchis*.

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EXPLANATION OF PLATE

1-3, Ventral views; 4, lateral view; 5, view of acetabular region and genital pore; 6, dorsal view

<i>ac.</i> Acetabulum.	<i>o. s.</i> Oral sucker.
<i>c. s.</i> Cirrus sac.	<i>p. g.</i> Prostate gland.
<i>e. c.</i> Excretory canal.	<i>ph.</i> Pharynx.
<i>e. r.</i> Excretory reservoir or vesicle.	<i>s. g.</i> Shell gland.
<i>es.</i> Esophagus.	<i>s. v.</i> Seminal vesicle.
<i>ex. p.</i> Excretory pore.	<i>t.</i> Testis.
<i>g. p.</i> Genital pore.	<i>u.</i> Uterus.
<i>i. c.</i> Intestinal caeca.	<i>v.</i> Vitellaria.
<i>o.</i> Ovary.	<i>va.</i> Vagina, or metraterm.