



WILEY

Lerneocera tortua, n. s.

Author(s): D. S. Kellicott

Source: *Proceedings of the American Society of Microscopists*, Vol. 2, Third Annual Meeting (1880), pp. 39-43

Published by: Wiley on behalf of American Microscopical Society

Stable URL: <https://www.jstor.org/stable/3220319>

Accessed: 05-12-2019 20:20 UTC

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at <https://about.jstor.org/terms>



American Microscopical Society, Wiley are collaborating with JSTOR to digitize, preserve and extend access to *Proceedings of the American Society of Microscopists*

JSTOR

LERNEOCERA TORTUA, *n. s.*

BY D. S. KELLICOTT.

In this paper I propose to give as complete an account, as the material secured will permit, of a *Lernæan* harbored by the catfish or bullhead, (*Ameiurus catus*, Gill), and I entertain the hope that the pains taken in preparing figures will render my statements about the structure of this form intelligible. Thus far I have not hit upon a locality where the parasite occurs in the least abundance; indeed, it is rare wherever in the several parts of Central and Western New York I have sought for it. I have now but a single perfect one to serve for this description, and to present to the Society for examination. It was obtained July 6, 1880, from a moderate sized fish taken from Grindstone creek, a few miles above its entrance into Lake Ontario. It was deeply buried in a tumor caused by its own presence, just back of or in the axilla of a pectoral fin, and could be removed only after cutting right and left the inclosing skin and muscle. It remained alive for several hours after dislodgement. Although at the time without the pleasure of a compound microscope, the simple lens enabled me to see very well the rhythmical contraction or pulse of the intestinal tube; a constriction passes from abdomen to head, followed by another and another, each commencing before the preceding one is finished; after a number of ordinary pulsations there appears to be one moving in the opposite direction. The contents of the canal were quite green, which, owing to the unusually transparent body walls, rendered the creature decidedly of that hue, both to the eye and under a simple lens.

I describe the female (Fig. 1.) as follows:

Size—Length of body and egg-tubes,	.59 of an inch.
“ “ alone,45 “ “
“ egg-sac,16 “ “
Width of head appendages, . .	.13 “ “

Body almost straight, nearly cylindrical posteriorly, but somewhat flattened at the neck. It is enlarged to fully twice the diameter of the upper half in the lower. The body is twisted half way round

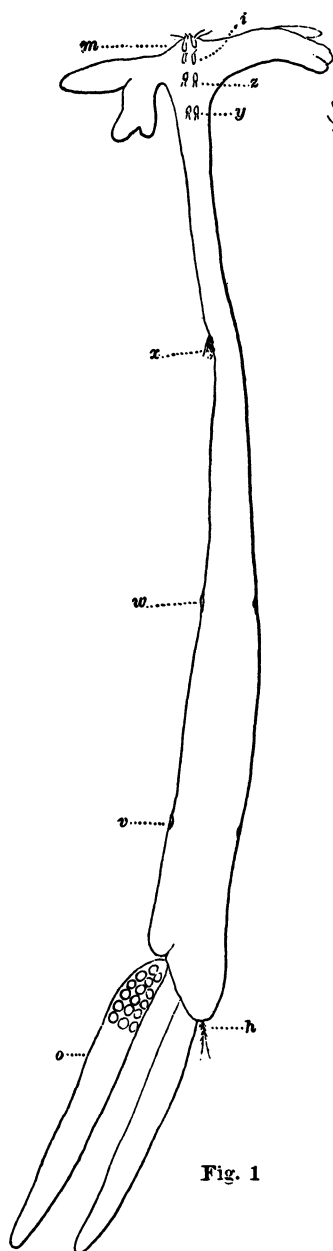


Fig. 1

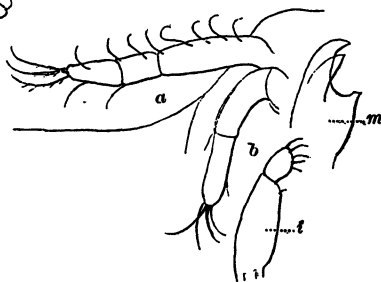


Fig. 2
(X 182)

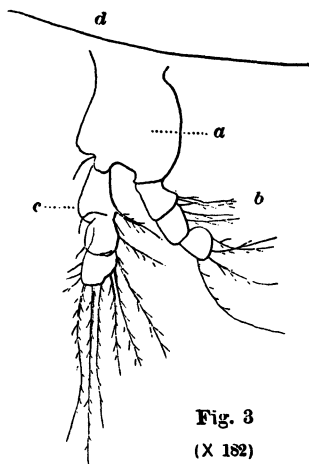


Fig. 3
(X 182)

DESCRIPTION OF THE PLATE.

LERNEOCERA TORTUA, *female*.

FIG 1.

- m.*—The mouth.
- i.*—The foot-jaws
- z, y, x, w.*—Several pairs of swimming feet.
- v.*—Apparently an articulation.
- h.*—Plumose hairs.
- o.*—Ovisacs.

FIG 2.

- a* and *b.*—First and second antennæ.
- m.*—Mandible.
- i.*—Foot-jaw.

FIG. 3.

- A swimming foot situated at *x*, Fig 1.
- d.*—Posterior border of a segment.
- a.*—Basal joint.
- b* and *c.*—Three jointed fingers with plumose hairs.

With the exception of *m*, Fig. 2, all the figures are drawn with the camera lucida.

so that while the third pair of thoracic limbs are lateral, (Fig. 1, *x*), the fourth pair are nearly on the opposite side from the mouth (*w*). The abdomen is represented by three lobes; two small, scarcely separated ones below (above by twisting), at the base of which arise, close together, the ovigerous sacs; above (below by twisting), there is one broad truncated lobe, the outer edges of which have three undulations, which bears at its extremity two long feathery hairs (*h*). Below the head there are three articulations defined without much difficulty; they occur at *x*, *w*, and *v* of the figure. The ovaries extend the whole length of the widest part of the thorax, and are bent back upon themselves as in *L. cruciata*.

Four pairs of minute swimming feet are situated underneath the thorax, thus: two pairs underneath the "head," the second pair standing at the beginning of the "neck;" one on the posterior of a segment at *x*, and one situated at *w*.

Each limb consists of a basal piece bearing two parts, each three jointed; these fingers are furnished with many long, thick, plumose hairs, for details of which refer to Fig. 3.

The expansion of the upper thorax, known as the head, bears three anchor appendages. The one on the "occiput" is stout, recurved, simple, rounded at the apex; the lateral ones are each two branched, the branches ending the lower in three, the upper in two blunt tubercles; these prominences are chitinous.

The head (*m*), as I understand the relation of the parts, is represented by a conical protuberance directed downwards and forwards, bearing the mouth organs, (Fig. 2.)

There are two pairs of antennal organs (*a* and *b*) defined as follows: First pair, (*a*), nearly straight, three jointed, with many curved hairs projected beyond the front margin of the basal segments especially; the terminal part ends with several stout, apparently branched hairs; the second pair, (*b*), also three jointed, the second and third joints lying almost at right angles to the basal one, the organ terminating in a long, slender talon, and four stout, more or less, hooked hairs. The jaw-feet, first pair, (*i*), are of the usual form, ending in five small claws. The mandibles are relatively large, trapezoidal in form, seen from below, with a process on the inner posterior angle, evidently for the attachment of muscles moving the organ, and a stout incurved tooth in front: at the base of this tooth arises a smaller one directed downwards (*m*). I have not made out palpi.

The ovisacs are nearly straight, seen from above they curve towards each other at the middle, and from each other near the tips; they are fusiform, there being as many as a dozen rows of eggs at the

base and not more than four near the apex, (Fig. 10.). The eggs are spherical.

The male has not yet been found.

I have referred this species provisionally to the genus *Lerneocera* and propose the specific name *tortua*,* suggested by its twisted body. The minute feet near the head refer it to *Lerneonema*, but its branched and tuberculated head appendages exclude it. Therefore on account of its general form and proportion agreeing so closely with the described species of *Lerneocera*, the comparatively short and straight egg-tubes, the little developed abdomen and the *symmetrical* head prolongations ally it, as I think, more closely with the species of the latter genus than with any other. I may remark here that the thoracic swimming feet of *L. cruciata* of Leseuer, described at page 67, fig. 2, of the Proceedings of this Society, refer that species also to the genus *Lerneonema*, but as authors have placed it in *Lerneocera*, it seems to me it should remain until observation gives us sufficient comparative knowledge of these forms to permit more satisfactory arrangement than the present. I will remark further concerning this species, *tortua*, that it appears to be somewhat comprehensive: i.e., the two feathered hairs at the tip of the abdomen hint at *Panella*, the thoracic swimming feet at *Lerneonema*, the twisted body and tuberculated horns to the contorted body and horns of *Lernaea*.

I take pleasure in acknowledging the assistance rendered me by Mr. Geo. E. Fell, in making out the structure of this object to the extent it has been done, without whose aid this account would have been still more imperfect.

The lenses used were an inch by Tolles and a half inch of 98° angular aperture by Bausch and Lomb. I take pleasure also in acknowledging the efficiency and superiority of the wide angled class of lenses for this particular kind of work.

LERNEOCERA TORTUA, n. s.—Body nearly straight, twisted so that the under abdominal lobes are uppermost, subclaviform, obscurely articulated, obliquely truncated; abdominal lobes three, terminal one bearing two plumon hairs at extremity. Four pairs of swimming feet. Cephalic horns rather stout; the two lateral symmetrically two branched and tuberculated; one stout unbranched one on the upper side of head. Two pairs of antennae, each three jointed. Egg tubes moderately long, subcylindrical.

Length $11\frac{1}{4}$ mm.

Found on *Ambrysus catus*; tributaries of Lake Ontario.