

TWO NEW SPECIES OF TREMATODE WORMS OF THE GENUS EUCOTYLE FROM NORTH AMERICAN BIRDS

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In this paper two species of trematodes which appear to be new are described. These forms belong to the family Eucotylidae Skrjabin, 1924, and to the genus *Eucotyle* Cohn, 1904. The first of these was collected in 1897 from the intestine of *Colymbus auritus* by Dr. A. Hassall, at Washington, D. C. For this species the name *Eucotyle hassalli* is proposed. The second species was found mixed with some specimens of echinostomes which were collected from the intestine of a blue-winged teal, killed at Lake Garberson, Miles City, Mont., by Everett E. Wehr, of the Zoological Division, May 20, 1929. For this species the name *Eucotyle wehri* is proposed.

Despite the fact that these trematodes were recorded as from the intestine by the collectors, it is quite improbable that the intestine is their normal location, since all members of the genus are parasites of the urinary tract. It appears reasonable to assume, therefore, that during evisceration they escaped from their normal location in the urinary tract and adhered to the outside of the intestine, and were later found in the washings from the intestines.

The genus *Eucotyle* was proposed by Cohn (1904) for a trematode which was named *Monostomum nephriticum* by Mehlis (in Creplin, 1849). Skrjabin (1920) described a species, *Eucotyle zakharowi*, from the renal tubules of *Fuligula cristata* in Russia, and later (Skrjabin, 1924) he described an additional species, *E. cohni*, from the kidney tubules of *Podiceps nigricollis* and *P. griseigena*, collected in Russian Turkestan. The characters of the genus as emended by Skrjabin are as follows:

Genus EUCOTYLE Cohn, 1904

Generic diagnosis.—Elongated, flattened, medium-sized monostomes; anterior end triangular and set off from the remainder of body by a dorsal and ventral transverse muscular ridge, posterior

end rounded. Testes opposite each other, either entirely extracecal, partly overlying the ceca, or occupying the entire width of body and with their median borders touching. Ovary lobate, pretesticular, and to the side of the median line. Vitellaria extracecal, commencing immediately posterior of the transverse muscular ridge and extending backward as far as the testes or beyond. Parasites in the kidneys of water birds.

Type species.—*Eucotyle nephritica* (Mehlis, 1846) Cohn, 1904.

EUCOTYLE HASSALLI, new species

Specific diagnosis.—*Eucotyle*: Body elongate, 2.5 mm. long by 620μ to 650μ wide; anterior end triangular and set off from the remainder of body by a transverse ridge situated 400μ to 434μ from the anterior end. Cuticle evidently uniformly covered with spines but in the specimens available for study only a few scattering blunt

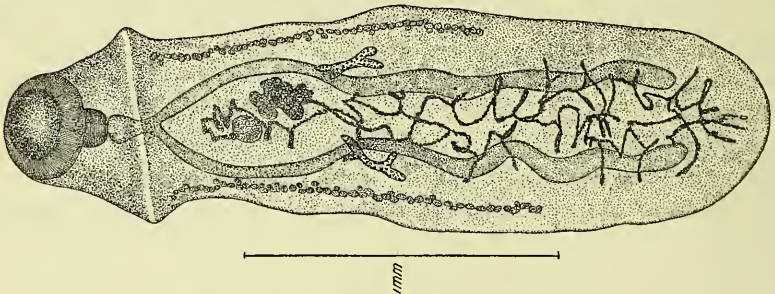


FIGURE 1.—*EUCOTYLE HASSALLI*. VENTRAL VIEW

spines were visible. Oral sucker subterminal, 310μ in diameter. Prepharynx absent; pharynx well developed, 124μ wide. Esophagus 155μ long, the anterior end being dilated to almost the width of the pharynx. Intestinal ceca moderately wide, sinuous, with a distinct median bend at the level of the testes, and terminating 300μ to 337μ from the posterior end of body. Testes similar in shape, 187μ to 210μ long by 30μ to 38μ wide, largely intracecal, and with their ends deeply lobed, giving them an irregular X shape. Cirrus pouch thin-walled, oval, 100μ long by 80μ wide, and situated in the median line immediately in front of ovary. Ovary deeply lobed, 128μ to 180μ long by 75μ to 125μ wide, and situated to the left of the median line a short distance in front of the testes. Receptaculum seminis and Laurer's canal apparently absent. The uterus consists of a descending limb which runs in irregular coils to near the posterior end of body where it turns and proceeds forward in the same manner as an ascending limb, passing between the testes and between the ovary and cirrus pouch to a short distance behind the intestinal bifurca-

tion. The genital pore is situated immediately in front of the cirrus pouch and to the right of the median line. The vitellaria are composed of small uniform follicles and extend from a short distance behind the transverse muscular ridge to about one-third of the body length from the posterior end. Eggs oval, 22μ long by 11μ wide, yellowish brown in color.

Host.—*Colymbus auritus*.

Location.—Intestine according to label; probably urinary tract.

Distribution.—United States (Washington, D. C.).

Type specimens.—United States National Museum Helminthological Collection No. 29186; paratype No. 29187.

Eucotyle hassalli apparently occupies a position intermediate between *E. nephritica* (Mehlis) and *E. cohni* Skrjabin. In *E. nephritica* the testes are elongate, entirely extracecal, and partially encroach upon the vitelline fields, while in *E. hassalli* the testes are bifurcate at the poles, have their anterior part partly overlying the ceca, and are separated from the vitellaria by a distinct space. This species may be differentiated from *E. cohni* on the basis of body and egg sizes, *E. hassalli* being a much smaller form and the eggs about one-half the size of those of *E. cohni*.

EUCOTYLE WEHRI, new species

Specific diagnosis.—*Eucotyle*: Body elongate, 2.4 mm. long by 387μ wide; anterior end set off from remainder of body by a transverse

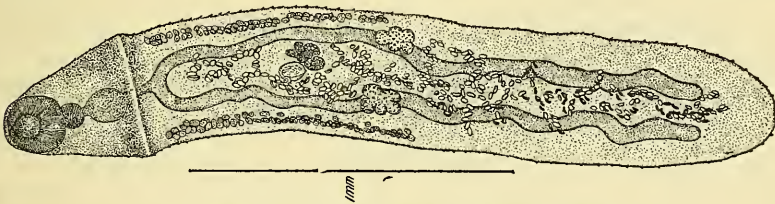


FIGURE 2.—EUCOTYLE WEHRI. VENTRAL VIEW

ridge 387μ from the anterior end. Cuticle covered with blunt spines measuring 7μ in length. Oral sucker subterminal, 170μ in diameter, weakly muscular. Prepharynx absent; pharynx 78μ in diameter. Esophagus 233μ long and provided with a dilation a short distance from the pharynx, the width of the dilation being slightly greater than that of the pharynx. Intestinal caeca sinuous and extending to about 210μ from the posterior end of body. Testes lobed, 112μ long by 75μ wide, partly extracecal but largely overlying the ceca, and situated near the equator of body. Cirrus pouch containing the seminal vesicle oval, 110μ long by 75μ wide, and situated in the median line to right of the ovary. Ovary lobed, 112μ long by 75μ wide, and situated to the left of the median line about 150μ in front of testes. Receptaculum seminis and Laurer's canal not observed.

The uterus pursues a course similar to that in *E. hassalli*. The genital pore is situated slightly to the right of the cirrus pouch. The vitellaria are composed of uniform follicles commencing a short distance caudad of the transverse muscular ridge and extending to about the equator of body. Eggs oval, brown in color, and from 30μ to 33μ long by 15μ to 18μ wide.

Host.—*Querquedula discors*.

Location.—Intestine according to label; probably urinary tract.

Distribution.—United States (Miles City, Mont.).

Type specimen.—United States National Museum Helminthological Collection No. 29188.

E. wehri resembles *E. zakharowi* Skrjabin in body form and extent of the vitellaria, but may be differentiated from this species by its smaller body size and position of testes. The testes are separated from each other by the width of the intercecal space in *E. wehri* while in *E. zakharowi* they occupy the entire body width.

For the purpose of separating the species described in this paper from those previously described the following key is appended:

KEY TO THE SPECIES OF EUCOTYLE COHN, 1904

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|---|------------------------|
| 1. Vitellaria extending to posterior border of testes..... | 2. |
| Vitellaria extending to beyond posterior border of testes..... | 3. |
| 2. Body 5.6 mm. long by 1.1 mm. wide; testes occupy entire width of body; uterine coils closely packed..... | <i>E. zakharowi</i> . |
| Body 2.4 mm. long by 387μ wide; testes separated by width of intercecal space; uterine coils few..... | <i>E. wehri</i> . |
| 3. Testes elongated but not lobed, entirely extracecal..... | <i>E. nephritica</i> . |
| Testes lobed, partly overlying ceca..... | 4. |
| Testes X-shaped; ovary larger than testes; egg 22μ by 11μ | <i>E. hassalli</i> . |
| Testes irregular in shape; ovary smaller than testes; egg 43μ by 16μ . | <i>E. cohni</i> . |

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