

Two New Parasites of the Genus *Lecithocladium* Luhe 1901 (Family Hemiuridae)

A. K. M. BASHIRULLAH AND J. D'SILVA

Department of Zoology, University of Dacca

(Received for publication; Nov. 24, 1972)

Two new species of *Lecithocladium* were recovered from marine fishes in the Bay of Bengal. They were collected in Cox's Bazar.

The trematodes were fixed in formalin and stained in Semichon's acetic carmine. They were cleared in oil of cloves and mounted temporarily in glycerine. The preserved specimens were kept in glycerine-alcohol. All drawings were made with a drawing eyepiece, MNR-2 (Poland). The measurements are in millimetres; averages are followed by ranges in parentheses.

Lecithocladium dawesi, n. sp.

(Figs. 1-2)

Host: *Selaroides leptolepis* (Family Carangidae)

Location: Intestine

Locality: Bay of Bengal, Cox's Bazar coast

Holotype: Deposited with the Department of Zoology, University of Dacca.

Description: (Based on an examination of ten specimens; measurements on four.)

Body cylindrical, with ecsoma. Soma length 1.213 (1.176-1.287); total length 1.714 (1.544-1.974); width at acetabular region 0.372 (0.363-0.396) and 0.604 on the average at its widest region. Cuticular plications on entire body.

Oral sucker terminal, cup-shaped, deep, measuring 0.213 (0.204-0.277) × 0.205 (0.196-

0.217). Acetabulum 0.216 (0.210-0.224) × 0.221 (0.204-0.247), located on the average 0.373 from anterior extremity of the soma. Ratio of length of suckers 1:1.01. Pharynx muscular, large, extending from oral sucker to almost acetabulum, and measuring 0.181 (0.168-0.204) × 0.103 (0.092-0.110). Oesophagus short, terminus of caeca could not be made out conclusively but appears to end in the ecsoma.

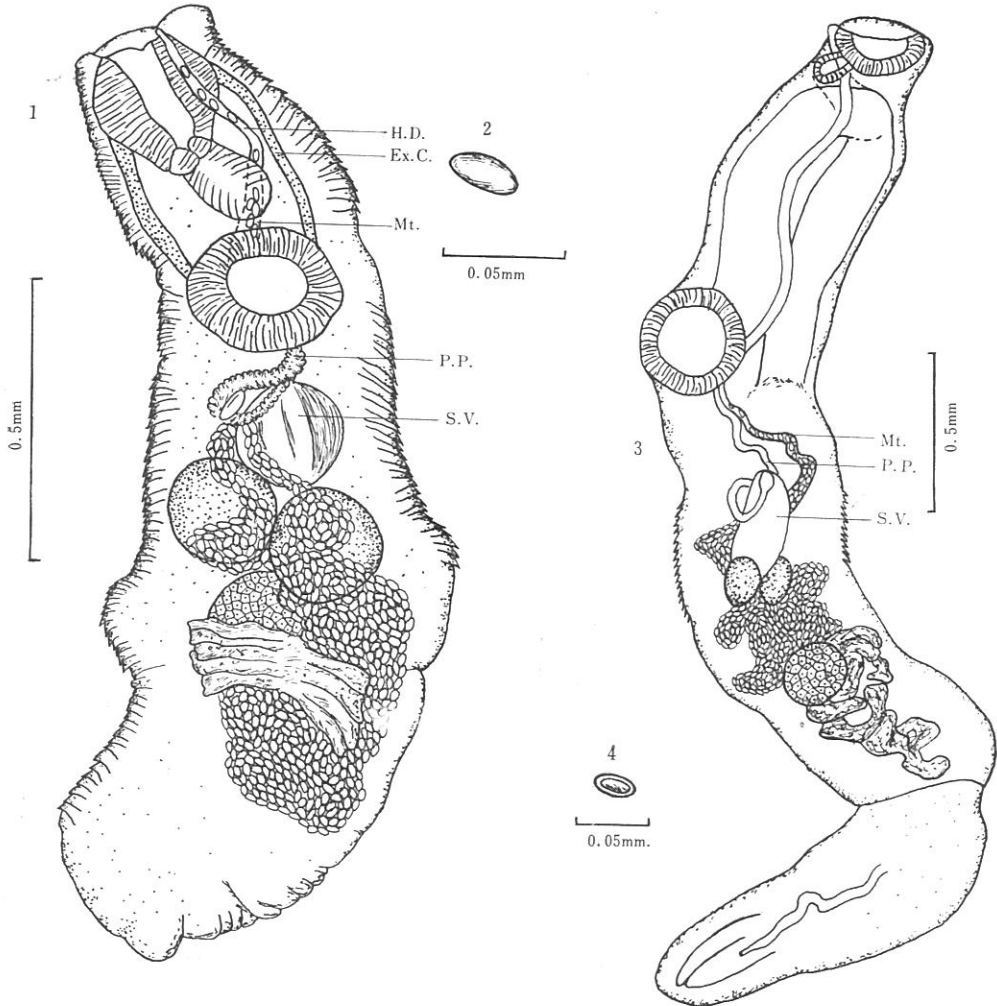
Testes rounded, slightly oblique, situated at posterior end of soma. Dimensions of anterior testis 0.188 (0.171-0.196) × 0.158 (0.171-0.188) and posterior testis 0.195 (0.151-0.250) × 0.193 (0.178-0.204). Seminal vesicle rounded, muscular, overlapping anterior testis slightly but not posterior testis. Pars prostatica forms a loop in the right field before ascending towards oral end; prostatic gland cells all along pars prostatica. Hermaphroditic duct long, slender, following along left ventral side of pharynx, starting anterior to acetabulum, enclosed in thin-walled sinus sac. Genital pore opening to left of oral sucker.

Ovary somewhat transversely oval, median, 0.146 (0.112-0.196) × 0.162 (0.138-0.182), overlapping posterior testis slightly, and descending below soma partially. Vitellaria of nine long, broad lobes, four on the left and five on the right. Vitellaria overlap ovary partially.

Uterus winding, enters ecsoma. Eggs 0.013 × 0.021 in average. Excretory crura extending to middle of oral sucker and uniting there.

Discussion: This is a smaller species of *Lecithocladium*, and compares only with *L.*

Lecithocladium ilishae, n. sp., from *Hilsa ilisha*, and *L. dawesi* n. sp., from *Selaroides leptolepis* are described from fishes in the Bay of Bengal.



Figures 1-2. *Lecithocladium dawesi* n. sp.

1. The whole worm, ventral view

2. Egg

Figures 3-4. *Lecithocladium ilishae* n. sp.

3. The whole worm ventral view

4. Egg

Ex. C.—Excretory canal.

Mt.—Metraterm.

S. V.—Seminal vesicle.

H. D.—Hermaphroditic duct.

P. P.—Pars prostatica.

carultum Chauhan 1945 and *L. scombri* Yamaguti 1953. It compares with *L. brevicaudum* Srivastava 1937 only in the number of vitelline lobes.

L. carultum with seven vitelline lobes is weakly annulated, oral sucker is subterminal, ovary small, and so does not compare with

L. dawesi, n. sp.

It is similar to *L. scombri* in that the vitelline lobes enter into the ecsoma.

Lecithocladium dawesi is thus proposed as a new species on the basis of number of vitelline lobes, the terminal oral sucker, and the opening of the genital pore to the left

of the oral sucker.

The present species is named after Professor Ben Dawes of London University.

Lecithocladium ilishae, n. sp.

(Figs. 3-4)

Host: *Hilsa ilisha* (Family Clupeidae)

Location: Stomach

Locality: Bay of Bengal, Cox's Bazar coast

Holotype: Deposited with the Department of Zoology, University of Dacca.

Description: (Based on the only specimen recovered.)

Body cylindrical and elongated, somewhat muscular, with faint plications. Total length 4.326. Soma length 2.940. Ecsoma well-developed. Width at acetabular region 0.560.

Oral sucker terminal, outwardly directed, with smooth margin, 0.210×0.084 . Pharynx small, 0.140×0.014 . Oesophagus not observed. Intestinal crura with prominent shoulders (precaecal sacs of Manter (1971)), extend into ecsoma. Acetabulum large, 0.378×0.322 , in anterior third of body. Genital pore median, very close to ventral edge of mouth. Testes symmetrical, small, sandwiching posterior end of seminal vesicle. Left testis 0.175×0.112 ; right testis 0.152×0.112 . Pars prostatica sinuous, longer than seminal vesicle, without prostatic gland cells. Seminal vesicle bipartite, spindle-shaped, non-muscular, 0.564×0.286 . Hermaphroditic duct long.

Ovary ovoid, 0.188×0.224 , larger than testis, post-testicular, in posterior third of body proper. Vitelline tubes long, extending transversely, seven altogether. Uterine coils descend a short distance into ecsoma. Eggs oval, thin-walled, 0.017×0.007 .

Excretory crura not observed.

Discussion: *Lecithocladium ilishae*, n. sp., appears most similar to *L. harpodontis* Srivastava 1937 (emend. 1942). It differs in (i) that the seminal vesicle is spindle-shaped and bipartite; (ii) pars prostatica not being surrounded by prostatic gland cell; (iii) the absence of fringed margin in oral sucker and (iv) size of eggs being larger (0.010×0.010 versus 0.017×0.007). Hence *Lecithocladium ilishae*, n. sp., is proposed.

References

- 1) Chauhan, B. S. (1945): Trematodes from Indian Marine Fishes. Part IV. On some trematodes of the family Hemiuridae Luhe 1901, with description of six new forms. Proc. Ind. Acad. Sci. B 21, 160-173.
- 2) Manter, H. W. (1971): The terminology and occurrence of certain structures of digenetic trematodes, with special reference to the Hemiuroidea. H. D. Srivastava Commem. 27-33.
- 3) Srivastava, H. D. (1942): New hemiurids (Trematoda) from Indian marine food fishes. III. Two new parasites of the genus *Lecithocladium* Luhe, 1901. (Subfamily Dinurinae Looss, 1907). Parsit., 34, 124-197.
- 4) Yamaguti, S. (1953): Systema helminthum. Part I. Digenetic trematodes of fishes. Maruzen Co., Ltd., Tokyo.