

**ON *LYTOCESTUS KOPARDAENSIS* N.SP. CESTODA LYTOCESTIDAE HUNTER,
FROM A FISH IN MAHARASHTRA STATE, INDIA.**

G.B. SHINDE AND SUNITA BORDE*

DEPARTMENT OF ZOOLOGY, DR. BABASAHEB AMBEDKAR
MARATHWADA UNIVERSITY, AURANGABAD - 431004, INDIA.
DEPARTMENT OF ZOOLOGY, Y.C. COLLEGE, SILLOD - 431112, INDIA*.

The paper contains, description of a new species of genus *Lytocestus* (Cohn, 1908) Hunter, 1927 *L. kopardaensis* n.sp. differs from all the earlier reported species, in having head long, elongated, narrow anteriorly, neck is medium in length with irregular margins, testes numerous 1600-1700 (1650), cirrus pouch large, preovarian, obliquely placed, ovary distinctly bilobed with irregular margins; uterus a coiled tube, loop shaped; vitellaria are follicular, cortical in position. in 2-3 rows on each side, from the middle region to the level of cirrus pouch.

The genus *Lytocestus* was erected by Cohn, 1908 with its type species *L. adhaerens* found in *Clarias fuscus* in Hongkong. Nine species have been reported so far.

The present communication deals with the description of a new species *L. kopardaensis* collected from *Clarias batrachus* at Koparda (Jalna), India.

All cestodes were fixed in 4% formalin, stained with Harris haematoxylin. Drawings are made with Camera lucida. Measurements are in millimeters.

Lytocestus kopardaensis n. sp. (Fig. 1)

Mature specimens long, head long elongated narrow anteriorly, 1.7. Neck is medium in length, broad anteriorly, 2.071×1.607 ; gonads situated in the posterior most region of worm. Testes 1600-1700 (1650), preovarian, oval, 0.321×0.196 ; cirrus pouch large, elongated, opens in the centre of the body 2.839×0.037 ; cirrus thin, curved measures 0.839×0.018 . The male genital pores large, oval, situated in the centre of the worm, measure 0.267×0.320 ; ovary distinctly bilobed with irregular margin measure 1.036×0.375 ; the lobes are large, triangular, pointed, connected by a wide isthmus measures 0.143×0.320 ; vagina a wide tube, measures 2.25×0.232 . Female genital pore, large, oval, obliquely placed, measure 0.338×0.142 ; uterus is wide, coiled loop shaped, preovarian, measures 6.393×0.393 . Ootype posterior to the isthmus obliquely placed measures 0.232×0.196 ; vitellaria follicular, cortical in position, two to three rows on each lateral side of the worm, measure 0.035×0.107 . (Fig. 1).

The genus *Lytocestus* was established by Cohn in 1908 as *L. adhaerens* from *Clarias fuscus* at Hongkong. Later on the following species are added to this genus :

- L. filiformis* Woodland, 1923 in *Mormyrus cashive*, Egyptian Sudan.
- L. indicus* Moghe, 1925 in *Clarias batrachus*, India.
- L. alestes* Lynsdale, 1956
- L. birmanicus* Lynsdale, 1956 in *Clarias batrachus* India.
- L. javanicus* (Bovien, 1926) Mackiewicz, 1962 U.S.A.
- L. parvulus* (Furtado, 1963) Mackiewicz, 1962 U.S.A.
- L. longicollis* Ramadevi, 1973; in *Clarias batrachus*, India.
- L. fossilis* Singh, 1982 in *Heterpneustes fossilis*, Nepal.

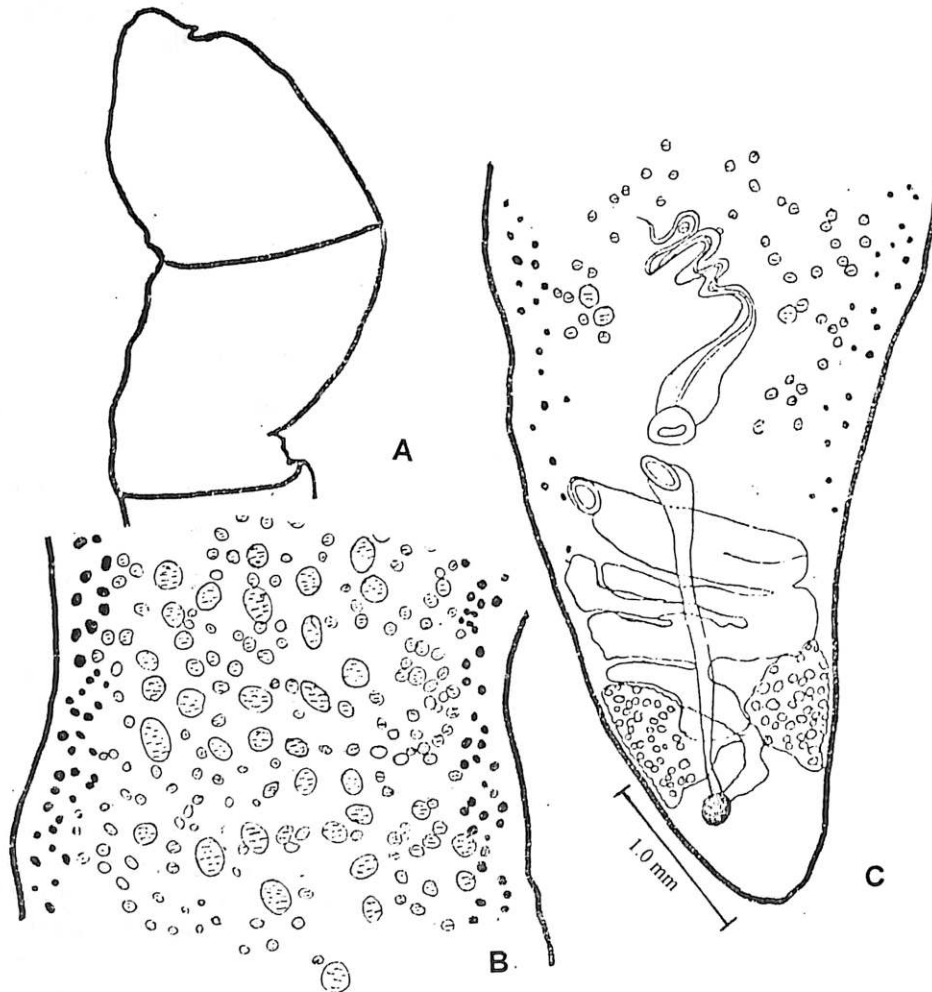


Fig. 1 : *Lytocestus kopardaensis* n. sp. A = Anterior end; B = Middle region; C = Posterior end.

L. marathwadaensis, Shinde and Phad, 1990 in *Clarias batrachus*, India.

L. alii, Jadhav and Gavhane, 1991 in *Clarias batrachus*, India.

L. clariasae Jadhav and Gavhane, 1991 in *Clarias batrachus*, India.

After going through the literature, the present worm comes closer to *L. indicus*, *L. birmanicus*, *L. filiformis*, *L. longicollis*, *L. marathwadaensis*, *L. alii*, and *L. clariasae*.

- The present worm, differs from *L. indicus*, which is having testes 230-270 in number, ovary with numerous follicles, vitellaria corticalar in 2-3 rows; uterus thick and coiled.
- The present tapeworm, differs from *L. birmanicus* which is having neck long; testes numerous, arranged in medullary region; ovary wing like, with numerous follicles and vitellaria follicular.
- The present cestode differs from *L. filiformis* having testes numerous, large, round; cirrus pouch, small; vas deferens short, thin; ovary bilobed with 6-11, large follicles and vitellaria follicular.

- the present form, differs from *L. longicollis* having long neck; testes 105-140. Vas deferens much convoluted; ovary corticular, "H" shaped and vitellaria corticular, in one to two rows, on each lateral side.
- The present cestode, differs from *L. marathwadaensis* which is having testes 100-105, vitellaria follicular, in a single row.
- The present worm, differs from testes; ovary butterfly shaped, vitelline follicle small, corticular in 4-5 rows.
- The present tapeworm, differs from *L. clariasae* which is having testes 700-750; ovary bilobed; vitellaria follicular corticular, lateral to testes in 5-6 rows.

The distinct characters, as noted above, justify the recognition of the present worm as a new species and hence have the name *Lytocestus kopardaensis* n.sp. is proposed after the locality.

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REFERENCES

- MACKIEWICZ, 1962. A new Caryophyllaeid cestode : *L. parvulus* sp. nov. from a Malyan cat fish. *Ann. Mag. Nat. Hist.* (Ser. No. 13) 6 : 97-106.
- JADHAV, B.V. & GAVHANE, A.V. 1991. Two new cestodes from Caryophyllidae at Aurangabad, India. *J. Inv. Zool. & Aqua. Biol.* 3(1) : 28-31.
- LYNSDALE, J.A. 1956. On two new species of *Lytocestus* from Burma and Sudan respectively. *J. Helm.* 30(2-3) : 87-96.
- MACKIEWICZ, J.S. 1972. Two new species of Caryophyllid tapeworm from catostomid fishes In Term. *J. Parasit.* 58(6) : 1075-1081.
- MACKIEWICZ, J.S. 1975. Caryophyllid cestode research at the University of Oklahoma. Biological station 11963-1966. A summary. *Proc. Okla. Acad. Sci.* 55 : 157-158.
- MOGHE, M.A. 1925. Caryophyllaeus indicus n.sp. (Cestoda) from the cat fish *Clarias batrachus* (L). *Parasit.* 17 : 232-235.
- MOGHE, M.A. 1931. A supplementary description of *Lytocestus indicus* sp. Moghe (Syn. *Caryophyllaeus indicus* Moghe, 1925 Cestoda). *Parasit.* 23 : 84-87.
- RAMADEVI, P. 1973. *Lytocestus longicollis* sp. nov. (Cestoda : Caryophyllidae) from the cat fish, *Clarias batrachus* (L) in India. *J. Helminth.* 47(4) : 415-420.
- SHINDE, G.B & PHAD, A.N. 1990. On a new cestode *Lytocestus marathwadaensis* n.sp. from freshwater fish. *Riv. Parasit.* 59(47) : 295-298.
- SINGH, S.S. 1982. On *Lytocestus fossilis* n.sp. (Cestoda : Lytocestidae) from *Heteropneustes fossilis* from Nepal. *Zool. Soc. Ind.* (1975) : 79 - 82 (En. 10 ref.) Nepal.