

STUDIES ON LARVAL TERMATODES FROM LYMNAEA AURICULARIA, A FRESH WATER SNAIL FROM NASHIK DISTRICT (M.S) INDIA

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❖ **ABSTRACT:**

The new species of monostome larval trematode parasite, cercaria posterocellata was found in fresh water snails of Nashik district. It is described in detail and diagnostic features of new species compared with related species.

❖ **Key Words** – Larval trematodes, Parasite, Fresh water snails, Monostome.

❖ **INTRODUCTION :**

Luhe (1909) made the first attempt to classify the cercariae in a compressive manner and classified various cercariae into three types: Amphistome, Lophocercous and Gastrome. Labour (1911) made a survey of British marine carcaria and divided them into two main groups. Gastrome and Prosostoma. Cort (1914) made a survey of larval trematodes from North American fresh water snail. Faust (1919, 1921, 1922, 1924, 1926) studied larval trematodes from South America and China. Miller (1926) made comparative account of Furcocercous cercariae. Soparkar (1921) gave a note on Furcocercus cercariae from Bombay. Sewell (1922) studied fresh water cercariae from India and he modified the Luhe's classification and divided major groups into a number of smaller groups. Porter (1938) studied the fresh water larval trematodes found in certain South American mollusca. Nasir (1964) gave a key to the cercariae from British fresh water mollusca. In 1972 he gave some aspects of xiphido cercariae classification and in 1973 reported twenty new species. Karyakarte and Yadav (1981) studied fresh water larval trematodes of Marathwada.

The present paper deal with three species of fresh water cercariae which belong to Pleurolophocerca and Lophocerca subgroups. The classification followed in this paper is that of Luhe (1909) Sewell (1922) and porter (1938) The classification followed in this paper is that of Luhe (1909) Sewell (1922) and porter (1938).

❖ Material and Methods

Various species of snail : *Melania tuberculata*, *M. Scabra*, *Viviparous bengalensis*, *Indoplanorbis exustus*, *Lymnea auricularia*, and *Lymnea acuminata* from different localities ponds, ditches near Chankapur, Girna, Bhagu, Dhanoli, Kalwan village Nashik District were collected and individuals of different species were separated and kept in separate glass with aquatic plants in the laboratory. Digestive glands and gonads were exposed from fully grown snails, for studying rediae and cercariae. For the study of structural details in live condition. Vital stain, Nile blue sulphate was used. Wide variety of specimens were examined and their figures drawn with the help of camera Lucida.

❖ Observation & Discussion

1) *Cercaria Posterocellata*

The cercaria was found in hepato pancreas of *Melania tuberculata* collected from the ponds and ditches near Kalwan village. It show 18-19% infection from March to May. During the survey 200 to 350 snail of various sizes ranging from 30 to 40 mm were examined.

The ceraria is oval-shaped and brownish in color. The general body surface is smooth but three rows of spines were observed at the anterior end surrounding the protrusible organs. Cercuria is an active swimmer which move with various lashing movements of tail. It measures 0.634mm. including tail with fin fold. Main body of cercaria is 0.256 mm long and 0.132 mm wide. The tail is longer than the body which measures 0.378 mm in length including fine fold and 0.091 mm in width with fin-fold at the proximal end. The mouth is terminal in position and leads into pre-pharynx, followed by muscular pharynx. The Oesophagous and intestinal cerci are absent. Cercaria has seven pairs of glandular nucleated penetration glands with their ducts. The caudal runs in the entire tail and opens at the tip.

The development occurs in radiae. The immature redia is elongated brownish in color and measures 0.24 mm in length and 0.066 mm in width. Pharynx is large oval and leads into sac like gut. The mature radia is also brownish and measures 1.44 mm length and 0.265 mm in width. The suckorial pharynx is round it contain 8 to 9 cercariae at time.

The cercariae reported in the sub group – *Pleurolophocerca*, the present form differs from. *C. lophocerca filipi*, 1857, *C. pleuroloph ocerca* Sonsino, 1892, *C. Indica e II*, VIII sewell 1922, *C. Pinjorensis* Gupta and Taneja 1970. *C. Indicae* in having fin fold

Cort, W.W. Larval trematodes from North America fresh water snail. J. Parasit, 1914, 1, 65-84.

Faust, E. C. Notes on South African cercariae J. Parasit, 1919, 9, 164-170.

Faust, E. C. Notes on South African Larval trematodes. Ibid, 1921, 8, 11-21.

Faust, E. C. Further observation of South African Larval trematodes. Parasitology 1926, 18, 101-127.

Filippi, F. Oe. Deuxieme memoire pour servir a I, histories trematodes. Mem. Acad, Sci Turin, 15, (Ser.II) 1857, 419-442.

Gupta N. K. and Taneja, S. K. Two Furcocercous cercariae from fresh water snail of Chandigarh. Res. Bull. Panjab University 1970, 20, 33-38.

Karyakarte, P. P. and Yadav, B. B. Studies on fresh water larval trematodes of Marathwada Rivista di parasitologia . 1981, 42, 79-107.

Khan, D. Studies on fresh water larval trematodes infecting Snail in London (U.K.) and adjoining areas part II. J. Helminth , 1960, 34, 305-318.

