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STUDIES ON THE EMERGENCE PATTERN OF CERCARIAE FROM FRESH WATER SNAILS

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ABSTRACT

The emergence pattern of different types of cercariae form three snail hosts *Melania tuberculata, Lymnea auricularia Viviparous bengalensis* has been studied in detail. In natural emerging method the snails (2 to 3 at a time) were kept in separate test tube. This was constant source of living cercariae naturally emerging from the snails. The sunlight and artificial light play an important positive role in stimulating the emergence of cercariae has been observed. The effect of light and dark on the emission pattern of cercariae has been studied.

Keywords: cercariae, *Viviparous, Melania*

INTRODUCTION:

The study of molluscs harbouring the cercariae of various trematodes involves in the study of environment in which mollluse live. It is well known that wind range of environmental factors will affect the emergence of cercariae from the snail hosts. The larval trematodes interacting cycles of activity which respond in various ways to charges in the external environment. The important contributor in emergence pattern of cercariae are Probert (1963), Wagen bach and Allendredge (1974), Anderson and Nowosielski (1976), Duttan and Srivastava (1962a,b) Simha (1964), Mohandas (1974) and Madhavi (1983).

Some cercariae so not respond towards on the emission of light and dack pattern ex. Cercaria of *Fasciola hepatica* (Kendall and Mccullolugh,1951) and *Cercaria cambrensis* (Rees,1931) *Cercariae Orientobilharzia* duttai (Dutta and Srivastava,1962 a,b) have been reported they emerge only during day time. Some cercariae like *Plagioponis Vespertilionis* have nocturnal emergence patterns.

Other factors such as pH and oxygen content of the medium, nutritional condition and physiological state of the host also exert their influence (Mohandas, 1974).

MATERIAL AND METHODS:

Studies on emergence pattern of cercariae commenced with collection of first intermediate host (snails). They were collected either hand picked or dragging a net through water and were transported to laboratory. After collecting the snails, *Melania tuberculata Lymnea auricularia, Viviparous bengalensis* they were brought to the laboratory and were separated into groups each consisting of twelve snails, If cercariae appeared in the water in any of groups, the snail of that group were isolated singly and then infected snails were separated from the normal.

Melania tuberculata was also infected under laboratory conditions with 5 miracida of *Philopina inica* obtained from the trematode parasistes of experimental fish, *Nemachilus boria*. After five weeks of infection with miracidia, the snails were observed for the emergence of cercaria. Observation were made on the following groups of snails.

1) *Melania tuberculatea* infected with *Monostome cercaria.*
2) *Lymnea anricularia* infected with *Echinostome cercaria.*
3) *Viviparous bengalensis* infected with *Xiphidiocercaria.*
4) *Melania tuberculata* infected with *Cercaria pigementosa* .
5) *Lymnea auricularia* infected with *Furcocercus cercaria.*

For the observation of cercariae, the infected snails were placed singly in glass tubes that were filled with equal amount of water in all the experiments. Pieces of *Vallisineria, Hydrilla, Fimbria* leaves were also

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