STUDIES ON CLINOSTOME METACERCARIA

VIII. On a Rare Clinostome Metacercaria from *Heteropneustes fossilis* (Bloch).

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ABSTRACT

*Clinostomoides chauhani* n. sp. a metacercaria is described from the body cavity of a freshwater fish *Heteropneustes fossilis* (Bloch). The species is characterised by a spinose cuticle, by position of gonads and by simple uterus.

Twenty specimens of the common siluroid fish, *Heteropneustes fossilis* (Bloch) were examined on 18 February 1968, at Lucknow, out of which only one was found infected with a metacercaria. On subsequent study, the larva proved to a new species of the rare Clinostome genus *Clinostomoides* Dollfus, 1950 and is described here as such. As far as the writer is aware, this is the first record of the genus *Clinostomoides* from Lucknow and 2nd from India [Earlier Agarwal (1958) described *C. dollfusi* from Jabalpur]. Further attempts to collect this metacercaria was futile as out of total 220 specimens of *H. fossilis* examined none was found infected.

*Clinostomoides chauhani* n. sp.

The metacercaria was found in the body cavity of the host attached to the visceral organs. It was without a cyst and performed active movements of contraction and elongation, often twisting its body.

The body (Fig. 1) is aspinose, elongated with rounded ends, measuring 5.47 mm. in length and 1.20 mm. in maximum breadth. The suckers are well developed and located in the anterior third of the body. The oral sucker measures 0.20 mm. × 0.16 mm., but the ventral sucker is larger than the oral sucker and measures 0.44 mm. × 0.26 mm. The ratio between the oral and the ventral sucker is roughly 1 : 2 : 5.

A pharynx is absent. The oesophagus is short and measures 0.17 mm. in length. The hind end of the oesophagus is slightly bulbous. This structure
simulates a true pharynx and is surrounded by gland cells. Agarwal (1958) and Yamaguti (1958) have called this bulbous structure as pharynx but the writer, as discussed in his earlier publications (Baugh and Pandey, 1955; Pandey and Baugh ...), has termed this bulbous structure as a pseudo-pharynx. The intestinal caeca are simple (i.e., with smooth borders) in the preacetabular region, but provided with well-developed diverticula on inner as well as outer borders in the post-acetabular part and extend up to the hind end of the body. The diverticula are further indented, engorged with brownish food material, and appear conspicuous in live worms.

The gonads (Fig. 1) are well developed and located in the hind fifth of the body. The anterior testis is transversely long, crescentic, non-digitate and measures 0.02 mm. × 0.15 mm. and the posterior testis measures 0.22 mm. × 0.16 mm. The cirrus-sac is club-shaped, located in between testes on the mesial side of the ovary and measures 0.39 mm. × 0.05 mm. The vesicula seminalis is tubular and lies contorted within the cirrus-sac. A pars prostatica, an ejaculatory duct and a cirrus are not developed. The cirrus-sac opens into the genital atrium.

The ovary (Fig. 1) is small, elongate oval, located on the right side at the level with the cirrus-sac, and measures 0.10 mm. × 0.04 mm. The ootype complex, a receptaculum seminis, and a Laurer's canal are not yet developed. The utero-duct first makes several coils in the intertesticular as well as pretesticular field and the runs anteriorly to open at the anterior end of the uterine-sac. The uterine-sac is a slender tube and leads by a short metraterm into a genital atrium. The genial pore is located at the anterior border of the posterior testis. The vitelline follicles are not yet developed.

The excretory bladder (Fig. 1) is small V-shaped and located at the hind end of the body. It opens outside by terminal excretory pore.

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**Fig. 1. Clinostomoides chauhani n. sp. ventral view.**