Argulosis causing juvenile mortality in some fishes at Kakdwip, West Bengal

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Diseases and parasites of food fishes in India and adjacent countries were reported on several occasions (Gopalakrishnan 1967). A few cases of argulosis associated with fish mortality were also known from Indian ponds (Hora 1943; Anonymous 1955,1960; Gopalakrishnan 1963, 1964; Tripathi 1975). However, Ramakrishna (1951) reported the occurrence of Argulus siamensis for the first time from India. He had examined Southwell's (1915) and Hora's (1943) collection and identified them as A. siamensis. Afterwards are- ponof A. siamensis infecting large number of fishes of a pond at Salkia, Howrah, appeared in the Annual Report of the Central Marine Fisheries Research Institute, Mandapam (Anonymous 1955).

The outbreak of argulosis was at present observed in juvenile fishes of Indian major carps at Kakdwip, South 24-Parganas district, West Bengal. The physico-chemical conditions of the infested fish ponds, measuring about 0.15 hectares, showed that the dissolved oxygen was 10.8-12.8 ppm, salinity 1.0-1.50 ppt, pH 7.5-8.6, total alkalinity (CaCO₃) 344-350ppm, water temperature 19.2'-22.8°C and depth of water 150-210 cm.

The parasites collected from the affected fishes were all identified as Argulus siamensis Wilson (Crustacea : Branchiura). It attacked Labeo /oMa(Hamilton), Cirrhinus mrigala (Hamilton) and Calla calla (Hamilton) on the dorsal surface of the body. The infected fishes were very weak and emaciated. Heavy infestation was noticed at the base of dorsal fin and around the lateral lines (Fig. 1). Juvenile (6-8 month, 14-18 cm) mortality was observed in highly infected fish of L. rohita (Fig. 2). A population of 2-6 parasites/cm² was recorded from highly infested portions of the body. Several individuals of L. rohita were noticed with broad head and slender body having a few or even no ectoparasites on them. Various other species of fish viz., Anabas testudineus (Bloch), Rhinomugil corsula (Hamilton) and Liza parsia (Hamilton), though occurring in the same ponds, were not infected with A. siamensis. The infection was first recorded

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Fig. 2. *Labeo rohita* died after severe infection with *Argulus siamensis* throughout the body. In December 1988, turned epidemic in February-March 1989, and declined gradually in May 1989.

This report of outbreak of *A. siamensis* resulting in depredation of fish populations showed that further specific studies are needed.

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