

**“OCCURRENCE OF *ISOPARORCHIS HYPSELOBAGRI* (Billet, 1898) F. MORAVEC, (1989) (Family: ISOPARORCHIIDAE POCHE, 1926) AS PARASITE OF FRESH WATER FISH *MASTACEMBELUS ARMATUS* (LACEPEDE, 1800) IN SINA KOLEGOAN DAM, OSMANABAD DISTRICT (MS)”**

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## ABSTRACT

The present investigation was carried out on helminth parasites of Sina Kolegoan Dam, Osmanabad District. The Metacercaria of *Isoparorchis hypselobagri* (Billet, 1898) Odher, 1927 was described from the Air bladder of fresh water fish *Mastacembelus armatus* (Lacepede, 1800) from Sina kolegoan Dam dist Osmanabad (MS), India during January, 2011. *Isoparorchis hypselobagri* characterized by having Body large, oval, narrow at both the ends wide in the middle, leaf like, dorsoventrally flattened, reddish in colour. Oral sucker oval, Ventral sucker oval in shape, larger than oral sucker. Intestinal caeca elongated, bifurcate, bulging at somewhat few distance. Gonopore small rounded. Testis are small, oval, two in numbers. Cirrus pouch oval, large. Ovary is branched, irregular in shape. Uterus is large or much coiled broad. Eggs are elongated. Vitellaria median. Excretory vesicle is 'Y' shaped.

**Keywords:** *Isoparorchis hypselobagri*, *Mastacembelus armatus*, Sina Kolegoan Dam.

## 1. Introduction

Parasites are extremely abundant and diverse in nature, representing a substantial portion of global biodiversity. Fishes are important components of ecosystem from ecological, medicinal, nutritional and economical point of view. In case of fish parasites, large member of helminth parasites are generally occurs in fishes they create some problems to fish health. The expansion and intensification of fish culture has also faced serious threats from pathogens, which are certainly responsible for significant chronic mortalities and poor growth that is reflected in low survival and poor yield affecting marketability.

Parasites of fish constitute one of the major problems faced by modern fish aquarium culturists. These helminthic infection leads to various disorders i.e. anemia. Population investigation is necessary to provide data for the prediction of integrated methods to achieve the regulation of numbers of harmful parasites (Kennedy) [12]. Notable contribution made by Dobson [8], Dogiel *et al.* [9], Euzeby [10], Anderson [1], Moller, H [15] and Rajeshwar Rao [16].

The present study was aimed that determining the intestinal digenetic metacercarae found in fishes of Sina Kolegoan Dam Osmanabad District.

## 2. Material and Methods

Fishes for the present investigation have been collected from Sina Kolegoan Dam. *Isoparorchis hypselobagri* were obtained from the Air bladder of *Mastacembelus armatus*. These parasites were preserved in 4% formalin and all specimens were stained with Borax carmine, passed through various alcoholic grades, cleared in xylene, mounted in D.P.X and drawings are made with the aid of camera lucida. All measurements are given in millimeters. The identification and classification of the metacercariae was done using Yamaguti, 1958.

## 3. Result

### **Metacercaria of *Isoparorchis hypselobagri* (Billet, 1898) F. Moravec, (1989).**

The trematode worms are large, Body oval, narrow at both the ends wide in the middle, leaf like, dorsoventrally flattened, reddish in colour. The entire length of worm measures 28.95 mm length and 12.25 in breadth. The oral sucker oval, sub-terminal, it measures 1.38 (1.28-1.48) mm in length and 1.81 (1.65-1.98) in breadth. Pharynx and oesophagus not visible. Ventral sucker oval in shape, larger than oral sucker, situated in the anterior half of the body and measures 1.66 mm in length and 1.33 mm in breadth. Intestinal caeca elongated, bifurcate, bulging at somewhat few distance, running sinuously to posterior side of body and overlaps uterus. Gonopore small rounded between two suckers.

Testis are small, oval, two in numbers, lateral to position, situated in anterior half of the body along inner side of intestinal caeca and measures 1.15 (0.99-1.32) mm in length and 1.74 (1.58-1.91) mm. Cirrus pouch is well developed, oval, large located above ventral sucker it measures 0.70 (0.59-0.82mm) in length and 0.97 (0.95-0.99 mm) in breadth.

Ovary is branched, irregular in shape having numerous acini situated in the posterior side of body. Uterus is large or much coiled broad, winding from side to side hind body, extends from ootype and opens at the anterior of the acetabulum and filled with numerous eggs. Eggs are elongated and it measures 0.057 mm in length and 0.027 mm in breadth. Vitellaria median, immediately behind ovary, present in the posterior end of body. Excretory vesicle is 'Y' shaped.

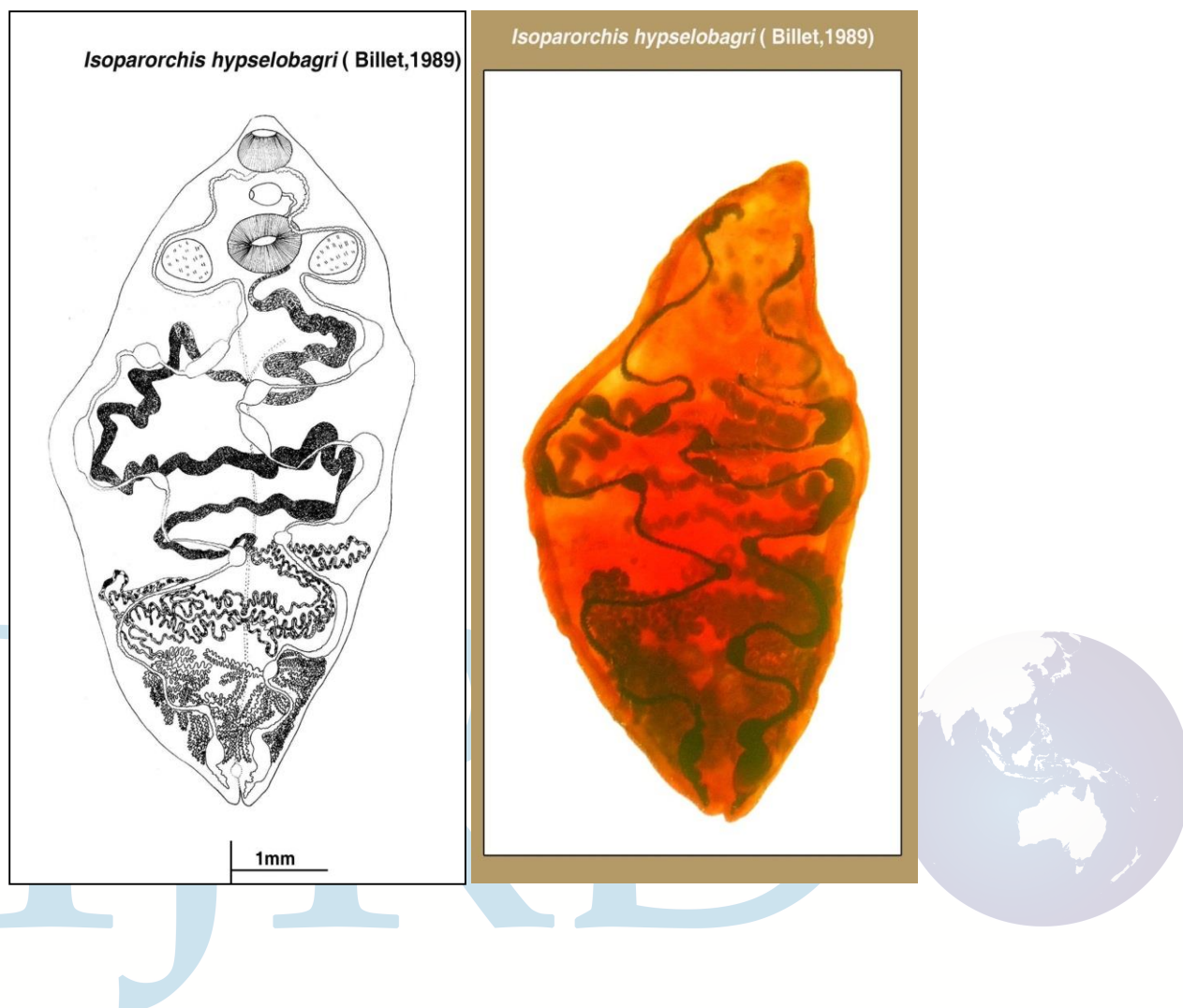
## 4. Discussion

The occurrence of the Metacercariae of *I. hypselobagri* has been reported by [2] in fishes and hosts on its life history. [3] Studied the helminth parasites of fishes in India. [4] studied the

infestation of *I. hypselobagri* in fresh water cat fish *Mystus vittatus* of Bangladesh. [6] worked on abundance and intensity of infestation in *Mystus vittatus*, *M. tengara* and *M. cavasius*. [7] worked on incidence of *I. hypselobagrii* among the cat fishes of Bhavani sagar reservoir. [10] studied the infestation of *I. hypselobagri* in *Nandus nandus*. [13] redescribed the early development of *I. hypselobagri*. [17] worked on *Isoparorchis* infestation in some unrecorded fishes. [19] studied *I. hypselobagri* among fishes in China. [18] reported various digenetic metacercariae from the freshwater fishes of River Godavari. The present Metacercariae was referred to genus *Isoparorchis* [5]. The present Metacercariae closely resembled with *I. hypselobagri* (Billet, 1898) F. Moravec, (1989) in having body is large, dorsoventrally flattened, pre-pharynx absent, acetabulum large, irregular, sub-terminal, Intestinal caeca well developed into 'glandular stomach', but the same differs from it in the following characters. Position of acetabulum is Anterior, sub-terminal; As the characters are minor, it is redescribed here as *Isoparorchis hypselobagri* (Billet,1898) F. Moravec (1989).The present form is collected from *Mastacembelus armatus* (Lacepede,1800) from Sina kolegoan Dam Dist. Osmanabad (MS),India where as *Isoparorchis hypselobagri* (Billet,1898) F. Moravec (1989) is collected from *Ophiocephalus maculates*.

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