Description of *Pycnadena parichaii* N. Sp., A Parasite of Fresh Water Fish *Channa punctatus* (Bl.) from Paricha Reservoir, Jhansi

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***Abstract*- The present investigation is carried out on helminth parasite of Bundelkhand Region, Jhansi. The new species *Pycnadena parichaii* n. sp. reported from fresh water fish *Channa punctatus* (Bl.) from Paricha reservoir, Jhansi. *Pycnadena parichaii* n. sp. is characterized by absence of pre-pharynx; oval post-equatorial ovary which is parallel to anterior testis; presence of oesophagus; post-equatorial tandem testes; vitelline follicles extending from posterior level of ventral sucker up to hind end of the body; uterus arises from ootype, intercaecal extends up to middle of anterior testis then turned arterially and open at genital pore and oval operculated eggs.**

Key words- Helminth Parasite, Paricha reservoir, Bundelkhand region & fresh water.

I. INTRODUCTION

Fishes are the most numerous and diverse of the major vertebrate groups. They dominate the waters of the world through a marvelous variety of morphological, physiological and behavioral, patterns. Fishes are valuable sources of high grade protein and organic products. They occupy a significant position in the socio-economic status of South-Asian countries by providing the population not only the nutritious food but also income and employment opportunities (Joseph and Moyle, 2000).

This paper includes the description of a new species genus *Pycnadena* Linton, 1911 found in the intestine of many specimens of *Channa punctatus* (Bl.), along with observation on its prevalence.

II. MATERIAL AND METHODS

Fishes for the present investigation have been collected from Paricha Reservoir, Jhansi. Fishes were examined for intestinal parasites. The intestine was removed from the body cavity and contents were then examined under microscope. The parasites taken out and fixed in 70% Alcohol for 24 hours. These parasites were stained in aceto-alum carmine, dehydrated and mounted in Canada balsam. Measurement of the digenetic trematode was in micrometers. Drawing was made with aid of camera lucida device. Identification and classification of the species was done by using Yamaguti (1958)

III. DESCRIPTION

Body, elongated, aspinose, with narrow anterior and broad posterior ends, 1.60-1.80 mm long, 0.39-0.41 mm wide. Oral sucker sub-terminal, oval 0.11-0.13 mm long, 0.12-0.14 mm wide. Pre-pharynx absent. Pharynx oval, muscular, 0.03-0.05 mm long, 0.06-0.08 mm wide. Oesophagus tubular, 0.06-0.08 mm long, 0.03-0.05 mm wide. Ventral sucker sub-spherical, 0.1-0.12 mm long, 0.1-0.12 mm wide, and smaller than oral sucker.

Testes, entire, spherical or sub-spherical, post-equatorial, intercaecal, tandem, unequal in size, close or apart from each other; anterior testis 0.1-0.12 mm long, 0.08-0.01 mm wide, posterior testis 0.08-0.1 mm long, 0.1-0.12 mm wide. Cirrus sac anterior to ventral sucker, elongated, 0.11-0.13 mm long, 0.06-0.08 mm wide. Vesiculaseminalis sac like 0.05-0.07 mm long, 0.03-0.05 mm wide. Pars-prostatica, small, 0.02-0.04 mm long, 0.01-0.02 mm wide, surrounded by a large number of prostate gland cells. Ejaculatory duct short, narrow, 0.01-0.02 mm long.

Ovary, oval, oblong, post-equatorial, at the level of anterior testis, 0.07-0.09 mm long, 0.05-0.07 mm wide. Vitelline follicles extending from posterior level of ventral sucker up to hind end of body. Uterus arises from ootype, intercaecal, extends up to middle of anterior testis then turned anteriorly and opens at genital pore. Eggs oval, larger in size, operculated, 0.04-0.07 mm long, 0.02-0.05 mm wide. Genital pore intercaecal, just below the intestinal bifurcation. Excretory bladder simple, tubular; excretory pore terminal.

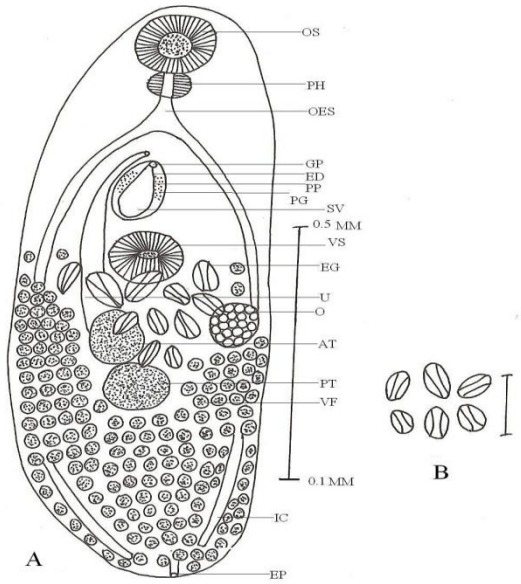

Fig. A. *Pycnadena parichaii* n. sp

Fig. B. Eggs

IV. DISCUSSION

Linton (1910) erected the genus *Didymorchis* with *D. latus* as type species obtained from *Calamus calamus* at Dry Tortugas, and later on (1911) renamed this genus as *Pycnadena* since the former was preoccupied by the *Rhabdocoelic* genus DidymorchisHaswell, 1900. Price (1933) described *P. piriforme* from *Monacanthus hispidus*. C. V. Srivastava (1962) described *Pycnadena komiyai* from *Oxygaster gora* (Hamlinton.), Agrawal and Sharma (1989 and 1990) described *P. betwai*; *P. indica* and *P. bariliusi* from *Rita rita* (Ham.); *Channa punctatus* (Bl.) and *Heteropnesustes fossilis* (Bl.) respectively. *P. parichaii* n. sp differs from these species in having, absence of pre-pharynx; oval post-equatorial ovary which is parallel to anterior testis; presence of oesophagus; post-equatorial tandem testes; vitelline follicles extending from posterior level of ventral sucker up to hind end of the body; uterus arises from ootype, intercaecal extends up to middle of anterior testis then turned interiorly and open at genital pore and oval operculated eggs.

V. KEY TO THE SPECIES OF THE GENUS *PYCNADENA*

1. Prepharynx present…….....2

Prepharynx absent; Vitellaria extending from posterior level of ventral sucker up to hind end of the body; ovary oval……***P. parichaii n. sp.***

2. Vitelline follicles extending from anterior to the posterior extremity of the body; testes tandem…....***P. komiyai*** (C. V. Srivastava, 1962).

Oesophagus absent; vitellaria extending from pharynx to the posterior extremity…...***P. latus*** **(**Linton, 1910).

Oesophagus present; vitellaria confined between acetabulum and the posterior ends of intestinal…….....***P. piriforme*** (Price, 1933).

Vitellaria extending from middle region of ventral sucker up to hind end of the body cirrus sac saccular instead of tubular; position of genital pore intercaecal and post bifurcal ……..…***P. betwai*** (Agrawal, S. C. Sharma, S. K. 1989)

Vitelline follicles extending from anterior end of the body up to posterior end of the body; testes much larger than ovary; extension and size of cirrus sac and position of genital pore…….....***P. indica***, (Agrawal, S. C. Sharma, S. K. 1989)

Anterior testes post ovarian instead of overlapping to ventral sucker…….***P. bariliusi***, (Kumari and Shrivastava, 1975)

VI. SUMMARY

Pycnadena parichaii n, sp. from *Channa punctatus* (Bl.) has been described. Genus *Pycnadena* is reported from a freshwater fish and also from India. A key to the species of the genus is given.

Therefore, a new species *P. parichaii* n. sp is formed for its reception. The new species is named after the name of the place from which the host is collected.

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