

A new host record of endoparasite *Bucephalopsis fusiformis* Verma (1936) from the new fish host *Clupisoma garua* from river Burhi Gandak, Akharaghat, Muzaffarpur, Bihar

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ABSTRACT

During the investigation of endohelminth fauna of siluroid fish hosts of Muzaffarpur, a digenetic trematode endoparasite *Bucephalopsis fusiformis* was collected from the intestine of the fish host *Clupisoma garua*. This is the new host record for the parasite.

KEY WORDS: New host record, Fresh water.

INTRODUCTION:

Diesing (1855) established *Bucephalopsis* as a subgenus of the genus *Bucephalus* Bear (1827) for *B. haimeanus* Lacaze Duthiers (1854). Nicoll (1914) elevated the subgenus *Bucephalopsis* Diesing (1855) and accorded a generic status to it with *B. gracilescens* (Rud, 1819) nec. Tennent (1906) as the type species.

Since the inception of the genus *Bucephalopsis*, a number of species have been reported from India and abroad. During present investigation only one specimen of *Bucephalopsis fusiformis* was collected from the intestine of *Clupisoma garua*.

DESCRIPTION:

The worm is minute, fusiform in shape measuring 1.49 mm in length while 0.35 mm width (**Table**) in the region of vitellaria. Anterior sucker is subterminal and 0.15 mm in diameter (**Fig.**).

Vitellaria compact situated between ovary and anterior sucker. Vitelline follicles are large and rounded measuring from 0.039-0.052 mm in diameter. The follicles are arranged mostly in two antero-lateral groups, one on each side between the lateral margin of the anterior sucker and the mid-level of the ovary.

However, in two cases the follicles are seen arranged in linear rows. In the linear rows the follicles are single in one case and paired in the other case.

The number of follicles on left side is 12-13 while on the right side 11-12. The extension of follicles on each side 0.455 mm from the anterior end of the body.

Pharynx is inconspicuous about middle of body, between ovary and testis and 0.08 mm in diameter.

Oesophagus short and curved. Intestine wide near about 0.23 mm long.

Uterine coils are transverse and winding reaching the anterior region and reaches up to the lower extremity of oral sucker.

The ovary is near right margin and oval in shape and at the distance of 0.44 mm from the anterior end of the body. It measures 0.16 mm in length while 0.12 mm in width.

Testes ovoid and placed one behind the other pushed to right margin of the body and in the same line. The anterior testis is smaller than the posterior testis.

The anterior testis measures 0.18 mm in length while 0.10 mm in width. It lies at the distance of 0.71 mm from anterior end. The posterior testis measures 0.21 mm in length while 0.18 mm in width. It lies at the distance of 0.90 mm from anterior extremity.

Cirrus sac long nearly one – third of the body length reaches more ahead than the posterior testis. It measures 0.52 mm in length and 0.08 mm in width.

Genital sinus 0.14 mm in diameter. Excretory bladder tubular clearer in living condition. Eggs are sparsely distributed and measure 0.02 mm in length and 0.01 mm in width.

Table – Morphometric data for *Bucephalopsis fusiformis* of present collection and its comparison with *B. fusiformis* by Verma, 1936.

All measurements are in mm.

Sl No.	Parts measured	Measurement of present collection	Measurement of <i>B. fusiformis</i> Verma, 1936
1.	Length of body	1.49	1.24-2.52
2.	Width of body	0.35	0.39-0.84
3.	Length of Oral sucker	0.15	0.17-0.245 in diameter
4.	Width of Oral sucker	0.14	
5.	Diameter of Pharynx	0.08	0.07-0.084
6.	Distance of Pharynx from anterior end	0.71	
7.	Distance of Mouth opening from anterior end	0.60	
8.	Length of Anterior Testis	0.18	0.18-0.29
9.	Width of Anterior Testis	0.10	0.26
10.	Distance of Ant. Testis from anterior end	0.71	
11.	Length of Posterior Testis	0.21	0.16-0.25
12.	Width of Posterior Testis	0.18	0.15-0.21
13.	Distance of Post. Testis from anterior end.	0.90	
14.	Length of Cirrus sac	0.52	0.16-0.7
15.	Width of Cirrus sac	0.08	0.1-0.14

16.	Length of Ovary	0.16	0.14-0.21 in diameter
17.	Width of Ovary	0.12	
18.	Distance of Ovary from anterior end	0.44	
19.	Diameter of Vitellarian follicle	0.02-0.04	
20.	Length of Egg	0.02	0.013-0.226
21.	Width of Egg	0.01	0.001-0.146

DISCUSSION

The worm of present collection is being placed under genus *Bucephalopsis* in having elongated body, cuticle covered with spines, anterior end having a sucker on the ventral surface, pharynx present but inconspicuous. Intestinal caecum simple, sac shaped. Testis two, smooth contoured, cirrus sac at the posterior half, towards the left side of the body. Ovary anterior to testis, vitelline glands in two separate groups, being situated in anterior half of the body.

Chauhan (1943) presented a key for the identification of the Indian species.

The present form resembles *B. karvei*, *B. belonea*, *B. microcirrus* and *B. thapari* in having tubular excretory bladder. It differs from *B. sinhai* and *B. garuai* in not having bilobed vitelline follicles, large uterine coils and ovary not anterior to pharynx. It resembles *B. karvei* in vitelline glands not extending like a band along the sides of the body; but differs in the length and extension of cirrus sac. It differs from *B. thapari* in the position of testes and from *B. microcirrus* in not having vitellaria in the middle of the body. It resembles *B. belonea* and *B. macronus* in the position of vitellaria which is in the anterior part of the body but differs from those two in the extension of cirrus sac.

The present worm is very much closer to *B. fusiformis* in having cirrus sac less than half of the body length and hence assigned to *B. fusiformis* (Verma, 1936). This is new host record.

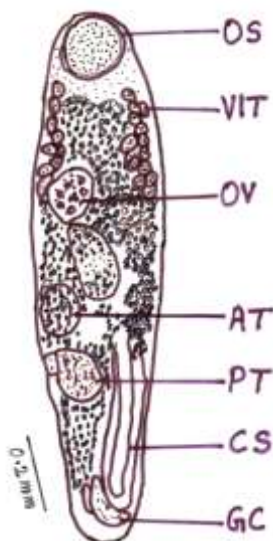


Fig. – Camera Lucida Diagram of *Bucephalopsis fusiformis*

ABBREVIATIONS:

OS – Oral Sucker; VIT – Vitellaria; OV – Ovary; AT – Anterior Testis; PT – Posterior Testis; CS – Cirrus Sac; GC – Genital Cone.

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Host: *Clupisoma garua*

Habitat: Intestine

Locality: River Burhi Gandak, Akharaghat, Muzaffarpur.

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