Circumoncobothrium panchagangae n.sp.

Cotyloda	Wardle, McLeod and Radinovsky 1974.
Pseudophyllidea	Carus, 1863.
Ptychobothridae	Luhe, 1902.
Circumoncobothrium	Shinde, 1968.

***Circumoncobothrium panchagangae* n. sp.**

INTRODUCTION

The genus *Circumoncobothrium* is erected by Shinde in 1968, from the intestine of a freshwater fish *Ophiocephalus leucopunctatus* as a type species *C. ophiocephali*. Chincholikar, 1976 described two new species of this genus i.e. *C. shindei* from a freshwater fish, *Mastacembellus armatus* and *C. bagariusi* from *Bagarius* sp.

Shinde, 1976 described *C. khami* from *Ophiocephalus striatus*. Later on Jadhav and Shinde, 1976 added two new species of this genus viz. *C. aurangabadensis* and *C. raoii* from *Mastacembellus armatus*. Jadhav and Shinde 1976 described *C. gachuae* from *Ophiocephalus gachua*. Later on *C. shindei* and *C. bagariusi*, these two new species added by Chincholikar and Shinde in 1977. Later on Shinde, 1977 reported *C. khami* from *Ophiocephalus*. Jadhav *et al.* 1990 recorded *C. yamaguti* from *Mastacembellus armatus*.

Shinde *et al.* 1994 reported *C. alii* from *Mastacembellus armatus*. In 1998 *C. vadgaonensis* erected by Patil and *C. baimaii* by Wongsawad and Jadhav. *C.*

punctatusi reported by Kalase and Shinde *et al.* in 1999. Shinde *et al.* in 2002 recorded *C. mastacembelusae* from *Mastacembellus armatus*.

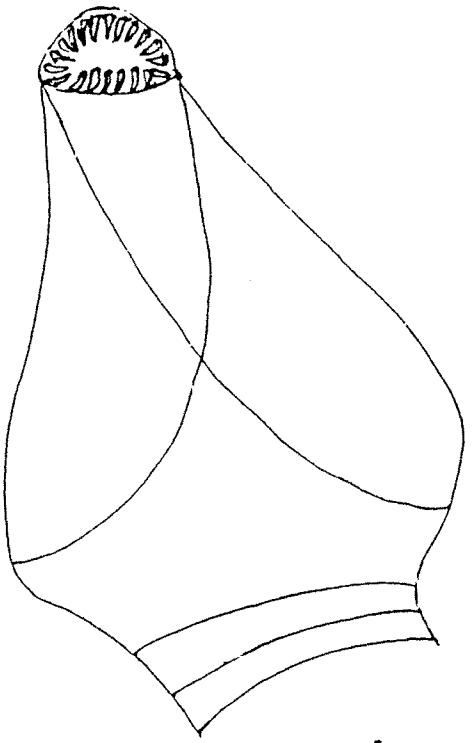
Pawar *et al.* added new species *C. armatusae* from *Mastacembellus armatus* in 2002. In 2004, *C. manjari* reported by Tat and Jadhav.

Recently Supugade *et al* added *C. vitellariensis* from *M. armatus* in 2005.

The present communication deals with the description of two new species under the same genus as *C. panchagangae* n.sp. and *C. subhashae* n. sp. from the intestine of fresh water fishes *Mastacembellus armatus* and *Channa Marulius* collected from Panchaganga river at Rukadi, Tal. Hatkanangale, Dist. Kolhapur and at Ichalkaranji, Tal. Hatkanangale, Dist. Kolhapur, M.S., India.

DESCRIPTION

Two specimens of cestode parasites were collected from the intestine of *Mastacembellus armatus* at Rukadi, Tal. Hatkanangale, Dist. Kolhapur. These parasites were flattened, preserved in 4% formalin; the worms were stained with Harris haematoxylin, passed through various alcoholic grades, cleared in xylol, mounted in D.P.X. and then observed under microscope for taxonomical studies.



A

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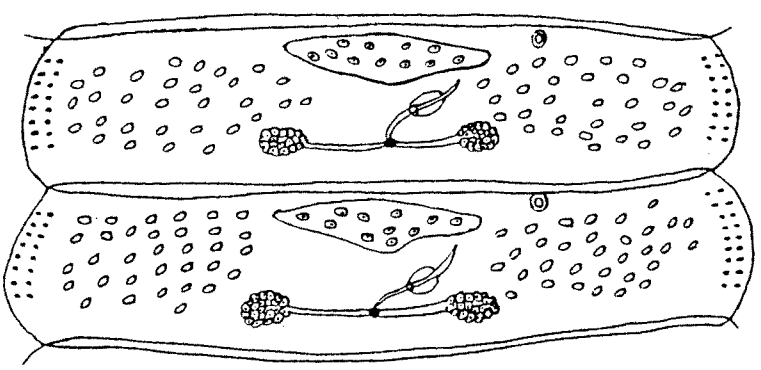
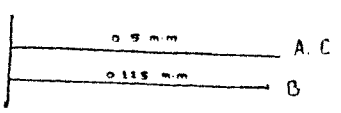


C



The scolex is large in size and conical in shape, longer than broad, broad at the base. Scolex bears a pair of bothridia, large sac like appearance start from the rostellum. Scolex measures 1.116 [1.092 - 1.140] in length and 0.485 [0.097 - 0.873] in breadth. Rostellum distinct and measures 0.121 [0.097 - 0.145] in length, 0.169 [0.097 - 0.242] in breadth. The rostellar hooks are 50-52 in numbers, longer in the centre, shorter on both the sides.

All hooks are straight, stout, few slightly curved. The smaller hooks are 0.054 in length and 0.004 in width, the larger hooks are 0.08 in length and 0.006 in width. The two bothria are large in size almost triangular in size. Bothria 1.043 [0.970 - 1.116] in length and 0.266 [0.194 - 0.339] in breadth.

The neck is very short.

The mature segments are broader than long, about six times broader than long with slightly convex lateral margins with short, blunt projections and measures 0.266 [0.242 - 0.291] in length and 1.310 [1.262 - 1.359] in width. Testes are distributed lateral to ovary, few preovarian, oval in shape 60-70 in numbers. It measures 0.048 in length and 0.026 in width. The cirrus pouch is oval in shape, preovarian almost in the centre of the segments and measures 0.070 [0.067 - 0.072] in length and 0.031 [0.029 - 0.033] in breadth. The cirrus is thin, runs anteriorly 0.060 in length and 0.012 in width.

The ovary is small in size, bilobed, lobes oval, compact almost unequal in size, transversely placed, posterior to the middle of the segments and measures 0.026 [0.019 - 0.033] in length and 0.072 [0.067 - 0.007] in width. The ootype is small in size, round in shape, placed on the isthmus and measures 0.012 in diameter.

The genital pore is small in size, oval in shape, preovarian, almost in the centre of the segment and measures 0.014 in length and 0.009 in breadth.

The vitelline follicles are small in size oval in shape, arranged in two rows on each lateral side. Lateral to testicular field and from anterior to the posterior margin of the segments.

DISCUSSION

The genus *Circumoncobothrium* was established by Shinde, 1968 with the type species *C. ophiocephali*. Later on the following species are added to this genus.

1) *C. aurangabadensis* Jadhav and Shinde 1976
2) *C. raoii* Jadhav and Shinde 1976
3) *C. gachuai* Jadhav and Shinde 1976
4) *C. shindei* Chincholikar and Shinde 1977
5) *C. bagariusi* Chincholikar and Shinde 1977
6) *C. khami* Shinde, 1977
7) *C. yamaguti* Jadhav *et al.* 1990
8) *C. alii* Shinde *et al.*, 1994
9) *C. vadgaonensis* Patil, 1998
10) *C. baimaii* Wongsawad and Jadhav 1998

11) *C. punctatusi* Kalase and Shinde *et al.* 1999
12) *C. mastacembelusae* Shinde *et al.* 2002
13) *C. armatusae* Pawar *et al.* 2002
14) *C. manjari* Tat and Jadhav, 2004
15) *C. vitellariensis* Supugade *et al.* 2005

The tapeworm under discussion, *Circumoncobothrium panchagangae* n. sp. is having the scolex large and conical in shape, rostellar hooks are 50-52 in number. Neck is very short. The mature segments are six times broader than long. Testes 60-70 in numbers. The cirrus pouch, is oval in shape, bilobed, compact ovary; Vitellaria follicular, small in size, arranged in two rows on each lateral side.

1. The worm under discussion *Circumoncobothrium panchagangae* n. sp. differs from *C. ophiocephali* which bears distinct scolex, rostellar hooks 80 in number, rod shaped. Neck is present. Testes are 70-80 in number and ovary single conical mass with irregular bands.
2. The present cestode differs from *C. aurangabadensis* in the number of rostellar hooks which is 42, rod shaped. Neck is present. Testes were 135-145 in number, scattered through out the segment and granular vitellaria.
3. The present worm differs from *C. raoii* which bears scolex broad in the middle and narrow at both the ends, rostellar hooks are 46 in number, rod shaped. Neck is present. Testes 210-215 in number and granular vitellaria.

4. The present cestode differs from *C. gachuae* in not having pear shaped scolex, rostellar hooks 46 in number. Neck is present. Mature segments are squarish in shape. Testes are 375-400 in number; bilobed ovary, short blunt with 5-6 acini.
5. The worm under discussion differs from *C. shindei* in having rostellar hooks 49 in number, rod shaped. Neck is present. Testes 260-275 in number. Bilobed, dumbell shaped ovary with long isthmus and granular vitellaria.
6. The present worm differs from *C. bagariusi* which bears 55 rostellar hooks. Neck is absent, testes 275-285 in number; ovary bilobed, each lobe with 5-6 globular acini.
7. The present tapeworm differs from *C. khami* in having cylindrical scolex with even width, apical disc separated by notch, rostellar hooks 48 in number lancet shaped. Neck is absent; squarish mature segment; testes are 190-200 in numbers, bilobed each lobe compact situated at the posterior and center of the segment.
8. The tapeworm under discussion differs from *C. yamaguti,* which bears distinct scolex, rostellar hooks are 56 in number. Neck is absent. Testes 130-150 in numbers and granular vitellaria.
9. The present cestode differs from *C. alii,* which is having triangular scolex, rostellar hooks 34 in number. Neck is present; testes 230-240 in numbers and vitellaria is granular.

10. The present tapeworm differs from *C. vadgaonensis* which bears triangular scolex. Rostellar hooks 56 in number. Neck is present. Mature segments are slightly broader than long. Testes evenly distributed 490-510 in numbers.
11. The present cestode differs from *C. baimaii* in pear shaped scolex, rostellar hooks 48 in number. Testes 88-100 in numbers; ovaries compact.
12. The present worm differs from *C. punctatusi* which bears medium scolex which is rectangular in shape. The rostellar hooks are 40-50 in number; testes are 140-150 in number and ovary medium, short, blunt with round acini.
13. The present worm under discussion differs from *C. armatusae* in not having triangular scolex. Rostellar hooks are 58 in numbers. Neck is absent. Testes are 190-200 in numbers. Ovarian lobes are unequal.
14. Test present worm under discussion differs from *C. mastacembelusae* which shows pear shaped scolex, rostellar hooks are 38 in number; neck is absent; testes are 130-140 in numbers. Ovary distinctly bilobed, compact with unequal lobes.
15. The present cestode differs from *C. manjari* in having triangular scolex, rostellar hooks are small and large in a single circle. Testes 128-145 in numbers.
16. The present tapeworm differs from *C. vitellariensis* which shows large scolex. Neck is absent. Testes 250-260 in numbers; ovaries bilobed, dumb-bell shaped.

The above noted characters are enough to erect a new species for these worms and hence the name *Circumoncobothrium panchagangae* n. sp. is proposed after the name of the river Panchganga.

Type species	*Circumoncobothrium panchagangae* n. sp.
Host	*Mastacembellus armatus*
Habitat	Intestine
Locality	Rukadi, Tal. Hatkanangale, Dist. Kolhapur, M.S., India
Date of collection	10th May 2008.