On a new species of the genus Senga (Dollfus, 1934) (Cestode: Ptychobothridae, Luhe, 1902) from fresh water fish Mastacembelus armatus

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Abstract

The present paper deals with a new species of the genus Senga (Dollfus, 1934) from freshwater fish Mastacembelus armatus (L.) Kaigaon toka, Dist Aurangabad (M.S) India, in the month of March 2007. It differs from all the earlier reported species in having scolex triangular, anterior end pointed, rounded and posterior end broad., hooks 36 in number , mature segment broader than longer , test 285-295 in number , cirrus pouch pre-ovarian, obliquely placed.

Keywords:- Senga, Mastacembelus armatus

Introduction


Materials and Method

Twenty cestode parasites were collected from the freshwater fish Mastacembelus armatus (Lacepede) from Kaigaon toka, Dist. Aurangabad (M.S.) India, in the month of March 2007. Out of 20 cestodes, four worms are stained with Harris
haematoxylin stain and on closer observations it has been found that they belongs to the genus *Senga* (Dollfus, 1934).

These cestodes were flattened, preserved in 4 % formalin, stained with Harris haematoxylin, passed through various alcoholic grades, cleared in xylol, mounted in D.P.X. and whole mount slides were prepared, for further anatomical studies. Drawings were made with the camera lucida and all measurements are in millimeters.

**Description**
The complete strobilae measure 86-145 mm in length and 3.8 – 4.4 mm in width. The scolex is triangular shaped being broader at the base. It measures 1.22 - 1.25 mm in length and 0.32–0.33 mm in width, it contain two bothria which is narrow at the anterior and broader at the posterior end which measures 1.18-1.20 mm in length and 0.28-0.29 mm in width. The rostrellum is disc like, bears a crown of 36 hooks, the apical disc measures 0.3-0.35 by 0.19-0.21 mm in size. The larger hook measures 0.065 – 0.085 mm by 0.01-0.012 mm in size and the smaller hooks measures 0.031-0.035 mm by 0.01-0.01 mm in size. All the segments, right from the base of the scolex up to the end of the strobila are much broader than long, including immature segments and partly mature segments. In immature segments there is no trace of any reproductive organ and in the partly mature segment besides the developing ovary, vitelline follicle are observed which arranged in the lateral fields of the proglottids. In more differentiated segment, the vitelline follicles appear to be arranged in clusters at the lateral fields and the testes appear to occupy the medullary region around the ovarian lobes.

In most of the mature segment which lie just after the partially mature segments are three times broader than longer which measures 0.15 mm in breadth and 0.024 mm in length, the vitelline follicle are well distinct from the testes being arranged separately i.e. of the segment. The testes 285-295 in numbers which measures 0.03-0.04 mm by 0.01-0.014 mm, they are arranged in two lateral fields. The ovary is differentiated into bilobed structure with a long thin and strip like isthmus between the two lobes is median in position, each lobe consist of 5 acini and it measures 0.09-0.12 by 1.25-1.45 in size. The gravid segments are broader then longer and measures 0.20 mm in breadth and 0.01776 mm in length, tubular uterus is present in these segments which measures 0.075 mm in breadth and 0.0155 mm in length, greater space is occupied by the uterine sacs, which are transversely elongated in accordance with the shape of the proglottids. The eggs are oval to elongated, thin-shelled and non-operculated and measures 0.00- 0.00774 in size.

**Results and Discussion**
Dollfus erect the genus *Senga* in 1934 as a type species *S. besnardii* from *Betta splendens*. Later on the following species are added to this genus. The present cestode comes closer to *S. lucknowensis* (1956), *S. khami* (1971), *S. Wankhede and Reddy Fig. 1: Sections of different segment of *Senga kaigaonensis* n.sp.
The present tapeworm differs from *S. maharashtrii* in the shape of scolex (triangular vs oval), in the number of testes (45-50 vs 300-310). Neck is present.

The present tapeworm differs from *S. armatusae* in the number of hooks (36 vs 55-57). The present cestode differs from *S. maharashtrii* in the number of hooks (36 vs 55-57). The present parasite differs from *S. armatusae* in the shape of the scolex (triangular vs pear shaped), arrangement of follicles (4-5 rows vs 2-3 rows). The present parasites differ from *S. godavari* in the number of hooks (36 vs 40), testes (distributed vs granular). The present worm differs from *S. paithanensis* in the number of rostellar hooks (36 vs 54), in the number of testes (45-50 vs 130-135) and position of vagina (anterior vs posterior). The present tapeworm differs from *S. armatusae* in the shape of scolex (triangular vs rectangular) in the number of hooks (36 vs 55-57). The present cestode differs from *S. aurangabadensis* in the number of hooks (36 vs 40), testes (distributed vs oval) and arrangement of follicles (4-5 rows vs 2-3 rows). The present parasites differ from *S. paithanensis* in the number of hooks (36 vs 40-44), in the number of testes (45-50 vs 90). Neck is present.

The present tapeworm differs from *S. armatusae* in the number of hooks (36-40), testes (distributed in two lateral field vs. densely distributed). The present worm differs from *S. tappi* in the number of hooks (36 vs 40), testes (distributed in two lateral field vs. densely distributed). The present worm differs from *S. maharashtrii* in the number of hooks (36 vs 40), in the number of testes (45-50 vs 285-295). These distinct characters are more than enough to erect a new species from this genus and hence the name *Senga kaigaonensis* n.sp is proposed as it is reported from Kaigaon Toka, Dist Aurangabad, (M.S.) India. Genus : *Senga* Dollfus (1934) Species: *Senga kaigaonensis* n. sp Type host: *Mastacembelus armatus* (L.) Locality: Kaigaon Toka, Dist Aurangabad (M.S.) India Date: March 2007.

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