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Occurrence of heavy parasitic infestation in fresh water fish at Pune, M.S. India

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ABSTRACT

The Cestode parasites are found in plenty in vertebrates like fishes, amphibians, reptiles, birds and mammals. So far very little work has been done on the Cestode parasites of vertebrates in India compared to the wealth of information available in the various part of the world. Mastacembelus armatus is the nocturnal fish occurs in rivers, coastal marshes, sandy or rocky riverbeds. The Cestode parasites cause serious diseases when present in these vertebrate hosts. As their vertebrates like fishes, birds and mammals are an important source of food for human beings and also have economic importance, the parasites cause many diseases when the flesh of the host is improperly cooked and eaten by human beings. The parasites when present, increases the rate of mortality of hosts and reduces their food values.

KEYWORDS: *Scolex, Rostellum, Cirrus pouch, Vitelline glands*

INTRODUCTION

MATERIAL AND METHOD:

I have collected two intestines of fresh water fish *Mastacembelus armatus* from the fish market . washed them under tap water and proceed for whole procedure in the Zoology laboratory of Abasaheb Garware college , Pune, Maharashtra, India.The specimens of Cestode parasites were preserved in 4 % formalin, stained with Harris haematoxylin, cleared in xylol and mounted in D P X for systematic study. The drawings are made with the aid of camera Lucida. . All the measurements are in millimeters, unless otherwise indicated.

DISCUSSION:

Two specimens, of the Cestode parasites, *Senga*, were collected from the intestineof *Mastacembelus armatus.* Each tapeworm is of 2-3 meters long. The Scolex is large 1 mm in diameter, triangular in shape, long, narrow anteriorly, broad posteriorly, tapering at the apex, with two bothria, extending up to the posterior, and margin of Scolex. The bothria are large in size, oval in shape, sac like in appearance, narrow anteriorly, broad posteriorly, occupying almost whole region of Scolex. The Scolex bears an unarmed rostellum, which is medium in size, oval in shape, transversely placed, at the tip of the Scolex. The circle, in four quadrants, all the hooks straight, few slightly curved, small and large in size. The neck is short. The mature segments are broader than long, two and half times broader than long, of small size, with almost straight lateral margins, without lateral projections at posterior corners of the proglottids. The testes are small in size, oval in shape,155 to 160 in number, in two lateral fields, each field on each lateral side of ovarian lobs, few preovarian, almost evenly distributed, from anterior to the posterior margin of the segments in each half. The cirrus pouch is medium in size, oval in shape, preovarian, in the center of the segment, anterior posteriorly and almost vertically situated, curved.The cirrus is thin, almost straight, contained within the cirrus pouch. The vas deferens is very short, thin; curved. The ovary is distinctly bi lobed, dumb-bell in appearance in the posterior half of the segments, just posterior to the middle of same,

irregular in shape and lobes connected with each other by a wide and long isthmus, each lobe almost globular, each with two to three, short, blunt. Acini. The vagina is a thin tube, starts from the genital port, takes a posterior turn, runs, reaches and opens into the ootype. The ootype is small in size, oval in shape, posterior to the ovary. The genital pores are small in size, oval in shape, just anterior to the middle of the segments.The uterus is saccular, preovarian, in the center of the segments; contain numerous eggs, which are oval in shape. The eggs are small in size, oval in shape.

The genus *Senga* was established by Dollfus (1934) with its type species *S. besnardi* from *Betta splendens* the siamese fighting fish, in an aquarium at Vincennes, France, *S. ophiocephalina* Tseng (1933) as *Anchistrocephalus ophiocephalina* from *Ophiocephalus arqus* at Tsinan, china and identified with a form previously recorded by southwell (1913) as *Anchistrocephalus polyptera*, (*Anchistrocephalus* Monticelli, 1890-syn *Anchistrocephaus* Luhe, 1899) from Ophiocephalus straitus in Bengal, India. *S. Pycnomerus* woodland (1924) as *Bothriocephalus pycnomerus* from *Ophiocephalus marulius* at Allahabad, India. *S. Lucknowensis* Johri (1956) from *Mastacembellus armatus* in India. Furnando and Furtado (1963) recorded *S. malayana* from *channa striata*, *S. dorva* and *S. filliformis* from channa micropeltes at Malacca.

Ramadevi and Hanumantha Rao (1966) reported the plerocercoid of Senga with the genus Polyonchobothrium and proposed new combs forspecies.

Furtado and Chaulan (1971) reported S. pahagensis from channa micropelets at Task Bera. Shinde (1972) re-described S. besnardi from Ophiocephalus gachua in India.

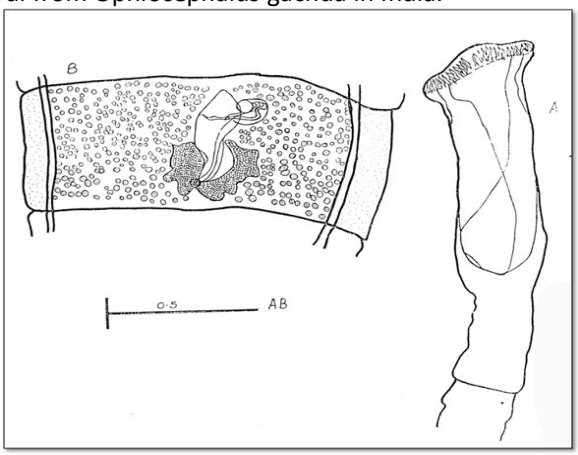

Fig. A .Scolex B. Mature segment of the cestode parasite

RESULT AND CONCLUSION:

Fish tapeworm infection are not seen immediately but tapeworms occur when the people notice mature proglottids and eggs in their stool or fecal matter Symptoms are seen like Fatigue, pain in abdomen diarrhea, weight loss. Feel hungry or loss of appetite. If people take precaution like proper food safety handling means to wash hands, avoid the contact to the infected animal, never eat any flesh of animals or fish in any unknown restaurant.

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REFERENCES:

1. Tseng (1933): Study on some Cestode from fishes. Jour.of Science National Univ. Shantuma, Tsingtao, China (2):1-21.

2. Ramadevi, P. and Rao, K.H. (1966): Plerocercoid of Senga n.sp. (Pseudophyllidea, ptychobothriidae) from fresh water fish, Panchax panchax (Ham. and Buch).Current Sci. 35 (247): 626-627.
3. Shinde, G.B. (1972): Studies on Indian cestode redescription of Senga benesardi Dollfus, 1923,Marathwada Univ. J. Sci. 11: 39-40.
4. Shinde, G.B. and Jadhav, B.V. (1980): New tapeworm,Senga godavarii from Mastacembelus armatus,Aurangabad (M.S.) India. Biology. Vol.II 40: 46-48.
5. B.V.Jadhav, S.B.Deshmukh and A.B.Gavhane (1991): A new tapeworm Senga gachuae n.sp. from the fish Channa gachua at Aurangabad. India. J. Inv.2001.nnd.Aqu.Biol.3 (1) 39-41.
6. B.V.Jadhav (2005): Cestoda of the genus Senga (cestode-Pseudophyllidae) From freshwater fishes in Maharashtra India.A survey of species.Riv. Di. para.vol XXII (IXVI) N-2 93-101.
7. Bhure, D. B., Jadhav. B.V. (2007): New tapeworms, Senga jadhvae n.sp. (Cestode: Pseudophylidae) from Mastacembelus armatus, Aurangabad (M.S) India.Proc. Zool. Soc. of India. Vol. 6, No2: 45-52.
8. C.J. Hiware (1999): On a new tapeworm Senga armatusae n.sp. from fresh water fish, Mastacembelus armatus at pune (M.S) India.Riv. Di. Para. Vol XVI (LX) N-1. 9-12.
9. Deshmukh, R.A. and Shinde, G.B. (1980): On a new cestode Senga khami n.sp. (cestoda-Ptychobothridae) from a fresh water fish.Indian J. of helminth. 31 (1-2):28-32.
10. Dollfus, R.P.H. (1934): Sur un Cestode Pseudophyllidae parasite de Poisson d' ornament. Boll. Soc. Zool.France, 59: 476-490.
11. Felsenstein J. (1985): Confidence limits on phylogenies: An approach using the bootstrap. Evolution 39:783-791.
12. Fernando, C.H and Furtado, J.I. (1964): Helminth parasite of some Malayan freshwater fishes. Bukketin of the national museum state of Singapore, 32:45-71.
13. Furtado, J.E. and Chaulan, L. (1971): Two new helminth species from the fish, Channa micropeltes, Cuvier Ophicephalae) of Malaysia. Folia Parasit, Praba 18(4): 365.
14. Gairola, D.and Malhotra S.K. (1986): Cestode fauna of fishes in river Ganges around an India sub humid region Senga gangesia n.sp from Mystus vittatus. Japanase of para. 35(6) 471-474.
15. Gupta, V. and Parmar, S. (1985): On a new cestode Senga indica Sp. Nov. from the intestine of a freshwater fish Mastacembelus armatus (Lacepede 1800) from Lucknow. Indian J. Helminth, 37 (2) 96-99.
16. Jadhav, B.V. (1980): On a new cestode Senga aurangabadensis n.sp. from the fish Mastacembelus armatus. Bioresearch, 1980(4):25-27.
17. Jadhav, B.V and Shinde, G.B. (1980): A new tapeworm Senga godavari n.sp.from Mastacembelus armatus at Aurangabad. Indian Biology, 2 (4):46-48.
18. Jadhav, B.V, Gavahane, A.B.and Jadhav, A.P. (1991): On new pseudophyllidean cestode from Mastacembelus armatus at Daryapur M.S.India. Riv. parass.8 (1):19-22.
19. Johri, G.N. (1956): A new cestode Senga lucknowensis from Mastacembelus armatus Lecep. CurrentScience,Bangalore, 25 (6): 193- 195.
20. Kadam, S.S, Jadhav, B.V. and G.B.Shinde (1981): On a new cestode Senga paithenesis n.sp (cestode ptychobothridae) Mastacembelus armatus. Bio. Research, 1981 5(1):95-96.
21. Kalse, A.T (2009): Senga panzaraensis from Mastacembelus armatus at Dhule India. Uttarpradesh journal of zoology 2009, vol.29 no.1. Pp. 105-108.
22. Majid, M.A. and Shinde, G.B. (1984): Two new species of the genus senga Dollfus 1934 (cestoda – Pseudophylldea) from fresh water fishes at Jagannathpuri, Orisa. India, J of para. (1)169-172.
23. Nilima M. Kankale (2008): A new species of the genus Senga nathsagarensis from a fresh water fish Mastacembelus armatus. National journal of life sciences, 5 (3) 81-84.
24. P.R.Pardeshi (2011): A new pseudophyllidean Senga rupchandensis n.sp. from Channa striatus (Bloch, 1973) at Jalna District (M.S), India. RRST 3(12): 17-22.

25. Pande, P.N., Mittal Neetu and Sing, S.R. (2000): On a new cestode of the genus Senga, Dollfus, 1934 from the intestine of fresh water fish Mastacembelus armatus (Lacepede) from Kanpur, U.P.India. J.Hel. (N.S.) 5-8.
26. Pande, P.N., Mamta, T. and Neetu, M. (2006): On two new species of genus Senga Dollfus, 1934 (Family:Ptychobothriidae) Luhe, 1902 from the intestine of freshwater fishes. Indian Journal of Helminthology.
27. Patil D.N. and Jadhav, B.V. (2003): On new species the Senga Dollfus, 1934 (Cestoda- Ptychobothridae Lune, 1902) as S.tappi n.sp. Jour. Comp. tox. Physiol, Vol -1, 68-72.
28. Ramadevi, P. and Rao (1976): On Sengavisakhapatnamensis n.sp. (Cestoda: Pseudophyllideaarasite de Poisson d' Ornement. from the intestine of the freshwater fishOphiocephalus punctatus (Bloch.). Rivista Di Parasitol., Vol. 34, No. 4: 281-286.
29. R.A.Mcloed, J.A. and Radinovsky, S (1974): Advances in the Zoology of tapeworms, 1950-1970. Univ.Minnesota. Minnetoba Press, Monneapolis, 1-274.
30. Wongsawad, C; Tanu, Marayong, Jadhav, B.V. (1998): A new Ptychobothridae tapeworms from Maesa stream, Chiang Mai, Thailand.