



STUDIES ON THE CESTODE GENUS *SILUROTAENIA*, NYBELIN, 1942 FROM WALLAGO ATTU A REPORT ON NEW SPECIES, *SILUROTAENIA SANGVINESIS*

¹Bele P.S and ²Gore G.D,

¹Dept. Of Zoology .ACS College, Gangakhed.

²Head Of Dept of Zoology SSGM Mahavidhyala, Loha
psbele2011@gmail.com

ABSTRACT :

Present study deals with the taxonomic observation of piscian tapeworm *Silurotaenia sangvinensis* n.sp. collected from the intestine of *Wallago attu* from Manar river, at Sangvi tq Ahmedpur dist. Latur(M.S) India during May.2012-June.2013. Present cestode come closer to all known species of genus *Silurotaenia*, Nybelin, 1942 in having general topography of organ but differs due to scolex large, somewhat vessel in shape, suckers four large in size oval in shape, rostellum is large, oval in shape situated at the tip, armed with hooks, neck present, mature segment large, squarish in shape, testes 150 in number, ovary distinctly bilobed, vagina thin tube, arises from genital pore, vitellaria are follicular.

Keywords: *Silurotaenia*, Manar river, *Wallago attu*.

INTRODUCTION

Fishes are important protein food source in human life. Fishes show wide range of distribution in marine and freshwater, silurid fishes are important naturally developed food fish group found in the catch in this region. It is found that various species of cestode worm invade in the small intestine of these fishes. Fishes are rich in high protein and vitamin like A, D, E, B12.

The genus *Silurotaenia* was erected by Nybelin, 1942 from *Silurus glanis*. Later on Shinde, Deshmukhand Chincholikar added one new species to this genus in (1975) as *S. nybelini* from *Pseudotropius taakree* at Ambajogai, and Aurangabad, M.S., India. After that, Shinde and Kadam added four new species such as *S. macroni*, *S. singhala* from *Macrones singhala* and *S. barbui*, *S. ticto* from *Barbus ticto*, then one more species is added namely *S. paithanensis* by Shinde and Majid in 1982 from *Mystus singhala*. In 1989, Deshmukh and Shinde added *S. behairvnathi*, new species to this genus. Later on, Jadhav *et al.* (1991) added one more species to this genus *S. shatri* from *M. seenghala*. Chavan, S.P (1997) added new species *S. gangakhedensis* from *Wallago attu*. In 2002 Wankhede and Jadhav reported *S. godavari* from *Sparata seenghala*. Bhure and Nanware *et al.* (2010) reported *S. raoii* from *Mystus seenghala*. Sawarkar, B.W (2013) added one more species in to this genus *S. govindii* from *Macrones singhala*.

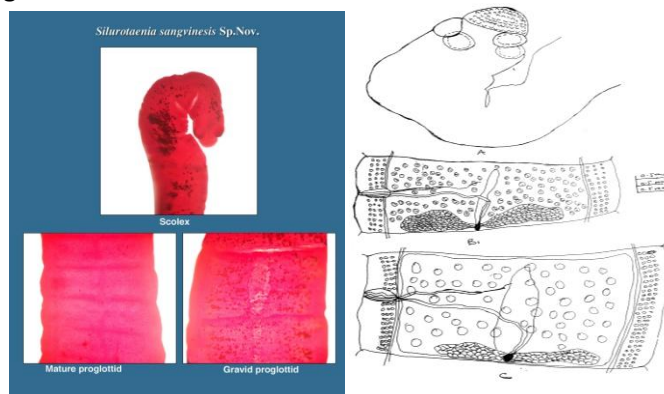
MATERIALS AND METHODS

Fifteen specimen of the cestode parasite, were collected, from the intestine of Fresh water fish, *Wallago attu*. From Manar river at Sangvi tq Ahmedpur taluka M.S. India during the period of May 2012 June 2013. The specimens were flattened, preserved in hot 4% formalin, stained with Harris Haematoxylin, passed through various alcoholic grades, cleared in xylene mounted in DPX. And drawings are made with the aid of Camera lucida and all measurements are recorded in millimeters. The identification done by "systema Helminthum" Vol. II by Yamaguti 1959.

RESULT AND DISCUSSION

All the cestodes were long, with thin musculature white in colour with the scolex, numerous immature and mature proglottids. The Scolex is large in size, somewhat Vessel in shape, distinctly marked off from the strobilla, narrow anteriorly, broad at the posteriorly and dimensions were counted about 0.391 to 0.459 in length and 0.249 to 0.279 in breadth. The scolex bears four suckers, which are large in size, oval in shape, situated near the posterior and lateral margins of the scolex, arranged in two pairs, one pair in each half of the scolex, overlapping on each other, in each pair and dimensions were counted about 0.095 to 0.110 Lengths 0.045 to 0.58 in width. The rostellum is large in size, Oval in shape situated at the tip of the scolex armed with hooks and dimensions were counted about 0.021 to 0.086 in length and 0.131 to 0.159 in width. The rostellar hooks are present on the restellum, which are many in number arranged in 5 to 6 rows, which are simple single pronged, small in size, straight, pointed, stout and dimensions were counted about 0.018 to 0.026 in length and 0.005 to 0.012 in breadth The neck is present. The mature segment are large in size, almost squarish in shape, slightly broader them log, almost two to three times broader than long, with slightly convex lateral margins and short, blunt projections at the posterior corners of the segments and dimensions were counted about 0.920 to 1.857 in length and 0.685 to 0.698 in width.

The testes are small to medium in size, oval in shape 150 in number, preovarian in a single field, in the central medulla, evenly distributed from ovary to the anterior margin of the segments, bounded laterally by the longitudinal excretory canals and dimensions were counted about 0.020 lengths 0.030 width. The cirrus pouch is small, narrow proximally, broad distally, slightly curved, dimensions were counted about 0.169 Length & 0.067 to 0.024 width. The cirrus is wide slightly curved, contained within the cirrus pouch and dimensions were counted about 0.125 in length 0.008 to 0.010 in width. The vasdeferense is thin. Slightly curved, runs obliquely crosses the vagina, extends anteriorly and dimensions were counted about 0.324 in Length & 0.015 in breadth. The ovary is large in size, distinctly bilobed, situated near parallel to the posterior margin of the segments; lobes are someof equal in size, dimensions were counted about about 0.268 to 0.276 in length and 0.068 to 0.071 in breadth The ovarian lobes are connected to each other by a short, medium isthmus, dimensions were counted about 0.022 to 0.029 in length and 0.013 to 0.019 in breadth. The vagina is thin tube, arises from the genital pore placed posterior to the cirrus pouch, runs parallel transversly upto the centre of segment. Reaches and opens in to the ootype and measures 0.391 in length and 0.014 to 0.016 in breadth. The ootype is large in size, oval in shape, within the concavity of ovarian lobes, situated near the posterior to the middle of the segment and dimensions were counted about 0.015 to 0.021 in diameter. The genital pores are large in sizes, oval in shape marginal, irregularly alternate, situated the middle or just posterior to the middle of the segment and dimensions were counted about 0.067 in length and 0.033 to 0.043 in breadths. The uterus is sacular, large in size, straight, unbranched, elongated, starts from the ootype, and extends up to anterior margin of the segments and dimensions were counted about 0.256 in length and measure 0.022 to 0.032 in breadth. The vitellaria are follicular, small in size rounded in shape, arranged in three rows on each lateral side of the segments, from the anterior to the posterior margin of the segment and dimensions were counted about 0.005 to 0.009 in diameter.



The longitudinal excretory canals are thin and dimensions were counted about 0.010 Length & width. The gravid segments are large in size, slightly border than long, convex or concave margins with or without short blunt round projection at the posterior corners of the segment unequal in length. Gravid segment having the uterus, long separately elongated and separated numerous

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The present research work, deals with the description of a new species, with the same genus *Silurotaenia* from *Wallago attu*, collected from Mannar River, Sangvi Tq. Ahmedpur Dist. Latur, M.S., India.

The worm under discussion, is having scolex somewhat vessel in shape, narrow anteriorly, broad at the posteriorly; testes 150 Cirrus pouches small, Cirrus is wide slightly curved within the cirrus pouch, ovary large, distinctly bilobed, vitellaria, Follicular, Small in size, rounded, in three rows, genital pore large, oval, marginal, irregularly alternate middle or just posterior to middle of the segment.

1. The present worm differs from *S. siluri* in having testes 220 - 230, ovary bilobed, almost quadrangular lobes with acini, not reaching upto longitudinal excretory canals; vitellaria follicular, two to three rows, on each side; genital pores just anterior to the middle of the segments.
2. The present cestode, differs from *S. nybelini* which is having the testes 130 to 140, ovary is compact and 'U' shaped, lobes were extend anteriorly; vitellaria granular.
3. The newly proposed cestode distinguished from *S. macroni* which is having the counts of testes 68, ovary is bilobed, lobes were broad, extend up to longitudinal excretory canals; vitellaria as groups of granules in 2 to 3 rows and genital pores in the middle of the segments.
4. The newly proposed cestode distinguished from *S. singhala* which are 370 to 390 in number of testes, ovary is bilobed, lobes median in size, a poral lobes extend beyond the longitudinal excretory canals; vitellaria follicular.
5. The newly proposed cestode distinguished from *S. barbui* which is having testes 135 to 140, ovary is bilobed, fan shaped; vitellaria granular, lobes are broad, corticular and genital pores in anterior half or just anterior to the middle of the segments.
6. The newly proposed cestode distinguished from *S. ticto* which is having 575 to 580 testes, ovary is bilobed, lobes were elongated; vitellaria granular, corticular and genital pores just anterior to the middle of the segments.
7. The newly proposed cestode distinguished from *S. paithanensis* which is having tests 82 to 85 ovary bilobed, lobes fan shaped; vitellaria granular, corticular and genital pores just anterior to the middle of the segments.
8. The newly proposed cestode distinguished from *S. gangakhedensis* Which is having testes 230 to 235(231) in numbers, ovary is distinctly bilobed, vagina medium in width, anterior to cirrus pouch, genital pore is large, oval in shape, vitellaria follicular and small in size
9. The newly proposed cestode distinguished from *S. raoii* which is having testes 125-130 in number, ovary distinctly bilobed, vagina lies posterior to cirrus pouch, genital pores oval in shape, vitellaria granular.
10. The newly proposed cestode distinguished from *S. govindii* which is having testes 72 to 78 in number, ovary indistinctly bilobed near the posterior margin, vagina is thin, posterior to cirrus pouch runs transversely up the centre, vitellaria granular, corticular and subcorticular

The above distinct characters are enough and valid the present worm is regarded here to constitute a new species, for which, the name *Silurotaenia sangvinesis* n.sp. is proposed after the locality.

Type's species	-	<i>Silurotaeniasangvinesis</i>
Host	-	<i>Wallago attu</i> .
Habitat	-	Intenstine
Locality	-	Sangavi, At. Manar River

Tq. Ahmedpur Dist. Latur, M.S., India.

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