TYLOCEPHALUM NEWASAE (CESTODE PARASITE) N.SP. FROM TRYGON ZUGEI (MULLER AND HENLE, 1841) AT BHAGWATI BANDER, RATNAGIRI M.S. INDIA

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Abstract:**The present cestode is collected from *Trygonzugai*, a marine fish from Bhagwati Bandar, Ratnagiri, M. S. India during January 2007 to December 2007. It bears 57 segments which may be mature, immature, gravid etc. The scolex with four suckers.ovary U shaped.nvas defers large and curve. Testes are medium, 30-40 in numbers. By comparing different cestodes, it is clear that the species is new. It infects the Intestine of fish, attached with the help of suckers and feed on nutritious food, in higher infection death of host occurs.**

IndexTerms - Scolex, Cestode, Mature segments, Testes, Ootype

I.INTRODUCTION

The genus *Tylocephalum* was erected by Linton, 1890 with its type species *T. pingue* from *Rhinopteraquadriloba* at Ceylon and *T. dierma* from *Myliobatismeculata* at Ceylon. Linton (1916) reported *T. marsupium* from *Aetobatisnarinari*, Yamaguti (1934) recorded *T. squatinae* from *Squatinaejaponica* at japan, Toyama Bay of Japan. Southwell (1925) described,*T. yorkei* from *Aetobatisnarinari* at Puri, Orissa, India. Subhapradha (1955) described *T. elongatum* and*T. minimum* from *Rhynchobatusdjeddensis* in India. Chincholikar (1980)[1] added one new species to this genus i.e. *T. madhukari* from *Trygon* sp. at Ratnagiri. Jadhav and Shinde (1981)[2] described *T. singhii* from *Trygonzugei* at Bombay. In 1983[3&4] Jadhav erected a new species to this genus *T. bombayensis* which is collected from Bombay, Jadhav et al (1988)[5] described *T. aurangabadensis* from *Aetobatisnarinari* collected from Arabian Sea. Shinde and Jadhav (1989)[6] described *T. hanumanthravae*.
Later on Wankhede and Jadhav (2003)[7&8] described *T. gajanane* from *Trygonsephen* collected from Bombay, west Coa

II.RESEARCH METHODOLOGY

Fifteen cestode parasites were collected from *Trygonzugei* (Muller and Henle, 1841) at Bhagwatibander, Ratnagiri (West Coast of India), January 2007 to December 2007

Out of Fifteen parasites, seven parasites were preserved in 4% formalin for systematic study, three parasites along with infected intestine preserved in Bouin'sfluid to see histo-pathological changes, which are compared with the non-infected intestine, whereas the remaining parasites were used for biochemical aspects The parasites were identify by morphometric method. Drawing are made by using camera Lucida, all measurements are in millimeter.

III. DESCRIPTION

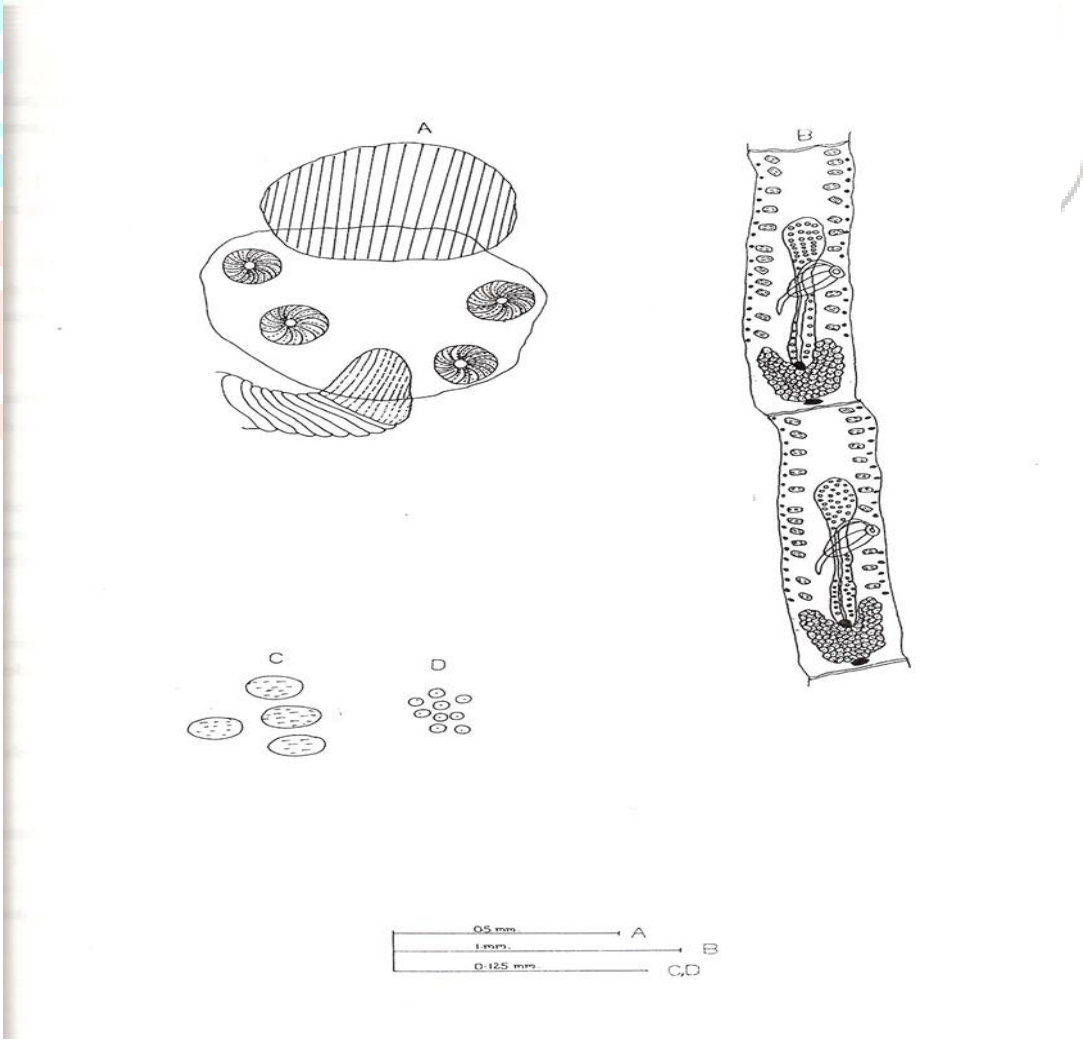
The worm measures about 20 in length and 1 in breadth, and consists of 53 variable segments irregular margins, immature and mature segments. The scolex (Head) is divided into two regions, anterior and posterior region. Anterior region is some what circular, placed towards the anterior side with some muscular pads. Anterior region is somewhat entangled in the posterior of Scolex, which measures 1.044 (1.020-1.068) in length and 0.643 (0.632-0.655) in breadth. The posterior region is globular in shape, diverting towards anterior and posterior side with four suckers and measures about 1.262 (1.238-1.287) and 0.544 (0.282-0.801) in breadth. Out of four suckers, two are situated towards the anterior side.. Suckers are somewhat oval in shape. The scolex is followed by a long neck which measures 0.316 (0.267-0.365) in length and 0.258 (0.219-0.297) in breadth. The testes measures 30-40 in number arranged in a line placed at both sides, r. The cirrus pouch is situated at length t 1/3rd of the segment towards the posterior side, large in size, oval measures 0.406 (0.399-0.413) in length and 0.100 (0.049-0.151) in breadth, placed sub marginally. Cirrus is narrow tube wide placed in a cirrus pouch measures 0.211(0.204-0.219) in length and 0.012 (0.005-0.020) in breadth. Vas deference which is large, curve, measures 0.211(0.170-0.253) in length and 0.0170 (0.010-0.025) in breadth. The ovary is "U" shaped, the lobes which are big, irregular in shape, present towards the posterior side of the segment with seven acini on both the sides, measures 0,680 (0.656-0.704) in length and 0.364 (0.267-0.462) in breadth.Vagina is a long narrow tubestart from the common genital pore, takes a turn anteriorly and forms recaptaculumseminis and opens into ootype, which are rounded with 0.088 in diameter. Vagina measures 0.522 (0.510-0.534 in length and 0.048-0.030 in breadth. Receptacle seminis measures 0.211(0.204-0.219) in length and 0.020 (0.015-0.025) in breadth. Uterus starts from ootype, which reaches up to the anterior side of the segment.

Filled with number of operculated eggs, measures 0.971 (0.923-1.020) in length and 0.199 (0.068-0.131) in breadth. Vagina and cirrus pouch opens through a common pore known as genital pore, which is marginal, unilateral and measures 0.098 in diameter. The shell gland is post ovarian, measures about (0.212-0.234) in length and 0.226 (0.015-0.437) in breadth. The vitellariaaregranular, cortically placed, except the cirrus pouch region.

IV. RESULT AND DISCUSSION

The cestode under discussion is having scolex globular, divided into two regions, Anterior region is some what circular, posterior region is globular, long neck, mature segments longer than broad, and 53 in number, varies in size, testes 30-40 in number, large, oval, sub marginally placed, ovary "U" shaped, vagina long, narrow tube, genital pore marginal, unilateral, shell glands, post-ovarian, vitellaria granular.

1. The present form differs from *T. pingue*, Linton, 1890, which is having the scolexglobose, absence of neck, testes 20 - 27 in number, ovary like transverse band.
2. The present worm differs from *T. artiobatidis*, Shipley et al and Hornell 1905, which is having scolex circular at the anterior part and swollen at the base, neck absent, segment 50 in number, testes 7 - 12 in number and ovary massive.
3. The form under discussion differs *T. marsupium*, Linton 1916 which is having scolex relatively large, neck absent, segment vase shaped, constricted at the anterior end, testes 30 - 32 in number, cirrus pouch relatively small and oval, ovary lobed and granular vitellaria.
4. The present worm differs from T. dierma Shipley et al, Hornell 1906, which is having the scolex variable in size, testes about 50 in number, ovary bilobed and composed of very small, elongated club shaped acini.
5. The present cestode differs from *T. yorkeri*Southwell 1925 which is having the scolex cushion shaped testes 30 - 36 in number ovary small and bilobed.
6. The present worm differs from *T. elongatum*Subhapradha 1955, neck absent testes 40 in number, ovary bilobed with numerous small acini and vitellaria follicular arranged in bands.
7. It differs from *T. minimum*Subhapradha 1955, anterior region much smaller than posterior regionThe above noted characters are valid enough to accommodate this worm into a new species and hence the name *Tylocephalumnewasae*n.sp. is proposed after the place Newasa Dist. Ahmednagar where the author is serving



TylocephalumNewasaeN.Sp A. Mature segment B. Scolex C. Testes D. Eggs

V. ACKNOWLEDGMENT

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VI. REFERENCES

[1] Chincholikar L.N. &Shinde G.B.1980**:**A new cestode*Tylocephalummadhukari*n.sp. (Lecanicephalidae) from a marine fishTrygonsephen. Riv. Parasit, (1980): 41 (1): 23-26.
[2] Jadhav B.V. &Shinde G.B. 1981**:***Tylocephalumaurangabadensis* sp. (Cestoda: Lecanicephalidae) from a marine fish Aetobatisnarinari.Indian J. Helm. Vol. XXXIX No.2,88-91.
[3] Jadhav B.V. &Shinde G.B.1981**:** A new species of the genus *Tylocephalum*, Linton, 1890 (cestode: Lecanicephalidae) fran Indian Marine fish.Indian Journal of Parasitology, 5(1): 109-111.
[4] Jadhav B.V. &ShindeG.B.1982**.**A new species of the genus *Tylocephalumsinghi*n.sp. fromTrygonzugei from Bombay. India.Indian J. of Parasitology 1981, 5(1): 109-111.
[5] Jadhav B.V.1983**:***Tylocephalumbombayensis* (CestodaLecanicephalidea) from the Indian fish *Trygonsephen*Rivista dparasitologia (1983): 44 (2): 193-195.
[6]Jadhav B.V. &ShindeG..B. 1989**.** *Tylocephalumaurangabadensis* sp. Nov. (cestoda: Lecanicephalidae) from a marine Fish*Aetobatisnarinari* from Arabian sea.Indian J. of HelminthVol, XXXIX No.,88-91.
[7] Shinde G.B. &JadhavD.H.1989**.**A new species of the genus *Tylocephalum* (Cestoda:
[8] Lecanicephalidae) from a marine fish *Rhynchobatusdjeddensis* at Bombay .India.Indian J. of Parasite, 1989 13 (2): 207-208.
[9] Wankhede&Jadhav B.V. 2003**.** On a new species of the genus*Tylocephalum*, Linton (1890) from *TrygonSephen*.Indian Journal of Comparative Animal physiology Vol.21 ,24-27.
[10]Wankhede&Jadhav B.V. 2003**.** On a new species of the genus *Tylocephalum*Linton (1890) from *TrygonSephen*.Indian Journal of Comparative Animal physiology, Vol. 21,24-27.