

ON A NEW *TYLOCEPHALUM SHINDEI* (CESTODA:LECANICEPHALIDAE) FROM *RHYNCHOBATUS DJEDDENSIS* AT BHATE IN MAHARASHTRA, INDIA.

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ABSTRACT

The present paper deals with the description of new a species, under the genus *Tylocephalum* Linton, 1890, as *Tylocephalum shindei* n.sp., which is having scolex large, globular, divided into anterior and posterior region having 4 circular suckers. The neck is short and wide; mature segments are longer than broad. Testes are medium in size, round, pre-ovarian, and anterior to cirrus pouch. Cirrus pouch is large in size, oval, vas deferens is short and thin; ovary is large, quadrangular, bilobed, numerous acini. Vagina is a wide tube, ootype is large, round in shape, post-ovarian; genital pores are regularly alternate, big in size, oval in shape. Uterus issaccular, vitellaria are granular.

KEY WORDS: Cestode, *Rhynchobatus*, *Tylocephalum*,

INTRODUCTION

The genus *Tylocephalum* was erected by Linton, 1890 with its type species *T. Pingue* from *Rhinopteraquadriloba* at Ceylon and *T. dierma* from *Myliobatis meculata* at Ceylon. Linton (1916) reported *T. Marsupium* from *Aetobatis narinari*, Yamaguti (1934) recorded *T. squatinae* from *Squatina japonica* at Japan, Toyama Bay, Japan. Southwell (1925) described *T. yorkei* from *Aetobatis narinari* at Puri, Orissa, India. Subhapradha (1955) described *T. elongatum* and *T. minimum* from *Rhynchobatus djeddensis* in India. Chincholikar (1976) added one new species to the genus i.e. *T. madhukari* from *Trygon* sp. At Ratnagiri. Jadhav and Shinde (1981) described *T. singhii* from *Trygon zugei* at Bombay. In 1983 Jadhav erected a new species to this genus *T. bombayensis* which is collected from Bombay, Jadhav *et al.*, (1988) described *T. aurangabadensis* from *Aetobatis narinari* collected from Arabia sea. The present communication deals with the new species of the genus i.e. *T. shindei* n. Sp. Collected from *Rhynchobatus djeddensis* at Bhate, M.S., India.

MATERIALS AND METHODS

The *Rhynchobatus djeddensis* was collected from the Bhate and were dissected. After dissection the parasites were collected and kept for some time in saline water. After the relaxation of parasites they were spread on slides, they were transferred in 4% Formalin and were kept for 24 hrs for fixation, and then good fixed parasites were selected and were stained in Haematoxylin staining. Then perfect stained parasites were photographed and Taxonomical studies were done. All the measurements are in millimeters.

DESCRIPTION

Five cestode parasites were collected from the intestine of a marine fish *Rhynchobatus djeddensis* (Forsskal) at Bhate (West Coast of India), India in the month of November, 2010.

The scolex is large in size, globular in shape, divided into two regions, anterior and posterior. The posterior part appears somewhat 'H' shaped. The scolex measures 0.844- 0.892 in length and 0.625-0.820 in breadth. The anterior region is blunt, round, oval in shape and measures 0.413 – 0.509 in length and 0.509 – 0.640 in breadth. The posterior region is large, quadrangular, bearing four prominent circular accessory suckers and measures 0.417 – 0.645 in length and 0.306 – 0.679 in breadth. Accessory suckers: small in size, oval in shape, situated in corners, equidistantly placed and measures 0.112 – 0.146 in length and 0.087 – 0.121 in breadth. The neck is short, wide and measures 0.461 in length and 0.301 in breadth.

The mature segments are longer than broad, loosely connected with each other. They are longer than broad, almost 3-4 times longer than broad, with convex or convex lateral margins and measures about 0.072 – 0.083 in length and 0.282 – 0.301 in width.

The testes are medium in size, round in shape, 40-50 in number, pre-ovarian, anterior 1/3 region of the segment, anterior to the cirrus pouch, in a single field, unevenly distributed, in the central medulla and measures 0.010 – 0.019 in diameter. The cirrus pouch is large in size, oval in shape, opens sub marginally, extends up to the other lateral margin of the segment, curved and measures 0.136 – 0.155 in length and 0.058 – 0.116 in width. The cirrus is wide, straight contained within the cirrus pouch and measures 0.432 – 0.461 in length and 0.291 – 0.301 in width. The vas deferens is short, thin and measures 0.343 in length and 0.299 in width.

The ovary is large in size, almost quadrangular in shape, near the posterior margin of the segment, bilobed, lobes with irregular margin, with numerous acini and measures 0.316 – 0.330 in length and 0.122 – 0.155 in width, preoral lobes of the ovary are almost equal sized. The vagina is a wide tube, starts from the common genital pore, postero ventral to the cirrus pouch, takes a curve posteriorly, runs obliquely and medially, reaches and opens into the ootype and measures 0.349 in length and 0.219 – 0.259 in width. The ootype is large in size, round in shape, post ovarian, near the posterior margin of the segment and measures 0.043 in diameter. The genital pores are regularly alternate, big in size, oval in shape, submarginal, subcortical in position and measures 0.043 in length and 0.019 in width.

The uterus is saccular, uterine tube is coiled arises from the ootype, runs anteriorly ventral to the ovary, extends anterior to the cirrus pouch, enlarges into a large sac, which extends up to the anterior margin of the segments. The vitellaria are granular, wide strips, in cortical parenchyma, on each lateral side of the segments and extend from anterior to the posterior margin of the proglottids.

RESULTS AND DISCUSSION

The present form differs from *T. pingue*, Linton, 1890, which is having the scolex globose, absence of neck, testes 20-27 in number, ovary transverse band are follicular vitellaria.

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.

The present cestode differs from *T. squatinae*, Yamaguti, 1934 which is having the scolex sub globular, long neck, testes 40-50 in number, cirrus pouch oval, ovary with elongated acini and follicular vitellaria in 2-3 rows.

The form under discussion differs *T. mosupium*. 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.

The present worm differs from *T. diorama* Shipley et al, Hornell 1906, which is having the scolex variable in size, presence of neck, testes about 50 in number, ovary bilobed and composed of very small, elongated club shaped acini and follicular vitellaria.

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 and follicular vitellaria in one row.

The present worm differs from *T. elongatum* Subhadrappa 1955, neck absent, testes 40 in number, ovary bilobed with numerous small acini and vitellaria follicular arranged in bands.

It differs from *T. minimum* Subhadrappa 1955, anterior region much smaller than posterior region, neck absent, testes 33 in number and vitellaria follicular in one row.

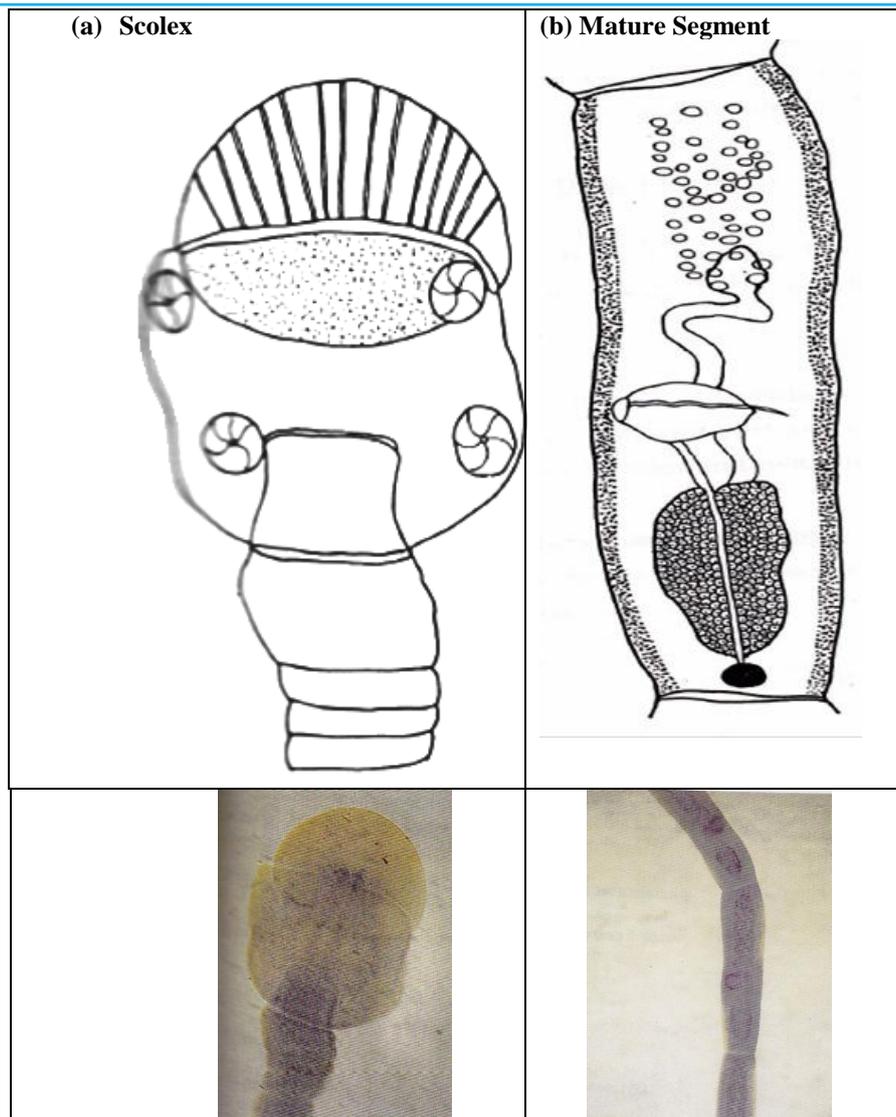
The present form differs from *T. madhukari* Chincholikar 1976, which is having the scolex divided in two regions anterior region composed of subglobular plate, neck absent, segment 16 in number, testes 10 in number, cirrus pouch saccular, ovary compact, granular and bean shaped and granular vitellaria.

The present cestode differs from *T. singhii* Adhav and Shinde, 1981, in shape of scolex globular, neck short, testes 76-80 in number, pre-ovarian genital pores regularly alternate submarginal, vagina posterior to cirrus sac, ovary 'U' shaped, uterus saccular and vitellaria follicular. The present tapeworm differs from *T. bombayensis* Jadhav, 1982, in the shape of scolex, rounded segmentation square, testes 31-38 in number, ovary transverse band and vitellaria granular.

The present cestode differs from *T. aurangabadensis* Jadhav et al, 1988, in the shape of the scolex quadrangular, absence of neck, testes 20-25 in number, genital pore unilateral, submarginal and follicular vitellaria.

As the above noted characters are valid enough to erect a new species as *T. shinedin*.sp. The name is proposed in honour of Prof. G. B. Shinde, who is a well-known cestodologist.

Type species	<i>Tylocephalumshindein</i>.sp.
Host	<i>Rhynchobatusdjeddensis</i> (Forsskal)
Habitat	Intestine
Locality	Bhate.
Date of collection	3rd November, 2010



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