

Regular Article

A new species *Tetragonocephalum panjiensis* N.Sp. (Eucestoda: Lecanicephalidae) from *Trygon zugei* at Panji, GoA, India

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ABSTRACT: The present paper deals with description of new species of genus *Tetragonocephalum panjiensis* n.sp. differs from all known species in length and breadth of worm, size of scolex, number of testes, presence or absence of neck, shape and size of ovary and external seminal vesicle.

Key words: *Tetragonocephalum panjiensis* n.sp., *Trygon zugei*, Spiral valve, Goa (West coast of India).

Introduction

The genus *Tetragonocephalum* is established by Shipley and Hornell, 1905, with its type species *T. trygonis* from *Trygon walga* at Ceylon. Later on seven species are added to this genus by various workers in the world. The present communication deals with description of *Tetragonocephalum panjiensis* n.sp.

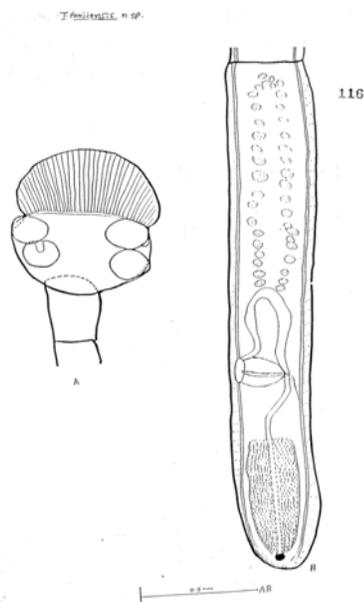
Materials and Methods

Thirteen cestode parasites were collected from *Trygon zugei*. All were flattened, preserved in 4% formalin, stained with Harris haematoxyline; were passed through various alcoholic grades, whole mount slides were prepared for anatomical studies. Drawings were made with the help of camera lucida. All measurements are in millimeters.

Description

Scolex large, distinctly marked off from strobila, oval, highly muscular, divided into anterior and posterior region, 0.699 x 0.437-0.006; anterior region globular, small, highly muscular muscle bundles spreaded out, fan wise, 0.218-0.316 x 0.325-0.006; posterior region larger, oval, broad anteriorly, narrow posteriorly, with accessory suckers, 0.291-0.388 x 0.437-0.582; accessory suckers 4, large, oval, in two pairs, two on each side, 0.107-0.146 x 0.155-0.180; papillae small, protrudes from suckers; neck medium, cylindrical, highly muscular, broad anteriorly, narrow posteriorly, 0.316 x 0.180-0.228; mature segments longer than broad, almost cylindrical, 2.438 x 0.243-0.379; testes small, medium, oval, transversely placed, pre-ovarian, anterior to cirrus pouch, in two lateral groups, in two rows, one on each side of segment, in central medulla, 20 in each row, extends anteriorly, upto anterior margin of the segment, 0.019-0.053 x 0.024-0.063; cirrus pouch large, oval, just posterior to middle of the segments, opens sub-marginally, extends medially, upto middle of the segments, 0.180 x 0.087-0.146; cirrus wide, straight tube, slightly curved, within the cirrus pouch, 0.180 x 0.010-0.019; vas deferens thin, curved posteriorly, 0.175 x 0.005-0.016; ovary large, oval, a single mass, situated near posterior margin of the segments, 0.568 x 0.146 - 0.223; vagina wide tube, long, tubular, anterior to cirrus pouch, starts from genital pore, runs posteriorly, in middle of the segments, reaches and opens into ootype, 1.680 x 0.019 - 0.063; ootype medium, oval, post-ovarian, near posterior margin of the segments, 0.034 x 0.039 - 0.049; genital pores large, oval, submarginal, irregularly alternate, 0.112 x 0.019 - 0.043; vitellaria granular, corticalar, thin strips, on each lateral side, from anterior to posterior margin of the segment; longitudinal excretory canals, thin, in between vitellaria and testicular field and 0.005 - 0.019 in size (Fig. A, B).

Fig. A and B- *Tetragonocephalum panjiensis* n.sp



Type species- *Tetragonocephalum panjiensis* n.sp
Host - *Trygo zugei* Muller and Henle, 1841..
Habitat - Spiral valve.
Locality — Panji, Goa State, (West coast of India) India.
Date of collection - 25th January, 1991.

Results and Discussion

The present cestode differs from *T. trygonis* Shipley and Hornell, 1905, length of worm 27.0, breadth 0.8, length of scolex 0.26, breadth of scolex 0.33, testes 7-12, external seminal vesicle present, ovary massive, vitellaria follicular; it also differs from *T. urnak* Shipley and Hornell, 1906, in having length of worm 8.3, breadth of worm 0.14-0.40, length of scolex 0.22-0.28, breadth of scolex 0.21-0.41, testes number 16-27, ovary massive, bilobed; it further differs from *T. minutum* Southwell, 1925 in having length of worm 20.00, breadth of worm 0.68, length of scolex 0.53, breadth of the scolex 0.44, testes 38-63, ovary quadrangular, follicular; also differs from *T. ravi* Deshmukh and Shinde, 1979 in having length of the worms 16-20, breadth of the worm 0.38, length of scolex 0.63-0.89, breadth of scolex 0.45-0.54, testes 50-55, ovary 'w' shaped, follicular; it further differs from *T. alli* Deshmukh and Shinde, 1979 in having length of worm 0.30-0.32, breadth of worm 0.73, length of the scolex 0.74, breadth of scolex 0.84, hooks absent, testes 40-45, external seminal vesicle present, ovary slightly 'U' shaped, follicular, then it differs from *T. sephenis* having length of worm 10.00, breadth of the worm 0.73, length of scolex 0.53-0.62, breadth of scolex 0.53-0.55, testes 36-38, ovary quadrangular, follicular; further it differs from *T. shipleyi* Shinde et al., 1985 in having length of worm 40.00, breadth of worm 1.83, length of scolex 0.50-0.56, breadth of scolex 0.38-0.48, testes 12, ovary bilobed, compact, ovary 'H' shaped, it than differs from *T. bhagwati* Shinde et al., 1985

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in having length of worm 20-25, breadth of worm 0.45-0.50, length of scolex 0.40-0.46, breadth of scolex 0.48-0.54, neck absent, testes 37-38, ovary bilobed and 'H' shaped.

The above mentioned characters are valid enough to erect a new species, for these worms and hence the name of *Tetragonocephalum panjiensis* n.sp. is proposed after the locality.

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References

- Deshmukh, R.A. and Shinde, G.B. (1979). Three new species of *Tetragonocephalum* Shipley et. Hornell, 1905 (cestoda: Tetragonocephalidae) from marine fishes, West Coast of India. Bio. Research. Ujjain. 3: 19-23.
- Shipley, A.E. and Hornell, J. (1905). Further report on Parasites found in connection with the pearl oyster fisheries in ceylon. I bid. Part III, 49-56.
- Shipley, A.E. and Hornell, J. (1906). Report on the cestode and nematode Parasites from the marine fishes of ceylon. Rept. Govt. of ceylon pearl oyster fish Gulf. Mannar. pt.5:43-96
- Shinde, G.B., Mohekar, A.D. and Jadhav, B.V. (1985). Two new species of the genus coast of India. Indian J. of Parasitology. 9(1):79-82