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A New *Tetragonocephalum sepheni* (Cestoda:Lecanicephalidae) From *Trygon sephen* at Ratnagiri In Maharashtra, India

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The present paper deals with the description of a new species, under the genus *Tetragonocephalum*, Shipley et Hornell, 1905, as *Tetragonocephalum sepheni* n.sp. which is having scolex divided into two regions anterior & posterior. Anterior region is quadrangular & posterior region is oval having suckers. Short neck & cylindrical shape. Mature segments longer than broad. Testes are oval to round & are pre-ovarian distributed in two fields. The cirrus pouch is oval in shape & it is thin ciliated. The genital pore is marginal. Ovary is large, compact & it is in the form of 'U' shape. The vagina is slight curved, ootype is small, oval in shape; receptaculum seminis is present. The gravid segment, uterus is large saccular & occupied by numerous eggs; vitellaria are granular cortical, thin strips.

Keyword: *Tetragonocephalum sepheni*, *Trygon sephen*, quadrangular.

1. Introduction

The genus *Tetragonocephalum* is established by Shipley^[5] from *Trygon walga* from Ceylon as type species *T. trygonis*. Later on the following species are added to this genus.

- 1) *T. marnrle*, Shipley et Hornell, 1906.
- 2) *T. minutum*, Southwell, 1925.
- 3) *T. raoii*, Deshmukh & Shinde, 1979.
- 4) *T. alii*, Deshmukh & Shinde, 1979.
- 5) *T. sephenis*, Deshmukh & Shinde, 1979.
- 6) *T. shipleyi*, Shinde, Mohekar & Jadhav, 1985.
- 7) *T. bhagwati*, Shinde, Mohekar & Jadhav, 1985.

Later on no species is added to this genus. The present form is collected from *Trygon sephen*, at Ratnagiri, Maharashtra India in month of 29th April, 2011.

2. Description:

Seven species of cestode parasites were collected from Spiral valve of *Trygon Sephen* at Harne (West coast of India), in the month of April, 2011, the species were preserved in 4% formalin, stained with Harris Haematoxylin and made whole mount slides.

The scolex is divided into two regions anterior and posterior. Anterior region is small measures about 0.058–0.102 in length and 0.102–0.146 in width. The anterior region is quadrangular in shape. The posterior region is large and oval in shape and measures about 0.063–0.089 in length and 0.045–0.054 in width. Posterior region has oval shaped accessory suckers which measures about 0.043–0.063 in length and 0.053–0.087 in width.

The scolex is followed by short neck protruded ventrally inside the posterior region, cylindrical

in shape and measures about 0.175–0.204 in length and 0.141–0.146 in width.

The mature segments are longer than broad almost. Here the longer than broad and measures 1.142–0.157 in length and 0.325–0.481 in breadth. The testes are oval to round in shape and 25-30 in number, situated in anto half of proglottids arranged in two groups measures about 0.029–0.053 in length and 0.029 0.043 in width. The testes are pre-ovarian distributed maximum in two fields and less in centre. The cirrus pouch thin ciliated and measures 0.199 x 0.039 in length and breadth. The genital pore is marginal oval placed at posterior two third of the segment and measures 0.180x0.112 in length and breadth.

The ovary is large, compact, occupying 1/6th of the posterior portion of proglottid, in the form of ‘U’ shaped, each lobe with blunt, acini, lobes extending anteriorly. It measures about 0.097–0.116 in length and 0.288–0.291 in width. The vagina is slight curved, starts from genital atrium, extends upto the centre of the proglotdd, runs posteriorly and connects to the ootype and measures about 0.196x0.148 in length and breadth. The ootype is small, oval in shape and measures about 0.029x0.024 in length and breadth. The receptaculum seminilis is present.

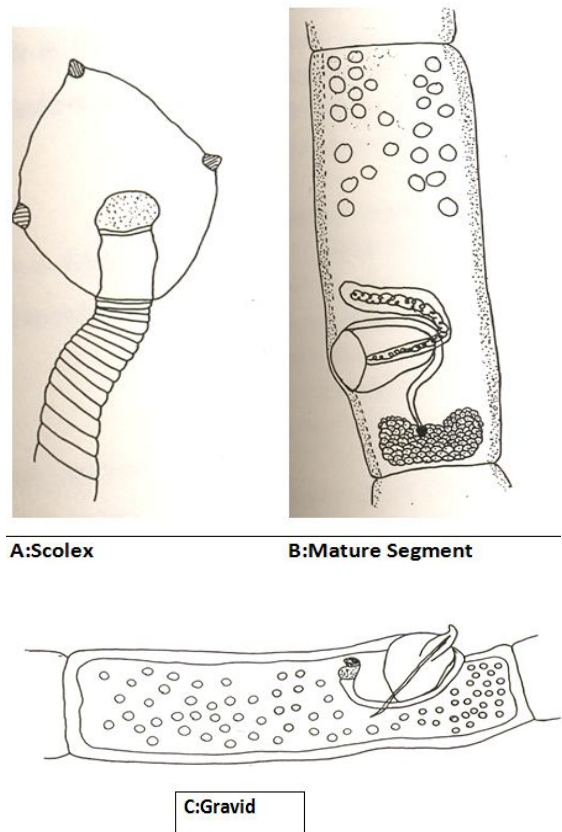
The gravid segment measures about 1.447x0.048 in length and breadth, the uterus is large saccular extending antero posteriorly and measures about 1.345x0.369 in length and breadth.

The uterus is occupied by numerous eggs and measures about 0.029x0.024 in length and breadth.

The vitellaria are granular, corticular, thin strips, present at both lateral sides, from anterior margin of the segment to posterior margin of the segment.

3. Discussion

- The worm under discussion is having length of scolex 0.058 -0.102, width of scolex 0.102-0.146, neck very short, testes 25-30 in number, presence of seminal vesicle, ovary ‘U’ shaped, uterus tubular 1.345x0.369 in length and breadth.
- The present cestode differs from *T. trygonis* in having the length of the scolex 0.26 width, of the scolex 0.33 testes, 7-12 in number, eggs diameter 0.05.
- The present cestode differs from *T. uarnak* which is having length of the scolex, 0.22-0.28, width of the scolex 0.21-0.41, presence of neck, testes 16-27 in number, ovary massive, bilobed and length of the uterus 5.
- The present cestode differs from *T. minimum* which is having the length of the scolex 0.53, width of the scolex 0.44, presence of neck, testes 38-63 in number, ovary quadrangular, with follicles and the length of the uterus 4.5.
- The present tapeworm differs from *T. raoi* which is having the length of the scolex 0.68 – 0.89, width of the scolex, 0.45 – 0.54, presence of the neck, testes 50-55 in number, length of uterus 3-18 and the length of the egg 2.94.
- The present worm differs from *T. alii* which is having the length of the scolex 0.74 width



of the scolex 0.80, neck absent, testes 40-45 in number, presence of external seminal vesicles, ovary slightly 'U' shaped, with follicles, length of the gravid segment 2.55 in length of the uterus 2.40.

- The present tapeworm differs from *T. sephenis* which is having in the length of the scolex 0.53-0.62, width of the scolex 0.53-0.55.

The above mentioned differentiating characters are necessary erection of a new species for this

parasite and hence the name *T. sepheni* is proposed after the species name of the host.

Type species	<i>Tetragonocephalum sepheni</i> n. sp.
Host	Trygon sephen (Cuvier, 1871).
Habitat	Spiral valve.
Locality	Ratnagiri (West coast of India)
Date of collection	29 th April, 2011.

Character	<i>T. trygonis</i> Shipley et Hornell, 1905	<i>T. uarna</i> k, Shipley et Hornell, 1906	<i>T. minutum</i> , Southwell, 1925	<i>T. raoi</i> Deshmukh & Shinde 1979	<i>T. bhagawati</i> Shinde, Jadhav (1984)	<i>T. alii</i> Deshmukh & Shinde (1979)	<i>T. sephenis</i> Deshmukh & Shinde (1979)	<i>T. shipley</i> Shinde, Mohekar & Jadhav, (1984)	<i>T. sephenis</i> n.sp
Worm length	27	8.30	20	16.20	20-25	30-32	10	40	45
Worm width	0.8	0.14 – 0.4	0.68	0.38	0.50-.95	0.73	0.72	1.83	0.20-0.476
Scolex length	0.26	0.22-0.28	0.53	0.63-0.89	0.40-0.46	0.74	0.53-0.62	0.50-0.56	Quadrangular, 0.543
Scolex width	0.33	0.21-0.41	0.44	0.45-0.54	0.48-0.54	-	-	-	-
Neck	Present	Present	Present	Present	Absent	Absent	Present	Present	Present
Testes	7-12	16-27	38-63	50-55	37-38	40-45	36-38	12	21-25
External seminal Vesicle	Present	Absent	Present	Absent	Absent	Present	Absent internal seminal Vesicle Present	Present	Present
Ovary	-	-	-	-	-	Slightly 'U' shaped with Follicles	Quadrangular with follicle	'H' shaped	'U' Shaped
Gravid segment	Massive with follicular	Massive with follicular & Bilobed	Quadrangular with follicular	'W' shaped with follicles.	'H' shaped	2.55	2.59	1.78-1.83	0.447x 0.481
Uterus length	-	5	4.5	3.18	0.86-0.92	2.40	2.3	0.81-0.92	1.345 X 0.369
Eggs diameter	0.5	--	--	2.94	0.14-0.17	0.04	0.01	--	0.29 X 0.024
Host	Trygon sephen	Trygon sephen	Trygon sephen	Trygon sephen	Trygon sephen	Trygon sephen	Trygon sephen	Trygon sephen	Trygon sephen

A key to the species of the genus *Tetragonocephalum*, Shipley et. Hornell (1905)

	Neck present -----	1.
	Neck absent -----	2.
1)	Presence of External seminal -----	3.
	Absence of External seminal -----	3.
2)	Testes below 40 in number -----	T.bhagawatii Shinde, Mohekar & Jadhav, 1984.
	Testes above 40 in number -----	T. alli Deshmukh & Shinde, 1979.
3)	Ovary 'H' shaped -----	T. Shipley Shinde, Mohekar & Jadhav, 1984.
	Ovary 'U' shaped -----	T. sepheni n.sp.
	Ovary Quadrangular -----	T. minutum Southwell, 1925.
4)	Testes below 30 in number -----	T. uarnak Shipley et Hornell, 1906.
	Testes in between 40-50 in number -----	T. sephenis Deshmukh & Shinde, 1979.
	Testes 50-55 in number -----	T.raoi Deshmukh & Shinde, 1979.

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