

RRST- Zoology

Choanotaenia intestinalis sp. Nov. (Cestoda: Dilepididae) from *Venellus indicus*

S.S. Nanware¹, R.M. Dhondge² and D.B. Bhure¹

¹Assistant Professor, Research and Post Graduate Department of Zoology, Yeshwant Mahavidyalaya, Nanded 431 602 (M. S.)

²Department of Zoology, Shri. Sant Gadge Maharaj Mahavidyalaya, Loha 431 708Dist.- Nanded (M. S.)

Article Info	Abstract
<p>*Corresponding Author</p> <p>Tel : 09423401227</p> <p>Email: snanware@rediffmail.com</p>	<p>The present communication deals with a new species of the genus <i>Choanotaenia</i>, [1] from the intestine of <i>Venellus indicus</i> at Kinwat, District Nanded. (M.S.), India. The new species <i>Choanotaenia intestinalis</i> Sp. Nov. is characterized by having scolex medium, globular to oval in shape, suckers four, oval to rounded, overlapping each other, rostellum armed having 10-12 hooks in a single circle, neck short, mature segment longer than broad, somewhat squarish in shape, testes oval to rounded, 14 in numbers, mostly post-ovarian, cirrus pouch elongated, placed 1/3 rd from anterior margin of the segment, cirrus small, tube like, within the cirrus pouch, genital pore marginal, unilateral, vagina posterior to cirrus pouch, ovary dumbel shaped, gravid segment broader than long, egg capsules 50-60 in numbers, having single egg in each egg capsule.</p>
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Introduction

Railliet, [1] was erected in the genus *Choanotaenia*. Subsequently following species are added to this genus Viz. *C. secunda* [2], *C. Cayennensis* [2], *C. macrocantha* [2], *C. rostellata* [2]; *C. passerina*, [2], *C. arctica* [3]; *C. southwelli*, [4]; *C. joyeuxi* [5] and *C. guarti* [5]; *C. manipurensis* [6]; *C. iola* [7]; *C. dispar* [8] and *C. magnihamata* [8]; *C. numenii* [9]. *C. infundibulum* [10]; *C. sylvarum* [11], *C. tugarinovi* [12] in *Saxicola torquata*; Tadjhikistan; *C. railliet* [13]; *C. thracionsis* [14]; *C. gondwada* [15] and *C. hypolculia* [15]; *C. fotedari* [16]; *C. oriolii* [17] added from *Acridotherus tristis* in Kashmir. Later on one species is added i.e. *C. pandei* [18] in *Pycnonotus cafer* from Medhak, A.P. India; *C. singhii* [19] from *Vanellus indicus* collected from Latur, M.S. India

The present investigation deals with the taxonomic evaluation of a new species, as *choanotaenia intestinalis* Sp. Nov. collected from Titwi, *Venellus indicus* at Kinwat, District Nanded. (M.S.), India, during the period of July, 2006 to June, 2009.

Material and Methods

In the course of parasitological study, 05 alike avian cestodes of genus *Choanotaenia*, Railliet, 1896 were collected from the intestine of 02 out of 03 *vanellus indicus*, at Kinwat, District Nanded (M.S.) India during the period of July, 2006 to June, 2009. Cestodes were processed for morphological examination after washing in lukewarm water, flattened, preserved in 4% formalin, stained with Harri's Haematoxylin, specimens were dehydrated in the upgraded series of alcohols, cleared in xylene and mounted in D.P.X. Camera lucida drawings were prepared and photomicrographs were taken using trinocular computerized research microscope all the measurements are recorded in millimeter.

Result

(Description Based on five specimens) (Figure- 1 & 2)

All the cestodes are short in length, consist of few immature, mature and two gravid proglottids the worms are 15 mm in length, white creamy in colour. The scolex is medium in size, Somewhat globular to oval in shape and measures 0.742 (0.699-0.784) x 0.508 (0.413-0.604) in length and breadth. The scolex bears an armed rostellum consisting of 12 hooks in a single circle and measures 0.029 (0.027-0.032) x 0.003(0.002-0.005) in length and breadth. The rostellar sac is present which is elongated, muscular, tapering at posterior end up to the posterior margin of scolex, and measures 0.540 (0.53-0.551) x 0.084 (0.063-0.106) in length and breadth. The suckers are large in size, oval in shape, arranged in two pairs, overlapping on each other in each pair and measures 0.243 (0.2332-0.254) x 0.222 (0.212-0.233) in length and breadth. The neck is short and measures 0.058 (0.053-0.063) x 0.397 (0.074-0.402) in length and breadth.

The mature proglottids are longer than broad, some what squarish in shape and measures 0.620 (0.583 - 0.667) x 0.710 (0.53 - 0.890) in length and breadth. The testes are large, oval to rounded in shape, 14 in numbers, arranged post-ovarian in position and measures 0.074 in diameter. The cirrus pouch is medium, oval to elongated in shape, placed at 1/3 rd from anterior margin of segment and measures 0.195 (0.167 - 0.224) x 0.086 (0.067 - 0.105) in length and breadth. The cirrus is small tube, within the cirrus pouch and measures 0.194 (0.189 - 0.199) x 0.013 (0.010-0.016) in length and breadth. The vas deferens is a small, coiled tube and measures 0.662(0.636-0.689) x 0.047(0.042-0.053) in length and breadth. The cirrus and vagina arises from common pore known as genital pore, which is small, oval to rounded in

shape, placed marginally, unilateral in position and measures 0.185 (0.180-0.190) x 0.037 (0.031-0.042) in length and breadth.

The vagina is a thin tube, starts from the genital pore, posterior to cirrus pouch, runs posterior, forms receptaculum seminis and measures 1.16 (1.06-1.27) x 0.057 (0.031-0.084) in length and breadth. The receptaculum seminis is a short, enlarged tube, it joins to ootype and measures 0.201(0.190-0.212) x 0.015 (0.010-0.021) in length and breadth. The ovary arise from ootype, which is bilobed, dumbel shaped and measures 0.148 (0.053-0.243) x 0.053 (0.021-0.084) in length and breadth. The vitelline gland is oval, compact, postovarian in position and measures 0.042 in diameter. The longitudinal excretory canals are long, tube like, placed at either side of segment and measures 0.620 (0.572-0.667) x 0.013 (0.010-0.015) in length and breadth.

The gravid proglottids are broader than long and measures 1.521 (1.229-1.812) x 0.954 (0.901-1.007) in length and breadth. Egg capsules are oval to rounded, present in a saccular uterus, 50-60 in numbers and measures 0.079 (0.075-0.083) x 0.070 (0.067-0.072) in length and breadth. Eggs are oval to rounded, each egg capsule is having single egg and measures 0.04 in diameter.

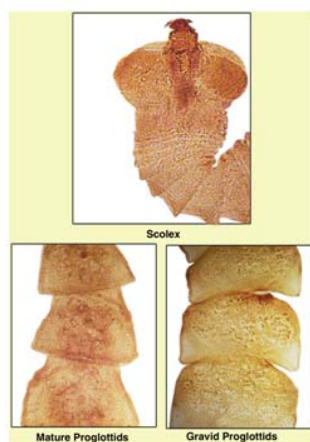


Figure 1. Microphotoplate of *Choanotania intestinalis* Sp. Nov.

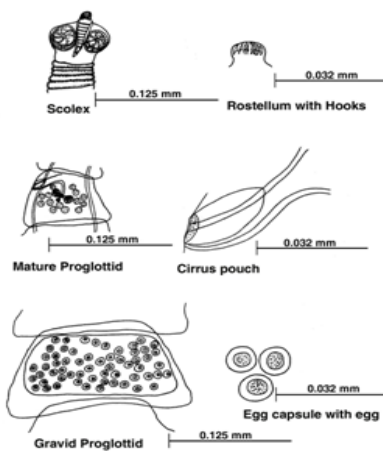


Figure 2. Camera Lucida diagram of *Choanotania intestinalis* Sp. Nov.

Discussion

The present form under discussion is characterised by having scolex medium, globular to oval in shape, suckers four, oval to rounded, overlapping each other, rostellum armed having 10-12 hooks in a single circle, neck short, mature segment longer than broad, somewhat squarish in shape, testes oval to rounded, 14 in numbers, mostly post-ovarian, cirrus pouch elongated, placed 1/3 rd from anterior margin of the segment, cirrus small, tube like, within the cirrus pouch, genital pore marginal, unilateral, vagina posterior to cirrus pouch, ovary dumbel shaped, gravid segment broader than long, egg capsules 50-60 in numbers, having single egg in each egg capsule.

The present tapeworm comes closer to all the reported species of genus *choanotaenia* in general topography of organs but differs dues to some morphological characters from following species.

1. The present form differs from *C. cayennensis*, in having length of worm (85 mm), size of scolex (350 μ), rostellar hooks (22 in numbers, arranged in two rows), testes (18-20 in numbers), and reported from *Belonopterus cayennensis*.

2. The present tapeworm differs from *C. secunda*, due to length of worm (07), breadth of worm (0.79), size of scolex (300 μ), Rostellar hooks (33 in numbers, arranged in two rows), testes (22 in numbers) and reported from *Belonopterus cayennensis*.

3. The present cestode differs from *C. macracantha*, in having size of worm (25-30 x 2.5) length and breadth respectively, rostellar hooks (22 in numbers, arranged in two rows), testes numerous and reported from *Helodroms mexicanus*.

4. The present parasite differs from *C. rostellata*, due to size of worm (50x 3 in length and breadth), Size of scolex (700 μ), Testes (40 in numbers) and reported from *Hemantopus maxicanus*.

5. The present worm differs from *C. passerina*, due to size of worm (80-85 x 0.66 in length and breadth), size of scolex (0.176), rostellar hooks (15 in numbers, arranged in single circle), testes (23-25 in numbers) and reported from *Passer domesticus*.

6. The present form differs from *C. arctica*, which is having rostellum with 30 hooks. arranged in a single row, length of hooks (15) and testes 20 in numbers.

7. The present cestode differs from *C. southwelli*, 1932 in having size of worm (45 x 1.8 in length and breadth), size of suckers (600 μ), Rostellar hooks (26 in numbers, arranged in double rows), testes (23-30 in numbers) and reported from *Lobivanellus lobatus*.

8. The present tapeworm differs from *C. joyeuxi*, due to size of worms (45 x 0.65 in length and breadth), Size of scolex (307 μ), rostellar hooks (10 in numbers, arranged in single row), testes (14-18 in numbers) and reported from *Scolopax rusticola tringamuritiba*.

9. The present communication differs from *C. guarti*, in having size of worm (17x0.68 in length and breadth), size of scolex (627 μ), rostellar hooks (30 in numbers, arranged in two rows), testes (12-20 in numbers) and reported from *Chradrius dubius*.

10. The present cestode, differs from *C.manipurensis*, in having size of worm (35 x 0.358 in length and breadth), Size of scolex (0.822 x 0.725), rostellar hooks (16 in numbers, arranged in two rows), testes (24-28 in numbers) and reported from *Lobipluvia malabarica*.

11. The present parasite differs from *C.dispar*, due to size of worm (40-37 x 1.5 in length and breadth), size of suckers (330 μ), rostellar hooks (24, arranged in two rows), testes (18-28) and reported from *Lobipluvia malabarica*.

12. The present tapeworm differs from *C. megnihamata*, in having size of worm (41-35 x 2.35 in length and breadth), size of scolex (620 μ), rostellar hooks (18 in numbers, arranged in single row), testes (110-120 in numbers) and reported from *Lobipluvia malabarica*.

13. The present form differs from *C.fotedari*, in having rostellar hooks (18-20 in numbers), testes (30-35 in number) and reported from *Acridotheres tristis*.

14. The present new form further differs from *Choanotaenia pandei*, in having shape and size of scolex (medium, globular to oval, 0.742 x 0.508 Vs small, quadrangular, 0.294 – 0.303 x 0.147-0.250), Number of rostellar hooks (12 Vs 25), Number of Testes (14 Vs 16-20), size of cirrus pouch (0.195 x 0.086 Vs 0.116 x 0.014-0.036), shape and size of ovary (bilobed, dumbel shaped, 0.148 x 0.053 Vs cylindrical, flask shaped, 0.090 x 0.038-0.059), size of gravid proglottids (1.521 x 0.954 Vs 0.592-0.621 x 0.0611-0.650) and reported from (vanellus indicus Vs Pycnonotus cafer).

Conclusion

These distinguishing characters are valid enough to erect a new species for these worms and hence the new species is designated as *Choanotaenia intestinalis* Sp.Nov. after the habit and habitat of parasite.

Taxonomic Summary

Type species : *Choanotaenia intestinalis* Sp.Nov.

Host : *Vanellus indicus*.

Habitat : Intestine

Locality : Kinwat, District- Nanded (M.S.), India.

Period of collection: July, 2006 to June, 2009.

No. of Specimen : 05

Prevalence : 5 specimens are collected from 2 died hosts out of 03 examined

Accession number : PGDZ/YMN/1-5.

Deposition : P.G. Department of Zoology, Yeshwant Mahavidyalaya, Nanded. (M.S.)

Etymology : The species is named as *Choanotania intestinalis* Sp.Nov. due to habit and habitat of parasite.

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