

On A New Nematode, *Rhabdochona Tictaii* N.Sp. From Fresh Water Fish *Barbus Ticto* (Gunther)

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Abstract : A new species of the family Rhabdochonidae, skrjabin, 1946; from the stomach of fresh water fish, *Barbus ticto* (Gunther) from Kotsagar pond, block-Kota, Bilaspur (C.G.) The specimens do not agree with the description of known species of the genus, *Rhabdochona*, hence a new species *Rhabdochona tictaii* has been established to describe these nematodes. The new species is characterized by body size, location of nerve ring & excretory pore, number & arrangement of caudal papillae, spicules length, shape of tail in both sexes.

Key word: *Barbus ticto*, Nematodes, *R.tictaii*.

I. Introduction

During a study on nematode parasite of freshwater fishes of Bilaspur (C.G.). A new species of a nematode *Rhabdochona tictaii* was obtained from the stomach of *Barbus ticto* (Gunther) of this region. This paper gives the description & status of the new species.

II. Materials And Methods

The host *Barbus ticto* (Gunther) was obtained from Kotsagar pond, block Kota, Bilaspur (C.G.). Fishes were examined thoroughly for nematode parasites. Out of 28 fishes examined, only 9 were infected, in these 6 males & 5 females were observed. Nematodes were fixed in hot 70% alcohol & preserved in 10% glycerol. Two clearing media, glycerol & creosote were used in order to examine properly. All measurements are given in millimetres.

III. Description

Rhabdochona tictaii n.sp. (Fig a-d)

Small to medium-sized worms with finely transversely striated cuticle, body smooth, tapering anteriorly and posteriorly. Anterior extremity flat, Lateral alae absent. Mouth roughly hexagonal, prostom funnel-shaped, thick walled without basal teeth, surrounded by four small sub-median cephalic papillae. Oesophagus is divided into two portion (muscular and glandular) glandular oesophagus of both the sexes much larger and wider than the muscular portion of oesophagus. Nerve ring encircling the glandular oesophagus situated below the middle of glandular oesophagus in male, but in anterior half of glandular oesophagus in females. Excretory pore at level of posterior part of muscular oesophagus. Tail of both sexes conical with bluntly rounded tip.

1.1. Male :- Length of body 3.12-3.75 respectively, maximum width 0.9-1.00. Head diameter 0.5-0.9. Mouth roughly hexagonal surrounded by four small sub-median cephalic papillae. Prostom 0.4-0.5 Oesophagus is divided into two portion glandular portion and muscular portion. Length of glandular oesophagus 1.1-1.2 and length of muscular oesophagus 0.7-0.9. Glandular oesophagus of both the sexes much longer and wider than the muscular portion of oesophagus. Nerve ring encircles the glandular oesophagus at the middle. It measures 0.2-0.5. Excretory pore post-equatorial. Spicules unequal left specules large measures 0.9-1.1, right spicules short measures 0.4-0.6. Nine pairs of pre-anal and six pairs of postanal papillae present. Tail conical with bluntly rounded tail tip and It measures 0.8-0.9 long.

3.2 Female :- Length of body 7.12 - 8.03 , maximum width 1.8-1.9 in diameter. Head diameter 0.9-1.2. Mouth roughly hexagonal surrounded by four small submedian cephalic papillae. Prostom 0.4-0.5. Oesophagus is divided into two portion glandular and muscular portion, glandular portion is much longer and wider than the muscular oesophagus. Length of glandular portion 1.9-2.1 and length of muscular oesophagus 0.8-1.2 respectively. Nerve ring encircling the anterior half of glandular oesophagus in females measuring 0.5-0.7. Valva post-equatorial measures 1.2-2.7 from the posterior end of body. Tail is blunt, conical measures 1.2-1.7.

IV. Discussions

The present form when compared to known forms the following facts are observed.

The new form *Rhabdochona tictaii* n.sp. differs from all the known species *Rhabdochona acuminata* (Molin, 1860); *Rhabdochona canadensis* Moravec et Arai, 1971; *Rhabdochona jaenschi* Johnston et Mawson 1940; *Rhabdochona beatriceinsleyae* Holloway et Klewer 1969; *Rhabdochona penangensis* Furtado, J.I.1965; Moavec. F. 1972 a, 1972 b; *Rhabdochona phoxini* Moravec, 1968; *Rhabdochona oncorhynchi* (Fujita, 1921); *Rhabdochona coelorhynchi* Johnston et Mawson, 1945; *Rhabdochona decaturensis* Gustafson, 1949; *Rhabdochona gnedini* Skryabin, 1948; *Rhabdochona hakyi* Moravec et sey, 1988; *Rhabdochona hellichi* (Sramek, 1901); *Rhabdochona kidderi* Pearse, 1936; *Rhabdochona nushkai* Asmatullah-kakar & Bilquees, 2007; *Rhabdochona milesi* Asmatullah- kakar et al; 2008; presence of dorsal, barbs on the right spicule & a sharply pointed tail tip in the female.

However, the present new form also differs from the following known forms in the following characters :-

- 1) Size of body and spicules length.
- 2) No. & arrangement of post and pre-anal papillae.
- 3) Position of Vulva
- 4) Position of excretory pore
- 5) Structure of tail.

The present species shows resemblances to *Rhabdochona papuanensis*; *Rhabdochona anguillae* Spaul, 1927; *Rhabdochona (F) gubernaculus*; but differs in the position and number of pre-anal and post-anal papillae and in the length of body, length of spicules e.t.c.

The comparison of new species *Rhabdochoa tictaii* n.sp. to some known forms are given below

TABLE
 (Comparison of *Rhabdochona tictaii* n.sp. with some known forms)
 All measurement are given in mm otherwise stated.

Male				
Characters	<i>R. papuanensis</i>	<i>R. anguillae</i>	<i>R. gubernaculus</i>	<i>R.tactaii</i> n.sp.
Length	3.43	9.81-12.86	2.7-3.5	3.12-3.75
Thickness	0.95	0.218-0.245	0.09-0.14	0.9-1.00
Oesophagus				
M	0.129	0.330-0.420	0.063-0.072	0.7-0.9
G	0.591	2.00-2.28	0.094 - 0.162	1.1-1.2
Nerve ring	0.120	0.198-0.271	0.131-0.175	0.2 - 0.5
Spicules				
L	0.651	0.460-0.660	0.218-0.324	0.9-1.1
R	0.108	0.130-0.150	0.069-0.097	0.4-0.6
Papillae				
Pre	9 pairs	8 or 9 pairs	8 pairs	8 pairs
post	6 pairs	6 pairs	6 pairs	5 pairs
Tail	0.135	0.250-0.326	0.07-0.09	1.1-1.2
Female				
Characters	<i>R. papuanensis</i>	<i>R. anguillae</i>	<i>R. gubernaculus</i>	<i>R.tactaii</i> n.sp.
Length	7.68-8.65	15.80- 20.85	3.14-4.22	7.12-8.03
Thickness	0.122-0.150	0.313-0.370	0.093-0.138	1.8 - 1.9
Oesophagus				
M	0.201-0.225	0.300-0.474	0.069-0.082	0.8- 1.2
G	1.56-1.60	2.18- 2.54	0.098-0.164	1.9-2.1
Nerve Ring	0.105-0.123	0.183-0.281	0.098-0.14	0.5-0.7
Distt.of Valva	4.37-4.60	6.80-7.34	1.21-2.13	2.2 - 2.7
Tail	0.192-0.204	0.281-0.490	0.1-0.2	1.2-1.7

In the light of above discussion it is therefore, concluded that the present form is new to the genus *Rhabdochona* Railliet, 1916; & a new species *Rhabdochona tictaii* is erected.

Fig a-d

Rhabdochona tictaii n.sp

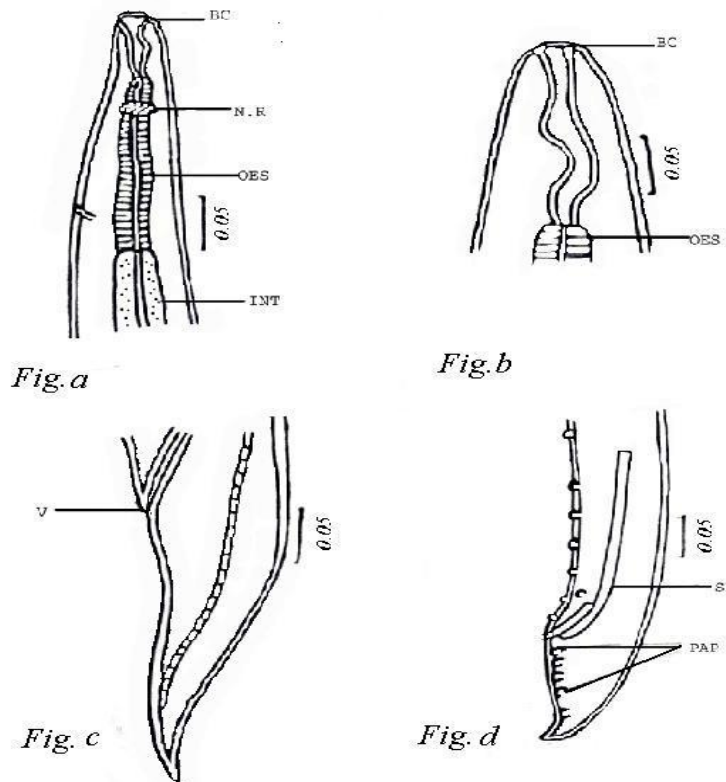


Fig. *Rhabdochona tictaii n.sp*

- a - anterior end of both (male & female).
- b - cephalic end.
- c - female tail.
- d - caudal end of male.

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