

**ON A NEW SPECIES *RHABDOCHONA MARINA* (NEMATODA : RHABDOCHONIDAE)
FROM THE INTESTINE OF *PEMPHERIS VANICOLENSIS* (CUVIER)
OF VISAKHAPATNAM**

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The present paper deals with description of a new nematode species of the family Rhabdochoniidae Skrjabin, 1946 from the intestine of marine fish *Pempheris vanicoles* (Cuvier) of Visakhapatnam. The specimens do not agree with descriptions of known species of the genus *Rhabdochona*, hence a new species *Rhabdochona marina* has been erected to accommodate the present specimens. The new species could be distinguished by body measurements, location of nerve ring and cervical papillae, number of longitudinal ridges supporting buccal capsule, length of muscular and glandular oesophagus, number and arrangement of caudal papillae, size of spicules and position of vulva.

INTRODUCTION

During the course of a survey of the parasites of marine fishes of Visakhapatnam a new species *Rhabdochona marina* is obtained from the intestine of *Pempheris vanicolensis* (Cuvier). This paper gives the description and status of the new species.

The host *Pempheris vanicolensis* was obtained from fishing harbour, Visakhapatnam. Out of 15 fishes examined, two were infected. The nematodes were fixed in hot 70% alcohol and preserved in 10% glycerine alcohol. These specimens were cleared in lacto phenol for appropriate observations. For enface-view study, the head of parasite was cut with a sharp blade and brought into desired position under the cover glass in lacto - phenol on the slide. All measurements are given in millimeters.

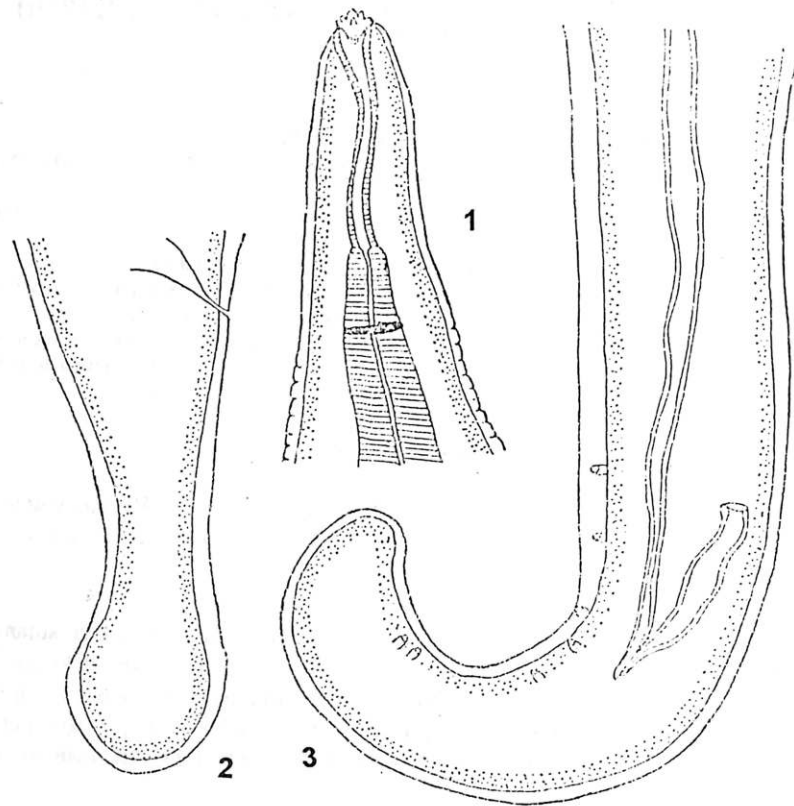
DESCRIPTION

Rhabdochona marina n. sp. (Figs. 1 - 7)

Large, slender and light yellowish coloured worms. Cuticle unstriated except from the middle of the muscular oesophagus to the end of glandular oesophagus. Mouth bounded by two lips. Pharynx bell shaped, vestibule tubular and internal lining of vestibule raised into longitudinal ridges terminating in front into six pointed teeth. Cervical papillae present. Oesophagus composed of two distinct parts, an anterior muscular and posterior glandular regions. Valves present at the junction of oesophagus and intestine.

Male : Body 16-17 long and 0.108-0.12 wide. Head 0.024-0.036 in diameter. Bell shaped portion of pharynx 0.024×0.021. Tubular pharynx 0.156-0.168×0.024. Cervical papillae at a distance of 0.108-0.12 from anterior end. Muscular oesophagus 0.104-0.204×0.048-0.06, glandular oesophagus 1.7-2.12×0.084-0.096. Nerve ring 0.180 from anterior end.

Spicules two, unequal, dissimilar, right spicule 0.13-0.144 and left spicule 0.588-0.6. Spicule length ratio 1:4.2 right one small, tubular proximally narrow distally, left one long, slender, arc shaped proximally. Spicules not bifurcated. Caudal papillae eight pairs and pedunculated. Four pairs preanals, one pair adanal and three pair postanals. Anterior most preanal papilla at a distance of 0.274 from cloaca. Of three pairs of postanal papillae, two pairs arranged in one group and



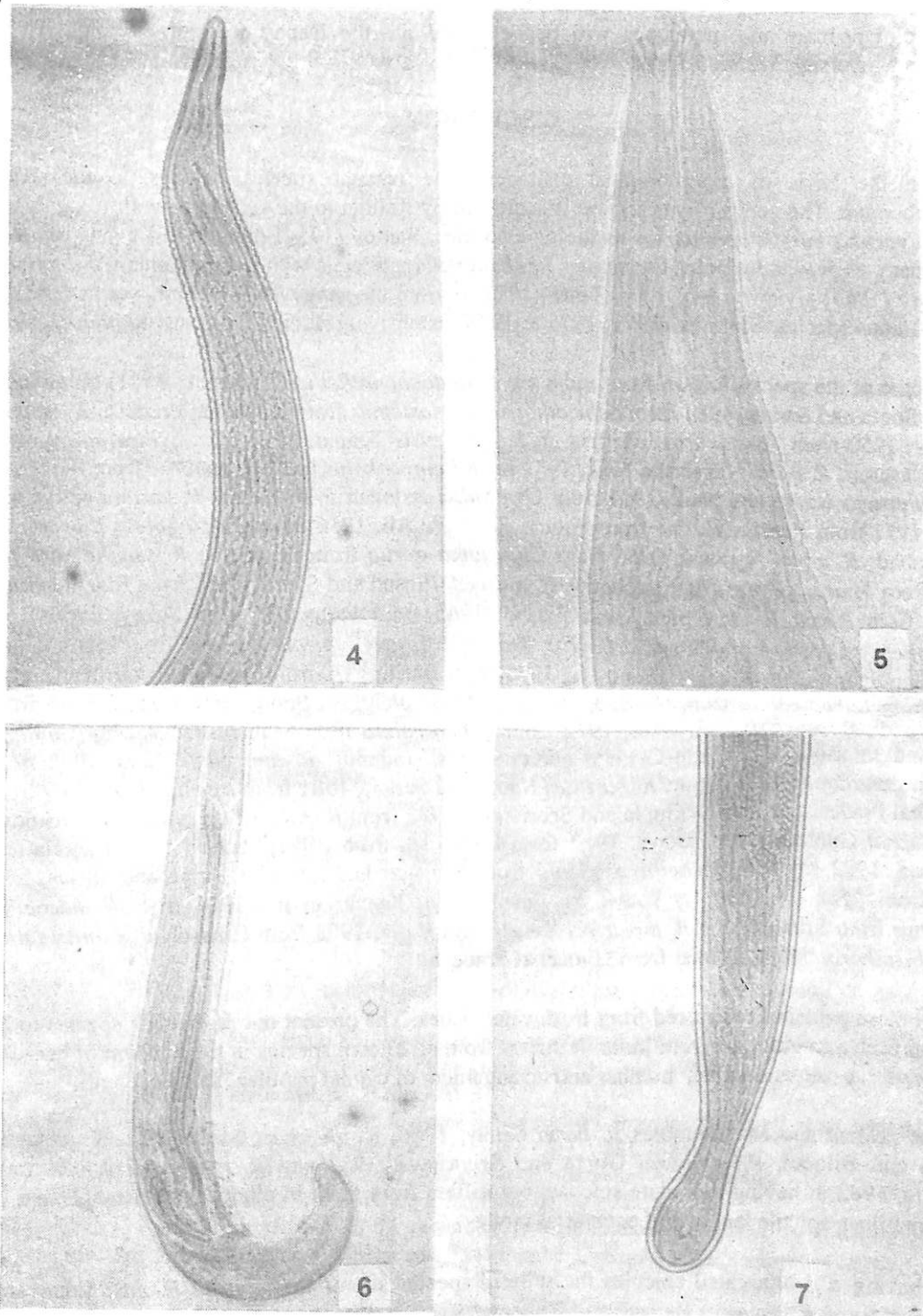
Figs. 1 - 3 : *Rhabdochona marina* n.sp. 1. Anterior of male; 2. Posterior end of male; 3. Posterior end of male.

placed at a distance of 0.065-0.072 from the tip of tail. Another pair of papillae at 0.018 from cloaca and at a distance of 0.078 from the two pairs. Gubernaculum absent. Caudal alae well developed. Posterior extremity curved ventrally. Tail 0.156-0.168 long.

Female : Body 16-18 long and 0.144-0.204 wide. Head diameter 0.024-0.048. Bell shaped portion of pharynx 0.024×0.018. Tubular pharynx 0.144-0.156×0.024. Cervical papillae 0.108 from anterior end. Muscular oesophagus 0.18×0.036 and glandular oesophagus 0.9×0.06. Nerve ring at a distance of 0.274 from anterior end.

Vagina runs posteriorly, forming a distinct 'u' loop. Uterine branches opposed. Vulva equatorial, 8-9 from anterior end. Eggs oval, double walled, non filamented and measure 0.024-0.036×0.012-0.024. Tail 0.192-0.228, abruptly narrows down behind anus ending into a knob like process.

Type species	: <i>Rhabdochona marina</i> n.sp.
Host	: <i>Pempheris vanicolensis</i>
Location	: Intestine
Locality	: Visakhapatnam



Figs. 4 - 7 : *Rhabdochona marina* n.sp. 4. Anterior end of male; 5. Enlarged Anterior end of male; 6. Posterior end of male; 7. Posterior end of female.

Holotype male and paratypes will be deposited in the Department of Zoology, Andhra University, Waltair, India.

DISCUSSION

On the basis of morphological characters the present species belongs to the genus *Rhabdochona*. The genus *Rhabdochona* was erected by Railliet in the year 1916 with *R. denudata* from *Cyprinus eurythrophthalmus* as the type species. Saidov (1954) divided this genus into two subgenera, eggs without polar filaments - *Rhabdochona* and eggs with polar filament- *Filochona*. Rasheed (1965) reviewed this genus. Sahay (1971) revised the genus *Rhabdochona* with a new key to the Indian species. Moravec (1972, 1975 & 1978) extensively studied the genus *Rhabdochona*.

Some of the species known from India are *Rhabdochona hellichi* (Sramek, 1901) (Chitwood, 1933) Soota and Sarkar, 1981 from *Schizothorax plagiostomus* from Himachal Pradesh; *R. hospeti* Thapar, 1950 from *Tor tor* from Madras; *R. kashmirensis* Thapar, 1950 from *Schizothorax niger* from Kashmir; *R. barbi* Karve and Naik, 1951 from *Puntius kolus* and *Tor khudree* from Poona; *R. glyptothoracis* Karve and Naik, 1951 from *Glyptothorax lonah* from Poona; *R. sarana* Karve and Naik, 1951 from *Puntius sarana* from Poona; *R. singhi* Ali, 1956 from *Glossogobius giuris* from Hyderabad; *R. garui* Agrawal, 1965 from *Clupisoma garua* from Lucknow; *R. smythi* Agrawal, 1965 from *Mystus vittatus* from Lucknow; *R. mazedeei* Prasad and Sahay, 1965 from *Eutropichthys vacha* from Patna; *R. dasi* Sahay and Prasad, 1965 from Patna; *R. bosei* Sahay, 1966 from *Eutropichthys vacha* from Patna; *R. baylisi* Rai, 1969 from *Clupisoma garua* from Mathura and Gorakhpur; *R. barusi* Majumdar and De, 1971 from *Barilius sp.* from Ranchi; *R. alii* Kalyankar, 1972 from *Labeo rohita* from Nanded, Maharashtra; *R. ghaggari* Sood, 1972 from *Tor tor* from Chandigarh; *R. labeonis* Kalyankar, 1972 from *Labeo rohita* from Maharashtra; *R. oligopapillata* Arya and Johnson, 1977 from *Cybbium guttatum* from Jodhpur; *R. unispinate* Arya, 1978 from *Cybbium guttatum* from Jodhpur; *R. bariliusi* Soota and Sarkar, 1981 from *Barilius bendelisis* from Himachal Pradesh; *R. bagarii* Gupta and Srivastava, 1982 from *Bagarius bagarius* from Lucknow; *R. chhaprai* Gupta and Srivastava, 1982 from *Labeo sp.* from Bihar; *R. nemacheli* Rautela and Malhotra, 1982 from *Nemacheilus rupicola* from Srinagar U.P.; *R. tori* Gupta and Srivastava, 1982 from *Tor tor* from Lucknow; *R. noemacheili* Kumar *et al.*, 1984 from *Nemacheilus montanus* from Srinagar and *R. moraveci* Katoch and Kalia, 1988 from *Crossochilus latius latius* and *Schizothoracichthys esoinus* from Himachal Pradesh.

All these parasites recovered from freshwater fishes. The present one is the first species to be reported from a marine fish from India. It differs from all known species in the position of cervical papillae, nerve ring and vulva, number and arrangement of caudal papillae, spicule length.

The present species resembles *R. bosei* Sahay, 1966, *R. ghaggari* Sood, 1972, *R. cavasius* Rehana and Bilkees, *R. chhaprai* Gupta and Srivastava, 1982 and *R. nemacheli* Rautela and Malhotra, 1982 in having non alate spicules but differs from them in number and arrangement of caudal papillae, spicule length and equatorial vulva.

In having non-bifurcated spicules the present species shows similarity to *R. dasi* Sahay and Prasad, 1965 and *R. cavasius* Rehana and Bilkees, 1973 but differs in the number and arrangement of caudal papillae, length of spicules, number of longitudinal ridges supporting the buccal capsule and presence of well developed caudal alae. Caudal papillae 8 pairs (4+1+3) in the present species right spicule 0.132-0.144, left spicule 0.54-0.576 and buccal capsule supported by 6 longitudinal ridges versus 15 pairs caudal papillae (11+0+4), right spicule 0.098, left spicule 0.21-0.27 in *R.*

dasi, 14 pairs caudal papillae (9+0+5), right spicule 0.042 left spicule 0.12 and 3 teeth supporting buccal capsule in *R. cavasius*.

In having 6 longitudinal ribs supporting the buccal capsule the present species comes close to *R. longleyi* Moravec and Hoffman, 1988 but differs in the number and arrangement of caudal papillae, spicules length, position of nerve ring, cervical papillae and vulva. The present species further differs from *R. longleyi* in the absence of dorsal barb on the small spicule.

In view of the above differences mentioned, the present species has been considered as new species and named *Rhabdochona marina* n.sp. *Pempheris vanicolensis* is new host record. Visakhapatnam is new locality record for this genus.

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