

A NEW SPECIES OF THE GENUS *CYLIROSTRONGYLOS* YAMAGUTI, 1961 (NEMATODA: CYLIROSTRONGYLDAE) FROM FRESH WATER FISH *MASTACEMBELLUS* ARAMATUS.

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ABSTRACT

A new species of nematode *Cylicostrongylos sailuensis* sp. was erected from fresh water fish *Mastacembelus armatus*. We have describe this new species in the genus *Cylicostrongylos* (Yamaguti, 1961) differ from other species in body measurement, the head is somewhat bulbous, two pairs of horn like thickenings are present, mouth opening without lips.

KEY WORDS: *Cylicostrongylos sailuensis* sp., *Mastacembellus aramatus*, Nematode Parasites.

INTRODUCTION

The genus *Cylicostrongylus* was erected by Yamaguti 1961, with its type of species *C. ctareai*. Latter Sood added one new species *C. thapari*, 1966. The present communication deals with the *Cylicostrongylus sailuensis* sp. from the fresh water fish *Mastacemnellus aramatus*.

MATERIALS AND METHODS

The male and female nematodes described in this paper collected from the intestine of freshwater fish *Mastacembelus armatus* obtained from the various dams, lakes, river streams etc. The nematode was fixed in hot 70% alcohol. The worm were later preserved in fresh 70% alcohol to which 10% glycerine was added. The specimen were cleared in Lactophenol. The worms were mounted in glycerine. All drawings were made with the aid of camera lucida and all measurements are expressed in millimeters.

DESCRIPTION

The body is thin and cylindrical small to medium sized. The head is slightly bulbous. The buccal capsule is thick walled and cup shaped. Two pairs of horn like thickenings are present. One pair ventro laterally and one pair are dorsally situated. A spinose median stylet. The mouth opening is oval without lips. The oesophagus is muscular and club shaped. The intestine is without diverticula. The cervical alae are absent.

Male

The body is 13.98 to 14.30 mm long and 0.32 to 0.42 mm wide. Buccalcapsul measure 0.15 to 0.19 mm and 0.14 to 0.16 mm wide The oesophagus is 1.18 to 1.22 mm long and 0.12 to 0.15 mm wide. The Spicules are slender, unequal broader anteriorly and narrow posteriorly left spicule is about 0.63 to 0.66mm in length. Gubernaculum is absent. The burs is well developed, somewhat circular, divided into two asymmetrical lateral lobe. All rays are elongated reaching nearly margin of bursa The Ventrolateral rays are widely separate. The prebursal papillae are absent.

Female:

The body is 14.35 mm long and 0.31 mm wide. The buccalcapsul measures 0.20 mm long and 0.16 mm wide. The median stylet measures 0.21 mm long. The Oesophagus 0.49mm and 0.15mm wide. The valve is preequatorial 4.92 mm from anterior end. The tail is blunt 0.28 mm long .The eggs are oval 0.05 to 0.07 *0.02 to 0.03 mm in size.

Host : *Mastacembelus armatus* (Lacep)
Habitat : Intestine
Locality : Sailu, (M.S.) India.

DISCUSSION

The present form is referred to the genus *Cylicostrongylus*, Yamaguti, 1961 that is buccalcapsul with spinones median styletn horn like thickenings mouth opening oval and without lips and having unequal and dissimilar spicules. It is differ from *C. thapari* (Sood, 1966) which is three pair of horn like thickenings are present, spicules of male equal and similar. It is also differ from *C. ciuareai*, (Yamaguti, 1961), circular bursa in having simple dorsal ray instead of terminating. Accordingly it is regarded as new with specific name *C. sailuensis* from their locality.



Figs. 1-4. *Cyllocostongylus salluensis* n.sp. Fig. 1. Male anterior & Dorsal view.
Fig. 2. Bursa Dorsal view. Fig. 3. Valva Fig. 4. Female tail lateral view.

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A NEW SPECIES OF THE GENUS *HEPATHINEMA* (RASHEED, 1964, (NEMATODA: RHABDOCONIDAE)
FROM FRESH WATER FISH *CHANNA PUNCTATUS*.

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ABSTRACT

A new species of nematode parasites *Hepatinema jadhavae* n.sp. was erected from fresh water fish *Channa punctatus*. It differs from *H. kherai* (Gupta and Masoodi, 1990), in the number and arrangement of caudal papillae. It also differs from *H. dorabi* in the absence of oral teeth.

KEY WORDS: *Channa punctatus*, *Hepatinema jadhavae* n.sp., Nematode Parasites.

INTRODUCTION

The genus *Hepatinema* was erected by Rasheed 1964, with *H. karachiensis* as its genotype from *Scomberoides tala* from Karachi. The present specimens differ from *H. kheri* having 12 pairs of caudal papillae instead of 15 pairs, strongly developed caudal alae. Amphids poorly developed. Oesophagus anteriorly thick. Cuticle without any striations.

MATERIALS AND METHODS

The male and female nematodes described in this paper collected from the intestine of freshwater fish *Channa punctatus* obtained from the various dams & river streams etc. The nematodes were fixed in hot 70% alcohol. The worms were later preserved in fresh 70% alcohol to which 10% glycerine was added. The specimens were cleared in Lactophenol. The worms were mounted in glycerine. All drawings were made with the aid of camera lucida and all measurements are expressed in millimeters.

DESCRIPTION

The body is medium size, cylindrical, covered by small digitiform papillae, tapering posteriorly. Mouth without lips. cephalic papillae not seen properly. Amphids poorly developed. Vestibule elongated lacking teeth. Oesophagus anteriorly thick. Cuticle without any striations.

Male

The body is 11.52 to 12.30 mm long & 0.26 to 0.28 mm wide. Head diameter 0.04mm. Vestibule 0.15mm long. Length of oesophagus is about 4.46 mm long, Spicule, dissimilar, unequal non alate with pointed tips. Left spicule is 0.085 mm long right spicule is short, boat shaped 0.04 mm long. Caudal Papillae 22 pairs, 12 pairs preanal and 10 pairs postanal. Caudal alae well developed. Tail, elongated, curved laterally 0.12mm long. Gubernaculum absent.

Female

The body is 10.85 mm long and 0.41 mm wide. Head diameter 0.07 mm long. Vestibule 0.1 mm long. Anterior muscular oesophagus 0.36 mm long, posterior glandular oesophagus 3.20 mm long. Entire oesophagus is 3.56 mm. Long Valva postequatorial 2.10 mm from posterior end. Tail elongated denated tip 0.257 mm long. Eggs tick oval with polar plugs.

Host : *Channa punctatus* (Ham.)
Habitat : Intestine
Locality : Sailu, (M.S.) India.

DISCUSSION

The genus *Hepatinema* was erected by Rasheed 1964, with *H. karachiensis* as its genotype from *Scomberoides tala* from Karachi. The present specimens differ from *H. kheri* having 12 pairs of caudal papillae instead of 15 pairs, strongly developed caudal alae. Amphids poorly developed. Oesophagus anteriorly thick. Cuticle without any striations. Accordingly the present specimens are considered as a new species, *Hepatinema jadhavae* n.sp. named in honor of Late Prof. Dr. B.V. Jadhav, for his outstanding contributions to Helminthology.

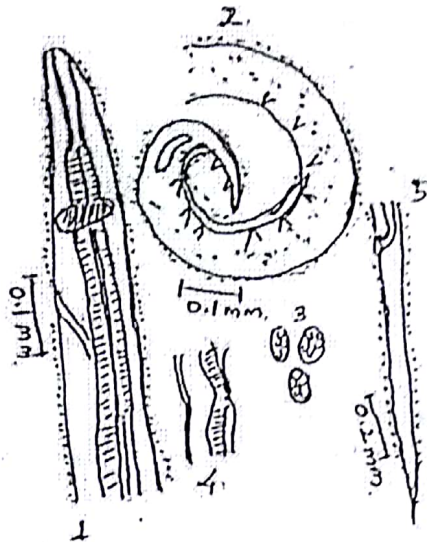


Plate I. Figs.1-5 *Hepatinema jadhave n.sp* 1. Anterior region Male
2. Posterior region Male, lateral view. 3. Eggs. 4. Valva. 5. Female tail lateral view

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A NEW SPECIES OF THE SUBGENUS *PROCAMALLANUS* ALI, 1956 (NEMATODA: CAMALLANIDAE) FROM FRESH WATER FISH *MASTACEMBELLUS ARAMATUS*.

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ABSTRACT

A new species of nematode *Procamallanus sailuensis* n.sp. was erected from fresh water fish *Mastacembelus armatus*. Male and female specimens of worms collected from Sailu (Dhudna Dam). We have describe this new species *Procamallanus sailuensis* n.sp. It differ from other species the presence of 13 pairs caudal papillae, a bladder like structure situated anterior to alae, spicule are unequal, dissimilar, vulva subequatorial, caudal alae absent, gubernaculum absent.

KEY WORDS: Nematode Parasites. *Mastacembellus aramatus*, *Procamallanus sailuensis* n.sp.

INTRODUCTION

The subgenus *Procamallanus* was erected by Ali, 1956, which are known 34 species. Buccal capsule arrangement, Arrangement of spicule, present or absent gubernaculum, spiral thickenings, circum anal papillae etc. The present worm close to *P. annulatus* (Yamaguti, 1934), *P. clarius* (Ali, 1956), *P. bilaspurensis*, Gupt and Doggal (1973).

MATERIALS AND METHODS

The male and female nematodes described in this paper collected from the intestine of freshwater fish *Mastacembelus armatus* obtained from the various dams, lakes, river streams etc. The nematodes were fixed in hot 70% alcohol. The worm were later preserved in fresh 70% alcohol to which 10% glycerine was added. The specimen were cleared in Lactophenol. The worms were mounted in glycerine. All drawings were made with the aid of camera lucida and all measurements are expressed in millimeters.

DESCRIPTION:

The worm are thin slender and white in colour. The females are about double the size of males. The cuticle is thin and smooth. The mouth is hexagonal and is provided with poorly developed papillae. The buccal capsule measures 0.104 in length. It lead to oesophagus which is muscular. The nerve ring is situated 0.2 behind the anterior end. The excretory pore is not visible.

Male:

The male is 5.6-6.9 mm long with maximum diameter of 0.120-0.140. The posterior region is curved ventrally and is somewhat heavy and thick. The caudal alae are present and provided with 5 pair of preanal and 4 pairs of postanal papillae. In addition to these papillae 2 pairs of sessile postanal and 2 pairs of preanal papillae are also present. A bladder like structure is situated anterior to alae. The spicules are unequal and dissimilar. The left spicule is small heavily chitinized and measures 0.021-0.023 mm in length. The right spicule is long and cylindrical being 0.149-0.175 mm in length. The tail is small and curved.

Female:

The female is longer than male and measure about 11.79-14.45 mm in length. The vulva is subequatorial at a distance of 5.31-6.72 mm from anterior end. It is guarded by two well-developed lobes. The vagina is muscular and directed posteriorly. Eggs are present extreme ends. The tail is short measuring about 0.150-0.162 mm in length.

Host : *Mastacembelus armatus* (Lacep)

Habitat : Intestine

Locality : Sailu, (M.S.) India.

DISCUSSION:

The present worm form belongs to the subgenus *Procamallanus*, Ali 1956 to which are known 34 species. In having somewhat buccal capsule. The present worm close to *P. annulatus* (Yamaguti, 1934), *P. clarius* (Ali, 1956), *P. bilaspurensis* Gupt and Doggal (1973) but is differ from all other in which the buccal capsule is lined with spiral

thickenings. In the absence of alae. *P. glossogobii* differs from and *P. spiculogubernculus* and *P. annulatus* in which the gubenaculum is absent. In having short spicule more than 13 pairs of caudal papillae and the vulvasubequatorial the new species stands apart from *P. heteropneustus*, *P. clarius*, *P. attul*. In *P. brevis* the right spicule is about double the size of the left spicule and there are 8-9 preanal, four pairs of postanal and 3 pairs of perianal papillae, in *P. laeviconchus* the right spicule is about three times longer than the left spicule. There are 9-11 preanal 3 pairs of postanal and 2 pairs of perianal papillae. Whereas in the new species the left/right spicule ratio 1:5 and 5 pairs present.

In view of the above difference the present form has been taken as a new species and named *Procamallanus sailuensis* to its locality.

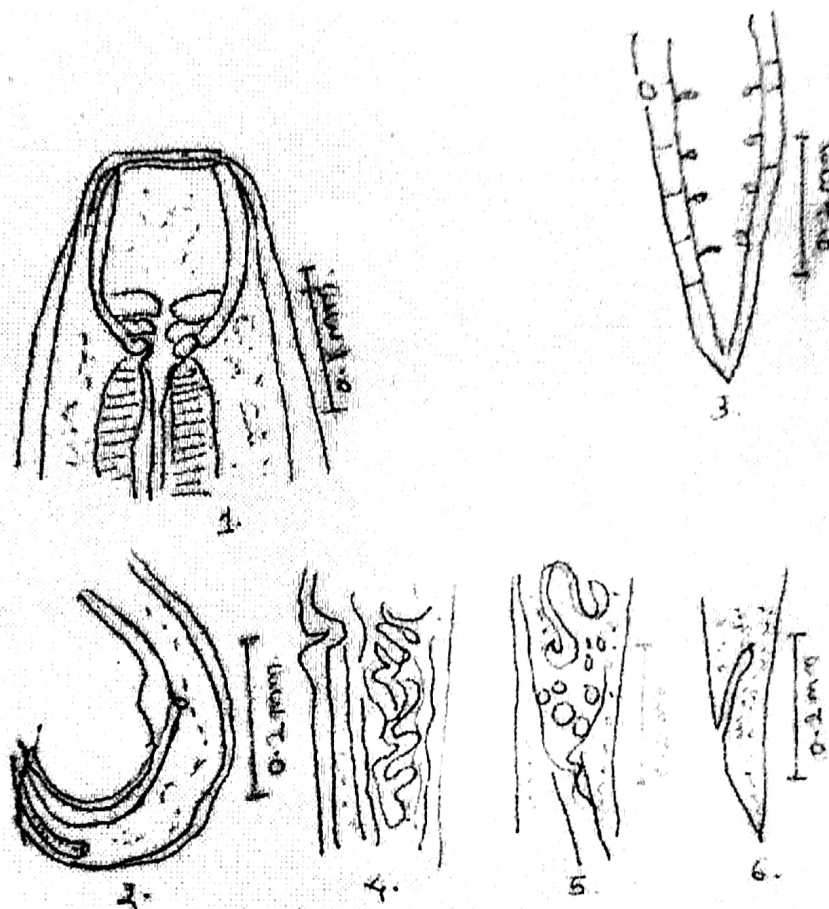


Figure 1. *Procamallanus sailuensis* n.sp

1. Anterior end, male
2. Posterior end, Male
3. Posterior end, Male (Ventral view)
4. Vulvar region
5. Eggs, face view.
6. Posterior end, Female.



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Email:-rmkhadap@gmail.com**ABSTRACT**

A new species of nematode *Spironoura shindae n.sp.* was erected from fresh water fish *Mastacembelis armatus*. It is collected from Sailu (Dhudna Dam). We have describe this new species *Spironoura shindae n.sp.* in the genus (*Spironoura* Leidy, 1856). It differ from other species the presence of five pairs pre cloacal papillae and 25-30 caudal muscles with the absence of caudal sucker.

KEY WORDS: *Nematode Parasites, Spironoura shindae n.sp, Mastacembellus aramatus.*

INTRODUCTION

The genus *Spironoura* erected by Leidy in 1856, with its type of species *S.gracilis* as the type species and referred to the family *Kathianiida*. Latter on Linstow, 1907 reported as a new species of nematode. Skriabin et.all, 1951 add few species. The present worm closer to *S.leptocephala*, Baylis and Daubney, 1922. The present worm also close to *S.khalili*, Arya S.N., 1993. in the absence of caudal sucker.

MATERIALS AND METHODS

The male and female nematodes described in this paper collected from the intestine of freshwater fish *Mastacembelus armatus* obtained from the various dams, lakes, river streams etc. The nematode were fixed in hot 70% alcohol. The worm were later preserved in fresh 70% alcohol to which 10% glycerine was added. The specimen were cleared in Lactophenol. The worms were mounted in glycerine. All drawings were made with the aid of camera lucida and all measurements are expressed in millimeters.

DESCRIPTION

The body is thin and cylindrical small to medium sized. Terminal mouth has triadate opening with three bilobed flaps off lip, one dorsal and two sub ventral. Cephalic papillae are prominent. The buccal cavity is vestibule is surrounded by a ring of thickened cuticle. Oesophagus measures about 1.50 to 1.80 mm long and 0.12 to to 0.13 mm in width. Excretory pore at 1.23 to 1.25 mm in length from anterior end

Male

The body is 13.98 to 14.30 mm long & 0.32 to 0.42 mm wide. Spicule are unequal, dissimilar, left spicule is long 0.85 to 0.87 mm in length and right spicule is spicule short 0.75 to 0.79 mm in length. Caudal Papillae is 14 pairs, five pair pre-coacal, 2 pairs ad-coacal, 7 pairs are post-coacal. Caudal sucker absent. Oblique pre-coacal muscles band 25 to 30 in number and well developed. Tail is about 0.40 to 0.42 mm in length.

Female:

The body is 14.40 mm long and 0.38 mm wide. Vulva postequatorial at 7.3 to 11.7 from anterior end. Vagina anteired and muscular. Eggs spherical, thick walled measures about 0.06-0.09 * 0.05-0.089 in diameter. Tail is long measure about 1.35 to 1.64 mm in length and tapering.

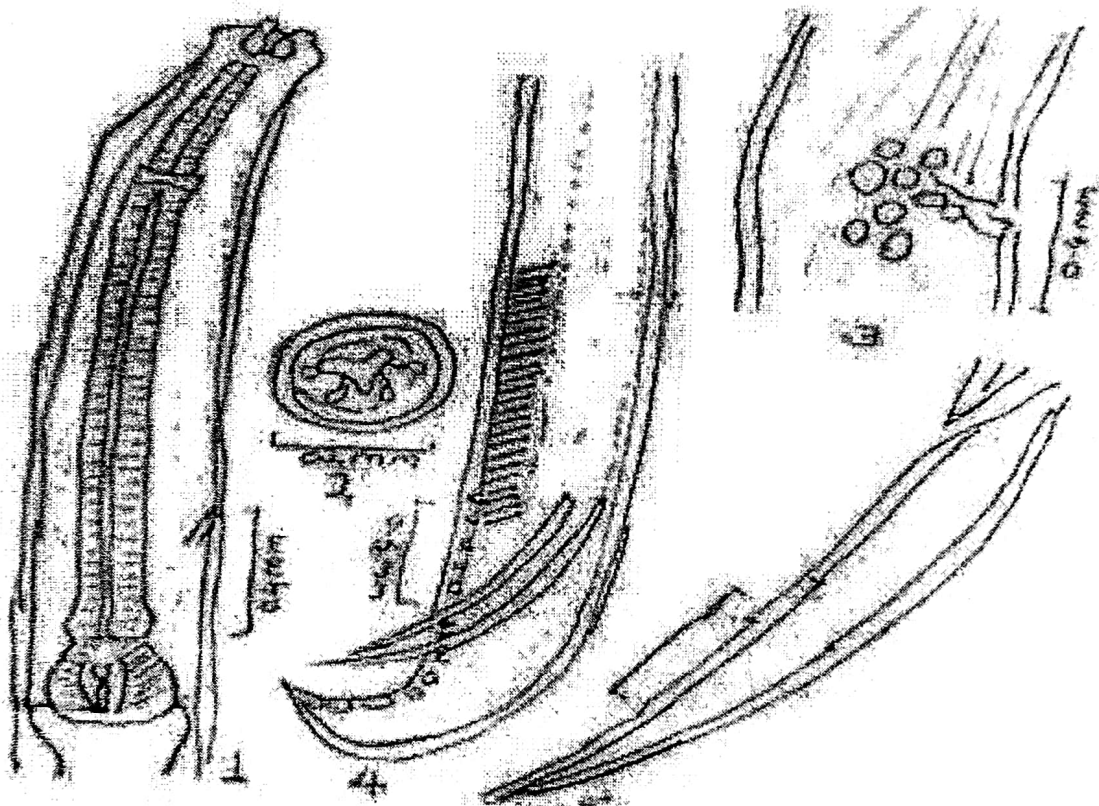
Host : *Mastacembelus armatus* (Lacep)

Habitat : Intestine

Locality : Sailu, (M.S.) India.

DISCUSSION:

The genus *Spironoura* was erected by Leidy, 1856 with its type of species *S. gracilis* as the type of species referred to the family kathlanidae. Linstow, 1907 reported a new species of nematode piscicola on the basis some specimens recovered from a fish *Distichodus* sp. From the canecorons Skrjanin and ozgova 1951 considered as a new species. The present form comes closer to *S. teptocephala* Baylis and Daubney, 1922. The present form differ from *S. Khandari* and *S. khalili* in body size, shape of spicule and number of caudal papillae. It is differ from *S. leptocephaia* in having gubernaculum and number of caudal papillae. The form under discussion in having unequal spicule ,numner of caudal papillae, oblique muscle bands. are also differ from the latters. Accordingly the present specimens are considered as a new species, *Hepatinema jadhavae* n.sp. named in honor of Prof. Dr. G.B. Shinde for his outstanding contributions to Helminthology.



Spironoura shindae n.sp

Figure 1. Anterior end, male 2. Eggs, face view. 3. Vulvar region 4. Posterior end, Male 5. . Posterior end, Female.

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