New distributional records of free-living marine nematodes from Indian waters II. Monhysterids

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Monhysterids were found to be the second most dominant order among the free-living marine nematodes which were collected from the continental shelf region of southeast coast of India during FORV “Sagar Sampada” Cruise no. 260 consisting 63 out of 192 species. Among these nine species such as *Thalassomonhystera venusta*, *Cobbia trefusiaeformis*, *Theristus ensifer*, *T. longus*, *Sphaerolaimus balticus*, *S. gracilis*, *Astomonema southwardorum*, *Siphonolaimus cobbi* and *Araeolaimus elegans* were found to be new distributional records for the Indian waters.

**Key words:** Free-living marine nematodes, Monhysterids, continental shelf, India

**Introduction**

Meiobenthic organisms occupies major component in benthic realm because it’s higher abundance and fast turnover rats. While within the meiobenthic community free-living marine nematodes inhabit the top most position due to their higher density (60-90%) of total meiobenthic population. Nevertheless an importance of parasitic nematodes has been recognized for many decades, this is not the case for free-living marine nematodes, especially those of marine environments. Important features of free-living marine nematodes are the large number of species present in any habitat; short life span, high fecundity (Vranken and Heip, 1983), having several tropic levels and able to culture easily at least some species.

Generally free-living marine nematodes are very small in structure and taxonomically difficult to distinguish species level. Although the nematodes comprise a large fraction of marine benthic communities, to date only few studies have been undertaken on qualitative and quantitative aspects of meiobenthos in Indian waters. As for as nematode taxonomy concerns, only little information is available in the Indian waters. In this backdrop the present study was undertaken on the free-living marine nematodes of the southeast continental shelf region and this paper describes new distributional records of nine nematode species belonging to order Monhysterida.

**Materials and methods**

The samples were collected from seven latitudinal transects (from north to south) Singarayakonda, Tammenapatanam, Chennai, Cheyyur, Cuddalore – SIPCOT, Parangipettai and Karaikkal at different depths (30-50m, 51-75m, 76-100m, 101-150m, 151-175m and >176m) in southeast continental shelf of India. The sampling extends latitude from 10º 34.03’ to 15º 14.48’ N and longitude from 79º 52.13’ to 80º 53.87’E sediments were collected for meiofaunal and nematode analysis.

Sampling was done during Cruise No. 260 of FORV Sagar Sampada (from 7th to 28th December 2008). Two sediment samples were collected using a Smith McIntyre grab (having a bite area of 0.2m²) at each depth range. Immediately after the grab was hauled to the deck, sub-samples were taken from undisturbed grab samples using a glass corer (having an internal diameter of 2.5 cm and a length of 15 cm) from the middle of grab sample. Samples were fixed in buffered formalin at a concentration of 4%. Replicate core samples were processed separately in the laboratory and data were pooled for analyses. Samples were washed through a set of 0.5 mm
and 0.053 mm sieves. Sediment retained in the 0.053 mm sieve was decanted to extract meiofauna following the standard method proposed by Pfannkuche and Thiel. Sorting of meiofauna from sediment was done by flotation technique. The efficiency of this technique is around 95%. Sorting and enumeration were carried out under a stereomicroscope (Meiji, Japan) followed by thee sorted nematodes were mounted onto glass slides, using the formalin-ethanol-glycerol method. Identification of nematodes was done to the lowest taxonomic level possible using the compound microscope (Olympus CX 41 under higher magnification of 1000x) following the standard pictorial keys.

**Results**

In southeast continental shelf of India, authors reported 192 species belonging to 96 genera and 33 families. Among the identified nematodes species, Monhysterida (63 species) is second largest order after order Chromadorida (91 species) remaining 34 and 4 species were coming second largest order after order Chromadorida (91 genera and 33 families. Among the identified families were recorded in Monhysterida order, Overall 63 species belonging to 21 genera and 7 families were recorded in Monhysterida order, among these nine species (Thalassomonhystera venusta - Monhysteridae; Cobbia trefusiaformis, Theristus ensifer, T. longus - Xyalidae; Sphaerolaimus balticus, S. gracilis - Sphaerolaimidae; Astomonema southwardourn, Siphonolaimus cobbi - Siphonolaimidae and Araesolaimus elegans - Diplopeltidae) were found to be new distributional records for the Indian waters. Detailed systematic account, material examined (number of specimens, place of collection, depth range and date of collection), brief description, feeding type, habitat and geographical distribution besides remarks of the above nine species are given below.

1. **Thalassomonhystera venusta** (Lorenzen, 1979)
   - Phylum: Nematoda Rudolphi, 1808
   - Class: Adenophorea von Linstow, 1905
   - Order: Monhysterida Filipjev, 1929
   - Family: Xyalidae Chitwood, 1951
   - Genus: Thalassomonhystera
   - Species: Thalassomonhystera venusta (Lorenzen, 1979)
   - Material examined: 3 males collected at Cheyyur 76-100m and 101-150m depths (18.12.2008).

**De Man ratio:**

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<tr>
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<th>a</th>
<th>b</th>
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<tr>
<td>Male</td>
<td>80.14±0.08</td>
<td>10.28±0.13</td>
<td>14.03±0.09</td>
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<tr>
<td></td>
<td>(80.07-80.22)</td>
<td>(10.20-10.43)</td>
<td>(13.94-14.12)</td>
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</table>

**Description**

Body length 0.9-1.2mm. Maximum diameter 21-27µm. Cuticle smooth. 12 equal length of cephalic setae (6-7µm). Sarce cervical setae (6-8µm long). Amphids circular (7-9µm). Simple conical buccal cavity and the oesophagus without posterior bulb (78-124µm). Tail conico-cylindrical (6-8a.b.d.). Spicules 23-32µm slender, proximally cephalate. Gubernaculum strongly cuticularised with two very indistinct caudal apophysis (Fig.1).

**Female:** Not found

**Feeding type:** The specimens showed large buccal cavity with small teeth but not armed. According to the buccal cavity classification by Wieser, this species is a non-selective deposit feeder (1B).

**Habitat:** Sandy sediments.

**Distribution**

**India:** Cheyyur.

**Elsewhere:** Netherland; England; English Channel, European waters and North Sea.

![Fig.1. Thalassomonhystera venusta A) entire male B) male head, C) male tail](image)

**Remarks**

The specimens examined and conformed well to the earlier description of Warwick *et al.* except for the larger body size. The total body length described was 0.5mm and tail length 7.5a.b.d. The body length of the specimen studied at larger being 0.9-1.2mm and the tail length 6-8a.b.d. This is the first record from Indian waters.
2. *Cobbia trefusiaeformis* De Man, 1907
Phylum: Nematoda Rudolphi, 1808
Class: Adenophorea von Linstow, 1905
Order: Monhysterida Filipjev, 1929
Family: Xyalidae Chitwood, 1951
Genus: Cobbia De Man, 1907
Species: *Cobbia trefusiaeformis* De Man, 1907


*De Man ratio:* a b c

| Male | 68.30 | 9.08 | 10.14 |

*Description*

Body length 1.6mm. Maximum diameter 24µm. Cuticle transversely striated. Short labial setae (4µm). Six long (20-22µm) and four short (14-17µm) cephalic setae and two finer and shorter lateral setae (4µm). Six cervical setae (3-4µm) between cephalic setae and amphids. Large circular amphids (4µm). Buccal cavity conical with three poorly cuticularised teeth. Elongated oesophagus (176µm) but has no distinct bulb. Tail conical for first quarter, then filiform (7.9a.b.d.). Spicules 29µm with a lateral spine at the dorsal end. Gubernaculum lightly cuticularised. Minute precloacal spine (Fig.2).

*Female:* Not found

*Feeding type:* The specimen showed buccal cavity armed with small teeth. According to the buccal cavity classification by Wieser, this species is an epigrowth feeder (2A).

*Habitat:* Sandy sediments.

*Distribution*

*India:* Parangipettai.


*Remarks*

The specimens examined and conformed well to the earlier description of Warwick *et al.* except for the smaller body size. The total body length described was 1.6-1.7mm and tail length 12-17a.b.d. The body length of the specimen studied was found larger being 1.6mm and the tail length 7.9 a.b.d. This is the first record from Indian waters.

3. *Theristus ensifer* Gerlach, 1951
Phylum: Nematoda Rudolphi, 1808
Class: Adenophorea von Linstow, 1905
Order: Monhysterida Filipjev, 1929
Family: Xyalidae Chitwood, 1951
Genus: *Theristus* Bastian, 1865
Species: *Theristus ensifer* Gerlach, 1951


*De Man ratio:* a b c

| Male | 41.76±0.11 | 4.75±0.12 | 7.55±0.16 |
|      | (41.68-41.89) | (4.67-4.89) | (7.41-7.72) |

| Female | 38.05 | 4.90 | 7.68 |

*Description*

Body length 1.7-1.9mm in male and 1.7mm in female. Maximum diameter 39-46µm in male and 45µm in female. Cuticle transversely striated. Six longer (12-16µm) and four shorter (6-12µm) cephalic setae. Somatic setae sparse and short. Large circular amphids (8-10µm). Buccal cavity unarmed simply conical with three poorly cuticularised teeth. Elongated oesophagus (348-372µm in male and 349µm in female) but has no distinct bulb. Tail (7.1-7.7a.b.d in male and 7.2a.b.d. in female), with a cylindrical dorsal quarter which is not swollen at the tip, nor are there any terminal setae. Spicules 35-44µm measured as curve, more strongly cephalate proximally. Gubernaculum with prominent triangular dorsal apophysis. Ovaries paired, equal, opposed and reflexed. Vulva present at 62% of body length (Fig.3).
Feeding type: The specimens showed large buccal cavity with teeth but not armed. According to the buccal cavity classification by Wieser[31], this species is a non-selective deposit feeder (1B).

Habitat: Sandy sediments.

Distribution
India: Tammenapatanam and Cuddalore – SIPCOT.
Elsewhere: England[30]; European waters[33] and North Sea[32].

Remarks
The specimens examined and conformed well to the earlier description of Warwick et al.[29] except for the larger body size. The total body length described was 1.2mm and tail length 6-6.5a.b.d. The body length of the specimen studied was found larger being 1.7-1.9mm and the tail length 7.1-7.7a.b.d. in male and in female 1.7mm body length and tail length 7.2a.b.d. This is the first record from Indian waters.

4. Theristus longus Platt, 1973
Phylum : Nematoda Rudolphi, 1808
Class : Adenophorea von Linstow, 1905
Order : Monhysterida Filipjev, 1929
Family : Xyalidae Chitwood, 1951
Genus : Theristus Bastian, 1865
Species : Theristus longus Platt, 1973

Material examined: 14 males and 9 females collected at Singarayakonda 51-75m, 101-150m (15.12.2008); Tammenapatanam 76-100m (16.12.2008); Chennai 101-150m (17.12.2008) and Karaikkal 30-50m, 101-150m depths (20.12.2008).

De Man ratio: a   b   c
Male : 82.19±0.67 14.03±0.23 6.08±0.28
      (81.56-82.88) (13.78-14.28) (5.77-6.29)
Female : 77.62±0.44 12.98±0.24 6.87±0.21
        (77.20-78.04) (12.69-13.36) (6.54-7.04)

Description
Body length 1.5-1.8mm in male and 1.7-2.1mm in female. Maximum diameter 19-26µm in male and 21-27µm in female. Cuticle transversely striated. Six longer (8-12µm) and four shorter (4-6µm) cephalic setae. Somatic setae fine (4-8µm). Large circular amphids (3-4µm in diameter). Buccal cavity unarmed simply conical with three poorly cuticularised teeth. Elongated oesophagus (125-142µm in male and 134-154µm in female) but has no distinct bulb. Tail (13.6-15.1a.b.d. in male and 14.5-15.3a.b.d. in female), with a cylindrical dorsal quarter which is not swollen at the tip. Spicules 22-34µm strongly cephalate proximally. Gubernaculum with lightly cuticularised, two dorsal hooks, no apophysis. Ovaries paired, equal, opposed and reflexed. Vulva present at 59-61% of body length (Fig. 4).

Feeding type: The specimens showed large buccal cavity that is not armed with teeth. According to the classification of buccal cavity by Wieser[31], this species is a non-selective deposit feeder (1B).
Habitat: Sandy and silty sediments.

Distribution
India: Singarayakonda, Tammenapanatham, Chennai and Karaikkal.
Elsewhere: North Ireland\(^{32}\); England\(^{29}\); European waters\(^{34}\) and Cornwall coast\(^{32}\).

Remarks
The specimens examined and conformed well to the earlier description of Warwick et al.\(^{29}\) except for the larger body size. The total body length described was 0.9-1.1mm and tail length 7.5-9a.b.d. The body length of the specimen studied was found larger being 1.5-1.8mm and the tail length 13.6-15.1a.b.d. in male and in female 1.7-2.1mm body length and tail length 14.5-15.3a.b.d. This is the first record from Indian waters.

5. *Sphaerolaimus balticus* Schneider, 1906
Phylum: Nematoda Rudolphi, 1808
Class: Adenophorea von Linstow, 1905
Order: Monhysterida Filipjev, 1929
Family: *Sphaerolaimidae* Filipjev, 1918
Genus: *Sphaerolaimus* Bastian, 1865
Species: *Sphaerolaimus balticus* Schneider, 1906

*Synonym:* *Sphaerolaimus ditlevseni* Kreis, 1929
*Sphaerolaimus gracilis* Stekhoven, 1929
*Sphaerolaimus hirsutus* Allgen, 1933

*Material examined:* 4 males collected from Chennai 51-75m, 101-150m (17.12.2008) and Karaikkal 51-75m, 101-150m depths (20.12.2008).

*De Man ratio:* \(a\) \(b\) \(c\)
Male: \(23.71\pm0.15\) \(4.64\pm0.32\) \(7.62\pm0.19\)
\((23.51-23.86)\) \((4.17-4.89)\) \((7.41-7.84)\)

*Description*
Body length 1.2-1.6mm. Maximum diameter 54-56 \(\mu\)m. Cuticle with faint transverse striations which are not always visible. Six small labial papillae. Six short (3-5\(\mu\)m) and four long (6-9\(\mu\)m) cephalic setae. Eight groups of subcephalic setae situated between cephalic setae and amphids. Cervical setae in eight files. Somatic setae short and scattered. Circular amphids (5-8\(\mu\)m in diameter). Buccal cavity with alternating heavily and weakly punctated areas. Oesophagus (312-336 \(\mu\)m) widens posteriorly, but has no distinct bulb. Tail (4.6-5.1a.b.d.) conical except for the last fifth, which is cylindrical with a terminal dilation. Spicules 74-86\(\mu\)m, distally slender with a single dorsal hook-shaped apophysis (Fig. 5).

*Female:* Not found

![Fig. 5. *Sphaerolaimus balticus* A) entire male B) male head, C) male tail](image)

Feeding type: The specimens showed large teeth. According to the classification of buccal cavity by Wieser\(^{31}\), this species is a predator (2B).

Habitat: Sandy sediments.

Distribution
India: Chennai and Karaikkal.
Elsewhere: Limfjorden\(^{32}\); England\(^{29}\); European waters\(^{35}\); France Channel, Finland, Kieler Buchat, Skagerrak, Oresund, Kattegatt and Zuidervaart.

*Remarks*
The specimens examined and conformed well to the earlier description of Warwick et al.\(^{29}\) except for the smaller body size. The total body length described was 1.6-1.8mm and tail length 3.2-3.9a.b.d. The body length of the specimen studied was found smaller being 1.2-1.6mm and the tail length 4.6-5.1a.b.d. This is the first record from Indian waters.

6. *Sphaerolaimus gracilis* De Man, 1884
Phylum: Nematoda Rudolphi, 1808
Class: Adenophorea von Linstow, 1905
Order: Monhysterida Filipjev, 1929
Family: *Sphaerolaimidae* Filipjev, 1918
Genus: *Sphaerolaimus* Bastian, 1865
Species: *Sphaerolaimus gracilis* De Man, 1884
Synonym: *Sphaerolaimus demani* Filipjev, 1922  
*Sphaerolaimus setosus* Paramonov, 1927  
*Sphaerolaimus buetschilii* Schulz, 1932  
*Sphaerolaimus hirsutus* Butschli, 1874

**Material examined:** 3 males collected at Karaikkal 30-50m and 101-150m depths (20.12.2008).

![Image](image-url)

**Fig. 6. Sphaerolaimus gracilis** A) entire male B) male head, C) male tail

**De Man ratio:**

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<tbody>
<tr>
<td>Male</td>
<td>22.12±0.18</td>
<td>3.87±0.28</td>
<td>8.92±0.22</td>
</tr>
</tbody>
</table>

**Description**

Body length 1.2-1.5mm. Maximum diameter 55-61µm. Cuticle with faint transverse striations which are not always visible. Six small labial papillae. Six short (3-5µm) and four long (6-9µm) cephalic setae. Few subcephalic setae per group. Cervical setae in eight files. Somatic setae short and scattered. Circular amphids (4-6µm in diameter) situated well behind the buccal cavity. Buccal cavity more evenly punctated. Oesophagus (336-349 µm) widens posteriorly, but has no distinct bulb. Tail (3.2-3.6.b.d.) conical except for the last fifth, which is cylindrical with a terminal dilation. Spicules 83-96µm, measured as a curve, open ended proximally. Gubernaculum (39-44µm), in three sections, the proximal one hooked (Fig. 6).

**Female:** Not found

**Feeding type:** The specimens showed large teeth. According to the classification of buccal cavity by Wieser⁷, this species is a predator (2B).

**Habitat:** Sandy sediments.

**Distribution**

India: Karaikkal.

**Elsewhere:** England²⁹; European waters³³; North Sea²²,³⁵; Belgium, Boulthnian Bay, Kieler Buchat and Zuidersee²²; Mediterranean and Black Sea²²,³⁵.

**Remarks**

The specimens examined and conformed well to the earlier description of Warwick *et al.*²⁹ except for the smaller body size. The total body length described was 1.3-1.7mm and tail length 3.2-3.9a.b.d. The body length of the specimen studied was found smaller being 1.2-1.5mm and the tail length 3.2-3.6.b.d. This is the first record from Indian waters.


**Phylum:** Nematoda Rudolphi, 1808  
**Class:** Adenophorea von Linstow, 1905  
**Order:** Monhysterida Filipjev, 1929  
**Family:** Sphaerolaimidae Filipjev, 1918  
**Genus:** *Astomonema* Ott, Rieger, Rieger & Edderes, 1982  
**Species:** *Astomonema southwardorum* Austen, Warwick & Ryan, 1993

**Material examined:** 4 males and 2 females collected at Singarayakonda 30-50m depth (15.12.2008).

**De Man ratio:**

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<th>a</th>
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<tr>
<td>Male</td>
<td>78.31±0.10</td>
<td>6.31±0.22</td>
<td>36.75±1.42</td>
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<td>(78.22-78.44)</td>
<td>(6.12-6.6)</td>
<td>(35.34-38.12)</td>
</tr>
<tr>
<td>Female</td>
<td>68.64-69.12</td>
<td>7.01-7.16</td>
<td>32.12-32.77</td>
</tr>
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</table>

**Description**

Body length 3.9-4.5mm in male and 3.8-4.0mm in female. Maximum diameter 58-72µm in male and 61-68µm in female. Cuticle finely striated. Head rounded with six short (1-2µm) and four long (2-4µm) square-ended papillae, the two short lateral papillae in displaced slightly anterior to the remaining circle of eight. Amphids circular (8-10µm in diameter). Mouth opening, Buccal cavity, oesophagus absent. Tail conical (2.2-2.5a.b.d. in male and 2.4-2.6a.b.d. in female). Spicules 32-38µm, paired, equal, curved with pointed distal tip. Gubernaculum with dorso-caudally directed apophysis (22-30µm long). One paired subventral percloacal papilla and two paired subventral postcloacal papillae. Ovaries paired, equal, opposed and reflexed. Vulva present at 49-51% of body length (Fig. 7).
Female: Not found

Feeding type: The specimens showed a narrow tubular buccal cavity. According to the buccal cavity classification by Wieser, this species is a selective deposit feeder (1A).

Habitat: Silty sediments.

Distribution

India: Singarayakonda.


Remarks

The specimens examined and conformed well to the earlier description of Warwick et al. except for the larger body size. The total body length described was 3-4.2mm and tail length 2.9-3.7a.b.d. The body length of the specimen studied was found larger being 3.9-4.5mm and the tail length 2.2-2.5a.b.d., male and in female 3.8-4mm body length and 2.4-2.6a.b.d. tail length. This is the first record from Indian waters.

8. Siphonolaimus cobbi Riemann, 1966

Phylum: Nematoda Rudolphi, 1808
Class: Adenophorea von Linstow, 1905
Order: Monhysterida Filipjev, 1929
Family: Sphaerolaimidae Filipjev, 1918
Genus: Siphonolaimus De Man, 1893
Species: Siphonolaimus cobbi Riemann, 1966

Material examined: 2 males collected at Chennai 76-100m (17.12.2008) and Parangipettai 101-150m depths (19.12.2008).

De Man ratio: a b c
Male: 50.07-50.68 7.68-6.92 26.76-27.06

Description

Body length 1.5-1.6mm. Maximum diameter 30-32µm. Cuticle finely striated. Head rounded with four long (12-14µm); four submedian (6-7-14µm); two lateral (7-8µm) cephalic setae and six (6-8µm) subcephalic setae can be seen. Somatic setae sparse, mainly confined to tail. Amphids circular (10-12µm in diameter). Tail conical with short cylindrical tip (1.9-2.2a.b.d.). Spicules 38-40µm, curved with straight proximal cephalization. Gubernaculum with a dorso-caudally directed apophysis (20-23µm long). Three setose precloacal supplements (Fig. 8).

Female: Not found

Feeding type: The specimens showed large teeth. According to the classification of buccal cavity by Wieser, this species is a predator (2B).

Habitat: Sandy sediments.

Distribution

India: Chennai and Parangipettai.

Elsewhere: England; European waters and Helgoland.

Remarks

The specimens examined and conformed well to the earlier description of Warwick et al. except for the smaller body size. The total body length described was 4.1mm and tail length 3.4a.b.d. The body length of the specimen studied was found smaller being 1.5-1.6mm and the tail length 1.9-2.2a.b.d. This is the first record from Indian waters.
9. *Araeolaimus elegans* De Man, 1888

Phylum: Nematoda Rudolphi, 1808
Class: Adenophorea von Linstow, 1905
Order: Monhysterida Filipjev, 1929
Family: Diplopeltidae Filipjev, 1918
Genus: *Araeolaimus* De Man, 1888
Species: *Araeolaimus elegans* De Man, 1888
Synonym: *Araeolaimus ditlevseni* Allgen, 1932

: *Araeolaimus dolichoposthis* Ssaweljev, 1912
: *Coinonema punctatum* Cobb, 1920
: *Araeolaimus spectabilis* Ditlevsen, 1921
: *Araeolaimus tristiis* Allgen, 1931

![Image](image_url)

Fig. 9. *Araeolaimus elegans* A) entire male, B) male head, C) female head, D) entire female, E) male tail, F) female tail

Material examined: 5 males and 2 females collected at Tammenapatanam 30-50m, 101-150m (16.12.2008) and Chennai 30-50m, 51-75m depths (17.12.2008).

De Man ratio: a b c
Male: 71.32±0.19 12.24±0.14 11.68±0.20
Female: 68.48-69.92 11.92-12.02 12.14-12.42

Description

Body length 1.9-2.1mm in male and 1.7-2.2mm in female. Maximum diameter 25-37 μm in male and 26-28μm in female. Cuticle striations first detectable at level of amphids. Six minute cephalic papillae. Four 3μm cephalic setae. Numerous somatic setae in oesophageal region, becoming shorter and less numerous posterior to the median oesophageal bulb. Loop-shaped amphids (8-12μm in diameter) appearing as a spiral of 1.5 turns. Buccal cavity conical, lined with thicker cuticle than that of the oesophageal lumen. Oesophagus with a prominent bulb (175-202μm), terminating in a rather weak swelling. Tail conical (4.6-5.4a.b.d. in male and 5.2-6a.b.d. in female). Spicules 30-42μm as curve, strongly bent. Gubernaculum with broad rounded apophysis. Two ovaries. Vulva present at 52-54% of body length (Fig. 9).

Feeding type: The specimens showed a narrow tubular buccal cavity. According to the buccal cavity classification by Wieser31, this species is a selective deposit feeder (1A).

Habitat: Sandy and silty sediments.

Distribution

India: Tammenapatanam and Chennai.
Elsewhere: Helgoland, Barents Sea and Spitsbergen32; England29; European waters33; Belgium, Kieler Buchat, Skagerrak, Belt Sea, Oresund, Kattegatt and Mediterranean32.

Remarks

The specimens examined and conformed well to the earlier description of Warwick et al. 29 except for the longer body size. The total body length described was 1.1-1.2mm and tail length 3.2-5.6a.b.d. The body length of the specimen studied was found longer being 1.9-2.1mm and the tail length 4.6-5.4a.b.d. in male and in female 1.7-2.2mm body length and tail length 5.2-6a.b.d. This is the first record from Indian waters.

Discussion

In the present study, *Thalassomonhystera venusta*, *Cobbia trefusiformis*, *Theristus ensifer*, *T. longus*, *Sphaerolaimus balticus*, *S. gracilis*, *Astomonema southwardorum*, *Siphonolaimus cobbi* and *Araeolaimus elegans* of free-living marine nematodes belonging to order Monhysterida were reported for the first time in Indian waters from the continental shelf region (southeast coast of India). So far, 225 species of nematodes have been reported from various regions including estuaries, backwaters, lagoons and mangroves on the east and west coasts of India13-23,36-40. Sajan and Damodaran14 reported 154 species in the western continental shelf of India. Nevertheless none of these nine species from order Monhysterida have been reported earlier from Indian waters. Therefore, these new recorded species might be useful in future studies especially in the environmental impact assessment (EIA) studies and ecotaxicology studies of Indian waters.
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