

Checklist of Nematodes (Nematoda: Adenophorea) from Southeast Continental Shelf of India

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ABSTRACT: A checklist of free-living marine nematode species recorded from the continental shelf region of southeast coast of India is presented (10°34.03' to 15°14.48' N and from 79°52.13' to 80°53.87'E). The checklist comprise 191 species belonging to 97 genera in 32 families currently know from the area. We provided a synthesis of the taxonomical and ecological work carried out until now that could guide to future research

INTRODUCTION

Sedimentary habitats cover most of the ocean bottom and therefore constitute the largest single ecosystem on earth in spatial coverage (Schratzberger *et al.* 2007). Benthic organisms which occupy these habitats make a significant contribution to the regulation of carbon, nitrogen and sulphur cycling, water column process, pollutant distribution and fate, secondary production and transport and stability of sediments (Snelgrove *et al.* 1997). Four of every five bottom living multicellular animals on earth are nematodes (Bongers and Ferries 1999). Free living marine nematodes are usually the most abundant metazoans inhabiting marine benthic ecosystems, often representing more than 60-90% of the benthic meiofauna (Sajan *et al.* 2010).

Their significance in terms of energy flexes in the food chain through way of degradation and mineralization of organic matter is high. Nematodes have short life span, high fecundity (Vranken and Heip 1983), represent several trophic levels (herbivores, bacterial feeders and carnivores) and at least some species can be easily cultured (Heip *et al.* 1985). By virtue of their wide range of adaptations, marine nematodes have exploited all seashores and seabed habitats. An important feature of nematode population is the large number of species present in any habitat, often an order of magnitude higher than for any other taxon (Platt and Warwick 1980).

Whereas the importance of parasitic nematodes has been recognised for many decades, this is not the case for free-living marine nematode species, especially those of aquatic environments. They remain poorly understood, despite the fact that they are extremely abundant and diverse, often numbering millions per square meter in sediments, and occur in more habitats than any other metazoan group (Heip *et al.* 1985). While few studies have been carried out on nematodes in and around the Indian waters, nematode communities of the Indian shelf sediments received cursory attention. More over the

nematofaunal studies done in the Indian subcontinent covered mostly the Western continental shelf (Harkantra *et al.* 1980; Sajan *et al.* 2010) and shallow coastal waters (Timm, 1961; 1967; Ansari *et al.* 1980) and no information is available on the distribution and species level composition of nematodes in the Southeast coast of India. Therefore the present investigation was undertaken on the meiobenthos especially on nematodes in the continental shelf of the Southeast coast of India.

MATERIALS AND METHODS

Study site

The study area extends from 10°34.03' to 15°14.48' N and from 79°52.13' to 80°53.87'E in the continental shelf region of the Southeast coast of India (Figure 1). Totally 35 sediment samples were collected along 6 transects (off Karaikkal, Parangipettai, Cheyyur, Chennai, Tammenapatnam and Singarayakonda) at the depths of 30-50m, 50-75m, 75-100m, 100-150m, 150-175m and above 175m. In addition one more transect was sampled, due to the presence of an industrial cluster in Cuddalore-SIPCOT (State Industries Promotion Corporation of Tamil Nadu), at 30-50m and above 175m depths. In these industrial cluster units mainly produced PVC pipes, paints, pharmaceutical products and fertilizers. These industries play a major role in this region and the industrial units here discharge treated/untreated effluents in to the sea. The study area map was drawn with the help of SURFER 8.0.

Data collection

Meiofaunal samples for the present study were collected onboard FORV (Fishery and Oceanographic Research Vessel) "Sagar Sampada" during Cruise No. 260 under the program of "Marine Benthos of Indian EEZ" founded by Centre for Marine Living Resources and Ecology (CMLRE), Ministry of Earth Sciences (MoES), Government of India. Two samples were collected using a

Smith McIntyre grab (having a bite area of 0.2 m²) from each depth. Immediately after the grab was hauled to the deck and sub-samples were taken from undisturbed grab samples using a glass corer (with an internal diameter of 2.5 cm and a length of 15 cm) from the middle of grab sample (Platt and Warwick 1983). The samples were fixed in buffered formalin at a concentration of 4%. The replicate core samples were processed separately in the laboratory and data were pooled for analyses.

Sample processing

In the laboratory, samples were washed through a set of 0.5 mm and 0.063 mm sieves. The sediment retained in the 0.063 mm sieve was decanted to extract meiofauna following the method (Higgins and Thiel, 1988). Sorting of meiofauna from sediment was done by flotation technique. The efficiency of this technique is around 95% followed by Armenteros *et al.* (2008). The meiofaunal organisms were stained with Rose Bengal prior to extraction and were sorted and enumerated under a stereomicroscope (Meiji, Japan). All the nematodes were mounted onto glass slides, using the formalin-ethanol-glycerol technique by Vincx (1996). Identification of nematodes was carried out to the highest taxonomic level possible using the compound microscope (Olympus CX 41 under higher magnification of 1000x) following the standard pictorial keys of Platt and Warwick (1983; 1988), Warwick *et al.* (1998) and the NeMys Database (Steyaert *et al.* 2005).

The collected specimens is currently deposited in CMLRE (Centre for Marine Living Resource and Ecology), MoES (Ministry of Earth Sciences), Government of India, whose available voucher numbers are provided (Table 1). These lists could be found in "Achievements of FORV Sagar Sampada 1997-2010" published in National Symposium entitled "Indian Ocean Marine Living Resources

(IndoMLR)", held at CMLRE, Kochi, India 2010.

RESULTS AND DISCUSSION

A total of 4218 individuals were collected and 191 species belonging to 97 genera and 32 families were identified. About 154 species of nematodes were reported from the Western continental shelf of India (Sajan *et al.* 2010). In the present study, the abundance (mean \pm SE) of nematodes decreased with increase in depth. The maximum abundance of 207.7 \pm 19.19 no. of ind. /10cm² was noticed in 30-50m depth and the minimum in >175m depth (34.6 \pm 6.66 no. of ind. /10cm²). Highest number of species was recorded in 30-50m depth (151 species) followed by 100-150m depth (120 species), 75-100m depth (100 species), 50-75m depth (95 species), 150-175m depth (80 species) and >175m depth (58 species) (Table 1). As observed in the present study, decline in abundance, number of species and families with increase in depth was reported (Ansari *et al.* 1980; Parulekar *et al.* 1982; Muthumbi *et al.* 2004; Sajan and Damodaran 2007; Sajan *et al.* 2010) in the Indian shelf sediments and (De Bovee *et al.* 1990; Tietjen 1992; Soltwedel 2000; Liu *et al.* 2007; De Leonardis *et al.* 2008; Armenteros *et al.* 2009) from other parts of the world. Transect-wise variation was less distinct in the faunal composition. However, such a variation was noticed in the abundance of nematodes in the entire shelf (Sajan *et al.* 2010).

Seventeen families such as Anoplostomatidae, Oxystominidae, Oncholaimidae, Trefusiidae, Chromadoridae, Comesomatidae, Cyatholaimidae, Desmodoridae, Microlaimidae, Leptolaimidae, Ceramonematidae, Desmoscolecidae, Monhysteridae, Xyalidae, Sphaerolaimidae, Linhomidae and Axonolaimidae were found in the entire study area. Some families were found to be depth specific- Enchelidiidae and Epsilonematidae were restricted only in 30-50m depth range, Meyliidae in 50-75m depth and Enoplidae in 75- 100m depth. Totally 29 out of 32 nematode families were recorded in 30-50m depth followed by 27 families in 50-75m and 100-150m depths. While behind 100m depth all the 32 nematode families were found and beyond 100m depth 28 families were recorded. However Enoplidae, Enchelidiidae, Epsilonematidae and Meyliidae were not recorded. At the edge of the shelf (beyond 175m) only 18 families were recorded. Ironidae, Leptosomatidae and Draconematidae were present in all the depth ranges except > 175m depth (Table 1). Similar results were reported by Sajan and Damodaran (2007) in Western continental shelf of India.

The present study most of the free-living marine nematodes were identified only generic level for the reason that lack of literature. The generic composition in the southeast continental shelf of India showed the presence of all the depths genera like Anoplostoma, Halalaimus, Oxystomina, Viscosia, Dorylaimopsis, Sabatieria, Paralongicyatholaimus, Tricoma, Thalassomonhystera, Daptonema, Terschellingia and Odontophora (Table 1) as found in various shelf sediments (Vanreusel *et al.* 1992; Soetaert and Heip 1995; Muthumbi *et al.* 2004; Sajan and Damodaran 2007; Sajan *et al.* 2010). In the importance of industrial cluster transect (Cuddalore - SIPCOT), nematode species like *Mesocanthion* sp., *Neochromadora*

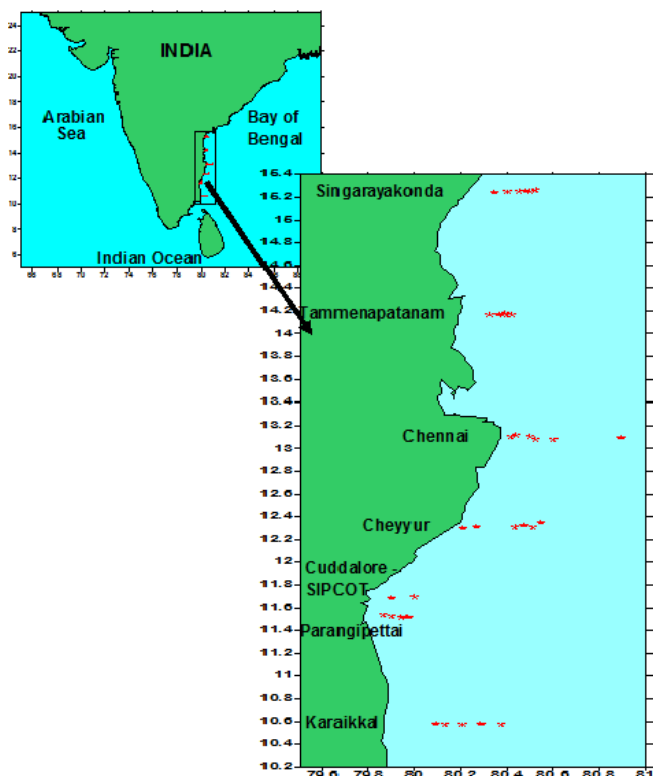


FIGURE 1. Depths sampled at various transects of southeast continental shelf of India.

sp. and *Epsilonema pustulatum* were recorded only in this transect. Genus *Neochromadora* was noticed as indicators for oil pollution and heavy metal contamination (Platt and Warwick 1988). There is no information regarding list of free-living marine nematode species, distribution,

diversity and pollution aspect studies in the southeast continental shelf of India. Therefore, the present study data is valuable for further ecological, qualitative and quantitative research on free-living marine nematodes in this region.

TABLE 1. List of species collected at seven transects and each in six depths (1 = 30-50m, 2 = 50-75m, 3 = 75-100m, 4 = 100-150m, 5 = 150- 175m and 6 = > 175m) along the continental shelf region of the southeast coast of India (x = present, - absent).

NEMATODES	CMLRE NUMBER	1	2	3	4	5	6
Enoplidae Dujardin, 1845 (1)							
<i>Enoplus</i> sp.	-	-	-	x	-	-	-
Thoracostomopsidae Filipjev, 1927 (4)							
<i>Enoplolaimus longicaudatus</i> (Southern, 1914)	CMLRE 4/061	-	-	-	-	x	-
<i>Mesacanthion</i> sp.	-	x	-	-	-	-	-
<i>Paramesacanthion</i> sp.	CMLRE 4/068	x	x	-	x	-	-
<i>Thoracostomopsis</i> sp.	-	-	-	-	x	-	-
Anoplostomatidae Gerlach and Riemann, 1974 (2)							
<i>Anoplostoma viviparam</i> (Bastian, 1865)	-	x	x	x	x	x	x
<i>Anoplostoma</i> sp.	-	x	x	x	x	x	x
Anticomidae Filipjev, 1918 (2)							
<i>Anticoma eberthi</i> Bastian, 1865	CMLRE 4/006	-	-	-	x	-	-
<i>Anticoma</i> sp.	-	x	x	x	x	-	-
Ironidae De Man, 1876 (2)							
<i>Dolicholaimus</i> sp.	-	x	-	-	x	-	-
<i>Syringolaimus</i> sp.	-	x	x	x	x	x	-
Leptosomatidae Filipjev, 1916 (3)							
<i>Leptosomatum</i> sp.	-	x	-	x	-	-	-
<i>Platycoma</i> sp.	-	x	x	-	x	-	-
<i>Thoracostoma</i> sp.	-	x	-	-	-	x	-
Oxystominidae Chitwood, 1935 (7)							
<i>Halalaimus capitulates</i> Boucher, 1977	-	x	-	-	-	-	-
<i>Halalaimus gracilis</i> De man, 1888	-	x	x	x	x	x	x
<i>Halalaimus longicaudatus</i> (Filipjev, 1927)	-	x	x	x	x	x	x
<i>Halalaimus</i> sp.	-	x	x	x	x	x	x
<i>Nemanema</i> sp.	-	-	x	-	-	-	x
<i>Oxystomina elongata</i> (Butschli, 1874)	-	x	x	x	x	x	x
<i>Oxystomina</i> sp.	CMLRE 4/060	x	x	x	x	x	x
Oncholaimidae Filipjev, 1916 (9)							
<i>Metoncholaimus scanicus</i> (Allgen, 1935)	CMLRE 4/039 and 4/78	x	-	-	-	-	-
<i>Oncholaimellus calvadosicus</i> De Man, 1890	CMLRE 4/057	-	-	-	x	-	-
<i>Oncholaimellus</i> sp.	-	-	x	-	x	x	x
<i>Viscosia abyssorum</i> (Allgen, 1933)	-	x	-	-	-	-	-
<i>Viscosia elegans</i> (Kreis, 1924)	-	x	x	x	x	x	x
<i>Viscosia glabra</i> (Bastian, 1865)	CMLRE 4/038	x	-	x	x	x	-
<i>Viscosia langrunensis</i> (De Man, 1890)	CMLRE 4/037	x	x	x	x	x	x
<i>Viscosia viscosa</i> (Bastian, 1865)	-	x	x	x	x	x	x
<i>Viscosia</i> sp.	-	x	x	x	x	x	x
Enchelidiidae Filipjev, 1918 (2)							
<i>Belbolla</i> sp.	CMLRE 4/076	x	-	-	-	-	-
<i>Pareurystomina</i> sp.	CMLRE 4/058	x	x	-	x	x	-
Tripyloidae Filipjev, 1918 (2)							
<i>Tripyloides marinus</i> (Butschli, 1874)	-	x	-	-	x	-	-
<i>Tripyloides</i> sp.	CMLRE 4/059	x	-	-	-	-	-
Trefusiidae Gerlach, 1966 (4)							
<i>Halanonchus</i> sp.	-	x	x	x	x	x	x
<i>Trefusia longicaudata</i> De Man, 1893	-	x	x	x	x	-	-
<i>Trefusia</i> sp.1	-	x	x	x	x	-	-
<i>Trefusia</i> sp.2	-	x	x	-	x	-	-
Chromadoridae Filipjev, 1917 (5)							
<i>Chromadora</i> sp.	-	x	x	x	-	-	-
<i>Chromadorina granulopigmentata</i> (Weiser, 1951)	CMLRE 4/013	x	x	-	x	-	-
<i>Neochromadora poecilosomoides</i> (Filipjev, 1918)	CMLRE 4/079	x	-	-	-	-	-

TABLE 1. CONTINUED.

NEMATODES	CMLRE NUMBER	1	2	3	4	5	6
<i>Prochromadorella</i> sp.	-	-	-	-	-	-	X
<i>Siplophorella</i> sp.	-	X	X	X	X	X	X
Comesomatidae Filipjev, 1918 (16)							
<i>Comesoma</i> sp.	-	X	X	-	-	-	-
<i>Dorylaimopsis punctata</i> Ditlevsen, 1918	-	X	X	X	X	X	-
<i>Dorylaimopsis</i> sp.	-	X	X	X	X	X	X
<i>Laimella</i> sp.	-	-	-	-	X	-	X
<i>Metacomesoma</i> sp.	-	X	-	-	-	-	-
<i>Paracomesoma dubuim</i> (Filipjev, 1918)	-	-	-	X	-	-	-
<i>Paracomesoma</i> sp.	CMLRE 4/066	X	X	-	X	X	X
<i>Sabatieria breviseta</i> Stekhoven, 1935	-	X	X	X	X	X	-
<i>Sabatieria celtica</i> Southern, 1914	CMLRE 4/030	X	X	X	X	-	-
<i>Sabatieria longisetosa</i> (Kries, 1929)	-	X	-	X	-	X	-
<i>Sabatieria ornata</i> (Ditlevsen, 1918)	-	X	X	X	-	X	-
<i>Sabatieria praedatrix</i> De Man, 1907	CMLRE 4/031	X	X	-	X	-	X
<i>Sabatieria pulchra</i> (Schneider, 1906)	CMLRE 4/032	X	X	X	X	X	X
<i>Sabatieria punctata</i> (Kreis, 1924)	CMLRE 4/033	X	X	X	X	X	-
<i>Sabatieria</i> sp.1	-	X	X	X	X	X	X
<i>Sabatieria</i> sp.2	-	X	X	X	X	-	-
Ethmolaimidae Filipjev and Stekhoven, 1941 (2)							
<i>Comesa cuanensis</i> (Platt, 1982)	CMLRE 4/017	X	X	-	-	-	-
<i>Paraethmolaimus</i> sp.	-	X	-	-	-	-	-
Cyatholaimidae Filipjev, 1918 (10)							
<i>Cyatholaimus</i> sp.	CMLRE 4/065	X	-	-	X	-	-
<i>Longicyatholaimus</i> sp.	-	X	X	X	X	-	X
<i>Metacyatholaimus</i> sp.	-	-	-	-	X	-	-
<i>Paracanthochus longicaudatus</i> Warwick, 1971	CMLRE 4/072	X	-	-	X	-	-
<i>Paracanthochus platti</i> Vadhyaar, 1980	-	-	X	-	-	-	-
<i>Paracanthochus</i> sp.	-	X	-	-	X	X	X
<i>Paracyatholaimus</i> sp.	CMLRE 4/071	-	-	X	X	-	-
<i>Paralongicyatholaimus minutus</i> Warwick, 1971	-	X	X	X	X	X	X
<i>Paralongicyatholaimus</i> sp.	CMLRE 4/040	X	X	X	X	X	X
<i>Pomponema</i> sp.	-	X	X	-	X	-	-
Selachinematidae Cobb, 1915 (5)							
<i>Cheironchus</i> sp.	-	X	-	-	-	-	-
<i>Gammanema</i> sp.	-	X	-	-	-	-	-
<i>Halichoanolaimus robustus</i> (Bastian, 1865)	-	-	-	-	X	-	-
<i>Synonchiella</i> sp.	CMLRE 4/069	-	X	-	-	-	X
<i>Synonchium</i> sp.	-	-	X	-	-	-	-
Desmodoridae Filipjev, 1922 (16)							
<i>Catanema</i> sp.	-	-	X	-	-	-	-
<i>Chromaspirina inglisi</i> Warwick, 1970	CMLRE 4/014	X	-	-	-	-	-
<i>Chromaspirina parapontica</i> Luc and De Coninck, 1959	CMLRE 4/015	X	-	-	X	-	-
<i>Chromaspirina</i> sp.	-	X	-	X	X	-	-
<i>Desmodora (Desmodora) scaldensis</i> De Man, 1889	-	X	-	X	-	X	-
<i>Desmodora (Desmodora) schulzi</i> Gerlach, 1950	CMLRE 4/025	-	-	X	-	X	-
<i>Echinodesmodora</i> sp.	-	X	-	-	X	-	-
<i>Leptonemella</i> sp.	-	-	-	-	X	-	-
<i>Metachromadora (Bradylaimus) suecica</i> (Allgen, 1929)	CMLRE 4/056	X	-	-	-	-	-
<i>Metachromadora (Chromadoropsis) vivipara</i> (De Man, 1907)	-	X	-	-	-	-	-
<i>Metachromadora</i> sp.1	-	X	-	X	X	X	-
<i>Metachromadora</i> sp.2	CMLRE 4/055	X	X	X	X	X	X
<i>Paradesmodora</i> sp.	CMLRE 4/047	X	X	-	X	X	-
<i>Pseudonchus northumbriensis</i> Warwick, 1969	CMLRE 4/053	-	X	-	X	-	-
<i>Pseudonchus</i> sp.	CMLRE 4/052	X	X	X	X	-	X
<i>Spirinia</i> sp.	-	X	X	X	X	X	-
Draconematidae Filipjev, 1918 (2)							
<i>Draconema claparedii</i> (Gerlach, 1952)	-	X	-	-	-	-	-
<i>Draconema</i> sp.	-	-	-	X	-	-	-
Epsilonematidae Steiner, 1927 (1)							
<i>Epsilonema pustulatum</i> (Gerlach, 1952)	CMLRE 4/077	X	-	-	-	-	-

TABLE 1. CONTINUED.

NEMATODES	CMLRE NUMBER	1	2	3	4	5	6
Microloaimidae Micoletzky, 1922 (11)							
<i>Aponema</i> sp.	-	x	x	-	x	-	-
<i>Belbolaimus teutonicus</i> Riemann, 1966	-	x	x	-	-	-	-
<i>Belbolaimus</i> sp.	CMLRE 4/041	x	x	-	x	-	-
<i>Calomicrolaimus honestus</i> (De Man, 1922)	CMLRE 4/011	-	-	-	x	-	-
<i>Calomicrolaimus spirifer</i> (Warwick, 1970)	-	x	-	x	x	-	-
<i>Calomicrolaimus</i> sp.	CMLRE 4/012	x	-	x	x	-	-
<i>Microloaimus acinaces</i> Warwick and Platt, 1971	-	-	x	-	-	-	-
<i>Microloaimus conothelis</i> (Lorenzen, 1973a)	CMLRE 4/027	x	-	-	-	-	-
<i>Microloaimus robustidens</i> Stekhoven and De Connick, 1933	CMLRE 4/026	x	-	x	x	x	-
<i>Microloaimus</i> sp.1	-	x	x	x	x	x	x
<i>Microloaimus</i> sp.2	CMLRE 4/028	x	x	-	x	-	-
Leptolaimidae Orley, 1880 (10)							
<i>Camacolaimus barbatus</i> Warwick, 1970	-	x	-	-	-	-	-
<i>Camacolaimus langicauda</i> De Man, 1922	-	x	-	-	x	-	-
<i>Camacolaimus</i> sp.	CMLRE 4/070	x	x	x	x	x	-
<i>Deontolaimus</i> sp.	-	-	x	-	-	-	x
<i>Leptolaimus ampullaceus</i> Warwick, 1970	CMLRE 4/062	x	-	-	-	x	-
<i>Laptolaimus elegans</i> (Stekhoven and De Coninck, 1933)	-	x	-	-	x	x	-
<i>Leptolaimus papillinger</i> De Man, 1876	CMLRE 4/063	x	-	-	-	-	-
<i>Leptolaimus</i> sp.	-	x	-	-	x	-	-
<i>Leptolaimoides</i> sp.	-	x	-	-	-	-	-
<i>Stephanolaimus</i> sp.	-	x	-	-	-	-	-
Ceramonematidae Cobb, 1933 (4)							
<i>Dasynemoides albaensis</i> (Warwick and Platt, 1973)	-	-	-	x	-	-	-
<i>Metadasynemoides</i> sp.	CMLRE 4/075	x	-	x	x	x	x
<i>Pselionema longiseta</i> Ward, 1974	-	x	x	-	x	x	-
<i>Pselionema</i> sp.	-	x	x	-	x	x	-
Meyliidae De Coninck, 1965 (1)							
<i>Gerlachius</i> sp.	-	-	x	-	-	-	-
Desmoscolecidae Shipley, 1896 (6)							
<i>Desmoscolex falcatus</i> Lorenzen, 1972	-	x	-	-	-	-	-
<i>Desmoscolex</i> sp.	-	x	-	x	-	-	-
<i>Quadricoma scanica</i> (Allgen, 1935)	-	x	-	-	-	-	-
<i>Tricoma brevirostris</i> (Southern, 1914)	-	x	x	x	x	x	x
<i>Tricoma longirostris</i> (Southern, 1914)	CMLRE 4/074	x	x	x	x	x	x
<i>Tricoma</i> sp.	-	x	x	x	x	x	x
Aegialoalaimidae Lorenzen, 1981 (1)							
<i>Southernia</i> sp.	-	-	x	x	x	-	-
Monhysteridae De Man, 1876 (8)							
<i>Diplolaimelloides</i> sp.	-	x	-	-	-	-	-
<i>Paramonhystera buetschlii</i> (Bresslau and Stekhoven 1935)	-	-	-	x	x	-	x
<i>Paramonhystera riemanni</i> (Platt, 1973)	-	-	-	x	-	-	-
<i>Paramonhystera</i> sp.1	-	x	x	x	x	x	x
<i>Paramonhystera</i> sp.2	CMLRE 4/029	-	-	x	x	-	x
<i>Thalassomonhystera parva</i> (Bastian, 1865)	-	x	-	x	-	x	x
<i>Thalassomonhystera venusta</i> (Lorenzen, 1979)	-	x	x	x	x	x	x
<i>Thalassomonhystera</i> sp.	CMLRE 4/067	x	x	x	x	x	x
Xyalidae Chitwood, 1951 (18)							
<i>Cobbia trefusiaeformis</i> De Man, 1907	CMLRE 4/016	x	-	-	-	-	-
<i>Cobbia</i> sp.	-	-	-	x	-	-	-
<i>Daptonema biggi</i> (Gerlach, 1965)	CMLRE 4/020	-	-	x	-	-	-
<i>Daptonema hirsutum</i> (Vitiello, 1967)	CMLRE 4/018	-	-	-	-	x	-
<i>Daptonema normandicum</i> (De Man, 1890)	CMLRE 4/019	x	x	x	x	x	x
<i>Daptonema oxycerca</i> (De Man, 1888)	-	x	x	x	x	x	-
<i>Daptonema procerum</i> (Gerlach, 1951)	-	-	-	x	-	-	-
<i>Daptonema psammoides</i> (Warwick, 1970)	CMLRE 4/021	-	x	x	-	-	-
<i>Daptonema setifer</i> (Gerlach, 1952)	-	x	-	-	-	-	-
<i>Daptonema tenuispiculum</i> (Ditlevsen, 1918)	CMLRE 4/022	x	x	x	x	x	x
<i>Daptonema</i> sp.1	-	x	x	x	x	x	x
<i>Daptonema</i> sp.2	CMLRE 4/023	x	x	x	x	x	x

TABLE 1. CONTINUED.

NEMATODES	CMLRE NUMBER	1	2	3	4	5	6
<i>Daptonema</i> sp.3	CMLRE 4/024	-	x	x	x	x	x
<i>Echinotheristus</i> sp.	-	-	-	-	x	-	-
<i>Theristus longus</i> Platt, 1973	CMLRE 4/064	x	x	x	x	-	-
<i>Theristus ensifer</i> Gerlach, 1951	CMLRE 4/080	x	-	x	-	-	-
<i>Theristus</i> sp.1	-	x	x	x	x	-	-
<i>Theristus</i> sp.2	-	-	-	x	-	-	-
Sphaerolaimidae Filipjev, 1918 (4)							
<i>Sphaerolaimus balticus</i> Schneider, 1906	CMLRE 4/035	-	x	-	x	x	-
<i>Sphaerolaimus gracilis</i> De man, 1884	CMLRE 4/036	x	-	-	x	-	-
<i>Sphaerolaimus islandicus</i> Ditlevsen, 1926	-	x	x	x	x	x	x
<i>Sphaerolaimus</i> sp.	-	x	x	-	-	x	-
Siphonolaimidae Filipjev, 1918 (4)							
<i>Astomonema southwardorum</i> Austen, Warwick and Ryan, 1993	CMLRE 4/009	x	-	x	x	-	-
<i>Astomonema</i> sp.	-	-	x	x	x	-	-
<i>Siphonolaimus cobbi</i> Riemann, 1966	CMLRE 4/034	-	-	x	x	-	-
<i>Siphonolaimus</i> sp.	-	x	-	-	-	-	-
Linhomoeidae Filipjev, 1922 (15)							
<i>Eleutherolaimus</i> sp.	-	x	-	-	-	-	-
<i>Linhomoeus hirsutus</i> Bastian, 1865	-	-	-	-	x	-	-
<i>Linhomoeus</i> sp.1	-	x	-	x	x	x	-
<i>Linhomoeus</i> sp.2	-	x	x	-	-	-	-
<i>Megadesmolaimus</i> sp.	CMLRE 4/054	x	-	-	x	-	-
<i>Metalinhomoeus filiformis</i> (De Man, 1907)	CMLRE 4/042	x	x	x	x	x	-
<i>Metalinhomoeus longiseta</i> Kreis, 1929	-	-	x	-	x	x	-
<i>Metalinhomoeus</i> sp.	-	x	x	x	x	x	x
<i>Paralinhomoeus conicaudatus</i> (Allgen, 1930)	CMLRE 4/049	x	-	x	x	-	x
<i>Paralinhomoeus lepturus</i> (De Man, 1907)	-	x	-	x	x	-	-
<i>Paralinhomoeus uniovarium</i> Warwick, 1970	CMLRE 4/048	x	-	-	-	-	-
<i>Paralinhomoeus</i> sp.	-	x	x	x	x	-	x
<i>Terschellingia communis</i> De Man, 1888	-	x	x	x	x	x	x
<i>Terschellingia longicaudata</i> De Man, 1907	-	x	x	x	x	x	x
<i>Terschellingia</i> sp.	CMLRE 4/050	x	x	x	x	x	x
Axonolaimidae Filipjev, 1918 (11)							
<i>Ascolaimus elongates</i> (Butschli, 1874)	-	x	-	-	x	-	-
<i>Ascolaimus</i> sp.	CMLRE 4/051	x	x	x	x	x	x
<i>Axonolaimus paraspinosus</i> Stekhoven and Adam, 1931	CMLRE 4/010	x	-	-	-	x	-
<i>Axonolaimus</i> sp.	-	x	-	-	x	x	-
<i>Odontophora exharena</i> Warwick and Platt, 1973	CMLRE 4/043	x	-	-	x	x	-
<i>Odontophora longisetosa</i> (Allgen, 1928)	CMLRE 4/044	x	-	x	x	x	x
<i>Odontophora rectangula</i> Lorenzen, 1971	CMLRE 4/045	x	-	x	x	x	x
<i>Odontophora setosa</i> (Allgen, 1929)	-	x	-	x	x	-	-
<i>Odontophora</i> sp.1	CMLRE 4/046	x	x	x	x	x	x
<i>Odontophora</i> sp.2	-	x	x	x	x	x	x
<i>Parodontophora</i> sp.	-	-	-	x	-	-	-
Diplopeltidae Filipjev, 1918 (3)							
<i>Araeolaimus elegans</i> De Man, 1888	CMLRE 4/007	x	x	x	x	-	-
<i>Araeolaimus</i> sp.1	-	x	x	x	-	x	-
<i>Araeolaimus</i> sp.2	CMLRE 4/008	x	x	-	x	x	-

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