Aust. J. Mar. Freshwater Res., 1978, **29**, 497–508

Scientific Report on the Belgian Expedition to The Great Barrier Reef in 1967. Nematodes XII.* Ecological Notes on the Nematode Fauna in and around Mangroves on Lizard Island

W. Decraemer and A. Coomans

Instituut voor Dierkunde, Rijksuniversiteit, Gent,
Ledeganckstraat 35, B-9000 Belgium.

Abstract

A study was made of the nematode fauna of two small mangrove swamps and adjacent sandy beaches on Lizard Island, Great Barrier Reef (Australia). Species diversity of the different sampling sites was compared and the degree of affinity of the nematode fauna was established.

Introduction

This paper deals with the nematode fauna in two small mangrove swamps (*A* and *B*) on Lizard Island, Great Barrier Reef, and the adjacent sandy beaches (Fig. 1). Species diversity of the different sampling sites is compared.

A description of four new species and a redescription of four known species from these places is given separately (Decraemer and Coomans 1978, pp. 509–41).

Materials and Methods

Lizard Island is situated at latitude 14°39′S. and longitude 145°28′E., about 24 km from the Australian mainland and 16 km from the outer Barrier Reef.

Mangrove swamp *A* is a very small area in the south of the island, on Freshwater beach. The area is protected by a sandy shoal, the lagoon and finally the Barrier Reef in the south (see Fig. 1).

Freshwater beach is a sandy beach bordered by a Pres-caprae association with *Ipomoea-pres-caprae* Roth. and some isolated Casuarina trees. The *Rhizophora stylosa* mangrove is surrounded by fine sand covered by a thin layer of organic material. This bluish green to brown layer contains various algae and benthic animals. Among the algae a filamentous blue-green alga is the most common. Among the benthic animals Nematoda, Polychaeta and Copepoda (Harpacticoidea) were present in abundance in the three samples taken. Ostracoda, Amphipoda, Tanaidacea and Acari were always present but usually in small numbers, although Tanaidacea were common at the margin of the mangrove swamp. At the margin mosquito larvae were also present.

The three samples near mangrove swamp *A* were taken as follows:

(1) *Sample 1.* Sand was collected near the outer side of the mangrove swamp, towards the beach, at high tide on 11 September 1967. It was fixed with 5% (v/v) formaldehyde.

(2) *Sample 2.* This sample was taken at the outer margin of the mangrove swamp on 11 September 1967. It was fixed with hot 4 : 1 F.A. (10 ml formalin, 1 ml glacial acetic acid, 89 ml distilled water).

(3) *Sample 3.* Sand and algal mats were collected about 10 m from the mangrove swamp at a depth of about 1 m on 11 September 1967. This sample was fixed with 5% (v/v) formaldehyde.

Mangrove swamp *B* is situated at the west side of the island, close to Watson's Beach. It consists of a channel that starts on the beach and reaches some 200 m inland where it ends in a *Pandanus* swamp. The channel is bordered by *Rhizophora stylosa*.

* Part XI, *Aust. J. Zool., Suppl. Ser.*, 1978, No. 55, 1–121.

Seven samples were taken in or near mangrove swamp *B*:

(4) *Sample 4.* Coarse sand was collected at the waterline on Watson's Beach, about 20 m from the entrance of the mangrove swamp, on 31 August 1967 It was fixed with hot 4 : 1 F.A. The sample contained many Copepoda (Harpacticoidea) and Polychaeta, some Amphipoda, Isopoda and Acari, and a few Ostracoda.

(5) *Sample 5.* Algal mats in between stones were collected some 10 m inside the mangrove channel.

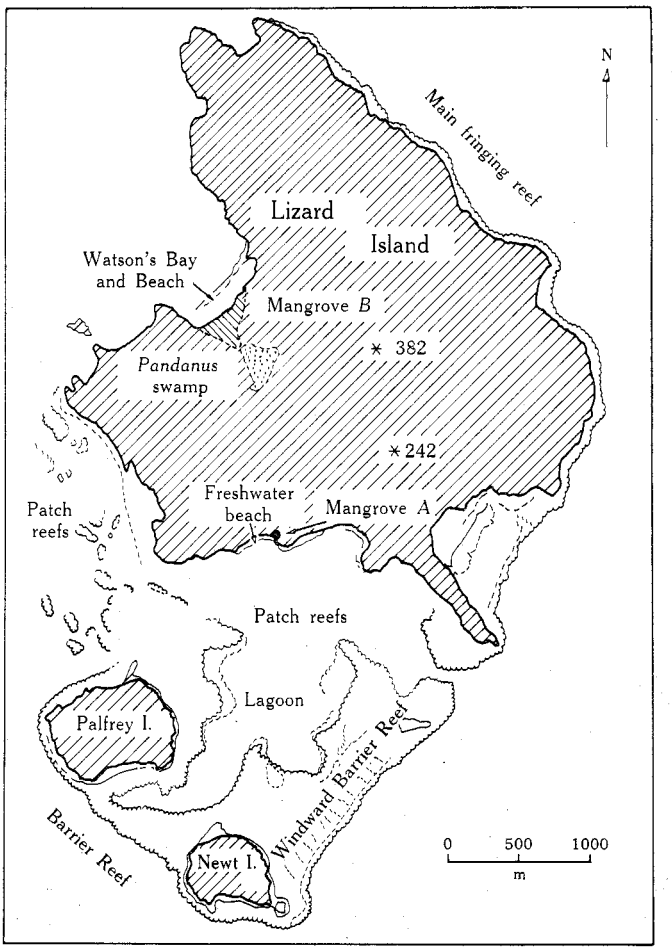

Fig. 1. Map of Lizard Island showing the sampling sites. *242 and 382 are altitudes (in metres).

(6) *Sample 6.* Algae and detritus were collected in a branch of the mangrove channel. Samples 5 and 6 were collected on 13 September 67 and fixed with 5% (v/v) formaldehyde. Apart from nematodes, they also contained numerous ciliates (some very big ones), many Copepoda (mainly Harpacticoidea, some Cyclopoidea), Polychaeta, Turbellaria, Amphipoda and Tanaidacea, and also some Kinorhyncha, Acari, mosquito larvae and Ostracoda.

(7) *Sample 7.* Fine sandy material and plant detritus were collected from the bottom of a small, shallow puddle (about 1 by 1 m, up to 15 cm deep) near the mangrove channel; salinity of the water was 29·84 mg Cl^-/ml. Apart from nematodes the sample contained numerous small ciliates, many Copepoda and a few mosquito larvae. It was collected on 13 September 1967 and fixed with 5% (v/v) formaldehyde.

(8) *Sample 8.* Fine sandy material and plant detritus were collected from halfway across the mangrove channel; salinity of the water was 14·44 mg Cl^-/ml. Apart from nematodes the sample contained many Copepoda, quite a number of Kinorhyncha, and some Amphipoda, Turbellaria, Tanaidacea and Annelida. It was collected on 15 September 1967 and fixed with 5% (v/v) formaldehyde.

(9) *Sample 9.* Bottom material was collected from a puddle which was about 40 by 25 cm and 6–7 cm deep and which contained green algae. The puddle was surrounded by ferns and was situated at the end of the mangrove swamp near the *Pandanus* swamp; salinity of the water was 1 mg Cl^-/ml. Apart from nematodes, the sample contained many Oligochaeta and mosquito larvae, and some Copepoda, Ostracoda, Acari and Insecta. It was collected on 15 September 1967 and fixed with 5% (v/v) formaldehyde.

(10) *Sample 10.* Soil was collected from the *Pandanus* swamp at the end of the mangrove swamp. It was collected on 1 September 1967 and fixed with hot 4 : 1 F.A. The sample was rather poor in nematodes but it also contained a few other organisms (Copepoda and Acari).

All samples from the Great Barrier Reef were collected by one of us (A.C.).

Comparison of the Nematode Faunas from the Various Sampling Sites

A comparison of the samples from near mangrove swamp *A* shows (Table 1) that some differences exist in the nematode fauna although the distance between the places where samples 1 and 2 and sample 3 were taken is small (about 10 m). The total number of species found was 68: 35 species in sample 1, 41 species in sample 2, and 36 species in sample 3. Only 13 out of the 68 species occurred in the three samples, 25 species are common to samples 1 and 2, 16 species to samples 1 and 3, and 16 species to samples 2 and 3; 12 of the species that are found in samples 1 and 2 do not occur in sample 3; 7 species only are present in sample 1, 12 species in sample 2, and 17 species in sample 3. When the more abundant species are considered we see that 9 species in sample 1, 7 species in sample 2, and 5 species in sample 3 each account for 5% or more of the total number of specimens; 3 species in sample 1, 2 species in sample 2, and 3 species in sample 3 each account for 10% or more. Only one species (*Microlaimus* sp. 1) is very abundant in all three samples; 8 species are abundant in two samples (usually samples 1 and 2); 6 species are abundant in one sample only.

The sample (No. 4) taken on the beach near mangrove swamp *B* is richer in species than the samples taken inside the mangrove swamp (see Table 2) (30 species compared to 14–25). Six out of the 30 species also occur in sample 5, and four also occur in sample 6; three species are found in the three samples. None of the species in sample 4 is present in sample 7 and only one species is present in sample 8. Three of the four most abundant species in sample 4 are not found in the other samples, but the fourth species (*Enoploides* sp.) is also found in sample 5. One-third of the species in sample 4 also occur in one of the samples near mangrove swamp *A*, but the two most abundant species of sample 4 were not present elsewhere. A very common species in mangrove swamp *B* is *Prochromadorella paramucrodonta*, but for some reason (temperature, oxygen?) it is absent from the shallow pool (sample 7). Several other species found in several samples may be absent from the puddle for the same reason(s), but a few species are found only in the puddle. The number of species inside mangrove swamp *B* decreases from 25 (sample 5) to 19 (sample 6) and 15 (sample 8), and only 14 species are present in sample 7. In samples 5 and 8 *P. paramucrodonta* forms the bulk of the nematode fauna, accounting for 64 and 77% respectively of the total number of specimens. In samples 5–8, 3, 6, 6, and 2 species respectively each account for 5% or more of the total nematode fauna, and

Table 1. Nematode fauna near mangrove swamp *A*

For species marked with an asterisk, descriptions are given by Decraemer and Coomans (1978)

	Sample 1				Sample 2				Sample 3			
	♀	♂	Juv.	Total	♀	♂	Juv.	Total	♀	♂	Juv.	Total
O. ARAEOLAIMIDA												
Axonolaimidae												
Axonolaimus caudostriatus Boucher, 1973	—	—	—	—	—	—	—	—	11	9	30	50
Axonolaimus sp.	—	—	—	—	—	—	—	—	—	—	2	2
O. MONHYSTERIDA												
Linhomoeidae												
Anticyathus sp.	—	—	—	—	—	—	1	1	—	—	—	—
Megadesmolaimus uncinatus Gerlach, 1963	—	—	—	—	—	—	—	—	2	1	3	6
Metalinhomoeus setosus Chitwood, 1951	—	—	2	2	—	1	—	1	—	—	—	—
Terschellingia longicaudata de Man, 1907	4	1	1	6	—	—	2	2	—	—	—	—
Terschellingia sp.	—	—	—	—	—	—	1	1	—	—	—	—
Anticyclus sp.	—	—	—	—	—	—	—	—	1	—	—	1
Linhomoeus sp.	—	—	—	—	—	—	1	1	—	—	—	—
Monhysteridae												
Cylindrotheristus sp.	28	38	25	91	8	11	2	21	—	—	—	—
Monhystrella marina Timm, 1964	—	—	—	—	—	—	—	—	14	—	1	15
Paramonhystera sp.	—	—	—	—	—	—	—	—	—	1	3	4
Steineria apud *ampullacea* Wieser & Hopper, 1967	3	3	5	11	11	7	3	21	1	—	—	1
Theristus (*Penzancia*) *metaflevensis* Gerlach, 1955	—	—	1	1	2	—	—	2	—	—	—	—
Theristus (*T.*) sp.	—	—	4	4	—	—	—	—	—	—	—	—
O. DESMODORIDA												
Desmodoridae												
Microlaimus sp. 1	89	—	9	98	46	—	6	52	66	—	48	114
Microlaimus problematicus Allgen, 1932	48	—	5	53	6	—	2	8	7	—	4	11
Microlaimus sp. 2	1	—	—	1	—	—	—	—	2	—	6	8
Microlaimus sp. 3	—	—	—	—	—	1	—	1	—	—	—	—
Metachromadora sp.	26	—	27	53	33	—	35	68	—	—	1	1
Onyx apud *perfectus* Cobb, 1891	—	—	—	—	—	—	—	—	—	—	1	1

Spirinia (*S.*) *laevioides* Gerlach, 1963	—	—	1	1	—	1	—	1	1	1	2	4
Spirinia sp.	—	—	—	—	1	—	2	3	—	—	—	—
* *Acanthopharynx distechei*, sp. nov.	—	—	—	—	—	—	—	—	1	1	9	11
Desmodora (*Croconema*) *cincta* (Cobb, 1920)	—	—	—	—	—	—	—	—	—	—	2	2
Desmodora (*Zalonema*) *megalosoma* Steiner, 1918	3	—	2	5	1	1	—	2	7	8	103	118
Desmodora sp.	—	—	—	—	—	—	—	—	—	—	2	2
Paradesmodora campbelli (Allgen, 1932)	30	23	14	67	7	7	18	32	—	—	—	—
Monoposthiidae												
Nudora sp.	—	—	—	—	—	—	—	—	—	—	1	1
Epsilonematidae												
Epsilonema sp.	21	21	7	49	—	—	—	—	—	—	—	—
O. DESMOSCOLECIDA												
Desmoscolecidae												
Desmoscolex laevis Kreis, 1928	—	3	—	3	—	—	—	—	—	—	—	—
O. CHROMADORIDA												
Comesomatidae												
Paracomesoma dubium (Filipjev, 1918)	4	16	24	44	11	13	28	52	—	—	—	—
Chromadoridae												
Ethmolaimus multipapillatus Paramonov, 1926	30	—	13	43	19	—	3	22	—	—	—	—
Spiliphera sp.	—	—	—	—	—	—	1	1	—	—	—	—
Atrochromadora denticulata Wieser & Hopper, 1967	2	2	—	4	17	17	5	39	36	30	23	89
Chromadora siciliana Wieser, 1954[A]	2	—	1	3	1	—	—	1	4	3	4	11
Prochromadorella ditlevseni (de Man, 1922)	44	42	4	90	—	—	—	—	3	1	—	4
Prochromadorella paramucrodonta (Allgen, 1929)	—	—	—	—	—	—	—	—	9	8	1	18
Prochromadorella sp.	—	—	—	—	2	—	—	2	—	—	—	—
Actinonema longicaudatum (Steiner, 1918)	6	—	—	6	11	6	1	18	—	—	—	—
Austranema pectinatum (Wieser & Hopper, 1967)	—	—	—	—	15	17	5	37	—	—	—	—
Chromadorita sp.	—	—	1	1	—	—	—	—	—	—	—	—
Dichromadora apapillata Timm, 1961	1	1	2	4	47	53	12	112	3	3	—	6
* *Ptycholaimellus lizardiensis*, sp. nov.	2	—	—	2	—	—	—	—	5	1	5	11
Spilophorella paradoxa (de Man, 1888)	4	1	—	5	1	7	—	8	2	—	1	3
Unidentified	—	—	—	—	—	—	1	1	—	—	2	2
Cyatholaimidae												
Neotonchus apud *melotridus* Wieser & Hopper, 1966	—	—	—	—	—	1	1	2	—	—	—	—
* *Paracanthonchus parahartogi*, sp. nov.	—	—	—	—	—	—	—	—	4	3	21	28

Table 1 (*Continued*)

	Sample 1				Sample 2				Sample 3			
	♀	♂	Juv.	Total	♀	♂	Juv.	Total	♀	♂	Juv.	Total
Paracanthonchus sp.	—	—	—	—	—	—	—	—	1	—	3	4
Longicyatholaimus sp. 1	1	—	3	4	—	—	1	1	—	1	3	4
Longicyatholaimus sp. 2	—	—	—	—	—	3	1	4	—	—	—	—
Xyzzors inglisi Wieser & Hopper, 1967	4	7	16	27	6	5	10	21	—	—	1	1
Unidentified	—	—	1	1	—	—	—	—	—	—	—	—
Choniolaimidae												
Halichoanolaimus quattuordecimpapillatus Chitwood, 1951	—	—	1	1	3	1	4	8	—	—	1	1
O. ENOPLIDA												
Ironidae												
Thalassironus brittanicus de Man, 1889	—	—	—	—	1	1	4	6	—	—	—	—
Thalassironus jungi Inglis, 1964	—	—	1	1	—	—	4	4	—	—	—	—
Tripyloididae												
Bathylaimus australis Cobb, 1894	1	1	6	8	5	7	6	18	—	—	—	—
Phanodermatidae												
Phanoderma (*Ph.*) *ocellatum* (Cobb, 1920)	1	—	—	1	—	—	6	6	—	—	—	—
Enoplidae												
Enoplus sp.	—	—	—	—	—	—	3	3	—	—	1	1
Oncholaimidae												
Mononcholaimus sp.	—	—	—	—	—	—	—	—	—	—	2	2
Viscosia apud *macramphida* Chitwood, 1951	1	1	4	6	—	1	—	1	—	—	—	—
Oncholaimus brachycercus de Man, 1889	3	—	8	11	—	—	—	—	—	—	—	—
Oncholaimus apud *opisthonchus* Filipjev, 1927	—	—	1	1	—	—	—	—	—	—	—	—
Oncholaimus sp.	—	—	—	—	1	—	2	3	—	—	—	—
Pontonema donsi (Allgen, 1932)	—	—	—	—	2	—	1	3	2	1	10	13
Enchelidiidae												
Eurystomina minutisculae Chitwood, 1951	—	—	—	—	1	1	4	6	—	—	—	—
Euristomina sp.	—	—	—	—	—	—	—	—	—	—	2	2
Calyptronema sp.	—	—	—	—	—	—	—	—	—	—	1	1
Total	359	160	189	708	258	162	176	596	181	73	299	553

[A] Considered to be a valid species different from *C. nudicapitata*.

Table 2. Nematode fauna near mangrove swamp *B*

For species marked with an asterisk, descriptions are given by Decraemer and Coomans (1978)

	Sample 4				Sample 5				Sample 6				Sample 7				Sample 8			
	♀	♂	Juv.	Total	♀	♂	Juv.	Total	♀	♂	Juv.	Total	♀	♂	Juv.	Total	♀	♂	Juv.	Total
O. ARAEOLAIMIDA																				
Rhabdolaimidae																				
Syringolaimus sp.	—	—	—	—	—	—	—	—	—	—	—	—	7	—	4	11	—	—	—	—
Leptolaimidae																				
Procamacolaimus sp.	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Camacolaimus exilis (Cobb, 1920)	3	2	5	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Axonolaimidae																				
Araeolaimus sp.	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Axonolaimus caudostriatus Boucher, 1973	6	6	28	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Axonolaimus sp.	—	—	—	—	11	9	20	40	1	3	3	7	1	—	1	2	—	1	2	3
O. MONHYSTERIDA																				
Linhomoeidae																				
Metalinhomoeus sp.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
Monhysteridae																				
Cylindrotheristus sp. 1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	—	—	1	1
Cylindrotheristus sp. 2	—	—	—	—	—	—	—	—	4	2	2	8	—	—	—	—	5	6	5	16
Monhystrella marina Timm, 1964	—	—	—	—	12	—	1	13	—	—	—	—	40	—	14	54	5	—	1	6
Monhystera sp.	—	—	—	—	12	—	3	15	—	—	—	—	—	—	—	—	—	—	—	—
Paramonhystera sp.	—	—	—	—	—	—	—	—	7	—	6	13	—	—	—	—	—	—	—	—
Steineria sp. 1	—	—	—	—	—	—	—	—	1	—	—	1	—	—	—	—	—	—	—	—
Steineria sp. 2	—	—	—	—	—	—	—	—	—	—	1	1	—	—	—	—	—	—	—	—
* *Theristus* (*T.*) *quadripapillatus*, sp. nov.	—	3	5	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Theristus (*Penzancia*) *flevensis* S. Stekhoven, 1935	—	—	—	—	—	—	—	—	—	—	—	—	4	3	5	12	—	—	—	—
Theristus (*Penzancia*) *metaflevensis* Gerlach, 1955	—	7	6	13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Theristus (*P.*) sp. 1	—	—	—	—	—	—	—	—	—	—	1	1	—	—	—	—	—	—	—	—

Table 2 (*Continued*)

	Sample 4				Sample 5				Sample 6				Sample 7				Sample 8			
	♀	♂	Juv.	Total	♀	♂	Juv.	Total	♀	♂	Juv.	Total	♀	♂	Juv.	Total	♀	♂	Juv.	Total
Theristus (*P.*) sp. 2	4	3	—	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Theristus (*P.*) sp. 3	4	2	1	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Theristus (*P.*) sp. 4	1	1	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
O. DESMODORIDA																				
Desmodoridae																				
Microlaimus problematicus Allgén, 1932	—	—	—	—	3	—	—	3	18	—	3	21	—	—	—	—	2	—	—	2
Microlaimus sp. 1	—	—	—	—	1	—	—	1	—	—	—	—	25	—	6	31	—	—	—	—
Microlaimus sp. 2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	—	—	—	—
Microlaimus sp. 4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	1	2
Chromaspirina sp.	—	—	—	—	—	—	1	1	—	—	1	1	—	—	—	—	—	—	—	—
Metachromadora (*M.*) *clavata* Gerlach, 1957	—	—	—	—	1	—	2	3	—	—	—	—	—	1	10	11	—	—	—	—
Metachromadora sp. 1	7	2	6	15	—	—	1	1	—	—	1	1	—	—	—	—	—	—	—	—
Metachromadora sp. 2	—	—	3	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onyx apud *perfectus* Cobb, 1891	1	—	2	3	—	—	9	9	—	—	2	2	—	—	—	—	—	—	—	—
Spirinia sp.	—	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Desmodora (*Zalonema*) *megalosoma* Steiner, 1918	4	1	1	6	—	—	2	2	—	—	—	—	—	—	—	—	—	—	—	—
Desmodora (*Croconema*) sp.	—	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Desmodora (*Desmodorella*) sp.	—	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Desmodora (*Pseudochromadora*) sp.	—	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Paradesmodora campbelli (Allgén, 1932)	—	—	—	—	1	—	—	1	—	—	—	—	—	1	17	18	—	—	—	—
Monoposthiidae																				
Nudora sp.	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Epsilonematidae																				
Epsilonema sp.	2	3	3	8	—	—	—	—	—	—	1	1	—	—	—	—	—	—	—	—
O. CHROMADORIDA																				
Chromadoridae																				
Ethmolaimus multipapillatus Paramonov, 1926	—	—	—	—	—	—	—	—	1	—	—	1	1	—	2	3	—	—	—	—

Chromadorina sp.	—	—	—	—	—	—	2	2	—	—	—	—	—	—	—	—	1	—	—	1
Prochromadorella ditlevseni (de Man, 1927)	14	15	5	34	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Prochromadorella paramucrodonta (Allgén, 1929)	—	—	—	—	74	100	224	398	18	13	4	35	—	—	—	—	48	58	63	169
Prochromadorella sp. 1	—	—	—	—	3	9	—	12	—	1	—	1	—	—	—	—	1	3	—	4
Prochromadorella sp. 2	—	—	—	—	1	—	5	6	—	—	—	—	—	—	—	—	—	—	—	—
Austranema pectinatum (Wieser & Hopper, 1967)	5	2	—	7	—	—	1	1	19	21	30	70	—	—	—	—	—	—	—	—
Dichromadora geophila (de Man, 1876)	—	—	—	—	2	1	—	3	—	1	—	1	—	—	—	—	2	2	—	4
Neochromadora apud *tecta* Gerlach, 1951	34	35	28	97	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
* *Ptycholaimellus lizardiensis*, sp. nov.	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
Spilophorella paradoxa (de Man, 1888)	—	—	—	—	9	2	2	13	3	5	3	11	—	—	—	—	1	2	—	3
Unidentified	—	—	—	—	—	—	2	2	—	—	—	—	1	—	—	1	—	—	—	—
Cyatholaimidae																				
Gomphionema sp.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	4
?*Biarmifer* sp.	1	—	2	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Longicyatholaimus sp.	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Xyzzors inglisi Wieser & Hopper, 1967	—	—	—	—	—	—	1	1	6	1	10	17	1	—	3	4	—	—	—	—
Unidentified	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
O. ENOPLIDA																				
Ironidae																				
Trissonchulus oceanus Cobb, 1920	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	1	—	—	—	—
Tripyloididae																				
Trupyloides sp.	—	—	—	—	—	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—
Anticomidae																				
Anticoma sp.	—	1	2	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Enoplidae																				
Enoploides sp.	17	4	57	78	8	6	9	23	—	—	—	—	—	—	—	—	—	—	—	—
Oncholaimidae																				
Viscosia apud *macramphida* Chitwood, 1951	1	—	1	2	3	—	8	11	—	—	—	—	—	—	—	—	—	—	—	—
Oncholaimus sp.	—	—	—	—	—	—	—	—	—	—	1	1	—	—	—	—	—	—	—	—
Pontonema donsi (Allgén, 1932)	—	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Table 2 (*Continued*)

	Sample 4				Sample 5				Sample 6				Sample 7				Sample 8			
	♀	♂	Juv.	Total	♀	♂	Juv.	Total	♀	♂	Juv.	Total	♀	♂	Juv.	Total	♀	♂	Juv.	Total
Enchelidiidae																				
Eurystomina minutisculae Chitwood, 1951	—	—	—	—	—	—	—	—	—	—	1	1	—	—	—	—	—	—	—	—
Polygastrophora heptabulba Timm, 1952	—	—	—	—	7	6	39	52	—	—	—	—	—	—	—	—	2	—	—	2
Unidentified Enoplida	—	—	—	—	1	—	2	3	—	—	—	—	—	—	—	—	—	—	—	—
O. TYLENCHIDA																				
Aphelenchidae																				
Aphelenchoides sp.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	—	—	—	—
Total	107	91	158	357	150	135	335	620	79	47	69	195	81	7	67	155	68	73	78	219

Table 3. Nematode fauna of the *Pandanus* swamp near mangrove swamp *B*

	Sample 9				Sample 10			
	♀	♂	Juv.	Total	♀	♂	Juv.	Total
O. ARAEOLAIMIDA								
Teratocephalidae								
Euteratocephalus palustris (de Man, 1880)	2	—	1	3	—	—	—	—
Plectidae								
Plectus longicaudatus Bütschli, 1873	—	—	—	—	2	—	1	3
Rhabdolaimidae								
Rhabdolaimus sp.	4	—	1	5	—	—	—	—
Leptolaimidae								
Paraphanolaimus anisitsi (Daday, 1905)	22	4	21	47	—	—	—	—
O. MONHYSTERIDA								
Monhysteridae								
Monhystrella apud *gracilis* Khera, 1966	14	—	5	19	—	—	—	—
Monhystera sp.	12	—	3	15	1	—	1	2
O. DESMODORIDA								
Desmodoridae								
Microlaimus sp.	1	—	1	2	—	—	—	—
Prodesmodora sp.	—	—	—	—	1	—	—	1
O. CHROMADORIDA								
Chromadoridae								
Chromadora macrolaimoides Steiner, 1915	—	—	—	—	—	1	—	1
Unidentified	—	—	1	1	—	—	—	—
O. ENOPLIDA								
Prismatolaimidae								
Prismatolaimus sp.	—	—	1	1	6	—	11	17
Ironidae								
Ironus sp.	2	—	2	4	—	—	1	1
O. DORYLAIMIDA								
Mononchidae								
Mylonchulus sp.	—	—	—	—	—	—	3	3
Dorylaimidae								
Prodorylaimus apud *depressus* Loof, 1973	8	—	114	122	—	—	—	—
New genus near *Prodorylaimus*	—	—	—	—	1	—	19	20
Leptonchidae								
Proleptonchus saccatus (Clark, 1962)	—	—	—	—	4	1	6	11
O. RHABDITIDA								
Cephalobidae								
Cephalobus sp.	—	—	—	—	1	—	1	2
O. TYLENCHIDA								
Tylenchidae								
Eutylenchus africanus Sher, Corbett & Colbran, 1966	—	—	—	—	2	—	—	2
Criconematidae								
Hemicriconemoides cocophilus (Loos, 1949)	—	—	—	—	8	—	3	11
Total	64	4	150	219	26	2	46	74

1, 3, 3, and 1 species respectively each account for 10% or more. The fewer numbers for samples 5 and 8 are due to the extreme dominance of *P. paramucrodonta*.

Although some trends could be deduced from Tables 1 and 2 it is too early to form conclusions. More extensive sampling is necessary to evaluate these preliminary results.

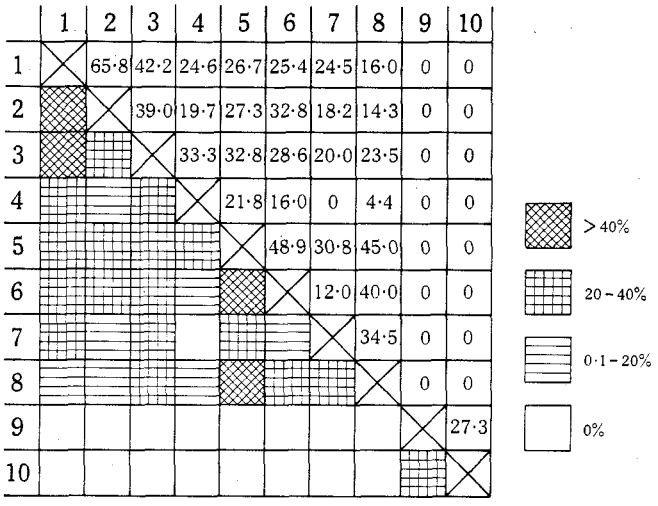

Fig. 2. Trellis diagram indicating the degree of affinity of the nematode fauna of the sampling sites.

As could be expected the nematode fauna from the last two samples (Nos 9 and 10) is very different from that described above (see Table 3). Some of the specimens were either badly fixed (especially in sample 10, fixed with hot 4 : 1 F.A.) or partly obscured by foreign material that adhered to the cuticle, so that specific identification was impossible or doubtful. This was also the case when only juveniles were available. Some other specimens, however, were in very good condition. Interesting findings are: *Paraphanolaimus anisitsi* recorded so far only from Paraguay, Columbia and Hungary; a new genus of dorylaim close to *Prodorylaimus*; a *Prodorylaimus* species near to *P. depressus* which was described from Suriname; a new species of *Ironus*; and a record outside Africa of *Eutylenchus africanus*.

The degree of affinity of the nematode fauna, based on Sörensen's index, is given in a trellis diagram (Fig. 2). Sörensen's index is given by

$$S = 2C/(A+B),$$

where A is the number of species in sample A, B is the number of species in sample B, and C is the number of species common to samples A and B.

References

Decraemer, W., and Coomans, A. (1978). Scientific report on the Belgian Expedition to the Great Barrier Reef in 1967. Nematodes XIII. A description of four new species and a redescription of four known species from in and around mangroves on Lizard Island. *Aust. J. Mar. Freshwater Res.* **29**, 509–41.

Manuscript received 24 October 1977