

Article

Biodiversity of Nematodes from Coral Reef Sediments in the South China Sea Based on eDNA Metabarcoding

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Abstract: Coral reef ecosystems in the South China Sea are one of the globally important marine biodiversity hotspots. However, there are few studies on nematode biodiversity in coral reef sediments. Here, we assessed nematode biodiversity in coral reef sediments in the South China Sea using eDNA metabarcoding. Eight sampling stations were set up in the region north of the South China Sea Basin (Xisha and Zhongsha Islands) and south of it (Nansha Islands), respectively. We also compared and analysed the nematode biodiversity and community structure in different regions, as well as the effects of environmental factors on the community structure. The results showed that a total of 503 operational taxonomic units (OTUs) were detected in 16 sediment samples. The nematodes identified belong to two classes, 10 orders, 37 families, 51 genera and 61 species, and all of them were Enoplea and Chromadorea, except for the unidentified taxa, which accounted for 97.26% of the total abundance. The analyses showed that the northern region had higher nematode abundance and diversity relative to the southern region. However, there was no significant difference in the nematode community structure between the two regions, which was less affected by geographic location. Similarly, environmental factors (total nitrogen, total phosphorus, copper, zinc, cadmium, lead and arsenic) have an effect on the abundance of specific nematode groups but not on the overall community structure. In summary, this study initially reveals the composition and diversity of nematode communities in coral reef sediments in the South China Sea and provides an important reference for further in-depth study of the South China Sea ecosystem.

Keywords: coral reef; sediment; eDNA metabarcoding; marine nematode



Citation: An, L.; Wang, A.; Zhang, Z.; Ren, X.; Sha, Z. Biodiversity of Nematodes from Coral Reef Sediments in the South China Sea Based on eDNA Metabarcoding. *Diversity* **2024**, *16*, 362. <https://doi.org/10.3390/d16070362>

Academic Editor: Stuart Kininmonth

Received: 9 May 2024

Revised: 12 June 2024

Accepted: 19 June 2024

Published: 25 June 2024



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1. Introduction

Coral reef ecosystems, often referred to as the tropical rainforests of the ocean due to their high biodiversity and ecosystem service value, continue to support thousands of marine species despite the pressures of global climate change and human activities [1]. Particularly in the South China Sea, the coral reefs not only boast rich biodiversity but also occupy a significant position in economic activities [2]. However, scientific research on the coral reef ecosystems in this region, especially studies on meiofauna communities, remains relatively undeveloped.

Nematodes, as a crucial part of the benthic meiofauna community in marine ecosystems, play a key role in coral reef ecosystems [3]. These minute organisms are not only vital components of the food web but also serve as indicator species for environmental health [4]. The diversity and community structure of nematodes reflects the health of ecosystems and biogeographical distributions [5]. However, despite the recognized importance of nematodes, studies on their diversity in the coral reef sediments of the South China Sea are still very limited.

Traditional biodiversity research methods primarily rely on morphological features for species identification and classification. While historically significant, this approach has clear limitations when dealing with large-scale samples or species that are difficult to distinguish [6]. In recent years, the development of molecular biology techniques, especially the application of environmental DNA (eDNA) metabarcoding, has provided new perspectives and tools for biodiversity research [7]. By analysing the DNA in environmental samples, this technique allows for rapid and efficient monitoring and assessment of biological communities, making it particularly suited for studying minute or cryptic species that are challenging to identify through traditional methods [8].

Thus, using eDNA metabarcoding technology, this study conducted a comprehensive analysis of the nematode community's biodiversity and structure in the coral reef sediments of the South China Sea. Through this method, we were able to monitor the dynamics of coral reef nematode communities non-invasively and assess the health of ecosystems on a larger geographical scale, promptly identifying ecological risks and potential crises and providing a basis for scientific management and conservation measures.

2. Materials and Methods

2.1. Sample Collection

The samples for this study were collected in April–May 2023 in the coral reef region of the Nansha Islands (three stations on Beiwai shoal (BW1, BW2 and BW3); two stations on Meiji Reef (MJ2 and MJ4); one station on Chigua Reef (CG1); one station on Dongmen Reef (DM1); and one station on Zhangxi Reef (ZX1)), the Zhongsha Islands (one station on Walker Shoal: (MB)) and the Xisha Islands (three stations on North Reef (BJ1, BJ3 and BJ4); one station on Ganquan Reef (GQ)); one station on Shi island (SY); two stations on Qilian island (QLY1, QLY2)), with a total of 16 sampling stations. As the sampling stations are separated by the South China Sea basin, the sampling stations in the Xisha Islands and the Zhongsha Islands were divided into the northern region, and those in the Nansha Islands were divided into the southern region (Figure 1). Surface sediments were collected on-site by divers using sterile sampling bags in water depths of 10–20 m and subsequently placed in an -80°C refrigerator for preservation. Sampling stations were mapped by the software Ocean Data View (ODV, 4.7.10).

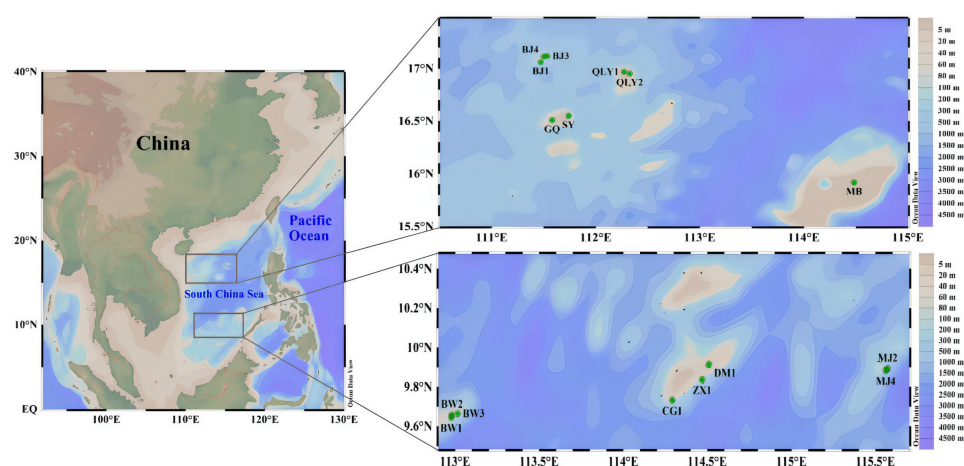


Figure 1. Sampling stations in the South China Sea.

2.2. Environmental Factor Parameter Acquisition

Thirty grams of sediment samples were placed in a freeze-dryer and lyophilised for 24 h. The dried samples were then ground into powder using a mortar and pestle and transferred into 50 mL sterile centrifuge tubes. These samples were sent to the Institute of Soil Science, Chinese Academy of Sciences in Nanjing for the determination of environmental factors, including nutrients (total nitrogen (TN), total phosphorus (TP)) and heavy metal elements (copper (Cu), zinc (Zn), cadmium (Cd), lead (Pb) and arsenic (As)).

2.3. High-Throughput Sequencing

In this study, genomic DNA was extracted from sediment samples using the DNeasy PowerSoil Kit (QIAGEN, Hilden, Germany) according to the instructions, and integrity was examined using 1% agarose gel electrophoresis. Marine nematode-specific primers were selected for PCR amplification of 18S rRNA gene [9], and the primer sequences were A-NF1: 5'-GCCTCCCTCGCGCCATCAGGGGTGGTGCATGGCCGTTCTTAGTT-3' and B-18Sr2b: 5'-GCCTTGCCAGCCCGCTCAGTACAAAGGGCAGGGACGTAAT-3'. PCR was performed using TransStart Fastpfu DNA Polymerase (TransGen Biotech) with a 20 µL reaction system in the following amplification procedure: pre-denaturation at 95 °C for 5 min, followed by 35 cycles (denaturation at 95 °C for 30 s, annealing at 58 °C for 30 s, and extension at 72 °C for 45 s), and finally extension at 72 °C for 10 min. Three replicates were set up for all the samples, and the PCR products of the same samples were mixed and checked by electrophoresis on 2% agarose gel. Qualified PCR products were subjected to library preparation and high-throughput sequencing on the Illumina MiSeq PE250 sequencing platform. The results were stored in FASTQ file format and uploaded to NCBI, BioProject: PRJNA1101407.

2.4. Data Quality Control and Processing

Firstly, Raw Reads were filtered using Trimmomatic [10], and adaptor sequence and primer sequences were identified and removed by using cutadapt [11] to obtain Clean Reads. Double-ended reads were spliced using USEARCH (8.1) [12]. We removed chimeras using UCHIME [13] to obtain high-quality sequences for subsequent analyses. Those Sequences were clustered at a 97% similarity level using USEARCH [12], and OTUs were filtered by default parameters with a threshold of 0.005% of total number of all sequences sequenced. OTUs are clusters of similar sequences that are used to classify groups of closely related individuals. In microbial ecology, OTUs are often used as a proxy for species or other taxonomic units, especially when exact taxonomic identification is challenging. By clustering sequences based on similarity, OTUs provide a practical way to analyze and compare community composition and diversity. Taxonomical annotation was performed using the Naive Bayes Classifier with a reference database (SILVA 138). All optimised sequences were mapped to OTU representative sequences to generate OTU tables (Appendix A).

2.5. Statistical Analysis

The region of this study is located in the Nansha Islands, Zhongsha Islands and Xisha Islands in the South China Sea; due to the separation of the South China Sea Basin, the above region is divided into the northern region (Xisha Islands and Zhongsha Islands) and the southern region (Nansha Islands). The nematode biodiversity and community structure in different regions and the effects of environmental factors on the community structure were analysed. The Alpha diversity index of the samples was assessed using QIIME2 [14]; Beta diversity analysis was performed using QIIME [15] to evaluate nematode biodiversity in different samples. Linear Discriminant Analysis (LDA) was performed on the samples according to different grouping conditions based on taxonomic composition using LEfSE to identify communities or species that significantly differed in their impact on sample partitioning [16]. Redundancy Analysis (RDA) was performed using CANOCO5 [17] to analyse the effect of environmental factors on community structure. Correlation mapping was performed based on R language (R4.2.2), Origin (9.9) and EXCEL (2021).

3. Results

3.1. Valid Sequences and OTUs

From 16 sediment samples collected from coral reefs in the South China Sea, the 18S rRNA gene of marine nematodes was amplified and subjected to high-throughput sequencing. A total of 1,769,042 sequences were obtained, of which 1,659,263 valid sequences remained after data purification for subsequent analysis (Table 1). Approximately 99.26% of these sequences ranged from 310 to 330 bp in length. Annotation and screening were

conducted using the SILVA138 database. Among the annotated sequences, 503 OTUs were identified as marine nematodes. There were 52 OTUs common to both the northern and southern regions, with 257 unique OTUs in the northern region and 194 unique OTUs in the southern region. Table 2 presents species annotations of shared OTUs with high abundance in both regions. At the class level, Enoplea and Chromadorea were the dominant groups. At the order level, the primary groups included Mermithida, Rhabditida, Plectida, Enoplida, Dorylaimida. At the family level, the major families observed were Mermithidae, Cephalobidae, Criconematidae, Anguinidae, Ceramonematidae, Ironidae, Alaimidae, Aporcelaimidae. At the genus level, *Hexamermis*, *Acrobeles*, *Criconemoides*, *Subanguina*, *Ceramonema*, *Syringolaimus*, *Alaimus*, *Aporcelaimellus* were predominant.

Table 1. Statistics of sequences among two regions of the South China Sea.

Group	Station	Input	Merged	Filtered
Northern	SY	130,251	124,931	121,859
	GQ	114,936	111,734	108,498
	QLY1	155,331	146,627	140,371
	QLY2	73,950	72,626	70,182
	BJ1	138,678	135,313	131,186
	BJ3	112,546	110,911	107,886
	BJ4	123,672	121,653	117,627
	MB	106,069	103,946	100,938
Southern	BW1	145,553	140,193	136,322
	BW2	134,999	132,028	127,920
	BW3	79,462	73,205	70,437
	MJ4	111,306	109,822	106,471
	MJ2	69,361	64,965	63,315
	DM1	101,336	95,673	93,962
	ZX1	112,938	110,658	106,448
	CG1	58,654	57,591	55,841

Table 2. Species annotations of shared OTUs are in high abundance in two regions of the South China Sea.

OTUID	Class	Order	Family	Genus	Species
OTU1	Enoplea	Mermithida	Mermithidae	<i>Hexamermis</i>	<i>Hexamermis albicans</i>
OTU2	Chromadorea	Rhabditida	Cephalobidae	<i>Acrobeles</i>	<i>Acrobeles</i> sp. MA-2012
OTU3	Chromadorea	Rhabditida	Criconematidae	<i>Criconemoides</i>	<i>Criconemoides myungsugae</i>
OTU4	Chromadorea	Rhabditida	Anguinidae	<i>Subanguina</i>	<i>Subanguina radiculola</i>
OTU5	Chromadorea	Plectida	Ceramonematidae	<i>Ceramonema</i>	<i>Ceramonema altogolfi</i>
OTU6	Enoplea	Enoplida	Ironidae	<i>Syringolaimus</i>	<i>Syringolaimus</i> sp. 1060
OTU7	Enoplea	Enoplida	Alaimidae	<i>Alaimus</i>	<i>Alaimus</i> sp. 1247
OTU8	Chromadorea	Rhabditida	Cephalobidae	<i>Acrobeles</i>	<i>Acrobeles</i> sp. MA-2012
OTU9	Enoplea	Dorylaimida	Aporcelaimidae	<i>Aporcelaimellus</i>	<i>Aporcelaimellus</i> sp. JH-2004
OTU10	Chromadorea	Rhabditida	Cephalobidae	<i>Acrobeles</i>	<i>Acrobeles</i> sp. MA-2012
OTU16	Enoplea	Dorylaimida	Aporcelaimidae	<i>Aporcelaimellus</i>	<i>Aporcelaimellus</i> sp. JH-2004
OTU18	Chromadorea	Rhabditida	Cephalobidae	<i>Acrobeles</i>	<i>Acrobeles</i> sp. MA-2012
OTU19	Chromadorea	Rhabditida	Cephalobidae	<i>Acrobeloides</i>	<i>Acrobeloides</i> sp. MCt34
OTU21	Chromadorea	Rhabditida	Cephalobidae	<i>Acrobeles</i>	<i>Acrobeles</i> sp. MA-2012
OTU25	Chromadorea	Rhabditida	Cephalobidae	<i>Acrobeles</i>	<i>Acrobeles</i> sp. MA-2012
OTU27	Enoplea	Dorylaimida	Aporcelaimidae	<i>Aporcelaimellus</i>	<i>Aporcelaimellus</i> sp. JH-2004

3.2. Alpha Diversity

The alpha diversity indices based on the OTU level for each sample (Table 3) revealed that the northern region exhibited higher alpha diversity indices compared to the southern region. To visualise the differences in nematode biodiversity between regions, box plots of the four alpha diversity indices were generated based on the OTU level (Figure 2).

The medians of the alpha diversity indices were higher in the northern region than in the southern region, and the lengths of the upper and lower quartile ranges of the alpha diversity indices were also greater, indicating higher nematode abundance and evenness in the northern region. Additionally, one station in the northern region (GQ) and one station in the southern region (MJ2) exhibited significantly higher nematode biomass compared to other stations within their respective regions.

Table 3. Alpha diversity index among two regions in the South China Sea.

Group	Station	Richness Index	Shannon Index	Simpson Index	Pielou Index
Northern	SY	50.1	2.8224	0.8392	0.4999
	GQ	159.1	5.3288	0.9663	0.7286
	QLY1	12.8	0.0080	0.0010	0.0022
	QLY2	81.1	1.9746	0.7051	0.3114
	BJ1	14.6	0.0195	0.0031	0.0051
	BJ3	19.9	1.5835	0.6572	0.3680
	BJ4	28.1	0.0323	0.0046	0.0067
	MB	37.9	0.9829	0.4703	0.1877
Southern	BW1	82.8	2.1153	0.7329	0.3320
	BW2	21.4	0.9608	0.4638	0.2179
	BW3	14.6	0.7314	0.3131	0.1897
	MJ4	23.4	0.1444	0.0338	0.0318
	MJ2	103.5	2.2335	0.7103	0.3337
	DM1	12	0.6860	0.2506	0.1916
	ZX1	11.1	0.0085	0.0011	0.0024
	CG1	35.2	0.0386	0.0054	0.0075

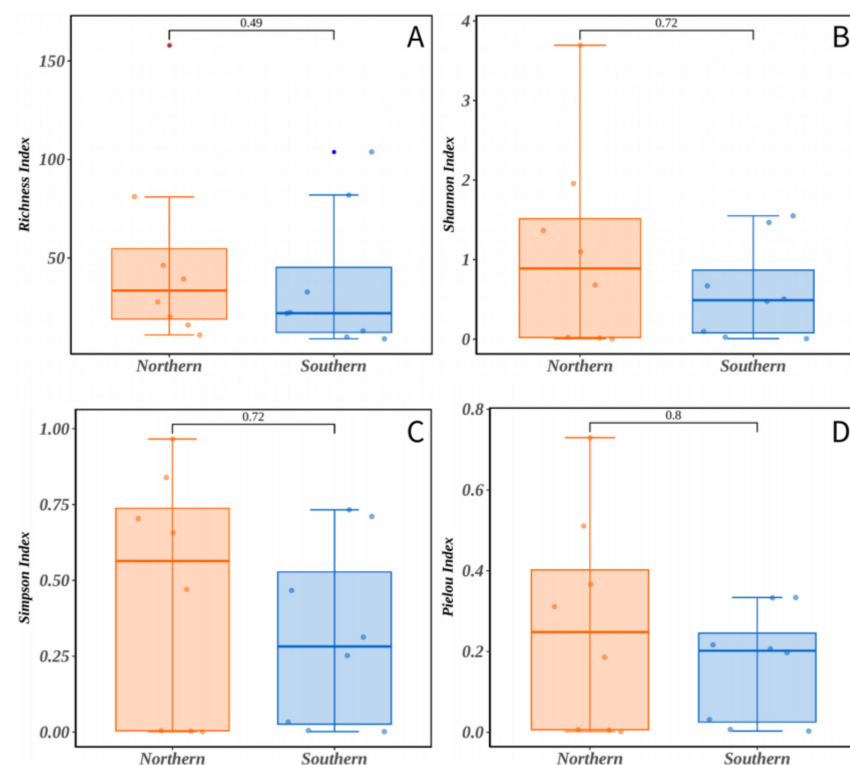


Figure 2. Alpha diversity index box diagram among three regions in the South China Sea: (A) Richness index, (B) Shannon index, (C) Simpson index, (D) Pielou index. Different colored circles represent individual sample points, with each color corresponding to a specific region: orange circles indicate samples from the northern region, blue circles indicate samples from the southern region.

3.3. Species Composition and Relative Abundance

The results of the OTU sequence comparison revealed that the nematodes identified in the coral reef area of the South China Sea belong to two classes, 10 orders, 37 families, 51 genera and 61 species. At the class level, excluding unidentified taxa, the nematodes are predominantly Chromadorea (56.53%) and Enoplea (41.87%). At the order level, the dominant groups are Rhabditida (49.65%), Enoplida (15.21%), Dorylaimida (13.70%), Mermithida (12.74%). At the family level, the major observed families are Cephalobidae (26.89%), Criconematidae (9.93%), Aporcelaimidae (13.61%), Mermithidae (12.74%), Alaimidae (8.33%). At the genus level, the primary genera include *Acrobeles* (24.56%), *Aporcelaimellus* (13.61%), *Hexamermis* (12.74%), *Criconemoides* (9.93%), *Alaimus* (8.33%). At the species level, the dominant species are *Acrobeles* sp. MA-2012 (24.56%), *Aporcelaimellus* sp. JH-2004 (13.61%), *Hexamermis albicans* (12.74%), *Criconemoides myungsugae* (9.93%), *Alaimus* sp. 1247 (8.32%) (Figure 3).

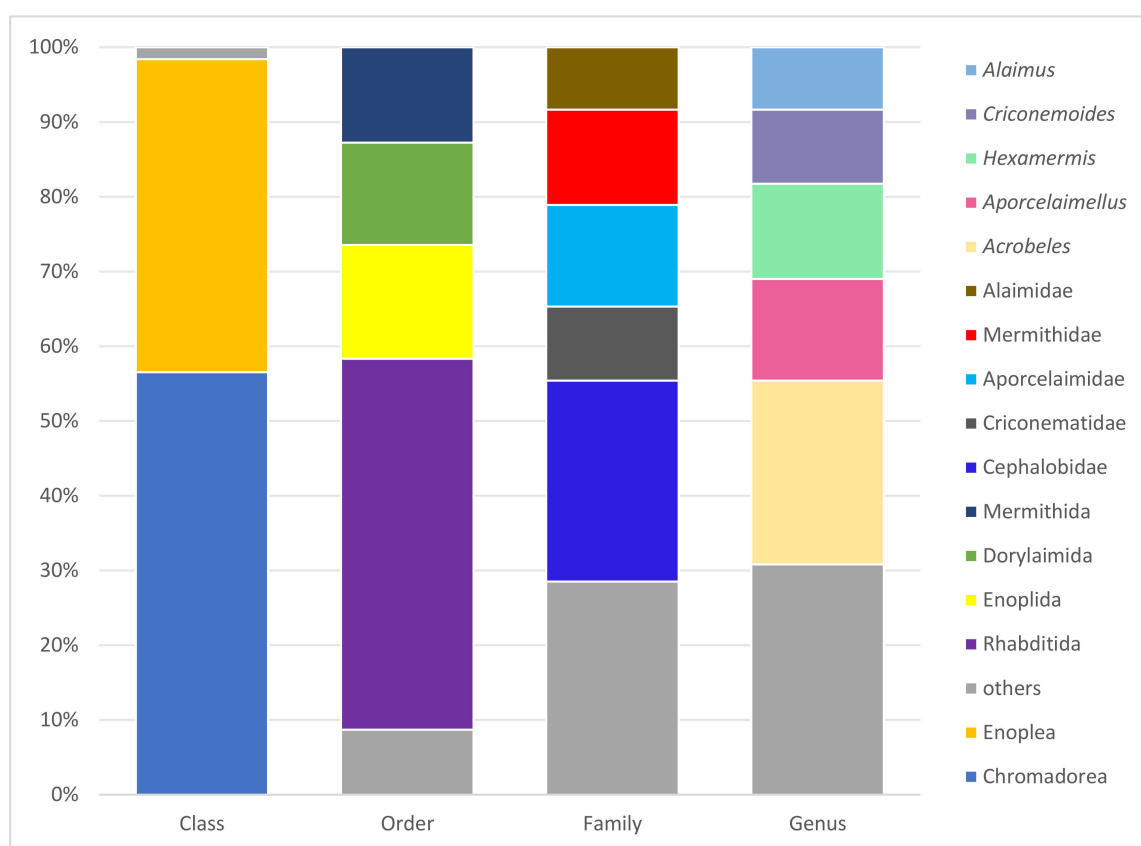


Figure 3. Relative abundance of nematode in the South China Sea: class, order, family, genus level.

In the northern and southern regions of the study area, the dominant classes are Enoplea and Chromadorea. In the northern region, the proportions of these two classes are approximately equal, whereas in the southern region, Chromadorea is more prevalent. The dominant orders are Rhabditida, Enoplida, Dorylaimida, Mermithida. The dominant families include Cephalobidae, Aporcelaimidae, Mermithidae. The dominant genera are *Acrobeles*, *Aporcelaimellus*, *Hexamermis*. Figure 4 illustrates the relative abundance of different taxonomic levels (classes, orders, families, genera) in the northern and southern regions. Overall, the differences between the dominant groups in the northern and southern regions are minimal, with the southern region exhibiting a greater number of dominant groups.

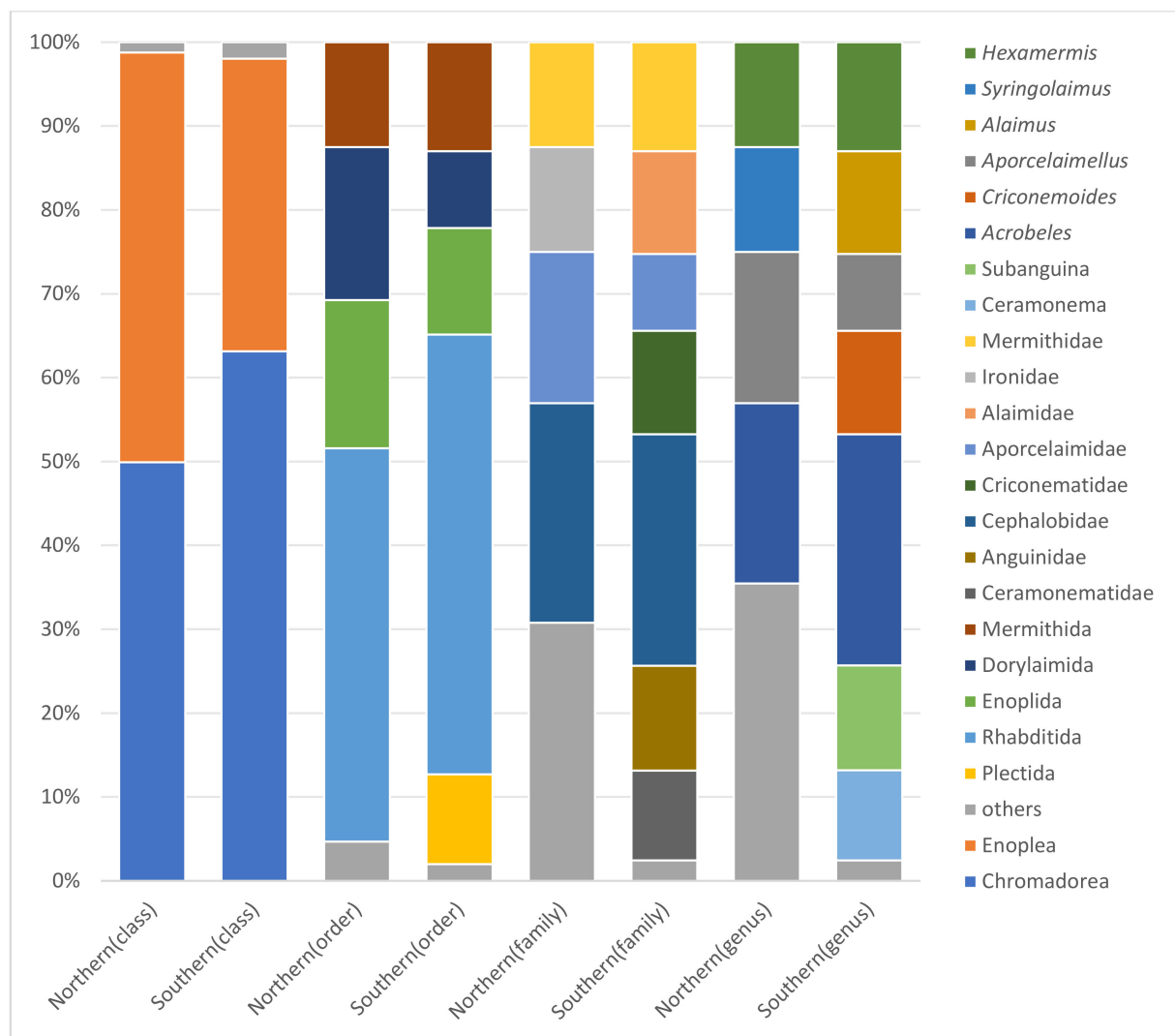


Figure 4. Relative abundance of nematode among two regions in the South China Sea: class, order, family, genus level).

3.4. Community Structure and Differential Groups

To explore the similarities and differences in nematode communities between different regions, Beta diversity was assessed using various similarity matrices based on the abundance–Jaccard algorithm. Principal Component Analysis (PCA) revealed (Figure 5A) that the stations were not significantly dispersed, indicating that the nematode community structure was relatively consistent across stations. Notably, MB and GQ, as well as MJ2 and QLY2, were closer together, suggesting a higher degree of similarity in nematode community structure between these pairs of stations. Additionally, some overlapping areas in the elliptical confidence zones of the two regions indicate that the nematode community structures of certain stations in the northern and southern regions share similarities. Furthermore, the UPGMA clustering tree and abundance histogram at the family level (Figure 5B) showed no distinct clustering between the two regions, reinforcing the observation that there are no significant differences in nematode community structure between the northern and southern regions.

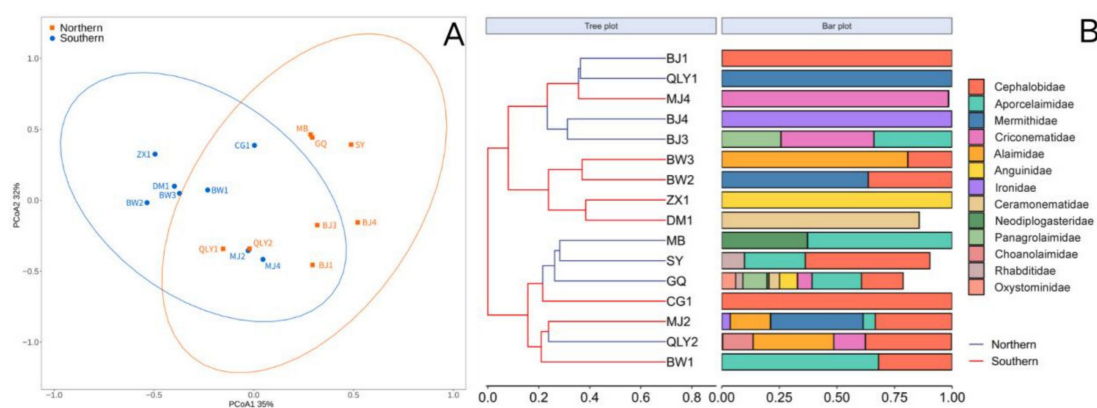


Figure 5. Similarity analysis among two regions of nematode community structure in the South China Sea: (A) PCA analysis; (B) hierarchical cluster analysis.

The LEfSe-based analysis (Figure 6) revealed more categories of significantly different impacts in the northern region compared to the southern region. In the northern region, the significant taxa include Diplogasteridae, Oxystominidae and Haliplectidae at the family level and *Pristionchus*, *Pseudodiplogasteroides* and *Haliplectus* at the genus level. In the southern region, the significant taxa are Mermithida at the order level, Mermithidae at the family level and *Hexamermis* at the genus level.

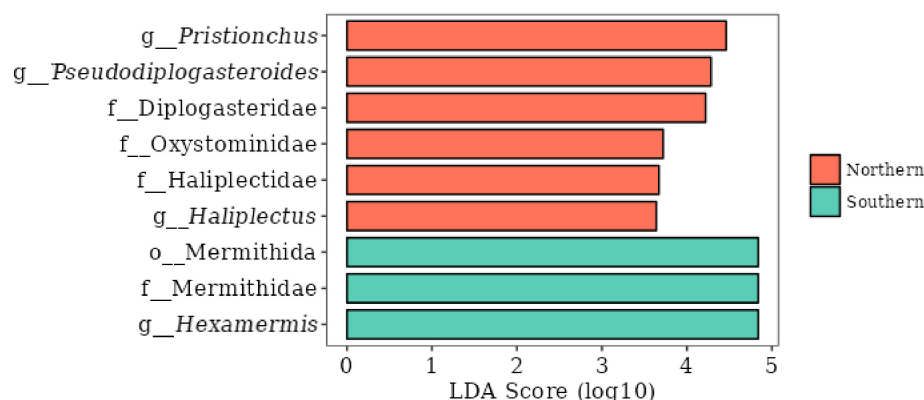


Figure 6. LDA distribution histogram based on LEfSe analysis.

3.5. Effects of Environmental Factors on Community Structure

Detrended Correspondence Analysis (DCA) was performed on the nematode abundance matrix of South China Sea coral reefs. The results showed that the axis lengths of the gradient were less than 3.0, prompting the selection of Redundancy Analysis (RDA) to explore the relationship between environmental factors and nematode community structure. The environmental factors considered included conventional indices (latitude (LAT), total nitrogen (TN), total phosphorus (TP)) and heavy metal indicators (copper (Cu), zinc (Zn), cadmium (Cd), lead (Pb), arsenic (As)). Nematodes were analysed at the genus level. The RDA results (Figure 7) indicated that the first two ordination axes contributed 31.48% and 24.3% of the explanatory power for the nematode community structure. There was no obvious clustering of stations in the northern and southern regions, suggesting that environmental factors did not significantly affect the nematode communities in these regions. Specific influences of environmental factors were observed as follows: Latitude has a greater effect on BJ3 at the station; TN has a greater effect on MB at the station and on *Aporcelaimellus*, *Pristionchus*, *Halicephalobus* at the community structure; TP has a greater effect on BJ1 and CG1 at the station and on *Acrobeles* at the community structure; Cu and Pb have a greater effect on GQ and MJ4 at the station; Cd has a greater effect on *Criconeimoides*

at the community structure; and As has a greater effect on BW2 and DM1 at the station and on *Ceramonema* at the community structure.

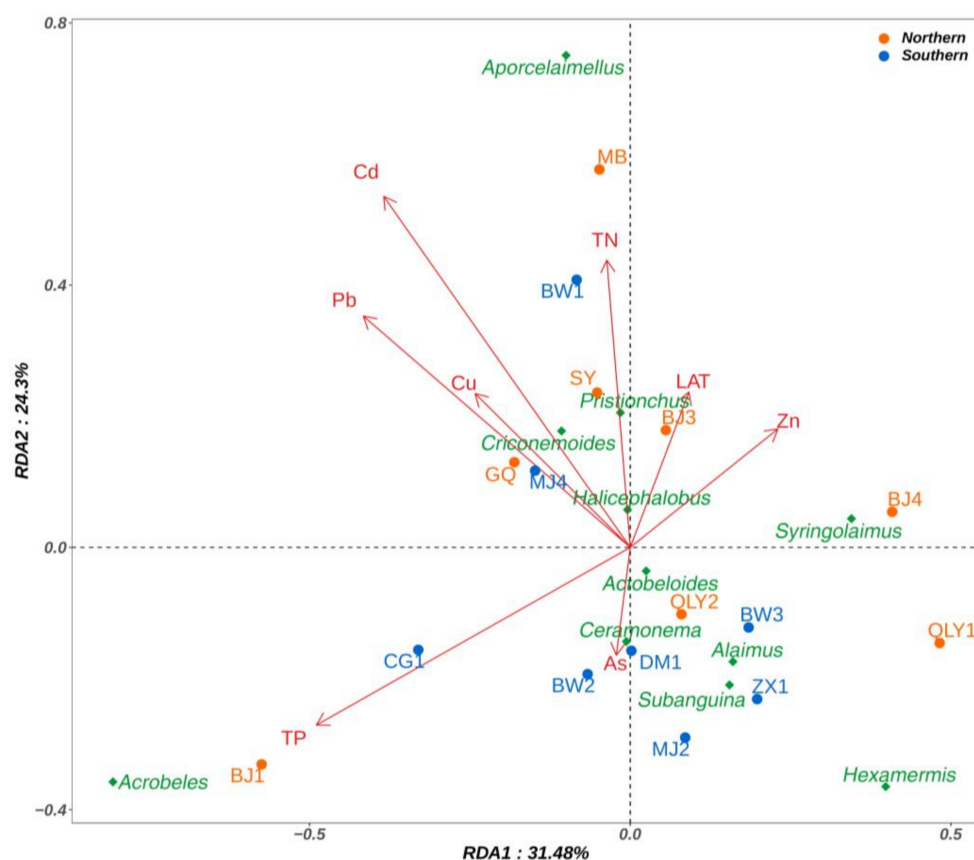


Figure 7. The distribution diagram on RDA between nematode structure and environmental factors. Red lines represent different environmental factors, green dots represent different genera of nematodes, orange dots represent stations in the northern region, and blue dots represent stations in the southern region.

4. Discussion

4.1. Nematode Biodiversity in the South China Sea Coral Reefs

In this study, we monitored the nematode biodiversity of coral reef sediments in the South China Sea using eDNA metabarcoding sequencing. A total of 503 OTUs were detected in 16 sediment samples, with the dominant groups being Enoplea and Chromadorea, accounting for 97.26% of the total abundance. Similar findings have been reported in other coral reef ecosystems. For instance, a study on the morphological identification of 2010 nematodes from the Maldives coral reefs revealed that all 173 identified genera belonged to Enoplea and Chromadorea [18]. In comparison, this study identified more than 30 families across the two coral reef regions, with seven families being common to both regions. However, only 61 genera were identified at the genus level, indicating a significant gap compared to the Maldives coral reef region. This discrepancy may be attributed to the lower resolution at the genus level, resulting in some unidentified genera. Nematodes also dominate meiofauna in extreme marine environments such as cold seeps [19], hydrothermal vents [20] and hypersaline environments [21]. Additionally, some unidentified taxa were observed in this study, potentially due to the presence of new species, an incomplete reference database, degradation of DNA fragments, or varying amplification efficiencies of primers. With continuous improvements in reference databases and advancements in science and technology, it is expected that these unidentified OTUs will be more accurately identified and classified in the future.

4.2. Community Variation and LEfSe Analyses

In this study, the investigation region was divided into northern and southern sections based on spatial latitude. The nematode community structure in different coral reef regions of the South China Sea was explored using eDNA metabarcoding sequencing technology. LEfSe analysis is known for revealing significant differences among multiple groups [22]. A previous study utilising LEfSe showed that nematodes were more readily detected in sediment eDNA, whereas echinoderms were more readily detected in water eDNA [23]. Although no significant difference in the overall nematode community structure between the northern and southern regions was observed in this study, LEfSe analysis still highlighted some taxa with specific distributions. In the northern region, the families Diplogasteridae, Oxystominidae and Haliplectidae were detected, with percentages of 0.41%, 0.3% and 0.3%, respectively. These families were not detected in the southern region, indicating a subtle but noteworthy difference that underscores the sensitivity of LEfSe analysis. In the southern region, Mermithida was identified as a significant group, comprising 12.98% of the total nematode population. In the northern region, Mermithida accounted for approximately 12.5%, a similar percentage. However, this similarity may be attributed to the uneven distribution of nematodes, primarily observed at station QLY1, which represented over 99.9% of the Mermithida detected in the northern region.

4.3. Environmental Factors and Community Structure

The nematode community structure in different regions may be influenced by the concentration of various elements, such as nitrogen and phosphorus, which are major nutrient elements in the water. Appropriate amounts of nitrogen and phosphorus can provide the nutrients required by meiofauna to promote their growth and reproduction. However, when the concentrations of these elements are too high, they may produce negative effects, such as eutrophication and hypoxia [24]. Additionally, high concentrations of certain metal elements can have toxic effects on meiofauna, affecting their survival and reproduction and potentially leading to death [25]. The present study showed that nutrient elements and heavy metal elements did not have a significant effect on the overall community structure of nematodes. Specific environmental factors impacted individual nematode types but did not significantly affect other species, thus masking the effect on the overall community structure. Although the two regions are geographically distant from each other, latitude did not have a significant impact on the nematode community structure. This lack of effect may be attributed to the shallow sampling depth and the strong ecological adaptability of nematodes in the tropical region, allowing them to maintain a relatively stable community structure. In addition to the aforementioned environmental factors, other factors such as temperature, salinity and pH may also affect nematode community structure, though these were beyond the scope of this research.

4.4. Nematode Biodiversity Assessment Methods

Nematodes are the most abundant taxa of benthic meiofauna and can be found in various ecosystems, ranging from shallow waters to the deep sea. The species composition of nematodes not only offers valuable insights into the ecosystems they inhabit but also serves as a widely recognised bioindicator [26]. Despite two centuries of research, the number of marine nematode species identified through morphological methods is about 6900, representing only 19% of the estimated total number of species [27]. Nematode identification primarily relies on morphological features, but this approach is often biased due to the time-consuming nature of the process, the high phenotypic plasticity of nematodes and the scarcity of distinct taxonomic features [28,29]. In contrast, combining morphological observation with molecular biology techniques provides a new approach to assessing nematode biodiversity [30]. Molecular biology techniques can be effectively used for large-scale assessment of nematode biodiversity across various ecosystems. This not only improves the efficiency of identification but also enables the detection of species that are difficult to observe [31]. Additionally, it helps resolve the problem of identifying cryptic

species [26]. In this context, eDNA metabarcoding sequencing technology emerges as a promising approach. The use of eDNA technology in environmental monitoring is rapidly expanding, with applications in fisheries, coral reefs, harmful algal blooms, invasive and endangered species, and biodiversity monitoring [32]. By detecting species across space and time, eDNA fulfils the basic needs of environmental surveys. The accuracy of eDNA is largely determined by the selected marker genes, the suitability of primers, amplification conditions and reference databases [33]. For free-living marine nematodes, COI genes have proven relatively difficult to amplify due to rampant gene rearrangements and frequent recombination in the mitochondrial genome [26]. Therefore, the 18S rRNA gene, which has a higher success rate, was selected as the marker gene to assess the diversity of coral reef nematodes in the South China Sea, focusing primarily on elucidating nematode biodiversity from different habitats. Notably, although molecular tools have been applied to the identification and description of nematode species in recent years, the rate of new species descriptions has not increased exponentially as initially expected. Indeed, the benefits of molecular taxonomy are often incomplete, lacking the final step of formal species description, which requires traditional morphological methods and the expertise of experienced nematologists. Therefore, eDNA metabarcoding sequencing technology needs to be combined with traditional morphological methods to build a comprehensive biomonitoring system.

5. Conclusions

In this study, the nematode biodiversity and community structure of coral reef sediments in the South China Sea were analysed by eDNA metabarcoding technology, which not only realised the non-invasive monitoring of coral reef nematode communities but also better assessed the health of coral reef ecosystems and identified and prevented possible ecological risks and ecological crises in a timely manner. In summary, the dominant groups of nematodes in coral reef sediments in the South China Sea are Enoplea and Chromadorea. Alpha diversity analysis shows that the northern region has higher nematode abundance and homogeneity than the southern area; Beta diversity analysis shows that there is no significant difference in the structure of the nematode communities in the northern region and the southern region and that the dominant groups are more or less the same. The analysis of variance showed that the significant taxa in the northern region were Diplogasteridae, Oxystominidae, Haliplectidae, *Pristionchus*, *Pseudodiplogasteroides* and *Haliplectus*, and in the southern region, they were Mermithida, Mermithidae and *Hexamermis*. Correlation analysis showed that environmental factors had little effect on the overall nematode community structure and only affected individual stations or single nematode species.

Author Contributions: Conceptualisation, X.R. and Z.S.; sampling, L.A. and A.W.; experiment, L.A.; data curation, L.A.; visualisation, L.A. and Z.Z.; writing—original draft, L.A.; writing—review and editing, X.R. and Z.S. All authors have read and agreed to the published version of the manuscript.

Funding: This work was supported by the National Key Research and Development Program of China: grant number 2022YFC3102402; the Ministry of Science and Technology of China, grant number 2021YFF0502801.

Institutional Review Board Statement: Not applicable.

Data Availability Statement: Illumina data for 16 sediment samples have been saved in NCBI, BioProject: PRJNA1101407.

Acknowledgments: We are grateful to the academic editor and reviewers for their valuable comments.

Conflicts of Interest: The authors declare no conflicts of interest.

Appendix A

Table A1. OTU table.

OTU ID	Northern	Southern	Taxonomy
OTU_1	140,292	98,991	d__Eukaryota; p__Nematoda; c__Enoplea; o__Mermithida; f__Mermithidae; g__Hexamermis; s__Hexamermis albicans
OTU_10	4	45,647	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_100	0	38	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_1002	0	13	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Microlaimida; f__Monoposthiidae; g__Monoposthia; s__Monoposthia sp. S226-16
OTU_1004	0	2	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Anguinidae; g__Subanguina; s__Subanguina radicola
OTU_101	0	14	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Chromadorida; f__Choanolaimidae; g__Choanolaimus; s__Choanolaimus psammophilus
OTU_102	30	3	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_103	23	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Neodiplogasteridae; g__Fictor; s__Fictor levidentus
OTU_104	0	91	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_105	0	20	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_106	0	36	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_107	0	18	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_108	0	8	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_109	0	25	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_11	30,844	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_110	7	10	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Onchocercidae; g__Litomosoides; s__Litomosoides sigmodontis
OTU_111	53	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Plectida; f__Haliplectidae; g__Haliplectus; s__Haliplectus sp. JH-2004
OTU_112	0	20	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Microlaimida; f__Monoposthiidae; g__Monoposthia; s__Monoposthia sp. 1266
OTU_113	0	13	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_114	0	64	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_115	0	4	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_116	0	11	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004

Table A1. Cont.

OTU ID	Northern	Southern	Taxonomy
OTU_117	0	3	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_118	3	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_119	31	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_12	36,064	1	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Neodiplogasteridae; g__Pristionchus; s__Pristionchus elegans
OTU_120	8	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_121	0	6	d__Eukaryota; p__Nematoda; c__Enoplea; o__Mermithida; f__Mermithidae; g__Hexameris; s__Hexameris albicans
OTU_122	0	5	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_123	0	8	d__Eukaryota; p__Nematoda; c__Enoplea; o__Mermithida; f__Mermithidae; g__Hexameris; s__Hexameris albicans
OTU_124	0	11	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Enoplidae; g__Enoplus; s__Enoplus sp. PPA7
OTU_125	0	11	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_127	3	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Oxyuridae; g__Wellcomia; s__Wellcomia sp. SAN-2007
OTU_128	4	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Heteroderidae; g__Globodera; s__Globodera pallida
OTU_129	17	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Alaimidae; g__Alaimus; s__Alaimus sp. 1247
OTU_13	34,698	7	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_130	3	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_131	6	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_132	22	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_133	0	92	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_134	0	4	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_135	0	4	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_136	0	3	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_137	0	4	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Microlaimida; f__Monoposthiidae; g__Monoposthia; s__Monoposthia sp. 1266
OTU_138	0	4	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004

Table A1. Cont.

OTU ID	Northern	Southern	Taxonomy
OTU_139	0	2	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_14	4	32,009	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_140	0	11	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Criconematidae; g__Criconemoides; s__Criconemoides myungsugae
OTU_141	0	2	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_142	0	5	d__Eukaryota; p__Nematoda; c__Enoplea; o__Triplonchida; f__Trichodoridae; g__Paratrichodorus; s__Paratrichodorus anemones
OTU_143	7	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_144	125	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_145	2	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Camallanidae; g__Paracamallanus; s__Paracamallanus cyathopharynx
OTU_146	6	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_147	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_148	3	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Plectida; f__Tarvaidae; g__Tarvaia; s__Tarvaia pacifica
OTU_149	5	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_15	26,317	9	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Panagrolaimidae; g__Halicephalobus; s__Halicephalobus sp. FTL-1A-7
OTU_150	3	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_151	3	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Rhabditidae; g__Oscheius; s__Oscheius onirici
OTU_152	6	1	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_153	3	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_154	0	34	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_155	0	7	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Rhabditidae; g__Rhabditoides; s__Rhabditoides inermiformis
OTU_156	0	6	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Criconematidae; g__Criconemoides; s__Criconemoides myungsugae
OTU_157	0	5	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_158	0	6	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Criconematidae; g__Discocriconemella; s__Discocriconemella limitanea
OTU_159	0	2	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Aphelenchoididae; g__Aphelenchoides; s__Aphelenchoides sp. 18Asp

Table A1. Cont.

OTU ID	Northern	Southern	Taxonomy
OTU_16	5	34,951	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_160	0	3	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_161	0	10	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Alaimidae; g__Alaimus; s__Alaimus sp. 1247
OTU_162	0	2	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Chromadorida; f__Choanolaimidae; g__Choanolaimus; s__Choanolaimus psammophilus
OTU_163	0	11	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_164	0	24	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_165	0	2	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_166	16	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Isolaimida; f__Isolaimiidae; g__Isolaimium; s__Isolaimium sp. 9 Mile 3-17 BB-01 A
OTU_167	5	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Plectida; f__Haliplectidae; g__Haliplectus; s__Haliplectus sp. ITDL-2011
OTU_168	9	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. 257AcrI1
OTU_169	5	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Longidoridae; g__Xiphinema; s__Xiphinema parapachydermum
OTU_17	18,050	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_170	4	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Rhabditidae; g__Pelodera; s__Pelodera teres
OTU_171	10	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_174	2	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Plectida; f__Haliplectidae; g__Haliplectus; s__Haliplectus sp. ITDL-2011
OTU_18	21,039	2	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_180	3	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_181	5	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_182	1	1	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_187	1	1	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Alaimidae; g__Paramphidelus; s__Paramphidelus sp. JH-2004
OTU_19	23,364	21	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeloides; s__Acrobeloides sp. MCt34
OTU_192	3	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Plectida; f__Haliplectidae; g__Haliplectus; s__Haliplectus sp. JH-2004
OTU_194	6	2	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Criconematidae; g__Criconemoides; s__Criconemoides myungsugae
OTU_199	2	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Onchocercidae; g__Litomosoides; s__Litomosoides sigmodontis

Table A1. Cont.

OTU ID	Northern	Southern	Taxonomy
OTU_2	131,508	190	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_201	5	1	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Plectida; f__Haliplectidae; g__Haliplectus; s__Haliplectus sp. JH-2004
OTU_203	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_205	5	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Criconematidae; g__Criconemoides; s__Criconemoides myungsugae
OTU_206	2	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Plectida; f__Haliplectidae; g__Haliplectus; s__Haliplectus sp. JH-2004
OTU_207	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_21	17	15,824	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_214	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_22	3	19,097	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_220	2	7	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Criconematidae; g__Criconemoides; s__Criconemoides myungsugae
OTU_227	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Ironidae; g__Syringolaimus; s__Syringolaimus sp. 1060
OTU_228	4	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Ironidae; g__Syringolaimus; s__Syringolaimus sp. 1060
OTU_229	10	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Ironidae; g__Syringolaimus; s__Syringolaimus sp. 1060
OTU_23	0	13,349	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_232	6	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Ironidae; g__Syringolaimus; s__Syringolaimus sp. 1060
OTU_234	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Ironidae; g__Syringolaimus; s__Syringolaimus sp. 1060
OTU_236	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Ironidae; g__Syringolaimus; s__Syringolaimus sp. 1060
OTU_237	4	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Ironidae; g__Syringolaimus; s__Syringolaimus sp. 1060
OTU_238	6	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Ironidae; g__Syringolaimus; s__Syringolaimus sp. 1060
OTU_24	21,894	22	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Alaimidae; g__Alaimus; s__Alaimus sp. 1247
OTU_240	3	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Ironidae; g__Syringolaimus; s__Syringolaimus sp. 1060
OTU_244	3	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Ironidae; g__Syringolaimus; s__Syringolaimus sp. 1060
OTU_249	9	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Ironidae; g__Syringolaimus; s__Syringolaimus sp. 1060

Table A1. Cont.

OTU ID	Northern	Southern	Taxonomy
OTU_25	12,954	6	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_252	3	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Ironidae; g__Syringolaimus; s__Syringolaimus sp. 1060
OTU_257	0	11	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_258	0	19	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_259	0	10	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_26	0	13,332	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_260	0	2	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_261	0	2	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_262	0	2	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_263	0	4	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Microlaimida; f__Monoposthiidae; g__Monoposthia; s__Monoposthia sp. 1266
OTU_264	0	7	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Microlaimida; f__Monoposthiidae; g__Monoposthia; s__Monoposthia sp. 1266
OTU_265	0	2	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Rhabditidae; g__Poikilolaimus; s__Poikilolaimus regenfussi
OTU_266	0	3	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_267	0	4	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_268	0	2	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_27	12,103	3	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_270	0	17	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_271	0	2	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_272	0	7	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_273	0	6	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_274	0	2	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_275	0	2	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_276	0	3	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004

Table A1. Cont.

OTU ID	Northern	Southern	Taxonomy
OTU_28	11,286	2	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Rhabditidae; g__Oscheius; s__Oscheius onirici
OTU_280	0	2	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_282	0	14	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_283	0	7	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_286	0	3	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_287	0	2	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_290	0	2	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_291	0	3	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Microlaimida; f__Monoposthiidae; g__Monoposthia; s__Monoposthia sp. 1266
OTU_292	0	3	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_294	0	3	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Microlaimida; f__Monoposthiidae; g__Monoposthia; s__Monoposthia sp. 1266
OTU_295	0	4	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_296	0	6	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_298	0	2	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_3	50,100	104,476	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Criconematidae; g__Criconemoides; s__Criconemoides myungsugae
OTU_30	5251	3	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Panagrolaimidae; g__Halicephalobus; s__Halicephalobus sp. FTL-1A-7
OTU_300	0	2	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_301	0	4	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_302	0	2	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_303	0	4	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_31	5522	1	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Anguinidae; g__Subanguina; s__Subanguina radicola
OTU_311	0	7	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_313	0	2	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_314	0	5	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004

Table A1. Cont.

OTU ID	Northern	Southern	Taxonomy
OTU_315	0	2	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_320	0	4	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_325	0	5	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_328	0	2	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_33	3663	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Oxystominidae; g__Oxystomina; s__Oxystomina sp. BCA35
OTU_334	0	2	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_336	0	4	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_34	2282	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Panagrolaimidae; g__Halicephalobus; s__Halicephalobus sp. FTL-1A-7
OTU_343	0	6	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_347	0	3	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_348	0	2	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_349	0	2	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_35	2699	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Onchocercidae; g__Ochoterenella; s__Ochoterenella sp. 2 EL-2015
OTU_350	1	10	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_351	0	3	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Rhabditidae; g__Pellioiditis; s__Pellioiditis sp. GSt17
OTU_352	0	2	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_353	0	2	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_357	0	5	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Microlaimida; f__Monoposthiidae; g__Monoposthia; s__Monoposthia sp. 1266
OTU_361	0	2	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_364	0	5	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_369	0	2	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_37	2341	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Diplogasteridae; g__Pseudodiplogasteroides; s__Pseudodiplogasteroides sp. NK-2010
OTU_371	0	5	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004

Table A1. Cont.

OTU ID	Northern	Southern	Taxonomy
OTU_374	0	4	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_376	0	4	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_377	0	5	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_38	2319	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Desmodorida; f__Desmodoridae; g__Spirinia; s__Spirinia sp. S212-4
OTU_381	0	2	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_39	8318	23	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Chromadorida; f__Choanolaimidae; g__Choanolaimus; s__Choanolaimus psammophilus
OTU_393	0	3	d__Eukaryota; p__Nematoda; c__Enoplea; o__Mermithida; f__Mermithidae; g__Hexameris; s__Hexameris albicans
OTU_395	0	2	d__Eukaryota; p__Nematoda; c__Enoplea; o__Mermithida; f__Mermithidae; g__Hexameris; s__Hexameris albicans
OTU_396	1	2	d__Eukaryota; p__Nematoda; c__Enoplea; o__Mermithida; f__Mermithidae; g__Hexameris; s__Hexameris albicans
OTU_4	80	106,365	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Anguinidae; g__Subanguina; s__Subanguina radiculicola
OTU_400	0	2	d__Eukaryota; p__Nematoda; c__Enoplea; o__Mermithida; f__Mermithidae; g__Hexameris; s__Hexameris albicans
OTU_408	0	3	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Alaimidae; g__Alaimus; s__Alaimus sp. 1247
OTU_41	3532	1	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_411	0	4	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Alaimidae; g__Alaimus; s__Alaimus sp. 1247
OTU_412	0	7	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Alaimidae; g__Alaimus; s__Alaimus sp. 1247
OTU_418	0	3	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Alaimidae; g__Alaimus; s__Alaimus sp. 1247
OTU_42	1	1721	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Ironidae; g__Syringolaimus; s__Syringolaimus sp. 1060
OTU_422	0	6	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_423	0	4	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_424	0	2	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_426	0	33	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_427	2	1	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_429	0	2	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Neotylenchidae; g__Ficotylus; s__Ficotylus congestae

Table A1. Cont.

OTU ID	Northern	Southern	Taxonomy
OTU_43	3797	1	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Criconeematidae; g__Criconemoides; s__Criconemoides myungsugae
OTU_431	0	6	d__Eukaryota; p__Nematoda; c__Enoplea; o__Triplonchida; f__Trichodoridae; g__Paratrichodorus; s__Paratrichodorus sp. IMD0102
OTU_432	0	9	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_434	0	11	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_435	0	3	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_436	0	2	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_438	0	4	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_439	0	2	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_44	1907	1	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Plectida; f__Ceramoneematidae; g__Ceramoneema; s__Ceramoneema altogolfi
OTU_440	0	4	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_441	0	3	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_443	0	2	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_444	0	5	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_445	0	7	d__Eukaryota; p__Nematoda; c__Enoplea; o__Triplonchida; f__Trichodoridae; g__Paratrichodorus; s__Paratrichodorus sp. IMD0102
OTU_446	0	2	d__Eukaryota; p__Nematoda; c__Enoplea; o__Triplonchida; f__Trichodoridae; g__Paratrichodorus; s__Paratrichodorus sp. IMD0102
OTU_45	1582	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Rhabditidae; g__Poikilolaimus; s__Poikilolaimus oxycercus
OTU_450	0	3	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_452	0	2	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_459	0	2	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Plectida; f__Ceramoneematidae; g__Ceramoneema; s__Ceramoneema altogolfi
OTU_46	2004	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_463	0	2	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Microlaimida; f__Microlaimidae; g__Prodesmodora; s__Prodesmodora circulata
OTU_465	149	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_466	7	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Triplonchida; f__Bastianiidae; g__Bastiania; s__Bastiania gracilis

Table A1. Cont.

OTU ID	Northern	Southern	Taxonomy
OTU_467	15	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Alaimidae; g__Alaimus; s__Alaimus sp. GSt19
OTU_47	1234	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_472	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_475	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_476	10	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_477	5	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_48	1249	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Microlaimida; f__Monoposthiidae; g__Monoposthia; s__Monoposthia sp. 1266
OTU_480	4	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_482	46	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Alaimidae; g__Alaimus; s__Alaimus sp. GSt19
OTU_483	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_484	115	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_485	12	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_488	6	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_489	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Alaimidae; g__Alaimus; s__Alaimus sp. GSt19
OTU_49	1397	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Triplonchida; f__Bastianiidae; g__Bastiania; s__Bastiania gracilis
OTU_491	3	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_492	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_493	12	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_494	19	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Alaimidae; g__Alaimus; s__Alaimus sp. GSt19
OTU_497	5	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_499	4	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_5	17	80,502	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Plectida; f__Ceramomonematidae; g__Ceramomonema; s__Ceramomonema altogolfi
OTU_50	1098	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Triplonchida; f__Prismatolaimidae; g__Prismatolaimus; s__Prismatolaimus intermedius

Table A1. Cont.

OTU ID	Northern	Southern	Taxonomy
OTU_500	2	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_501	13	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_502	2	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_504	7	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_505	23	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_507	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_51	1118	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_510	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_511	6	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_513	3	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_516	2	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Microlaimida; f__Monoposthiidae; g__Monoposthia; s__Monoposthia sp. S226-16
OTU_517	6	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_52	916	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Oxyuridae; g__Wellcomia; s__Wellcomia sp. SAN-2007
OTU_520	16	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Alaimidae; g__Alaimus; s__Alaimus sp. GSt19
OTU_521	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_524	7	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_525	4	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_526	3	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_529	2	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_53	1080	1	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Leptonchidae; g__Leptonchus; s__Leptonchus granulatus
OTU_530	3	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_533	6	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_534	3	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Triplonchida; f__Bastianiidae; g__Bastiania; s__Bastiania gracilis

Table A1. Cont.

OTU ID	Northern	Southern	Taxonomy
OTU_535	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_536	4	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_538	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_539	3	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_54	1377	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Plectida; f__Ceramonomatidae; g__Ceramonomia; s__Ceramonomia altogolfi
OTU_543	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_545	2	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_546	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_548	3	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_55	900	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_550	2	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_553	2	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Criconematidae; g__Criconemoides; s__Criconemoides myungsugae
OTU_56	3	2153	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Alaimidae; g__Alaimus; s__Alaimus sp. 1247
OTU_560	5	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_561	3	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Alaimidae; g__Alaimus; s__Alaimus sp. GST19
OTU_564	3	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_566	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_568	3	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_57	916	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_570	6	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_571	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_577	4	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_58	986	1	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Plectida; f__Tarvaidae; g__Tarvaia; s__Tarvaia pacifica

Table A1. Cont.

OTU ID	Northern	Southern	Taxonomy
OTU_580	7	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_581	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_584	4	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_585	15	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_59	2124	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_590	2	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_593	3	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_6	117,431	16	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Ironidae; g__Syringolaimus; s__Syringolaimus sp. 1060
OTU_60	1025	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_600	4	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_602	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_603	16	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_605	6	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Alaimidae; g__Alaimus; s__Alaimus sp. GST19
OTU_606	2	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Anguinidae; g__Subanguina; s__Subanguina radiculicola
OTU_609	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_61	1071	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Aphelenchoididae; g__Aphelenchoides; s__Aphelenchoides blastophthorus
OTU_610	2	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_612	2	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_615	2	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Criconematidae; g__Criconemoides; s__Criconemoides myungsugae
OTU_617	14	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_62	698	2	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Criconematidae; g__Criconemoides; s__Criconemoides myungsugae
OTU_629	6	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_63	0	948	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004

Table A1. Cont.

OTU ID	Northern	Southern	Taxonomy
OTU_637	3	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_64	754	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_640	3	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_642	16	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_65	812	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_653	2	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Rhabditidae; g__Oscheius; s__Oscheius sp. 67_P20
OTU_654	3	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_656	5	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Alaimidae; g__Alaimus; s__Alaimus sp. GSt19
OTU_658	2	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_66	630	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Rhabditidae; g__Crustorhabditis; s__Crustorhabditis scanica
OTU_663	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_67	753	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_679	2	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Neodiplogasteridae; g__Pristionchus; s__Pristionchus elegans
OTU_68	625	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_680	14	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_681	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_684	2	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Desmodorida; f__Desmodoridae; g__Robbea; s__Robbea sp. 2 SB-2008
OTU_685	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_687	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_69	2267	6	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_690	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_691	18	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_693	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004

Table A1. Cont.

OTU ID	Northern	Southern	Taxonomy
OTU_694	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_695	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_696	4	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_697	3	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_698	4	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_699	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_7	16	62,342	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Alaimidae; g__Alaimus; s__Alaimus sp. 1247
OTU_70	501	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_701	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_702	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_705	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_707	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_71	0	1121	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_714	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_716	0	2	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Microlaimida; f__Monoposthiidae; g__Monoposthia; s__Monoposthia sp. 1266
OTU_717	0	5	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Plectida; f__Plectidae; g__Chronogaster; s__Chronogaster typica
OTU_718	0	11	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Alaimidae; g__Alaimus; s__Alaimus sp. 1247
OTU_72	515	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_720	0	2	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_722	0	4	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_723	0	2	d__Eukaryota; p__Nematoda; c__Enoplea; o__Mermithida; f__Mermithidae; g__Hexamermis; s__Hexamermis albicans
OTU_724	0	8	d__Eukaryota; p__Nematoda; c__Enoplea; o__Mermithida; f__Mermithidae; g__Hexamermis; s__Hexamermis albicans
OTU_726	0	4	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Alaimidae; g__Alaimus; s__Alaimus sp. GSt19

Table A1. Cont.

OTU ID	Northern	Southern	Taxonomy
OTU_728	0	9	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_729	0	2	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_73	1	599	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_730	0	6	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_731	0	7	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Chromadorida; f__Choanolaimidae; g__Choanolaimus; s__Choanolaimus psammophilus
OTU_732	0	4	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Onchocercidae; g__Litomosoides; s__Litomosoides sigmodontis
OTU_733	0	8	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Anticomidae; g__Anticoma; s__Anticoma sp. TCR197
OTU_734	0	4	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Alaimidae; g__Alaimus; s__Alaimus sp. 1247
OTU_735	0	3	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Odontopharyngidae; g__Odontopharynx; s__Odontopharynx longicaudata
OTU_736	0	2	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_738	0	2	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Chromadorida; f__Choanolaimidae; g__Choanolaimus; s__Choanolaimus psammophilus
OTU_74	586	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Neodiplogasteridae; g__Fictor; s__Fictor levidentus
OTU_741	0	5	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Microlaimida; f__Microlaimidae; g__Prodesmodora; s__Prodesmodora sp. 1338
OTU_742	0	10	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Alaimidae; g__Alaimus; s__Alaimus sp. 1247
OTU_746	0	2	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_747	0	2	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_749	0	3	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Alaimidae; g__Alaimus; s__Alaimus sp. 1247
OTU_75	302	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_751	0	3	d__Eukaryota; p__Nematoda; c__Enoplea; o__Mermithida; f__Mermithidae; g__Hexamermis; s__Hexamermis albicans
OTU_753	0	2	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Alaimidae; g__Alaimus; s__Alaimus sp. 1247
OTU_754	0	10	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_756	7	1	d__Eukaryota; p__Nematoda; c__Enoplea; o__Mermithida; f__Mermithidae; g__Hexamermis; s__Hexamermis albicans
OTU_758	0	6	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012

Table A1. Cont.

OTU ID	Northern	Southern	Taxonomy
OTU_76	413	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_761	0	4	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Alaimidae; g__Alaimus; s__Alaimus sp. 1247
OTU_763	0	8	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_764	0	4	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Alaimidae; g__Alaimus; s__Alaimus sp. 1247
OTU_766	0	2	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Criconematidae; g__Criconemoides; s__Criconemoides myungsugae
OTU_767	0	3	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Neodiplogasteridae; g__Fictor; s__Fictor stercorarius
OTU_768	0	4	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_769	0	2	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_77	421	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_770	0	2	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Alaimidae; g__Alaimus; s__Alaimus sp. 1247
OTU_771	0	2	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_774	0	2	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_78	367	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Oxystominidae; g__Oxystomina; s__Oxystomina sp. BCA35
OTU_780	0	3	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_781	0	2	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Enoplidae; g__Enoplus; s__Enoplus sp. PPA7
OTU_784	0	4	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Chromadorida; f__Choanolaimidae; g__Choanolaimus; s__Choanolaimus psammophilus
OTU_79	352	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_793	0	2	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Plectida; f__Plectidae; g__Chronogaster; s__Chronogaster typica
OTU_794	0	4	d__Eukaryota; p__Nematoda; c__Enoplea; o__Mermithida; f__Mermithidae; g__Hexamermis; s__Hexamermis albicans
OTU_798	0	7	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_799	0	2	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_8	1330	55,664	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_80	329	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Oxystominidae; g__Litinium; s__Litinium sp. TCR205

Table A1. Cont.

OTU ID	Northern	Southern	Taxonomy
OTU_800	0	2	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_801	0	2	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Criconematidae; g__Criconemoides; s__Criconemoides myungsugae
OTU_803	1	1	d__Eukaryota; p__Nematoda; c__Enoplea; o__Mermithida; f__Mermithidae; g__Hexameris; s__Hexameris albicans
OTU_808	0	3	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_81	366	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_811	0	2	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_813	0	2	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_817	0	4	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Alaimidae; g__Alaimus; s__Alaimus sp. 1247
OTU_82	199	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_824	0	2	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_827	0	2	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_834	0	2	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Criconematidae; g__Criconemoides; s__Criconemoides myungsugae
OTU_838	0	4	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Thoracostomopsidae; g__Epacanthion; s__Epacanthion sp. AS571
OTU_84	489	129	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_846	3	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Mermithida; f__Mermithidae; g__Hexameris; s__Hexameris albicans
OTU_849	4	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Mermithida; f__Mermithidae; g__Hexameris; s__Hexameris albicans
OTU_85	744	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_852	3	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Mermithida; f__Mermithidae; g__Hexameris; s__Hexameris albicans
OTU_86	157	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Tylenchulidae; g__Paratylenchus; s__Paratylenchus sp. N2508
OTU_862	5	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Alaimidae; g__Alaimus; s__Alaimus sp. 1247
OTU_863	10	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Alaimidae; g__Alaimus; s__Alaimus sp. 1247
OTU_865	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Oxystominidae; g__Litinium; s__Litinium sp. TCR205
OTU_866	30	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Alaimidae; g__Alaimus; s__Alaimus sp. 1247

Table A1. Cont.

OTU ID	Northern	Southern	Taxonomy
OTU_867	3	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Alaimidae; g__Alaimus; s__Alaimus sp. 1247
OTU_868	14	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Oxystominidae; g__Litinium; s__Litinium sp. TCR205
OTU_869	6	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeloides; s__Acrobeloides sp. MCT34
OTU_871	8	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_872	6	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Oxystominidae; g__Litinium; s__Litinium sp. TCR205
OTU_873	13	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Oxystominidae; g__Litinium; s__Litinium sp. TCR205
OTU_874	2	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeloides; s__Acrobeloides sp. MCT34
OTU_875	25	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Oxystominidae; g__Litinium; s__Litinium sp. TCR205
OTU_876	6	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Oxystominidae; g__Litinium; s__Litinium sp. TCR205
OTU_878	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Oxystominidae; g__Litinium; s__Litinium sp. TCR205
OTU_879	4	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Oxystominidae; g__Litinium; s__Litinium sp. TCR205
OTU_88	0	47	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeloides; s__Acrobeloides sp. MA-2012
OTU_881	6	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Alaimidae; g__Alaimus; s__Alaimus sp. 1247
OTU_882	2	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeloides; s__Acrobeloides sp. MCT34
OTU_883	10	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_884	8	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeloides; s__Acrobeloides sp. MCT34
OTU_885	8	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_887	4	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Diplogasteridae; g__Parasitodiplogaster; s__Parasitodiplogaster sp. RGD974S2
OTU_888	8	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Oxystominidae; g__Litinium; s__Litinium sp. TCR205
OTU_889	2	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeloides; s__Acrobeloides sp. MCT34
OTU_890	46	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Oxystominidae; g__Litinium; s__Litinium sp. TCR205
OTU_891	31	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Oxystominidae; g__Litinium; s__Litinium sp. TCR205
OTU_892	4	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Alaimidae; g__Alaimus; s__Alaimus sp. 1247

Table A1. Cont.

OTU ID	Northern	Southern	Taxonomy
OTU_895	22	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Oxystominidae; g__Litinium; s__Litinium sp. TCR205
OTU_896	17	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeloides; s__Acrobeloides sp. MCT34
OTU_898	4	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Alaimidae; g__Alaimus; s__Alaimus sp. 1247
OTU_899	4	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Alaimidae; g__Alaimus; s__Alaimus sp. 1247
OTU_9	60,605	4	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_90	0	47	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_900	5	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeloides; s__Acrobeloides sp. MCT34
OTU_903	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Alaimidae; g__Alaimus; s__Alaimus sp. 1247
OTU_904	8	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Alaimidae; g__Alaimus; s__Alaimus sp. 1247
OTU_905	9	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Oxystominidae; g__Litinium; s__Litinium sp. TCR205
OTU_908	8	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Oxystominidae; g__Litinium; s__Litinium sp. TCR205
OTU_909	2	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeloides; s__Acrobeloides sp. MCT34
OTU_91	54	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_912	5	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Oxystominidae; g__Litinium; s__Litinium sp. TCR205
OTU_913	7	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_914	2	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeloides; s__Acrobeloides sp. MCT34
OTU_916	2	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeloides; s__Acrobeloides sp. MCT34
OTU_917	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Oxystominidae; g__Litinium; s__Litinium sp. TCR205
OTU_918	5	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Oxystominidae; g__Litinium; s__Litinium sp. TCR205
OTU_919	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Oxystominidae; g__Litinium; s__Litinium sp. TCR205
OTU_92	21	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_923	46	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Oxystominidae; g__Litinium; s__Litinium sp. TCR205
OTU_927	4	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Oxystominidae; g__Litinium; s__Litinium sp. TCR205

Table A1. Cont.

OTU ID	Northern	Southern	Taxonomy
OTU_93	0	13	d__Eukaryota; p__Nematoda; c__Enoplea; o__Mermithida; f__Mermithidae; g__Hexameris; s__Hexameris albicans
OTU_932	4	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Alaimidae; g__Alaimus; s__Alaimus sp. 1247
OTU_935	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Oxystominidae; g__Litinium; s__Litinium sp. TCR205
OTU_94	20	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Rhabditidae; g__Protorhabditis; s__Protorhabditis sp. DF5055
OTU_942	4	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Enoplida; f__Alaimidae; g__Alaimus; s__Alaimus sp. 1247
OTU_95	0	118	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_955	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_959	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_96	2	10	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_960	2	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_968	2	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_97	14	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_970	2	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_972	2	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_974	7	0	d__Eukaryota; p__Nematoda; c__Chromadorea; o__Rhabditida; f__Cephalobidae; g__Acrobeles; s__Acrobeles sp. MA-2012
OTU_98	48	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_982	3	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_985	4	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_988	4	0	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004
OTU_99	163	1	d__Eukaryota; p__Nematoda; c__Enoplea; o__Dorylaimida; f__Aporcelaimidae; g__Aporcelaimellus; s__Aporcelaimellus sp. JH-2004

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