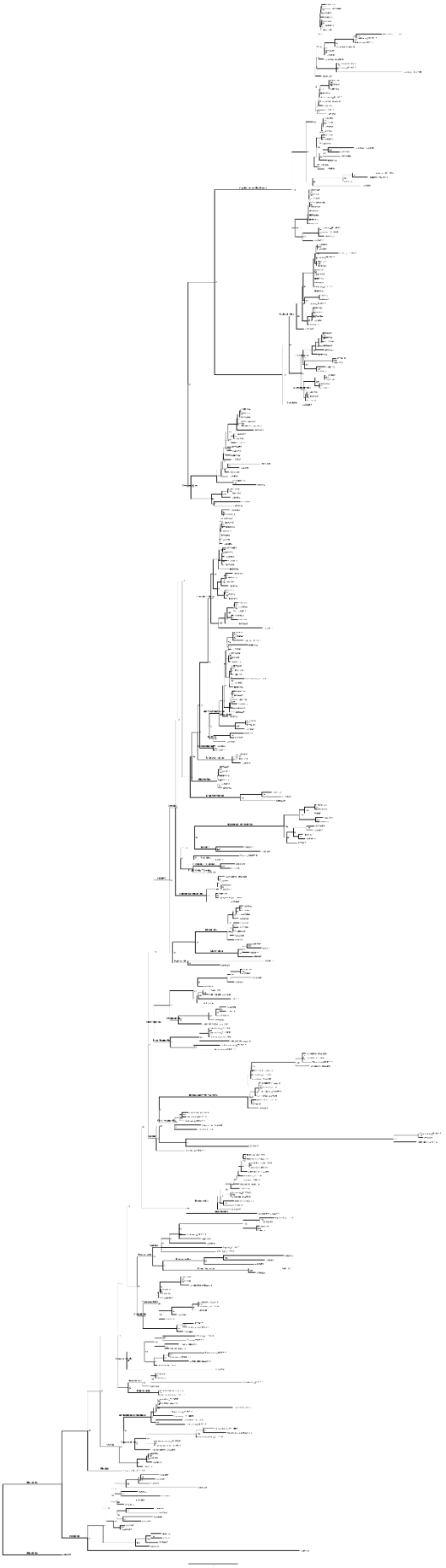
Species variability and connectivity in the deep sea: evaluating effects of spatial heterogeneity and hydrodynamic effects

Supplementary material for [L Lins], [2016], [Species variability and connectivity in the deep sea: evaluating effects of spatial heterogeneity and hydrodynamic effects]



Supplementary material for [L Lins], [2016], [Species variability and connectivity in the deep sea: evaluating effects of spatial heterogeneity and hydrodynamic effects]

Supplementary Figure 1: Partial-18S rDNA phylogeny of Nematoda: Chromadorea. The inferred relationships support a broad taxonomic representation of nematodes in samples from lower shelf and upper slope at the West-Iberian Margin and furthermore indicate neither geographic nor depth clustering between 'deep' and 'shallow' taxa at any level of the tree topology. Reconstruction of nematode 18S relationships was conducted using Maximum Likelihood. Bootstrap support values were generated using 1000 replicates and are presented as node support. The analyses were performed by means of Randomized Axelerated Maximum Likelihood (RAxML). Branch (line) width represents statistical support. Sequences retrieved from Genbank are represented by their Genbank Accession numbers. Orders and Families are annotated as branch labels.

PERMANOVA table of results
(2-factor design)

Source	df	SS	MS	Pseudo-F	P(perm)	Unique perms
Depth	1	105.29	105.29	18,037	**0.0027**	3014
Station(Depth)	8	45,042	56,302	28,113	**0.0001**	9929
Res	22	4,406	0.20027			
Total	31	155				

PAIR-WISE TESTS

Term 'Station(Depth)'

Within level 'DEEP' of factor 'Depth'

Groups	t	Unique perms	P(MC)
D1, D2	14,453	35	0.1836
D1, D3	0.21922	35	0.9692
D1, D4	11,404	35	0.2898
D2, D3	28,189	35	0.0062
D2, D4	0.74526	35	0.5423
D3, D4	17,462	35	0.0754

Within level 'SHALLOW' of factor 'Depth'

Groups	t	Unique perms	P(MC)

S1, S4	52,363	10	**0.005**
S1, S7	14,786	10	**0.0004**
S1, S2	59,548	10	**0.0019**
S1, S614	54,457	10	**0.0094**
S1, S613	10,274	10	**0.0004**
S4, S7	15,104	10	**0.0009**
S4, S2	72,374	10	**0.0008**
S4, S614	7.09	10	**0.0027**
S4, S613	12,505	10	**0.0002**
S7, S2	27,661	10	0.0586
S7, S614	41,579	3	**0.036**
S7, S613	61,604	10	**0.0049**
S2, S614	10,659	10	0.3696
S2, S613	0.80935	10	0.4851
S614, S613	0.81016	10	0.4904

Supplementary Table 1: Table of results from the multivariate PERMANOVA two-way nested design test and pairwise t-tests for sediment composition. Values in bold represent significant values.

PERMANOVA table of results
(2-factor design)

Source	df	SS	MS	Pseudo-F	P(perm)	Unique perms
Depth	1	28,266	28,266	290.31	**0.0038**	3009
Station(Depth)	8	0.75128	9.39E+01	13,912	0.2576	9951
Res	22	14,851	6.75E+02			
Total	31	31				

PAIR-WISE TESTS

Within level 'DEEP' of factor 'Depth'

Groups	t	Unique perms	P(MC)
D1, D2	0.87706	35	0.4193
D1, D3	21,165	35	0.0767
D1, D4	15,794	35	0.1669
D2, D3	12,268	35	0.28
D2, D4	0.4402	35	0.6771
D3, D4	0.94545	35	0.3727

Within level 'SHALLOW' of factor 'Depth'

Groups	t	Unique perms	P(MC)
S1, S4	11,198	10	**0.0006**
S1, S7	38,705	10	**0.0297**
S1, S2	11,958	10	0.2967
S1, S614	0.69613	10	0.5416
S1, S613	10,709	10	0.3462
S4, S7	12,439	10	**0.0016**
S4, S2	59,381	10	**0.0047**
S4, S614	36,069	10	**0.0393**
S4, S613	81,676	10	**0.0015**
S7, S2	12,966	10	0.2842
S7, S614	0.7778	3	0.5125
S7, S613	21,078	10	0.1247
S2, S614	4.62E+02	10	0.9641
S2, S613	0.2926	10	0.7909
S614, S613	0.13656	10	0.8965

Supplementary Table 2: Table of results from the multivariate PERMANOVA two-way nested design test and pairwise t-tests for Total Organic Matter (%). Values in bold represent significant values.

PERMANOVA table of results (2-factor design)

Source	df	SS	MS	Pseudo-F	P(perm)	Unique perms
Depth	1	26,291	26,291	117.4	**0.0044**	2982
Station(Depth)	8	1,728	0.216	2.1723	0	9948
Res	22	2.1876	9.94E+02			
Total	31	31				

PAIR-WISE TESTS

Term 'Station(Depth)'

Within level 'DEEP' of factor 'Depth'

Groups	t	Unique perms	P(MC)
D1, D2	6.24E+02	35	0.9543
D1, D3	14,616	35	0.1973
D1, D4	16,115	35	0.1581
D2, D3	14,857	35	0.1932

D2, D4	16,355	35	0.1534
D3, D4	0.52802	35	0.6108

Within level 'SHALLOW' of factor 'Depth'

Groups	t	Unique perms	P(MC)
S1, S4	43,932	10	**0.0127**
S1, S7	4.85E+02	10	0.9671
S1, S2	13,419	10	0.2507
S1, S614	2,617	10	0.0761
S1, S613	25,712	10	0.0639
S4, S7	21,765	10	0.1079
S4, S2	42,708	10	**0.0127**
S4, S614	20,996	10	0.1254
S4, S613	65,162	10	**0.0032**
S7, S2	0.85525	10	0.4589
S7, S614	0.97067	3	0.4387
S7, S613	13,943	10	0.2571
S2, S614	25,694	10	0.0814
S2, S613	0.49958	10	0.6447
S614, S613	47,643	10	**0.0171**

Supplementary Table 3: Table of results from the multivariate PERMANOVA two-way nested design test and pairwise t-tests for Total Organic Carbon (%). Values in bold represent significant values.

PERMANOVA table of results
(2-factor design)

Source	df	SS	MS	Pseudo-F	P(perm)	Unique perms
Depth	1	24,328	24,328	68.19	**0.0031**	2975
Station(Depth)	8	27,534	0.34417	1.7061	0.1482	9942
Res	22	4.4381	0.20173			
Total	31	31				

PAIR-WISE TESTS

Term 'Station(Depth)'

Within level 'DEEP' of factor 'Depth'

Groups	t	Unique perms	P(MC)
D1, D2	0.23752	35	0.8173
D1, D3	25,534	35	**0.0417**
D1, D4	0.91472	35	0.3884
D2, D3	11,073	35	0.3213

D2, D4	0.34137	35	0.7475
D3, D4	11,913	35	0.2853

Within level 'SHALLOW' of factor 'Depth'

Groups	t	Unique perms	P(MC)
S1, S4	69,773	10	**0.0027**
S1, S7	0.721	10	0.517
S1, S2	0.64104	10	0.5577
S1, S614	0.31006	10	0.7737
S1, S613	2,198	10	0.0896
S4, S7	59,241	10	**0.0097**
S4, S2	29,036	10	**0.0415**
S4, S614	24,086	10	0.0942
S4, S613	1.21	10	0.2871
S7, S2	0.91122	10	0.4207
S7, S614	0.53866	3	0.6433
S7, S613	20,931	10	0.1266
S2, S614	0.14015	10	0.9037
S2, S613	12,206	10	0.2896
S614, S613	10,775	10	0.356

Supplementary Table 4: Table of results from the multivariate PERMANOVA two-way nested design test and pairwise t-tests for Total Nitrogen (%). Values in bold represent significant values.

PERMANOVA table of results (2-factor design)

Source	df	SS	MS	Pseudo-F	P(perm)	Unique perms
Depth	1	13,669	13,669	1,149	0.3532	3010
Station(Depth)	8	93,176	11,647	12,613	0.246	9929
Res	22	20,316	0.92343			
Total	31	31				

PAIR-WISE TESTS

Term 'Station(Depth)'

Within level 'DEEP' of factor 'Depth'

Groups	t	Unique perms	P(MC)
D1, D2	10,171	15	0.3465
D1, D3	0.51803	4	0.6248
D1, D4	0.1894	8	0.8526
D2, D3	14,632	8	0.19
D2, D4	0.74632	15	0.4868
D3, D4	0.63864	4	0.542

Within level 'SHALLOW' of factor 'Depth'

Groups	t	Unique perms	P(MC)
S1, S4	11,913	2	0.2925
S1, S7	51,545	4	**0.0146**
S1, S2	1	1	0.3738
S1, S614	12,399	4	**0.0006**
S1, S613	36,177	4	**0.0248**
S4, S7	0.82471	10	0.4677
S4, S2	11,092	4	0.3355
S4, S614	0.77009	10	0.5019
S4, S613	0.74004	10	0.4872
S7, S2	0.45648	7	0.676
S7, S614	1,801	3	0.2177
S7, S613	19,838	10	0.1387
S2, S614	11,506	7	0.333
S2, S613	2.51	7	0.0646
S614, S613	15,554	10	0.2141

Supplementary Table 5: Table of results from the multivariate PERMANOVA two-way nested design test and pairwise t-tests for Chlorophyll a (µg/g). Values in bold represent significant values.

PERMANOVA table of results (2-factor design)

Source	df	SS	MS	Pseudo-F	P(perm)	Unique perms	P(MC)
Depth	1	80,288	80,288	33,462		72	0.1063
Station(Depth)	8	17,986	22,482	99,215	**0.0028**	9931	
Res	22	49,853	0.2266				
Total	31	31					

PAIR-WISE TESTS

Within level 'DEEP' of factor 'Depth'

Groups	t
D1, D2	Denominator is 0
D1, D3	Denominator is 0
D1, D4	Denominator is 0
D2, D3	Denominator is 0
D2, D4	Denominator is 0
D3, D4	Denominator is 0

Within level 'SHALLOW' of factor 'Depth'

Groups	t	Unique perms	P(MC)
S1, S4	3,064	10	**0.0351**
S1, S7	82,415	7	**0.0033**
S1, S2	0.56826	10	0.6091
S1, S614	82,415	7	**0.0031**
S1, S613	15,569	10	0.1936
S4, S7	2,905	7	0.0624
S4, S2	27,014	10	0.0544
S4, S614	2,905	7	0.0602
S4, S613	24,855	10	0.0661
S7, S2	1,935	7	0.149
S7, S614	Denominator is 0		
S7, S613	29,953	7	0.0617
S2, S614	1,935	7	0.1473
S2, S613	0.58587	10	0.584
S614, S613	29,953	7	0.0583

Supplementary Table 6: Table of results from the multivariate PERMANOVA two-way nested design test and pairwise t-tests for Carotenes (µg/g). Values in bold represent significant values.

PERMANOVA table of results
(2-factor design)

Source	df	SS	MS	Pseudo-F	P(perm)	Unique perms
Depth	1	72,472	72,472	3,644	**0.0386**	2997
Station(Depth)	8	14,936	1,867	46,588	**0.0045**	9952
Res	22	88,166	0.40075			
Total	31	31				

PAIR-WISE TESTS

Term 'Station(Depth)'

Within level 'DEEP' of factor 'Depth'

Groups	t	Unique perms	P(MC)
D1, D2	10,171	15	0.3529
D1, D3	0.51803	4	0.6183
D1, D4	0.1894	8	0.8558
D2, D3	14,632	8	0.1964
D2, D4	0.74632	15	0.4832
D3, D4	0.63864	4	0.5433

Within level 'SHALLOW' of factor 'Depth'

Groups	t	Unique perms	P(MC)

S1, S4	2,271	10	0.0875
S1, S7	19,895	10	0.1385
S1, S2	0.72924	10	0.4989
S1, S614	18,669	10	0.1602
S1, S613	30,912	10	**0.0403**
S4, S7	19,487	10	0.1428
S4, S2	17,777	10	0.1559
S4, S614	19,374	10	0.1495
S4, S613	0.79021	10	0.4756
S7, S2	0.98405	10	0.4014
S7, S614	1,801	3	0.2104
S7, S613	28,504	10	0.0662
S2, S614	0.95874	10	0.4111
S2, S613	17,076	10	0.1642
S614, S613	28,251	10	0.0658

Supplementary Table 7: Table of results from the multivariate PERMANOVA two-way nested design test and pairwise t-tests for Chloroplastic Pigment Equivalents (Chla + phaeopigments) in µg/g. Values in bold represent significant values.

PERMANOVA table of results
(2-factor design)

Source	df	SS	MS	Pseudo-F	P(perm)	Unique perms
Depth	1	1.7584	1.7584	0.88153	0.4262	1247
Station(Depth)	8	15,683	1.9604	2,188	0.0632	9944
Res	25	22,399	0.89596			
Total	34	39,745				

PAIR-WISE TESTS

Term 'Station(Depth)'

Within level 'DEEP' of factor 'Depth'

Groups	t	Unique perms	P(MC)
D1, D2	19,931	35	0.0956
D1, D3	11,297	35	0.2983
D1, D4	11,256	35	0.3002
D2, D3	0.32117	35	0.7622
D2, D4	29,688	35	**0.026**
D3, D4	1,803	35	0.1239

Within level 'SHALLOW' of factor 'Depth'

Groups	t	Unique perms	P(MC)
S1, S4	21,911	10	0.0909
S1, S7	20,528	35	0.0929
S1, S2	15,427	10	0.1928

S1, S614	21,028	10	0.1034
S1, S613	25,457	10	0.0675
S4, S7	0.55518	35	0.6057
S4, S2	0.59708	10	0.5868
S4, S614	0.87619	10	0.4261
S4, S613	0.39437	10	0.7152
S7, S2	0.16946	35	0.8768
S7, S614	0.25975	35	0.8014
S7, S613	0.30146	35	0.777
S2, S614	2.61E+02	10	0.9855
S2, S613	0.43361	10	0.6877
S614, S613	16,224	10	0.1809

Supplementary Table 8: Table of results from the multivariate PERMANOVA two-way nested design test and pairwise t-tests for Pielou's Evenness (J'). Values in bold represent significant values.

PERMANOVA table of results
(2-factor design)

Source	df	SS	MS	Pseudo-F	P(perm)	Unique perms
Depth	1	51.09	51.09	7.9858	**0.0249**	1256
Station(Depth)	8	49,471	6.1838	2.5175	**0.0352**	9950
Res	25	61,407	2.4563			
Total	34	166.19				

PAIR-WISE TESTS

Term 'Station(Depth)'

Within level 'DEEP' of factor 'Depth'

Groups	t	Unique perms	P(MC)
D1, D2	17,005	35	0.1341
D1, D3	13,561	35	0.2247
D1, D4	0.30917	35	0.7727
D2, D3	0.17259	35	0.8632
D2, D4	13,559	35	0.2177
D3, D4	10,458	35	0.3349

Within level 'SHALLOW' of factor 'Depth'

Groups	t	Unique perms	P(MC)
S1, S4	15,485	10	0.1929
S1, S7	29,366	35	0.0307
S1, S2	0.60365	10	0.59
S1, S614	34,028	10	**0.0277**
S1, S613	20,977	10	0.1059
S4, S7	0.83038	35	0.4515
S4, S2	12,653	10	0.281
S4, S614	0.24289	10	0.8264
S4, S613	0.48703	10	0.6484
S7, S2	26,766	35	**0.0472**

S7, S614	0.89408	35	0.412
S7, S613	0.22099	35	0.8344
S2, S614	37,889	10	**0.0169**
S2, S613	18,584	10	0.1418
S614, S613	0.4437	10	0.6781

Supplementary Table 9: Table of results from the multivariate PERMANOVA two-way nested design test and pairwise t-tests for Shanon-Wiener diversity (H'). Values in bold represent significant values.

PERMANOVA table of results

Source	df	SS	MS	Pseudo-F	P(perm)	Unique perms
Depth	1	94.88	94.88	91,429	**0.0168**	1256
Station(Depth)	8	80,234	10,029	24,215	0.0457	9941
Res	25	103.55	41,419			
Total	34	287.97				

PAIR-WISE TESTS

Term 'Station(Depth)'

Within level 'DEEP' of factor 'Depth'

Groups	t	Unique perms	P(MC)
D1, D2	14,246	35	0.2047
D1, D3	11,205	35	0.3043
D1, D4	0.48756	35	0.6371
D2, D3	0.24395	35	0.8117
D2, D4	0.80301	35	0.4486
D3, D4	0.55524	35	0.5978

Within level 'SHALLOW' of factor 'Depth'

Groups	t	Unique perms	P(MC)
St1, St4	10,783	10	0.3365
St1, St7	33,664	35	**0.019**
St1, St2	0.1162	10	0.9104
St1, St614	40,957	10	**0.0141**
St1, St613	17,301	10	0.1639
St4, St7	12,852	35	0.258
St4, St2	11,654	10	0.3134
St4, St614	0.31719	10	0.7659
St4, St613	0.50139	10	0.642
St7, St2	36,149	35	**0.0147**
St7, St614	15,434	35	0.1828
St7, St613	0.62355	35	0.5708
St2, St614	71,147	10	**0.0016**
St2, St613	18,401	10	0.1448
St614, St613	0.38887	10	0.7129

Supplementary Table 10: Table of results from the multivariate PERMANOVA two-way nested design test and pairwise t-tests for Expected genera (EG(80)). Values in bold represent significant values.

PERMANOVA table of results
(2-factor design)

Source	df	SS	MS	Pseudo-F	P(perm)	Unique perms
Depth	1	13517	13517	6.7478	**0.0028**	1259
Station(Depth)	8	15514	1939.2	1.5908	**0.0001**	9745
Res	25	30475	1219			
Total	34	59461				

PAIR-WISE TESTS

Term 'Station(Depth)'

Within level 'DEEP' of factor 'Depth'

Groups	t	Unique perms	P(MC)
D1, D2	0.76301	35	0.7173
D1, D3	0.9061	35	0.5444
D1, D4	0.84413	35	0.6229
D2, D3	10,155	35	0.4024
D2, D4	0.86606	35	0.5949
D3, D4	0.88881	35	0.5807

Within level 'SHALLOW' of factor 'Depth'

Groups	t	Unique perms	P(MC)
S1, S4	1,248	10	0.2218
S1, S7	19,035	35	**0.0235**
S1, S2	12,887	10	0.2012
S1, S614	15,582	10	0.0839
S1, S613	11,945	10	0.2625
S4, S7	16,065	35	0.0602
S4, S2	12,669	10	0.2076
S4, S614	15,113	10	0.0978
S4, S613	12,013	10	0.2592
S7, S2	1.67	35	**0.0492**
S7, S614	12,541	35	0.2045
S7, S613	16,441	35	0.054
S2, S614	14,735	10	0.1186
S2, S613	0.77248	10	0.6776
S614, S613	12,894	10	0.1995

Supplementary Table 11: Table of results from the multivariate PERMANOVA two-way nested design test and pairwise t-tests for nematode community composition. Values in bold represent significant values.

PERMANOVA table of results
(2-factor design)

Supplementary material for [L Lins], [2016], [Species variability and connectivity in the deep sea: evaluating effects of spatial heterogeneity and hydrodynamic effects]

Source	df	SS	MS	Pseudo-F	P(perm)	Unique perms
Depth	1	1974.6	1974.6	14,297	**0.0013**	1257
Station(Depth)	8	1068.2	133.53	1.2756	0.2391	9929
Res	25	2617	104.68			
Total	34	5606				

PAIR-WISE TESTS

Term 'Station(Depth)'

Within level 'DEEP' of factor 'Depth'

Groups	t	Unique perms	P(MC)
D1, D2	0.51763	35	0.8016
D1, D3	0.37384	35	0.8242
D1, D4	0.71546	35	0.5998
D2, D3	0.38009	35	0.8599
D2, D4	0.51489	35	0.7916
D3, D4	0.38968	35	0.8624

Within level 'SHALLOW' of factor 'Depth'

Groups	t	Unique perms	P(MC)
S1, S4	0.58178	10	0.6937
S1, S7	10,792	35	0.3396
S1, S2	10,727	10	0.3577
S1, S614	0.88803	10	0.4849
S1, S613	0.88786	10	0.4648
S4, S7	0.97944	35	0.4039
S4, S2	22,706	10	0.0505
S4, S614	0.5012	10	0.7517
S4, S613	19,218	10	0.1004
S7, S2	20,569	35	**0.0395**
S7, S614	0.44003	35	0.8343
S7, S613	15,491	35	0.127
S2, S614	23,118	10	0.0549
S2, S613	0.83393	10	0.5643
S614, S613	20,307	10	0.1135

Supplementary Table 12: Table of results from the multivariate PERMANOVA two-way nested design test and pairwise t-tests for nematode trophic composition. Values in bold represent significant values.

	%TN	%TOC	Chla	Carotenes	CPE	Silt-Clay	Very Fine Sand	Fine Sand	Medium Sand	Coarse Sand	SED
H'	***-0.38***	***-0.44***	0.26	0.32	0.32	***-0.46***	***0.43***	***0.41***	***0.42***	0.3	***0.51***
J	0.26	0.12	-0.11	-0.09	-0.28	0.19	-0.22	-0.26	-0.2	0.04	-0.17
EG (80)	***-0.43***	***-0.46***	0.25	0.31	***0.36***	***-0.47***	***0.45***	***0.45***	***0.44***	0.28	***0.52***
TD	***-0.4***	-0.28	***0.37***	0.3	***0.39***	***-0.37***	***0.48***	***0.41***	0.34	0.05	***0.4***

Supplementary Table 13: Spearman correlations between the nematode univariate variables Shanon-Wiener diversity (H'), Pielou's Evenness (J'), Expected genera (EG (80)) and Trophic Diversity (TD)

Supplementary material for [L Lins], [2016], [Species variability and connectivity in the deep sea: evaluating effects of spatial heterogeneity and hydrodynamic effects]

with sediment environmental variables. %TN= Total Nitrogen (%), %TOC=Total Organic Carbon (%), Chla= Chlorophyll a, Carotenes, CPE= Chloroplastic Pigment Equivalents, Silt-Clay, Very Fine Sand, Fine Sand, Medium Sand, Coarse Sand and SED=Sediment Diversity.

Field ID	Order	Family	Genus	Latitude	Longitude	Depth (m)	GenBank Accession numbers
77L10H15	Plectida	Camacolaimidae	*Camacolaimus*	37°49'661'N	09°28'042'W	1006	N/A - to be provided upon acceptance
52L27G15	Plectida	Camacolaimidae	*Camacolaimus*	37°49'661'N	09°28'042'W	1006	N/A - to be provided upon acceptance
97L22D15	Araeolaimida	Diplopeltidae	*Campylaimus*	37°58.904'N	09°07.525'W	335	N/A - to be provided upon acceptance
81L18E15	Monhysterida	Xyalidae	*Capsula*	37°58.904'N	09°07.525'W	335	N/A - to be provided upon acceptance
42L29D15	Plectida	Ceramonematidae	*Ceramonema*	37°58.904'N	09°07.525'W	335	N/A - to be provided upon acceptance
50L26C15	Plectida	Ceramonematidae	*Ceramonema*	37°51.171'N	09°06.944'W	325	N/A - to be provided upon acceptance
15L17C15	Araeolaimida	Comesomatidae	*Cervonema*	37°51.171'N	09°06.944'W	325	N/A - to be provided upon acceptance
25L20C15	Araeolaimida	Comesomatidae	*Cervonema*	37°51.171'N	09°06.944'W	325	N/A - to be provided upon acceptance
28L20C15	Araeolaimida	Comesomatidae	*Cervonema*	37°51.171'N	09°06.944'W	325	N/A - to be provided upon acceptance
20L27D15	Monhysterida	Xyalidae	*Daptonema*	37°58.904'N	09°07.525'W	335	N/A - to be provided upon acceptance
55L26C15	Monhysterida	Xyalidae	*Daptonema*	37°51.171'N	09°06.944'W	325	N/A - to be provided upon acceptance
48L27G15	Desmodorida	Desmodoridae	*Desmodora*	37°49'661'N	09°28'042'W	1006	N/A - to be provided upon acceptance
56L28G15	Desmodorida	Desmodoridae	*Desmodora*	37°49'661'N	09°28'042'W	1006	N/A - to be provided upon acceptance
76L10H15	Desmodorida	Desmodoridae	*Desmodora*	37°49'661'N	09°28'042'W	1006	N/A - to be provided upon acceptance
42L27G15	Desmodorida	Desmodoridae	*Desmodora*	37°49'661'N	09°28'042'W	1006	N/A - to be provided upon acceptance
41L29D15	Desmodorida	Desmodoridae	*Desmodorella*	37°58.904'N	09°07.525'W	335	N/A - to be provided upon acceptance
46L29D15	Desmodorida	Desmodoridae	*Desmodorella*	37°58.904'N	09°07.525'W	335	N/A - to be provided upon acceptance
54L27G15	Desmoscolecida	Desmoscolecidae	*Desmoscolex*	37°49'661'N	09°28'042'W	1006	N/A - to be provided upon acceptance
84L10H15	Desmoscolecida	Desmoscolecidae	*Desmoscolex*	37°49'661'N	09°28'042'W	1006	N/A - to be provided upon acceptance
62L28G15	Desmoscolecida	Desmoscolecidae	*Desmoscolex*	37°49'661'N	09°28'042'W	1006	N/A - to be provided upon acceptance
93L19E15	Chromadorida	Chromadoridae	*Dichromadora*	37°58.904'N	09°07.525'W	335	N/A - to be provided upon acceptance
93L31C15	Plectida	Diplopeltoididae	*Diplopeltoides*	37°51.171'N	09°06.944'W	325	N/A - to be provided upon acceptance
90L11H15	Chromadorida	Selachinematidae	*Gammanema*	37°49'661'N	09°28'042'W	1006	N/A - to be provided upon acceptance
3L22D15	Chromadorida	Selachinematidae	*Gammanema*	37°58.904'N	09°07.525'W	335	N/A - to be provided upon acceptance
51L04E15	Chromadorida	Selachinematidae	*Gammanema*	37°58.904'N	09°07.525'W	335	N/A - to be provided upon acceptance
5L16C15	Chromadorida	Selachinematidae	*Gammanema*	37°51.171'N	09°06.944'W	325	N/A - to be provided upon acceptance
65L05E15	Chromadorida	Selachinematidae	*Gammanema*	37°58.904'N	09°07.525'W	335	N/A - to be provided upon acceptance
9L17C15	Desmoscolecida	Desmoscolecidae	*Greeffiella*	37°51.171'N	09°06.944'W	325	N/A - to be provided upon acceptance
89L30C15	Enoplida	Oxystominidae	*Halalaimus*	37°51.171'N	09°06.944'W	325	N/A - to be provided upon acceptance
19L14G15	Enoplida	Oxystominidae	*Halalaimus*	37°49'661'N	09°28'042'W	1006	N/A - to be provided upon acceptance
60L28G15	Enoplida	Oxystominidae	*Halalaimus*	37°49'661'N	09°28'042'W	1006	N/A - to be provided upon acceptance
51L26C15	Enoplida	Oxystominidae	*Halalaimus*	37°51.171'N	09°06.944'W	325	N/A - to be provided upon acceptance

88L18E15	Enoplida	Oxystominidae	*Halalaimus*	37°58.904'N	09°07.525'W	335	N/A - to be provided upon acceptance
87L18E15	Enoplida	Oxystominidae	*Halalaimus*	37°58.904'N	09°07.525'W	335	N/A - to be provided upon acceptance
66L05E15	Enoplida	Oxystominidae	*Halalaimus*	37°58.904'N	09°07.525'W	335	N/A - to be provided upon acceptance
100L11H15	Enoplida	Oxystominidae	*Halalaimus*	37°49'661'N	09°28'042'W	1006	N/A - to be provided upon acceptance
64L28G15	Enoplida	Oxystominidae	*Halalaimus*	37°49'661'N	09°28'042'W	1006	N/A - to be provided upon acceptance
50L27G15	Enoplida	Oxystominidae	*Halalaimus*	37°49'661'N	09°28'042'W	1006	N/A - to be provided upon acceptance
99L19E15	Enoplida	Oxystominidae	*Halalaimus*	37°58.904'N	09°07.525'W	335	N/A - to be provided upon acceptance
77L30C15	Enoplida	Oxystominidae	*Halalaimus*	37°51.171'N	09°06.944'W	325	N/A - to be provided upon acceptance
65L07H15	Enoplida	Oxystominidae	*Halalaimus*	37°49'661'N	09°28'042'W	1006	N/A - to be provided upon acceptance
40L15G15	Enoplida	Oxystominidae	*Halalaimus*	37°49'661'N	09°28'042'W	1006	N/A - to be provided upon acceptance
39L15G15	Enoplida	Oxystominidae	*Halalaimus*	37°49'661'N	09°28'042'W	1006	N/A - to be provided upon acceptance
78L30C15	Chromadorida	Selachinematidae	*Halichoanolaimus*	37°51.171'N	09°06.944'W	325	N/A - to be provided upon acceptance
7L13G15	Enoplida	Enchelidiidae	*Ledovitia*	37°49'661'N	09°28'042'W	1006	N/A - to be provided upon acceptance
64L27C15	Plectida	Leptolaimidae	*Leptolaimus*	37°51.171'N	09°06.944'W	325	N/A - to be provided upon acceptance
45L25C15	Plectida	Leptolaimidae	*Leptolaimus*	37°51.171'N	09°06.944'W	325	N/A - to be provided upon acceptance
13L27D15	Plectida	Leptolaimidae	*Leptolaimus*	37°58.904'N	09°07.525'W	335	N/A - to be provided upon acceptance
2L13G15	Plectida	Leptolaimidae	*Leptolaimus*	37°49'661'N	09°28'042'W	1006	N/A - to be provided upon acceptance
53L04E15	Plectida	Leptolaimidae	*Leptolaimus*	37°58.904'N	09°07.525'W	335	N/A - to be provided upon acceptance
2L22D15	Plectida	Leptolaimidae	*Leptolaimus*	37°58.904'N	09°07.525'W	335	N/A - to be provided upon acceptance
63L28G15	Plectida	Leptolaimidae	*Leptolaimus*	37°49'661'N	09°28'042'W	1006	N/A - to be provided upon acceptance
24L18C15	Enoplida	Thoracostomopsidae	*Mesacanthion*	37°51.171'N	09°06.944'W	325	N/A - to be provided upon acceptance
90L31C15	Chromadorida	Cyatholaimidae	*Metacyatholaimus*	37°51.171'N	09°06.944'W	325	N/A - to be provided upon acceptance
14L17C15	Monhysterida	Linhomoeidae	*Metalinhomoeus*	37°51.171'N	09°06.944'W	325	N/A - to be provided upon acceptance
10L17C15	Monhysterida	Linhomoeidae	*Metalinhomoeus*	37°51.171'N	09°06.944'W	325	N/A - to be provided upon acceptance
12L13G15	Desmodorida	Microlaimidae	*Microlaimus*	37°49'661'N	09°28'042'W	1006	N/A - to be provided upon acceptance
50L29D15	Desmodorida	Microlaimidae	*Microlaimus*	37°58.904'N	09°07.525'W	335	N/A - to be provided upon acceptance
56L04E15	Desmodorida	Microlaimidae	*Microlaimus*	37°58.904'N	09°07.525'W	335	N/A - to be provided upon acceptance
83L18E15	Desmodorida	Microlaimidae	*Microlaimus*	37°58.904'N	09°07.525'W	335	N/A - to be provided upon acceptance
86L18E15	Desmodorida	Microlaimidae	*Microlaimus*	37°58.904'N	09°07.525'W	335	N/A - to be provided upon acceptance
80L18E15	Desmodorida	Microlaimidae	*Microlaimus*	37°58.904'N	09°07.525'W	335	N/A - to be provided upon acceptance
63L05E15	Desmodorida	Microlaimidae	*Microlaimus*	37°58.904'N	09°07.525'W	335	N/A - to be provided upon acceptance
49L29D15	Desmodorida	Microlaimidae	*Microlaimus*	37°58.904'N	09°07.525'W	335	N/A - to be provided upon acceptance
4L22D15	Desmodorida	Microlaimidae	*Microlaimus*	37°58.904'N	09°07.525'W	335	N/A - to be provided upon acceptance
79L30C15	Desmodorida	Microlaimidae	*Microlaimus*	37°51.171'N	09°06.944'W	325	N/A - to be provided upon acceptance
43L25C15	Desmodorida	Microlaimidae	*Microlaimus*	37°51.171'N	09°06.944'W	325	N/A - to be provided upon acceptance

46L25C15	Desmodorida	Microlaimidae	*Microlaimus*	37°51.171'N	09°06.944'W	325	N/A - to be provided upon acceptance
1L13G115	Desmoscolecida	Meyliidae	*Paratricoma*	37°49'661'N	09°28'042'W	1006	N/A - to be provided upon acceptance
33L28D15	Plectida	Camacolaimidae	*Procamacolaimus*	37°58.904'N	09°07.525'W	335	N/A - to be provided upon acceptance
92L31C15	Plectida	Camacolaimidae	*Procamacolaimus*	37°51.171'N	09°06.944'W	325	N/A - to be provided upon acceptance
21L27D15	Plectida	Camacolaimidae	*Procamacolaimus*	37°58.904'N	09°07.525'W	335	N/A - to be provided upon acceptance
47L29D15	Plectida	Camacolaimidae	*Procamacolaimus*	37°58.904'N	09°07.525'W	335	N/A - to be provided upon acceptance
52L04E15	Plectida	Ceramonematidae	*Pselionema*	37°58.904'N	09°07.525'W	335	N/A - to be provided upon acceptance
44L27G15	Plectida	Ceramonematidae	*Pselionema*	37°49'661'N	09°28'042'W	1006	N/A - to be provided upon acceptance
38L15G15	Plectida	Ceramonematidae	*Pselionema*	37°49'661'N	09°28'042'W	1006	N/A - to be provided upon acceptance
14L13G15	Chromadorida	Selachinematidae	*Richtersia*	37°49'661'N	09°28'042'W	1006	N/A - to be provided upon acceptance
2L16C15	Chromadorida	Selachinematidae	*Richtersia*	37°51.171'N	09°06.944'W	325	N/A - to be provided upon acceptance
23L18C15	Chromadorida	Selachinematidae	*Richtersia*	37°51.171'N	09°06.944'W	325	N/A - to be provided upon acceptance
72L27C15	Chromadorida	Selachinematidae	*Richtersia*	37°51.171'N	09°06.944'W	325	N/A - to be provided upon acceptance
26L14G15	Chromadorida	Selachinematidae	*Richtersia*	37°49'661'N	09°28'042'W	1006	N/A - to be provided upon acceptance
22L14G15	Plectida	Haliplectidae	*Setoplectus*	37°49'661'N	09°28'042'W	1006	N/A - to be provided upon acceptance
86L30C15	Araeolaimida	Comesomatidae	*Setosabatieria*	37°51.171'N	09°06.944'W	325	N/A - to be provided upon acceptance
70L27C15	Araeolaimida	Diplopeltidae	*Southerniella*	37°51.171'N	09°06.944'W	325	N/A - to be provided upon acceptance
9L22D15	Araeolaimida	Diplopeltidae	*Southerniella*	37°58.904'N	09°07.525'W	335	N/A - to be provided upon acceptance
17L13G15	Enoplida	Ironidae	*Syringolaimus*	37°49'661'N	09°28'042'W	1006	N/A - to be provided upon acceptance
60L04E15	Enoplida	Ironidae	*Syringolaimus*	37°58.904'N	09°07.525'W	335	N/A - to be provided upon acceptance
6L16C15	Desmoscolecida	Desmoscolecidae	*Tricoma*	37°51.171'N	09°06.944'W	325	N/A - to be provided upon acceptance
43L29D15	Desmoscolecida	Desmoscolecidae	*Tricoma*	37°58.904'N	09°07.525'W	335	N/A - to be provided upon acceptance
41L27G15	Desmoscolecida	Desmoscolecidae	*Tricoma*	37°49'661'N	09°28'042'W	1006	N/A - to be provided upon acceptance
70L05E15	Desmoscolecida	Desmoscolecidae	*Tricoma*	37°58.904'N	09°07.525'W	335	N/A - to be provided upon acceptance
11L27D15	Enoplida	Oncholaimidae	*Viscosia*	37°58.904'N	09°07.525'W	335	N/A - to be provided upon acceptance
96L31C15	Enoplida	Oncholaimidae	*Viscosia*	37°51.171'N	09°06.944'W	325	N/A - to be provided upon acceptance
72L05E15	Enoplida	Oncholaimidae	*Viscosia*	37°58.904'N	09°07.525'W	335	N/A - to be provided upon acceptance
29L28D15	Enoplida	Oncholaimidae	*Viscosia*	37°58.904'N	09°07.525'W	335	N/A - to be provided upon acceptance
64L05E15	Enoplida	Oncholaimidae	*Viscosia*	37°58.904'N	09°07.525'W	335	N/A - to be provided upon acceptance
32L15G15	Enoplida	Oxystominidae	*Wieseria*	37°49'661'N	09°28'042'W	1006	N/A - to be provided upon acceptance
8L17C15	Monhysterida	Xyalidae	not defined	37°51.171'N	09°06.944'W	325	N/A - to be provided upon acceptance

Supplementary Table 14: Sequenced nematode genera by ID (Identification number), taxonomic position, location and GenBank Accession numbers.

Supplementary material for [L Lins], [2016], [Species variability and connectivity in the deep sea: evaluating effects of spatial heterogeneity and hydrodynamic effects]