Responses of an abyssal meiobenthic community to short-term burial with crushed nodule particles in the South-East Pacific

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Supplementary Material

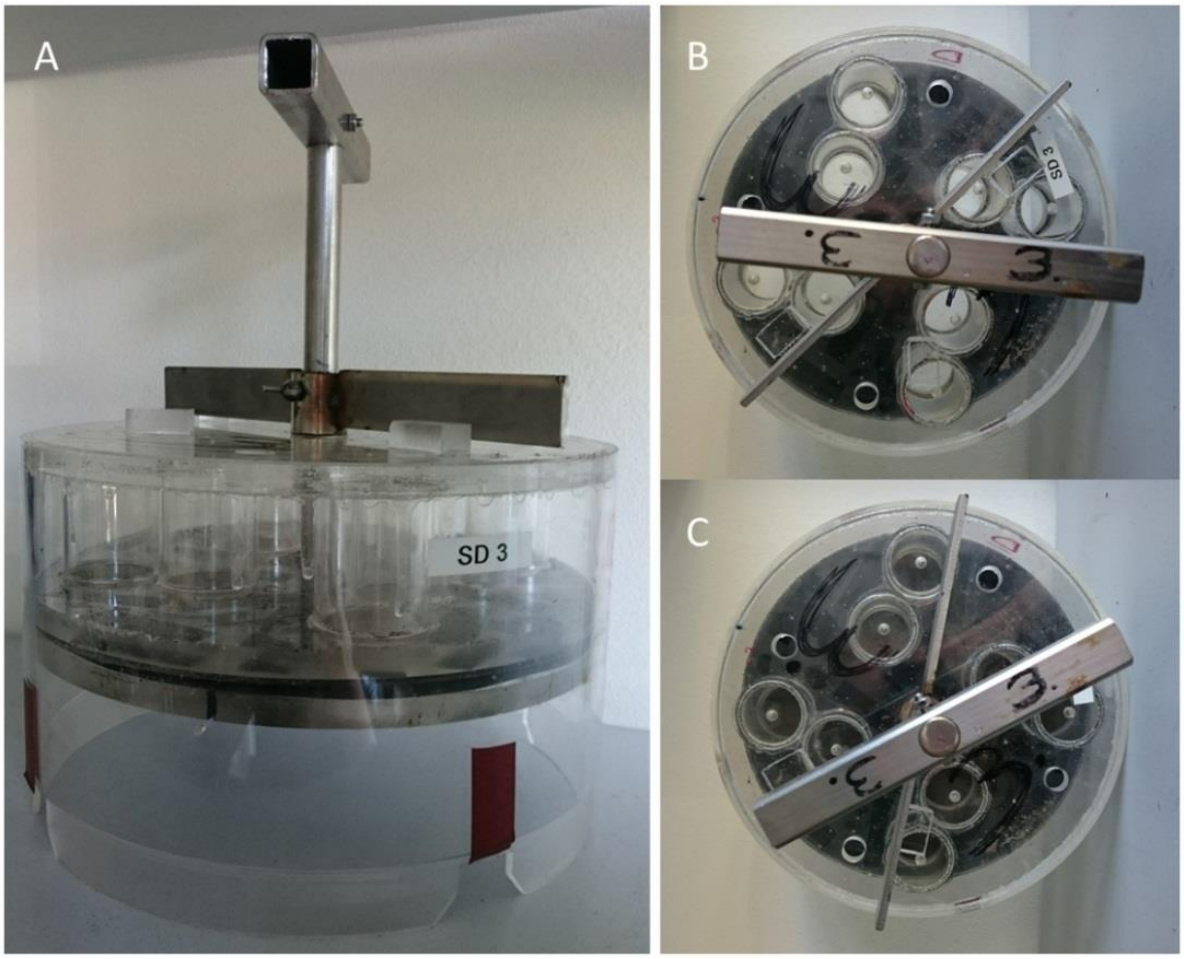

Figure S1 A) Front view on the sediment-dispensing device, sediment is filled in tubes inside the round plexiglass space B) Top view in open position, tubes are visible as big holes and C) Top view in closed position. Holes in the plexiglass cover ensured escape of all air in the device.

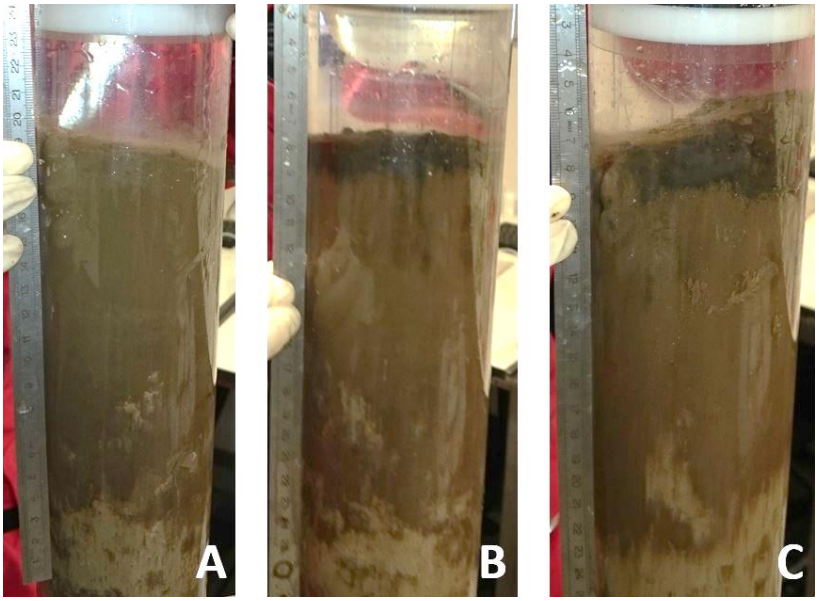

Figure S2 Pictures of push cores taken at the end of the experiment from the Control treatment (A) and the Burial treatment (B and C). Through its black colour, the layer of crushed nodule debris is easily distinguishable from the underlying sediment.

Figure S3 Example of the crushed nodule substrate. Scale in centimetres.

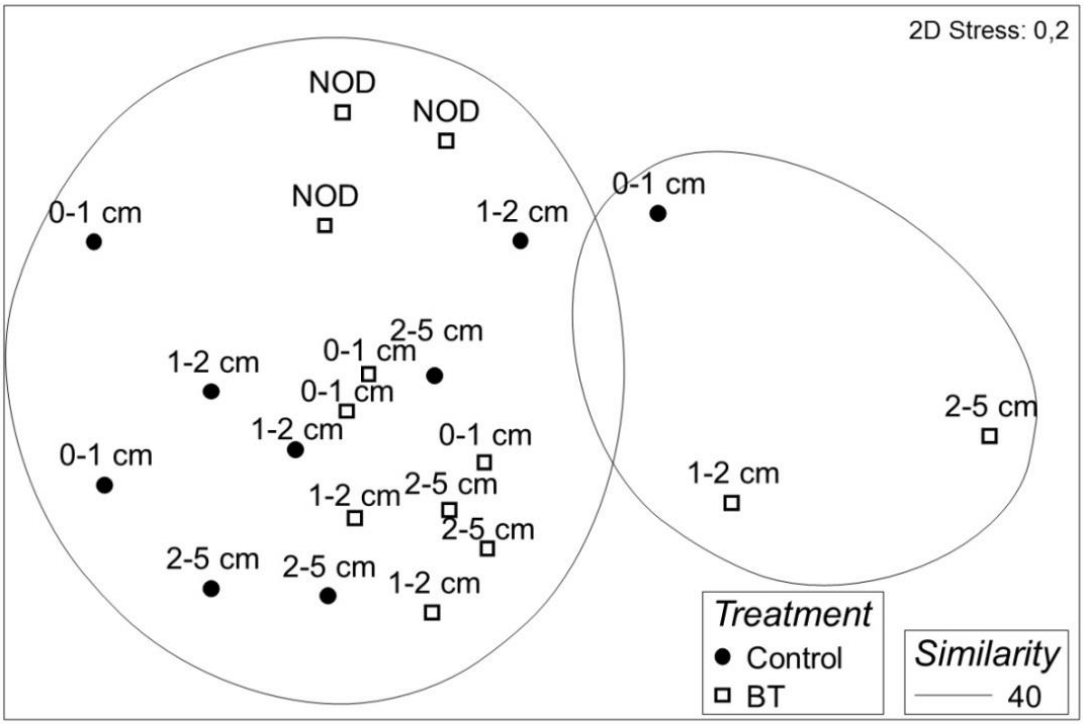

Figure S4 MDS plot of the relative nematode genus composition in each sample of the Control and Burial treatment (BT) per sediment depth layer with overlying contours of significant (SIMPROF test) clusters at a 40 % similarity level. NOD = crushed nodule layer

Table S1 Mean densities (ind. 10 cm^{-2}, ± standard error)and feeding type group of nematode genera found in both treatments of the experiment combining all depth layers.

Order	Family	Genus	Feeding type	Control	Burial treatment
Araeolaimida	Axonolaimidae	*Ascolaimus*	1B		0.17 ± 0.17
	Comesomatidae	*Cervonema*	1B	3.57 ± 0.81	2.59 ± 0.90
		Minolaimus	1A	0.43 ± 0.43	0.29 ± 0.29
		Pierrickia	1B	0.42 ± 0.21	0.94 ± 0.04
	Coninckiidae	*Coninckia*	1A		0.15 ± 0.15
	Diplopeltidae	*Campylaimus*	1B	0.21 ± 0.21	0.15 ± 0.15
		Diplopeltula	1A	2.29 ± 0.73	1.72 ± 0.17
		Intasia	1A	0.62 ± 0.35	
Chromadorida	Chromadoridae	*Acantholaimus*	2A	12.49 ± 1.13	16.12 ± 2.06
		Actinonema	2A	1.04 ± 0.41	0.78 ± 0.57
		Chromadora	2A	0.62 ± 0.62	0.30 ± 0.15
		Chromadorina	2A	0.62 ± 0.36	0.48 ± 0.27
		Endeolophos	2A		0.47 ± 0.02
		Hypodontolaimus	2A		0.16 ± 0.16
		Prochromadora	2A		0.15 ± 0.15
		Prochromadorella	2A	0.41 ± 0.41	0.47 ± 0.47
		Spilophorella	2A	0.42 ± 0.21	0.17 ± 0.17
	Cyatholaimidae	*Acantonchus*	2A	0.43 ± 0.43	
		Longicyatholaimus	2A	0.20 ± 0.20	
		Marylynnia	2A		0.15 ± 0.15
		Paracantonchus	2A		0.15 ± 0.15
		Paracyatholaimus	2A		0.17 ± 0.17
		Pomponema	2B	0.21 ± 0.21	0.15 ± 0.15
	Neotonchidae	*Gomphionchus*			0.17 ± 0.17
	Selachinematidae	*Synonchiella*	2B	0.22 ± 0.22	0.17 ± 0.17
Desmodorida	Desmodoridae	*Desmodora*	2A	1.70 ± 1.14	1.90 ± 0.34
		Desmodorella	2A	0.20 ± 0.20	
		Metadesmodora	1B	0.21 ± 0.21	
		Molgolaimus	1A	0.85 ± 0.57	1.23 ± 0.40
		Paradesmodora	2A	0.21 ± 0.21	
	Microlaimidae	*Calomicrolaimus*	2A		0.31 ± 0.31
		Microlaimus	2A	1.05 ± 0.55	1.62 ± 0.75
Desmoscolecida	Cyartonematidae	*Cyartonema*	1A	0.20 ± 0.20	0.49 ± 0.29
		Southerniella	1A	0.63 ± 0.36	0.46 ± 0.27
	Desmoscolecidae	*Desmoscolex*	1A	3.31 ± 1.73	2.51 ± 1.06
		Greeffiella	1A	0.62 ± 0.35	0.96 ± 0.54
		Hapalomus	1A		0.31 ± 0.31
		Tricoma	1A	1.24 ± 0.35	1.89 ± 1.19
Enoplida	Anticomidae	*Cephalanticoma*	2A		0.16 ± 0.16
	Enchelidiidae	*Bathyeurystomina*	2B	0.42 ± 0.21	0.45 ± 0.25
		Calyptronema	1b		0.15 ± 0.15
	Enoplidae	*Enoploides*	2B	0.22 ± 0.22	
		Mesacanthion	2B		0.30 ± 0.15

		Paramesacanthion	2B	0.21 ± 0.21	0.17 ± 0.17
	Ironidae	*Syringolaimus*	2B	1.03 ± 0.55	0.94 ± 0.04
	Leptosomatidae	*Anticoma*	1A	1.03 ± 0.73	0.47 ± 0.02
		Anticomopsis	1A		0.17 ± 0.17
	Oncholaimidae	*Adoncholaimus*	2B		0.16 ± 0.16
		Metoncholaimus	2B	0.20 ± 0.20	
		Meyersia	2B	0.21 ± 0.21	
		Oncholaimellus	2B		0.15 ± 0.15
		Oncholaimus	2B	0.42 ± 0.21	
		Viscosia	2B	4.75 ± 3.87	11.81 ± 5.37
	Oxystominidae	*Cricohalalaimus*	1A		0.17 ± 0.17
		Halalaimus	1A	4.20 ± 0.96	4.36 ± 0.49
		Litinium	1A		1.25 ± 0.32
		Nemanema	1A	0.20 ± 0.20	
		Oxystomina	1A	1.48 ± 0.58	0.45 ± 0.25
	Pelagonematidea	*Anoplostoma*	1B	0.21 ± 0.21	0.17 ± 0.17
	Phanodermatidae	*Phanodermopsis*	2A		0.29 ± 0.29
	Trefusiidae	*Cytolaimium*	1B	0.21 ± 0.21	
	Tripyloididae	*Bathylaimus*	1B	0.21 ± 0.21	
Monhysterida	Linhomoeidae	*Anticyclus*	2A	0.22 ± 0.22	
		Disconema	1A	0.42 ± 0.21	0.16 ± 0.16
		Eleutherolaimus	1B	0.21 ± 0.21	0.17 ± 0.17
		Metalinhomoeus	1B	0.21 ± 0.21	0.44 ± 0.44
		Terschellingia	1A	0.21 ± 0.21	
	Monhysteridae	*Monhystrella*	1B	9.77 ± 1.58	13.14 ± 0.54
		Thalassomonhystera	1B	6.07 ± 0.89	3.94 ± 0.44
	Siphonolaimidae	*Parastomonema*	mouthless	0.21 ± 0.21	
		Doliolaimus	2B	0.20 ± 0.20	
		Metasphaerolaimus	2B	0.00 ± 0.00	0.44 ± 0.44
		Sphaerolaimus	2B	4.16 ± 0.87	2.95 ± 0.30
		Subsphaerolaimus	2B	0.82 ± 0.41	0.78 ± 0.16
	Xyalidae	*Ammotheristus*	1B	0.22 ± 0.22	0.15 ± 0.15
		Amphimonhystera	1B		0.16 ± 0.16
		Amphimonhystrella	1B	0.20 ± 0.20	0.78 ± 0.32
		Daptonema	1B	5.88 ± 1.89	2.77 ± 0.95
		Elzalia	1B	0.22 ± 0.22	
		Enchonema	1B	0.00 ± 0.00	0.15 ± 0.15
		Linhystera	1A	1.46 ± 0.55	1.69 ± 0.36
		Manganonema	1A	3.15 ± 0.65	3.46 ± 0.47
		Metadesmolaimus	1B	0.43 ± 0.43	0.15 ± 0.15
		Paramonohystera	1B		0.29 ± 0.29
		Rhynchonema	1B	0.22 ± 0.22	
		Theristus	1B	3.59 ± 1.44	2.29 ± 0.83
Plectida	Aegialoalaimidae	*Aegialoalaimus*	1A	1.66 ± 1.03	1.26 ± 0.44
	Camacolaimidae	*Alaimella*	1A	0.22 ± 0.22	
		Camacolaimus	2A	0.63 ± 0.01	0.78 ± 0.16
	Ceramonematidea	*Ceramonema*	2A	0.20 ± 0.20	
		Dasynemoides	1A	0.22 ± 0.22	

	Pselionema	1A	1.47 ± 0.42	0.29 ± 0.29
Diplopeltoididae	*Diplopeltoides*	1A	5.21 ± 2.50	1.76 ± 0.70
Haliplectidae	*Setoplectus*	1A	0.22 ± 0.22	0.29 ± 0.29
Leptolaimidae	*Antomicron*	1A	0.21 ± 0.21	0.32 ± 0.16
	Leptolaimus	1A	2.49 ± 0.70	0.65 ± 0.45
	Unknown sp. 1		0.22 ± 0.22	
	Unknown sp. 2			0.63 ± 0.16
	Unknown sp. 3			0.47 ± 0.47
	Unknown sp. 4			0.17 ± 0.17
	Unknown sp. 5			0.15 ± 0.15

Table S2 Results of the SIMPER analysis between the significantly different clusters identified in the dataset of relative abundances of nematode feeding types. Av.Abund = average abundance, Av.Diss = average dissimilarity, Diss/SD = average contribution divided by the standard deviation, Contrib% = Contribution to the dissimilarities, Cum% = Cumulative contribution.

	Cluster A	Cluster C				
Feeding type	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
2B	16	33	9	3	34	34
2A	37	21	8	2	30	65
1A	30	21	5	2	20	84
1B	17	25	4	2	16	100

	Cluster A	Cluster B				
Feeding type	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
1B	17	36	9	2	37	37
2A	37	21	8	3	31	68
1A	30	34	4	1	16	84
2B	16	8	4	2	16	100

	Cluster A	Cluster D				
Feeding type	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
2B	16	67	26	12	48	48
2A	37	9	14	8	27	75
1A	30	7	12	5	22	96

	Cluster B	Cluster C				
Feeding type	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
2B	8	33	13	4	43	43
1A	34	21	7	2	25	69
1B	36	25	6	2	20	89
2A	21	21	3	1	11	100

	Cluster B	Cluster D				
Feeding type	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
2B	8	67	29	14	50	50
1A	34	7	14	3	23	73
1B	36	18	9	2	16	89
2A	21	9	6	3	11	100

	Cluster C	Cluster D				
Feeding type	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
2B	33	67	17	5	50	50

1A	21	7	7	2	20	70
2A	21	9	6	2	19	89
1B	25	18	4	2	11	100