The following supplement accompanies the article

Response of estuarine free-living nematode assemblages to organic enrichment: an experimental approach

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Table S1. Post Hoc comparisons using the Tukey test:

A) PERMANOVA * significant difference

Time (days)	Grups	t	p(perm)	perm	p(MC)
4	C, M	0.96	0.5498	126	0.4745
	C, H	0.99986	0.4115	126	0.396
	M, H	0.99247	0.5061	126	0.4282
15	C, M	1.262	0.1302	126	0.1764
	C, H	1.2364	0.1066	126	0.2
	M, H	1.599	0.0085	126	0.050*
30	C, M	3.7808	0.0077	126	0.0006*
	C, H	2.4845	0.0077	126	0.006*
	M, H	1.3853	0.0992	126	0.1449

B) Two-way crossed ANOVA (all variables except oxygen). Repeated measures ANOVA by oxygen.

B1) TREATMENT Were, treatments: control (C), medium (M) and high (H) * Significant difference

OM	PHEOPIG	LIP
C=M 0.851699	C<M 0.000149*	C<M 0.010469*
C<H 0.000798*	C<H 0.000149*	C<H 0.000968*
M<H 0.002358*	M<H 0.000271*	M=H 0.503104
MS = 1.2644, df = 18	MS = 0.01386, df = 18	MS = 0.09640, df = 18

B2) TIME. Were, time in days: 4 (T4), 15 (T15) and 30 (T30). * Significant difference

Chl-a	PHEOPIG
T4<T30 0.003656*	T4<T15 0.020450*
T4=T15 0.411820	T4<T30 0.000156*
T15=T30 0.055659	T15<T30 0.006543*
MS= 3.2304 df = 18	MS = 0.01386 df = 18

B3) TREATMENT X TIME. Were letter represent the treatment and the number the time in days e.g. M0= medium at 0 days, significance p<0.001

Chl-a	PRT	O_2 T_4	O_2 T_{15}	O_2 T_{30}
C4<M4, H4, M15, H15, M30, H30	C4<H4, M15, H15, M30, H30	C0<C1 C0>M0, M1, M2, M3, M4, H0, H1, H2, H3, H4	C0>M1-M3, M5-M12, H1-H14	C0>M1-M10, M20, H1-H20
M4>C30, H30	M4<M15, H15, M30, H30	C1> M0, M1, M2, M3, M4, H1, H2, H3,H4	C1<C5, C11,C12 C1>MO-M14, HO-H14	C1> C5-C7, C9, C10, C12,C13, C15,C18,C20, M0-M15, M18, M20, H0-H22, H27
H4>C15, C30, H30	H4>C30 H4<H30	C2>M0, M1, M2, M3, M4, H1, H2, H3, H4	C2>M0-M13, H0-H14	C2, C3, C4> C20, M0-M13, M20, H0-H22
C15<M15, H15, M30, H30	C15<M15, H15, M30, H30	C3>M0, M1, M2, M3, M4, H1, H2, H3, H4	C3, C4>M0-M3, M5-M13, H0-H14	C5> M1-M9, M20, H1-H17, H20
M15>C30, H30	M15>C30	C4> M0, M1, M2, M3, M4, H1, H2, H3, H4	C5,C6, C7>M1-M3, M5-M7, M10, M11, H1-H14	C6> M1-M10, M20, H1-H17, H20
H15>C30, H30	H15>C30	M0>M1, M2, M3, M4, H1, H2, H3,H4	C8, C9> M1-M3, M5-M11, H1-H14	C7> M0-M10, M20, H1-H17, H20

Chl-a	PRT	O_2 T_4	O_2 T_{15}	O_2 T_{30}
C30<M30, H30	C30<M30, H30	M1<M4, H0	C10, C11, C12, C13> M1-M3, M5-M7, M10, M11, H1-H14	C9, C10,C12, C15> M1-M11, M21, H1-H18, H21
		M2<H0	C14> M1-M3, M5-M12,H1-H14	C11, C13, C14> M1-M10, M21, H1-H18, H21
		M3<M4, H0	M0> M1, M2, M5-M7, H1-H9, H11-H13	C16, C17, C18, C19 > M1-M11, M21, H1-18, H21
		M4<H0	M1< M4, M9-M14, H0	C20> M1-M11, M21, H1-H21
		M4>H1, H2, H3, H4 H0> H1, H2, H3, H4	M2< M3-M4, M9-M14, H0	C21<C25, C28
			M3<M4, M14, H2, H4	C22>M1-M11, M21, H1-H13, H21
			M4> M5-M7, H1- H14	C23, C25> M1-M13, M21, H0-H22

			M5< M9, M11-M14, H0	C24> M1-M13, M21, H0-H21
			M6, M7<, M9, M12-M14, H0	C26> M1-M12, M21, H0-H21
			M9< H1-H7, H11	C27> M1-M11, M21, H1-H21
			M10< M14	C28> M0-M13, M21, H0-H23
			M10> H2, H4	
			M11<M14	M0>M1-M9, M21, H1-H12, H21
			M11>H2,H4,H6	
			M12> H1-H7, H11	M1<M12-M20, M22-M28, H22-H28
			M13, H0> H1-H13	M2<M11-M20, M22-M28, H19, H22-H28
			M14> M10, M11, H1-H14	M3<M12-M20, M22-M28, H0, H22-H28
			H2, H4< H14	M4<M14-M20, M22-M28, H24-H28
Chl-a	**PRT**	**O_2 T_4**	**O_2 T_{15}**	**O_2 T_{30}**
				M5<M11-M20, M22-M28, H0, H12, H20, H22-H28
				M6<M12-M20, M22-M28, H0, H22-H28
				M7<M11-M20, M22-M28, H0, H19, H22-H28
				M9< M12-M20, M22-M28, H0, H23-H28
				M10< M15-M20, M22-M28, H24-H27
				M11<M15-M18, M20, M22-M28, H3, H25, H26
				M12<M23, M25, M26, M28
				M12, M13> H1-H11
				M13, M12, M14>H21
				M13<M23, M25,M26, M28
				M14> H1-H13
				M15, M16> H1-H15, H17
				M17>H1-H18
				M18>H1-H17
				M19>H1-H14
				M20>H1-H17
				M21<M22-M28, H24-H28
				M14, M15, M16, M17, M19, M18, M20> M21, H21
				M22> H1-H18, H21
				M23> H1-H21
				M24>H1-H18, H21
Chl-a	**PRT**	**O_2 T_4**	**O_2 T_{15}**	**O_2 T_{30}**
				M25, M26, M28> H1-H21
				M27>H1-H18, H21
				H0>H1-H14, H21
				H0<H25, H26
				H1<H16, H18, H19, H20, H22, H28
				H2< H15, H16, H18-H20, H22-H28

				H3<H15-H20, H22-H28 H4<H15, H16, H18-H20, H22-H28 H5, H6< H16, H18-H20, H22-H28 H7<H18-H20, H22-H28 H9<H16, H18-H20, H22-H28 H10, H11<H19, H22-H28 H12,H13,H14< H22-H28 H15, H17<H23-H28 H16, H18< H24-H28 H19>H21 H19, H20< H24, H25, H26 H22<H25, H26
MS=3.2304 df = 18	MS=0.11054 df = 18	MS = 0.90073 df = 60	MS = 1.3681 df = 168	MS = 1.6451 df = 77

Table S2. Mean abundance of identified nematode genera in sediments from: field site, control at day 0, control and treatments (medium and high) at different time (4, 15, 30 days). Also, total nematode abundance by microcosm is shown. Code of treatments: 0= T0, C= control, M= medium and H= high. FT= Feeding Type: 1A= selective deposit-feeder, 1B= non-selective deposit-feeder, 2A= epigrowth feeder and 2B= omnivore/predator. Hyphen indicates absence.

	F.T	C4	C15	C30	M4	M15	M30	H4	H15	H30	T0	FIELD
Anonchus	2A	11 ± 3	10 ± 2	8 ± 3	6 ± 3	8 ± 3	2 ± 1	7 ± 3	7 ± 3	3 ± 2	15 ± 9	8 ± 4
Anoplostoma	1B	3 ± 3	2 ± 1	2 ± 0	3 ± 2	1 ± 1	-	3 ± 2	2 ± 1	0 ± 1	3 ± 4	12 ± 8
Antomicron	1A	1 ± 1	1 ± 1	0 ± 1	1 ± 1	1 ± 2	0 ± 1	-	-	0 ± 1	-	-
Daptonema	1B	0 ± 1	1 ± 1	-	0 ± 1	1 ± 1	-	1 ± 1	-	-	1 ± 1	1 ± 1
Halalaimus	1A	-	-	-	0 ± 1	-	-	-	-	-	-	-
Kosswigonema	2B	0 ± 1	-	-	-	-	-	0 ± 1	-	-	0 ± 1	3 ± 5
Leptolaimus	1A	2 ± 1	2 ± 2	1 ± 1	1 ± 1	2 ± 2	1 ± 1	2 ± 1	1 ± 1	1 ± 1	3 ± 1	4 ± 5
Morphotype 3	1B	0 ± 1	-	-	-	-	-	-	-	-	-	-
Neochromadora	2A	-	-	0 ± 1	-	-	-	-	-	-	0 ± 1	0 ± 1
Oncholaimellus	2B	0 ± 1	-	-	-	1 ± 1	-	-	-	-	-	-
Oncholaimus	2B	0 ± 1	-	-	-	0 ± 1	-	0 ± 1	-	-	-	1 ± 1
Oxystomina	1A	7 ± 4	7 ± 3	9 ± 3	7 ± 4	6 ± 2	3 ± 2	4 ± 2	5 ± 4	6 ± 2	7 ± 4	6 ± 6
Pseudochromadora	2A	37 ± 12	48 ± 3	44 ± 15	45 ± 6	53 ± 14	87 ± 8	35 ± 10	53 ± 8	69 ± 11	26 ± 19	24 ± 17
Paradontophora	2B	2 ± 1	1 ± 2	2 ± 1	3 ± 1	1 ± 1	0 ± 1	4 ± 2	2 ± 1	1 ± 1	5 ± 3	3 ± 2
Paralinhomoeus	1B	3 ± 2	2 ± 1	3 ± 2	3 ± 2	1 ± 1	2 ± 3	5 ± 3	4 ± 2	3 ± 1	4 ± 4	8 ± 6
Sabatieria	1B	9 ± 2	5 ± 2	8 ± 2	7 ± 2	8 ± 4	1 ± 1	9 ± 3	6 ± 5	1 ± 1	8 ± 4	4 ± 3
Theristus	1B	1 ± 2	1 ± 1	1 ± 1	1 ± 1	0 ± 1	0 ± 1	-	0 ± 1	0 ± 1	3 ± 3	2 ± 4
Terschellingia	1A	16 ± 6	16 ± 4	20 ± 7	17 ± 1	19 ± 7	7 ± 5	20 ± 5	17 ± 9	15 ± 8	15 ± 8	17 ± 11
Viscosia	2B	10 ± 3	8 ± 4	4 ± 2	8 ± 2	2 ± 2	1 ± 1	12 ± 4	7 ± 4	2 ± 1	22 ± 13	22 ± 18
Nematodes total abundance	-	1514 ± 1374	1162 ± 489	937 ± 633	750 ± 402	709 ± 389	289 ± 101	249 ± 98	666 ± 229	430 ± 137	627 ± 96	780 ± 327