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Functional trait responses to sediment deposition reduce macrofauna-mediated ecosystem functioning in an estuarine mudflat

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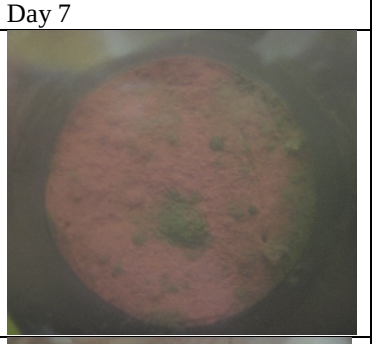
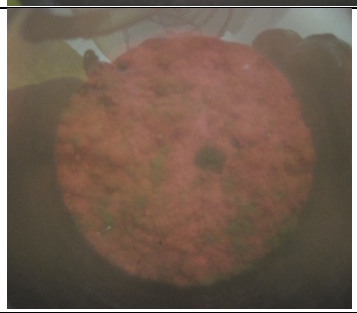
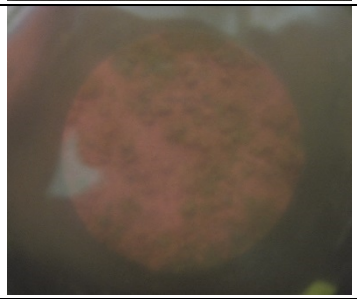
Table S1: Vertical oxygen concentration profiles. Depths are shown in µm, oxygen concentrations in µmol L^{-1}. All values are means ± standard error. T0 till T5 represent the four different treatments, each with an initial deposited sediment layer of 0 (T0), 1 (T1), 2 (T2) or 5 (T5) cm, that compacted to 1.09 ± 0.18 (T1), 1.52 ± 0.10 (T2) and 3.75 ± 0.11 cm (T5).

T0		**T1**		**T2**		**T5**	
Depth	$[O_2]$	Depth	$[O_2]$	Depth	$[O_2]$	Depth	$[O_2]$
-1000	267.59 ± 25.01	-1000	260.65 ± 21.94	-1000	269.10 ± 23.18	-1000	276.92 ± 23.56
-750	267.49 ± 25.02	-750	260.55 ± 21.92	-750	268.68 ± 23.23	-750	276.78 ± 23.49
-500	267.19 ± 24.95	-500	260.56 ± 21.98	-500	268.21 ± 23.55	-500	276.26 ± 23.37
-250	266.78 ± 24.82	-250	260.24 ± 22.03	-250	266.67 ± 23.91	-250	275.37 ± 23.17
0	264.96 ± 24.65	0	258.13 ± 21.47	0	262.18 ± 22.88	0	273.68 ± 22.79
250	238.56 ± 25.35	250	246.07 ± 21.72	250	249.49 ± 22.78	250	259.45 ± 24.93
500	198.44 ± 26.64	500	228.91 ± 23.35	500	233.66 ± 20.64	500	234.26 ± 30.29
750	160.76 ± 23.76	750	196.85 ± 19.06	750	203.30 ± 16.06	750	201.92 ± 34.56
1000	129.17 ± 20.30	1000	159.12 ± 17.56	1000	177.36 ± 14.29	1000	173.89 ± 38.78
1250	95.36 ± 15.55	1250	130.09 ± 18.75	1250	148.80 ± 16.57	1250	138.42 ± 31.67
1500	65.00 ± 13.72	1500	107.64 ± 20.46	1500	126.25 ± 15.47	1500	102.02 ± 24.43
1750	42.99 ± 11.08	1750	91.66 ± 21.93	1750	107.81 ± 15.90	1750	80.68 ± 21.82
2000	28.31 ± 8.65	2000	79.89 ± 22.24	2000	93.51 ± 16.43	2000	64.74 ± 20.25
2250	18.41 ± 6.30	2250	71.11 ± 21.92	2250	82.51 ± 16.70	2250	53.01 ± 18.43
2500	11.17 ± 4.31	2500	63.89 ± 21.51	2500	73.88 ± 16.02	2500	45.20 ± 16.37
2750	6.07 ± 2.69	2750	58.76 ± 20.81	2750	66.80 ± 15.13	2750	40.03 ± 14.56
3000	2.45 ± 1.52	3000	55.00 ± 20.63	3000	60.45 ± 13.77	3000	34.16 ± 12.99
3250	1.32 ± 0.79	3250	51.47 ± 20.11	3250	55.34 ± 12.25	3250	29.81 ± 11.56
3500	0.40 ± 0.25	3500	47.56 ± 19.60	3500	50.89 ± 11.24	3500	28.13 ± 10.40
3750	0.00 ± 0.00	3750	42.90 ± 19.07	3750	46.39 ± 10.30	3750	26.48 ± 9.79
4000	0.00 ± 0.00	4000	39.05 ± 19.08	4000	42.30 ± 9.16	4000	25.35 ± 9.65
		4250	36.54 ± 18.53	4250	38.54 ± 8.15	4250	25.58 ± 9.97
		4500	33.83 ± 17.78	4500	34.80 ± 7.52	4500	26.33 ± 10.71
		4750	31.47 ± 17.00	4750	31.35 ± 6.82	4750	27.18 ± 12.00
		5000	28.82 ± 15.88	5000	28.93 ± 6.36	5000	28.28 ± 13.27
		5250	26.12 ± 14.44	5250	26.61 ± 5.72	5250	29.81 ± 14.79
		5500	23.34 ± 12.92	5500	24.10 ± 5.22	5500	31.22 ± 16.62
		5750	20.00 ± 10.91	5750	21.67 ± 5.06	5750	34.40 ± 18.85
		6000	16.95 ± 9.29	6000	19.30 ± 5.00	6000	36.62 ± 19.90
		6250	17.65 ± 8.07	6250	17.76 ± 4.88	6250	38.16 ± 20.66
		6500	14.21 ± 6.49	6500	15.63 ± 4.40	6500	40.22 ± 21.33
		6750	11.24 ± 5.23	6750	13.68 ± 3.88	6750	42.55 ± 22.46
		7000	8.08 ± 3.91	7000	12.03 ± 3.68	7000	45.16 ± 23.84
		7250	4.98 ± 2.83	7250	10.28 ± 3.24	7250	48.35 ± 25.36
		7500	2.91 ± 2.13	7500	8.95 ± 3.00	7500	51.79 ± 26.79
		7750	1.84 ± 1.82	7750	8.00 ± 2.97	7750	54.69 ± 28.15
		8000	1.30 ± 1.30	8000	7.10 ± 2.73	8000	55.57 ± 28.48
		8250	1.00 ± 1.00	8250	6.07 ± 2.41	8250	56.30 ± 28.78
		8500	0.97 ± 0.97	8500	5.35 ± 2.14	8500	57.00 ± 28.91
		8750	0.10 ± 0.10	8750	4.79 ± 1.97	8750	58.51 ± 29.64
		9000	0.00 ± 0.00	9000	4.31 ± 1.84	9000	60.58 ± 30.33
		9250	0.00 ± 0.00	9250	3.78 ± 1.80	9250	61.67 ± 30.73
		9500	0.00 ± 0.00	9500	3.07 ± 1.57	9500	62.61 ± 30.98
				9750	2.93 ± 1.59	9750	63.37 ± 31.15
				10000	3.08 ± 1.83	10000	64.44 ± 31.46
				10250	2.72 ± 1.82	10250	65.09 ± 31.58
				10500	1.96 ± 1.24	10500	65.71 ± 31.45
				10750	1.91 ± 1.20	10750	65.98 ± 31.31
				11000	1.64 ± 1.19	11000	66.26 ± 31.22
				11250	1.21 ± 0.86	11250	66.41 ± 31.10
				11500	0.25 ± 0.24	11500	66.57 ± 30.98
				11750	0.17 ± 0.13	11750	66.81 ± 30.83
				12000	0.24 ± 0.19	12000	67.08 ± 30.74

12250	0.11 ± 0.11	12250	67.15 ± 30.57
12500	0.04 ± 0.04	12500	67.07 ± 30.37
12750	0.00 ± 0.00	12750	66.96 ± 30.24
13000	0.00 ± 0.00	13000	66.97 ± 30.07
		13250	66.92 ± 29.91
		13500	66.62 ± 29.76
		13750	66.12 ± 29.56
		14000	65.41 ± 29.21
		14250	64.87 ± 29.06
		14500	64.15 ± 28.71
		14750	63.06 ± 28.26
		15000	61.95 ± 27.82
		15250	60.91 ± 27.39
		15500	59.95 ± 27.06
		15750	59.05 ± 26.69
		16000	58.09 ± 26.26
		16250	57.29 ± 25.95
		16500	56.83 ± 25.88
		16750	56.18 ± 25.71
		17000	54.88 ± 25.26
		17250	53.71 ± 24.73
		17500	52.69 ± 24.29
		17750	51.63 ± 23.88
		18000	50.30 ± 23.25
		18250	49.28 ± 22.87
		18500	48.41 ± 22.54
		18750	47.35 ± 22.11
		19000	46.32 ± 21.70
		19250	45.58 ± 21.43
		19500	44.62 ± 21.04
		19750	43.72 ± 20.66
		20000	42.80 ± 20.31
		20250	41.67 ± 19.90
		20500	40.28 ± 19.54
		20750	39.05 ± 19.13
		21000	38.00 ± 18.81
		21250	37.00 ± 18.42
		21500	35.85 ± 17.85
		21750	34.84 ± 17.38
		22000	33.18 ± 16.75
		22250	32.20 ± 16.38
		22500	30.94 ± 15.89
		22750	29.57 ± 15.35
		23000	28.84 ± 15.03
		23250	27.79 ± 14.50
		23500	27.00 ± 14.26
		23750	26.14 ± 13.88
		24000	25.25 ± 13.45
		24250	24.23 ± 12.96
		24500	23.17 ± 12.52
		24750	21.90 ± 12.00
		25000	20.70 ± 11.48
		25250	19.60 ± 10.85
		25500	18.48 ± 10.31
		25750	17.53 ± 9.88
		26000	16.65 ± 9.44
		26250	15.76 ± 8.98
		26500	15.25 ± 8.71
		26750	14.58 ± 8.33
		27000	13.98 ± 8.02

27250	13.19 ± 7.60
27500	12.43 ± 7.19
27750	11.67 ± 6.75
28000	11.00 ± 6.35
28250	10.15 ± 5.87
28500	9.20 ± 5.34
28750	8.52 ± 4.93
29000	8.02 ± 4.68
29250	7.47 ± 4.38
29500	7.07 ± 4.17
29750	6.74 ± 4.00
30000	6.19 ± 3.68
30250	5.84 ± 3.44
30500	5.56 ± 3.29
30750	5.21 ± 3.10
31000	4.93 ± 2.95
31250	4.29 ± 2.63
31500	3.54 ± 2.20
31750	3.21 ± 1.97
32000	3.12 ± 1.91
32250	2.55 ± 1.60
32500	2.31 ± 1.44
32750	1.97 ± 1.23
33000	1.61 ± 1.00
33250	1.23 ± 0.76
33500	0.89 ± 0.55
33750	0.43 ± 0.29
34000	0.17 ± 0.17
34250	0.07 ± 0.07
34500	0.00 ± 0.00

Figure S1: Photos from the surface of the control cores, taken the first, second, and seventh day of the experiment. The six rows, labeled 0.1 till 0.6, represent the six replicates of the control treatment.

	Day 1	Day 2	Day 7
0.1			
0.2			
0.3			
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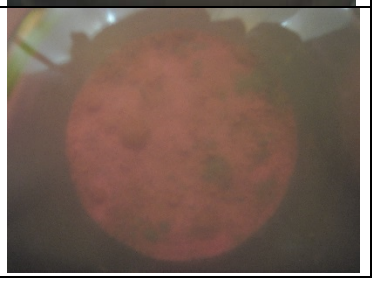
0.5			

0.6