Supplementary information

Carbon mineralization pathways and bioturbation in coastal Brazilian sediments

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Table S1: Summary of statistical analysis from variables with significant differences. Letters "a", "b" and "c" represent significant difference within the factors "time" and "station" observed in Tukey post hoc tests.

Two-way ANOVA	**F**	**p**	**Tukey test**				
Bottom water O_2			September	February	St 5	St 6	St 7
Time	$F_{1,16}$ = 393.77	<0.001	a	b			
Station	$F_{1,16}$ =0.70	0.515					
Time X Station	$F_{1,16}$ =0.90	0.431					
Sediment Chlorophyll-a							
Time	$F_{1,16}$ = 19.36	0.001	a	b	a	b	bc
Station	$F_{1,16}$ = 13.11	0.001					
Time X Station	$F_{1,16}$ = 6.69	0.013					
Sediment Phaeopigments							
Time	$F_{1,16}$ = 21.33	<0.001	a	b			
Station	$F_{1,16}$ =1.06	0.380					
Time X Station	$F_{1,16}$ = 2.41	0.136					
TCO_2 efflux							
Time	$F_{1,56}$ =31.61	<0.001	a	b			
Station	$F_{1,56}$ = 0.53	0.591					
Time X Station	$F_{1,56}$ = 1.98	0.149					
O_2 flux							
Time	$F_{1,56}$ = 319.05	<0.001	a	b			
Station	$F_{1,56}$ = 1.17	0.316					
Time X Station	$F_{1,56}$ = 1.34	0.270					
NO_x flux							
Time	$F_{1,36}$ = 118.17	<0.001	a	b	a	b	a
Station	$F_{1,36}$ = 7.66	0.002					
Time X Station	$F_{1,36}$ = 1.36	0.272					

Continuation of Table S1

Two-way ANOVA	F	p	Tukey test				
			September	February	St 5	St 6	St 7
Macrofaunal abundance							
Time	$F_{1,17} = 48.55$	<0.001	a	b			
Station	$F_{1,17} = 0.60$	0.563					
Time X Station	$F_{1,17} = 1.05$	0.379					
Macrofaunal biomass							
Time	$F_{1,17} = 6.28$	0.028	a	b			
Station	$F_{1,17} = 0.85$	0.453					
Time X Station	$F_{1,17} = 3.47$	0.065					
Macrofaunal bioirrigation							
Time	$F_{1,15} = 13.57$	0.004	a	b			
Station	$F_{1,15} = 0.63$	0.555					
Time X Station	$F_{1,15} = 1.38$	0.296					
Surface diffusors							
Time	$F_{1,17} = 11.84$	0.005	a	b			
Station	$F_{1,17} = 0.75$	0.493					
Time X Station	$F_{1,17} = 1.05$	0.381					
Gallery diffusors							
Time	$F_{1,17} = 17.80$	0.001	a	b			
Station	$F_{1,17} = 0.13$	0.88					
Time X Station	$F_{1,17} = 0.13$	0.88					
Epifaunal diffusors							
Time	$F_{1,17} = 17.80$	0.001	a	b			
Station	$F_{1,17} = 0.13$	0.88					
Time X Station	$F_{1,17} = 0.13$	0.88					

Table S2: Stoichiometry of carbon and nitrogen in porewater and jars and N mineralization processes at St 5, St 6 and St 7 during September 2012 and February 2014.

	St 5	St 6	St 7
C:N in porewater			
September 2012	7.2	7.8	5.5
February 2014	6.0	7.3	8.8
C:N in jars*			
September 2012	8.2	8.5	7.7
February 2014	6.4	7.7	9.4
Total N mineralization (mmol m^{-2} d^{-1})			
September 2012	2.4	1.3	2.3
February 2014	3.6	3.2	2.4
NH_4^+ production jars * (mmol m^{-2} d^{-1})			
September 2012	3.0	1.4	2.8
February 2014	1.8	1.1	2.4
Nitrification (mmol m^{-2} d^{-1})			
September 2012	2.5	1.8	3.5
February 2014	2.5	2.0	0.9
Denitrification (mmol m^{-2} d^{-1})			
September 2012	3.1	2.2	3.9
February 2014	2.6	1.8	1.0

* Corrected for NH_4^+ adsorption. C:N in porewater was determined by the slope of linear regression between TCO_2 and NH_4^+ in the upper 10 cm of the sediment. Total N mineralization was determined by dividing the TCO_2 effluxes with the C:N in jars. Nitrification was estimated by subtracting NH_4^+ fluxes from the total N mineralization. Denitrification was estimated by nitrification minus NO_x^- fluxes.