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Supplement of

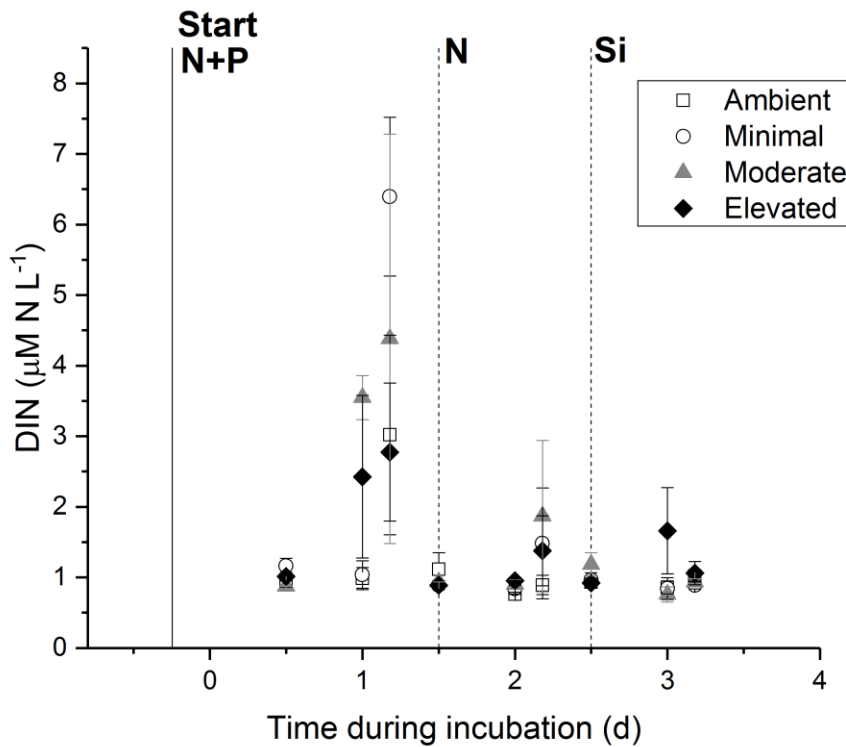
Short-term fate of intertidal microphytobenthos carbon under enhanced nutrient availability: a ^{13}C pulse-chase experiment

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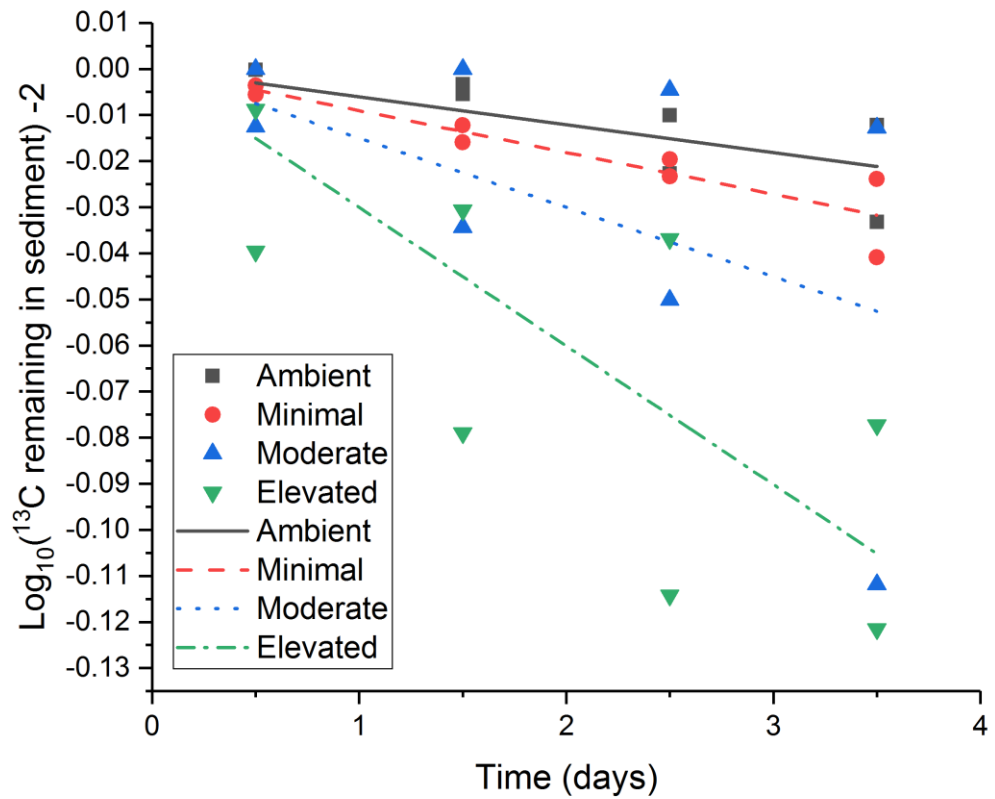
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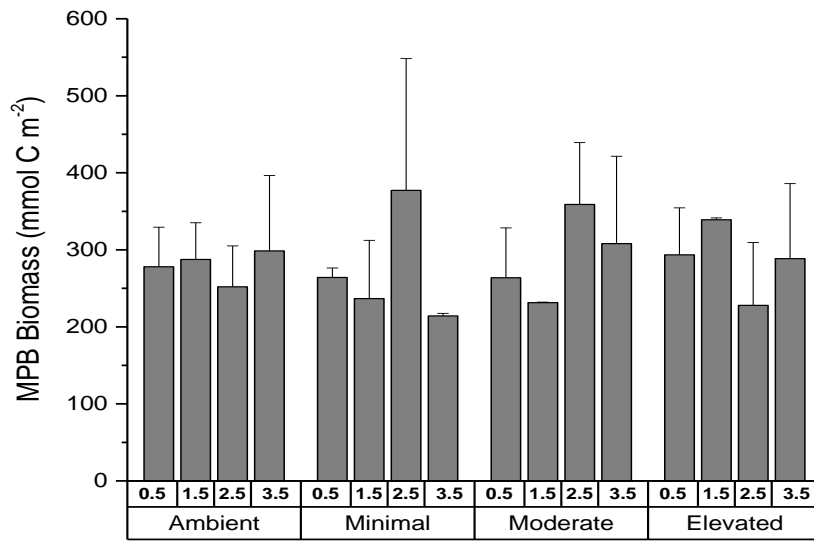
4 **Supplemental Figure 1:** Dissolved inorganic nitrogen in the overlying core waters during
5 sampling for light and dark incubations. The y-axis intercept represents the initial application of
6 H^{13}CO_3 to the sediment. The solid line is when cores were placed into treatment tanks prior to
7 the start of incubation. Dashed lines represent additional treatment pulses ($\text{N}=\text{NH}_4^+$, $\text{P}=\text{PO}_4^{3-}$,
8 $\text{Si}=\text{SiO}_3$) that occurred during incubation.



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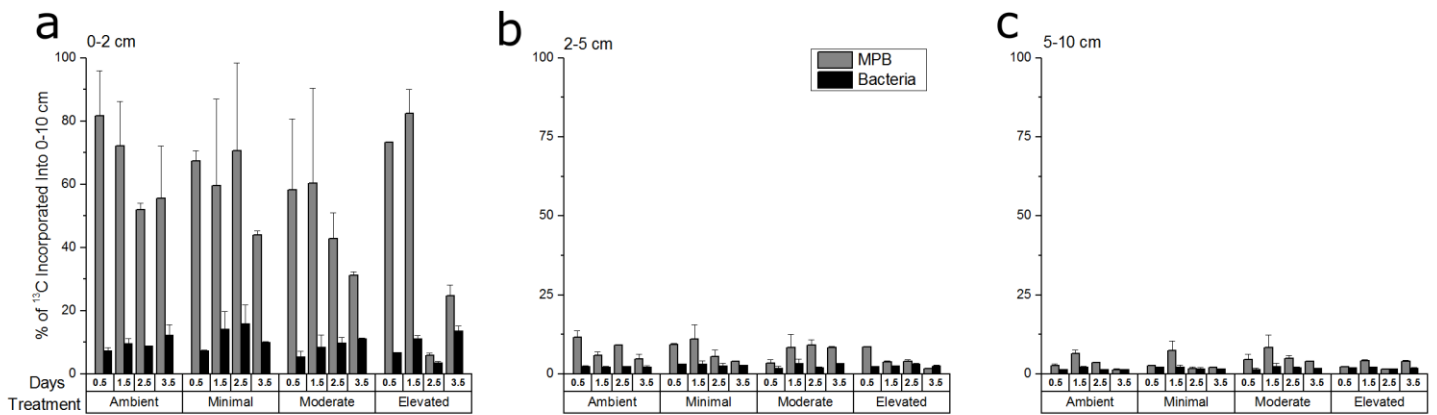
10 **Supplemental Figure 2:** Slope comparison between treatments for \log_{10} transformed ^{13}C
 11 remaining in sediment. The model with different slopes for each treatment fitted significantly
 12 better than the model with a single slope (F-test, $F_{3,28}=9.84$, $P < 0.001$).

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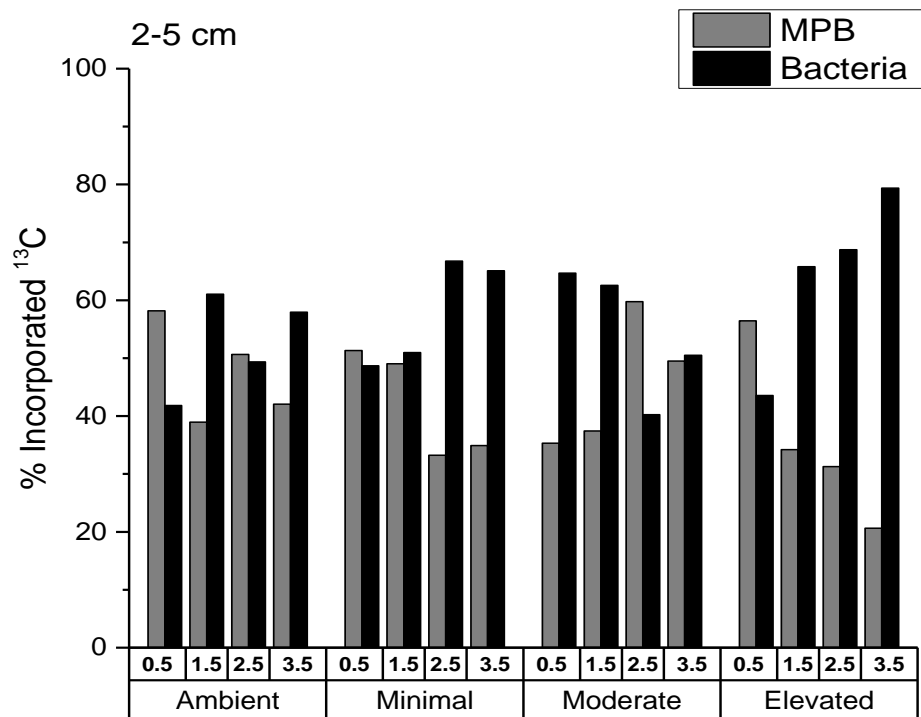


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15 **Supplemental Figure 3:** MPB carbon biomass in 0 to 2 cm sediments calculated from
 16 chlorophyll *a* concentrations, assuming a C:Chl-*a* ratio of 40 (mean ± SE).



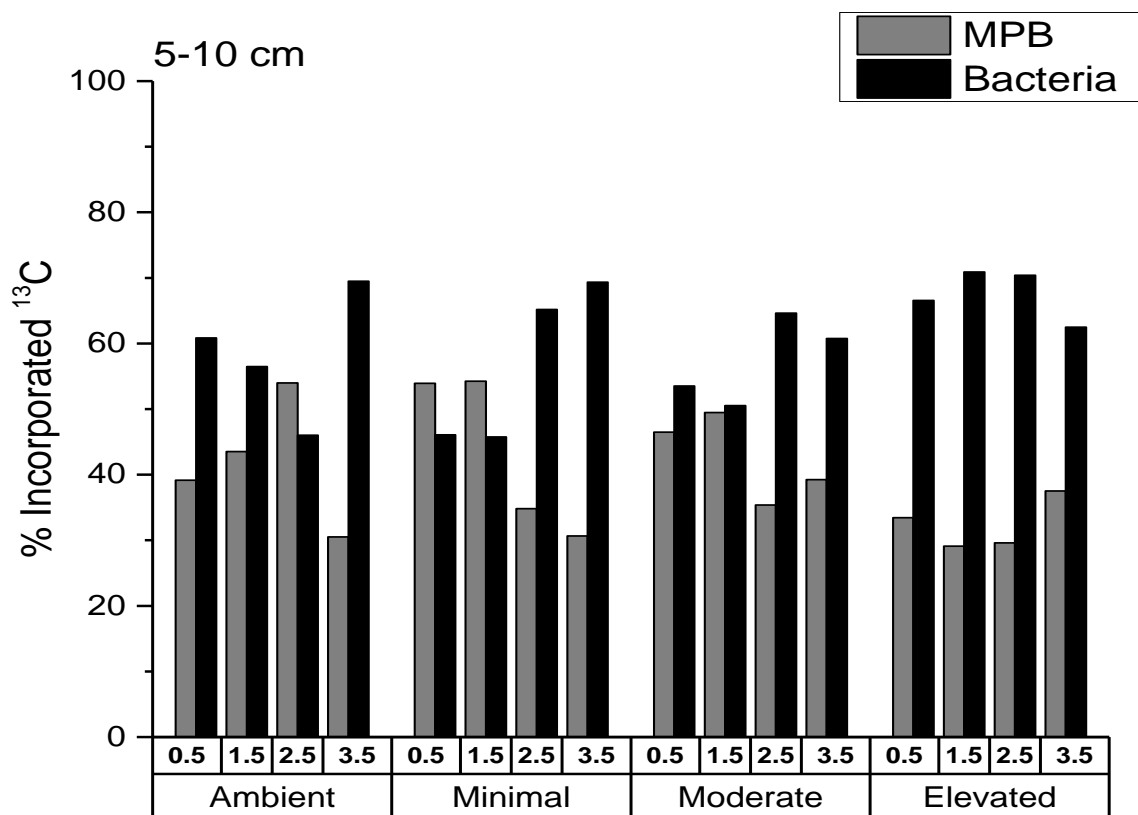
18 **Supplemental Figure 4:** Excess ¹³C incorporation into MPB and bacterial biomass at depths a)
 19 0-2 cm, b) 2-5 cm and c) 5-10 cm as a portion of the total ¹³C in 0-10 cm sediment OC at each
 20 time.



21

22 **Supplemental Figure 5:** Excess ^{13}C incorporation into MPB and bacterial biomass at a depth of
 23 2-5 cm as a percentage of the total ^{13}C in microbial biomass at 2-5 cm at each time period. There
 24 are no error bars as PLFAs were analyzed for only one replicate sample from each time period.

25



26

27 **Supplemental Figure 6:** Excess ^{13}C incorporation into MPB and bacterial biomass at a depth of
 28 5 -10 cm as a percentage of the total ^{13}C in microbial biomass at 5-10 cm at each time period.
 29 There are no error bars as PLFAs were analyzed for only one replicate sample from each time
 30 period.