



*Supplement of*

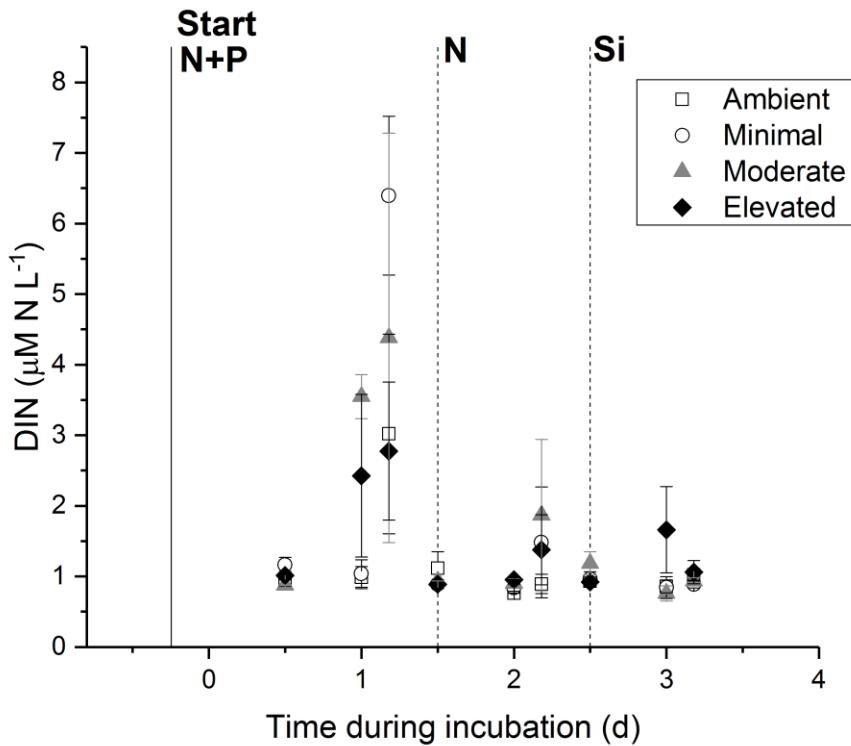
## **Short-term fate of intertidal microphytobenthos carbon under enhanced nutrient availability: a $^{13}\text{C}$ pulse-chase experiment**

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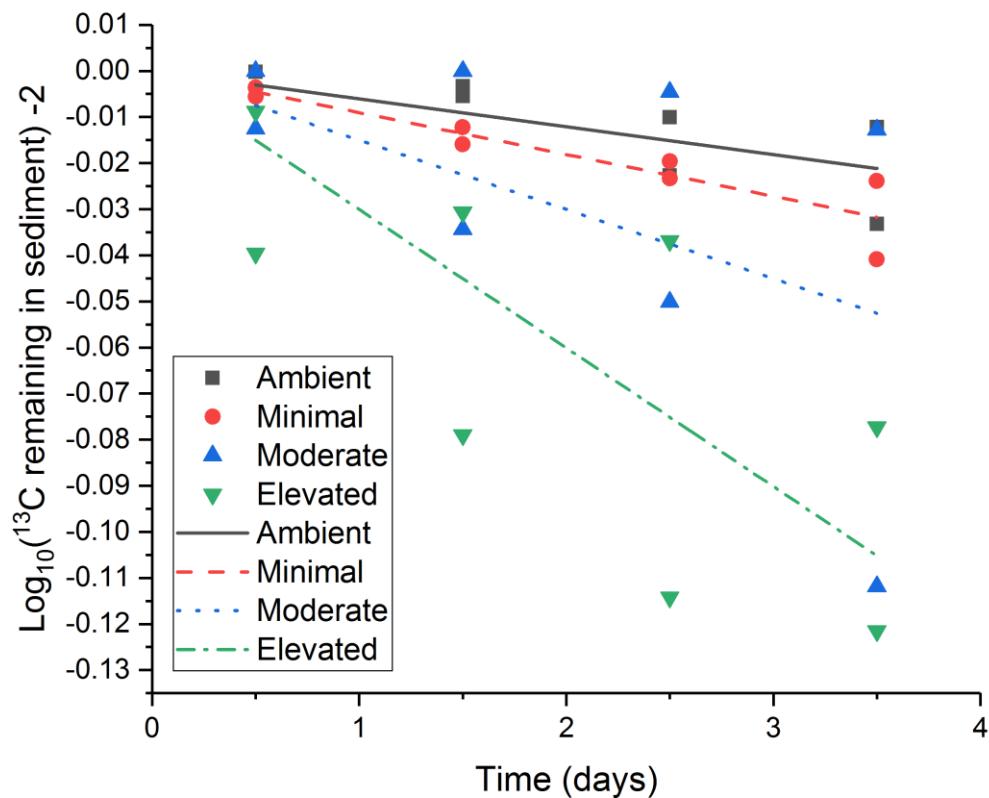
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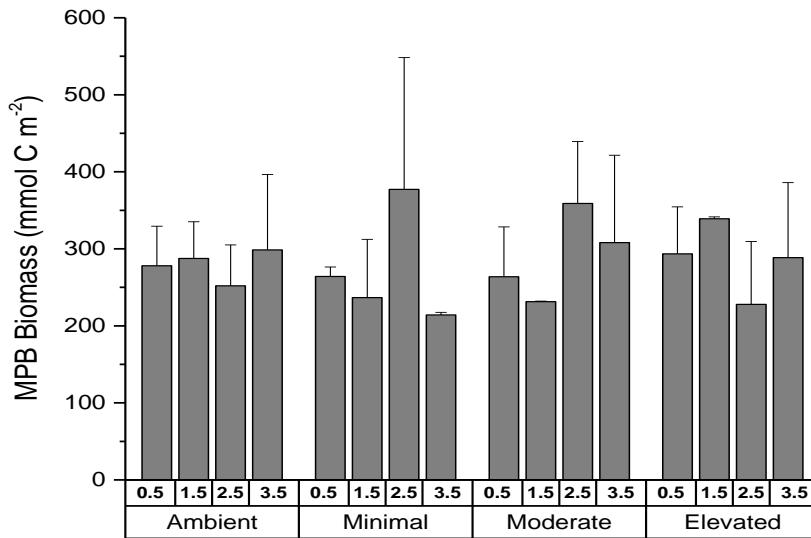
4 **Supplemental Figure 1:** Dissolved inorganic nitrogen in the overlying core waters during  
 5 sampling for light and dark incubations. The y-axis intercept represents the initial application of  
 6  $\text{H}^{13}\text{CO}_3$  to the sediment. The solid line is when cores were placed into treatment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



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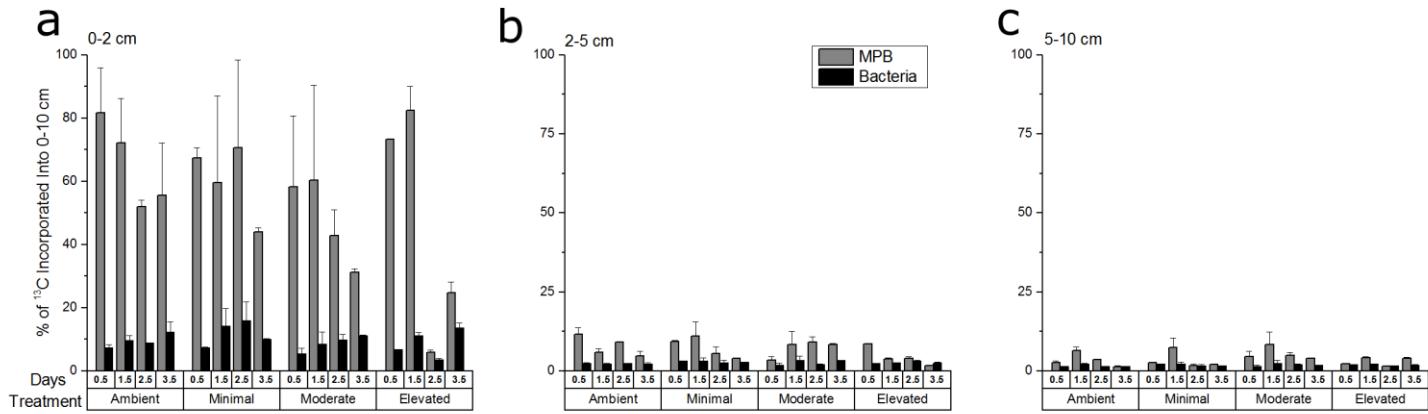
10 **Supplemental Figure 2:** Slope comparison between treatments for  $\log_{10}$  transformed  $^{13}\text{C}$   
11 remaining in sediment. The model with different slopes for each treatment fitted significantly  
12 better than the model with a single slope ( $F$ -test,  $F_{3,28}=9.84$ ,  $P < 0.001$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

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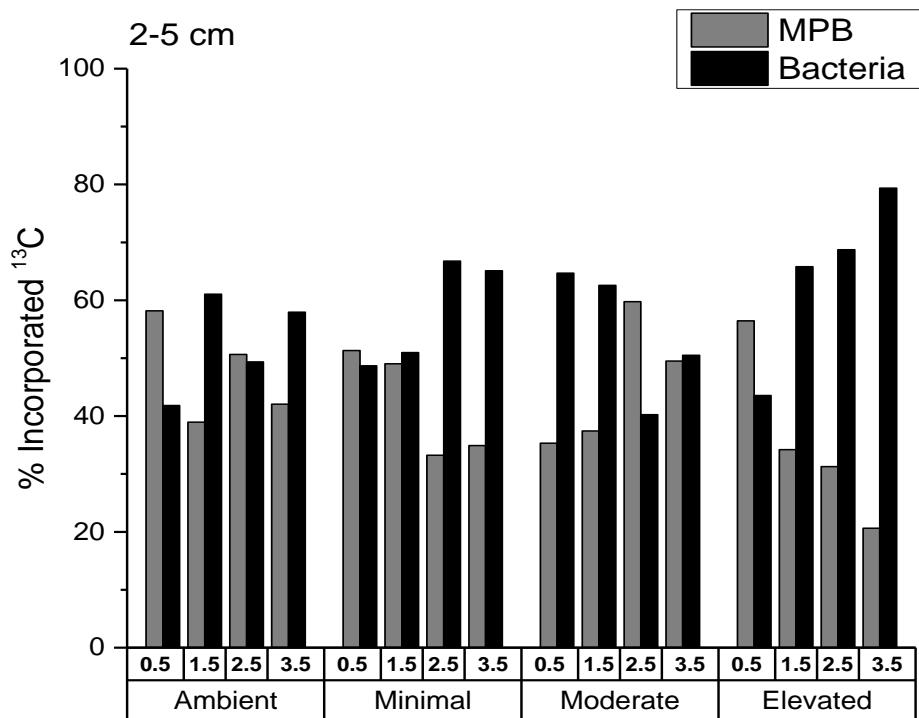


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15 **Supplemental Figure 3:** MPB carbon biomass in 0 to 2 cm sediments calculated from  
16 chlorophyll *a* concentrations, assuming a C:Chl-*a* ratio of 40 (mean  $\pm$  SE).



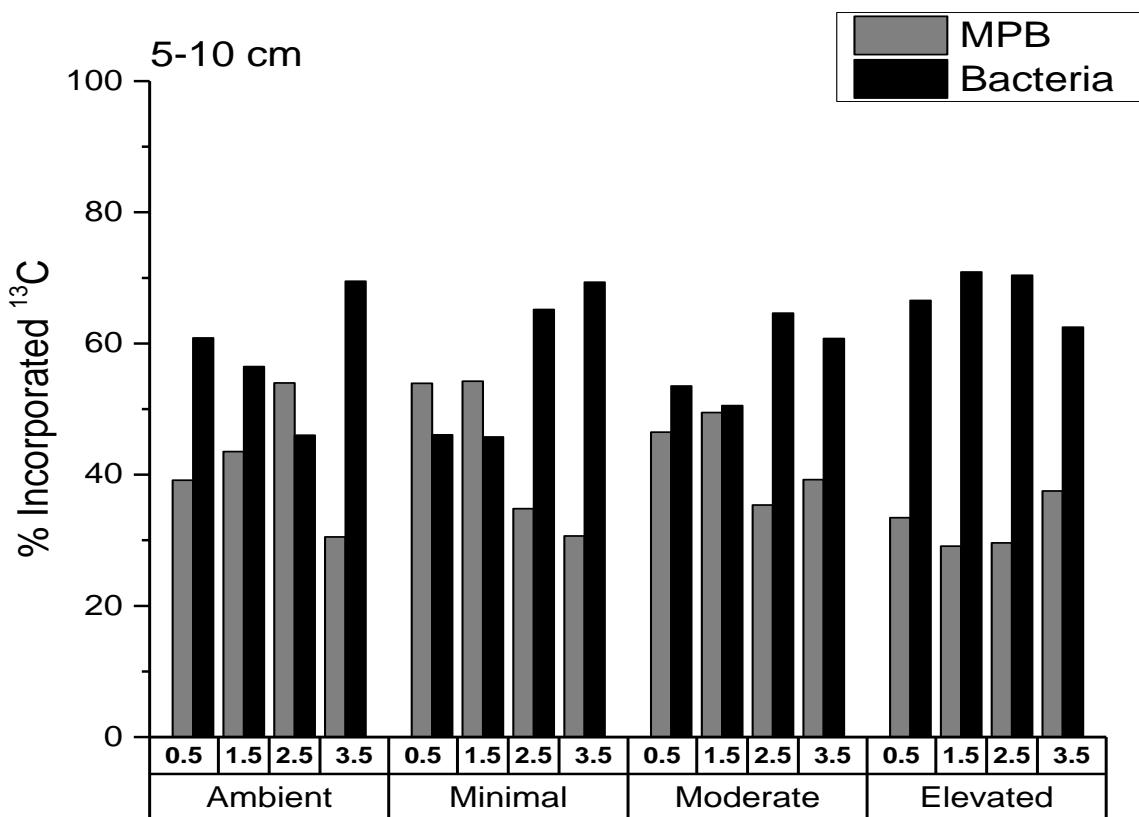
18 **Supplemental Figure 4:** Excess <sup>13</sup>C incorporation into MPB and bacterial biomass at depths a)  
19 b) 0-2 cm, b) 2-5 cm and c) 5-10 cm as a portion of the total <sup>13</sup>C in 0-10 cm sediment OC at each  
20 time.



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22 **Supplemental Figure 5:** Excess  $^{13}\text{C}$  incorporation into MPB and bacterial biomass at a depth of  
 23 2-5 cm as a percentage of the total  $^{13}\text{C}$  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.

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27 **Supplemental Figure 6:** Excess  $^{13}\text{C}$  incorporation into MPB and bacterial biomass at a depth of  
 28 5 - 10 cm as a percentage of the total  $^{13}\text{C}$  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.