

Supporting Information. Rewcastle, K.E., J.A. Henning, Q.D. Read, R.E. Irwin, N.J. Sanders, and A.T. Classen. 2021. Plant removal across an elevational gradient marginally reduces rates, substantially reduces variation in mineralization. *Ecology*.

Appendix S1

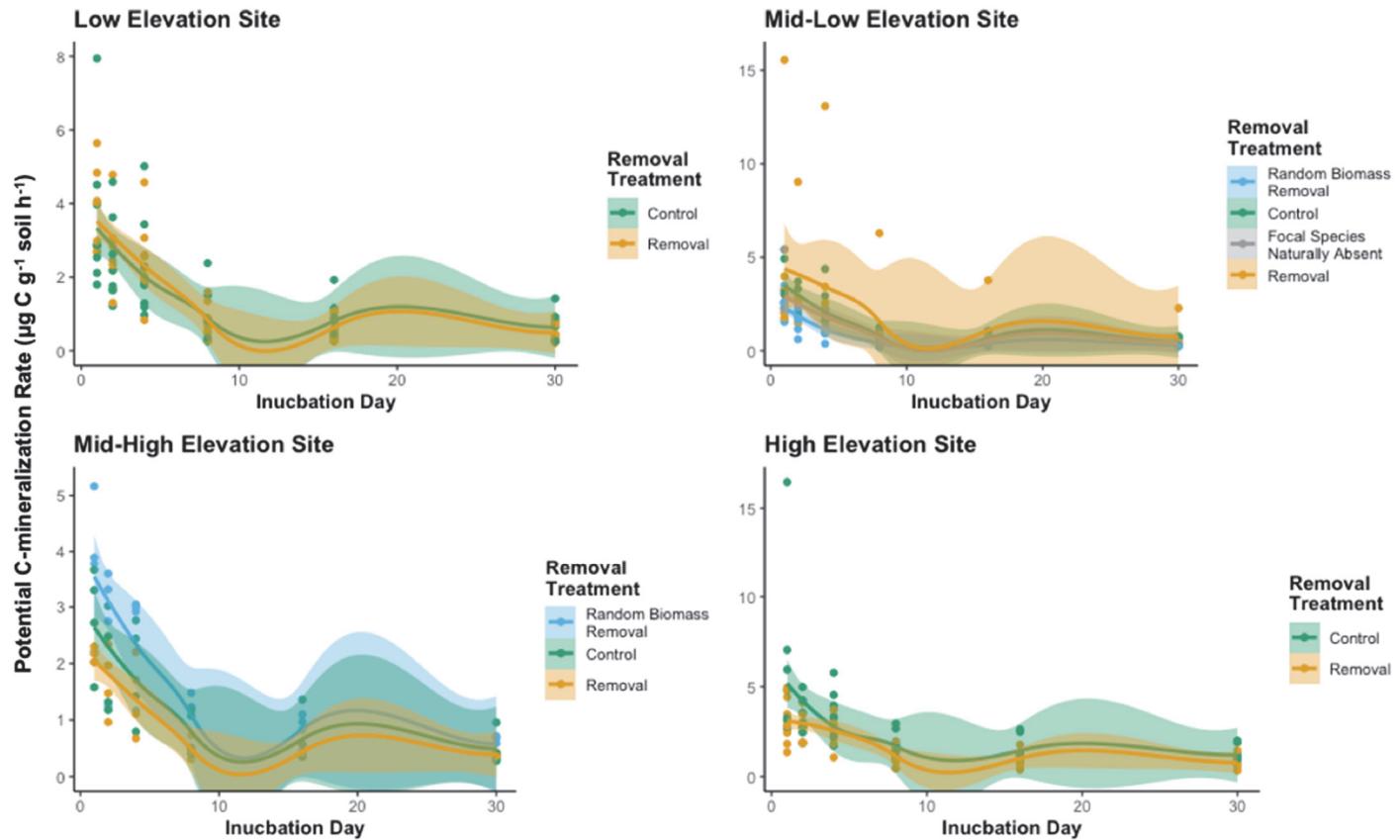


Figure S1. The pattern of C-mineralization rates over the course of the thirty-day incubation period did not vary across removal treatments or across the elevational gradient. However, the magnitude of C-mineralization rates was greatest at the high elevation site, consistent with the result that total C-mineralization was greatest at the high elevation site (Fig. 1b) and that SOM content was also highest at the high elevation site (Fig. S2).

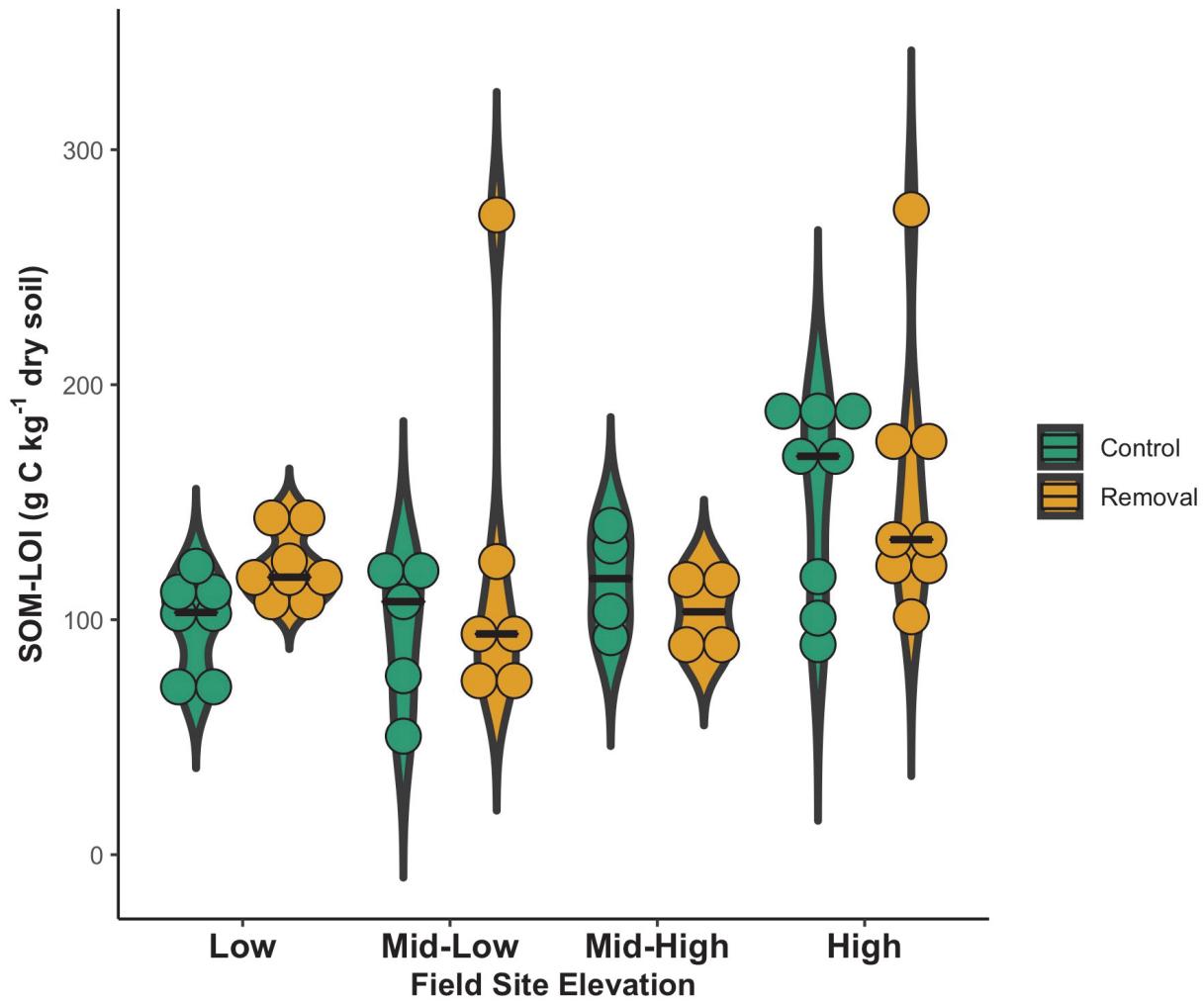


Figure S2. Removal treatments had no discernible impact on SOM content, measured via LOI, across the elevational gradient. SOM content at the high-elevation site is notably greater than SOM content at all other sites.

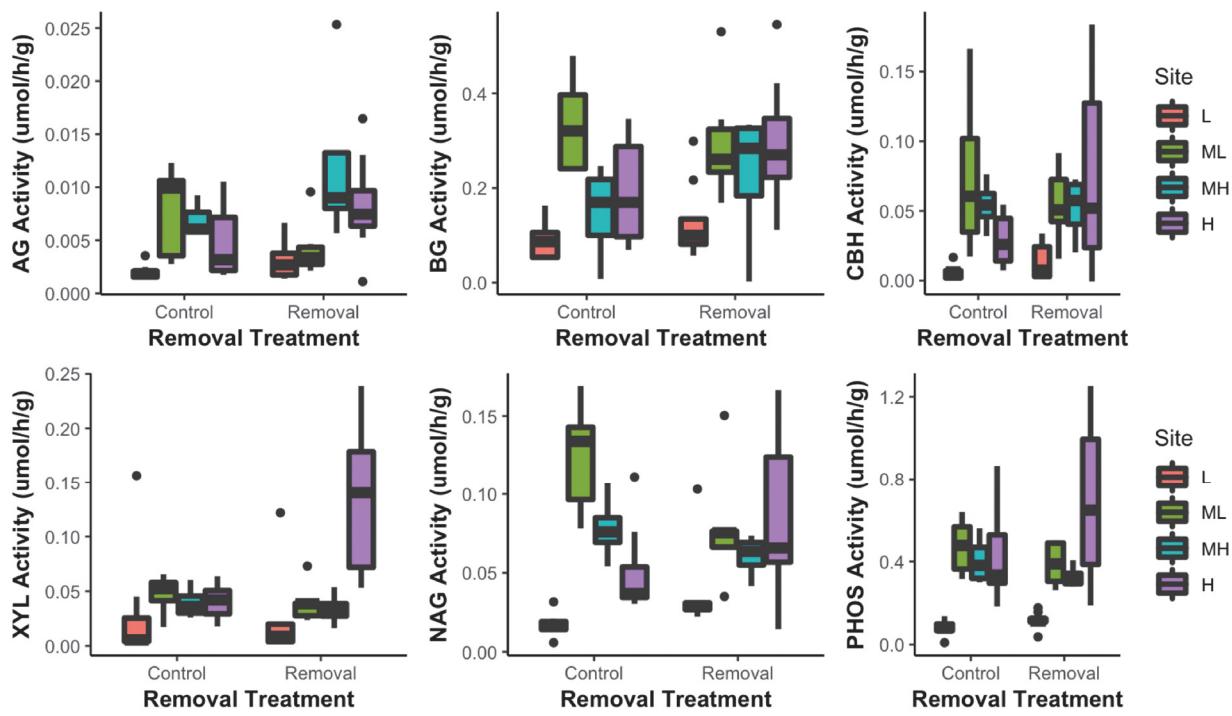


Figure S3. Potential extracellular enzyme activities of six different enzymes in soils sampled from plant removal experiments at four different sites across an elevational gradient (L = Low, ML = Mid-Low, MH = Mid-High, H = High elevation sites). Activity of all enzymes varied significantly by site but not by removal treatment. However, enzymes NAG and XYL showed a significant response to the interaction between removal treatment and site.

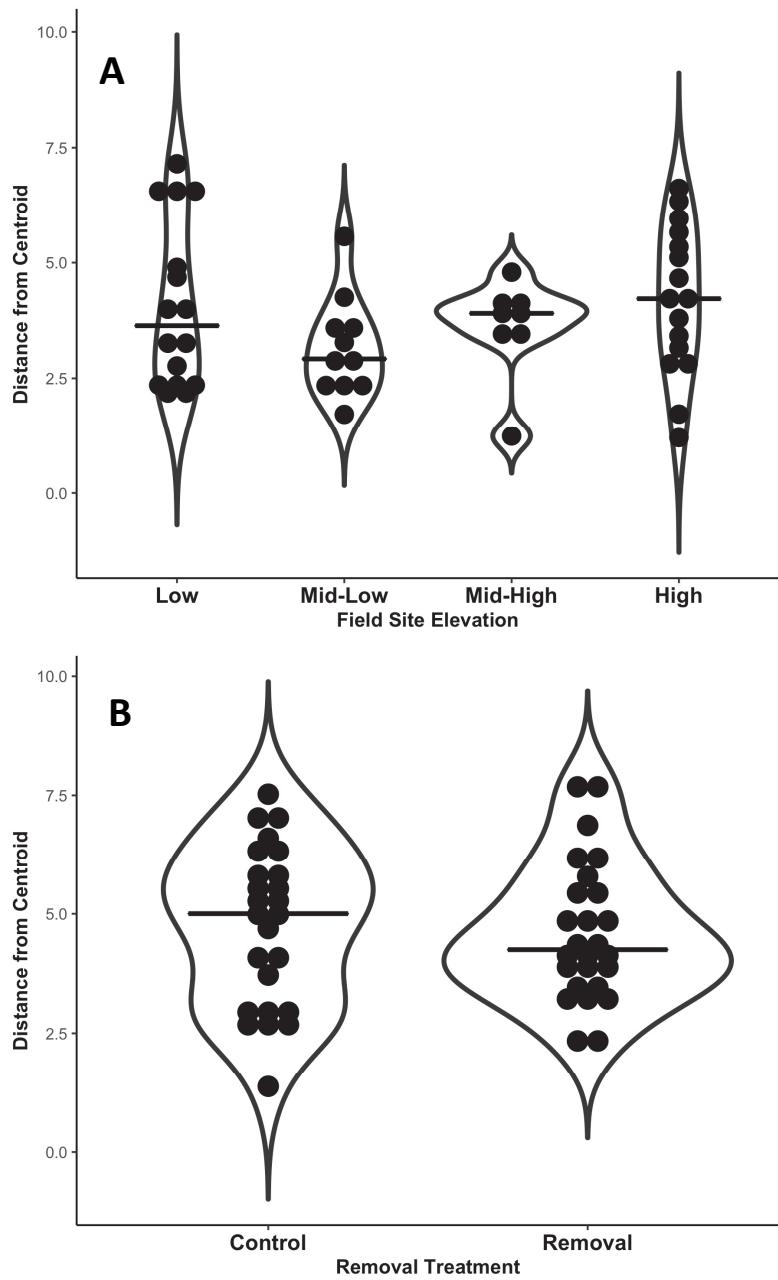


Figure S4. Neither site (a) nor the plant removal treatment (b) affected the distribution of variation in plant community structure within treatment/site groups. Crossbars indicate group medians.