



Supplement of

Killing the predator: impacts of highest-predator mortality on the global-ocean ecosystem structure

David Talmy et al.

Correspondence to: David Talmy (dtalmy@utk.edu)

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S1. Auxilliary Biogeochemical properties

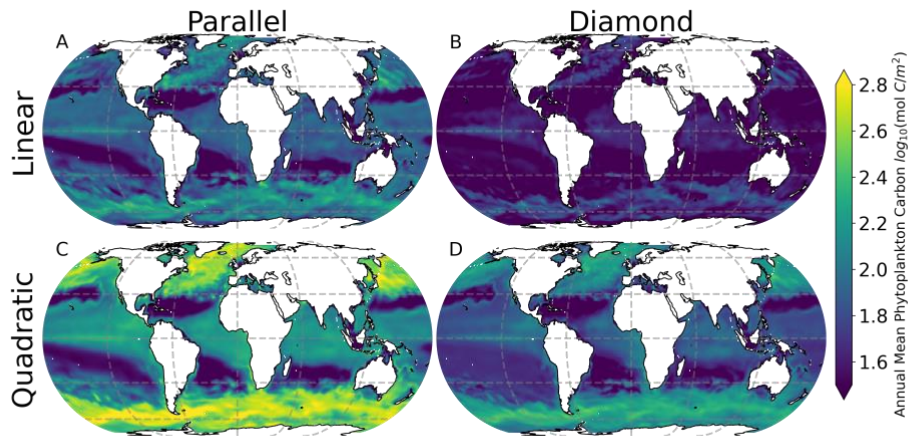


Figure S1. Depth integrated, seasonally averaged phytoplankton biomass density

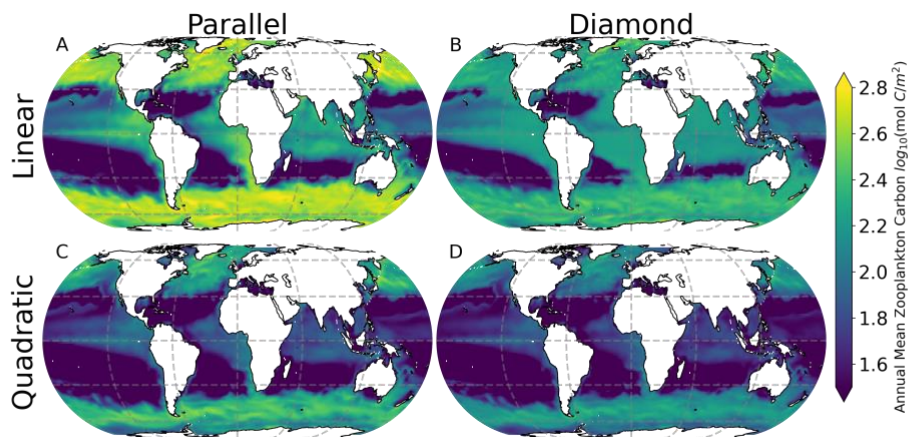


Figure S2. Depth integrated, seasonally averaged zooplankton biomass density

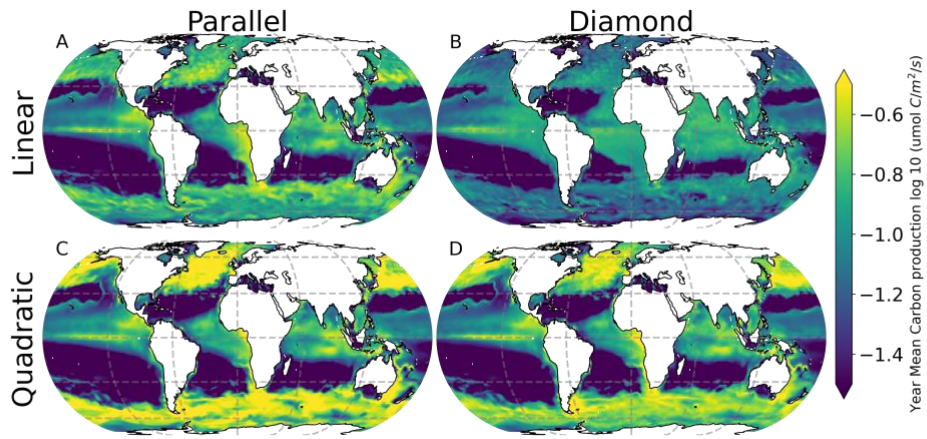


Figure S3. Depth integrated seasonally averaged Primary Production

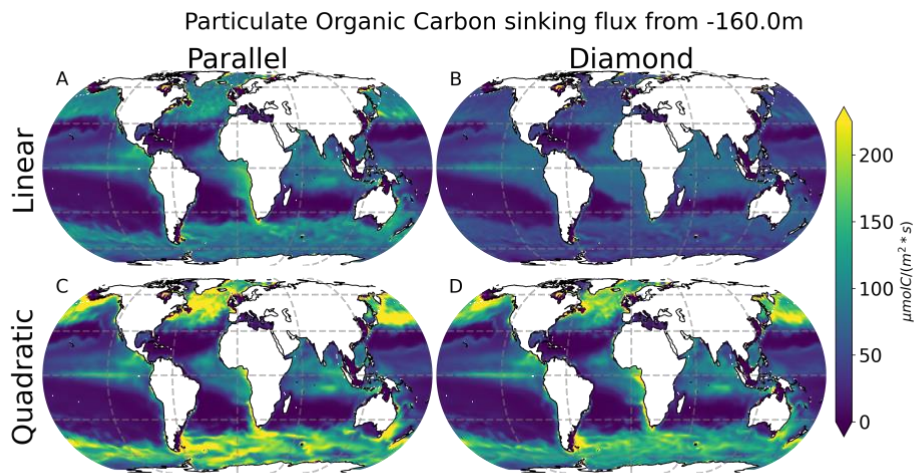


Figure S4. Seasonally averaged carbon export

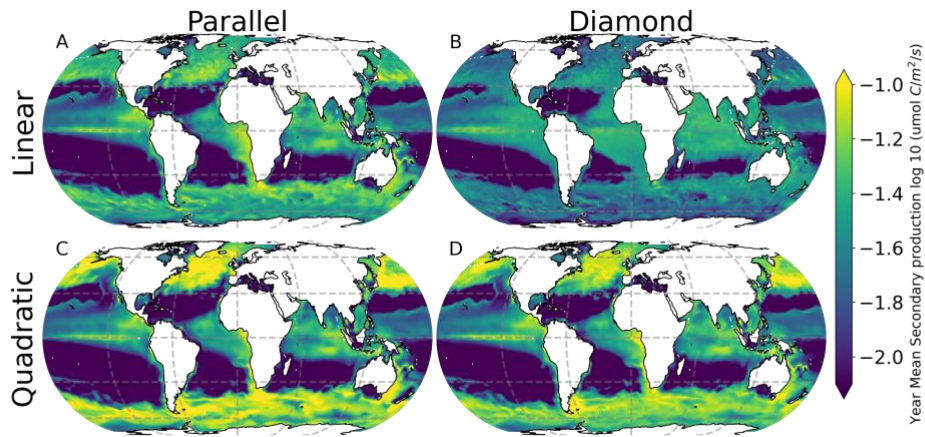


Figure S5. Depth integrated seasonally averaged Secondary Production

S2. Sensitivity studies

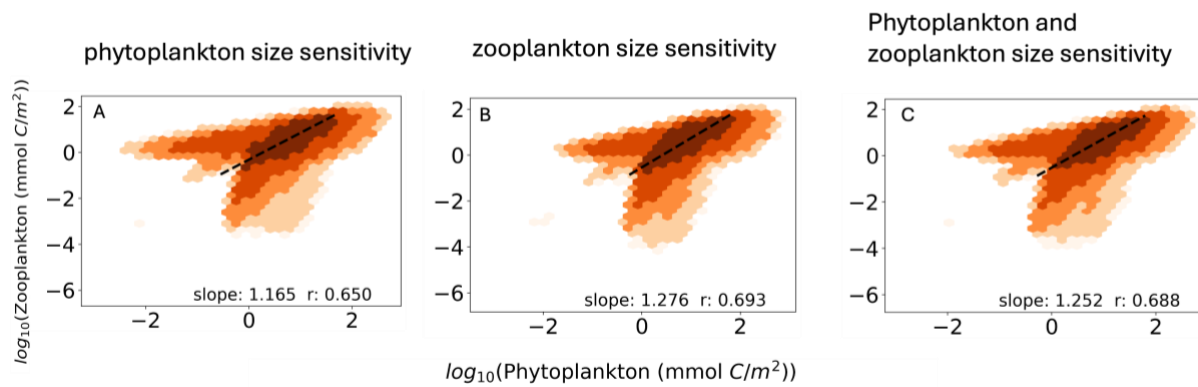


Figure S6. Sensitivity of phytoplankton biomass to phytoplankton size a) phytoplankton are increased in volume by ~ 3 -fold b) zooplankton are increased in volume by ~ 3 -fold and c) phytoplankton and zooplankton are both increased in volume by ~ 3 -fold. Shown are the results for the quadratic model with parallel feeding.

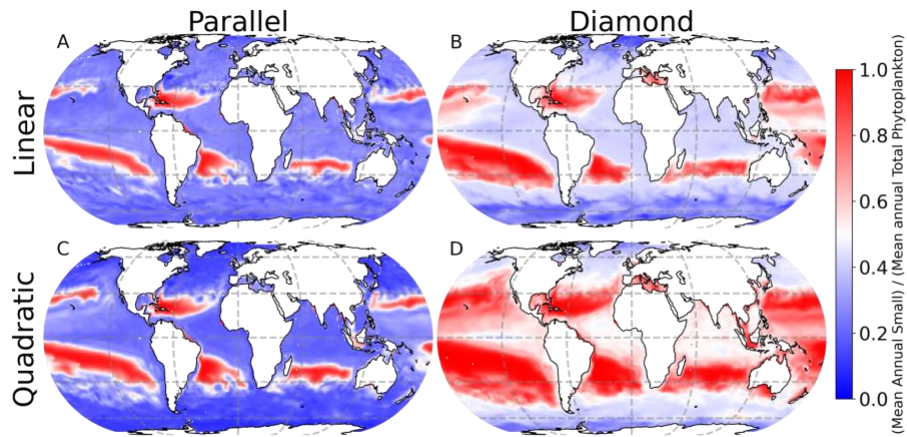


Figure S7. Sensitivity of community composition to grazing switching, found by setting $\beta = 2$ in Equation A21. Active switching allows coexistence in the diamond food web model (compare right column with Figure 4 of the main text).

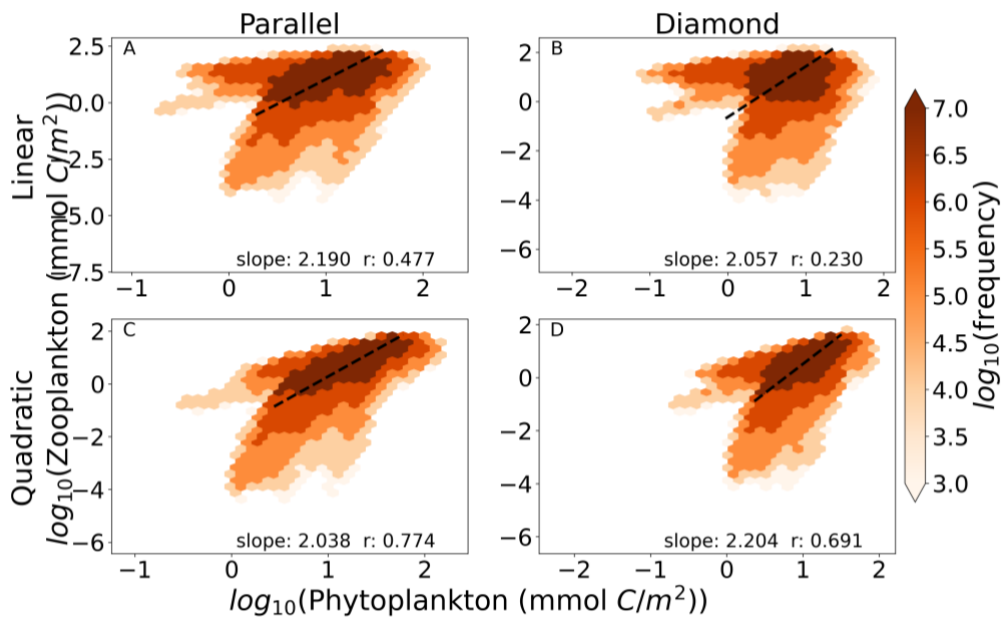


Figure S8. Sensitivity of scaling relationships to Type III zooplankton feeding, found by setting $\gamma = 3$ in Equation A21.