



1 Large sized phytoplankton sustain higher carbon specific photosynthesis than smaller cells in a coastal eutrophic ecosystem.

Cermeño P, Marañón E, Rodríguez J, Fernández E.
Mar. Ecol. Prog. Ser.. 2005; 297:51-60

Recommendations:

Average rating:

William Li, Bedford Institute of Oceanography, NS, Canada. [F1000 Ecology](#)

18 Aug 2005 | **New Finding**

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This paper demonstrates that marine phytoplankton assemblages, in particular those in favourable conditions of irradiance and nutrients do not exhibit the negative quarter power scaling relationship between carbon turnover rate and average organism mass expected from general allometric theory.

In particular, microphytoplankton have much higher specific rates of photosynthesis than nanophytoplankton and picophytoplankton, and therefore a physiological basis for presumed ecological advantage in these waters.

The authors suggest that particular features of nutrient and light acquisition by microplanktonic diatoms (e.g. luxury uptake and chloroplast distribution respectively) may explain the departure from direct allometric prediction. For the abstract of this paper, please see <http://int-res.com/abstracts/meps/v297/p51-60/>.

Disclosures

None declared

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