



Scaling of feeding in marine calanoid copepods

Saiz, Enric, Albert Calbet

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ABSTRACT: We describe patterns of body size scaling of feeding by marine calanoid copepods based on a literature review. Maximum feeding rates of calanoid copepods, determined in the laboratory, were temperature independent and scaled in conformity to the three-quarters universal law followed by animals. Field feeding rates (log transformed) of marine calanoid copepods were dependent on food availability, temperature, and body size, and in combination, these three variables explained 81% of the variance. The scaling to body mass for field data, however, showed a much lower slope, indicating severe food limitation in the larger copepods. The direct effects of temperature in field feeding rates were difficult to ascertain because of the inherent association between body size, temperature, and trophic level in natural ecosystems.

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