

IMS Seminar
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201 O'Neill, 3:30 pm

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Ecological effects of earlier sea ice retreat on overwintering Arctic zooplankton

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High latitude marine ecosystems experience strong seasonality in incoming light and thus primary production and food availability. Herbivorous calanoid copepods of the genus *Calanus* may comprise up to 90% of the mesozooplankton biomass in Arctic seas. They are able to build up large fat deposits during the short, but productive summer and to survive food shortage in winter by entering a dormant state, referred to as diapause. The ongoing reduction in sea ice thickness and extent will significantly change the underwater light climate and thus the timing, quantity and quality of the primary producers in the Arctic with possible consequences for the grazers. Up to date we have very limited knowledge on the overwintering ecology and physiology of *Calanus* spp., and their ability to respond to external cues like light and food while in diapause. In the ongoing research project “Climate effects on planktonic food quality and trophic transfer in Arctic marginal ice zones (CLEOPATRA II)” we combine field and experimental work to investigate the winter ecology and physiology of the key Arctic zooplankter *Calanus glacialis* and today some preliminary results from this study will be presented.

