
Woods Hole Oceanographic Institution
Biology Department Seminar



Thursday, March 23, 2017
Redfield Auditorium – 12:00 Noon

**Disentangling bottom-up and top-down
effects on *Calanus* dynamics in high
latitude systems**

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Calanus copepods constitute an important component of high-latitude marine ecosystems. Their distribution and abundance is influenced both “bottom-up” through climate and food availability, and “top-down” through predation. During her doctoral work, Kristina Kvile investigated how the species *Calanus finmarchicus* is influenced by bottom-up processes, coupling long-term survey data from the Barents Sea with oceanographic models. She demonstrated how climate variation influences food availability for *C. finmarchicus* in spring, and in turn the biomass of *C. finmarchicus* available to higher trophic levels in summer. Increased temperatures seem to trigger an earlier appearance of the new generation *C. finmarchicus* in spring, leading to increased abundances in spring, but not in summer. During this seminar, Dr. Kvile will summarize the findings from her thesis, linking this work to her ongoing research at WHOI, where she investigates how both bottom-up and top-down processes influence the distribution of different *Calanus* species in the Arctic.

