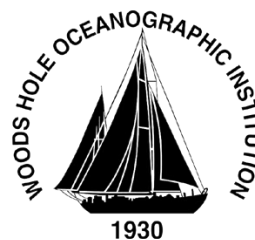


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Woods Hole Oceanographic Institution  
**Biology Department Seminar**



Thursday, May 28, 2015  
Redfield Auditorium – 12:00 Noon

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**Physical Control of the Distributions  
of a Key Arctic Copepod  
in the Northeast Chukchi Sea**

**Mr. Stephen Elliott  
MIT-WHOI Joint Program  
and U.S. Coast Guard**

The copepod *Calanus glacialis* is one of the most important zooplankton taxa in the Arctic shelf seas where it serves as a key grazer, predator, and food source. Its summer distribution and abundance have direct effects on much of the food web, from blooming phytoplankton to migrating bowhead whales. The Chukchi Sea represents a highly advective regime dominated by a barotropically driven northward flow modulated by wind driven currents that reach the bottom boundary layer of this shallow environment. The physics of this system establish the connection potential between specific regions, but unless biological factors are uniform and ideal the true connections will be an uneven subset of this physically derived connection potential. Here we used the Finite Volume Community Ocean Model i-State Configuration Model to advect observed distributions of *C. glacialis* forward and backward in time to determine the source and sink regions of the transient Hanna Shoal population.

