

Complex Nature of Zooplankton Migration ^[1]

Submitted by Dwight Owens Mon, 2013-06-03 00:00

Image not found

[Zooplankton migration visualization](#)  ^[2]

A recent publication in *Marine Ecology Progress* ([Marine Ecology Progress, 2013 V.480, pp 39-56](#) ^[3]) sheds more light on the complex process of diel zooplankton migration. A recent graduate of the UVic's School of Earth and Ocean Sciences, Dr. Mei Sato has completed extensive analysis of the zooplankton diel vertical migration patterns using chlorophyll and echo-sounder data collected by DFO and Ocean Networks Canada, respectively, in Saanich Inlet. Her research was focused on understanding the second order drivers of the diel migration timing. The first order signal is the seasonal variation due to changes in the length of day-light hours (the hour-glass shape of the slice in the image), while the second order terms look into environmental factors that impact behavior of the species that are integral part of the food web.

Dr. Mei Sato's analysis shows that there are subtle variations to the time of ascent and descent during the year, which might be attributed to both food supply and zooplankton life-cycle (body size). Other factors include variations in the presence of predators and prey competition. Some factors, such as lunar cycles and the possible influence of full moons were statistically ruled out.

Mei successfully defended her Ph.D. thesis in early May 2013.

Reference

Sato M., Dower J., Dewey, R. 2013. Second-order seasonal variability in diel vertical migration timing of euphausiids in a coastal inlet. *Marine Ecology Progress Series* 480: 39-56, DOI:10.3354/meps10215.

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