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UNIVERSITY OF CONNECTICUT

Department of Marine Sciences
Presents a Seminar by

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Analyses Lab

Rapid warming and salinity changes in the Gulf of Maine alter surface ocean carbonate parameters and hide ocean acidification

A profound warming event in the Gulf of Maine during the last decade has caused sea surface temperatures to rise to levels exceeding any earlier observations recorded in the region over the last 150 years. This event dramatically affected CO₂ solubility and, in turn, the status of the sea surface carbonate system. When combined with the concomitant increase in sea surface salinity and assumed rapid equilibration of carbon dioxide across the air sea interface, thermodynamic forcing partially mitigated the effects of ocean acidification for pH, while raising the saturation index of aragonite by an average of 0.14 U. Although the recent event is categorically extreme, we find that carbonate system parameters also respond to interannual and decadal variability in temperature and salinity, and that such phenomena can mask the expression of ocean acidification caused by increasing atmospheric carbon dioxide.

Host: Samantha Siedlecki

Time & Date: 11:00 am, Friday, December 7, 2018

Place: Marine Sciences Building, Seminar Room 103

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