

# Tracing Arctic climate evolution: from a forested arctic to the present.

## 23rd Annual Gregory Lecture with Professor Julie Brigham-Grette

The new paleoclimate record from Crater Lake El'gygytyn (Lake E), NE Russia, provides the first complete record of Pliocene and Pleistocene climate change from the terrestrial arctic high latitudes. These data are now being used to assess the climate evolution of the Arctic since a time when the arctic borderlands were forested and the Greenland Ice sheet did not exist in its present form. Moreover, these data provide a means to better understand inter-hemispheric linkages of natural climate variability, potentially impacting both polar regions over the past few million years. The project continues as a successful multinational collaboration.



Julie is Professor and Department Head, Department of Geosciences, University of Massachusetts-Amherst; she has been on the faculty at UMass since 1987. Her research interests are on the stratigraphy, sedimentology, and chronology of geologic systems that record the climate evolution and sea level history of the Arctic since the mid-Pliocene. Her research program is largely aimed at documenting the global context of paleoenvironmental change across "Beringia", i.e., the

Bering Land Bridge, stretching across the western Arctic from Alaska and the Yukon into NE Russia and adjacent marginal seas. She is US Chief Scientist of the El'gygytyn Lake Scientific Drilling project, a multinational program leading to the first unprecedented recovery of a 3.6 Myr record of paleoclimate in 2009. In collaboration with S. Petsch, Brigham-Grette is also studying sea ice proxies and paleoceanography across the Arctic-Pacific gateway. Since 2005, she has collaborated with colleagues at Bates, Mt Holyoke, and Hampshire colleges along side Northern Illinois University with a research program for undergraduate students on Svalbard tidewater glaciers. She was recently named Chair of the Polar Research Board of the U.S. National Academy of Science. At home, Julie maintains an interest in the late Pleistocene paleoclimatic history and drainage record of Glacial Lake Hitchcock and the Holocene evolution of the Connecticut River. She is married with 2 sons ages 21 and 24.

**Geography and Environment,  
University of Southampton  
cordially invites you and a guest to  
the 23rd Annual Gregory Lecture:**

**“Tracing Arctic  
climate evolution: from  
a forested arctic to the  
present”.**

**Thursday 5 March 2015**

Lecture Theatre A (room 1041),  
Building 44, Highfield Campus,  
University of Southampton

Refreshments from 17:30, lecture  
commences at 18:00 followed by  
post lecture drinks reception.

Please RSVP:

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**Or for more information please  
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