UC SANTA BARBARA

THE Current

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Gail Gallessich

New Lecture Series on Ecology Begins With Talk About Lake Baikal in Siberia

Lake Baikal, known as the Sacred Sea of Siberia, is the subject of "Science for Everyone!" and is the first in this monthly series of talks hosted by UC Santa Barbara's National Center for Ecological Analysis and Synthesis (NCEAS) on Thursday, Sept. 13, from 5:30 to 6:30 p.m. The series will be presented at the NCEAS lounge, third floor, in the Balboa Building at 735 State Street, Santa Barbara. The events are free and open to the public and will be webcast live. Light refreshments will be served.

In this presentation, Stephanie Hampton, deputy director of NCEAS, will take the audience on an ecological tour of Lake Baikal, where she conducts research. Lake Baikal is a lake of superlatives: It is the world's deepest, most ancient, most biologically diverse lake. It is also the largest freshwater lake by volume. Home to the world's only freshwater pinniped –– the Baikal seal –– and an astonishing diversity of freshwater creatures and underwater landscapes, this unique ecosystem depends on long periods of ice cover and cold temperatures.

As Siberia rapidly warms, Hampton and her colleagues are working to understand Baikal's unique biology, primarily through the use of 60 years of detailed data that have been collected by three generations of a single family of Siberian scientists and their colleagues.

Hampton and her research team have discovered many climate variability signals, called teleconnections, in the data. For example, changes in Lake Baikal water temperature correlate with monthly variability in El Niño indices, reflecting sea surface temperatures over the Pacific Ocean tens of thousands of kilometers away.

"This work is important because we need to go beyond detecting past climate variation," said Hampton. "We also need to know how those climate variations are actually translated into local ecosystem fluctuations and longer-term local changes. Seeing how physical drivers of local ecology –– like water temperature –– are in turn reflecting global climate systems will allow us to determine what important short-term ecological changes may take place, such as changes in lake productivity. They also help us to forecast consequences of climate variability."

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Stephanie Hampton Live Broadcast

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