



R/V *Sikuliaq*

Planned 2023 Arctic cruise



Jackie Grebmeier, chief scientist
Seth Danielson, co-chief scientist
Distributed Biological Observatory (DBO)-
Ecosystems & Fisheries Oceanography
Investigations (EcoFOCI)

September 10-October 4, 2023

[collaborative with Arctic Marine Biodiversity Observing Network (AMBN) and Chukchi Ecosystem Observatory (CEO)]

Seawater warming and declining sea ice cover are impacting ecosystem components, from prey in the water and sediments to marine mammal and seabird consumers. Food security, harmful algal blooms, and ocean acidification are impacted by changing environmental conditions that influence the health of the marine ecosystem.



[Photo by Seth Danielson, November 2021]

Research questions:

- What ecosystem changes are occurring in the northern Bering and Chukchi seas?
- What conditions cause marine animal populations to vary?



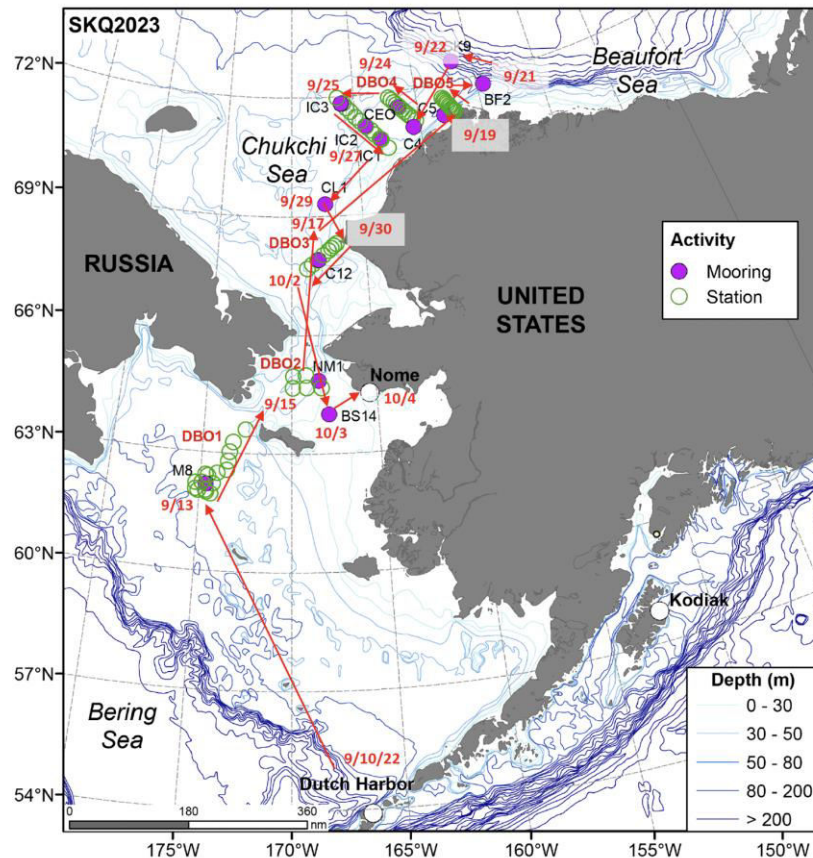
R/V Sikuliaq

Planned 2023 Arctic cruise

The NOAA annual research cruise, collaborative with AMBON and CEO, will occupy five DBO and EcoFOCI time series stations, along with turning multiple moorings.

Shipboard measurements will include:

- Seawater temperature and salinity, currents
- Water column measurements: chlorophyll, nutrients, eDNA, phytoplankton type, organic carbon
- Zooplankton and larval fish type
- Harmful algal bloom collections
- Bottom sediments and animals living on and in the sediments
- Seabird and Marine mammal surveys





R/V *Sikuliaq*

Outreach 2023 Arctic cruise

Jacqueline Grebmeier, Principal Investigator, UMCES

Phyllis Stabeno, Principal Investigator, NOAA/PMEL

Seth Danielson, Principal Investigator, UAF

Katrin Iken, Principal Investigator, UAF

Multiple projects and collaborators: A top to bottom ecosystem study

COMMUNICATION

Daily community emails during the cruise

Presentations to AEWC, planned Bering Strait Science talk, Nome; also local community radio and news outlets

WEBSITES

<https://dbo.cbl.umces.edu/>

<http://chukchiecosystemobservatory.org/>

<https://ambon-us.org/>



[Photo by Seth Danielson in November 2021]