



Bering Sea Storms – Past to Present

Over 80% of the Alaskan population reside in coastal counties and are at risk of damage from storm-induced flooding and erosion

ABOUT THIS PROJECT:

The goal of the 3-year project is to understand the ancient and historic record of extreme storm events along the Aleutian Islands (Unalaska, Atka, Adak) and how storm frequency and intensity have changed. This work will help communities plan for future storm scenarios that may result from rapid climate change.

The project will include:

- A research cruise aboard a University-National Oceanographic Laboratory System (UNOLS) ship, planned for July 29 - August 24, 2022. The cruise will transit roundtrip from Seward to Adak collecting sediment cores and conducting other research activities
- Local knowledge holder participation on the research cruise, offering a unique opportunity for adventure, learning and knowledge exchange
- Installation of instrumentation (wave/wind buoys, barometric pressure, and water level gauges) that provides real-time data regarding storm conditions enhancing forecasting and resiliency to coastal and marine hazards
- School and community engagement and opportunities to participate in science and discovery
- Analysis and data products that will be used by researchers, planners and local decision makers to improve preparedness and resilience to future storm impacts
- Professionally produced educational videos and a portable museum exhibit that will enhance understanding of changes in regional storminess



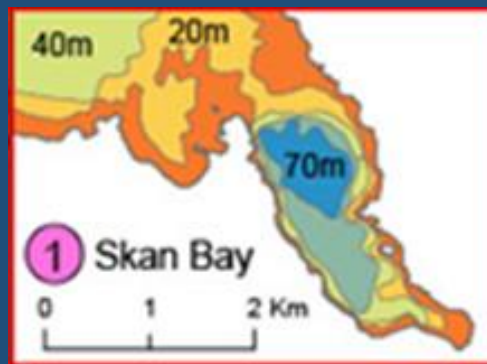
The R/V Sikuliaq will transit the Aleutian Islands to conduct the research with opportunities for local partners taking part on the ship



Research will also be carried out aboard F/V Miss Alyssa



Real-time wave direction, height, period, and water temperature data from wave buoys



Bathymetric mapping of field sites

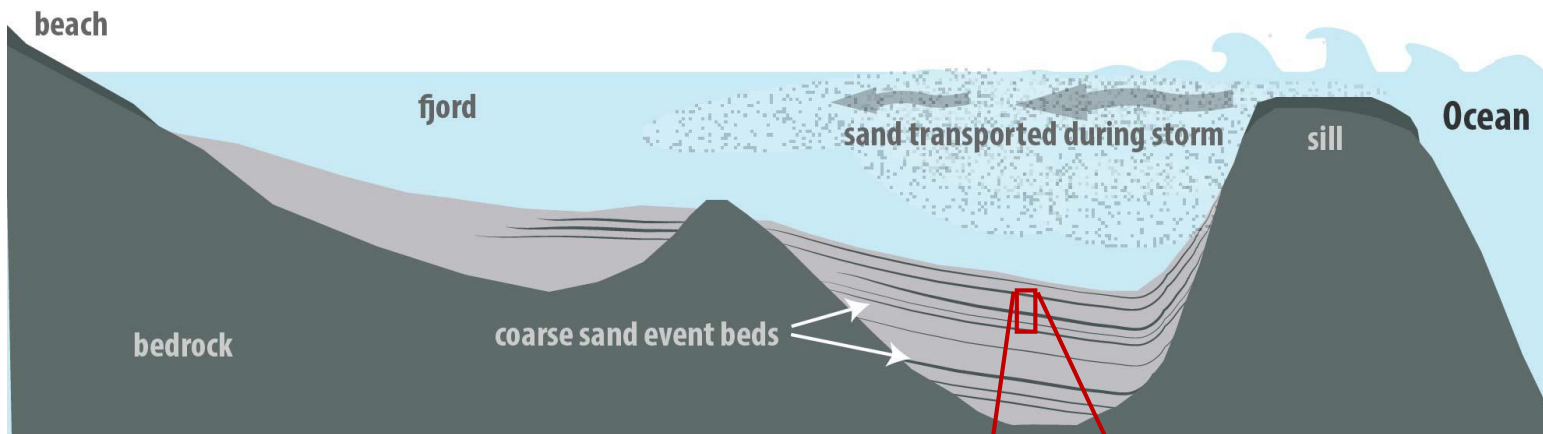
Interested in collaborating or joining us?

Contact

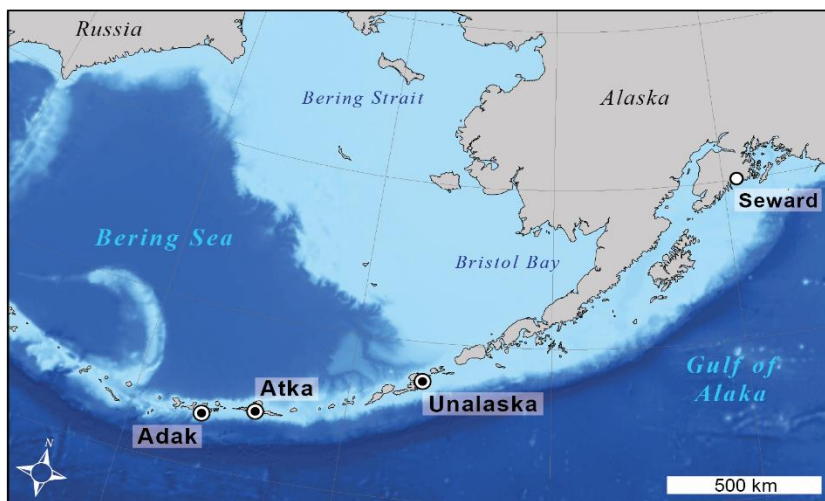
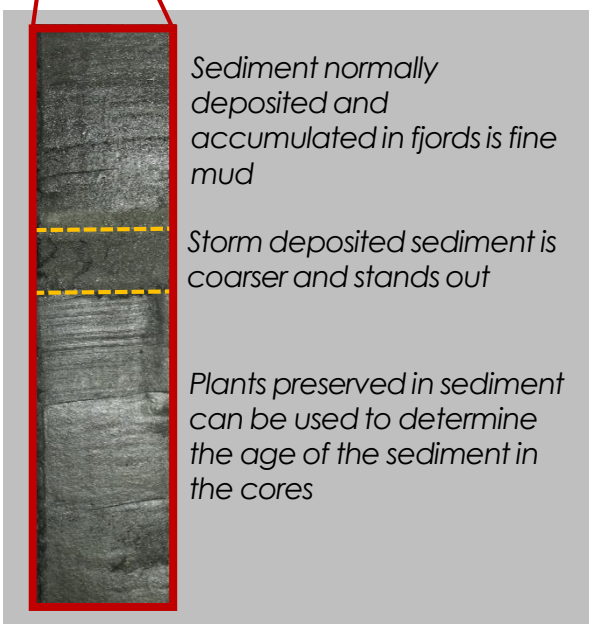
Chris Maio at UAF

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How storms are preserved in Aleutian Island Fjords



- Aleutian Island bays or fjords are nearly land-locked basins that collect sediment over 1000s of years
- Everyday small amounts of fine mud are deposited on the basin floor creating a sediment record
- During Bering Sea storms, waves and storm surge transport coarser and larger sediment into the basin, this distinct sediment falls to the basin floor and is preserved
- Coring these sediment records provides a history of Bering Sea storms – important for understanding coastal resilience



Map of field site locations. Remote fjords on the islands of Unalaska, Atka, and Adak will be instrumented to measure modern storm conditions. Sediment cores will be collected to understand both ancient and modern storm and tsunami impacts as well as past sea level changes.

Collaborators

Interested in more information or collaborating or joining us? Contact us below



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