

EMA-FOCI Age-0 Groundfish and Salmon Recruitment Process, 2022

Ed Farley (for Alex Andrews), AFSC

Research Expedition Details

Dates: Aug 12 - Sep 11, 2022

Departs from: Dutch Harbor

Returns to: Dutch Harbor

Research Area Location: Eastern Bering Sea

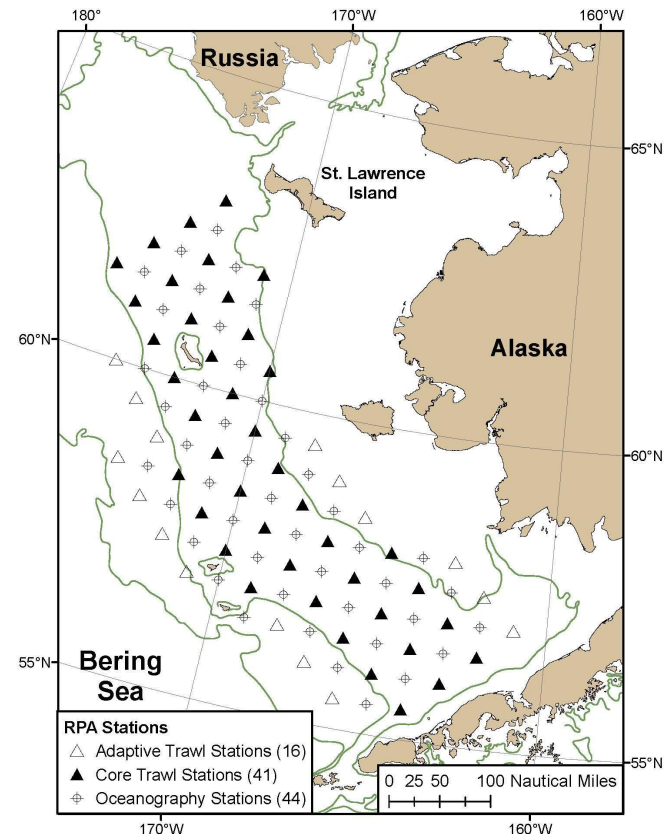
Vessel: R/V OSCAR DYSON

Research website:

<https://www.fisheries.noaa.gov/alaska/ecosystems/alaska-ecosystem-monitoring-and-assessment>

Project supported by: Alaska Fisheries Science Center

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Key Scientific Questions & Motivations

This integrated ecosystem survey supports research on the impact of loss of seasonal sea ice and warming temperature on the Bering Sea ecosystem.

The survey supports fisheries management through ecosystem indicators relevant to groundfish, forage fish, and juvenile salmon fitness and survival.

The survey monitors the distribution and abundance of phytoplankton, zooplankton, nutrients, and seabirds in the northern Bering Sea.

The survey is improving our understanding of the benthic habitat for juvenile crab and other small benthic species.

Key Activities & Data to be collected

- Pelagic species: surface and midwater trawls are used to sample young walleye pollock, Pacific cod, herring, capelin and salmon and other nekton species.
- Physical and biological oceanography: A CTD with a rosette bottle sampler is used to measure physical and biological oceanographic conditions in the Bering Sea.
- Zooplankton: A bongo net is used to sample zooplankton and ichthyoplankton.
- Sediments and benthic infauna: A Van Veen benthic grab is used to collect sediments and benthic infauna.
- Benthic species: A 3m plumb staff beam trawl is used to sample juvenile stages of crab and groundfish species.
- Seabirds and marine mammals: Line-transect assessments of the distribution and abundance of seabird and marine mammals are conducted during the survey.

Implications & Broader Impacts

- Loss of seasonal sea ice is altering the marine ecosystem in the Bering Sea. A better understanding of ecosystem impacts on salmon, groundfish, and crab species is needed to understand its impacts on marine resources in this region.
- The survey has documented impacts of warm events in the region that include northward shift of fishes, reduced fat content of prey, and reduced fitness of young fishes.

Potential Areas of Collaboration

Scientists interested in conducting research in the Bering Sea ecosystem are encouraged to submit sample requests.

Data collected during the survey are archived and are made publicly available within approximately one year of the survey completion.

Summaries of the survey data have been provided to local and indigenous communities in the region (survey has not been conducted since 2018), and we welcome the advice and direction for research by these communities.