



ARCTIC RESEARCH JOINT NEWS RELEASE August 3, 2012

Feds, State, UAF scientists team up for major marine ecosystem survey in Arctic seas

A team of marine scientists from the University of Alaska Fairbanks, federal, and state agencies is heading to the Arctic to begin the first comprehensive oceanographic and fisheries survey of the Chukchi Sea. The first of two vessels being used for the survey will depart August 6 from Dutch Harbor, Alaska.

It's the first survey that will sample all major components of the marine ecosystem at the same time throughout the U.S. waters of the northern Bering Sea and Chukchi Sea. It covers the entire eastern Chukchi Sea shelf, with sampling in offshore waters at least 50 feet deep from south of Hooper Bay to north of Barrow (61 to 73 degrees latitude).

The primary purpose of the survey is to gather scientific data needed to avoid or mitigate effects of potential future offshore oil and gas development projects on arctic marine life. The information will provide the scientific underpinning to help guide future responsible economic development activities in the Arctic region, including possible transportation and fisheries opportunities. It will also help determine potential impacts of climate change on Arctic marine ecosystems.

Funding for the project comes from the Department of the Interior's Bureau of Ocean Energy Management, State of Alaska Coastal Impact Assistance Program and the National Oceanic and Atmospheric Administration.

"We have scientists from UAF, NOAA's Alaska Fisheries Science Center, U.S. Fish and Wildlife Service, and the Alaska Department of Fish and Game participating in this Arctic Ecosystem integrated survey," said UAF's Franz Mueter, lead scientist for the collaborative effort. "So it is a bit of a scientific dream team."

Areas of particular interest to the team include:

- Abundance and distribution of marine fishes and shellfishes, and the plankton they depend on for food, throughout the northern Bering Sea and eastern Chukchi Sea;
- Biological and environmental connections between the Bering Sea and the Chukchi Sea;
- Baseline data on the densities, composition, and distribution of surface, mid-water, and bottom fish communities in these regions;
- Biology of salmon, Arctic cod, saffron cod, snow crab, capelin, and other species —because they are important parts of the ecosystem, can occur in high abundances in these regions, and serve as food for seabirds, sea mammals, and rural coastal communities;
- Information on water properties (physics, ocean chemistry, ocean circulation);

- Comparing the abundance and distribution of fishes from this project to similar surveys conducted in parts of the Chukchi Sea, Beaufort Sea, and northern Bering Sea.

Two fishing vessels will be used during the survey to gather two separate types of information. Each vessel uses different gear types.

Surface trawl survey: The F/V Bristol Explorer leaves Dutch Harbor August 6 for a 60-day survey, which will be divided into three segments with two crew changes in Nome:

- Aug 6 - 23: Southern Chukchi Sea
- Aug 26 - Sept 9: Northern Chukchi Sea
- Sept 12 - Sept 27: Northern Bering Sea

Scientists and crew members will use a surface trawl net to sample the upper 65 feet of the water column to collect a variety of samples for biological studies as well as to count and measure fishes that live in the upper water column.

They will also conduct a mid-water/acoustic survey that uses hydro-acoustics together with a mid-water trawl net to locate concentrations of fishes in the water column and determine their abundance and species composition.

Bottom trawl survey: The F/V *Alaska Knight* will set sail from Dutch Harbor August 9 on a 47-day survey, with a crew change in Nome around August 31. The bottom trawl survey will begin sampling stations on August 13 in the northern Chukchi sea and work south, finishing by September 20.

This survey is divided into two segments:

- August 9 - 31: Northern Chukchi Sea
- September 1 - 24: Southern Chukchi Sea

The bottom trawl survey is designed to sample fish and invertebrates with a bottom trawl net in order to count, measure, and sample organisms that live on the seafloor.

Daily updates of vessel position and the day's sampling plan will be sent by e-mail or fax and by VHF radio broadcast at 8 a.m. The broadcast will be announced on channel 16 and occur on channel 68. The vessels will avoid marine mammals and any sightings will be reported in the daily update.

Although surveys have been conducted in both the Beaufort and Chukchi Seas since 1959, past U.S. fishery research in the Arctic has been infrequent and limited in scope. A similarly comprehensive survey of the northern Bering Sea occurred for the first time in 2010.

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