



National Marine Fisheries Service
Alaska Region

NEWS RELEASE

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NOAA Unmanned Aircraft Helping Scientists Learn About Alaskan Ice Seals

NOAA Fisheries scientists and their partners have launched an unmanned aircraft to mount the vehicle's first search for ice seals at the southern edge of the Bering Sea pack ice during the Arctic spring, in an effort to learn more about these remotely located species.

On May 13, the NOAA research vessel *McArthur II* departed Kodiak, Alaska, and headed for the Bering Sea to launch the ScanEagle, an unmanned aircraft that is being used to collect images and video along the ice edge.

NOAA Fisheries scientists from the Alaska Science Center's National Marine Mammal Laboratory, in cooperation with the University of Alaska's Cooperative Institute for Arctic Research, will use the images, taken during the month-long expedition, to evaluate whether unmanned aircraft could be useful for estimating the abundance and distribution of ice seals. In 2008, NOAA determined that ribbon seals should not be listed under the Endangered Species Act. NOAA was also petitioned to list spotted, bearded and ringed seals, and is gathering information and preparing status reviews for those species.

"The distributions of ice seals are broad and include areas very far from shore," said Michael Cameron, NOAA Fisheries' lead scientist on the expedition. "Using traditional, manned aircraft to survey all of the sea ice habitat in Alaskan waters would be challenging, expensive and potentially dangerous. We hope that the ScanEagle will provide a safe and efficient way to collect information in this remote environment."

The ScanEagle, owned and operated by the University of Alaska Fairbanks, weighs less than 27 pounds. When loaded with fuel and survey equipment it can fly for about 20 hours at a cruising speed between 48 and 75 knots.

The small aircraft is recovered through a modified "skyhook" system—a catch line, hung out over the water using a large deck crane, caught by airframe-mounted hooks on the ends of the ScanEagle wings.

"We tested the ScanEagle from two NOAA vessels, the *Dyson* and the *McArthur II*, in Puget Sound near Seattle," said Robyn Angliss, deputy director of NOAA's National Marine Mammal Laboratory. "It performed well and we expect the same in the far north."

There are many potential applications of this technology in the North Pacific. In addition to surveys for ice seals and other easily visible marine mammals such as walrus, the system could potentially be used to study near surface oceanography, sea ice conditions and movements, and to collect information on atmospheric and weather conditions.

Collecting data on seals and sea ice will improve the agency's understanding of seal habitat preferences and sensitivity to climate change.

Greg Walker and Don Hampton from the University of Alaska Fairbanks will be piloting their ScanEagle system from the *McArthur II*. Other key partners who have been pivotal in making this project successful are Insitu, the aircraft's manufacturer, their subcontractor Evergreen, and the U.S. Navy.

NOAA understands and predicts changes in the Earth's environment, from the depths of the ocean to the surface of the sun, and conserves and manages our coastal and marine resources.

On the Web:

<http://uas.noaa.gov/>

<http://www.afsc.noaa.gov/nmml/polar/cruise/index.php>

<http://www.moc.noaa.gov/mt/>

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