



NOAA NATIONAL OCEANIC AND
ATMOSPHERIC ADMINISTRATION
UNITED STATES DEPARTMENT OF COMMERCE



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FOR IMMEDIATE RELEASE
Aug. 12, 2013

Seabirds fitted with satellite tags to track movements in Gulf of Maine

Researchers at NOAA's Stellwagen Bank National Marine Sanctuary are using satellite technology to learn more about the movements, life cycle, and feeding and foraging habits of great shearwater seabirds in the Gulf of Maine ecosystem. Scientists have attached satellite transmitters to 10 birds and are tracking their movements this summer.

Shearwaters are one of more than 30 species of seabirds that can be found in the sanctuary. They winter and nest in the southern hemisphere, usually appearing in the Gulf of Maine in April to feed. However, little is known about how the seabirds spend their time in these northern waters.

David Wiley, research coordinator for Stellwagen Bank National Marine Sanctuary, said seabirds are excellent indicators of ecosystem health, including changes that may occur due to climate change. The birds can be seriously affected by alterations in their food supply, which are often dictated by water temperature, currents or other factors, he said.

"In the southern Gulf of Maine, sand lance is the primary food fish for most large predators, including whales, seabirds, bluefin tuna, and other important commercial and recreational species," Wiley said. "For some reason, the numbers of this forage fish fluctuate and have been quite low over the past few years. We want to learn more about how seabirds react to changes in their primary food source and what factors cause changes in forage fish abundance."

The Stellwagen research team uses satellite tags manufactured by Microwave Technology to track the movement of 10 birds throughout the summer and beyond. Researchers attached the tiny tags to the back of each bird with fine thread. The team also collected body weight as an indicator of the bird's health and condition, and blood and feather samples to study food habits.

Signals from the tags have allowed scientists to plot bird movements as they relate to oceanographic features such as water temperature, bathymetry, chlorophyll concentration, ocean fronts and other factors that might result in increased productivity or that concentrate prey.

The 10 birds were named for the funding foundations or for communities that border the Stellwagen Bank sanctuary. To follow the bird's movements and for further information about the project, visit: <http://stellwagen.noaa.gov/science/shearwater13.html>.

Project collaborators include U.S. Fish and Wildlife; the University of Massachusetts in Amherst; Acadia University in Canada, and Boston University. Funding for the project was provided by the Volgenau Foundation and the Blake-Nuttall Foundation.

Designated in 1992, Stellwagen Bank National Marine Sanctuary encompasses 842 square miles of ocean, stretching between Cape Ann and Cape Cod offshore of Massachusetts. Renowned for its scenic beauty and remarkable productivity, the sanctuary supports a rich

diversity of marine life including endangered great whales, seabirds, more than 60 species of fishes and hundreds of marine invertebrates.

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Note to Editor: Photos and video available from Vernon Smith, 240-638-6447, Vernon.Smith@noaa.gov.

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