



NEWS FROM NOAA

NATIONAL OCEANIC & ATMOSPHERIC ADMINISTRATION • US DEPARTMENT OF COMMERCE

Contact: Connie Barclay
(301) 713-2370

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NOAA SCIENTISTS PARTNER WITH INTERNATIONAL TEAM OF EXPERTS TO DETERMINE REACTIONS OF MARINE MAMMALS TO UNDERWATER SOUND

NOAA Fisheries Service is proposing to lead an international effort this summer in the Bahamas with scientists from various academic institutions and research organizations to study how marine mammals respond to underwater sound. Scientists hope to learn more about how different sounds, including active sonar systems, may affect the behavior of several marine mammal species, and particularly beaked whales.

“Carefully controlled field studies in realistic conditions are essential and urgently needed for NOAA to fulfill its requirement to conserve and manage protected marine species,” said Dr. William Hogarth, assistant administrator for NOAA Fisheries. “These behavioral response studies on a highly-specialized acoustic range will provide some of the first detailed and direct measures of how deep-diving toothed whales react when they hear different natural and human sounds, like active sonar signals.”

NOAA Fisheries’ Office of Science and Technology has applied for a scientific research permit under the U.S. Marine Mammal Protection Act of 1972 and with appropriate Bahamian authorities to conduct these Behavioral Response Studies (BRS) with a team of co-investigators comprised of leading academic marine mammal researchers. Dr. Brandon Southall, head of NOAA’s Ocean Acoustics Program, is the principal investigator for the study; co-investigators include subject-matter experts from Woods Hole Oceanographic Institution, Cornell University, University of St. Andrews (Scotland), and the Bahamas Marine Mammal Research Organization. The experiments will be conducted with support from multiple sources, including the U.S. Navy.

Scientists plan to conduct the studies east of Andros Island, in the Tongue of the Ocean, a deep oceanic trench in the Bahamas. They will use a sophisticated array of listening sensors on the seafloor at the U.S. Navy’s Atlantic Undersea Test and Evaluation Center (AUTC) range to detect, track and monitor diving marine mammals, as well as sounds produced during the experiments. They will attach specialized data tags to the animals using suction cups to record their movements and the sounds they produce and receive. Scientists will monitor animal behaviors before, during and after sound exposures.

The studies are designed to provide direct measurements that can be used in conservation management to identify and mitigate potential adverse effects of underwater sound on marine life.

“We believe these kinds of experiments can be conducted safely using well-established scientific procedures without harming individual animals, while providing critically needed data to help us better manage and ensure the conservation of marine mammals,” said principal investigator Dr. Brandon Southall.

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The diversity of the research team is a result of the international nature of marine acoustics issues. It is also consistent with the partnerships and goals identified by national and international bodies, including the U.S. National Research Council and Marine Mammal Commission, and the U.K. Inter-Agency Committee on Marine Science and Technology's Working Group on Underwater Sound and Marine Life.

The National Oceanic and Atmospheric Administration, an agency of the U.S. Commerce Department, is celebrating 200 years of science and service to the nation. From the establishment of the Survey of the Coast in 1807 by Thomas Jefferson to the formation of the Weather Bureau and the Commission of Fish and Fisheries in the 1870s, much of America's scientific heritage is rooted in NOAA.

NOAA is dedicated to enhancing economic security and national safety through the prediction and research of weather and climate-related events and information service delivery for transportation, and by providing environmental stewardship of our nation's coastal and marine resources. Through the emerging Global Earth Observation System of Systems (GEOSS), NOAA is working with its federal partners, more than 60 countries and the European Commission to develop a global monitoring network that is as integrated as the planet it observes, predicts and protects.

NOAA Fisheries Service is dedicated to protecting and preserving our nation's living marine resources and their habitat through scientific research, management and enforcement. NOAA Fisheries Service provides effective stewardship of these resources for the benefit of the nation, supporting coastal communities that depend upon them, and helping to provide safe and healthy seafood to consumers and recreational opportunities for the American public. To learn more about NOAA Fisheries Service, please visit: www.nmfs.noaa.gov.

On the Web:

NOAA: <http://www.noaa.gov>

NOAA Fisheries Service: <http://www.nmfs.noaa.gov>

NOAA's Ocean Acoustics Program: <http://www.nmfs.noaa.gov/pr/acoustics/>

Discovery of Sound in the Sea: <http://www.dosits.org/>

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Additional links:

2003 U.S. National Research Council Report

<http://books.nap.edu/catalog/10564.html>

2005 U.S. National Research Council Report

<http://books.nap.edu/catalog/11147.html>

U.S. Marine Mammal Commission Beaked Whale Workshop Report

http://www.mmc.gov/sound/beakedwhalewrkshp/pdf/bwhale_wrkshpsummary.pdf

IACMST Report

<http://www.nmfs.noaa.gov/pr/acoustics/reports.htm>

