

## **NEWS FROM NOAA** NATIONAL OCEANIC & ATMOSPHERIC ADMINISTRATION • US DEPARTMENT OF COMMERCE

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## RESEARCH EXPEDITION REVEALS DETAILS OF SUBMERGED WRECK OF HISTORIC NAVAL AIRSHIP USS *MACON* IN NOAA MONTEREY BAY SANCTUARY

Over the course of a five-day archeological investigation, researchers from NOAA's National Marine Sanctuary program, the Monterey Bay Aquarium Research Institute (MBARI), the University of New Hampshire, and Stanford University have documented two major debris fields associated with the submerged wreck site of the rigid airship USS *Macon*, a U.S. Navy dirigible lost off California's Big Sur coast in 1935.

During the September 17-22 research cruise aboard MBARI's *Western Flyer*, more than 40 hours of deepwater surveys were completed utilizing MBARI's remotely operated vehicle *Tiburon*. The surveys recorded the visual wreckage *USS Macon* through high-definition videotape and still imagery that will be used to create a photo-mosaic of the two debris fields.

Distinguishable features included the airship's hangar bay containing four Sparrowhawk biplanes and their detached landing gear. Five of the *Macon*'s eight German-built Maybach 12 cylinder gasoline engines also were identified. Objects from the ship's galley were found, including two sections of the aluminum stove, propane tanks that supplied fuel for it, and the enlisted men's dining table and bench. A second debris field contained the *Macon*'s bow section including the mooring mast receptacle assembly. This field also contains aluminum chairs and desks that may have been in a port side officers' or meteorologist's office.

"We are pleased to report that the first archeological survey conducted in NOAA's Monterey Bay sanctuary was successful with all of our mission goals accomplished," said Robert Schwemmer, West Coast maritime heritage coordinator for NOAA's National Marine Sanctuary Program and co-principal investigator for the expedition. "Most notably, the advanced cameras and computer imaging provided by MBARI's expert team allowed us to better survey and document the Macon's historic wreckage, and over 10,000 individual Internet addresses from five continents signed up to view our live streaming video."

The USS Macon's two debris fields, designated by scientists as debris fields A and B, measure 60 meters in diameter and are elevated several meters above the seafloor. The fields are separated by a distance of 250 meters and show an accumulation of several centimeters of sediment since initial surveys conducted in 1990. Scientists also have concluded that sections of the aluminum girder show signs of degradation after 71 years in the marine environment.

"We are extremely happy with the underwater survey results, the performance of the offshore equipment and operations team and the collaboration with NOAA and the National Marine Sanctuary Program," said Chris Grech, MBARI deputy director for marine operations and co-principal investigator for the expedition. "Visiting the site again was like visiting an old friend that you haven't seen in years."

A press conference will be held today at the MBARI campus in Moss Landing, California at 10:00 a.m. PDT. Scientists at the conference will present the expedition's initial findings and detail their next steps. Still and video images from the cruise will also be available.

The expedition was designed to build upon information gathered by the U.S. Navy and MBARI, who first recorded the aircraft's remains during expeditions in 1990 and 1991. An initial survey involving NOAA, MBARI, U.S. Geological Survey, and Moss Landing Marine Laboratories was completed in May 2005 utilizing side-scan sonar deployed from the NOAA research vessel *McArthur II*.

The expedition was a collaborative venture involving NOAA's National Marine Sanctuary Program, NOAA's Office of Exploration, NOAA's Preserve America Initiative, Monterey Bay Aquarium Research Institute, Stanford University, University of New Hampshire, U.S. Navy, state of California, Monterey Maritime and History Museum, and Moffett Field Historical Society and Museum. Noah Doughty, an educator from Mission College Preparatory High School in San Luis Obispo, Calif., participated as a NOAA "Teacher-at-Sea" and provided daily science and technology web-based logs.

The mission of the Monterey Bay Aquarium Research Institute(MBARI) is to achieve and maintain a position as a world center for advanced research and education in ocean science and technology, and to do so through the development of better instruments, systems, and methods for scientific research in the deep waters of the ocean. MBARI emphasizes the peer relationship between engineers and scientists as a basic principle of its operation. All of the activities of MBARI must be characterized by excellence, innovation, and vision.

Monterey Bay National Marine Sanctuary stretches along 276 miles of central California coast and encompasses more than 5,300 square miles of ocean area. Renowned for its scenic beauty and remarkable productivity, the sanctuary supports one of the world's most diverse marine ecosystems, including 33 species of marine mammals, 94 species of seabirds, 345 species of fishes and thousands of marine invertebrates and plants.

NOAA's National Marine Sanctuary Program is committed to preserving historical, cultural and archaeological resources and seeks to increase public awareness of America's maritime heritage by conducting scientific research, monitoring, exploration and educational programs. Today, the sanctuary program manages 13 national marine sanctuaries and the Northwestern Hawaiian Islands Marine National Monument that together encompass more than 150,000 square miles of America's ocean and Great Lakes natural and cultural resources.

In 2007 the National Oceanic and Atmospheric Administration, an agency of the U.S. Commerce Department, celebrates 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 Bureau of Commercial 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.

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## On the Web:

NOAA: http://www.noaa.gov National Marine Sanctuary Program: http://sanctuaries.noaa.gov/ OceansLive: http://www.oceanslive.org/portal/ USS *Macon* Expedition 2006: http://montereybay.noaa.gov/research/macon/2006.html Monterey Bay National Marine Sanctuary: http://www.montereybay.noaa.gov/ USS *Macon* – Naval Historical Center: http://history.navy.mil/photos/ac-usn22/z-types/zrs5.htm Monterey Bay Aquarium Research Institute: http://www.mbari.org Monterey Maritime and History Museum: http://www.montereyhistory.org/maritime\_museum.htm Moffett Field Historical Society and Museum: http://www.moffettfieldmuseum.org/ Center for Coastal and Ocean Mapping/Joint Hydrographic Center: http://ccom.unh.edu/