NOAA Ship *Delaware II*

Delaware II was designed for the Bureau of Commercial Fisheries, the predecessor to the National Marine Fisheries Service. The ship was transferred to NOAA in 1972. In 1975 major modifications were made to enhance its scientific usefulness. In 1995 the ship went into a 16-month repair-to-extend period for major modifications to extend its useful service life, increase lab space and incorporate the latest technologies.

Fishery stock assessment operations include the use of stern mid-water and bottom trawls

The NOAA Ship *Delaware II* is a multidisciplinary platform that conducts fishery and living marine resource research in support of NOAA's National Marine Fisheries Service (NMFS) Northeast Science Center in Woods Hole, Massachusetts. The ship's normal operating area is along the continental shelf and slope waters from Nova Scotia, Canada to Cape Hatteras, North Carolina. The vessel has also sailed the Gulf of Mexico and the Caribbean.

The data collected is used by NMFS and passed along to the New England and Mid-Atlantic Regional Fisheries Management Councils and the Atlantic States Marine Fisheries Commission to determine sustainable yield levels for commercial fish stock and protected species.

Although most of the ship's projects involve fishery stock assessments, the ship also conducts a wide variety of physical, chemical and biological studies.

Delaware II has worked with other U.S. Government agencies, universities and private concerns such as U.S. Geological Survey, University of Massachusetts and Woods Hole Oceanographic Institution.

Typical surveys include:

Northeast Ecosystems Monitoring: to assess the impact of changing biological and physical properties of the Northeast continental shelf ecosystem which influence the sustainable productivity of living marine resources.

Apex Predator Surveys: longlining and tagging sharks to investigate the distribution, abundance, species composition and migration studies of sharks.

Atlantic Herring Hydroacoustic Surveys: to obtain abundance estimates using multifrequency echo integration, omni-directional sonar, midwater trawls and underwater video.

Ocean Quahog and Surf Clam Surveys: to determine relative abundance and sustainable yields using a unique hydraulic-jet dredge powered by an electric pump on the dredge.

Marine Mammals, Large Whale Biology: examine the relative abundance and spatial distribution of large whales using photographic and videographic identification methodology and biopsy sampling for population analysis and genetics.

A shark is tagged during the Apex Predator Survey

Ship Specifications

Length: 155 ft.
Breadth: 30 ft.
Draft: 16.6 ft.
Hull: Welded steel
Displacement: 891 tons
Cruising Speed: 10 knots
Range: 5,300 nm
Endurance: 24 days
Hull Number: R445
Call Letters: KNBD
Licensed Master: 1
Commissioned Officers: 2
Licensed Engineers: 3
Crew: 10
Scientists: 14 (Max.)
Launched: December 1967
Delivered: October 1968
Commissioned: March 12, 1975
Builder: South Portland Engineering, S. Portland, Maine
Designer: George C. Sharp, Inc.

A full net of red crabs for sorting and measuring samples

Clam dredge is used for ocean quahog and surf clam surveys

Office of Marine and Aviation Operations

Since NOAA's beginning, NOAA ships and aircraft have played a critical role in the collection of its oceanographic, atmospheric, hydrographic, fisheries and coastal data. This fleet of platforms is managed and operated by NOAA's Office of Marine and Aviation Operations (OMAO), an office composed of civilians and officers of the NOAA Commissioned Officer Corps, one of the Nation's seven uniformed services.

NOAA's fleet of research and survey ships is the largest fleet of federal research ships in the Nation. The fleet ranges from large oceanographic research vessels capable of exploring the world's deepest ocean, to smaller ships responsible for charting the shallow bays and inlets of the United States. The fleet supports a wide range of marine activities, including fisheries research, nautical charting and mapping, and ocean and climate studies. Many of NOAA's research vessels are unique in their ability to conduct scientific research.

NOAA's fleet of aircraft operates throughout the world providing a wide range of capabilities including hurricane prediction research, marine mammal and fisheries assessment, and coastal mapping. NOAA aircraft are modified to carry scientists and specialized instrument packages to conduct research for NOAA's missions.

In addition to research and monitoring activities critical to NOAA's mission, NOAA ships and aircraft provide immediate response capabilities for unpredictable events. NOAA survey ships found the wreckage of EgyptAir Flight 990, TWA Flight 800 and John F. Kennedy Jr.'s aircraft. Our ships, aircraft and personnel have also conducted damage assessments after major oil spills, such as the Exxon Valdez and Persian Gulf War, and after land-falling hurricanes. Following Hurricanes Katrina and Rita, NOAA ships conducted emergency surveys for navigation hazards that helped Gulf ports reopen quickly, and tested the waters for contamination to ensure seafood safety. Aerial images of disaster-torn areas taken by a NOAA aircraft were posted on the Web with a Google interface, enabling residents and emergency workers to see if houses, bridges and roads were still standing.

NOAA Commissioned Officer Corps

The NOAA Corps is one of the seven uniformed services of the United States. It is composed of commissioned officers who provide NOAA with an important blend of operational, management, and technical skills that support the agency's science and surveying programs at sea, in the air, and ashore. NOAA Corps officers, in addition to managing and operating ships and aircraft, are also scientists and engineers. Corps officers serve in NOAA's research laboratories and program offices throughout the Nation and in remote locations around the world. For example, an officer serves as station chief at the South Pole, Antarctica.

About NOAA

NOAA conducts research and gathers data about the global oceans, atmosphere, space, and sun, and applies this knowledge to science and service that touch the lives of all Americans.

NOAA warns of dangerous weather, charts our seas and skies, guides our use and protection of ocean and coastal resources, and conducts research to improve our understanding and stewardship of the environment that sustains us all.

A Commerce Department agency, NOAA provides these services through five major divisions: the National Weather Service, the National Ocean Service, the National Marine Fisheries Service, the National Environmental Satellite, Data and Information Service, and Office of Oceanic and Atmospheric Research; and numerous special program offices. More information about NOAA can be found at http://www.noaa.gov.

Visit the ship's Web site at <www.moc.noaa.gov/de/>
For more information, contact OMAO at 301-713-1045
or visit our Web site at <www.omao.noaa.gov>