

NOAA Ship MILLER FREEMAN



The ship is named for Miller Freeman, founder of Pacific Fisherman magazine in 1903. Mr. Freeman's editorials focused on basing international fisheries management on scientific facts. He is also known for sponsoring the halibut treaty and serving on the first commission in 1924; proposing a treaty in 1907 to save the Fraser River sockeye salmon; and persuading the University of Washington to create a new fisheries school in 1919.

NOAA ship *Miller Freeman* conducts a wide variety of operations including fisheries and oceanographic research and trawl gear testing. Currently, *Miller Freeman* conducts projects for the National Marine Fisheries Service and the Office of Atmospheric and Oceanic Research – Pacific Marine Environmental Laboratory. These projects include hydroacoustic fish estimation and groundfish stock surveys in the Bering Sea, Alaskan waters and off the Pacific West Coast; weather and seas monitoring; and deploying surface and subsurface moorings.

The ship is a Pacific stern trawler that conducts bottom trawling operations in water depths up to 1,250 meters, mid-water up to 1,100 meters, and over-the-side sampling. Fishing operations match those of the commercial trawler fleet. *Miller Freeman* is unique in the U.S. research fleet because the ship is capable of conducting multidisciplinary oceanographic operations in support of biological, chemical and physical process studies. A major and unique asset is the 12-foot retractable centerboard and its contribution to the quality of the hydroacoustic surveys and other acoustic data collection. The ability to move the ship's hydroacoustic fish survey, acoustic doppler current profiler, and other transducers on the bottom of the centerboard, away from

the acoustic noise created by the hull, significantly enhances the quality of the data collected and the scientific products based on that data. This capability, in conjunction with the trawling capacity, is of unique value to its clients.

Winter and spring projects focus on the Gulf of Alaska and the Bering Sea. Summer priorities are divided yearly amongst the California, Oregon and Washington Pacific Hake Survey; the Gulf of Alaska Groundfish Survey; and the Bering Sea Multilateral Hydroacoustic Survey. During the hydroacoustic survey, the status of walleye pollock and Pacific whiting, testing of fishing gear, and fish behavior during the capture process to determine methods to reduce bycatch are studied. In the fall, scientists study the effects of physical oceanography - such as water temperature, salinity and currents - on pollock larvae in Alaskan waters. This is followed by a return to the Northwest to complete a continental slope groundfish resource assessment to estimate the groundfish distribution and abundance, and to investigate biological processes and interactions with the environment to estimate growth, mortality, and recruitment. These data improve the precision and accuracy of forecasting groundfish stock dynamics.



Bongo nets are one of the methods used to collect fishery data



The ship deploys a Fisheries-Oceanography Coordinated Investigations project buoy

Ship Specifications

Length (LOA): 215 ft.
Breadth: 42 ft.
Draft: 21 ft. with centerboard up
33 ft. with centerboard down
Displacement: 1,920 tons
Cruising Speed: 11 knots
Range: 12,582 nm
Endurance: 31 days
Hull Number: R 223
Call Letters: WTDN
Commissioned Officers: 7
Crew: 27
Scientists: 11 (Max)
Launched: 1967
Delivered: June 1967
Recommissioned: 1974
Designer: Philip F. Spaulding
Builder: American Shipbuilding
Toledo, OH



Stern trawl operations



Fishery scientist sorts, identifies and counts specimens

NOAA 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 Marine and Aviation Operations (NMAO), an office made up of civilians and officers of the NOAA Commissioned Corps, the Nation's seventh service. In addition to research and monitoring activities critical to NOAA's mission, NOAA ships and aircraft provide immediate response capabilities for unpredictable events. Most recently, NOAA aircraft provided support to the World Trade Center and Pentagon recovery and clean-up efforts by mapping the wreckage using remote-sensing technology. 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 hurricanes and major oil spills such as the *Exxon Valdez*, Persian Gulf War and *New Carissa*.

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 fixed-wing aircraft and helicopters operate 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.

NOAA Commissioned Officer Corps

The NOAA Corps is one of the seven uniformed services of the United States, 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 which 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/mf/
For more information, contact NMAO at 301-713-1045
or visit our web site at www.nmao.noaa.gov

