NOAA Ship *Bell M. Shimada*

The ship's namesake served with the Bureau of Fisheries and the Inter-American Tropical Tuna Commission, and was known for his contributions to the study of tropical Pacific tuna stocks following World War II. A veteran of the 442nd Regimental Combat Team/ Military Intelligence Service, Bell Shimada resumed his B.Sc. studies at the University of Washington School of Fisheries in 1947, completing his Ph.D. in 1956. A young isolated seamount – Shimada Seamount – 560 nautical miles southwest of the Baja Peninsula, is named in his memory.

Removing sensors from the net that send data on the shape of the net and the biomass entering the net during fishing operations

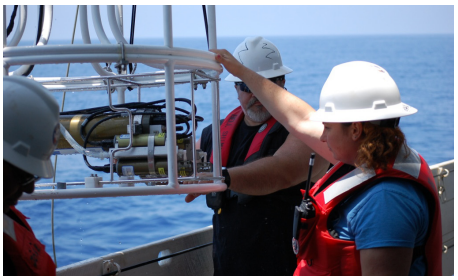
National Oceanic and Atmospheric Administration (NOAA) Ship *Bell M. Shimada* is the fourth in the class of new fisheries survey vessels (FSV) built for NOAA by VT Halter Marine, Inc., in Moss Point, Mississippi. *Bell M. Shimada* is a state-of-the art research ship capable of conducting a wide variety of fisheries and oceanographic research. Foremost among these capabilities is acoustic quieting technology, which will enable NOAA scientists to monitor fish populations without altering their behavior. *Bell M. Shimada* supports NOAA's mission to protect, restore, and manage the use of living marine, coastal, and ocean resources. The research done aboard aids scientists in understanding the California Current Large Marine Ecosystem, a globally significant natural resource stretching from Baja California to British Columbia. *Bell M. Shimada* is uniquely dedicated to serve the entire West Coast of the United States. The primary objective is to monitor region's valuable fisheries and protected species including albacore, sharks, salmon, groundfish, sardine, hake, and other coastal pelagic species. The ship also observes weather, conducts oceanographic research and habitat assessments, and surveys marine mammal and bird populations. *Bell M. Shimada's* capability to conduct both fishing and oceanographic research is unique among research vessels and a value to its users.

Bell M. Shimada is designed for a wide range of fisheries and oceanographic research. It is a stern trawler type vessel with capabilities matching those of the commercial trawler fleet. The ship can conduct trawling operations to depths of 1,800 meters. Smaller sampling nets and towed fishing gear can be deployed from various winches over the stern or starboard sampling station A-frames. Long-lining and trap fishing can also be accomplished from these two locations.

The ship can complete oceanographic research consisting of deployment/recovering of floating and bottom-moored sensors arrays. Water conductivity, temperature, and fluorescence can be measured as a function of depth using the hydrographic winches and CTD system. The ship can also handle specialized gear such as MOCNESS frames, towed vehicles, dredges, and bottom corers. Surface currents are measured with an acoustic doppler current profiler, while a multibeam sonar system provides information on the content of the water column and on the type and topography of the seafloor while underway.

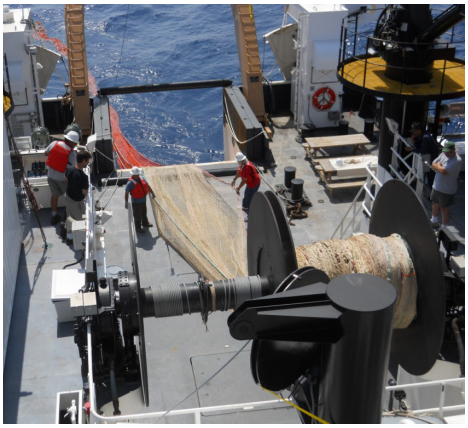
Modern fisheries management relies heavily on sonar systems. The most critical system on *Bell M. Shimada* is the scientific sonar system, which can accurately measure the biomass of fish in the survey area. The scientific sonar system is located on a retractable centerboard (drop keel) so that critical scientific transducers can be lowered away from the ship out of the region of hull generated flow noise.

The ship's normal complement is 9 officers and 15 crew, with berthing for up to 15 scientists. With a cruising speed of 12 knots and range of 12,000 nautical miles, the 40-day mission endurance is constrained only by provision storage space and fuel capacity.



Bell M. Shimada crew deploy oceanographic sampling instruments

Ship Specifications
Length (LOA): 63.6 m (208.6 ft)
Breadth: 15.0 m (49.2 ft)
Draft:
Centerboard Retracted- 5.9 m (19.4ft)
Centerboard Extended- 9.05 m (29.7ft)
Full Load Displacement: 2479mt
Lightship Displacement: 1840mt
Speed, Sustained: 14.0 knots
Speed, Hydroacoustic Survey: 0-11 knots
Range: 12,000 nm @ 12knots
Endurance: 40 days
Hull Number: R227
Call Letters: WTED
Commissioned Officers: 5
Licensed Engineers: 4
Crew: 24
Scientists: 15
Launched: September 26, 2008
Delivered: January 21, 2010
Commisssioned: August 25, 2010



The crew of Bell M. Shimada setting out the net

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.

Deploying divers to inspect the hull

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