

Melville (ship) completes maiden voyage to join SIO fleet

November 14, 1969

The blue and gray, 245-foot, 2,075-ton Melville, the nation's newest oceanographic research vessel, joined the fleet of Scripps Institution of Oceanography here November 16 when she berthed at the Nimitz Marine Facility to end an 8,745-mile maiden voyage from Bay City, Mich.

The Melville thus becomes the largest ship in operation for Scripps, next in size being the veteran of many extended expeditions, the 213-foot, 2,079-ton Argo.

Launched at the Defoe Shipbuilding Co. yards in Bay City on July 10, 1968, the Melville left Bay City last September 2 for San Diego. Capt. Noel Ferris, and James L. Pollock, chief engineer, were responsible for operation of the ship. Maxwell Silverman, oceanographic liaison officer with the Naval Ship Systems Command, helped coordinate sea trials during the voyage and served as chief scientist for Scripps.

The ship was put through her paces during extensive trials in the Bahama Islands area. These included a thorough test of her unique cycloidal propulsion system and machinery, including winches and other deep-sea gear.

The vessel's maneuverability was described as excellent. The propulsion system enables the vessel to proceed forward, backward, or sideways or to remain stationary over a fixed point in a 35 knot wind and a one knot current. This system incorporates vertically mounted, multi-bladed, cycloidal propellers, one at the bow, one at the stern.

Built at an estimated cost of \$7 million, including equipment, the ship has a maximum capacity of 62 scientists, technicians, and crew members.

The Melville is named for the late Rear Adm. George Wallace Melville, Arctic explorer, hydrographer, and Navy chief engineer. She will be equipped for research in biological, geological, physical, and chemical oceanography.

The vessel will be used initially in local operations by Scripps scientists to familiarize themselves with the ship's facilities and general operating.

The Melville has a sustained sea speed of 12 knots and a cruising range of more than 10,000 miles. She has a beam of 46 feet and a full-load draft of 15 feet. She is powered by a slow-speed, 2,500 horsepower engine, has three Diesel ship's service generators with a total capacity of 800 kilowatts, and can distill 6,000 gallons of fresh water daily.

Navy designation for the Melville is AGOR-14 (Auxiliary general Oceanography Research). A sister ship, the Knorr (AGOR-15), under construction by Defoe, will be operated by Woods Hole (Mass.) Oceanographic Institution. The two vessels were built at a cost of an estimated \$11,764,280, excluding equipment.

Special features of the Melville, in addition to the cycloidal propellers, include--

A bulb-like viewing port that extends from the bow, housing sonar equipment for undersea mapping and having viewing ports for scientists.

An 8-by-10-foot well that makes it possible to conduct coring and drilling operations through the hull.

Capability of carrying six portable, prefabricated vans. These vans can be fitted out for any one of three functions: as laboratories, as explosives magazines, or as living quarters, each housing four persons. They can be preloaded and bolted to the ship's deck. Portable vans make for quick turn-around time in port and a rapid interchange of scientific programs.

Deck equipment that can handle the launching, servicing, and stowing of 15-ton vehicles, deep-sea submersibles, deep moorings up to 20 feet in diameter and multi-tone transducers for acoustic experiments.

Capability of towing large vehicles, such as FLIP, Scripps' Floating Instrument Platform, or unmanned, 40-foot buoys.

Four completely independent laboratories, including a scientific chart room and operations center.

All machinery has been designed and will be installed for minimum vibration.