



Mesquite, 1943

WAGL / WLB-305



Any of several small spiny trees or shrubs of the genus *Prosopis* having small flowers in axillary cylindrical spikes followed by large sugar-rich pods.

Builder: Marine Iron & Shipbuilding Corporation, Duluth, MN

Keel Laid: 20 August 1942

Launched: 14 November 1942

Commissioned: 27 August 1943

Decommissioned: grounded on 4 December 1989

Cost: \$894,798

Length: 180'

Beam: 37'

Draft: 12' maximum (1945)

Displacement: 935 tons (1945)

Propulsion: 1 electric motor connected to 2 Westinghouse generators driven by 2 Cooper-Bessemer diesels; 1,200 SHP; single propeller.

Performance:

Max: 13 knots, 8,000 mile range (1945)
Cruising: 12.0 knots, 12,000 mile range
Economic: 8.3 knots, 17,000 mile range

Fluid Capacities (in gallons):

Diesel Oil: 28,600 gallons
Potable Water:

Deck Gear: 20-ton boom w/ electric hoist

Anchors:

Armament: 1 x 3"/50; 4 x 20mm/80 (single barrel); 2 x depth charge stern tracks; 2 x Mousetraps; 4 x "K" guns (1945)

Small Boats:

Complement: 80 (1945)

Electronics:

Radar: SL-1
Sonar: WEA-1

Class History:

When the US Coast Guard absorbed the Bureau of Lighthouses on 1 July 1939, *Juniper*, a 177-foot all welded steel buoy tender, was under construction and plans for a successor were on the drawing board. Plans initiated by the Bureau of Lighthouses called for the construction of several identical buoy tenders to replace existing coastal buoy tenders. The preliminary designs generated by the Bureau were for a vessel similar to *Juniper*. When the Aids to Navigation (ATON) system transferred to Coast Guard control, USCG planners reviewed the preliminary plans for the new class of buoy tenders and modified them to meet the service's multi-mission role. To be an effective part of the Coast Guard, the new buoy tenders needed to be multi-purpose platforms. They had to be capable of conducting Search and Rescue (SAR) and Law Enforcement (LE) missions, as well as their primary mission tending ATON. On 20 January 1941 the US Coast Guard contracted Marine Iron and Shipbuilding Company of Duluth, Minnesota to build the design based on *Juniper* and modified to meet the service's requirements. On 31 March 1941 Marine Iron and Shipbuilding laid the keel for the first vessel of the new buoy tender class. The new vessel measured 180 feet overall and had a beam of 37 feet at the extreme. She had a displacement of 935 tons and drew 12 feet. The new design was similar to *Juniper* in appearance but did exhibit some important differences. Gone was the turtle back forecastle. A notched forefoot, ice-belt at the waterline, and reinforced bow gave the vessel icebreaking capabilities. Extending the superstructure to the ship's sides increased interior volume above the main deck. A single propeller, turned by an electric motor powered by twin diesel generators, replaced the twin-screw arrangement. The 30,000-gallon fuel capacity gave the new design a range of 12,000 miles at a 12-knot cruising speed; at 8.3 knots the cruising range increased to 17,000 miles. Finer lines at the bow and stern increased the new tender's sea keeping ability in rough weather; an

increase in draft also promoted seaworthiness. Numerous minor alterations increased the vessel's utility as a SAR platform while deck-mounted guns and depth charge racks supported military duties. Marine Iron and Shipbuilding launched the prototype vessel on 25 November 1941, even as three more took shape. Preparations also went forward to begin a fifth vessel. By the time they commissioned the first 180, *Cactus*, on 1 September 1942 twelve vessels were under construction at the Marine Iron shipyard and at the Zenith Dredge Company shipyard, also in Duluth . The initial designation for the new buoy tenders was WAGL, which was a US Navy designation denoting an auxiliary vessel, lighthouse tender. The designation changed from WAGL to WLB in 1965. A few of the 180s have been designated as other types of vessels over the years; three became WMECs (medium endurance cutters), one of those, *Evergreen*, was a WAGO (oceanographic research vessel) before it became a WMEC. *Gentian* was a WMEC for a time and was then designated a WIX (Training Cutter) in 1999. Though designations have changed over time, each vessel's hull number has remained the same since commissioning.

DIFFERENCES WITHIN THE 180' CLASS

Six "B" or *Mesquite* class tenders followed the initial production run of thirteen vessels in the "A" or *Cactus*-class. The first *Mesquite*-class tender hit the water on 14 November 1942. Marine Iron and Shipbuilding built all except one of the *Mesquite*-class. The USCG built the lone exception, *Ironwood*, at the service's shipyard in Curtis Bay, Maryland. Twenty *Iris* or "C" class vessels followed the *Mesquite*-class tenders. The first launch of an *Iris* class vessel took place on 18 June 1943, and the final addition to the class slipped off the ways on 18 May 1944. Differences among the three classes were minimal. Their basic dimensions, length and beam were the same and draft varied based on loading. All were built of welded steel along the same framing pattern and with very similar internal and external layouts. All three classes could steam 8,000 miles at 13 knots, 12,000 miles at 12 knots, and 17,000 miles at 8.3 knots; though the "B" and "C" class vessels had engines with 20 percent more power than the "A" class. The "A" class vessels could carry the most fuel with a tank capacity of 30,000 gallons. The "C" class carried 29,335 gallons and the "B" class about 700 gallons less. The layout of the Commanding Officer's cabin and the radio room was slightly different in the "A" class vessels. The bridge wing door on the "B" and "C" vessels opened to the side while the doors on the "A" vessels opened forward. The cargo holds as originally laid out in the "C" were larger, by a nominal amount, than those in the other vessels. To hoist buoys and cargo, the "A" vessels carried an A-frame structure that straddled the superstructure and supported the cargo boom. The other two classes were fitted with power vangs that attached to the bridge wings and manipulated the cargo boom. The "A" vessels were originally fitted with manila line as part of the cargo handling system while the second and third generation vessels used wire rope. From the outside, other than the A-frame used in the first production run, the three classes were almost indistinguishable. Over the years their internal differences and variation in equipment were minimized by successive overhauls and improvements. Moreover, it does not appear that any one of the three classes was superior to the other two in the eyes of the US Coast Guard administration or the men who manned the buoy tender fleet. Tenders from each of the three classes remained in use past the turn of the 21st century. It usually took from two to four months between the time shipyard workers laid a keel and the day the vessel slipped off the ways. Once launched, however, the tenders were far from ready for service. The practice was to build the superstructure, finish the interior, and complete the machinery installation while the vessel was floating. Hence, on launch day the tenders were little more than finished hulls. As the shipyard workers neared the end of the building process, the Coast Guard would begin assigning officers and men to the vessels. Once each vessel was complete and ready to enter active service, the US Coast Guard commissioned her as part of the fleet. Often the commissioning ceremonies took place after the tender had departed from Duluth and arrived at an initial duty station. For the 180s as a whole, it took an average period of 308 days to go from the beginning of construction to commissioning. Divided according to sub-class, the elapsed time from keel laying to commissioning averaged 360 days for the *Cactus*-class; 323 days for the *Mesquite*-class; and 269 days for the *Iris*-class. The building process averaged

192,018 man-hours of labor per vessel. In keeping with the Lighthouse Service practice of naming tenders after foliage, all of the 180s were named after trees, shrubs, or flowers.

Cutter History:

Mesquite, a 180-foot *Mesquite* or *B-Class* tender, was built in Duluth, Minnesota by the Marine Iron & Shipbuilding Company. Her keel was laid on 20 August 1942. She was christened and launched on 14 November 1942. She was commissioned at Curtis Bay on 27 August 1943 under the command of LT A. H. Sheppard.

She was assigned on 11 September 1943 to general aids-to-navigation (ATON) duties in the Fifth Naval District out of New York before reporting for availability at the Coast Guard Yard on 28 September 1943. She then reported to Commander Training Group 23.8 on 13 December 1943 at Hampton Roads, Virginia for shakedown. On 28 December she was ordered, upon completion of training in the Chesapeake Bay area, to report to Commander Task Group 23.3 at Key West, Florida, for sound (sonar) training. She was then assigned to SERVPAD, 7th Fleet in the Pacific. *Mesquite* arrived at Milne Bay, New Guinea on 16 April 1944 for ATON work.

On 19 June 1944 she arrived at Wakde Island and was engaged in servicing ATON in that area until 9 September 1944, when she arrived at Manus Island. She returned to New Guinea on 5 October 1944 and was back at Manus Island on 7 October 1944. On 15 July 1945 she was servicing ATON in the Philippine area, arriving at San Pedro Bay on 19 July 1945 for an availability for repairs which expired 4 August 1945. Proceeding to Guinan for supplies she loaded there and on the 8th arrived at Tacloban. On 10 August 1945 she was standing off Silino Island Light preparing to service it.

From 10 August 1945 until July, 1946, she was employed in renewing ATON in the Philippine Islands. In August 1946, she was placed out of commission for the remainder of the season, due to budgetary cuts in the area. During this time she traveled from the Philippine Islands to Gout Island, California, where she was docked until her re-commissioning on 1 October 1947.

Once re-commissioned, she was stationed at the homeport of Sault Ste Marie, Michigan, where her primary duties were ATON and ice breaking. She worked primarily in Lake Michigan and Lake Superior, but would also work in the other lakes as well as some of the rivers, as needed.

On 10 April 1964 she ran aground on a reef while tending a buoy eight miles southeast of Escanaba, Michigan. The commercial tug, *John Purves*, also became stuck while trying to pull her off. USCGC *Sundew* was attempting to aid both vessels, and successfully pulled both vessels off by 12 April.

Though *Mesquite's* primary duties were ATON and ice breaking, she was occasionally called to other duties such as research and SAR. In the summers of 1968 and 1969, she supported the University of Wisconsin-Milwaukee's Department of Geology and Geophysics in doing limnology research and sub-bottom profiling of Green Bay, Lake Michigan. During this time (two summer sessions, each eight weeks in length), eight researchers worked on the ship with the crew.

In January 1973, while escorting the oil tanker *Venus*, the tanker's engine room suddenly caught fire, and *Mesquite's* crew fought the fire and eventually got it under control. Ultimately the crew was decorated for their efforts.

In 1977, after undergoing major renovations, *Mesquite's* homeport was changed to Charlevoix, Michigan. In 1984 and 1985, *Mesquite* was deployed to Grenada as a support ship and then was sent back to the Great Lakes and her homeport of Charlevoix where her duties were once again

ATON and ice breaking.

On 4 December 1989, she ran aground while switching out a summer buoy for a winter buoy near Keweenaw Point in Lake Superior. The buoy, ironically enough, marked the rock ledge onto which the ship came to rest. The buoy was not in the area that the *Mesquite* normally patrolled; however, they were filling in for *Sundew*, which was in dry dock for long overdue repairs to equipment and the hull. Before she could be pulled off the rock ledge, a storm came up and punched holes in the bottom, ripped the rudder off, and broke the mast. It was concluded that the ship would not be repaired, and was considered a total loss. Later that month *Mesquite* was decommissioned and on 14 July 1990 she was moved a mile away to Keystone Bay and sunken in 117 feet of water to be used for recreational purposes, the first ever Coast Guard craft used intentionally for this purpose.

Researched and written by Ms. Melissa M. Ashmore.



Original caption: "CGC MESQUITE (WAGL-305)"; dated 6 February 1961; Photo No. 060261-13; photographer unknown.



Original caption: "CGC MESQUITE (WAGL-305)"; dated 6 February 1961; Photo No. 060261-11; photographer unknown.



Original caption: "CGC MESQUITE (WAGL-305)"; dated 6 February 1961; Photo No. 060261-15; photographer unknown.



No caption/date/photo number listed; photographer unknown.



No caption/date/photo number listed; photographer unknown.

Sources:

Cutter History File. USCG Historian's Office, USCG HQ, Washington, D.C.

Robert Scheina. *U.S. Coast Guard Cutters & Craft of World War II*. Annapolis, MD: Naval Institute Press, 1982.

Robert Scheina. *U.S. Coast Guard Cutters & Craft, 1946-1990*. Annapolis, MD: Naval Institute Press, 1990.

U. S. Department of the Interior. National Park Service. *U.S. Coast Guard 180-Foot Buoy Tenders*. HAER booklet. Washington, DC: National Park Service, September, 2003. [HAER nos. DC-56, LA-14, LA-15, RI-56, and AL-187; Todd Croteau, HAER Industrial Archeologist (project leader); Jet Low, HAER Photographer; Dana Lockett (architect); Pete Brooks (architect); Candace Clifford (historian); and Kevin Foster (historian).]

