R/V Moana Wave Tribute
(1973 -1999)

The ocean sciences community was very well served by the R/V Moana Wave during her 25-year lifetime. The 65-m Moana Wave, or simply “Wave” as she is affectionately called by those who sailed aboard her, was built in 1973 at Halter Marine Corporation in New Orleans for the U.S. Navy. At that time she carried the military designation Auxiliary General Oceanographic Research (AGOR) – the twenty-second such vessel commissioned for the Navy fleet. Her design was for multi-disciplinary use with general capabilities that allowed her to conduct a broad range of scientific missions. The Hawaii Institute of Geophysics at the University of Hawaii was selected as the operator of this new state-of-the-art research vessel.

When the Wave (at that point a modest 36-m vessel) arrived in Honolulu she replaced the 28-m R/V Terri, a yacht constructed on a North Sea transfer hull which had been purchased and outfitted for scientific research by the University of Hawaii in 1964 (Fig. 1). With her 16,000-mile range and 60-day endurance, the Wave was a superb replacement for this much smaller, less capable ship. Upon her arrival in Honolulu in Feb-stary 1974, the Wave joined the R/V Kona Keoki, a 48-m vessel that the University had obtained in November 1973 on a lease-purchase agreement from Halter Marine (Fig. 2); the purchase was completed in 1973, just prior to the arrival of the Wave. At this time, the University of Hawaii’s research “fleet” was home-ported at the Marine Expeditionary Base at Pier 18 in Honolulu Harbor. The present snug Harbor facility which eventually provided expanded dock-side capability was developed a few years later and is still in use today (Fig. 3).

Moana Wave began service in South America and she coasted of the U.S. during her first few years and also worked in Alaska and off the west coast of Florida in support of the U.S. Navy’s SURveillance-Towed Array Sensor System (SURTASS). Following a mid-life overhaul and refit in 1984, she came out of the yard a larger (a 9-m section was added amidships) and more sea and science-capable vessel (Fig. 4, before; Fig. 5, after).

In September 1984 the Wave returned to Honolulu where she remained active until her retirement on 31 May 1999. During this period, the Wave supported diverse research missions throughout the Pacific basin from Korea to Antarctica and in the Atlantic Ocean in between. Her research mission and support capabilities were fully tested over one especially busy 2-year period from 1987 to 1988, during which time the Wave logged nearly 100,000 nautical miles and spent 633 days at sea (Fig. 5 and Table). 32 major cruises to Station ALOHA (at that point a 1%) of these physical-biogeochemical expeditions to Station ALOHA, all hands were on deck when she cleared the last sea buoy on route to Station ALOHA (Fig. 6). It was then that the science team was able to view from the observation deck the island of Oahu disappear in the horizon as science parties had done so many times before during the 25-year history of this capable ship. A major difference, however, was that this would be her last voyage in support of oceanographic research. During the routine fire and boat drills, suddenly the reality – and the finality – of it all struck home. Soon the Hawaiian Time-series (HOT) program scientists would lose the UNOLS flagship that has served them so well over the past decade.

The inaugural cruise, HOT-1, departed on 29 Oct 1988 with Dave Karl and Roger Lukas serving as co-chief scientists. Since that time, the R/V Moana Wave has been used for a majority of the HOT program monthly cruises (75 of 105 cruises from Oct 1988 to May 1999), as well as for all twelve of the bottom-moored sediment trap and biogeochemical monitoring cruises.

Early in the morning on 30 May 1999, as the Honolulu city lights reappeared in the distance on the home-bound leg of her final sea voyage there was mixed emotion among both the scientists and the crew. As she docked at the University’s Marine Center, the deck-draped Moana Wave lowered her flag for the last time (Figs. 8 and 9). This retirement seemed premature and hard to justify given the fine condition of this vessel, the exceptional qualifications of her crew and the large amount of her career still to be had. Funded mostly by the program for HOT, its field programs will continue with intermittent support from the State of Hawaii-owned R/V Kaimikau-O-Kalalea (KOK) and various UNOLS vessels of opportunity. Eventually the R/V Edith Moore (AGOR-26), a modern Small Water Area Twin Hull (SWATH) vessel currently under construction in Jacksonville, Florida, (delivery scheduled for May 2002) will fill this large void, but in certain respects, things will never be the same. The R/V Moana Wave will be a very hard act to follow. Throughout her life, the Wave was a user-friendly ship with a skilled and competent crew. To all of the officers, crew, technicians and shore-based support personnel we say aloha and mahalo nui loa for a job well done. May you all have fair winds and a following sea as you deploy on your next assignments.

At 0800 hrs on 28 May 1999, the research vessel Moana Wave departed Honolulu Harbor under sunny skies and light trade winds. When she cleared the last sea buoy on route to Station Atlantic, all hands were on deck when she cleared the last sea buoy on route to Station ALOHA (Fig. 6). It was then that the science team was able to view from the observation deck the island of Oahu disappear in the horizon as science parties had done so many times before during the 25-year history of this capable ship. A major difference, however, was that this would be her last voyage in support of oceanographic research. During the routine fire and boat drills, suddenly the reality – and the finality – of it all struck home. Soon the Hawaiian Time-series (HOT) program scientists would lose the UNOLS flagship that has served them so well over the past decade.

**The final voyage: R/V Moana Wave retires from UNOLS fleet**

**R/V Moana Wave Figures (post-1984 modifications)**

- **Modified (Built 1973):**
  - 1984
  - Length: 150 ft
  - Beam: 15 m
  - Draft (Summer Freeboard): 4.1 m
  - Displacement (Summer Freeboard): 1,853 light tons
  - Scientific Personnel: 19
  - Main Engines: Caterpillar 390 (2 ea.)
  - HP: 1250 HP
  - Bow Thruster, Electric: 150 HP
  - Speed, Cruising: 10 knots
  - Range: 14,000 nautical miles
  - Fuel Capacity: 12,500 gallons
  - Average Fuel Consumption: 2,000 gal/day
  - Owners: U.S. Navy
  - Designation: AGOR-22
  - Operator: University of Hawaii

**AHOY, MOANA WAVE!**

- 1984: R/V Moana Wave overhauled/re-fit at Halter Marine Shipyard in Chickasaw, Alabama, added a dozen of a 9-m section amidships, a deckhouse on the main deck, 6 new scientific laboratories, additional lab space, control room and a 2-m extension to the main deck.
- In September 1984, the R/V Moana Wave returned to Honolulu for the first time as a vessel. She departed on 14 December 1984 for the Galapagos Islands on her maiden voyage to a reconﬁgured research vessel.
- 1985 – May 1999: R/V Moana Wave supported a diverse global ocean research mission, including 93 HOT cruises, until her retirement from the UNOLS fleet on 31 May 1999.
- Dec 1999 – present: R/V Moana Wave is purchased by Ahtna Inc., an Alaska Native Corporation, and operated for use in undersea mapping and other epic cable industry.