



2007 Northwestern Hawaiian Islands Marine Debris Update

Results from first cruise July 18 - August 14, 2007

NOAA Fisheries Pacific Islands Fisheries Science Center (PIFSC) Coral Reef Ecosystem Division (CRED) Marine Debris Team successfully removed 23.8 metric tons (nearly 53,000 lbs) of derelict fishing gear (DFG) from the coral reefs and atolls of the Northwestern Hawaiian Islands (NWHI) from July to August of 2007. Operations included DFG removal at Kure Atoll, Pearl and Hermes Atoll and Laysan Island. The 28 day cruise aboard the NOAA vessel *Oscar Elton Sette* was the first in a series of three marine debris removal cruises to be conducted in the NWHI this year.



Derelict fishing gear near Pearl and Hermes Atoll

Recently designated the Papahānaumokuākea Marine National Monument, the 1200 nautical mile chain of atolls and islets known as the Northwestern Hawaiian Islands lies at the center of the North Pacific Gyre, a circular pattern of prevailing ocean currents that gather debris from around the North Pacific Rim. Various debris accumulate within the otherwise pristine monument; of great concern are the large conglomerates of derelict fishing gear that float in deep water, wash up on already littered beaches, and attach to coral reefs. DFG presents an entanglement hazard for many marine species, including the critically endangered Hawaiian monk seal, the endangered green sea turtle, and the endangered humpback whale. Additionally, DFG affects coral reef growth, presents a threat to boat navigation and may act as a vector for the introduction of non-native species to the sensitive ecosystems within the NWHI.



Dead green sea turtle found entangled in derelict fishing gear

This year, operations at Kure Atoll and Pearl and Hermes Atoll recovered 2859.5 kg and 16919 kg of derelict fishing gear, respectively; 2073 kg of emergent DFG were removed from the beaches of Laysan Island. Aggregations of DFG were found in all sizes with some individual conglomerates exceeding 500 kg. In total, marine debris divers surveyed over 9 km² of coral reef habitat, and bore witness to the hazards of DFG for marine wildlife. Monk seals were frequently observed playing in and around conglomerates of DFG. One live green sea turtle was successfully freed from a large multifilament net, while another was found dead, entangled just below the surface and unable to breathe.

Two additional marine debris recovery cruises are scheduled for the remainder of 2007. From September to November, operations will include a two-week recovery effort at French Frigate Shoals and 20 days of additional surveys at Pearl and Hermes Atoll, the location with the largest accumulation of marine debris in the NWHI.

The PIFSC would like to thank NOAA's Coral Reef Conservation Program and Marine Debris Program, Schnitzer Steel Hawaii Corp., Covanta Energy, the U.S. Fish and Wildlife Service, the State of Hawaii, and the US Coast Guard for contributing their time and services to the ongoing marine debris recovery project. For more information on marine debris removal efforts in Hawaii, please visit the NOAA PIFSC Coral Reef Ecosystem Division website: <http://www.pifsc.noaa.gov/cred/mdr.php>