

# Marine Debris

## PACIFIC

### A Survey of Invertebrate and Algal Communities Colonizing Marine Debris in the Northwestern Hawaiian Islands

One of the greatest threats to any ecosystem is the presence of non-native species and the alterations in the biotic community that can be caused by these organisms. The Northwestern Hawaiian Islands (NWHI) Marine National Monument is a nearly pristine ecosystem that has been the focus of derelict fishing gear removal efforts for the past 7 years. This debris may serve as a potential vector for non-native species and may act as an artificial substrate with the potential to alter the structure of the biotic community present on a reef. We are conducting surveys of the algal and invertebrate communities living on the nets



Alien mussel species living on a net in the NWHI recovered by the 2003 Marine Debris Removal Team. Photo courtesy of NOAA Fisheries PIFSC.

during the 2007 NOAA Pacific Islands Fisheries Science Center's Coral Reef Ecosystem Division (CRED) marine debris removal effort. This information will give us needed insight regarding the quantity and diversity of biota living on the nets and allow us to begin to assess this threat to the NWHI. Through this effort we will create a database of species found living on the debris, create summary results that will be available to managers, provide web based outreach, and better document the level of risk that alien species on marine debris poses to the NWHI coral reef ecosystems.

#### WHAT IS MARINE DEBRIS?

*Marine debris is any manufactured or man-made solid material that enters the coastal or marine environment. It may enter directly when it is lost or dumped from a ship, or indirectly when debris washes out to sea via rivers, streams, and storm drains.*

#### MARINE DEBRIS SOURCES

*Sources of marine debris include land-based sources, such as littering, dumping, and industrial losses. Ocean-based debris can come from fishing vessels, cargo ships, stationary platforms, and other vessels.*

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## MANDATES

Mandates supporting NOAA's marine debris efforts include the following:

- Marine Debris Research, Prevention, and Reduction Act of 2006, S.362
- U.S. Ocean Action Plan
- Coral Reef Conservation Act
- Marine Plastic Pollution Research and Control Act, 33 U.S.C. §§ 1901 et seq.
- Marine Protection, Research, and Sanctuaries Act, (Title II) 33 U.S.C. §§ 1401 et seq.
- Clean Water Act, 33 U.S.C. §§ 1251 et seq.

## PARTNERS

- Natural History Museum of Los Angeles County
- Florida Museum of Natural History University of Florida
- Census of Marine Life
- Census of Coral Reef Ecosystems
- State of Hawaii Division of Aquatic Resources
- Hawaii Institute of Marine Biology

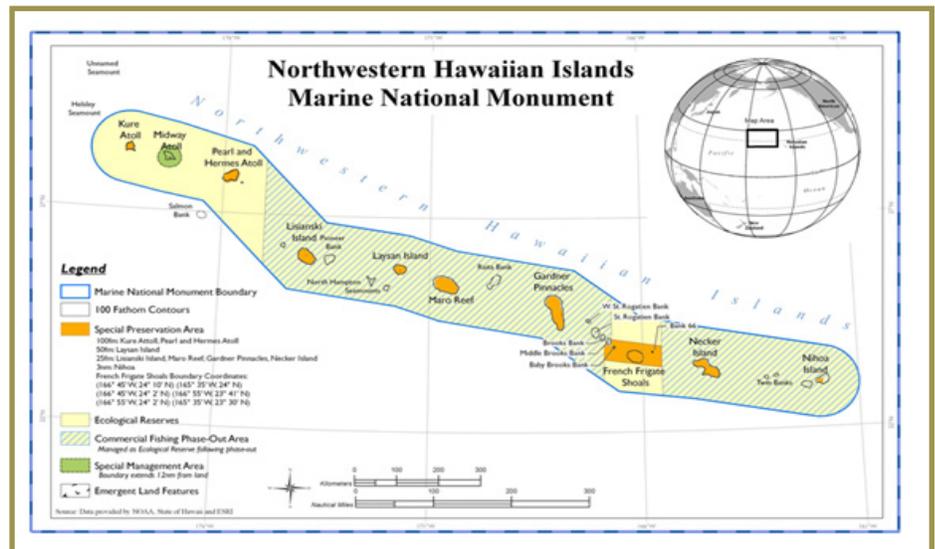
## BENEFITS OF THE PROJECT

- Assess and document the diversity of species living on derelict fishing nets
- To document invasive algae and invertebrates not previously recorded in the NWHI
- Create a summary of the results for NWHI management agencies

## CONTACTS

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