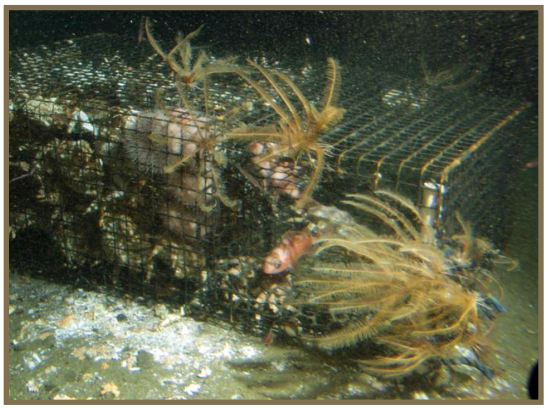
PACIFIC

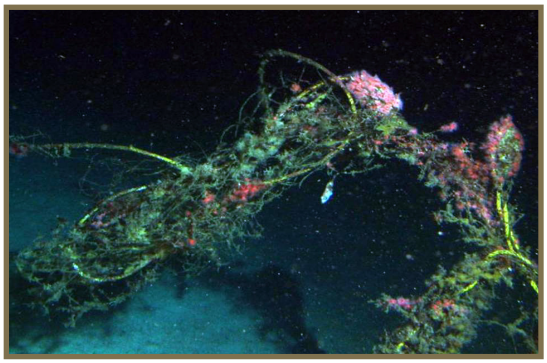
An Assessment of Derelict Fishing Gear and other Marine Debris in Deepwater Benthic Habitats off California

Efforts to address marine debris have focused primarily on monitoring and clean-up of the shoreline and subtidal areas (<30m depth) that are accessible to scuba divers. However, many of the activities that may contribute significantly to marine debris (e.g. from fishing and shipping) occur in deeper waters (>30 m) in coastal and open oceans, where little is known about the extent of marine debris and its potential impacts to seafloor habitats.

Using our extensive survey databases and video catalog, we are examining the extent of derelict fishing gear and other debris in deepwater off central and southern California. We have more than 400 hours of quantitative video transects conducted during the period 1992 through 2006, in 22 locations at depths of 20-365 m. These surveys were conducted to assess demersal fishes and their habitats, and marine debris was recorded when encountered. Our surveys comprise most seafloor habitat types throughout the Southern California Bight, including the Cowcod Conservation Areas and the Channel Islands National Marine Sanctuary, and the Monterey Submarine Canyon system and shelf rock habitats within the Monterey Bay National Marine Sanctuary. From these data we will quantify the distribution, abundance, and types of debris and assess potential ecological impact in a variety of benthic habitats.



Commercial spot prawn trap full of box crabs and continuing to fish in 240 meters of water off San Nicolas Island inside the Cowcod Conservation Area, October 2002. *Photo courtesy of Milton Love, University of California Santa Barbara.*



Snarled commercial fishing net colonized by invertebrates in 90 meters of water on Osborn Bank inside the Cowcod Conservation Area, October 2002. *Photo courtesy of Bob Lea, California Dept. Fish and Game.*

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

- NOAA National Marine Fisheries Service, Southwest Fisheries Science Center, Fisheries Ecology Division
- University of California Santa Barbara
- Pacific States Marine Fisheries Commission
- Cordell Bank National Marine Sanctuary

BENEFITS OF THE PROJECT

- Assessment of marine debris impacts to deepwater benthic habitats off California
- Contribute data to assist in management decisions of marine debris in deepwater
- Increased public awareness of issues related to marine debris in deep water
- Improved assessment of deepwater benthic habitats

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Commercial longline over rock outcrop located between Anacapa and Santa Cruz Islands in 140 meters of water off Southern California, November 2002. *Photo courtesy of Brian Tissot, Washington State University.*

This project is funded through NOAA's National Ocean Service, Office of Response & Restoration, Marine Debris Program. The NOAA Marine Debris Program works with other NOAA offices, as well as other federal, state, and local agencies and private sector partners to support national, state, local and international efforts to protect and conserve our nation's natural resources, oceans, and coastal waterways from the impacts of marine debris.