

# NOAA's Deep Sea Coral Research and Technology Program

## Deep-Sea Coral Ecosystems

Research over the last decade has revealed remarkably complex and fragile coral communities in the deep sea that can live for hundreds or thousands of years.

## Architects of the Deep

Many branching deep-sea corals are shaped like bushes or trees. Some species form deep-sea reefs that, over millennia, can grow more than 300 feet tall.

Deep-sea coral habitats have been discovered on continental shelves and slopes, canyons, and seamounts around the world. Their full extent is still unknown because most areas have yet to be surveyed.

These complex structures provide habitat for many diverse fish and invertebrate communities including commercially important species such as grouper, snapper, sea bass, rockfish, and crab.



## Fragile Gems

Deep-sea corals are vulnerable to damage caused by bottom-tending fishing gears—especially trawls. They may also be damaged by energy exploration and development, deployment of cables and pipelines, and other human activities that disturb the seafloor.

Recovery from damage may take decades, or even centuries, as most deep-sea corals grow extremely slowly. Additionally, ocean acidification, a result of the ocean absorbing increased carbon dioxide, adversely affects corals' ability to grow.

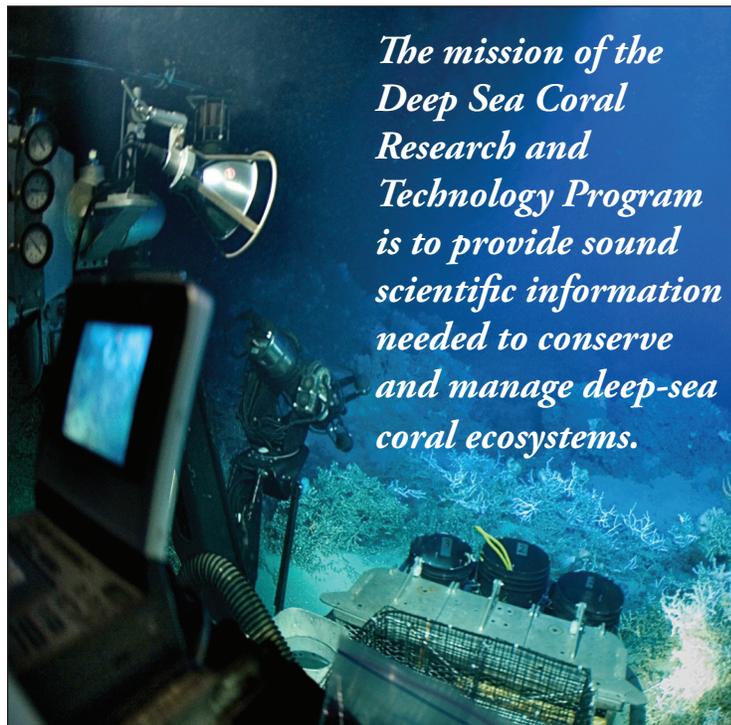


Photo: Art Howard

## About the Program

- Called for in the reauthorization of the Magnuson-Stevens Fishery Conservation and Management Act.
- Produces sound science to support NOAA's role in the management of fishing impacts and to address threats to deep-sea coral ecosystems.
- Developed in consultation with the eight Regional Fishery Management Councils and in coordination with other federal agencies and educational institutions.
- Supports conservation in National Marine Sanctuaries.
- Guided by the NOAA Strategic Plan for Deep-Sea Coral and Sponge Ecosystems.
- Integrates the expertise and resources available across NOAA.

# Our Research



## Alaska: 2012 – 2014

- Planning is underway for the fieldwork slated for 2012 through 2014. Scientists are compiling existing knowledge of deep-sea corals and sponges to guide the fieldwork design.



## West Coast: 2010 – 2012

- Fieldwork off the West Coast supports Pacific Fishery Management Council actions and marine sanctuary needs.
- Using cutting-edge technology, scientists are finding coral and sponge habitats in new locations and documenting their associations with fish.

## Nationwide Investment

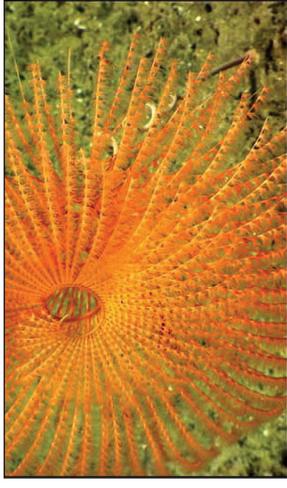
The Deep Sea Coral Research and Technology Program is the nation's resource for information on deep-sea coral and sponge ecosystems.

- Three-year field research efforts in each U.S. region
- Target analyses on:
  - Existing information about deep-sea coral ecosystems.
  - The distribution and intensity of fishing activities that may damage deep-sea corals in federal waters.
  - Coral and sponge bycatch in fisheries.

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## Southeast: 2009 – 2011

- Research cruises using sonar technology, remotely operated and manned submersibles discovered new deep-sea coral reefs.
- Research findings help the South Atlantic Fishery Management Council delineate fishing zones and protected areas.



## Northeast: 2013 – 2015

- A research priorities workshop in 2011 sets the direction for the three-year fieldwork research beginning in 2013.

