PROTECTING THE LIVING SEAFLOOR: NEW DISCOVERIES OFF SOUTHERN CALIFORNIA



A Unique Ocean Environment

The Pacific Ocean off Southern California is a productive and diverse marine environment from the region's giant nearshore kelp forests to the coral gardens of the deepsea. Large offshore islands and expansive underwater ridges shape this area into the widest and most geologically diverse marine region off the U.S. West Coast. This complex underwater topography combined with converging ocean currents and cold nutrient-rich water creates ideal circumstances for a dynamic ocean food web that supports a thriving ecosystem teeming with life.

Southern California waters are a global biological hotspot, critical to many large whales, including blue whales, the largest of them all. The area is a nursery for great white shark pups and a critical breeding and foraging habitat for California sea lions and seabirds. These waters are home to important invertebrate species like spiny lobsters and the critically endangered white abalone, plus hundreds of fish species from long-lived rockfish that live on the seafloor, tuna that race through the water column and flying fish that glide above the surface of the sea.





Protecting the Living Seafloor

At the foundation of this productive ocean ecosystem are living plants and animals—like corals and sponges—that make up seafloor habitats providing food and shelter for recreationally and commercially important fish species as well as other ecologically important marine life.

Relatives of their tropical counterparts, cold-water corals and sponges are able to thrive in deep and dark ocean waters. They are long-lived and slow growing, some advancing only millimeters per year. Because these structures are delicate, they can take hundreds of years to recover, if at all, once disturbed. Bottom trawling is the most destructive fishing practice to seafloor habitats off the U.S. West Coast. As the footrope, rollers, and heavy trawl doors of this fishing gear run along the seafloor, living habitat in its path is crushed, ripped up, or smothered.

In 2006, Oceana and its partners successfully pushed the federal government to protect over 135,000 square miles of living seafloor off the West Coast from bottom trawling, yet much of the ocean floor off Southern California was left unprotected despite having never been trawled. Now, the Pacific Fishery Management Council is considering whether to increase protections for newly identified coral and sponge species and newly explored areas, and whether to open areas that were protected over a decade ago.

(photo at top left): *Lophelia pertusa* with a basket star on 109 Seamount (photo at top right): Demosponge with a greenspotted rockfish at Cortes Spawning Grounds. (photo at bottom left): Cup coral (*Desmophyllum dianthus*) with a rockfish from Piggy Bank. Image credits: NOAA Southwest Fisheries Science Center, Advanced Survey Technologies Group.



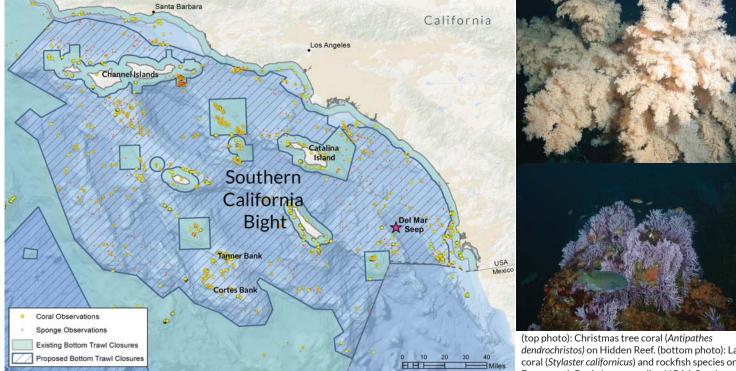
Protecting New Discoveries

In the last two decades, based on new mapping and exploration by scientists and fishermen. Southern California's ocean waters have emerged as a treasure trove of new biological discoveries. Species not previously known to science are being identified off the West Coast and there is new information on the location and extent of sensitive marine life and habitats. To defend and build upon existing seafloor protections, Oceana and its partners submitted a comprehensive conservation proposal in 2013 that includes protection of all remaining untrawled areas off Southern California as an Essential Fish Habitat Conservation Area. This area spanning from Point Conception to the Mexico border is roughly 16,400 square miles.

Except for some bottom trawl fisheries targeting California halibut, sea cucumbers, and prawns close to shore, this vast expanse of uncharted territory is currently not being trawled. However, as depleted species recover and markets change, there is a real risk that bottom trawling could expand into pristine and unexplored areas if not protected.

The protections implemented in 2006 were a critical step in establishing a system that conserves the integrity of the living seafloor and the ecological, social, and economic benefits derived from these healthy ocean habitats. But the diversity of the ocean environment is still at risk with the vast majority of the area offshore Southern California still open to bottom trawling. Without further protections, we could lose these fragile underwater secrets forever before we even have a chance to discover and understand them.

Oceana's proposal off Southern California would keep nearshore areas open to bottom trawling where the fishery is currently operating, but prevent the expansion of bottom trawling into pristine offshore areas. This precautionary conservation approach prevents economic impacts to existing fisheries and it protects the diversity of ocean habitats in this ecologically rich ocean region for the benefit of vibrant fisheries and future generations.



dendrochristos) on Hidden Reef. (bottom photo): Lace coral (Stylaster californicus) and rockfish species on Farnsworth Bank. Image credits: NOAA Southwest Fisheries Science Center, Advanced Survey **Technologies Group**

It is essential to be precautionary in protecting these rich habitats that provide nurseries, food, and shelter for many important fish species.



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