

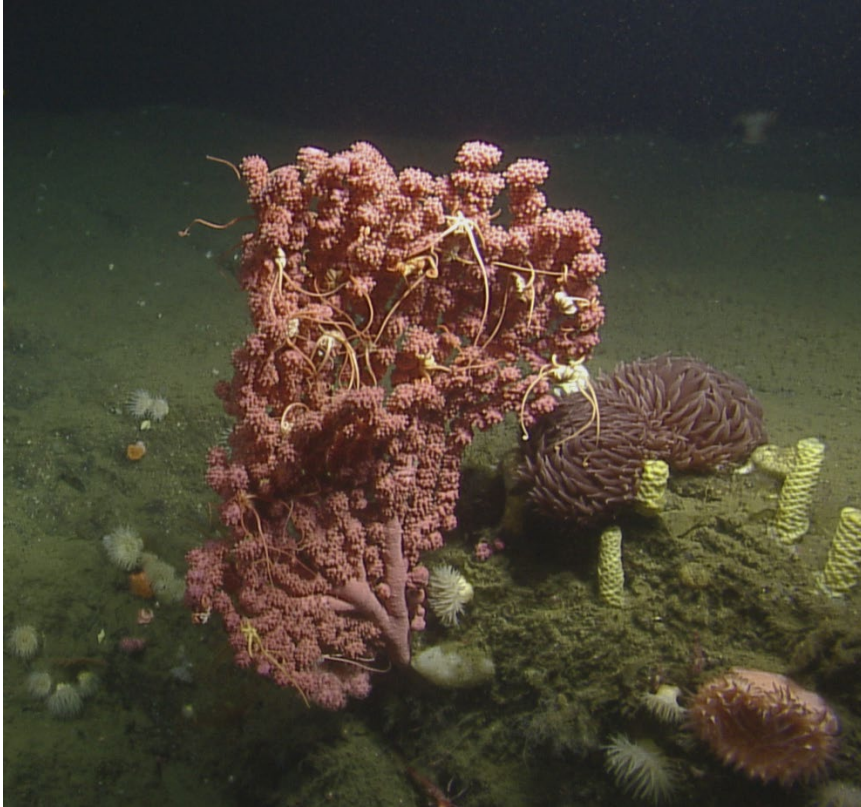


# DEEP-SEA CORAL RESEARCH AND RESTORATION

Pacific Fishery Management Council  
Agenda Item H.2 (September 11, 2023)  
Ben Enticknap, Oceana



# Deep-sea corals



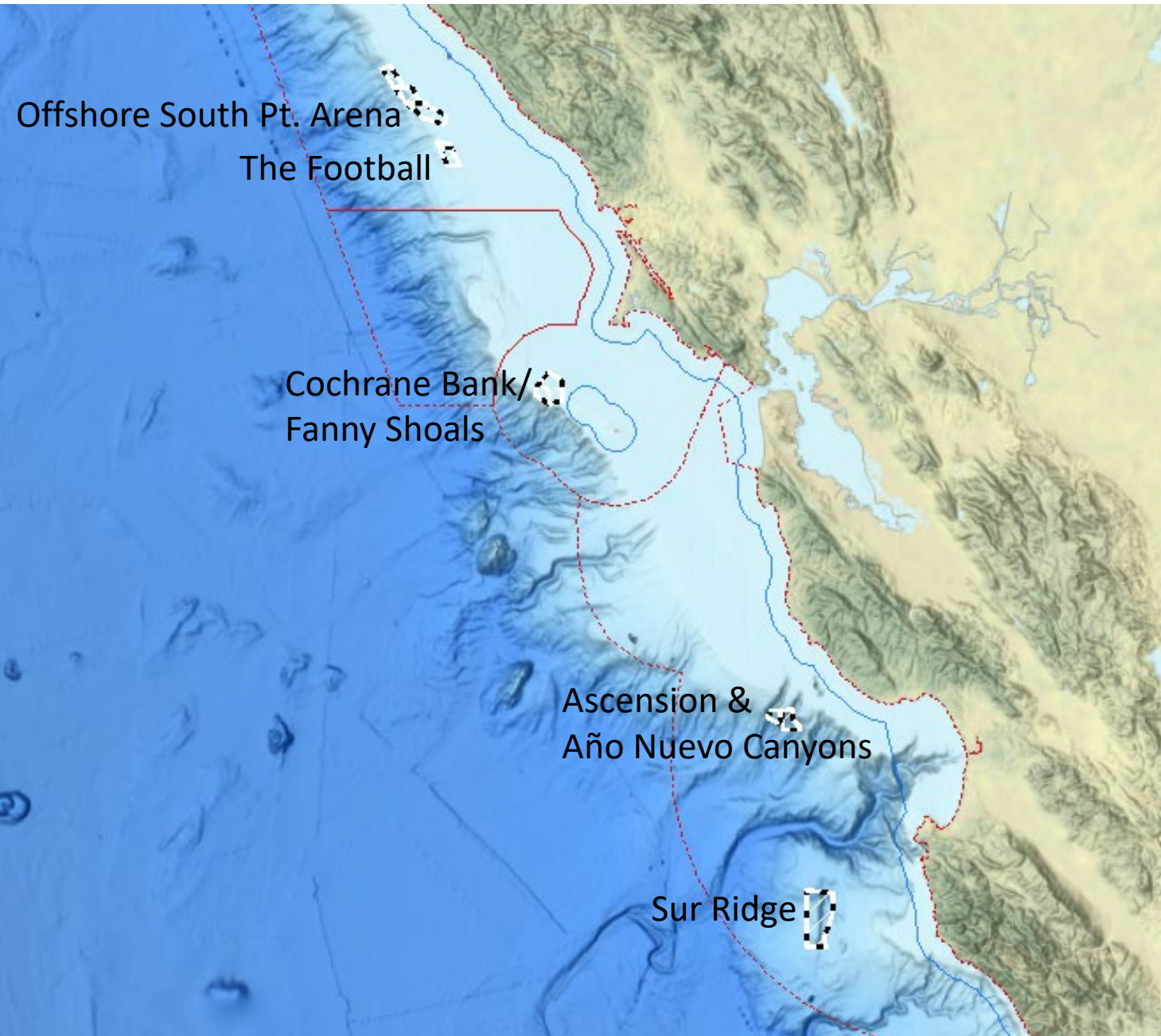
Bubblegum coral in Pioneer Canyon  
(Ocean Exploration Trust)

- Long-lived (100s to 1000s of years)
- Sensitive to disturbance
- Slow growing
- Rare
- Create living habitats
- PFMC priority habitat feature for EFH conservation

## *YFD-70 Dry Dock Impacts at Pioneer Canyon:*

- 1,713 -3,672 fish and invertebrates were displaced, crushed and killed in the sinking of the dry dock
- 646 - 1,305 octocorals estimated to have been crushed and killed



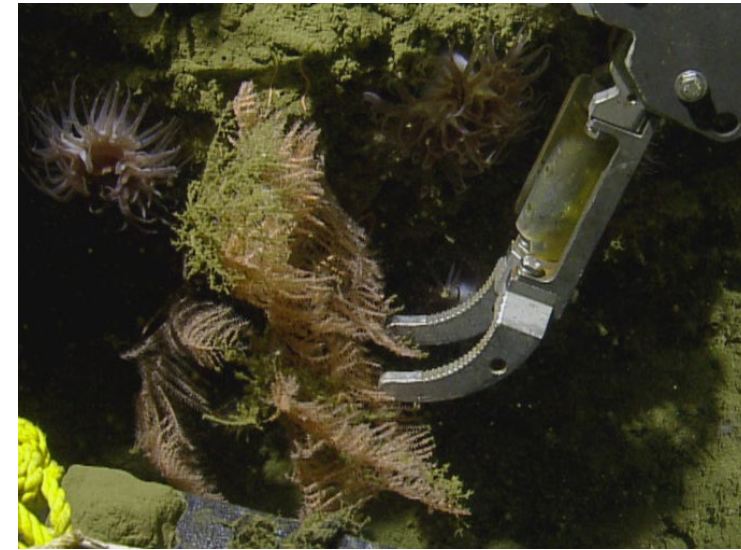
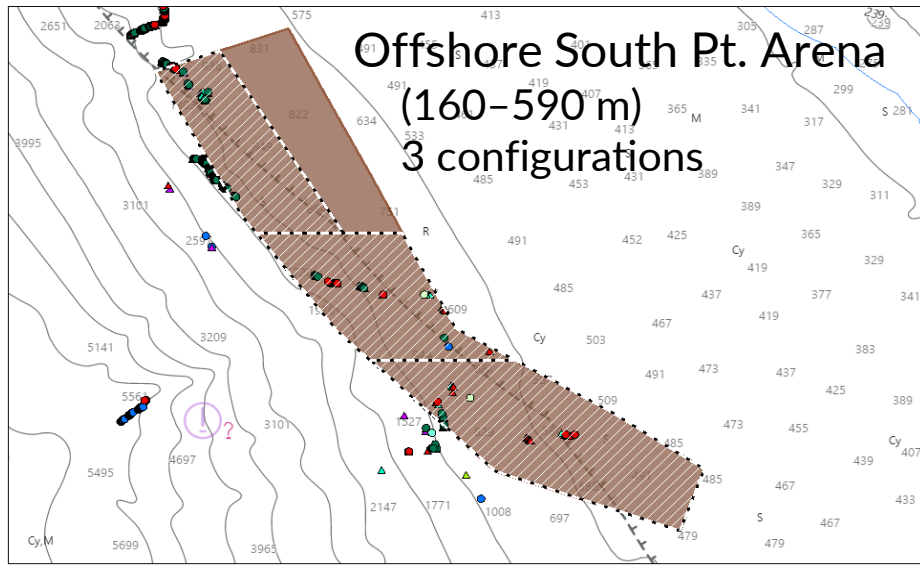


## Deep-Sea Coral Research and Restoration Areas

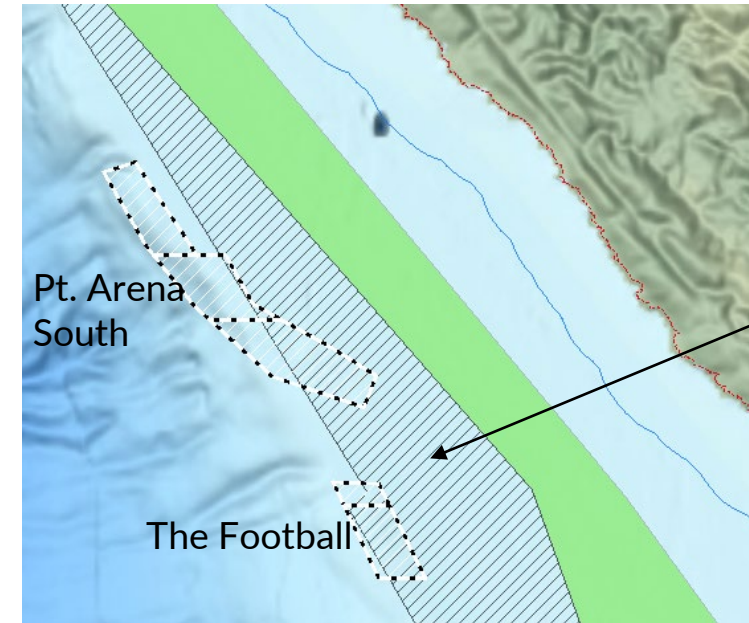
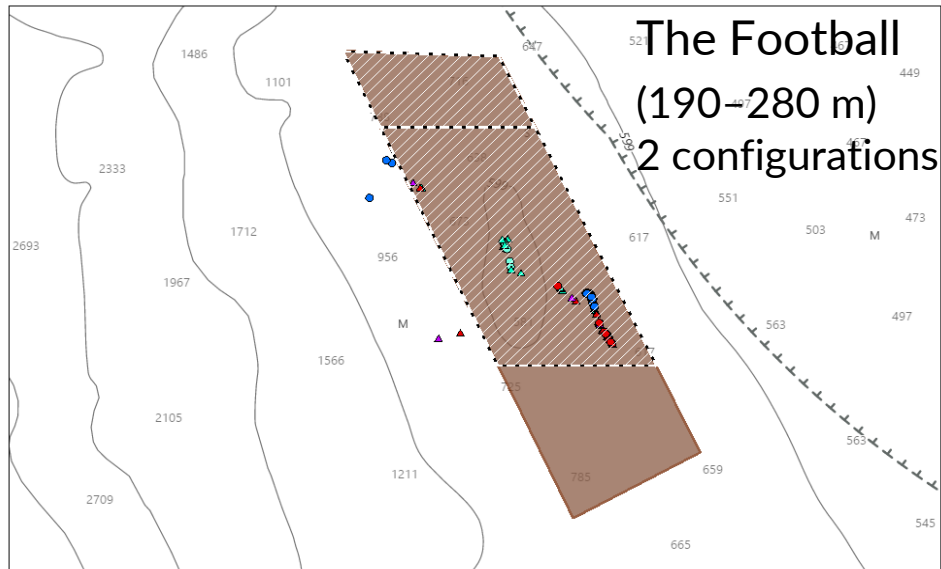
- Restore ecologically important habitats, enhance scientific understanding, conservation, and management
- Protect the most important and sensitive essential fish habitat areas from all bottom contact

### Carefully selected areas

- Closed to bottom trawling
- Some currently closed to groundfish bottom contact gear in the non-trawl RCA
- Span a range of suitable depths with necessary substrate for coral outplanting



ROV collecting black coral at Point Arena South (NOAA GFNMS)



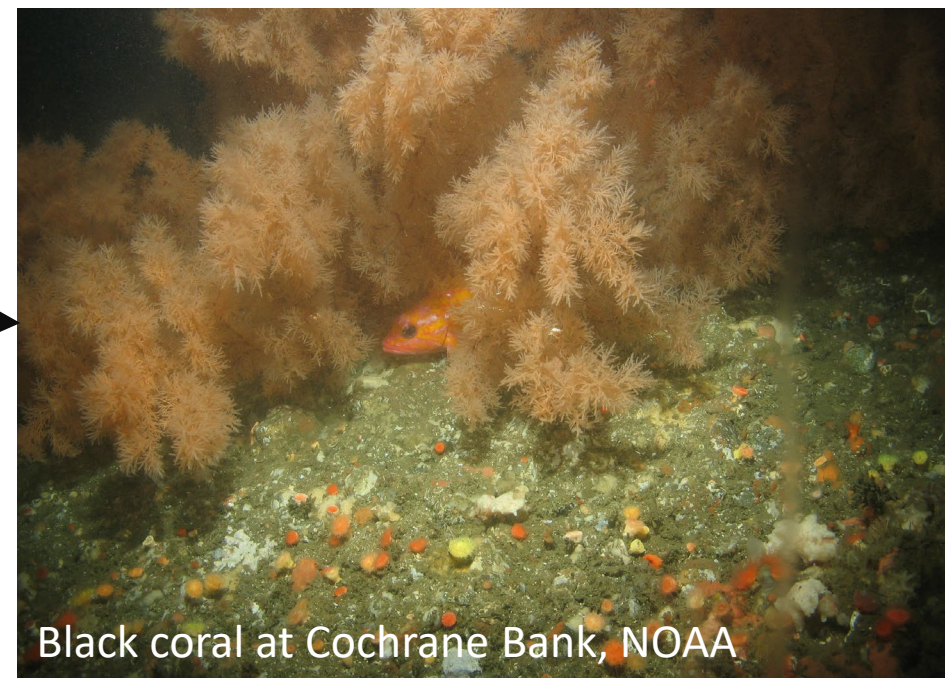
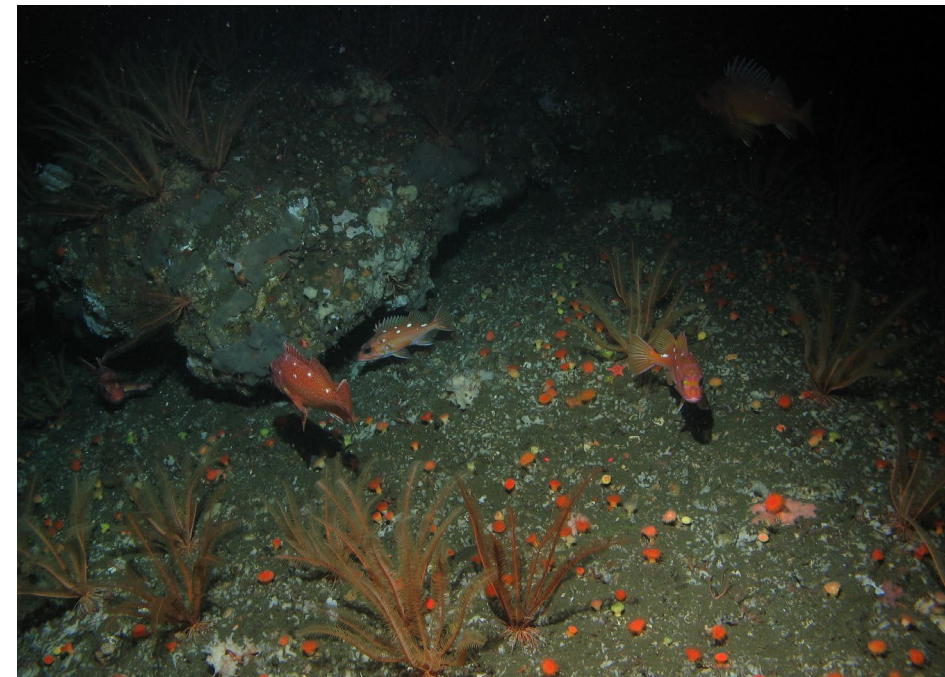
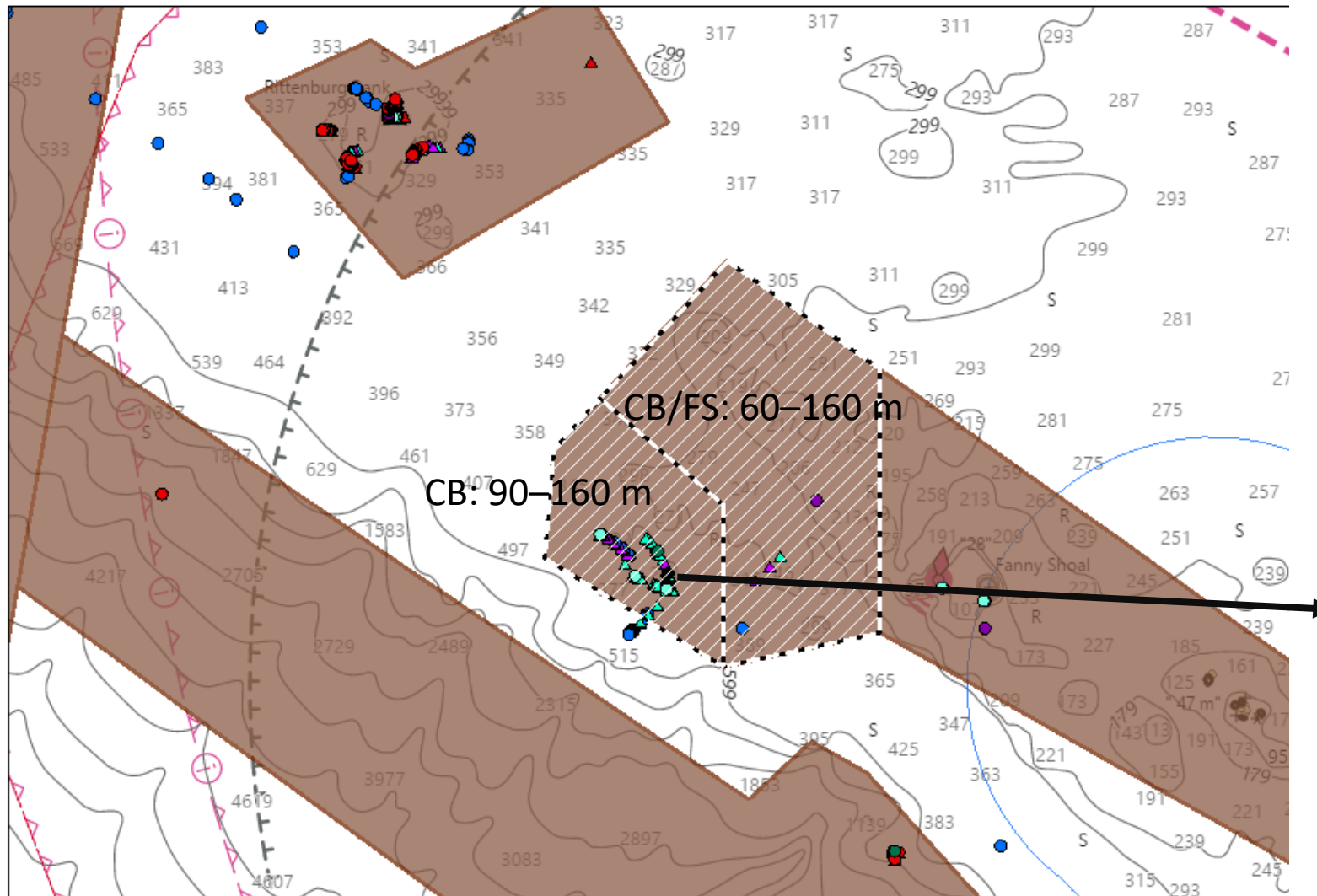


# Exploring the Football: Greater Farallones NMS



Full video available: <https://farallones.noaa.gov/science/football.html>

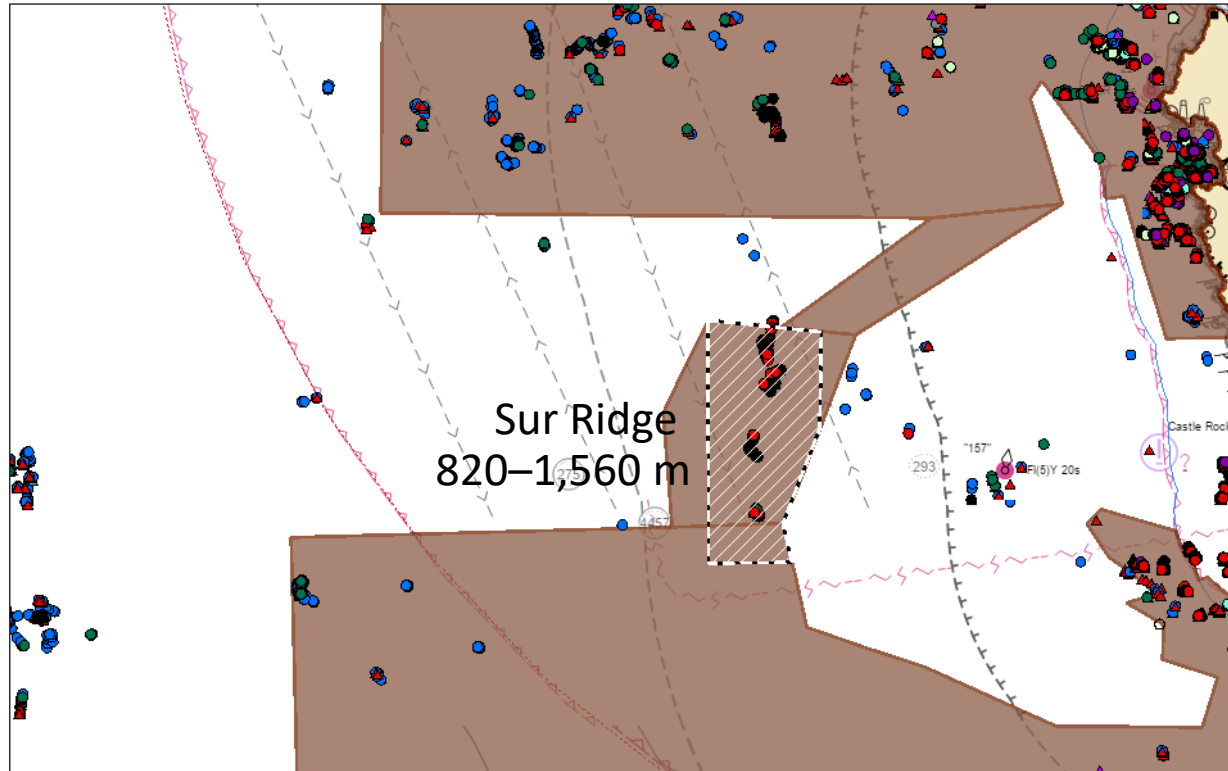
## Cochrane Bank and Cochrane Bank/ Fanny Shoal (2 configurations)



Black coral at Cochrane Bank, NOAA







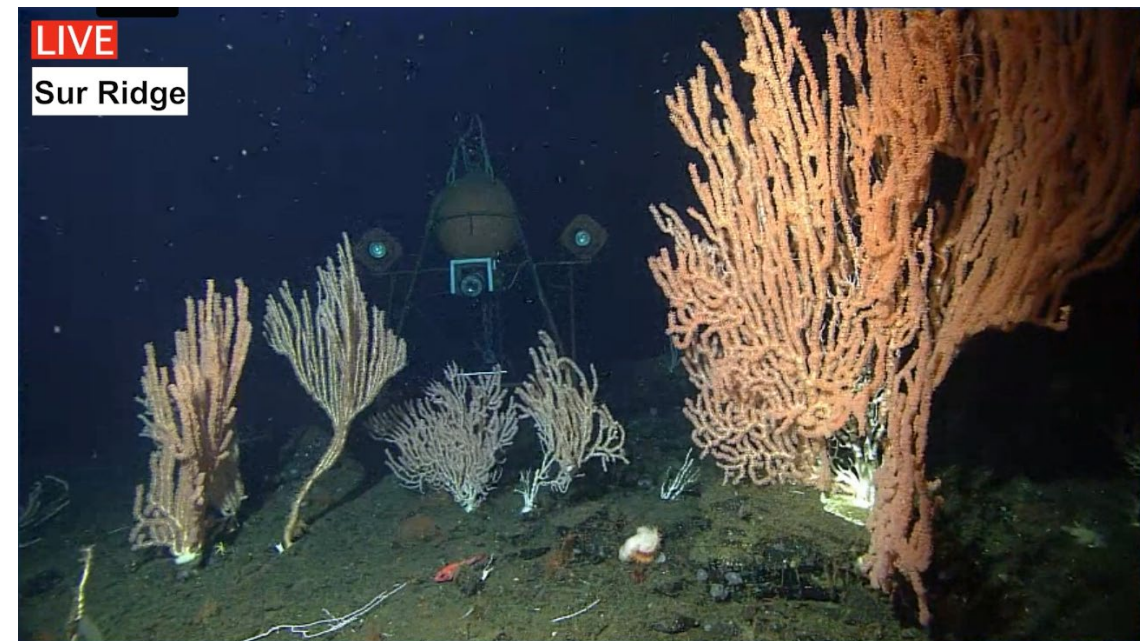
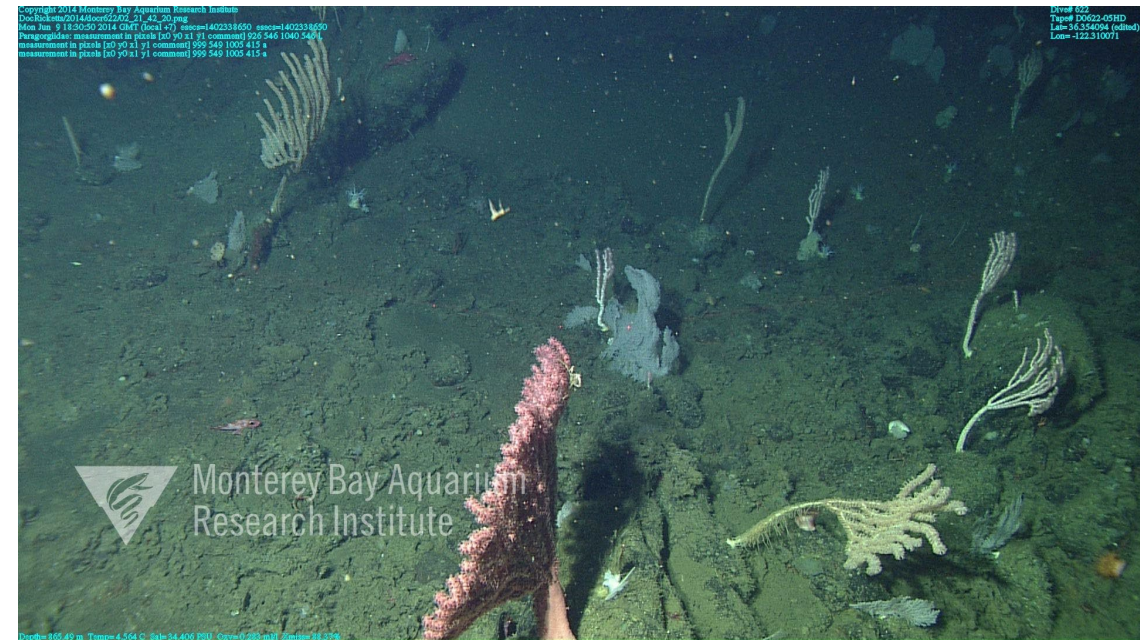
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0 3 6 12 mi  
0 4.75 9.5 19 km

California State Parks, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA,  
USGS, Bureau of Land Management, EPA, NPS, General Bathymetric Chart

**Sur Ridge:** Large rocky feature 28 miles west of Point Sur, coral gardens, Sanctuary Ecologically Significant Area, and EFH Conservation Area





## Recommendation for scope of action



- Protect coral research and restoration areas at each of the five Sanctuary identified locations from all bottom contact fishing gears.
- Analyze all area configurations put forward by ONMS
- Utilize varied legal authorities under the MSA including EFH and sections 303(b)(2)(A), 303(b)(2)(B) and 303(b)(12) which authorize fishery councils to take broad actions to conserve the marine environment.
- “conservation and management” in the MSA is defined to include measures to “rebuild, *restore*, or maintain . . . any fishery resource *and the marine environment*,” 16 U.S.C. § 1802(a)(5)(A) (*emphasis added*)