

# Supporting a Spatial Analysis of the Distribution and Size of Rebuilding Stocks in the Rockfish Conservation Areas through Directed Surveys



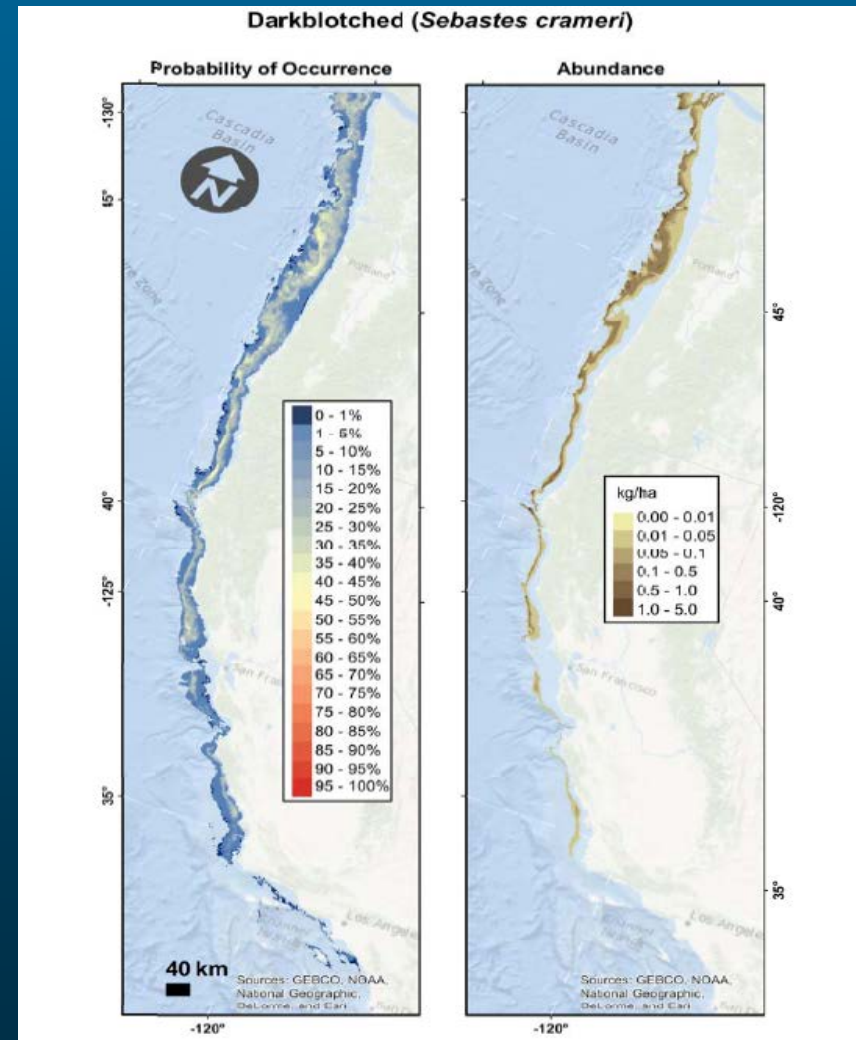
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EFP #: 13-14-TNC-01

Project Partners: TNC, MLML / Ca Sea Grant, NMFS/SWFSC, CCSGA/CCSMA, CGC, local fishermen, EDF, MARE, & CDFW

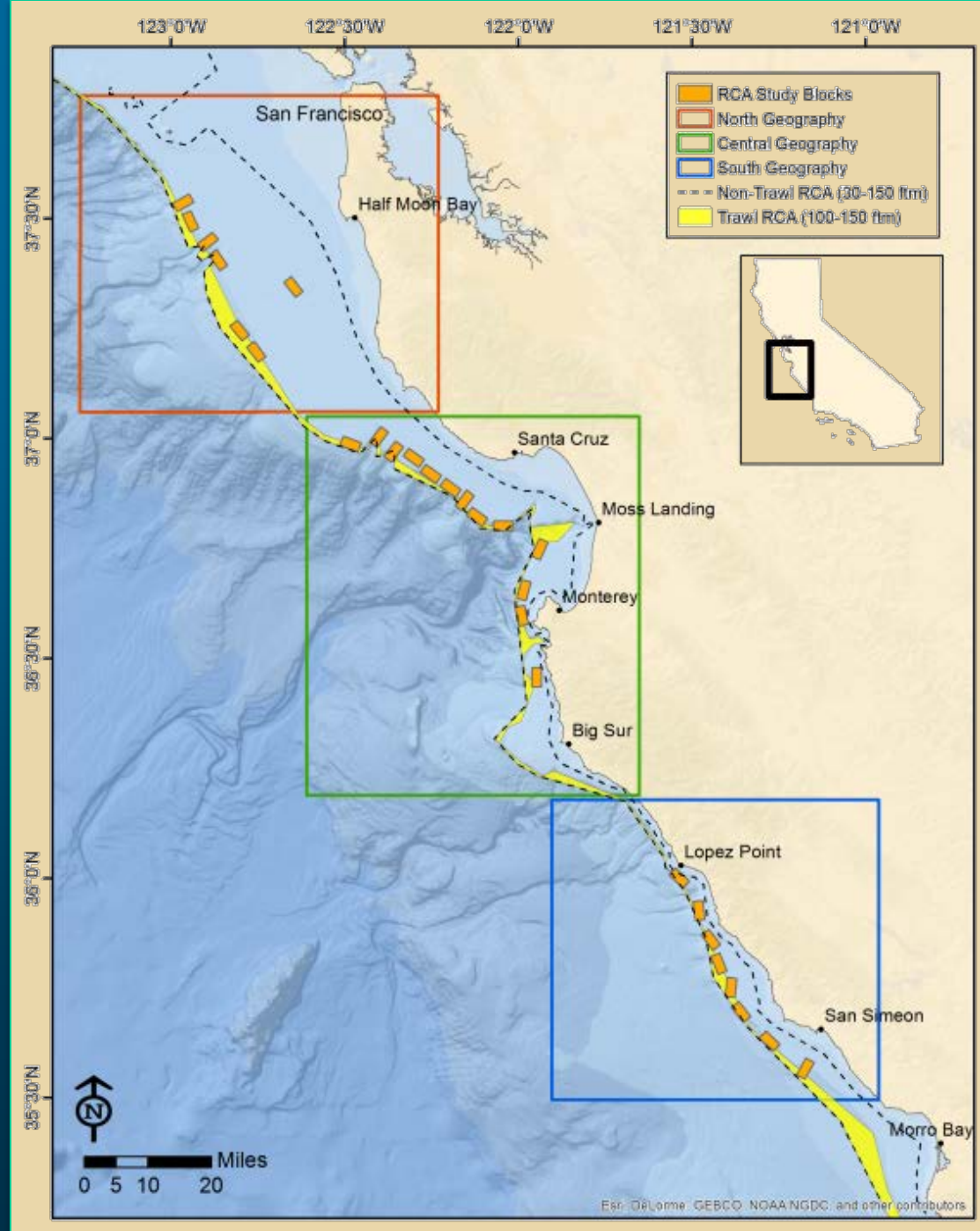
# Project Goal: To better understand distribution, abundance, and size of rebuilding species to inform fishing and management decisions

- Compile existing data and develop predictive maps of distribution and abundance of rebuilding species.
- Conduct visual and fishing surveys to assess encounter rates and collect data on distribution, abundance, and size structure.



## 2013-2015 Research:

- 200 mi of Coastline
- 50-250 meters depth in Trawl and non-trawl RCAs
- 741 Fishing Sets
- 1092 Visual Surveys





# Directed Fishing Surveys

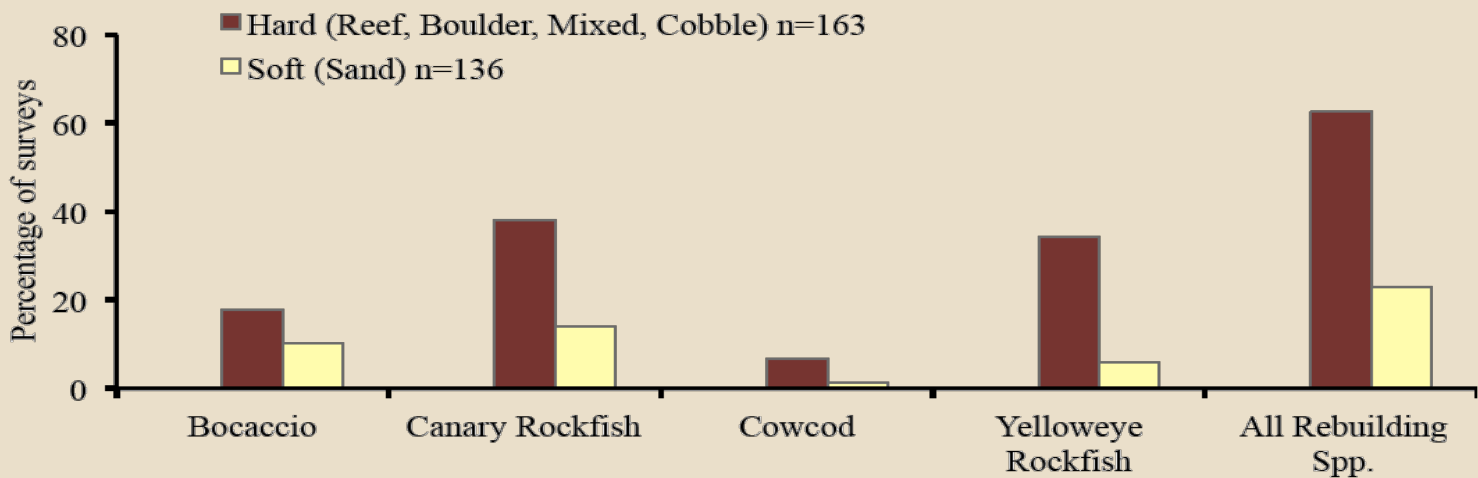
- Modified H&L gear w/ 25ft leader, targeting semi-pelagic species
- 8,827 lbs fish landed
  - Vermilion, Yellowtail, Chilipepper, Widow RF (90 % of landings)
  - Bocaccio (8.3% of landings)
  - Yelloweye (4) & Cowcod (2) at 0.5% of landings
- Target:Rebuilding Ratio of 10.1:1
- Biological analyses of growth & maturity



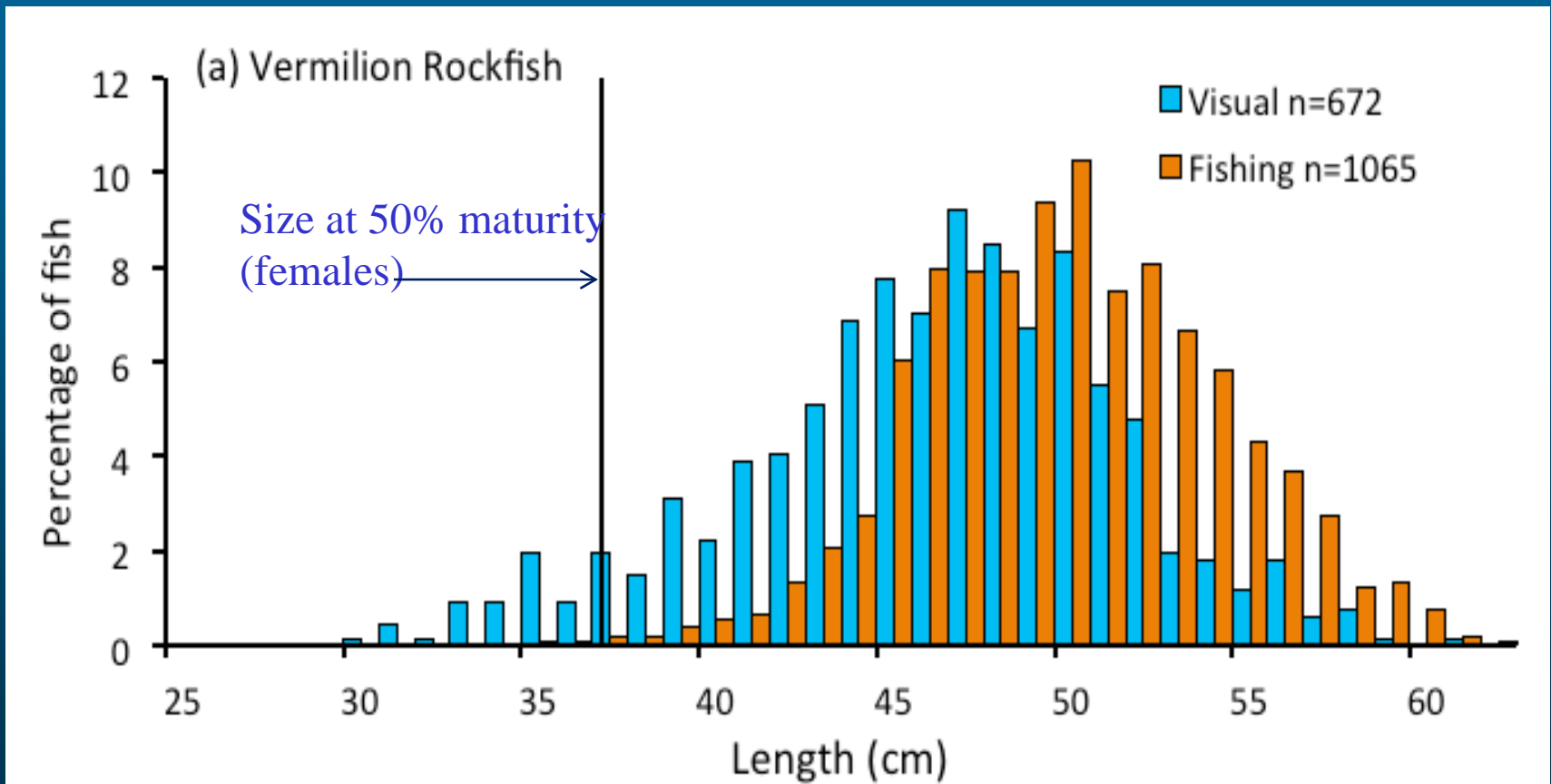
# Visual Surveys with Stereo Video Lander



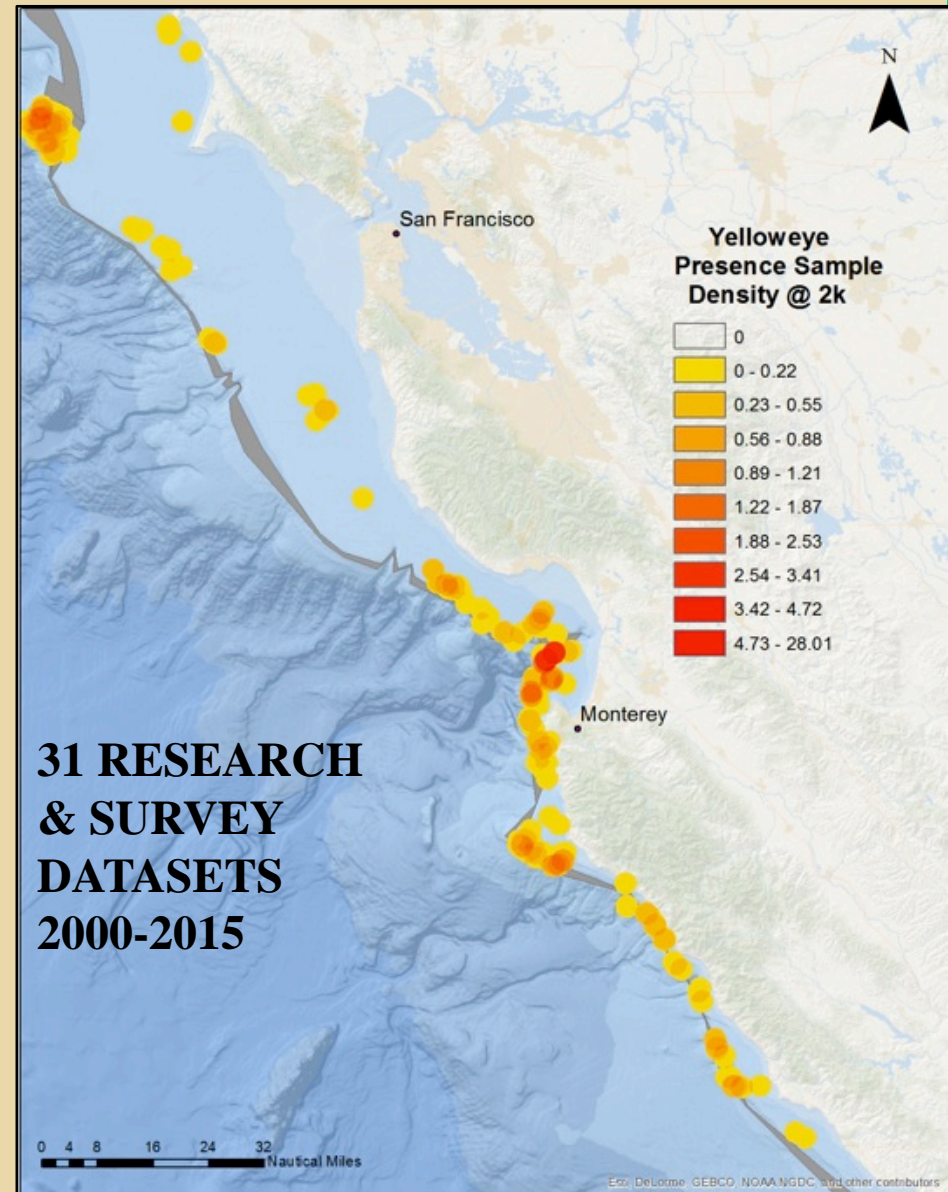
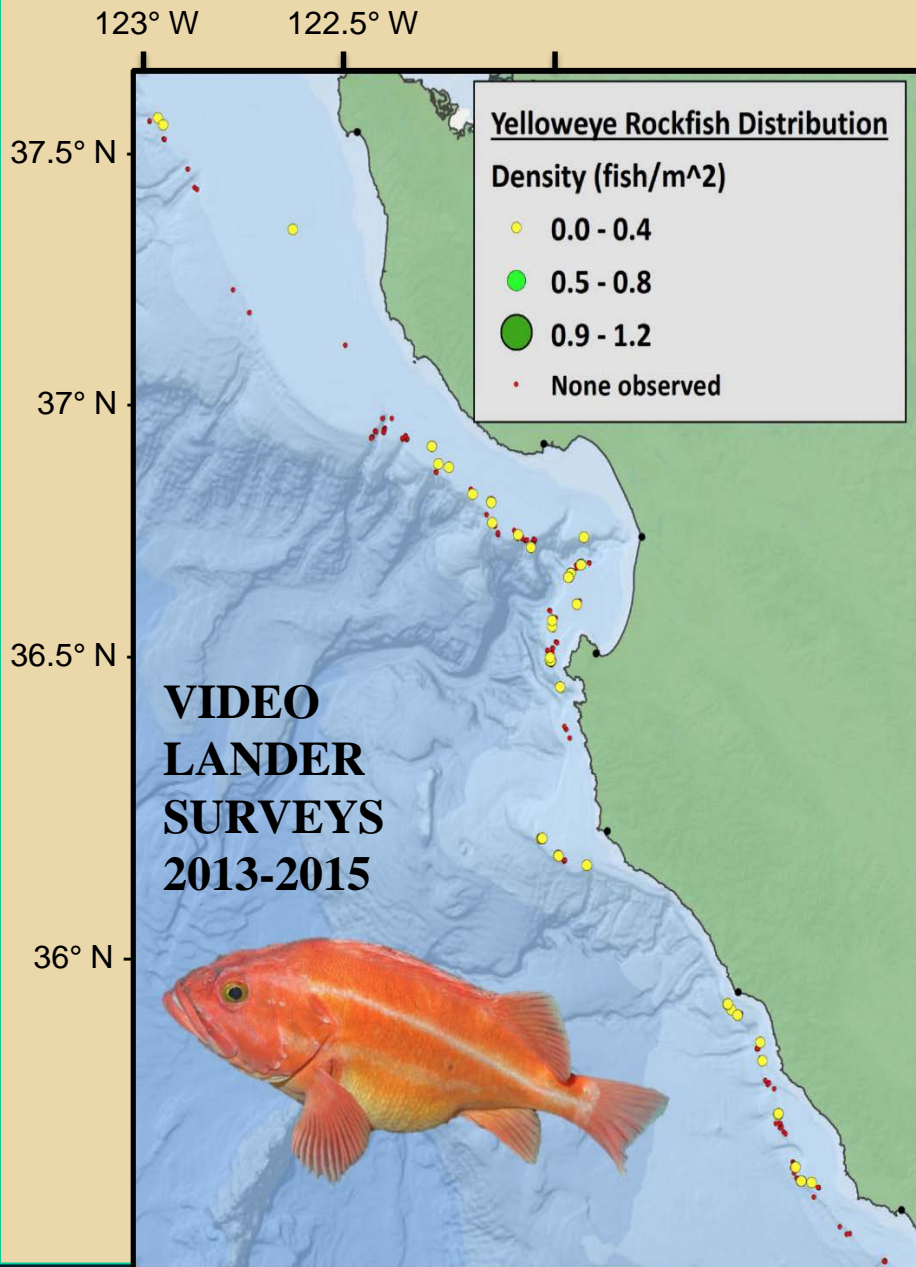
- Distribution, density, size, habitat association
- Over 10,000 fish from 60 species
- 40% of surveys had at least one rebuilding species
- Yelloweye in 20% of surveys
- Mostly in hard bottom habitat



# Length Frequencies: Visual Surveys and Fish Catches



# Rebuilding Species Geodatabase





# Acknowledgements



Thanks to the many entities & individuals who participated in this study!

## Collaborating fishermen:

Roger Cullen (F/V *Dorado*); Brad Leage (F/V *Princess*); Tim Maricich (F/V *Donna Kathleen*); Tom Mattusch (F/V *Huli Cat*); Mike Ricketts (F/V *Sea Hawk*)

