

Welcome!



Bodega Marine Laboratory California Collaborative Fisheries Research Program



Introductions

- Name
- How are you connected to CCFRP?
- Number of years involved in the project
- Favorite marine animal



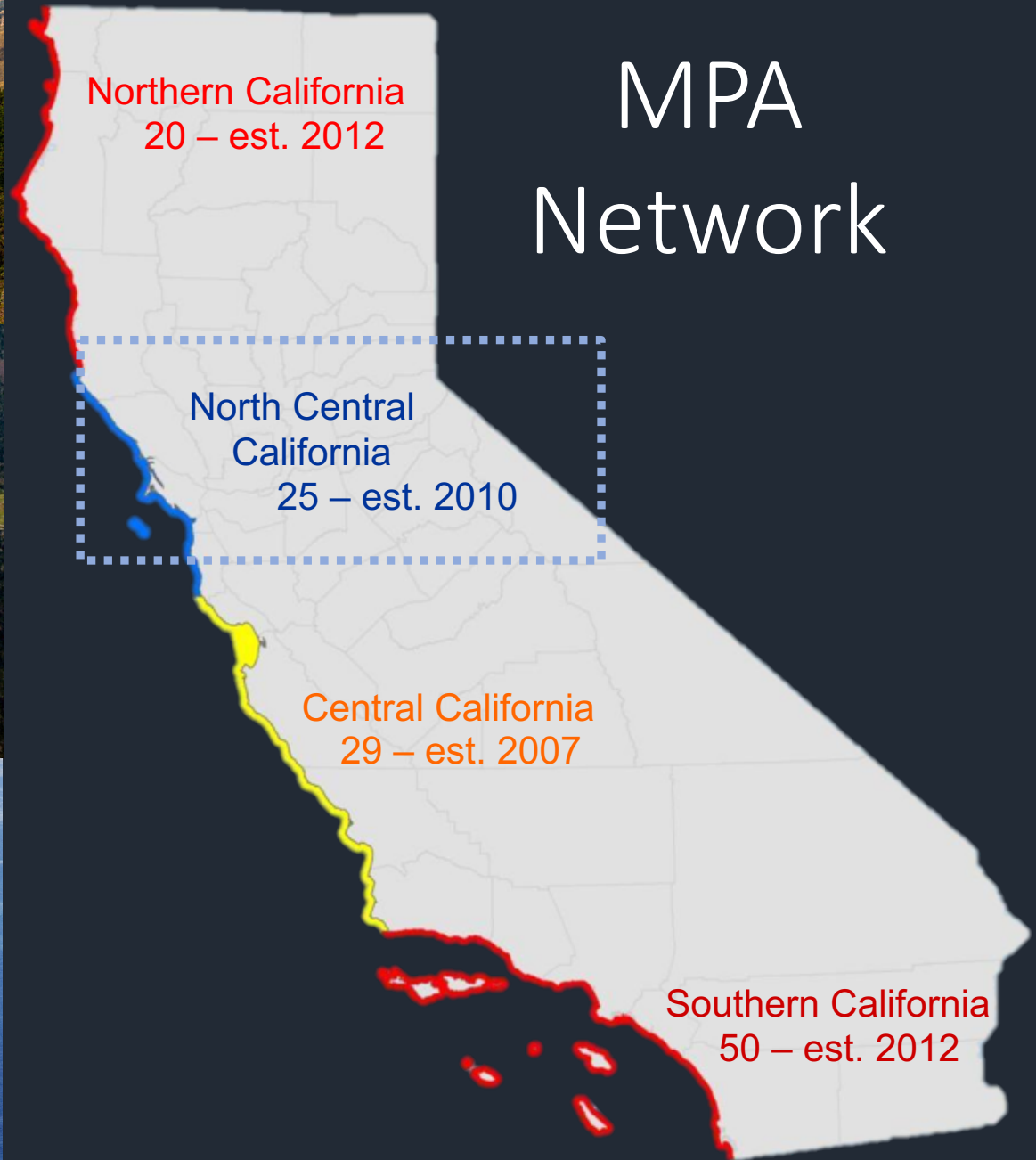
I've been with
CCFRP since the
beginning!



Marine Life Protection Act (MLPA)

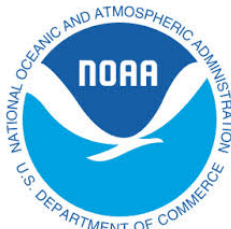
- Passed in 1999
- Mandated the creation of a network of marine protected areas (MPAs) to protect diversity and ecosystem function





California Collaborative Fisheries Research Program (CCFRP)

- Fishery-independent study
- Combines expertise of:
 - Fishing community
 - Academic scientists
 - Resource managers
- Conducts data collection for MPA monitoring and fisheries management



Goals of CCFRP

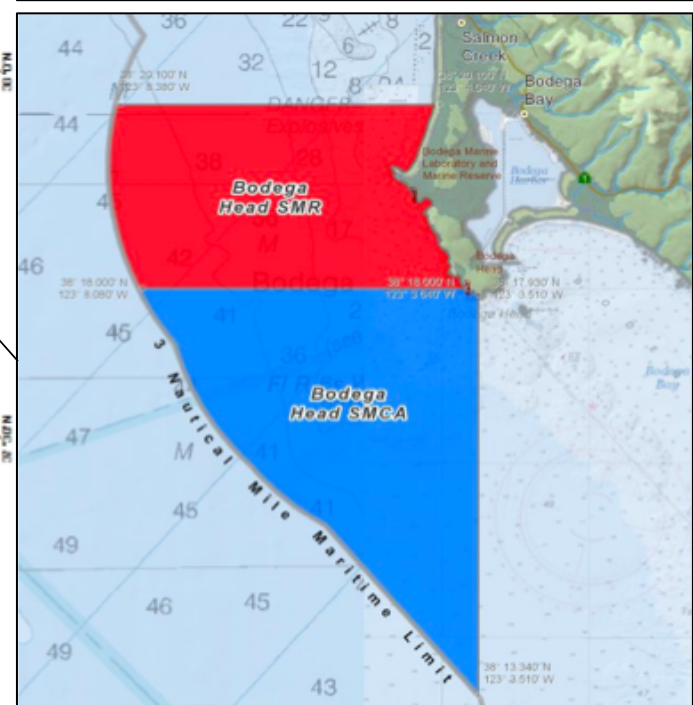
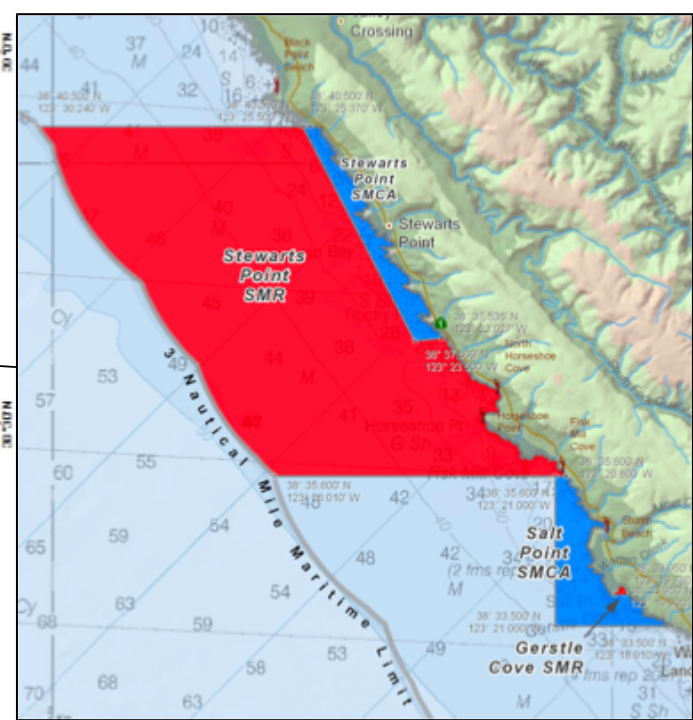
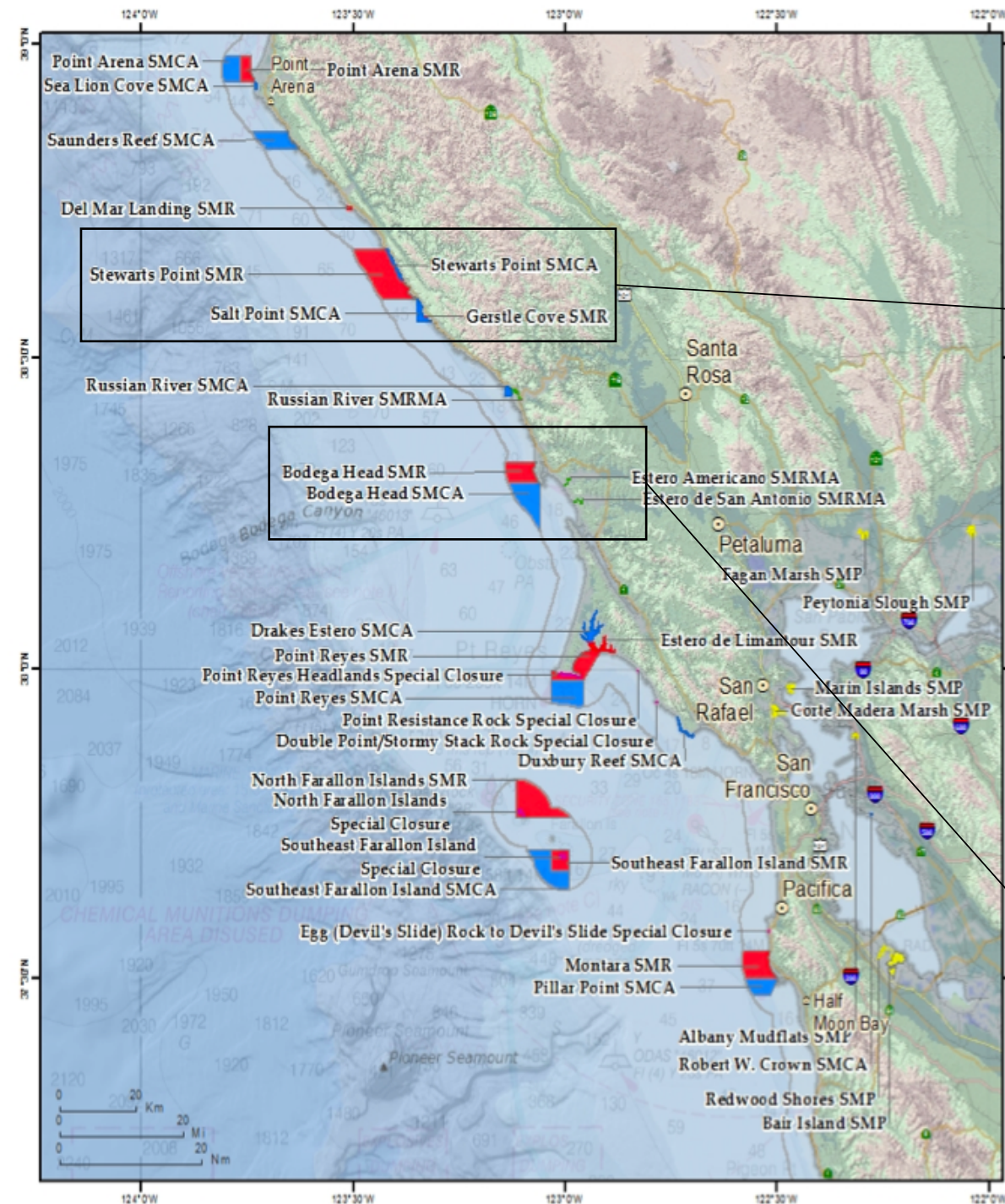
- conduct scientifically sound research to better inform resource managers
- provide rigorous baseline/monitoring data for the evaluation of MPA performance
- better understand nearshore fish stocks and the ecosystems upon which they rely
- collaboratively work with local fishing communities to collect fisheries data





no! don't
pass it
to larry!





Sampling Design

Region

Area

Site

Grid Cell (x4)

Location (x3)

North
Central CA

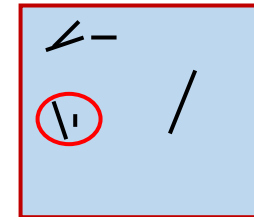
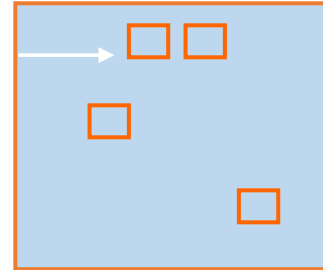
Stewarts Point SMR

MPA

REF

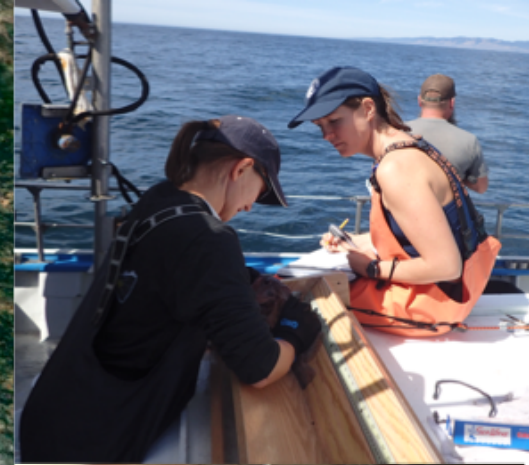
Drift (15 min / location)

Bodega Head SMR

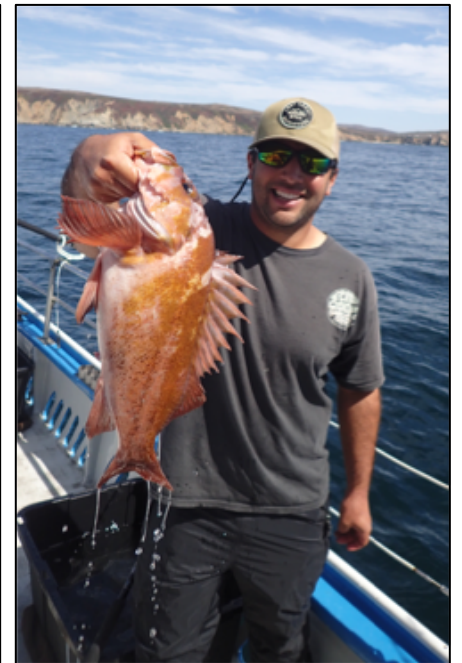


Data Recorded

- **Dates-** Sept. 24th-29th, 2017
- **Location** (Lat/Lon)
- **Type** (species) of fish caught
- **Length** of fish
- **Condition** of fish
- If it is **tagged** and tag #
- **Angler** who caught the fish



1,240 fish from 21 species caught
over 135 hours of fishing





[True] Blue Rockfish



[Deacon] Blue Rockfish



Gopher Rockfish



Black Rockfish



Olive Rockfish



Lingcod



Vermilion Rockfish



Yellowtail Rockfish



Kelp Rockfish



Canary Rockfish

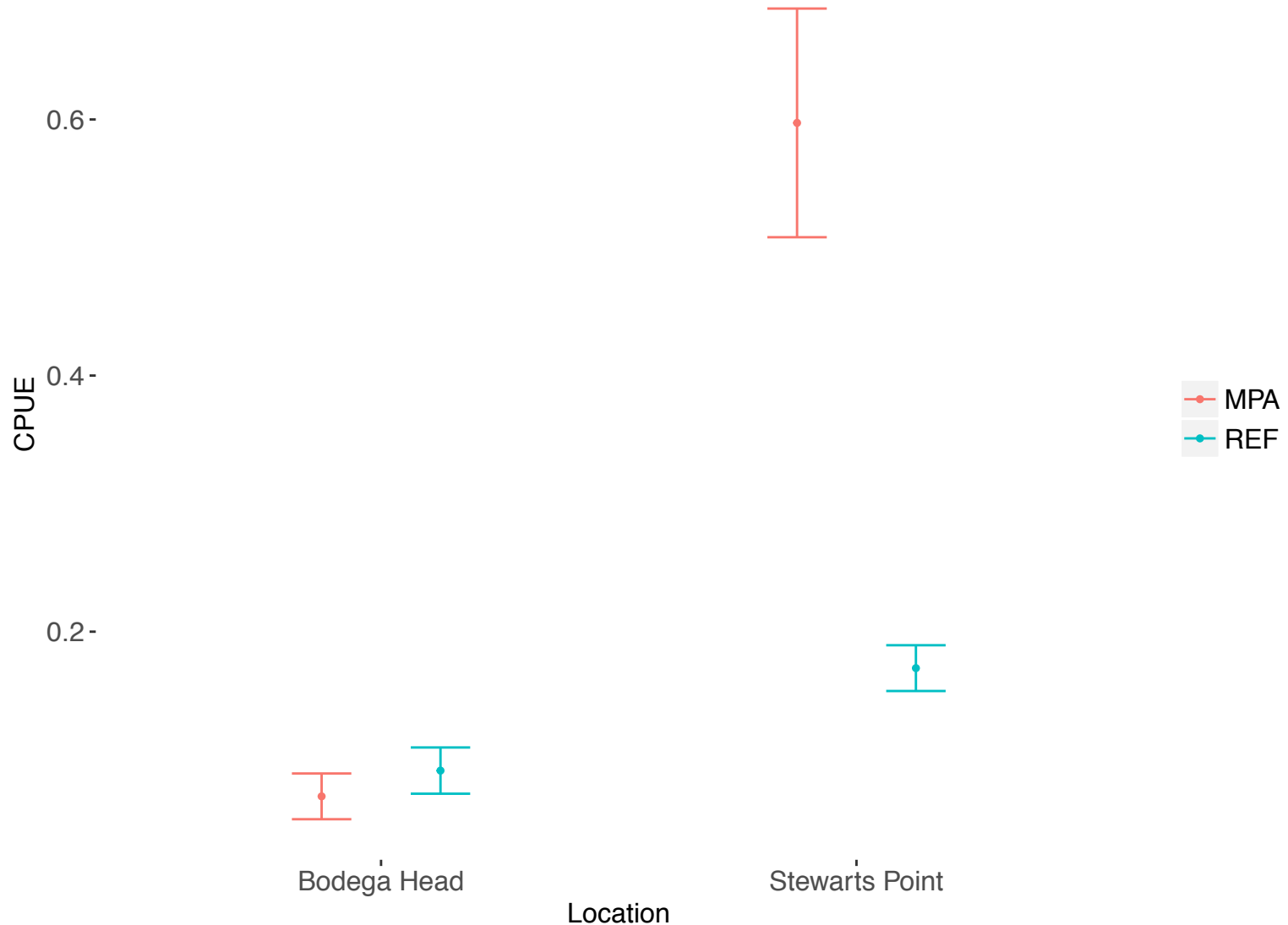


Copper Rockfish

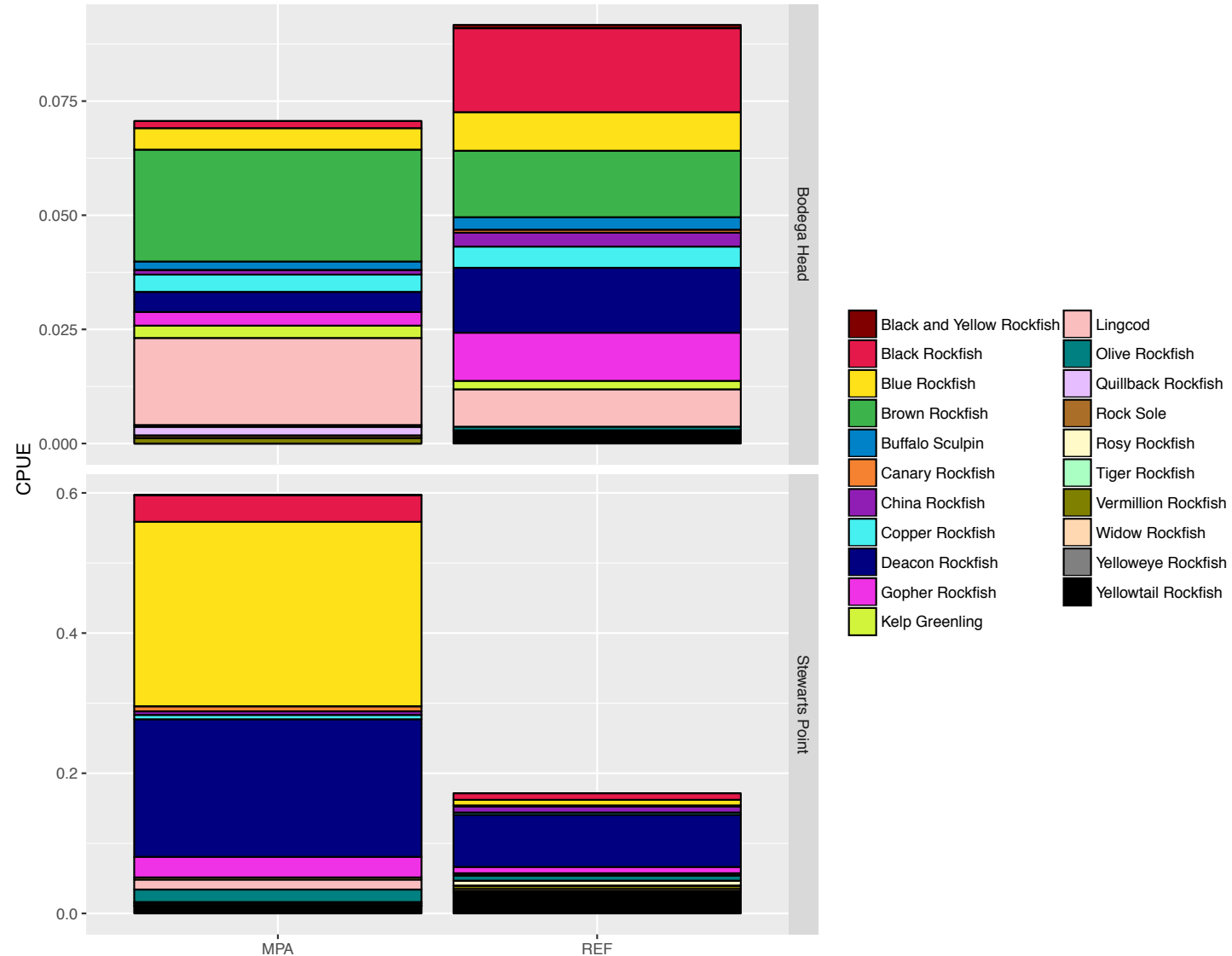
Species List		Bodega Head	Stewarts Point
Black & Yellow Rockfish	<i>Sebastes chrysomelas</i>	X	X
Black Rockfish	<i>Sebastes melanops</i>	X	X
Blue Rockfish	<i>Sebastes mystinus</i>	X	X
Brown Rockfish	<i>Sebastes auriculatus</i>	X	
Buffalo Sculpin	<i>Enophrys bison</i>	X	
Canary Rockfish	<i>Sebastes pinniger</i>	X	X
China Rockfish	<i>Sebastes nebulosus</i>	X	X
Copper Rockfish	<i>Sebastes caurinis</i>	X	X
Deacon Rockfish	<i>Sebastes diaconus</i>	X	X
Gopher Rockfish	<i>Sebastes carnatus</i>	X	X
Kelp Greenling	<i>Hexagrammos decagrammus</i>	X	X
Lingcod	<i>Ophiodon elongatus</i>	X	X
Olive Rockfish	<i>Acanthoclinus fuscus</i>	X	X
Quillback Rockfish	<i>Sebastes maliger</i>	X	X
Rock Sole	<i>Lepidopsetta bilineata</i>	X	
Rosy Rockfish	<i>Sebastes rosaceus</i>		X
Tiger Rockfish	<i>Sebastes nigrocinctus</i>		X
Vermillion Rockfish	<i>Sebastes miniatus</i>	X	X
Widow Rockfish	<i>Sebastes entomelas</i>		X
Yelloweye Rockfish	<i>Sebastes ruberrimus</i>		X
Yellowtail Rockfish	<i>Sebastes flavidus</i>	X	X

Higher catch in MPA at Stewarts Point

No difference at Bodega Head



Species composition *similar* between MPA and reference sites



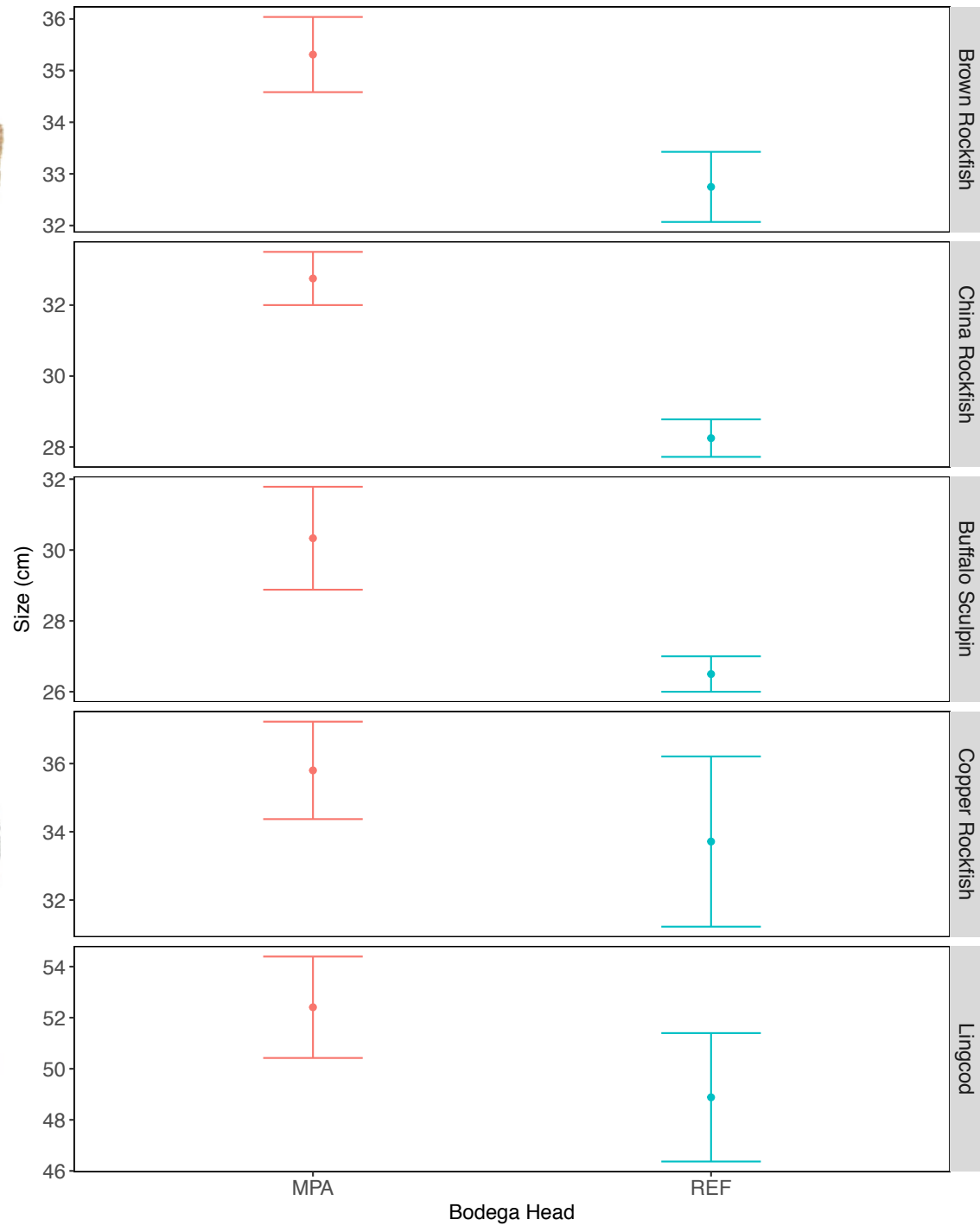
Bodega Head

Comparison of sizes of fish caught within and outside of MPA



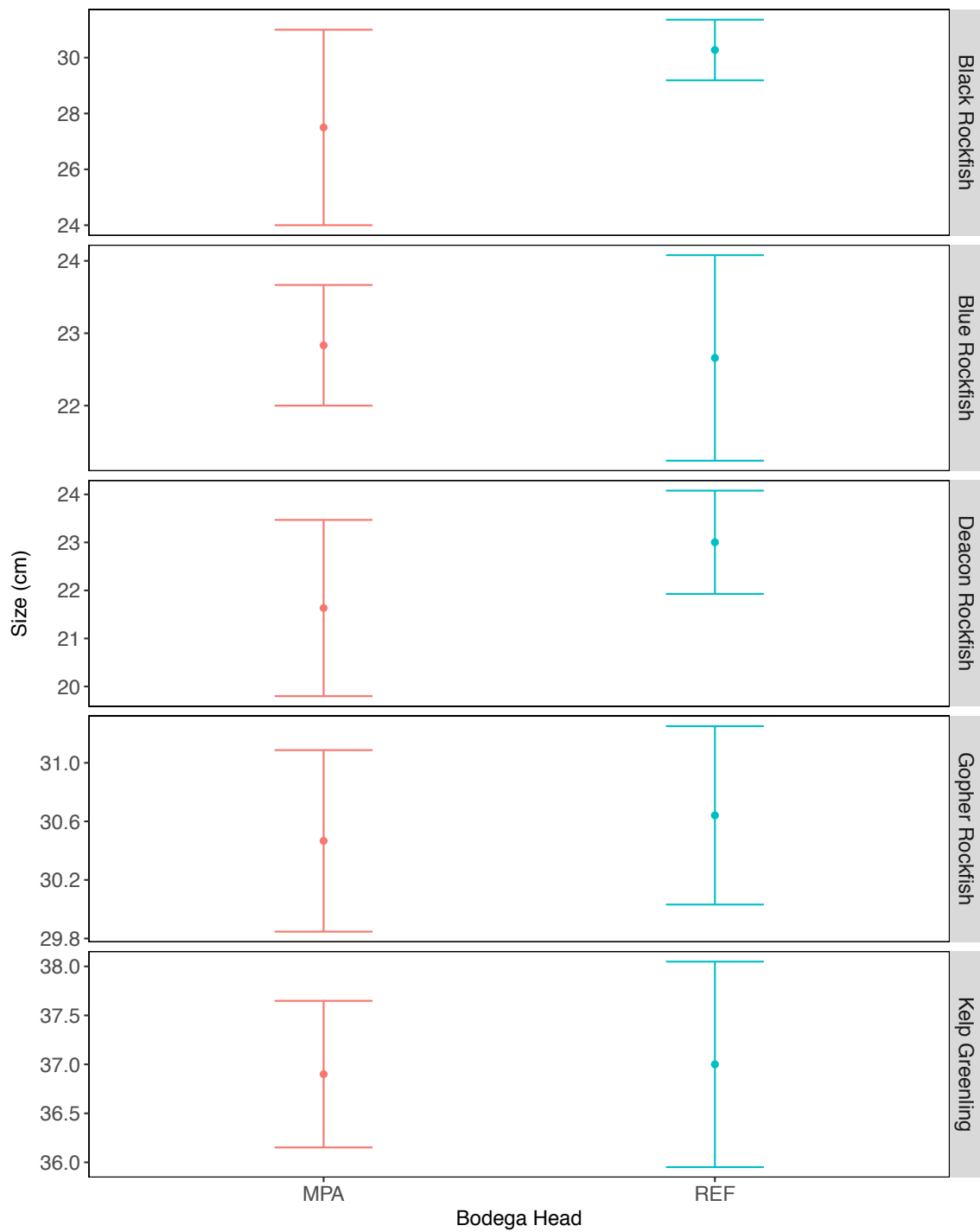
Some fish species were
larger in the MPA





Some fish species were
similar sizes in both the
MPA and reference



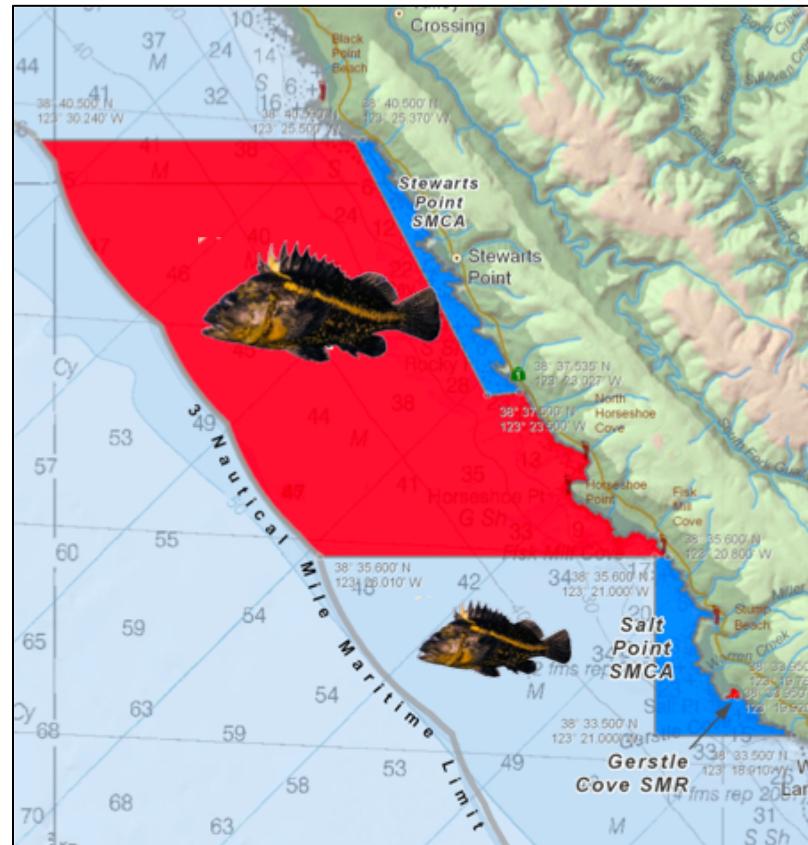


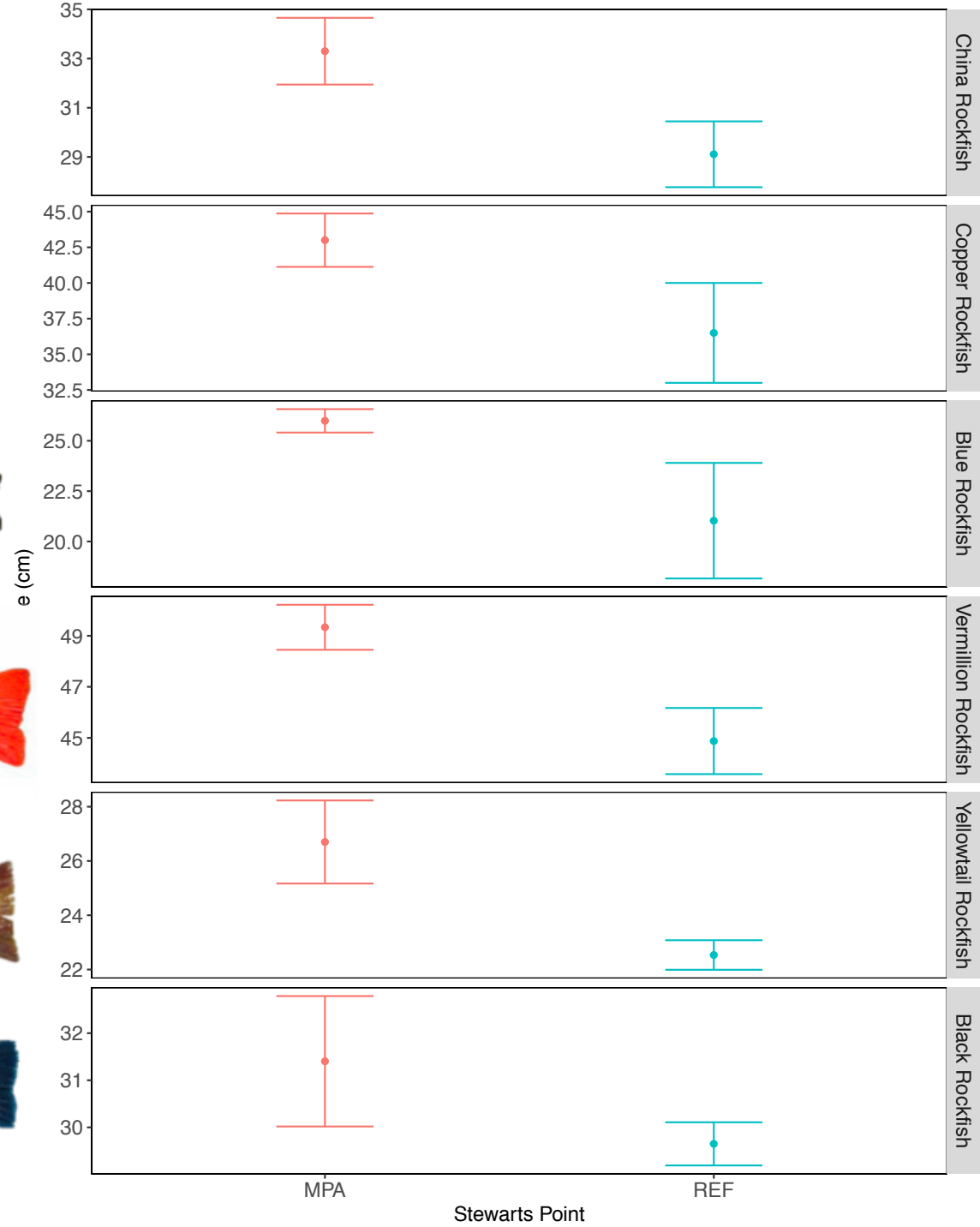
Stewarts Point

Comparison of sizes of fish caught within and outside of MPA

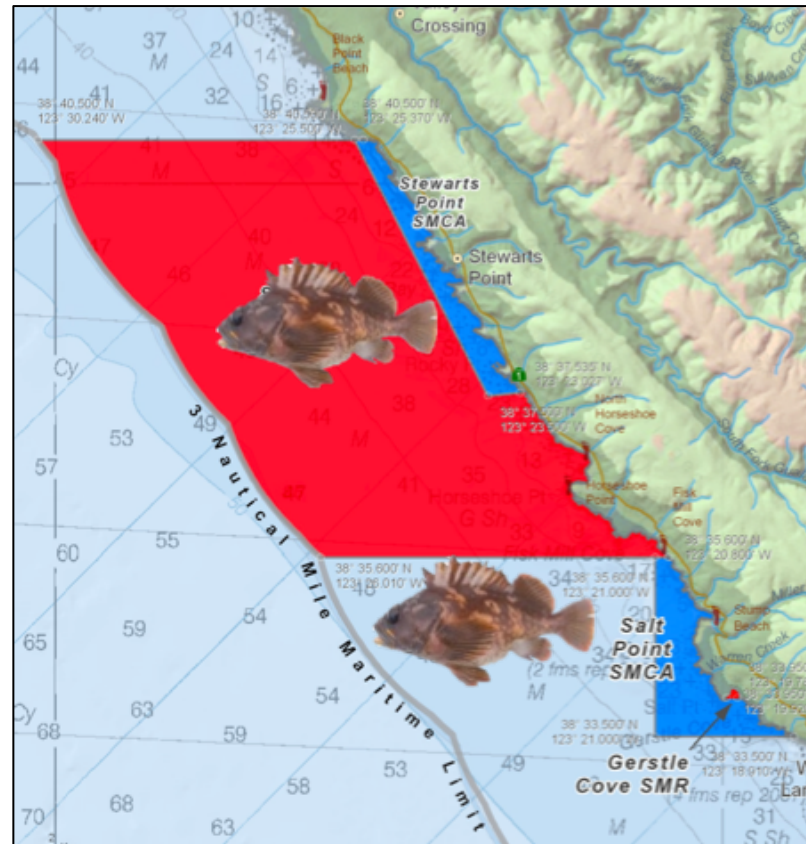


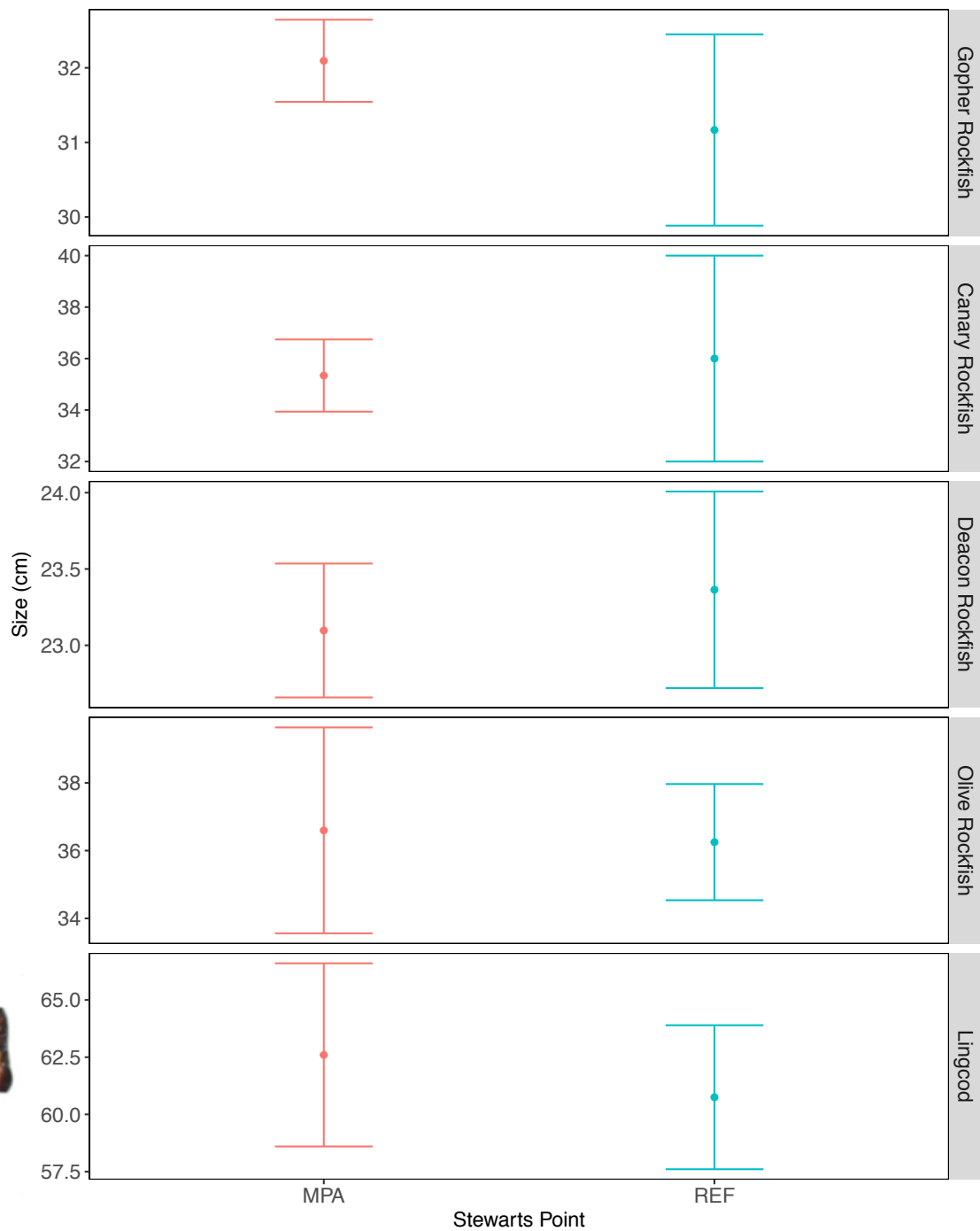
Some fish species were
larger in the MPA

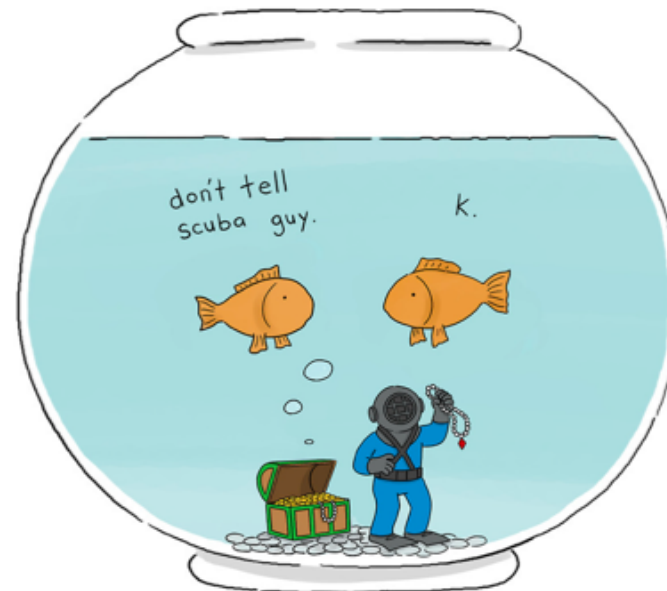
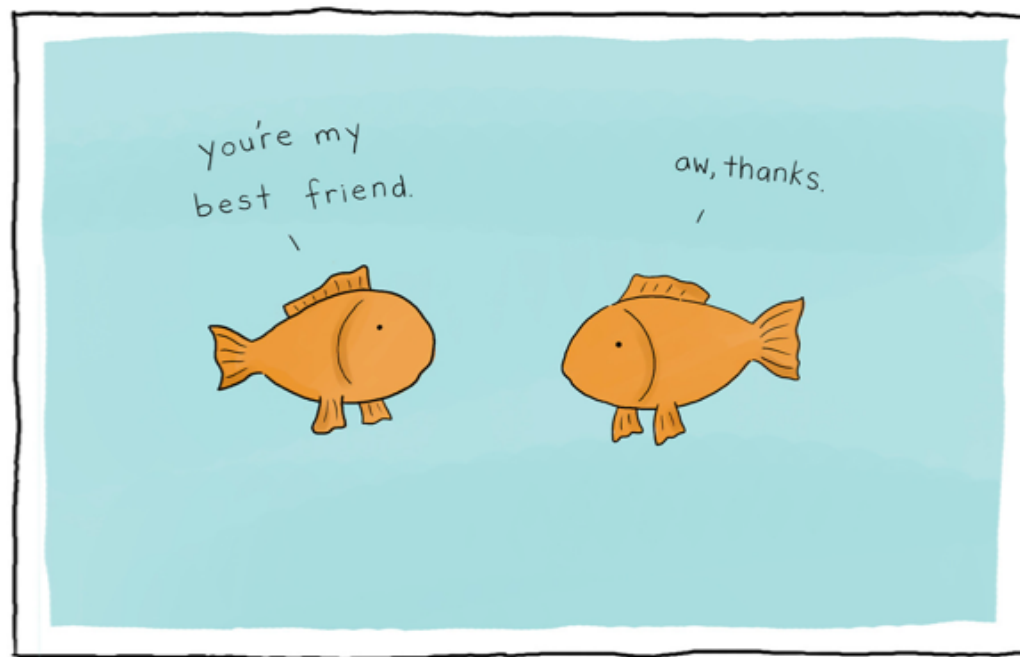




Some fish species were
similar sizes in both the
MPA and reference







Highlights

2017 Season



Fish stats	Angler	Species	Size (inches)	Where caught?
Smallest overall	Ian Pritchard	Black	5	BH-REF
Largest overall	John Morton	Lingcod	35	SP-MPA
Largest rockfish (tie)	Sandra Fogg	Vermillion	19	SP-MPA
Largest rockfish (tie)	Ken Kundargi	Olive	19	SP-MPA
Unique	Burke Greer	Rock sole	18	BH-MPA
Unique	Joel Bergeron	Tiger Rockfish	17	SP-REF



Fishy Times

VOL. 1

BODEGA BAY, THURSDAY, SEPTEMBER 28 2017

FREE

Copper Rockfish travels 225 miles!

by Bodega Marine Laboratory

A Copper Rockfish (12 inches) was initially tagged in Piedras Blancas MPA on 8/20/2013. It was then recaptured near Stewarts Point (17 inches) on 9/28/2017. That means it travelled over 225 miles and grew 5 inches in ~4 years (1.25 inches a year). Copper Rockfish have been previously thought to move very little.





Most Fish

Angler

Total number

1st place

Amos Foreman

74

2nd place

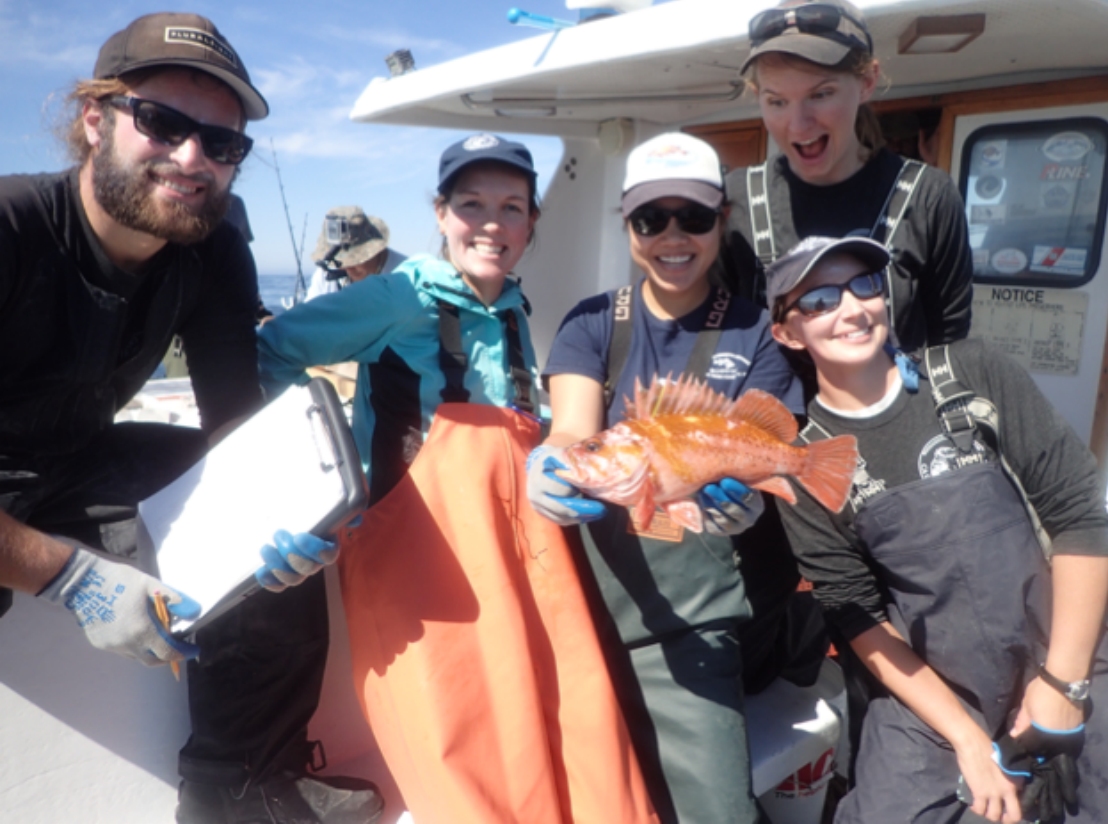
Ruben Lesdema

58

3rd place

Dave Kammerer

57



Thank you!



