



FISH ON!

HOOK-AND-LINE SURVEY
VOLUNTEER NEWSLETTER

SPRING/FALL 2016



Greetings Volunteers!

This year's hook-and-line surveys were a great success. We want to thank all our volunteer anglers who helped in this year's surveys especially those who remained flexible when surveys were postponed due to weather. Also, many thanks to our scientific assistants who volunteered their time. To charter captains and crews: Lars and Shad on the Samson, Robbie and crew Randy, Ricky and Mike on the Misty - we appreciate your hard work and collaboration.

We completed our 4th year of surveys at Cascade Head, 3rd year at Cape Perpetua, and our 2nd year of longlining at Redfish Rocks. We are grateful, to have such dedicated volunteers. Please enjoy this brief summary of the data YOU ALL helped to collect this year. For more information on all of our surveys visit our website.

Thank you all and we hope to see you again next year for surveys at Cape Falcon and Redfish Rocks!

Finally, we would like to wish Brittany all the best in her new position in Hawaii.

Sincerely,

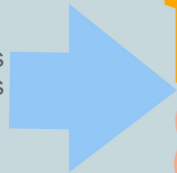
Brittany, Jessica, Kelly and Wolfe
ODFW Marine Reserves Ecological Monitoring Team



2016 HIGHLIGHTS

2 Sites Surveyed


Cape Perpetua -- 8 days
Cascade Head -- 10 days



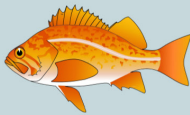
18 Trips
84 Volunteer Anglers

2,855 Fish Caught:
16 Species from
3 Families

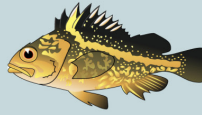

RECORD **LARGEST** catches from 2016 and smallest



BLACK ROCKFISH
minimum: 16 cm (6 in)
maximum: 59 cm (23 in)



CANARY ROCKFISH
minimum: 15 cm (6 in)
maximum: 48 cm (19 in)



CHINA ROCKFISH
minimum: 29 cm (11 in)
maximum: 42 cm (17 in)



COPPER ROCKFISH
minimum: 31 cm (12 in)
maximum: 51 cm (20 in)



TIGER ROCKFISH
43 cm (17 in)



DEACON & BLUE ROCKFISH
minimum: 20 cm (8 in)
maximum: 40 cm (16 in)



QUILLBACK ROCKFISH
minimum: 18 cm (7 in)
maximum: 54 cm (21 in)



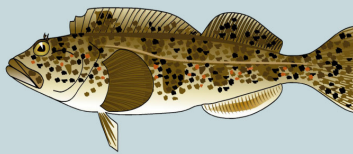
BROWN ROCKFISH
43 cm (17 in)



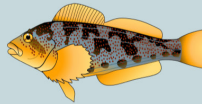
YELLOWEYE ROCKFISH
minimum: 24 cm (10 in)
maximum: 69 cm (27 in)



YELLOWTAIL ROCKFISH
minimum: 21 cm (5 in)
maximum: 44 cm (20 in)



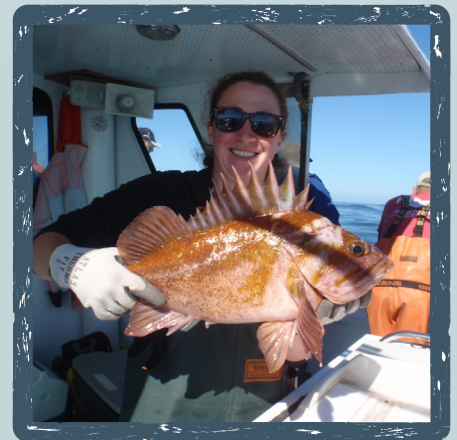
LINGCOD
minimum: 30 cm (12 in)
maximum: 98 cm (39 in)



KELP GREENLING
minimum: 27 cm (11 in)
maximum: 43 cm (17 in)



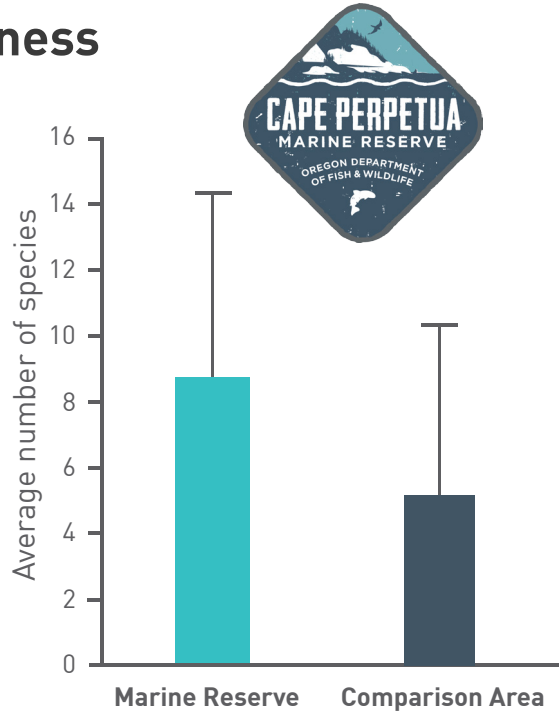
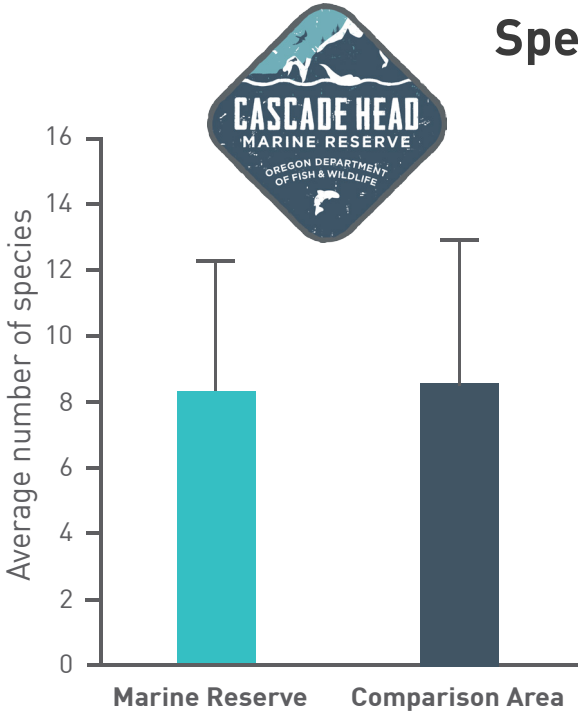
CABEZON
minimum: 24 cm (10 in)
maximum: 73 cm (29 in)



How Many Species Were There?

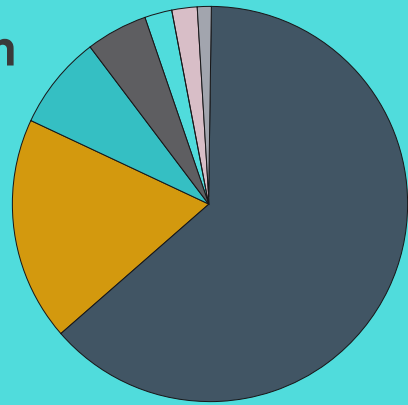
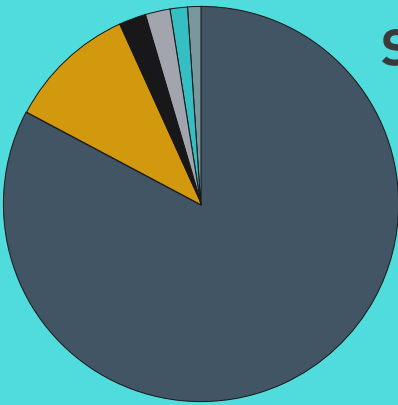
What Species Richness and Composition Tells Us

The graphs below show the overall average species richness (number of different species observed) and the catch composition for the reserves and comparison areas surveyed in 2016. Although Black Rockfish are the most abundant species observed, the composition of the other species present among the reserves underscores that each reserve is unique.

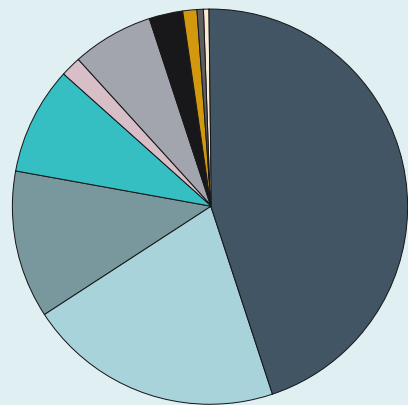
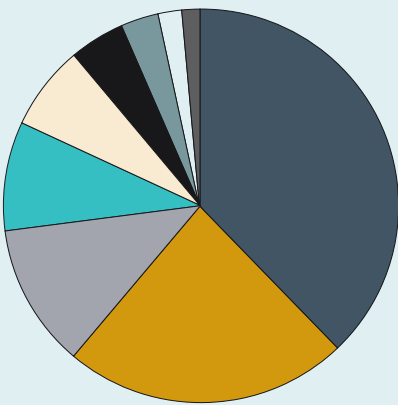


Species Composition

Marine Reserve



Comparison Area



- Black Rockfish
- Lingcod
- Canary Rockfish
- Yellowtail Rockfish
- Buffalo Sculpin
- Deacon Rockfish
- Quillback Rockfish
- Cabezon
- Kelp Greenling
- Yelloweye Rockfish
- Copper Rockfish








Learning and Adapting: Tailoring Monitoring to a Local Fishery

A Pilot Study Comparing Longline and Hook-and-Line Gear

Fish species regularly targeted locally by fisheries, and those that have smaller adult home ranges are more likely to benefit from marine reserve protections (Côté et al. 2001). So, it's important that our monitoring is sampling species commonly caught by fishers which are in the vicinity of our marine reserve sites. We noticed that several species regularly caught in the local commercial fishery at Port Orford were not being well sampled in our hook-and-line surveys at Redfish Rocks, including China, Vermilion, Quillback, and Copper Rockfish and Cabezon. So we undertook a gear comparison study to explore whether using longline gear could help us better catch and sample more of these species. We conducted the study in the spring of 2015 and 2016, aboard the fishing vessel Top Gun out of Port Orford. During the study we fished simultaneously using longline gear and hook-and-line gear and then compared species composition, catch rate, size distribution, and sampling effort (cost, man power, and fish condition) between the two gear types.

Moving forward we will be using longline gear to supplement our hook-and-line surveys at Redfish Rocks, based on the following results:

-  Daily catch rates between longline and hook-and line gears were comparable.
-  Longline gear had comparable or improved catch rates for all species except Black Rockfish and Kelp Greenling, which were more abundant when using hook-and-line gear.
-  In general, larger individuals were caught on the longline gear.
-  The costs between the two surveys were comparable.
-  Incidence of injury and mortality were higher with longlining, but still acceptable and limited to only three species: Black, Deacon/Blue, and Canary Rockfish.

By combining longline and hook-and-line sampling we will be able to broaden both the species and size ranges we are sampling. This study is an example of tailoring our monitoring efforts to reflect local fishing activities to help ensure the effects of marine reserve protection are being adequately studied.

This was recently submitted for publication to *Marine and Coastal Fisheries*. We will send a link to the article once it has been accepted. We would like to thank Captain Jeff Miles who proposed this study and contributed to the study design, as well as his crew members Chadwick and Bradley for their participation, professionalism, and shared knowledge conducting at-sea sampling.

