



# FISH ON!

## HOOK-AND-LINE SURVEY VOLUNTEER NEWSLETTER

2020



## GREETINGS VOLUNTEERS!

Well it's been quite the year and 2020 has kept us off the water. But we are still thankful for all of our volunteers and captains that have made our hook and line surveys possible over the past decade.

In the absence of surveys this year, we have dedicated a lot of our time to data management and were able to launch a Marine Reserves Data Dashboard! The next two pages of this newsletter will explain a few of the metrics that we collect on Hook and Line surveys and can further be explored on our dashboard ([link](#)).

A big welcome to our newest team member, Ryan Fields, who joined our team in February. Ryan has experience with Hook and Line surveys in Central California and brings a suite of skills to our team (like spearheading our dashboard). We can't wait for you to meet him next year!

Please enjoy this summary of the data YOU ALL helped collect over the past decade. In total volunteers have fished 202 days and caught almost 23,000 fish since 2010! We hope to see you again in 2021 for our Hook and Line surveys. We are grateful to have such dedicated volunteers and will have a lot to catch-up on next time we see you.

We miss you all,  
Lindsay, Stephanie, and Ryan

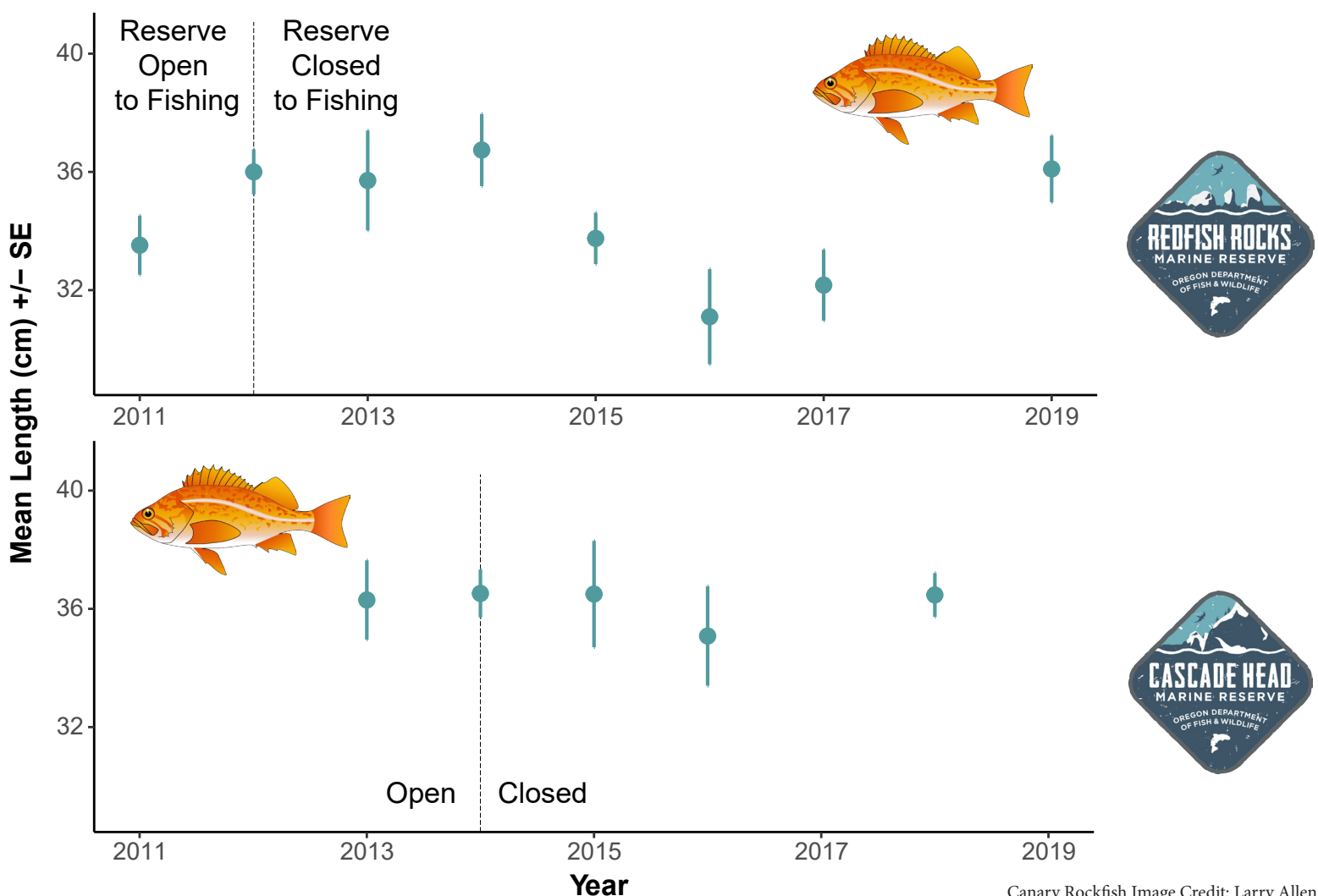
p.s. A hint about the 2021 Hook and Line patch: It's a fish whose name means 'Big Head'.



## WHY DO WE MEASURE SIZE?

- Tracking fish lengths through time allows us to determine if fish are growing bigger or living to older ages in our marine reserves.
- Long-term changes in size of targeted species is one of the potential responses we would expect to see from reserves with good fish habitat and high historical fishing pressure, such as the Redfish Rocks or Cascade Head Marine Reserves.
- Below are the mean size (cm) data of Canary Rockfish calculated at the individual-level across these two marine reserves. The standard error (SE) bars indicate the level of confidence in the mean length observed in that year (smaller bars = higher confidence).
- At this point in reserve implementation, we don't expect to see any changes in size due to marine reserve protections for slow-growing targeted species in a temperate system, hence the need for long-term monitoring.

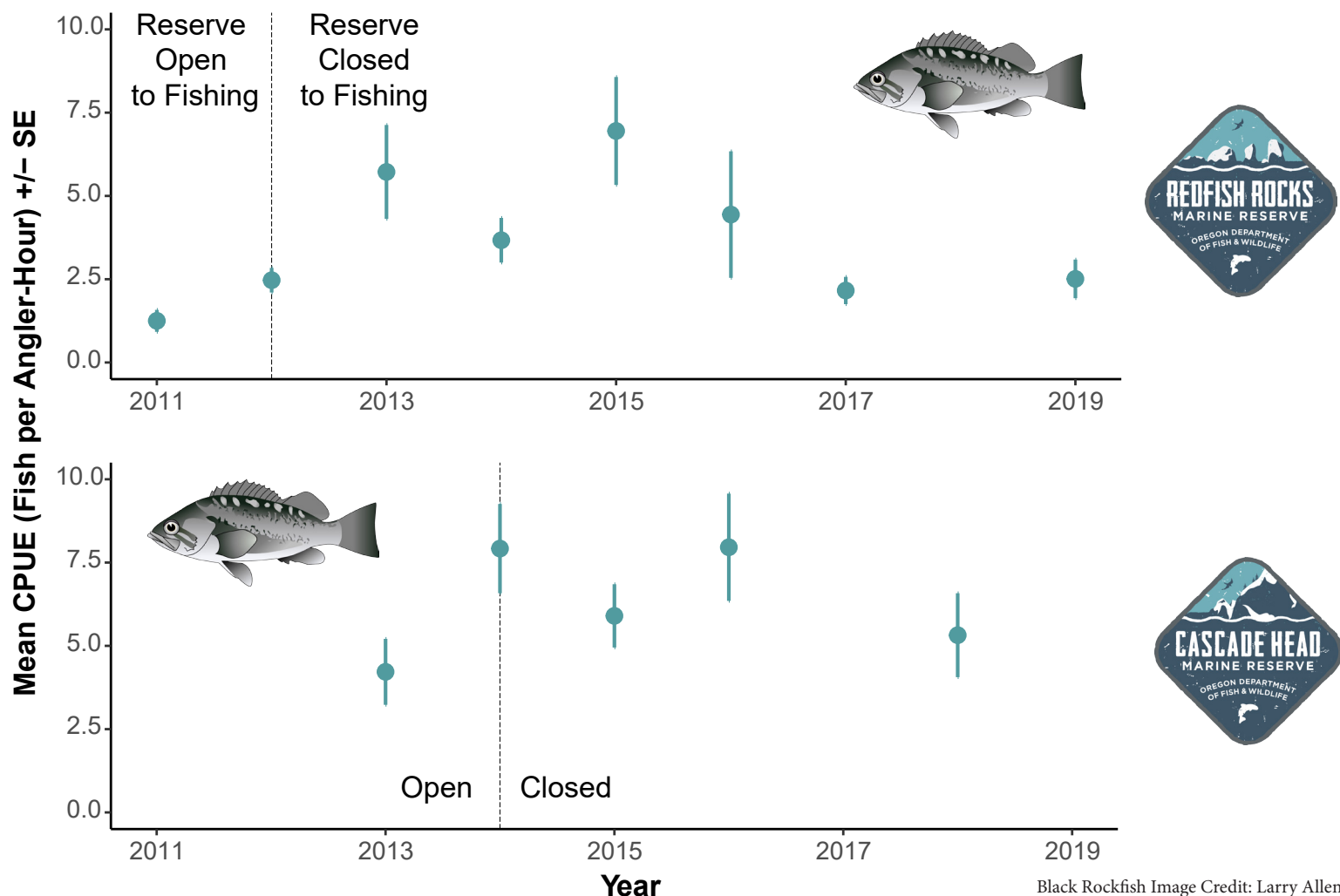
CHECK OUT OUR [DATA DASHBOARD](#) TO EXPLORE MORE SPECIES ACROSS OUR MARINE RESERVES AND COMPARISON AREAS!



## WHY DO WE TRACK ABUNDANCE?

- We measure relative abundance by tracking the catch per unit of effort (CPUE). CPUE is defined as the number of fish caught per angler hour spent fishing.
- We would anticipate that in reserves with good habitat and high historical fishing pressure, such as the Redfish Rocks or Cascade Head Marine Reserves, targeted species abundance would increase over time.
- Below are the mean CPUE data of Black Rockfish calculated at the fishing cell-level across these two marine reserves. The standard error (SE) bars indicate the level of confidence in the mean CPUE observed in that year (smaller bars = higher confidence).
- At this point in reserve implementation, we don't expect to see any changes in CPUE due to marine reserve protections for slow-growing targeted species in a temperate system, hence the need for long-term monitoring.

CHECK OUT OUR [DATA DASHBOARD](#) TO EXPLORE MORE SPECIES ACROSS OUR MARINE RESERVES AND COMPARISON AREAS!



Black Rockfish Image Credit: Larry Allen

## CAPTAINS THAT HAVE SHAPED OUR PROGRAM

### JEFF MILES

Captain Jeff Miles has been involved with the Redfish Rocks Marine Reserve from the beginning. He was part of the nomination and siting process of the reserve (2006-2008), and contributed to the development and implementation of scientific monitoring in the reserve (2010-2019). After a long career of fishing, Jeff has hung up his fishing pole and retired inland. He will be sorely missed, not only for his expertise of the seas surrounding Port Orford, but for his humble attitude, positive outlook, and love of 80's music. We credit Jeff for a major part in the development of our longline methodology at Redfish that ultimately allowed us to conduct both hook and line and longline surveys simultaneously (efficiency!). Over the four years of paired hook and line and longline surveys, Jeff's vessel has dedicated 37 days at sea surveying over 4,000 fish in the Redfish Rocks Marine Reserve and surrounding comparison areas. In addition to these surveys, Jeff has helped us with a rockfish tagging study, deployment of oceanographic and juvenile fish sampling devices, and was always down to try something out. We wish Jeff the best in his retirement and value his contributions to our program.



### LARS ROBISON

Captain Lars Robison was a major player in the community nomination of the Otter Rock Marine Reserve and played a key role in determining the appropriate comparison areas that we sample there and at Cascade Head. We were all heartbroken to hear of his passing in December and we will dearly miss his company and deep knowledge of the nearshore reefs. All of his contributions cannot be summed up, but in numbers Lars spent 43 days across 4 years helping us sample over 6,500 fish in the Cascade Head Marine Reserve and surrounding comparison areas. A favorite staff memory is the day he showed off his weather-reading skills -- we were able to complete all of our sampling because Lars' experience allowed us to keep fishing right in front of the storm as it chased us in to port! Many invaluable conversations were held in his wheelhouse. One staff member summed it up well -- talking with Lars felt like taking a crash course on a 40-year history of fishing on the central coast nearshore rocky reefs, it was fascinating. We hope we can honor him by contributing to the conservation of the ecosystem he spent his life caring for and observing.