

CALIFORNIA COLLABORATIVE FISHERIES RESEARCH PROGRAM



MLML Volunteer Newsletter Summary of the 2020 Sampling Season

Greetings MLML CCFRP Volunteers,

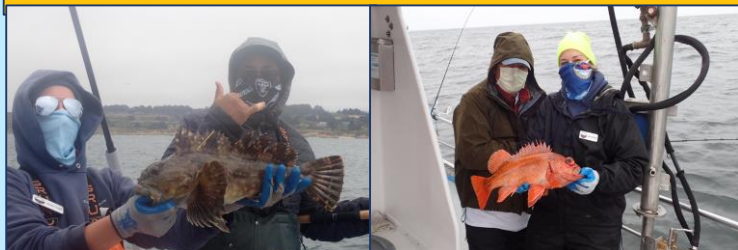
The 2020 sampling season was a great success, despite the many challenges this year has thrown at us all! With your help, MLML has successfully completed **14** years of data collections inside and outside MPAs along the central California coast! In this time, we've conducted a total of **230** hook-and-line surveys in an effort to gather information regarding species compositions, lengths, and catch rates of rockfishes and other species commonly found in the nearshore environment. From these surveys, **851** volunteer anglers have spent over **7,000** hours catching and releasing **76,756** fishes (and tagging over **23,000** fishes) from a total of **53** different species! This season, anglers caught and released **3,317** fishes (tagging **387** of those prior to release). Furthermore, we welcomed **16** new volunteers to the program. Our statewide effort remains strong and all partner institutions were able to get out for another successful field season. The National Marine Fisheries Service (NMFS) continues to use the information we collect to improve stock assessments of nearshore fishes and we are excited to say that both CDFW and OPC are using the information we've collected over the years to understand the effects of MPAs on the nearshore ecosystem. We can't thank everyone enough for their dedication and support! We're already looking forward to the 2021 season!



At this time, we would like to invite you to our virtual volunteer angler appreciation event and data workshop. This is an excellent opportunity to hear about the data we have collected over the past fourteen seasons. We welcome your attendance and involvement! The event will be held on:

March 20th from 10 AM to 12 PM (via ZOOM)

If you would like to attend, please RSVP through email (CCFRP@mlml.calstate.edu) so we can plan accordingly. An additional email will be sent out soon with more workshop details. Please stay tuned for updates through email, our website, Facebook, Instagram, and YouTube!



We would like to extend a big thanks to our program partners and research affiliates this season: The Ocean Protection Council, NOAA, Santa Monica Seafood, California Department of Fish and Wildlife, F/V Huli Cat, F/V Kahuna, F/V New Horizon, Humboldt State University, Bodega Marine Laboratories, Cal Poly San Luis Obispo, UC Santa Barbara, and Scripps Institution of Oceanography.

UPDATES FROM THE MLML CCFRP CREW

Welcome Shelby!



MLML's fearless leaders, **Dr. Rick Starr & Dr. Scott Hamilton**, continue to seek out funding, find innovative applications for our data, and offer useful advice to our team. Both have a very busy schedule that prevent them from getting out on the water as often as they would like, but we were excited to have Rick on a few trips this season!



We all thoroughly enjoyed working with you and can't wait for the 2021 season!

We would like to extend a warm welcome to our new Postdoctoral Research Associate, **Dr. Shelby Ziegler**! Shelby will be taking the lead in evaluating the performance of California MPAs using our CCFRP data. We're all working hard behind the scenes preparing for another successful and fun field season! Rachel will be continuing as the statewide coordinator for the program and lead field scientist for MLML. Jackie will continue to coordinate our volunteers and Katie, Kinsey, and Jake will be returning as science crew. Be on the lookout for emails in the early summer with details for our upcoming 2021 sampling schedule.

Please take a minute to like **CCFRP** on Facebook and follow us on Instagram, YouTube, and Twitter (@CCFRP)



BIGGEST FISHES CAUGHT WITH MLML (2007-2020)

Below are some of Moss Landing Marine Labs' largest fishes ever caught, by species. Total Lengths are listed along with angler, area, site (MPA/REF), and year.

Black & Yellow Rockfish 33 cm (13 in)

Matthew C. Año Nuevo REF '12
Judy W., Año Nuevo REF '14
Dan S., Año Nuevo REF '17

Black Rockfish 50 cm (20 in)

Mike E., Año Nuevo MPA '19

Blue Rockfish 45 cm (18 in)

Ray Y., Año Nuevo MPA '08
Mike I., Point Lobos REF '15

Bocaccio 64 cm (25 in)

Jonathan P., SE Farallon Islands MPA '18

Brown Rockfish 48 cm (19 in)

Ben S., Año Nuevo MPA '16
Scott Y., Año Nuevo MPA '17

California Halibut 89 cm (35 in)

Ken Y., Año Nuevo MPA '15
Ken Y., Año Nuevo REF '17

Cabezon 64 cm (25 in)

EC O., Año Nuevo REF '16 (x2)

Canary Rockfish 56 cm (22 in)

Amy M., Año Nuevo REF '11

China Rockfish 39 cm (15 in)

Kevin M., Año Nuevo REF '10

Copper Rockfish 52 cm (20 in)

Darrell B., Point Lobos MPA '17

Deacon Rockfish 34cm (12 in)

Scott Y., Año Nuevo REF '20

Gopher Rockfish 43 cm (16 in)

Scott Y., Año Nuevo REF '20

Grass Rockfish 45 cm (18 in)

Ken Y., Año Nuevo MPA '09

Kelp Greenling 41 cm (16 in)

Manny L., Año Nuevo REF '17



BIGGEST FISHES CAUGHT WITH MLML (2007-2020)

Come out with us again and defend your record! Or make a new one!
We look forward to seeing you next season!



Kelp Rockfish 39 cm (15 in)

Lester Y., Point Lobos MPA '14



Lingcod 102 cm (40 in)

Ed M., Año Nuevo MPA '14



Olive Rockfish 50 cm (20 in)

David R., Point Lobos MPA '07

Alan B., Point Lobos MPA '08

Nick I., SE Farallon Islands REF '18



Ocean Whitefish 60 cm (24 in)

Frank P., Point Lobos MPA '09



Pacific Mackerel 34 cm (13 in)

Matt M., Point Lobos MPA '19

Paul D., Point Lobos MPA '19

Quillback Rockfish 42 cm (17 in)

Willie T., SE Farallon Islands MPA '17

Rock Sole 31 cm (12 in)

Eddie G., Point Lobos MPA '19

Rosy Rockfish 31 cm (12 in)

Jonathan P., SE Farallon Islands MPA '18

Starry Rockfish 38 cm (15 in)

Randy Y., SE Farallon Islands MPA '17

Treefish 35 cm (14 in)

Ben R., Point Lobos REF '15

Eddie G., Point Lobos MPA '17

Vermilion Rockfish 56 cm (22 in)

Daniel S., Point Lobos MPA '11

Ben S., Año Nuevo REF '12

White Croaker 32 cm (13 in)

Bill D., Año Nuevo MPA '11

Wolf Eel 135 cm (53 in)

Ken Y., SE Farallon Islands MPA '18

Yellowtail Rockfish 44 cm (17 in)

Ken Y., Año Nuevo MPA '15

Matt M., Point Lobos MPA '18

2020 TAG RECAPTURES FOR MLML

Tag returns are an exciting part of our program and one way that we learn about the movements and growth rates of fishes we catch and release on our trips.

- In 2020, we had **18** recaptured fishes: **12 Copper Rockfish**, **1 Vermilion Rockfish**, **1 Black Rockfish**, **1 Yellowtail Rockfish**, **1 Brown Rockfish**, and **2 Lingcod**
- 14** recaptures were caught from CCFRP trips, **2** were recaptured by recreational anglers on party boats, and **2** were recaptured on privately owned fishing boats
- Copper Rockfish made up 83% of our recaptures this year!



2020



2017



8/11/2020



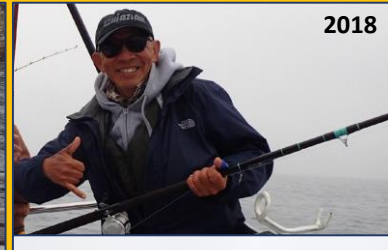
9/9/2020

Paul B. (left photo) recaptured a **Copper Rockfish** at the **Point Lobos MPA** this year that was originally tagged in 2017 by **Benny R.** (right photo). This fish grew 1cm during it's 1086 days at liberty.

Katie S. (right photo) recaptured a **Copper Rockfish** caught earlier this season by **Sherri R.** (left photo) at the **Point Lobos MPA**.



2020



2018



2020



2019



2020



2019

Raydon S. (top photo) recaptured a **Copper Rockfish** fishing in the **Point Lobos MPA** that was originally caught and tagged in 2019 by **Ross B.W.** (bottom photo).

John C. (bottom photo) recaptured a **Copper Rockfish** caught two years prior by **Ken Y.** (top photo) at the **Point Lobos MPA**. This fish grew 2cm and was recaptured after 706 days at liberty in the same cell it was released in.

Science crew member, **Jackie M.** (left photo), recaptured a **Lingcod** fishing in our **Año Nuevo REF Area**. This fish was originally caught and tagged in 2019 by **Kevin G.** (bottom photo). After 393 days at liberty, the **Lingcod** grew 4cm.

Please check for tags next time you are out fishing!

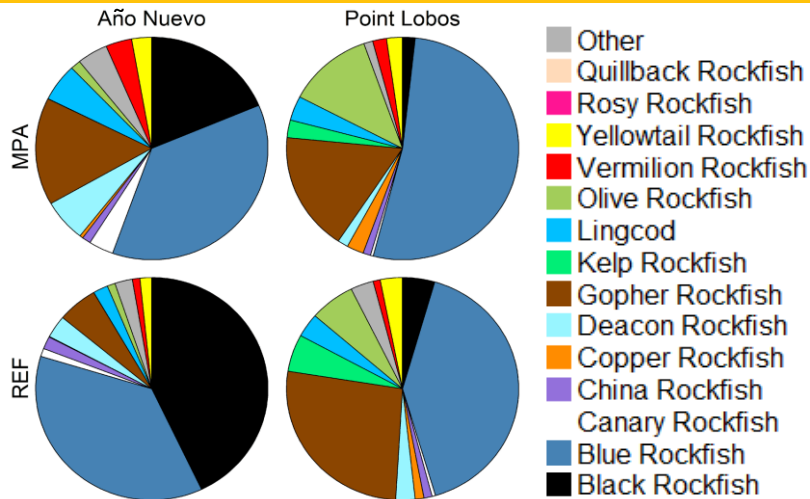
We don't get to fish as much as our volunteers (or as much as we'd like to), so we have to rely on the help of the fishing community to gather this important information. Remember that information from a tagged fish is worth \$20! If you happen to catch a tagged fish, please record the species, length, depth, and location, and contact:

CCFRP@mlml.calstate.edu or (831) 771-4479

GENERAL TRENDS IN CENTRAL CA MPA PERFORMANCE (2007-2020)

Trends in species composition and biomass per unit effort (BPUE) for Año Nuevo and Point Lobos MPA/REF sites by year

Species Composition (2007-2020)

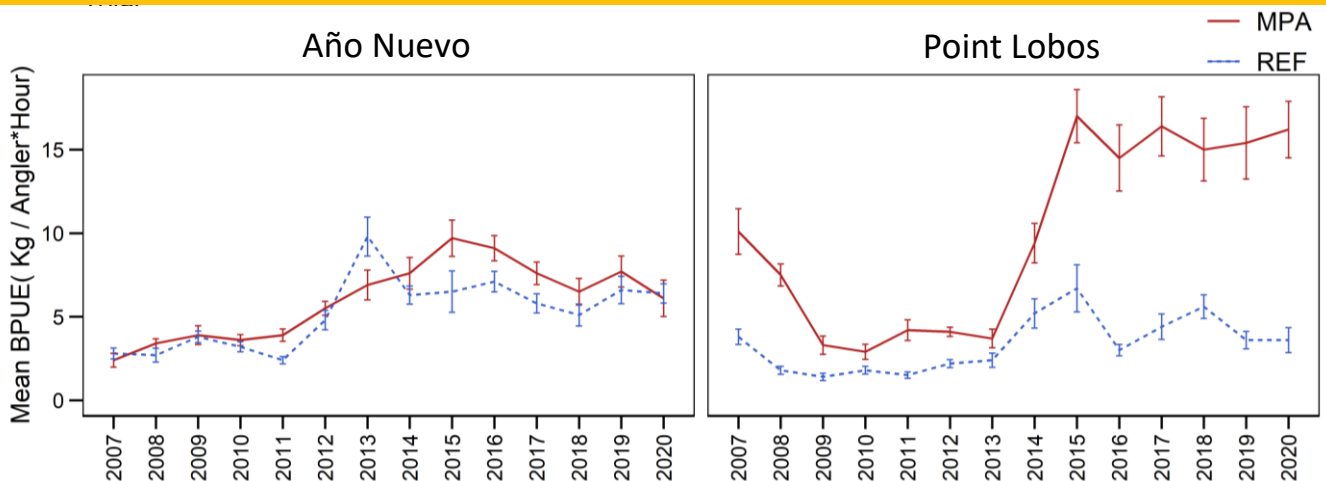


Unique Catches from the 2020 Field Season!

Some unique catches from the season included a **California Sheephead** (*Semicossyphus pulcher*) caught by **Raydon S.** (bottom photo) and a few **Ocean Whitefish** (*Caulolatilus princeps*) caught by both **John C.** and **Matt W.** (top photo).



BPUE - Biomass Per Unit Effort (2007-2020)



Biomass-per-unit-effort (BPUE), represented as the weight of total fishes caught per angler hour. By using the number of fishes caught, and fish lengths from the measurements we collect, we can calculate the weight (biomass) of all fishes caught for each site. When looking at all species combined, BPUE is higher inside MPAs than outside (with the exception of Año Nuevo, in some years). Initial differences in BPUE are due to varying levels of habitat quality at the time of MPA implementation. Additionally, MPA and REF BPUE fluctuate due to changes in the environment over time.



THANK YOU FOR YOUR CONTINUED SUPPORT!

