

## Volunteer Newsletter 2021 A Summary of the 2020 Sampling Season California Collaborative Fisheries Research Program

Greetings CCFRP Volunteer Anglers,

With your help, Cal Poly CCFRP has completed the 2020 sampling season; this was our 14<sup>th</sup> season of data collection inside and outside of marine protected areas (MPAs) on the central California coast! This season, we completed 12 trips, fishing for a total of 231 person hours. In that time, we caught a total of 4,416 fishes comprised of 27 species. This season, we caught approximately 19 fishes per angler hour. Thank you for participating in this remarkable season; we couldn't have done it without you!



To celebrate all the hard work you did this season, we would like to invite you to our annual volunteer angler appreciation event and data workshop, which will be held in a virtual format over Zoom. All past, present, and future volunteer anglers are welcome! We will be discussing the data we have collected this season, as well as some projects completed in the past year. We would appreciate your attendance very much. The event will be held over zoom on:

#### Sunday, April 11, 2021, 10am-1pm

We will send out an E-mail in the coming weeks with more details about this appreciation event and data workshop. If you are able to attend, **please RSVP to Erin's E-mail which will come from the address** <u>ccfrpslo@gmail.com</u>. Stay tuned for more updates on this event through email and by liking CCFRP on Facebook -we look forward to seeing you there!





### Join Us for the 2021 Sampling Season

We need your help to have another successful season! Be sure to monitor your email for details about the upcoming 2021 CCFRP sampling season. This email will include the 2021 sampling schedule and updates related to COVID-19. Once the schedule is released, make sure to email us promptly to secure your fishing spots. We are working hard behind the scenes to prepare and get those dates to you as soon as possible.



#### **CCFRP Science Crew Updates**

Alicia Ellingson finished her Bachelor of Science degree in Marine Sciences at Cal Poly in June and went on to work in Kodiak, AK as a commercial fisheries observer collecting abundance and composition data with NOAA; she is in the process of applying for graduate programs in seaweed aquaculture. Lauren Zaragoza also finished her B.S. in Marine Sciences and is currently working with the watershed stewards program in partnership with the California Conservation Corps and AmeriCorps to conduct snorkel surveys of salmon populations in Humboldt County. Meghan Fox graduated with a B.S. in Marine Fisheries Biology from Humboldt State University in December and will be a deckhand on *F/V Avenger* full-time this coming season. Nicholas Soares is continuing his senior project conducting research on phytoplankton composition between San Luis Bay and Morro Bay with the Harmful Algal Blooms group; he plans to graduate in Spring 2021. Callie Perdue is finishing up her last year as an undergraduate in Marine Sciences at Cal Poly; her senior project is exploring how MPAs affect the fine scale depth segregation of Gopher and Black & Yellow rockfishes (see page 3). Noel Clark is planning to graduate from Cal Poly this Spring and is in the process of applying for jobs with State Fisheries and Wildlife departments across the West Coast. In the meantime, she is also applying to graduate programs in fisheries resource management. Erin Johnston is continuing her investigation into the correlation between marine heatwaves and groundfish abundance using CCFRP data. Ellie **Brauer** is continuing her masters research: using rockfish growth hormones as a non-lethal way to obtain growth rate information. Grant Waltz has been spending too much time in a chair and has never been so excited for trips to the grocery store. He is looking forward to participating in the 15<sup>th</sup> (!!) season of CCFRP at Cal Poly.



**Dr. Benjamin Ruttenberg** is one of our fearless Cal Poly CCFRP PIs. As the director of the Center for Coastal Marine Sciences, Ben has numerous interests including the effects of climate variability on fish populations. On his first ever CCFRP trip, Ben caught a rock (not a rockfish).



**Dr. Dean Wendt**, our other incredible CCFRP PI, continues to head not only our project, but the entire Cal Poly College of Science and Mathematics. Dean utilizes the largest number of virtual Zoom backgrounds of anyone in the lab, and we never know whether he will be joining us from the middle of the ocean or outer space.

## What's Up with Those Fishes?



What's the Difference??



http://kenjonesfishing.com/2014/09/black-and-yellow-rockfish/

Gopher rockfish (*Sebastes carnatus*, left) and Black & Yellow rockfish (*S. chrysomelas*, right) are two different species of rockfish that are often confused. Their color pattern and morphology can look very similar; however, they may have different preferred habitats. Undergraduate student researcher, **Callie Perdue**, is investigating how MPAs influence the depth ranges that Gopher rockfish and Black & Yellow rockfish occupy on rocky reefs. Previous research has shown that Black & Yellow rockfish prefer shallower habitats, while Gopher rockfish prefer deeper water. One of the questions Callie will be addressing is how the removal of fishing pressure could affect depth distribution for these two species. Stay tuned to hear some of her findings at the virtual angler appreciation event!





CCFRP conducted a trapping project in 2008, 2009, 2012, & 2015 to target Cabezon and assess species composition in MPAs and reference areas.

Callie will analyze the trapping data to determine if there was a change in abundance over time and how depth distributions of these species changed within and outside of MPAs.





### **Tag Recaptures in 2020**

Tag returns are an exciting part of our program! This is one valuable way for us to learn about the movement and growth rates of fishes that are caught and released on our sampling trips. We had three tag returns this year from Piedras Blancas and Point Buchon!

See the following page for more information on each of these returns.





Representative Gopher rockfish.



#### **Tag Recaptures in 2020 (continued)**

Fish	Date Tagged	Date Recaptured	Days at Liberty	Fish Species	Area Caught	Recaptured by
1	8/26/19	7/20/20	329	Gopher rockfish	Point Buchon REF	Duane G.
2	7/21/14	7/27/20	2198	Olive rockfish	Piedras Blancas MPA	Ralph B.
3	9/5/18	8/31/20	726	Vermilion rockfish	Piedras Blancas REF	Carlos Z.

 $\blacktriangleright$  There were three recaptures in 2020.

- > The recaptured Olive rockfish was at liberty for a whopping 2,198 days!
- > This Olive also grew 3 cm in the time it was at liberty. Quite the fish brought up by Ralph B.





#### Please remember to check for tags next time you are out fishing!

We rely on the fishing community for this important source of information on tagged fishes. Remember that information from a tagged fish is worth \$20 and is priceless information for fisheries science! If you catch a tagged fish, please record the species, length, depth, and coordinates and contact: <a href="mailto:seagrant@mlml.calstate.edu">seagrant@mlml.calstate.edu</a>

#### Cal Poly 2020 CCFRP Summary Statistics

The bar chart below displays how catch per unit effort (CPUE) differed between area and type of gear for Cal Poly in 2020. In general, the trend of average CPUE was higher in Piedras Blancas than Point Buchon for all gear types. There is some evidence that CPUE, regardless of gear type, within an area is similar.



CPUE by Area and Gear Type

The pie charts represent 2020 CPUE (number of fishes per angler hour) of the top eight species in each area. Blue Rockfish was the primary species caught in Piedras Blancas, making up more than 60% of the total CPUE for this area. Gopher Rockfish represented more than 50% of the total CPUE for Point Buchon in 2020.



# THANK YOU SO MUCH!

