



Volunteer Newsletter A Summary of the 2017 Sampling Season

California Collaborative Fisheries Research Program

Greetings CCFRP Volunteers,

With your help, we have completed our 2017 sampling season! 2017 marks Cal Poly's eleventh season of data collection inside and outside of MPAs on the central California coast. This season, we completed a total of 16 trips, fishing for a total of 521 angler hours. In that time, we caught a total of 10,574 fishes of 32 species. This year brought us a new record of total number of fishes caught. Thank you!



To celebrate all the hard work you did this past season, we would like to invite you to our annual volunteer angler appreciation event and data workshop. We will be discussing the data we have collected this season, as well as some projects completed in the past year. The event will be held at:

The Cal Poly Pier

Avila Beach, Ca

May 19, 2018 from 11:00 am - 2:00 pm

If you are able to attend, feel free to bring others who might be interested and **please RSVP to grantwaltz_ucr@hotmail.com** so we may plan accordingly. A barbecue lunch will be provided. An additional message will be sent out soon with more workshop details. Please stay tuned for updates through email and our facebook page!



Updates from CCFRP Science Crew

Be on the lookout for emails coming soon with details of our 2018 sampling schedule! Once the schedule is released, make sure to email us promptly to secure your fishing spots. We're hoping for another record season and we need your help. We're working hard behind the scenes to prepare and get those dates to you soon.

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



We have had some exciting times this year. Four of our accomplished undergraduates finished their degrees at Cal Poly and moved on to big things. **Megan Wilson** started her PhD at Oregon State. **Ellie Brauer** is working for the NOAA onboard observer program in Alaska. **Matt McKechnie** is working on a diving project down in sunny San Diego. **Wyatt Palser** continues to work in the marine community in San Luis Obispo. We appreciate all their hard work! Two of our undergraduates, **Zack Kucinski** and **Chandler Skinner-Horne**, have begun collecting data for their senior research project and will be joining us again this season. **Rose Dodgen** is making progress on her thesis, which focuses on how data is used in understanding fish populations. **Nicole Hack** has finished her masters thesis on rockfish growth and is now working for SeaGrant, you can read more about her research further on in this newsletter. **Grant Waltz** has been hard at work analyzing our 2017 data from new collaborators across the State, and is excited to share the results of last season with you at our upcoming appreciation barbecue.



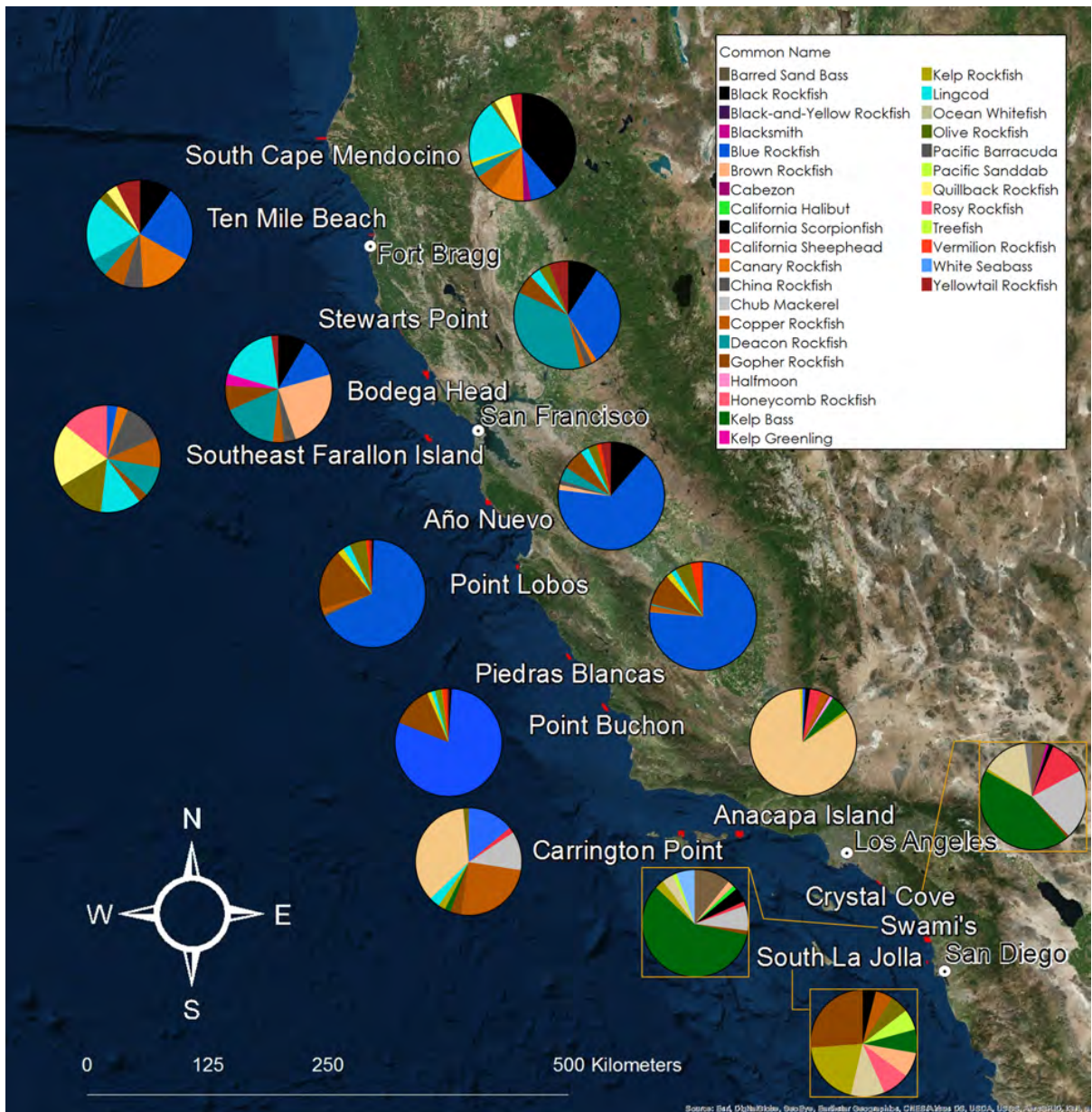
2017 Volunteer crews in action! We enjoyed fishing with you and can't wait to see you again this season.



Our fearless leader Dr. **Dean Wendt** continues to find innovative applications for our data and offer us sage advice. As the new dean of the College of Mathematics and Science, he has a busy schedule that keeps him from joining us as often as he'd like, but we are sure to bring back lots of exciting stories and photos!

CCFRP Goes State-Wide

This year CCFRP expanded into a state-wide program! With help from Humboldt State, UC Davis, Moss Landing Marine Laboratories, UC Santa Barbara, and UC San Diego, we are now sampling Marine Protected Areas all over the California coast.



We're excited to show you how some of our new sampling areas compare. Up north, we are catching a higher proportion of Black Rockfish (*Sebastes melanops*), Canary Rockfish (*Sebastes pinniger*), and Lingcod (*Ophiodon elongatus*). Down south, we are catching large numbers of Ocean Whitefish (*Caulolatilus princeps*) and lots of Kelp Bass (*Paralabrax clathratus*). We're interested to see how these patterns change as we continue to work on monitoring MPAs up and down the coast.

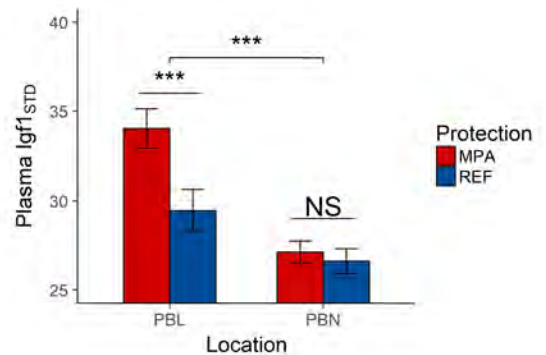
Rockfish Growth

Nicole Hack spent the last couple of years working with CCFRP. You may have seen her taking blood from rockfish. Having finished her research, here are some things she has learned about rockfish growth on the central coast of California.

Background: Fish growth is regulated by hormones that trigger physiological change after eating a meal. These can be detected in fish blood and used to understand how fast a fish is growing at a particular time.

Question: How are rockfish growing in protected and unprotected areas? To answer this, Nicci tested growth hormone concentrations in rockfish from Point Buchon and Piedras Blancas.

Findings: Growth hormones tended to be higher in Blue Rockfish within the boundaries of the Piedras Blancas MPA compared to Blue Rockfish from an adjacent site with no fishing restrictions. Point Buchon MPA, however, did not show the same trend. Hormone levels near Point Buchon were similar within and outside of the MPA. These results show that we can detect differences in rockfish growth between areas. Future studies will define the relationships between area and growth, which could potentially be used in rockfish management.



Piedras Blancas (PBL) had higher levels of growth hormone than Point Buchon (PBN). Within Piedras Blancas, the MPA had the highest levels of growth hormone, while in Point Buchon the protected and unprotected areas didn't differ in amounts growth hormone.



Tag Recaptures

Tag returns are an exciting part of our program and one way that we can learn about the movements and growth rates of the fishes we catch and release on our sampling trips. Cal Poly had a total of eight fish recaptures in 2017.

The farthest swim of the season goes to a Blue Rockfish (*Sebastes mystinus*) that was recaptured 258 meters, or 845 feet, from where it was originally caught. This fish was first caught in July of 2016, and returned to us on September 12th after 412 days at liberty.



The longest time at sea before recapture during this season of CCFRP was another Blue Rockfish. This fish was originally captured back in September of 2015, and was recaptured on August 29th, 719 days (almost two years!) later.

Our biggest recapture of the season was a 46cm Vermilion Rockfish (*Sebastes miniatus*). After being caught on July 18th of 2016, this fish spent 380 days at sea and moved only 71 meters during that time. It was recaptured on August 1st, 2017.



We recaptured two Copper Rockfish (*Sebastes caurinus*) on August 16th. One of them had originally been captured in September of 2016, and had moved only 84 meters in the 344 days it was free.

The other one must have missed us, because it was recaptured only 15 days after it was tagged! This fish swam a whole 150 meters to come back to us.



Please check for tags next time you are out for rockfish!

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:

seagrants@mlml.calstate.edu or grantwaltz_ucr@hotmail.com

2017 Highlights

This year was remarkable! We had record-breaking numbers and encountered unusual species and fishes of all sizes. We can't wait to see what this season brings!

Last year, our record day we caught 1,097 fishes caught out of the Pt. Buchon MPA . **This year we broke that record by 370 fish!** Our new record day was August 28th in the Pt. Buchon MPA, where we caught **1,467** fish aboard *F/V Fiesta*.

77% of the fishes caught this season were Blue Rockfish (*Sebastes mystinus*). Other top contenders were Gopher Rockfish (*Sebastes carnatus*), Olive Rockfish (*Sebastes serranoides*) and Vermilion Rockfish (*Sebastes miniatus*).



Unique Species

On a typical CCFRP trip we see several species of rockfish, some Lingcod, and maybe a Cabezon. However, once in a blue moon, someone reels up a truly unusual fish. In 2017 we caught:



Chilipepper Rockfish
(*Sebastes goodei*)

Spiny Dogfish
(*Squalus acanthias*)

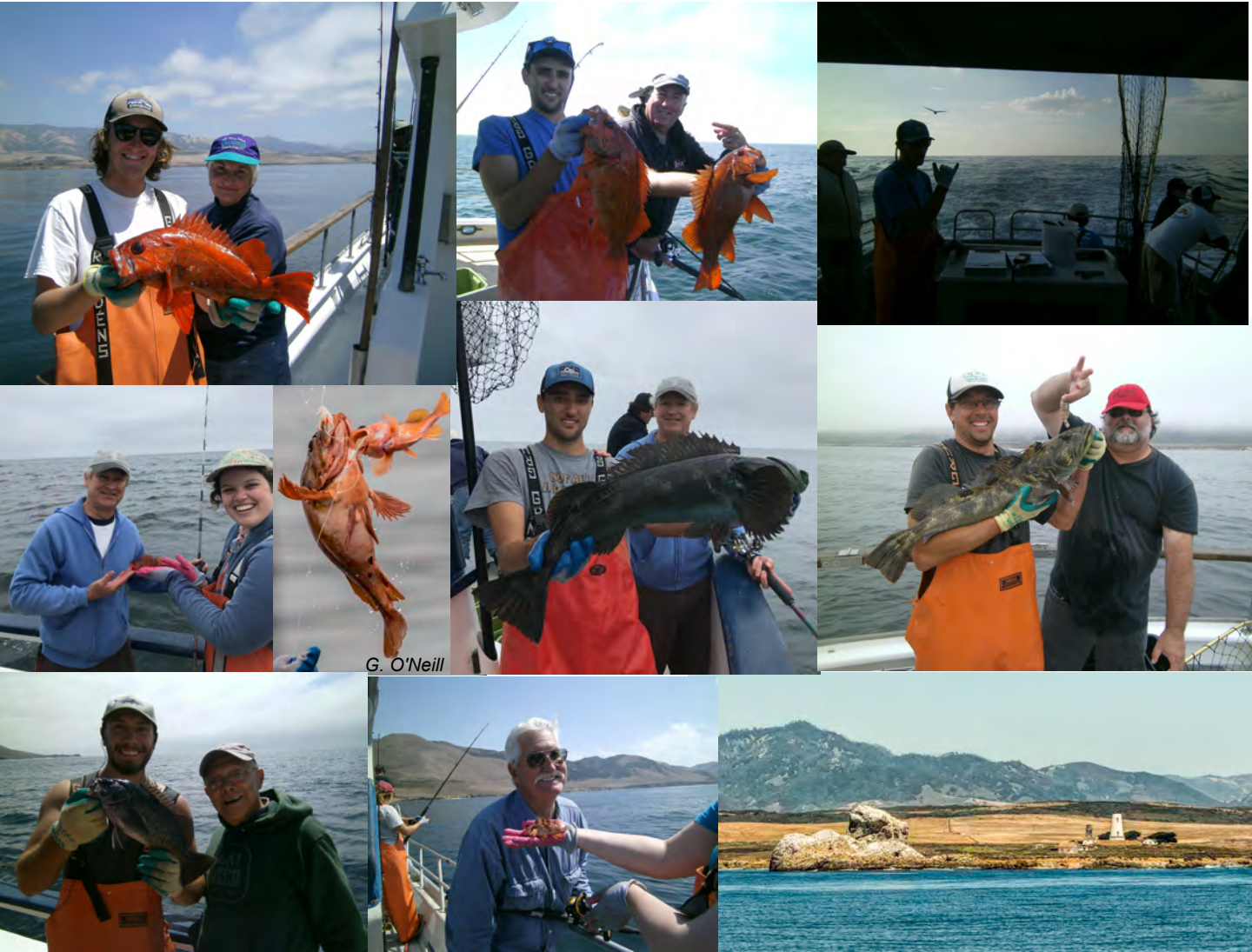
California Sheephead
(*Semioscyphus pulcher*)

Ocean Whitefish
(*Caulolatilus princeps*)

All Fishes Great and Small

We caught a truly astonishing range of sizes. The smallest fish of the season was a 10cm Blue Rockfish. The largest the season was a 93cm Spiny Dogfish. The largest range of size was in Lingcod, the smallest was 15cm and the largest was 89cm!





Thank you for joining us for another great season of CCFRP!





G. O'Neill

We can't wait to see you on the boat this year!

Many thanks to Gary O'Neill for the use of his photos!



G. O'Neill