CCFRP

MLML 2023 VOLUNTEER NEWSLETTER

A SUMMARY OF THE 2022 SAMPLING SEASON

GREETINGS VOLUNTEERS!

The 2022 sampling season was a great success! We want to thank all our volunteer anglers who helped in this year's surveys as well as the captains and crew of the F/V New Captain Pete, F/V New Horizon, and F/V Chubasco. With your help, MLML has successfully completed our 16th year of data collections inside and outside the Año Nuevo and Point Lobos State Marine Reserves (SMR)! Our statewide effort remains strong, and all partner institutions were able to get out for another successful field season. The NOAA 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 the California Department of Fish and Wildlife (CDFW) and the Ocean Protection Council (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 2023 season!

ANGLER WORKSHOP NEWS

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 fifteen seasons. We welcome your attendance and involvement! The event will be held on:

March 18th from 12PM to 3PM

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

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2022 HIGHLIGHTS

2 MPAs Surveyed

87 Volunteer Anglers

12 Trips

5,022 Fishes

25 Species



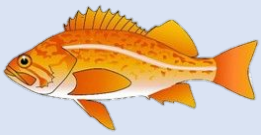

LARGEST and smallest catches from 2022

BLACK ROCKFISH
minimum: 16 cm (6.3 in)
maximum: 48 cm (18.9 in)

BLUE ROCKFISH
minimum: 8 cm (3.1 in)
maximum: 39 cm (15.4 in)

BROWN ROCKFISH
minimum: 13 cm (5.1 in)
maximum: 48 cm (18.9 in)

CABEZON
minimum: 29 cm (11.4 in)
maximum: 67 cm (26.4 in)

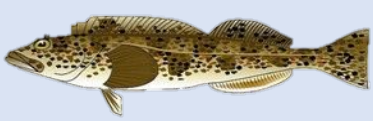


CANARY ROCKFISH
minimum: 18 cm (7.1 in)
maximum: 45 cm (17.7 in)

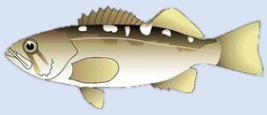
CHINA ROCKFISH
minimum: 18 cm (7.1 in)
maximum: 35 cm (13.8 in)

COPPER ROCKFISH
minimum: 19 cm (7.5 in)
maximum: 50 cm (19.7 in)

GOPHER ROCKFISH
minimum: 17 cm (6.7 in)
maximum: 39 cm (15.4 in)



LINGCOD
minimum : 31 cm (12.2 in)
maximum: 92 cm (36.2 in)



OLIVE ROCKFISH
minimum: 17 cm (6.7 in)
maximum: 49 cm (19.3 in)

VERMILION ROCKFISH
minimum : 16 cm (6.3 in)
maximum: 60 cm (23.6 in)

YELLOWTAIL ROCKFISH
minimum : 11 cm (4.3 in)
maximum: 45 cm (17.7 in)

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LARGEST catches of all time (2007-2022)

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. Congratulations to Donald B., Patrick T., Ed O., and Manny P. for making it on the leaderboard with their catches this season!

BLACK ROCKFISH
Total Length: 54 cm (21 in)
Randy W., Año Nuevo MPA '21

BLUE ROCKFISH
Total Length: 45 cm (18 in)
Mike I., Point Lobos REF '15
Ray Y., Año Nuevo MPA '08

BROWN ROCKFISH
Total Length: 48 cm (19 in)
Donald B., Año Nuevo REF '22
Jahnava D., Año Nuevo MPA '21
Scott Y., Año Nuevo MPA '17
Ben S., Año Nuevo MPA '16

CABEZON
Total Length: 67 cm (26 in)
Patrick T., Año Nuevo REF '22

CANARY ROCKFISH
Total Length: 56 cm (22 in)
Amy M., Año Nuevo REF '11

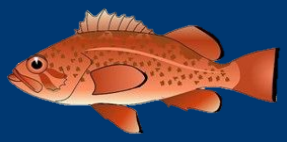
CHINA ROCKFISH
Total Length: 39 cm (15 in)
Kevin M., Año Nuevo REF '10

COPPER ROCKFISH
Total Length: 52 cm (20 in)
Darrell B., Point Lobos MPA '17

GOPHER ROCKFISH
Total Length: 43 cm (16 in)
Scott Y., Año Nuevo REF '20

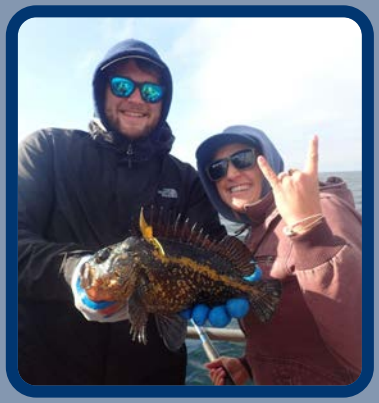
LINGCOD
Total Length: 102 cm (40 in)
Ed M., Año Nuevo MPA '14

OLIVE ROCKFISH
Total Length: 50 cm (20 in)
Nick I., SE Farallon Islands REF '18
Alan B., Point Lobos MPA '08
David R., Point Lobos MPA '07



VERMILION ROCKFISH
Total Length: 60 cm (23 in)
Ed O., Año Nuevo REF '22

YELLOWTAIL ROCKFISH
Total Length: 45 cm (18 in)
Manuel P., Año Nuevo MPA '22



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Most *Unique* Catches of 2022

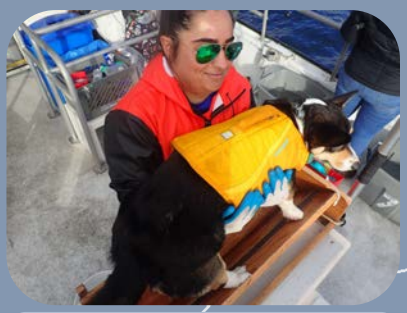
Angler EC O. pulled in a rainbow sea star (*Orthasterias koehleri*) almost as big as his head!

Angler Dave K. wishes his bat star (*Patiria miniata*) was a lingcod!

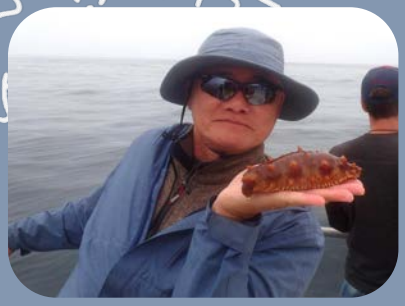
Angler Vince I. gave this sea star the ride of its life reeling it up to the surface!

Angler Lester Y. smiles with his multi-colored bat star (*Patiria miniata*).

Angler Mark A. wanted everyone to know he was on the bottom so he reeled in a rock to prove it!



Science crew Rachel B. is measuring our furriest and most buoyant catch of the season, Toro the corgi!



Angler EC O. proudly displays his catch: a California sea cucumber (*Apostichopus californicus*).

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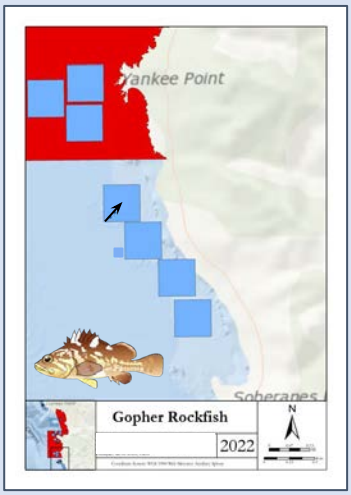
Tag-Recaptures from 2022

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 2022, we had 14 tag-recaptures from 8 different species! 8 were recaptured on CCFRP trips and 6 were recaptured by recreational and commercial fishermen!

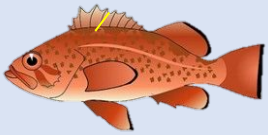
GOPHER ROCKFISH
Tag ID 43853

- Initially caught and tagged on 09/08/2021 in a Point Lobos Reference Cell.
- Recaptured on 02/13/2022 by a commercial fisherman in the same Point Lobos Reference Cell, traveling approximately 0.06 miles during its 148 days at liberty



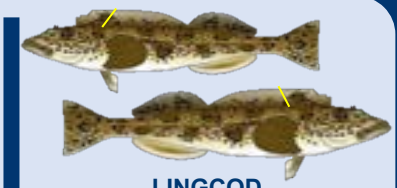
COPPER ROCKFISH
Tag ID 41896

- Initially caught and tagged on 09/11/2019 by angler Ed M. in an Año Nuevo MPA grid cell and recaptured on 08/09/2022 by angler Shig K. in the same grid cell.
- Traveled just 0.032 miles during its 1,063 days at liberty



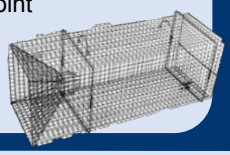
VERMILION ROCKFISH
Tag ID 40072

- First caught and tagged on 08/14/2018 by angler Ed M. in an Año Nuevo MPA grid cell and recaptured on 08/09/2022 by angler Ken Y. in the same grid cell.
- Traveled just 0.051 miles during its 1,4456 days at liberty and stayed within Grid Cell 22



LINGCOD
Tag IDs 41006 & 43366

- **TWO** Lingcod were recaptured on the same day (07/01/2022) by commercial fisherman, Walter D. using trap gear!
- Lingcod #41006 was originally caught and tagged on 09/05/2018 by angler Martin G., whereas Lingcod #43366 was caught and tagged on 08/20/2021 by angler Linzi W. Both fish were released in the same Point Lobos Reference cell.
- Lingcod #41006 spent 1,395 days at liberty and Lingcod #43366 spent 325 days at liberty
- Both Lingcod traveled about 0.3 miles before being recaptured right around Cypress Point



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 **mlml-ccfrp@sjsu.edu or (831) 771-4479**

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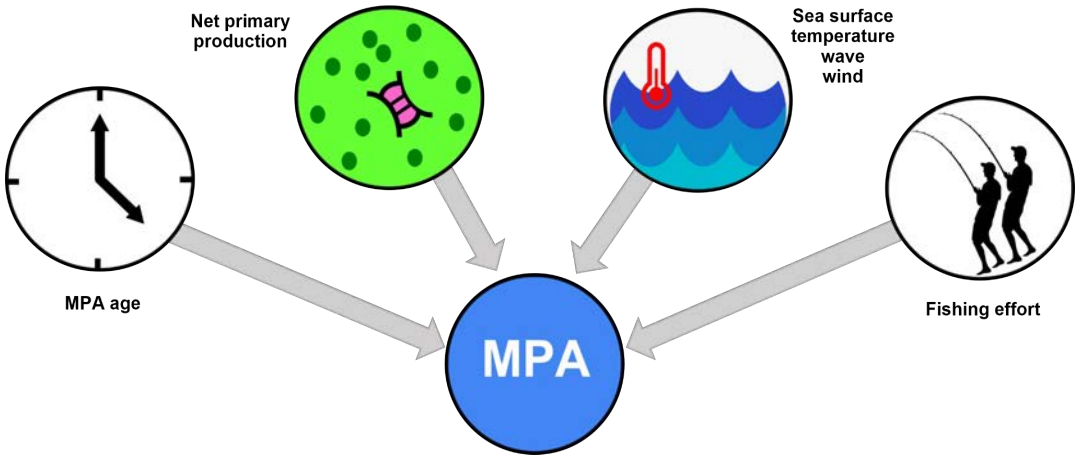
New CCFRP Publication Alert!

"External fishing effort regulates positive effects of no-take marine protected areas"

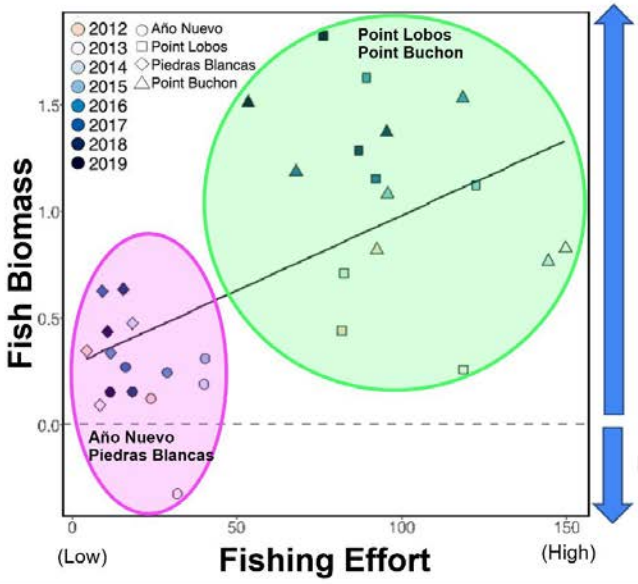
Shelby L. Ziegler, Rachel O. Brooks, Scott L. Hamilton, Benjamin I. Ruttenberg, Jennifer A. Chiu, Ryan T. Fields, Grant T. Waltz, Chenchen Shen, Dean E. Wendt, Richard M. Starr

Published in Biological Conservation, Volume 269, May 2022, https://doi.org/10.1016/j.biocon.2022.109546

What environmental and/or human induced stressors drive the perceived efficacy of marine protected areas?

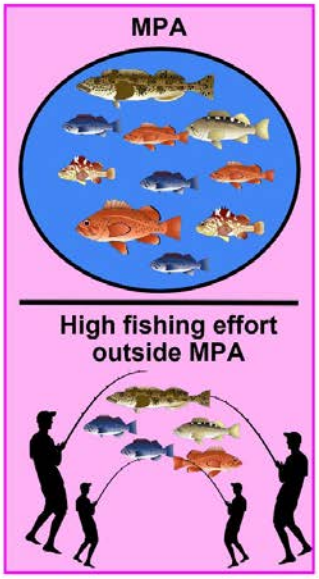


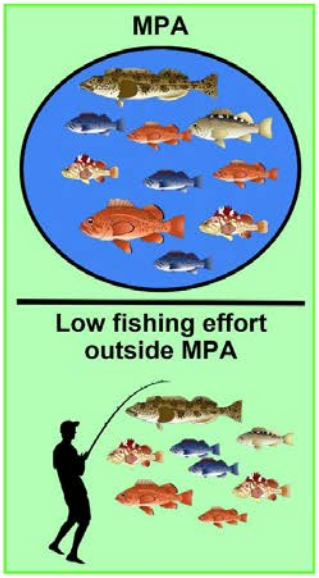
- ➔ Fishing effort outside the MPA was the most important variable explaining MPA effects on fish biomass.
- ➔ Most of the points in the figure below are positive indicating higher biomass inside MPAs compared to Reference (REF) sites, but the strength of those effects is directly influenced by the amount of fishing effort outside those MPAs
- ➔ Biomass in MPA and REF sites was more similar with low fishing effort outside MPAs (Año Nuevo, Piedras Blancas).
- ➔ Biomass was higher inside MPAs in areas with high fishing effort outside MPAs (Point Lobos, Point Buchon).



Points above dotted line indicate **higher biomass in MPA**

Points below dotted line indicate **higher biomass in areas open to fishing**





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UPDATES FROM MLML CCFRP CREW!

After years of fearless leadership and dedication to the program, Rachel will be moving on to pursue new opportunities down in San Diego. Thank you for everything!

Katie has accepted a California Sea Grant State Fellowship in which she will be working with the Ocean Protection Council starting in March!

Kinsey has also accepted a California Sea Grant State Fellowship in which she will be working with the Fish and Game Commission beginning in March!

Jake will be returning next season as MLML's Lead Field Technician. In the meantime, he will be begin analyzing videos for his thesis project.

Molly will be returning next season as MLML's Volunteer Coordinator. She will also begin rockfish collections for her thesis project, "The Effect of Variations in Swim Bladder Morphology on Nearshore Rockfishes' Responses to Barotrauma"in the next couple of months.

Konnor will be leaving the lab to further pursue his work with statistics - we wish him all the best!

Upcoming FCB Lab Thesis Defenses:

Katie Cieri - "Composition and distribution of fish assemblages in Cap de Creu Natural Park in relation to protection, depth, and habitat"

Kinsey Matthews - "Improving the use of species distribution models of continental shelf fishes off California"

PLEASE TAKE A MINUTE TO LIKE CCFRP ON FACEBOOK AND FOLLOW US ON INSTAGRAM, YOUTUBE, AND TWITTER (@CCFRP)

MLML's fearless leaders, **Dr. Richard 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 and Scott on a few trips this season!

WE ALL THOROUGHLY ENJOYED WORKING WITH YOU THIS SEASON AND CAN'T WAIT FOR 2023!

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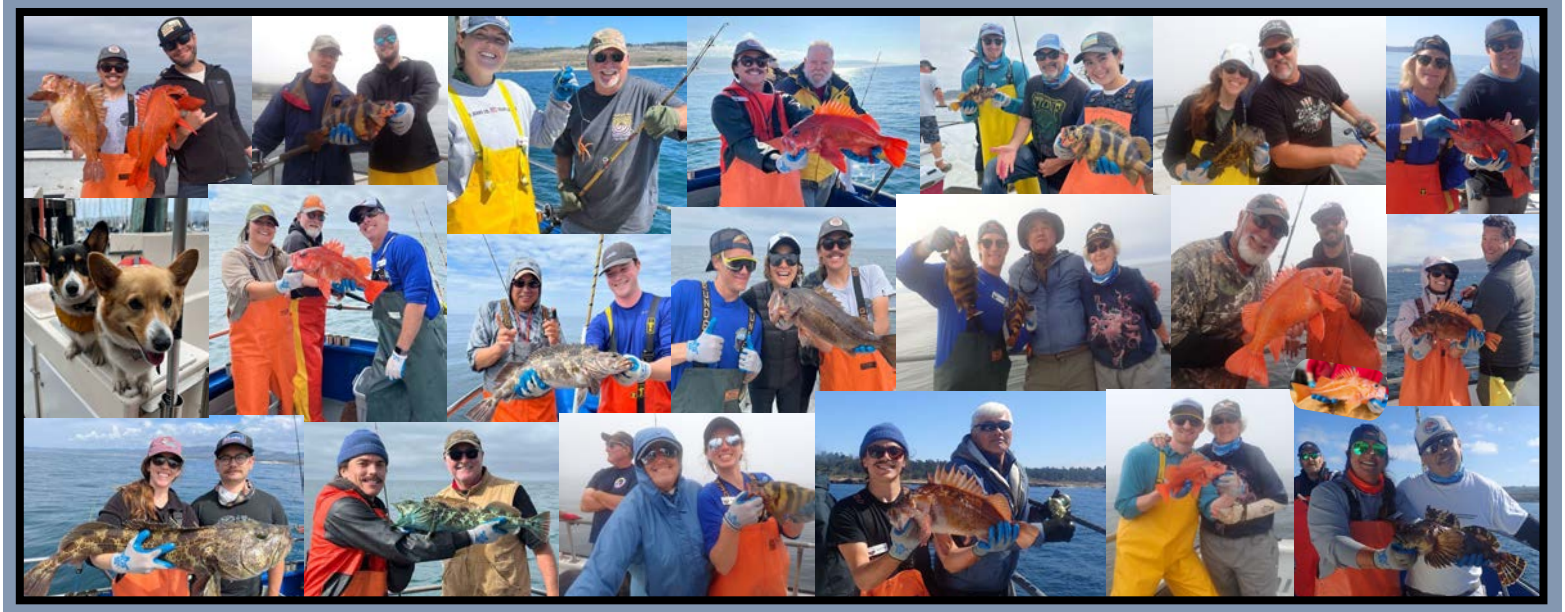

THANK YOU FOR YOUR CONTINUED SUPPORT!

We would like to extend a big thanks to our program partners and research affiliates this season: The Ocean Protection Council, NOAA National Marine Fisheries Service, Santa Monica Seafood, California Department of Fish and Wildlife, Cal Poly Humboldt, Bodega Marine Laboratories, Cal Poly San Luis Obispo, UC Santa Barbara, and Scripps Institution of Oceanography. Most importantly, we would like to thank the crew and captains of the F/V New Captain Pete, F/V New Horizon, and F/V Chubasco.