



California Collaborative Fisheries Research Program

Scripps Institution of Oceanography Volunteer Newsletter

A Summary of the 2021 Sampling Season

Welcome CCFRP Volunteers,

As many of you are aware, SIO's CCFRP surveys in the 2021 season continued to be impacted by UC San Diego COVID safety precautions and research protocols. Our fishing and science crew remained downsized and volunteer anglers remained limited to UC San Diego students and faculty, rather than our volunteer anglers from the local fishing community. For our upcoming 2022 season, we are looking forward to having YOU join us back out on the water. As we all can attest, citizen science is a pillar of CCFRP!

Last year was our fifth sampling season to gather important information on species composition, lengths, and catch rates! In 2021, we had 21 volunteer student anglers (11 new) join us on 12 hook-and-line surveys conducted inside MPAs and nearby reference areas off San Diego County. Volunteers spent 243.6 angler hours catching and releasing 778 fish (602 of these were tagged) representing 27 different species. Take a look inside for some of the awesome highlights from the past sampling season!!



Know someone interested in fishing with us in 2022?

Contact us at catchreporter@gmail.com for more information and to volunteer.



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Meet Our Science Crew!

Erica Jarvis Mason

Erica is a PhD candidate in her 5th year of the Marine Biology program at SIO. Her research focus is on the population dynamics of the iconic saltwater bass fishery in southern California. Erica has helped lead SIO's CCFRP effort since 2017 and is transitioning out of SIO's CCFRP lead scientist role as she nears completion of her PhD.



Connor Coscino

In the Spring of 2021, Connor graduated from UCSD with a BS in Marine Biology. He is now a graduate student working towards a Master's degree on a project evaluating the existing size limits of the most popular recreational and commercial fishes along the California coast. Connor has helped run the SIO division of CCFRP since 2019.



Jack Elstner

Jack graduated from Cornell University in the Spring of 2021 with a BS in Earth and Atmospheric Science. At Scripps, he will be pursuing his PhD in Biological Oceanography and is particularly interested in climate impacts on west coast fisheries and climate-informed ocean management. Jack will be transitioning into SIO's CCFRP lead scientist as Erica shifts her focus towards her dissertation.



Kathryn Chen

Kathryn is a third-year undergraduate at UCSD working towards a BS in Marine Biology and a minor in Climate Change Studies. She is interested in exploring how symptoms of climate change are affecting fisheries, and is also passionate about the importance of diversity and inclusion in marine science. Kathryn joined CCFRP this past year.



Biggest Fishes Caught in 2021

Below are the top 9 largest species caught last season.

Total lengths are listed along with angler, gear type, area, and site (MPA/REF).

Pacific Barracuda 91 cm (35.8 in)

Ozzy Mcgowan, South La Jolla REF

Swimbait

72 cm (28.3 in)

Ed Parnell, South La Jolla REF

Swimbait

California Sheephead 57 cm (22.4 in)

Autumn Bagaporo, South La Jolla MPA

Dropper Loop

54 cm (21.3 in)

Kamran Walsh, Swami's MPA

Dropper Loop

Lingcod 56 cm (22.0 in)

Yang Yang Zhang, South La Jolla MPA

Swimbait

Barred Sand Bass 52 cm (20.5 in)

Kamran Walsh, Swami's MPA

Swimbait



Kelp Bass 52 cm (20.5 in)

Kane Shanahan, Swami's MPA

Swimbait

50 cm (19.7 in)

Kamran Walsh, Swami's MPA

Dropper Loop

Vermilion Rockfish 48 cm (18.9 in)

Yang Yang Zhang, Swami's MPA

Swimbait

Ocean Whitefish 47 cm (18.5 in)

Jonathan Kim, South La Jolla MPA

Baited Shrimp Fly

Finescale Triggerfish 44 cm (17.3 in)

Kane Shanahan, Swami's MPA

Dropper Loop

California Halibut 41 cm (16.1 in)

Brian Chang, Swami's MPA

Baited Shrimp Fly



2021 Data Summary

(Revised February, 2022)

Catch-Per-Unit-Effort (Fish/Angler Hour)

Area	2019 CPUE	2020 CPUE	2021 CPUE	Most Frequently Caught Species
South La Jolla MPA	3.95	5.00	5.47	Ocean Whitefish, Honeycomb Rockfish, Gopher Rockfish, Kelp Rockfish
South La Jolla REF	3.26	3.23	3.48	
Swami's MPA	3.74	4.25	3.31	Kelp Bass, Treefish, Ocean Whitefish, Barred Sand Bass
Swami's REF	1.10	1.64	.93	

Species Spotlight: Vermilion Rockfish (*Sebastes miniatus*)



Etymology: Derived from the Greek *Sebastos* meaning august/venerable, and *miniatus* meaning scarlet/vermilion.

Geographic Range: From Prince William Sound, Alaska to San Benito Island, Baja California, Mexico, but most commonly found from central California to northern Baja California.

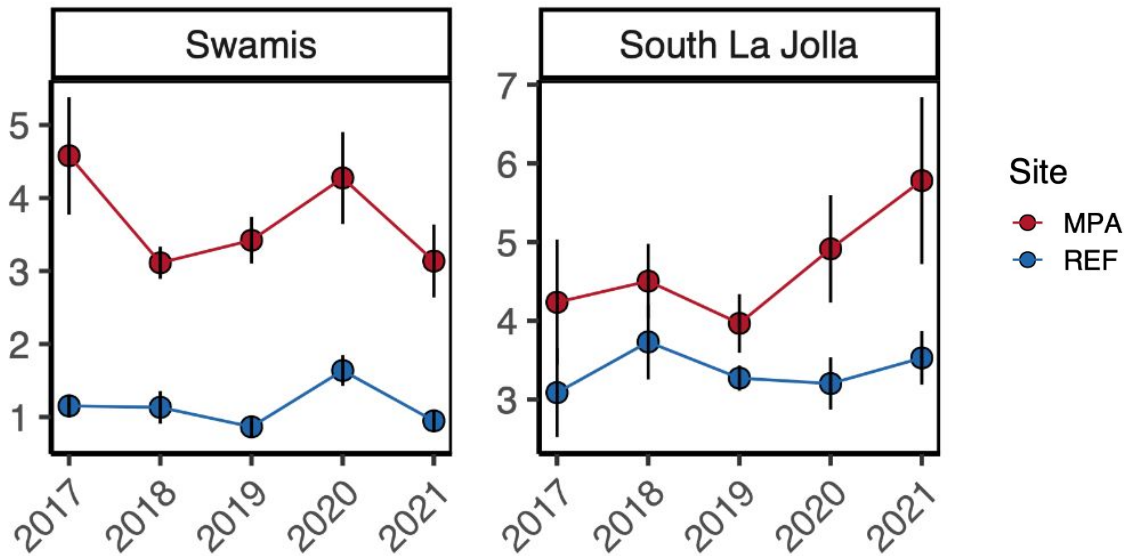
Maximum Size: 36 inches total length.

Known for their deep red color, Vermilion Rockfish are the third most frequently sport-caught rockfish species off California. They can be found from 39 to 1568 feet deep and mostly live over rocky reefs. After maturing at 4-7 years, they spawn from December to March and the oldest aged fish was 68 years old. They are targeted recreationally and commercially.

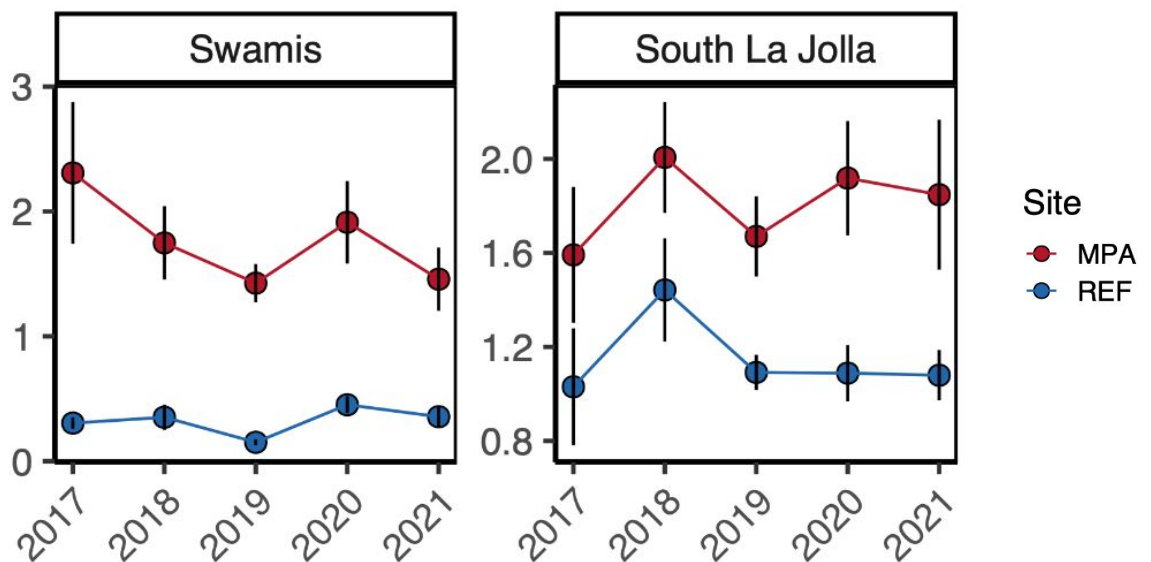
CCFRP Stats:	2017	2018	2019	2020	2021
Caught & released	10	9	28	35	22
Tagged	9	8	19	23	16
Recaptured	1	0	0	1	3
Max length (in)	16.5	15.75	18.9	17.3	18.9

Temporal Trends

Catch-Per-Unit-Effort (no. angler hr⁻¹)



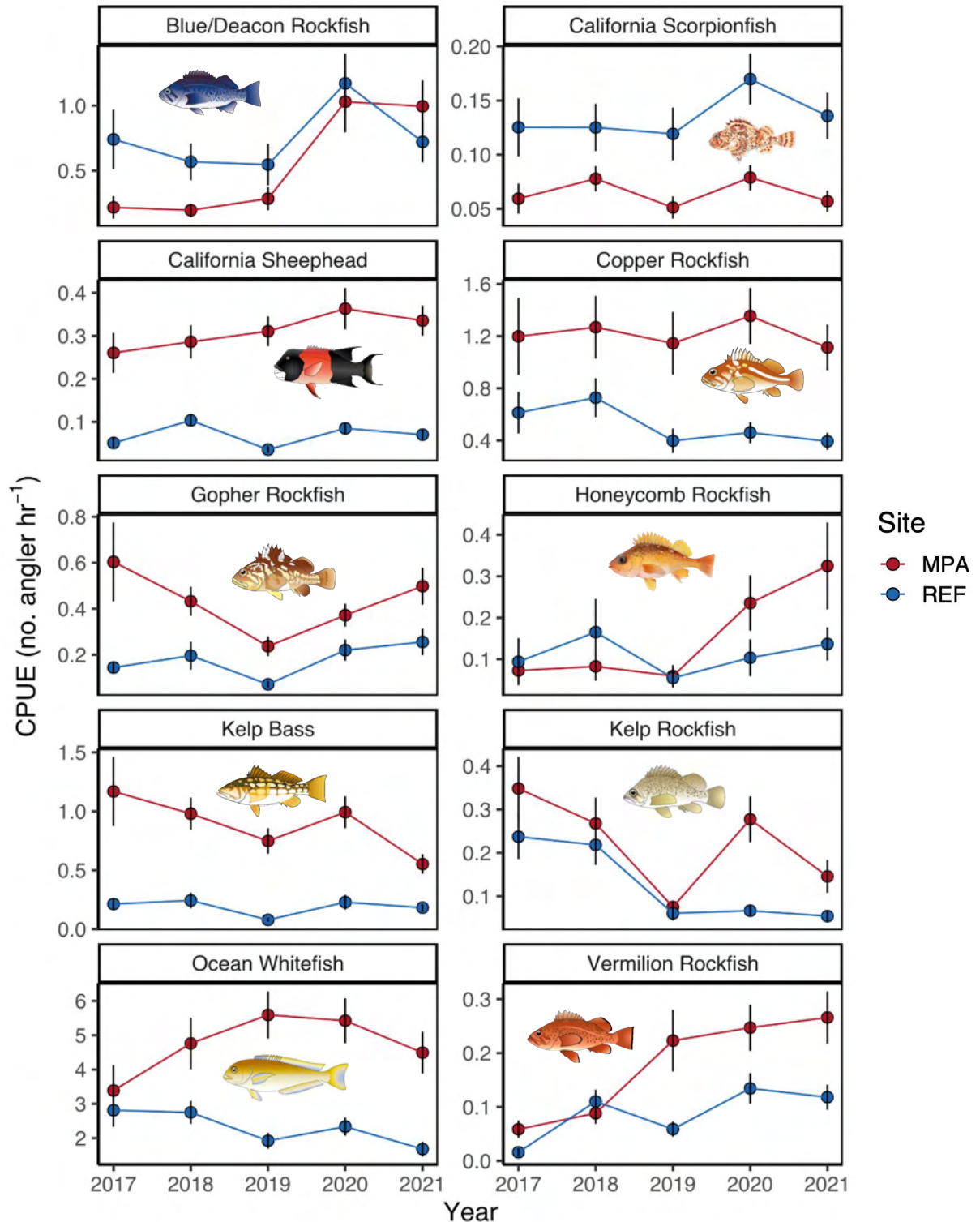
Biomass-Per-Unit-Effort (kg. angler hr⁻¹)



Temporal Trends

Catch-Per-Unit-Effort By Species

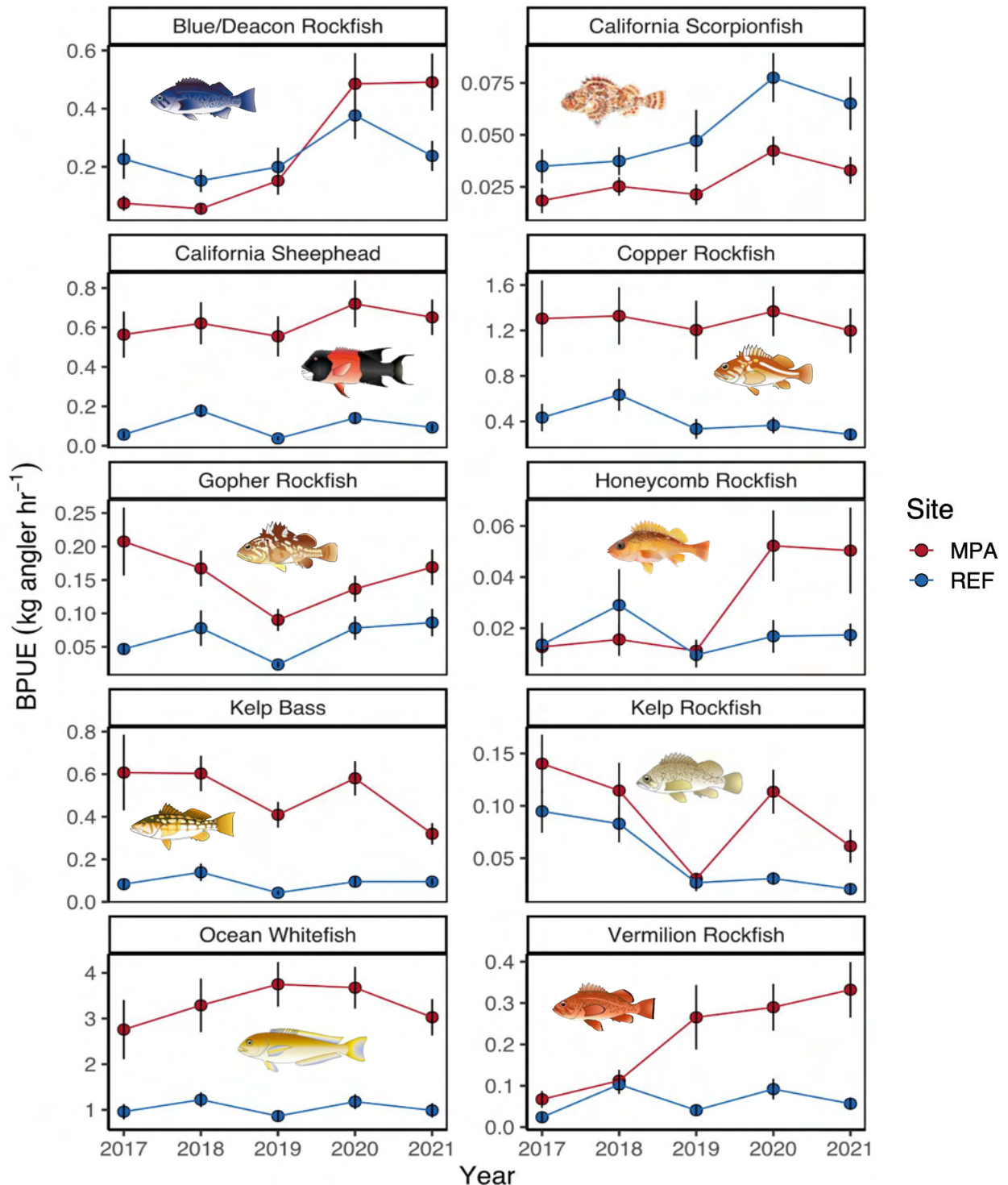
South Coast (Santa Barbara and San Diego Regions), covering Point Conception, Carrington Point, Anacapa Island, Swami's, and South La Jolla



Temporal Trends

Biomass-Per-Unit-Effort By Species

South Coast (Santa Barbara and San Diego Regions), covering Point Conception, Carrington Point, Anacapa Island, Swami's, and South La Jolla



2021 Tag Returns

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

Anglers reported catching **21** of our tagged fish last year! One interesting find was a Brown Rockfish originally tagged and released in 2017 inside of the South La Jolla SMR, and recaptured 1402 days later about 3.5 miles away from the original release location and outside of the MPA.

Species	Total	Max Days at Liberty	Max Distance (mi)
Ocean Whitefish	10	656	3
Vermilion Rockfish	3	1332	3
Honeycomb	2	1024	3.25
Kelp Bass	1	6	3
Brown Rockfish	1	1402	3.5
Gopher Rockfish	1	44	3
Olive Rockfish	1	364	0
Lingcod	1	470	0
Copper Rockfish	1	694	.17



On your next fishing outing, be on the lookout for our tags -- they are white and about 2 inches long, typically inserted on the left side of the fish. One side of the tag has our phone number, the other has the Tag ID number. If tags have been out for quite some time they may be fouled with algae and not as noticeable.



What to do if you catch a tagged fish:

- Record the **Tag ID number** and **location** (length, depth if possible)
- Call 858-534-2156 and leave us a detailed message
- Let us know if you kept or released the fish (with or without tag)
- We now have CCFRP hats as a **reward** for tag return data!!

Surveys in 2022

Stay on the lookout for emails this spring from catchreporter@gmail.com with details on our schedule for the 2022 field season. Be sure to respond quickly to ensure you don't miss out on joining us for another exciting year of surveys!

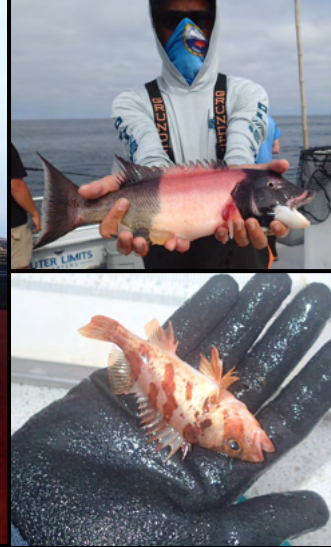
If you are a member of a fishing club that is interested in participating, please let us know! We can always use more volunteers on our science team. Science team members help with rigging gear, shuttling fish, descending bloated rockfish, collecting data, and assisting anglers with their gear.

If you are interested in volunteering, please contact us at catchreporter@gmail.com. Volunteers must be 18 years or older.

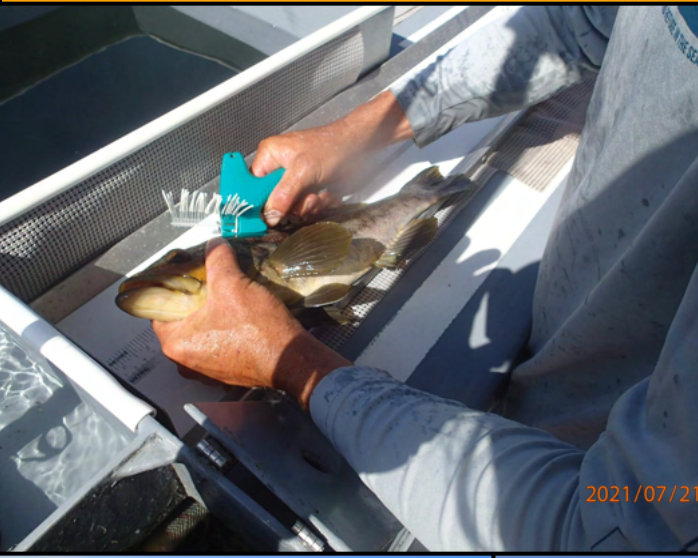


Please take a moment to follow "Coastal Angler Tagging Cooperative" on Facebook, as well as "CCFRP" on Facebook, Instagram, Twitter, and Youtube!





Thank you for your support of CCFRP!





Looking forward to another great season!

