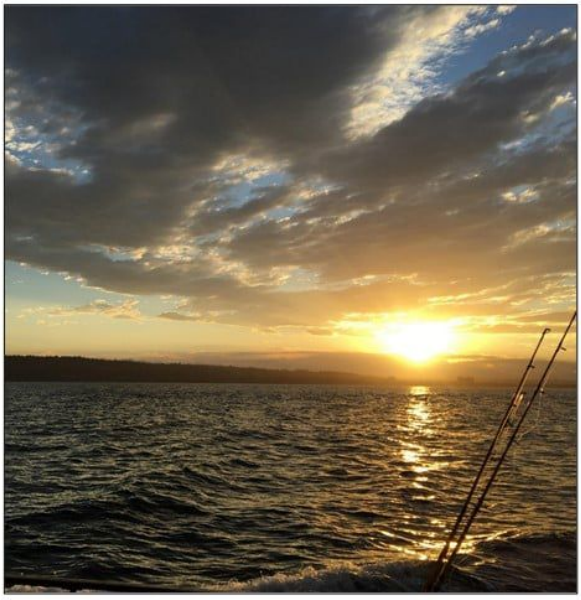
Volunteer Newsletter

A Summary of the 2020 Sampling Season

California Collaborative
Fisheries Research
Program – North Coast

Greetings Volunteers,

Despite the numerous challenges that 2020 presented, we were able to complete the 6th season of CCFRP MPA surveys here on the North Coast. Over this time, we've conducted a total of **102** hook-and-line surveys and enlisted the help of **82** volunteer anglers. We have caught and released **10,337** (and tagged **9,589**) total fish from **27** different species. This season we conducted 12 surveys inside 2 MPAs and their associated reference sites and caught a total of **1,398** fish (**550** tagged) representing **19** different species. Although COVID-19 restrictions did not allow us to enlist the help of volunteer anglers this season, we can't wait to have you back out on the water in 2021! Please enjoy these pictures and some preliminary results from this very interesting 2020 sampling season.

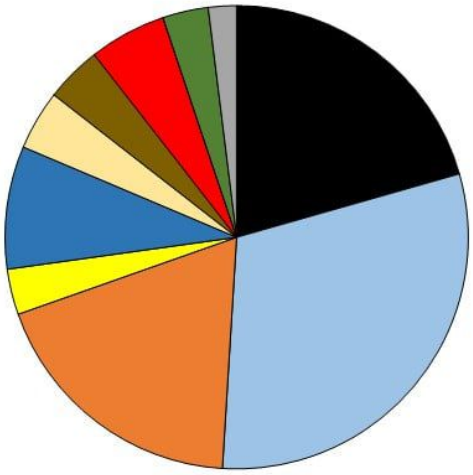


Don't forget to follow us on Facebook at **NorthCoastCFR** and follow **CCFRP** on Facebook, Instagram, YouTube, and Twitter (@CCFRP) to stay up to date on what is happening with MPA monitoring throughout the state!

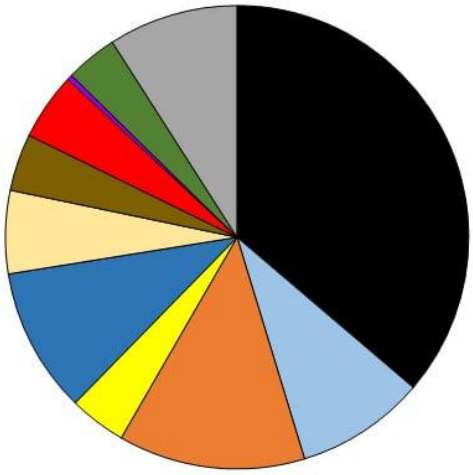
We are already looking forward to the 2021 season. We will continue to sample the Ten Mile Reserve and South Cape Mendocino Reserve. Watch your emails for the sampling schedule this summer!

2020 Species Composition

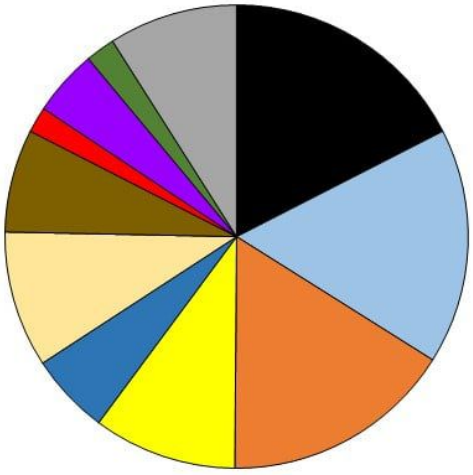
Cape Mendocino MPA



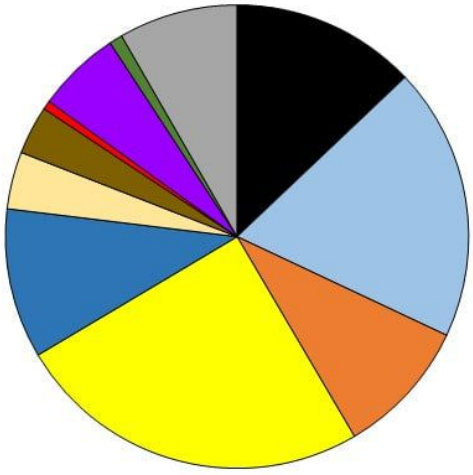
Cape Mendocino REF



Ten Mile MPA



Ten Mile REF



Species compositions are most similar within paired sites (e.g., Cape Mendocino MPA and REF). Black, Deacon, and Canary rockfish comprise of over 50% of the total catch at both the Cape Mendocino MPA and Reference sites, while China rockfish were caught in very low numbers.

The Ten Mile MPA and Reference sites were characterized by a more even distribution of the most captured species. Black, Deacon, Canary, and Yellowtail rockfish were all caught in similar numbers while Vermilion and Quillback rockfish were very rarely captured at these sites. Lingcod made up a similar percentage of the total catch at all sites as they are known to inhabit a large range of depths.

Blue Rockfish vs Deacon Rockfish

In 2015 a scientific paper was published out of Oregon State University that redescribed Blue rockfish into two molecularly and morphologically distinct species, Blue rockfish and Deacon rockfish (Frabel et al., 2015)*. Both Blue and Deacon rockfish are very commonly caught by recreational anglers off our Northern California shores, yet most anglers are not familiar with the Deacon rockfish, and if they are, can not tell them from a Blue rockfish. Check out the pictures and descriptions of these two species below and impress your fishing buddies next time you land a Blue or Deacon rockfish!

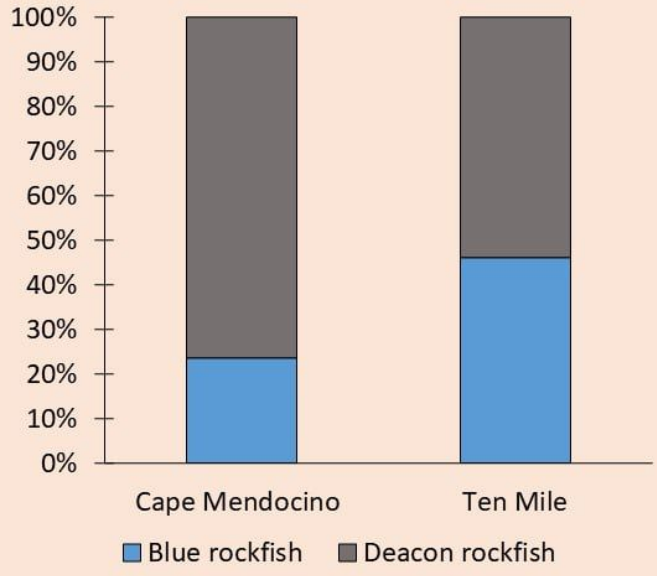
How to tell Blue and Deacon rockfish apart?

Body Coloration

- Blue rockfish will usually have more vibrant greenish coloration with noticeable dark mottling along the entire body (fig a).
- Deacon rockfish will be a drab blue-gray color with smaller speckles covering the sides of the body but not forming large blotches (fig b).

Lower Jaw

- The lower jaw of the blue rockfish does not extend significantly past the upper jaw (fig c).
- The lower jaw of Deacon rockfish extends significantly past the upper jaw (fig c).



When combining our catch data from 2019 and 2020, we found that we caught a lower percentage of Blue rockfish compared to Deacon rockfish at our MPA and reference site off Cape Mendocino than in our southernmost paired MPA site in Mendocino County where Blue rockfish and Deacon rockfish were caught in similar numbers. This trend is consistent with studies that have found the fraction of Deacon rockfish to Blue rockfish increases north of Monterey Bay (Dick et al., 2017)*.

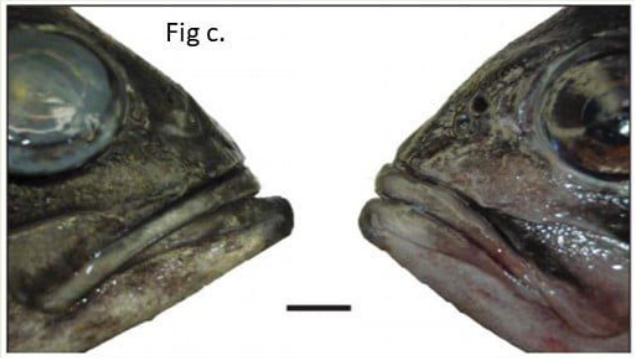
Fig a.

Blue Rockfish (*Sebastes mystinus*)

Fig b.

Deacon Rockfish (*Sebastes diaconus*)

Fig c.

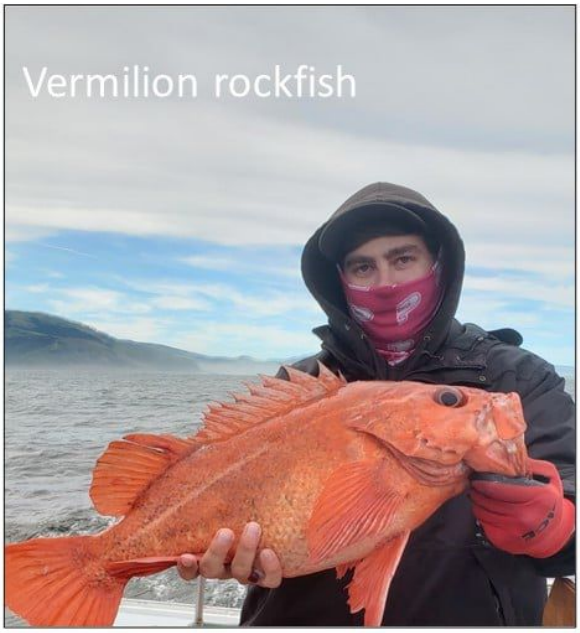


Comparison of lower jaw of Deacon Rockfish (left) and Blue rockfish (right)

Photo Credits:
a,b - RecFIN website
(http://www.recfin.org/resources/fishid/)
c - Frabel et al., 2015

*Frable, B. W., Wagman, D. W., Frierson, T. N., Aguilar, A., & Sidlauskas, B. L. (2015). A new species of Sebastes (Scorpaeniformes: Sebastidae) from the northeastern Pacific, with a redescription of the blue rockfish, S. mystinus (Jordan and Gilbert, 1881). *Fishery Bulletin*, *113*(4).
*Dick, E. J., Berger, A., Bizzarro, J., Bosley, K., ... & Rodomsky, B. T. (2017). The Combined Status of Blue and Deacon Rockfishes in US Waters off California and Oregon in 2017.

2020's Largest Fishes



Species	Length
Black Rockfish	50 cm (20 in)
Blue Rockfish	40 cm (16 in)
Lingcod	120 cm (47 in)
Canary rockfish	55 cm (21 in)
Yellowtail Rockfish	43 cm (17 in)
Copper Rockfish	54 cm (21 in)
China Rockfish	38 cm (15 in)
Quillback Rockfish	47 cm (19 in)
Vermilion Rockfish	54 cm (21 in)
Olive Rockfish	46 cm (18 in)
Kelp Greenling	41 cm (16 in)
Yelloweye Rockfish	53 cm (21 in)
Cabezon	63 cm (25 in)

*All values rounded to the nearest centimeter and inch, respectively

Thank you for your continued support!

We will see you on the boat this summer