



DEACON ROCKFISH (*Sebastes diaconus*)



Deacon Rockfish are an important component of the rocky reef ecology along the west coast. Perhaps one of the most surprising stories about this species is that it was first recognized as a species in 2015! Before that Deacon Rockfish and Blue Rockfish were thought to be one species. The more solidly colored sides of the body of Deacon Rockfish is the easiest way to distinguish it from the blue rockfish which has more mottled or spotty coloration. Both Deacon and Blue Rockfish have four dark bars on their head and small mouths that help distinguish them from black rockfish.

OVERVIEW

- **Oregon Conservation Strategy Species**
- **Size:** Up to 22 inches long (females grow larger than males)
- **Weight:** Up to 6 pounds
- **Lifespan:** At least 44 years
- **Key Strategy Habitats:** Nearshore
- **Similar Species:** Blue Rockfish, Black Rockfish

FISHING TIPS

- Start in the morning.
- Target rocky reef areas.
- Drop your hook to the bottom, then reel up slowly. Deacons are often well off the bottom.
- A variety of lures and flies work well, but Deacon Rockfish have small mouths so smaller lures may be best.
- Remember to check the fishing regulations for the area before you go and be sure you have your fishing license.

FUN FACTS

- Favorite Food:** Zooplankton, especially gelatinous forms. Will also eat small fish and squid.
- Deacon Rockfish were first recognized as a newly discovered species that is distinct and separate from Blue Rockfish in 2015!
 - Scientists are still learning about this species.
 - Deacon Rockfish are currently managed as part of a species complex with Blue Rockfish.
 - Deacon Rockfish mature at 4 to 11 years of age and can live to about 44.

RANGE AND DISTRIBUTION

In Oregon: Deacon Rockfish can be found in all marine waters over rocky bottoms off Oregon. Most are found in waters less than about 200 feet deep, but ODFW researchers have observed them at depths of about 233 feet.



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Everywhere Else: Deacon Rockfish range from at least British Columbia to central California. The northern end of their range is not clearly defined at this point. They are more common from northern California up through Oregon and Washington.

LIFE HISTORY AND ECOLOGY

Rockfish don't spawn; spawning refers to the release of sperm and unfertilized eggs into the environment. Rather, all rockfish species mate and have internal fertilization. The specific courtship and mating process for Deacon Rockfish is not known. Deacon Rockfish mature between about 4 to 11 years of age and can live to about 23. Off Oregon females have been found to have fertilized eggs in January and February. The eggs that are fertilized develop and are nourished in the womb. There is no placenta or other structure for transfer of nutrition and research suggests that the nourishment comes from dead embryos and undeveloped eggs that are reabsorbed into the amniotic fluid. In all rockfish species, fully formed larvae are released from the mother's body and live for several months in the water column. Female Deacon Rockfish can give birth once each year. In a study off central Oregon, young of the year juveniles that settled to the bottom at rocky reefs off the coast from early April through mid-July.

Deacon Rockfish are called a semi-pelagic species meaning that the adults and larger juveniles can be found anywhere in the water from the bottom to the surface. They are usually found in schools and sometimes the schools include other species of rockfish. Acoustic tagging studies of Deacon Rockfish off central Oregon indicate that most of the fish tagged occupied a small home range, but that at night they go back down to the bottom and don't appear to move.

It is not surprising the Blue and Deacon Rockfish were not distinguished as separate species for many years given their similarity in outward appearance, the fact that the males are smaller than females in both species, that they mature at similar sizes, and their reproductive timing during the year is similar as well. But genetic studies gave clues that these might be two species and research led by scientists in Oregon finally established that these are indeed two distinct species in 2015. Sampling in Oregon indicates that although both species occur in our waters, that Deacon Rockfish are far more frequently encountered here than Blue Rockfish. Results from earlier studies must now be interpreted knowing that what was previously considered to be a single species of rockfish is actually two different species.

Predators of Deacon Rockfish include marine mammals, sea birds (especially for juveniles), fish and humans. Deacon Rockfish have long been a fishery species caught on recreational bottom fishing trips and even from rocky shorelines. They are also taken by commercial fishermen and primarily sold to the fresh fish market.

DIET AND FORAGING

Deacon Rockfish eat primarily zooplankton. They consume both crustaceans, like copepods, mysid shrimp, and amphipods, as well as gelatinous forms of zooplankton like pteropods, larvaceans, and medusa. As they get larger Deacon Rockfish will also consume fish and squid.



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HABITAT CHARACTERISTICS

Coastal waters usually less than 180 feet deep with rocky bottoms both with and without kelp beds. Deacon Rockfish seem to prefer areas with high relief over areas with flat bottoms.

CONSERVATION AND MANAGEMENT

Threats: Deacon Rockfish that reside in the California Current Ecosystem benefit from the annual seasonal cycle that includes upwelling of cold nutrient rich waters during the spring and summer months, which are critical for ocean productivity. Changes in ocean productivity, whether they are human induced or natural, can affect reproductive success and stock size. Deacon Rockfish may also be vulnerable to overfishing, but the species was discovered after the last productivity and susceptibility analysis was completed so they were not included.

Conservation and management: Deacon Rockfish are included in the federal Pacific Coast Groundfish Fishery Management Plan administered by the Pacific Fishery Management Council (PFMC). Stock assessments for Deacon Rockfish are conducted periodically by PFMC to help manage for sustainable fisheries. The Oregon Department of Fish and Wildlife works in concert PFMC and manages fisheries for Deacon Rockfish within state waters. There is much still unknown about this species and there is an extensive set of research and data needs to improve conservation and management. Some of these needs include fishery independent-surveys in nearshore rocky habitat to provide information on abundance, species specific information because older information contains information from both Blue and Deacon Rockfish, gender specific information about growth and natural mortality, and better information on stock structure.

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