



TIGER ROCKFISH (*Sebastes nigrocinctus*)



Tiger Rockfish are a colorful species. They typically have 5 dark bands that can vary in color from red to purple to brown to almost black, on a pink or white body. They also have two stripes that extend back from their eyes. They have heavy bodies with prominent spines. This colorful species is caught both in the sport and commercial fisheries, although not in great quantities. Tiger Rockfish are highly prized in both fisheries for their appearance. They are among the most valuable rockfish species when sold live. They are similar in appearance to Flag Rockfish and Redbanded Rockfish, but both of those species have only 4 bars rather than 5.

OVERVIEW

- **Oregon Conservation Strategy Species**
- **Size:** Up to 24 inches long
- **Weight:** Up to 7.5 pounds
- **Lifespan:** At least to 116 years
- **Key Strategy Habitats:** Nearshore
- **Similar Species:** Redbanded Rockfish, Flag Rockfish

FISHING TIPS

- Start in the morning.
- Target rocky reef areas.
- Drop your hook to the bottom, and fish near the bottom.
- A variety of lures and flies work well.
- Remember to check the fishing regulations for the area before you go and be sure you have your fishing license and descending device.

FUN FACTS

Favorite Food: Prey that lives at the bottom like crabs, shrimp, and brittle stars.

- The colorful Tiger Rockfish is a popular catch in both recreational and commercial fisheries.
- Genetic studies show that three other species of rockfish with colorful bars, the Redbanded Rockfish, Flag Rockfish and Treefish are closely related to Tiger Rockfish.
- Tiger Rockfish are mostly a solitary species, but groups of them have been seen in Alaskan waters.
- Little is known about the juvenile life history of Tiger Rockfish.

RANGE AND DISTRIBUTION

In Oregon: Tiger Rockfish can be found throughout the state's marine waters.

Everywhere Else: Tiger Rockfish range from the Aleutian Islands in Alaska to central southern California. They are more common and abundant from southeast Alaska to northern California. Adults may live at depths from 30 feet down to almost 1,000 feet, but they are more common at depths greater than 100 feet.



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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, but the process of courtship and mating has been observed for relatively few of the many species and Tiger Rockfish is not one of them. The fertilized eggs develop as embryos inside their mothers. The developing embryos get substantial nourishment that does not come from the egg itself. 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. In Alaskan waters females release their larvae into the water from February through June, with the peak time being April and May. Larval rockfish do not look like adults and are difficult to identify to species. As they develop to the juvenile stage they become easier to identify.

Much of the life history for Tiger Rockfish remains a mystery. Very little is known about the pelagic larval and juvenile stages of this species or even about the settlement of young fish to the bottom. Some pelagic juveniles have been observed with floating vegetation and some recently settled juveniles have been observed in both shallow and deep waters.

There are two other species of rockfish that have dramatic vertical bars both as juveniles and adults: Flag Rockfish and Treefish. These two species are both closely genetically related to Tiger Rockfish, and juveniles have also been seen with drifting vegetation. Juvenile Tiger Rockfish have been collected in work off the Oregon coast with Standard Monitoring Units for the Recruitment of Fishes (SMURFs). These devices made of plastic strips enclosed in a mesh bag are designed to simulate the kelp canopy in nearshore shallow waters. Tiger Rockfish were collected from July through September when the SMURFs were removed from the water. Another life history trait that is unknown is the age or size at which Tiger Rockfish reach maturity. But we do know that they can live to be 116 years old. The long lifespan with an annual reproductive cycle helps to ensure that when the right combination of environmental conditions occur in the highly variable California Current system that a good year class of recruits are produced.

Tiger Rockfish are solitary, although they have been seen in areas with a number of other rockfish species. One study off the Oregon coast found that a Tiger Rockfish stayed in the same small area for a year, but in Alaska Tiger Rockfish move out of shallow waters in the winter months.

Known predators of Tiger Rockfish include marine mammals, fish, and humans. Tiger Rockfish are occasionally caught on recreational bottom fishing trips. They are also taken by commercial fishermen and many are sold live. Live fish prices are considerably higher than for freshly caught fish that are landed dead and the brightly colored Tiger Rockfish are among the most valuable. Live fish are sold in many Asian restaurants in the bigger cities on the west coast.

DIET AND FORAGING

Tiger Rockfish forage mostly on bottom or near bottom prey. They eat a variety of crustaceans including crabs, mysids, amphipods, and shrimps. They will also eat brittle stars.



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HABITAT CHARACTERISTICS

Adult Tiger Rockfish seem to prefer high relief complex bottoms with crevices, cracks, and caves. They are found in coastal waters with rocky bottoms from about 30 to 1000 feet deep, but are more common in water depths of 100 feet or more.

CONSERVATION AND MANAGEMENT

Threats: Tiger 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. Tiger Rockfish are also vulnerable to overfishing based on productivity and susceptibility analysis.

Conservation and management: Tiger Rockfish are included in the federal Pacific Coast Groundfish Fishery Management Plan administered by the Pacific Fishery Management Council (PFMC). The Oregon Department of Fish and Wildlife works in concert PFMC and manages fisheries for Tiger Rockfish within state waters. There has only been one stock assessment done for Tiger Rockfish to date and it is what is considered a “data-poor” assessment. 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 a fishery-independent survey in rocky habitats to get better information on abundance throughout its range, better information on stock structure, and genetic differences at a variety of scales throughout the species range. Very little is known about the pelagic larvae and juveniles or their dispersal.

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