

# Quillback Rockfish

## History of the Fishery

Quillback rockfish (*Sebastes maliger*) are a minor component of the commercial passenger fishing vessel (CPFV) fishery and in general are only observed from the ports of Monterey northward. Only in the Eureka area does this species rank among the 10 most frequently observed benthic sport fishes caught by CPFV anglers. In the Fort Bragg area, quillback rockfish ranked between 13 and 17 among benthic sport fishes caught by CPFV anglers, and their importance in the fishery diminishes with decreasing latitude. A survey of all recreational sport fishing modes from 1981 to 1986 indicated an average annual harvest of approximately 9,000 fish.

Commercial landings of the "quillback rockfish" market category are significant only from the San Francisco area northward. However, historical landings are difficult to determine because of the low frequency of quillback rockfish and confused identification with other similar species. Statewide landings in this market category in 1999 comprised less than 0.3 percent of all rockfishes. Since 1992, this market category has not been used every year and when used, may have consisted of several different species.

## Status of Biological Knowledge

The quillback rockfish was first described by Jordan and Gilbert in 1880. Also referred to as orange-spotted, yellow-back, or stickleback rockfish, it is part of central and northern California's nearshore benthic assemblage.

Quillback rockfish are relatively small, and are of "stout" morphology; a characteristic common among nearshore *Sebastes* found in close association with the bottom. They are usually orange-brown to black in color with a yellow or orange pale area between the eye and pectoral fin. This pale area is also present as a saddle on the first few dorsal spines and as speckling on the mid-dorsal surface. A characteristic that helps distinguish this species from similar species is its long dorsal spines and deeply notched forward dorsal fin membranes. Copper rockfish and other nearshore shallow dwelling rockfish also have deeply notched first dorsals but not so much as quillback.

Quillback rockfish are known from the Gulf of Alaska to Anacapa Passage in southern California, and are considered common between southeast Alaska and northern California. They are found from near the surface to a depth of 900 feet and can be common at depths of several hundred feet.

Like other *Sebastes* of shallow, benthic habit, individual quillback rockfish are not known to range far. Tagging studies in central California and Washington have shown

quillback to be residential (no movement) or to show movement of less than six miles. They have also demonstrated homing ability and day-night movement patterns.

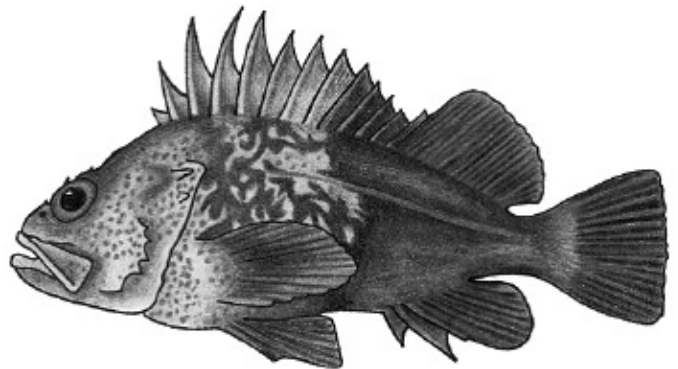
In California, quillback rockfish have been aged to 15 years, but are known to live longer, as they have been aged to 76 years in Canada. Quillback can grow to 24 inches, and growth rates differ along its range. In California, size for a 12-year-old quillback is approximately 7.1 inches. Size at first maturity for males is 8.7 inches (four years), and for females is 10.2 inches (six years). In California, size at 50 percent maturity for males and females was found to be the same as for first maturity.

As with all *Sebastes*, quillback have internal fertilization and produce live young. In California, mating takes place in the late winter and early spring, with birth occurring from April through July. After roughly one to two months in the plankton (0.7 to 2.8 inches), they begin to settle near shore.

As planktonic larvae and after they settle, quillback rockfish feed on other planktonic animals and eggs. As adults they feed on a variety of prey such as crustaceans, especially shrimps; small fish, including rockfishes and flatfishes; clams; marine worms; and fish eggs.

Quillback rockfish larvae are subject to predation by jellyfish and arrow worms. As juveniles, they are preyed upon by fishes, including larger rockfishes, lingcod, cabezon and salmon. Various marine birds and pinnipeds eat juvenile quillback as well. Adults are also subject to predation by larger fishes including some sharks, as well as sea lions, seals, and possibly, river otters.

Juveniles inhabit very nearshore bottom areas and are found over both low and high rocky substrate. They are sometimes found among sponges and algae that provide shelter. Adults are most often found in deeper water and are solitary reef-dwellers living in close association with the bottom. They are often seen perched on rocks or taking shelter in crevices and holes. Adults have also been noted to retreat to eelgrass beds at night. Quillback



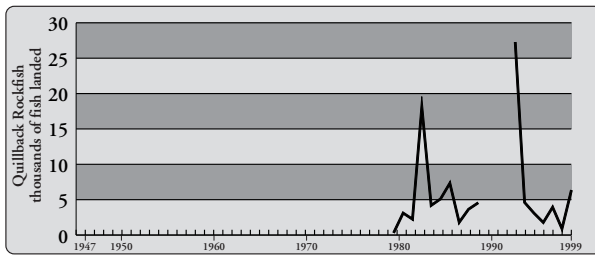
Quillback Rockfish, *Sebastes maliger*  
Credit: L. Sinclair  
Miller and Lea

are also associated with the rock-sand interface, but are rarely seen in the open away from suitable cover.

### Status of the Population

While no stock assessment has been done for quillback rockfish in California, length-frequency data exist on their occurrence in the recreational fishery in northern and central California, as well as in the commercial fishery from the same region. Between the late 1980s and mid-1990s, quillback rockfish experienced increased take by the commercial fishery as the market demand for premium, live fish increased, yet no significant trend was noted in the average size of fish. Fishing pressure has relaxed somewhat in recent years because of restrictions placed on the fishery. Concern over sustainability of the commercial and recreational nearshore fishery has made this species of particular interest to managers.

David A. Osorio and Richard Klingbeil  
California Department of Fish and Game



Recreational Catch 1947-1999, Quillback Rockfish

Data Source: RecFin data base for all gear types; data not available for 1990-1992

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