

# Blackgill Rockfish

## History of the Fishery

Until the 1970s, the relative abundance of shallow-water rockfishes precluded substantial commercial exploitation of blackgill rockfish (*Sebastes melanostomus*). Beginning in the mid-1970s, a fishery developed in deep waters off southern California and spread northward. Most blackgills are taken in central and southern California. The fishery was first conducted with vertical longlines and then with longlines and gill nets. Currently, most blackgills in southern California are taken with horizontal setlines, while trawls take the majority of fish further north. Statewide landings increased dramatically, peaking in 1983, then declined to about one-third in the late 1990s. From a recent stock analysis, it appears that the blackgill population has been substantially reduced on particular reefs. Blackgills are a very important rockfish species in the Asian fish markets of southern California. In 1998, the California commercial catch of about 336,000 pounds was worth \$231,000. In recent years, as the rockfish recreational fishery moved to deep banks, blackgills have become an occasional catch in southern California.

## Status of Biological Knowledge

This is a spiny and heavy-bodied species. Juveniles are reddish with distinct brown saddles and a dark blotch on the gill cover. Adults are dark red or dark pink with or without dark saddles and have a black edge on the rear of the gill cover. Blackgills reach two feet in length.

Blackgills are found from at least central Vancouver Island (British Columbia), and perhaps to northern Vancouver Island, to Isla Cedros, (central Baja California). Pelagic juveniles have been taken as far south as Punta Abreojos (southern Baja California), strongly implying that adults live in southern Baja California. Blackgills are relatively uncommon from Oregon northward. It appears that some records from north of Washington probably refer to rough-eye and shorttraker rockfishes. Adults are found in 288 to

2,520 feet, usually deeper than 660 feet, and are most abundant from 825 to 1,980 feet. Juveniles live in the shallower part of the depth range.

Pelagic juveniles settle out of the plankton at a minimum of about one inch long, generally in waters greater than about 660 feet. Small immature individuals are taken in bottom trawls on flat substrates, but seldom over rocks. They are also found on shell mounds of some deeper-water oil platforms. Adults live on deep high relief rock outcrops in areas with extensive caves and crevices. Although they are often seen hiding in crevices or closely associated with rocky substrates, fishermen have reported taken them in midwater above reefs.

Blackgills live to at least 87 years, although the largest specimens have not been aged. However, no age validation has been done on this species. Females reach a larger size and probably live longer. By the middle of their life span, females tend to be larger at any given age. Males reach maximum lengths earlier than females. Off northern and central California, males appear to mature at a smaller length than females; this is not the case off southern California. Based on two California studies, the smallest mature fish are 12 inches, 50 percent are mature at 14 inches and all are mature at 16 inches. Off Oregon, 50 percent maturity for males is 15 inches and for females is 16 inches. Blackgills appear to mature at a very late age. One percent of females is mature at about 13 years, 50 percent at 20 years, and 99 percent at about 26 years. Similarly, one percent of males is mature at about 13 years, 50 percent at about 19 years, and 95 percent at about 24 years. Off southern California, females release larvae from January to June, off northern and central California from February to April (both with February peaks) and off Oregon in April. Females produce between about 152,000 and 769,000 eggs per season in one brood. Blackgills feed primarily on fishes, including lanternfishes.

## Status of the Population

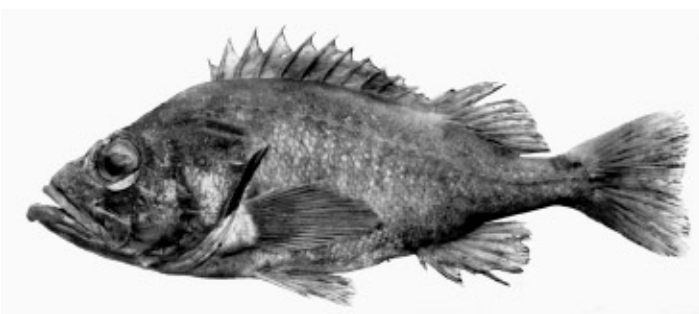
The first stock assessment of this species, completed in 1998, estimated that the current fishable/mature biomass was at between 40 and 54 percent of the virgin level.

**Milton Love**

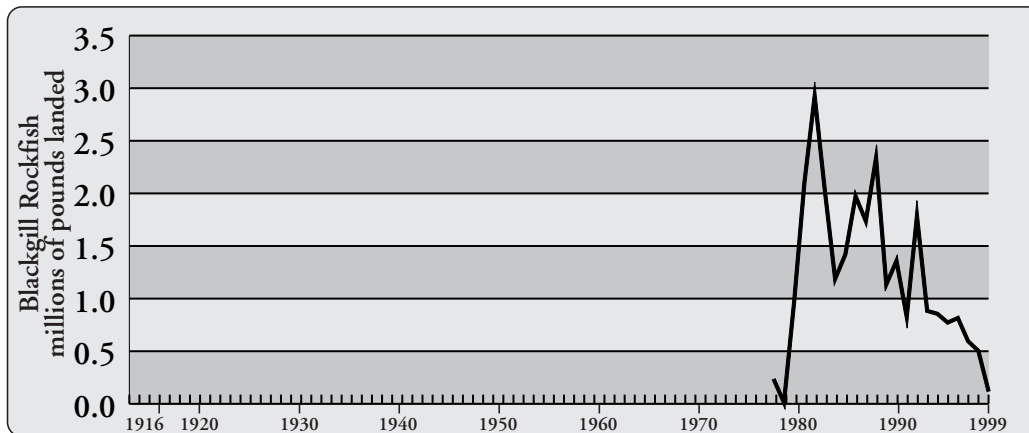
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Blackgill Rockfish, *Sebastes melanostomus*  
Credit: DFG



**Commercial Landings  
1916-1999,  
Blackgill Rockfish**

Data Source: CalCom, a cooperative survey with input from Pacific Fisheries Information Network (PacFin), National Marine Fishery Service (NMFS), and California Department of Fish and Game (DFG). Data are derived from DFG commercial landing receipts with expansions based on port samples collected by PacFin samplers. Expansion data not available for years prior to 1978.

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