Bank Rockfish

History of the Fishery

ost bank rockfish (Sebastes rufus) are taken commer $oldsymbol{\mathsf{N}}$ cially by trawls, although gill nets were also important early in the fishery. Most of the catch occurs off California, although substantial landings are occasionally made off southern Oregon. Until the 1980s, bank rockfish were a relatively minor part of the commercial catch. However, as fishing effort off California expanded into deeper waters, landings of this species sharply increased. From 1981 to 1992, banks ranked among the top 10 rockfish species taken in California, averaging 1,115 tons annually, and ranked among the top three rockfish species landed at Monterey and Morro Bay. In general, catches after 1992, though variable, have remained somewhat steady. Since the 1970s, there has been a decrease in both age and length of individuals in the fishery. In 1998, about 450,000 pounds of bank rockfish were caught in the California commercial fishery; these were valued at about \$207,000.

While bank rockfish are rarely caught in the recreational fishery north of Pt. Conception, California, they are a frequent catch of recreational anglers in deep waters off southern California.

Status of Biological Knowledge

Bank rockfish are oval-shaped fish with small head spines. They are dusky red or red-brown, often with a clear pinkish-orange zone along the lateral line and black spotting on the body and spinous portion of the dorsal fin. However, some individuals may not have spots. This species reaches a maximum length of 21.7 inches.

Bank rockfish are found from Queen Charlotte Sound, British Columbia to central Baja California and Isla Guadalupe (off central Baja California). They are abundant from the southern Oregon-northern California area to at least southern California. They live in depths between 100 and 1,500 feet, but most commonly between 300 and 800 feet.



Bank Rockfish, Sebastes rufus Credit: DFG

Juveniles and sub-adults tend to be found in shallower waters than adults are.

Demersal juveniles and adults often are found over high relief boulder fields or steep cliff faces with plenty of crevices and caves. They also are found over cobblestones or on mixed mud-rock bottoms, where they shelter near or beneath the hard substrate. Small numbers have been observed around the bottom of deeper offshore oil platforms. Banks usually are found either alone or in small groups of up to 30 individuals, often hiding in, or very close to, sheltering sites. It is also possible that this species previously formed large schools before it was subjected to intense fishing pressure. In southern California, banks are often found with blackgill rockfish.

Bank rockfish live to at least 53 years. They are among the slowest growing of the rockfishes. Females grow larger than males and, at least among older fish, appear to be larger at a given age. Males reach maximum length at a slightly faster rate than females and mature at a smaller size than females. A few males are mature at 11 inches and 10 years, and all are mature at 14.8 inches and 20 years. Off California, banks release larvae from December to May (peaking in January and February) and from January to April off Oregon. Individual females produce between about 65,000 and 608,000 eggs. Off southern California, females release larvae in several batches per season, although this is not the case further north. Little is known of their food habits, although krill and gelatinous zooplankton have been found in their stomachs.

Status of the Population

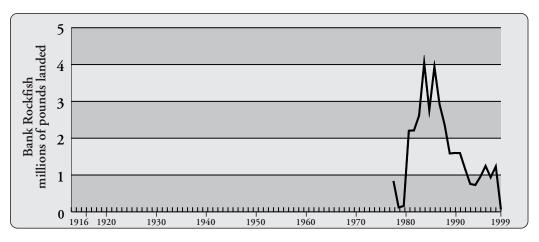
n 2000, a partial stock assessment was made on bank rockfish. This assessment implied that there has been a substantial decrease in the bank rockfish population, particularly in the 1990s.

Milton Love

University of California, Santa Barbara

Diana Watters

California Department of Fish and Game



Commercial Landings 1916-1999, Bank 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.

References

Barss, W. H. 1989. Maturity and reproductive cycle for 35 species from the family Scorpaenidae found off Oregon. Ore. Dep. Fish Wildl., Inf. Rep. 89-7.

Love, M. S., P. Morris, M. McCrae and R. Collins. 1990. Life history aspects of 19 rockfish species (Scorpaenidae: *Sebastes*) from the southern California bight. NOAA Tech. Rep. NMFS 87.

Pearson, D. E. 2000. Data availability, landings, and length trend of California's rockfish. NMFS, SWFSC Adm. Rep. SC-00-01.

Watters, D. 1993. Age determination and confirmation from otoliths of the bank rockfish, *Sebastes rufus* (Scorpaenidae). M.S. thesis, San Jose State Univ.

Wyllie Echeverria, T. 1987. Thirty-four species of California rockfishes: maturity and seasonality of reproduction. Fish. Bull. 85:229-250.