

Olive Rockfish

History of the Fishery

Olive rockfish (*Sebastes serranoides*) form a minor part of the commercial fishery in central and southern California, where they are primarily taken by hook-and-line. A relatively small number find their way into the live fish fishery. Historically, olive rockfish have been common in the recreational fishery as far north as Fort Bragg and were particularly important from central California to the northern Channel Islands. As late as the 1980s, olives were a very important recreational species throughout much of southern California. However, a combination of overfishing and poor juvenile survival brought about by changes in oceanographic conditions led to a steep decline (83 percent) in southern California party vessel catches between 1980 and 1996. In addition, while they were still commonly taken in the central California recreational catch, olive rockfish also declined there in the late 1990s.

Status of Biological Knowledge

Olive rockfish are streamlined fish with almost no head spines. Their body color is dark brown or dark green-brown on the back and light browns or green-brown on sides. There are a series of light blotches on the back. The fins range from olive to bright yellow, and olives are often mistaken for yellowtail rockfish. Olive rockfish are somewhat drabber in appearance, and yellowtail rockfish have red-brown flecking on the scales. They reach a maximum length of two feet.

Olive rockfish occur from southern Oregon to Islas San Benitos (central Baja California) from barely subtidal waters to 570 feet (the latter based on a trawl specimen collected by the Southern California Coastal Water Research Project). They are common from about Cape Mendocino to Santa Barbara and around the Northern Channel Islands from surface waters to about 396 feet. Olives appear to be uncommon off much of both southern California and Baja California.



Olive Rockfish, *Sebastes serranoides*
Credit: DFG

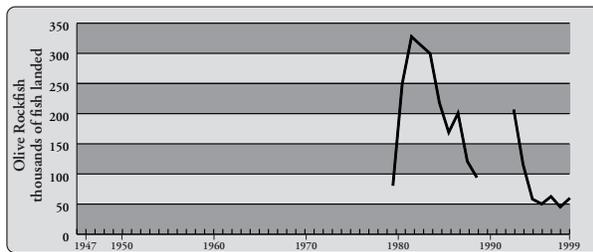
From April to September, young-of-the-year olive rockfish, around 1.2 to 1.6 inches long, settle out of the plankton to kelp beds, oil platforms, surfgrass and other structures at depths as shallow as 10 feet. During the day, young fish aggregate in the water column, occasionally with blue and black rockfish. They spend the night near or on the bottom, sheltering under algae or among rocks. Young olives also are found under drifting kelp mats. Olives about 2.5 inches long become more active at night, but it is not clear whether adult olives are nocturnal. They do feed commonly on octopuses, which are more available at night. Sub-adult and adult olives live over high relief reefs, as well as around the midwaters of oil platforms. In shallow waters, they are found throughout the water column and occasionally rest on the bottom. They form small to moderate-sized schools and a few often are mixed with blue rockfish schools. From tagging studies, most olive rockfish move relatively little; a maximum movement of 20 miles has been reported.

Olive rockfish live at least 25 years. Females grow larger, and, beginning at maturation, tend to be longer at a given age. Males reach maximum length earlier. Throughout California, males mature at a somewhat smaller size and a slightly greater age than females, however the difference is not large. Off central California, a few fish were mature at 10.6 to 11.2 inches (three years), 50 percent were mature at 12.9 to 13.7 inches (five years), and all were mature by 15.2 inches (eight years). Females release larvae once a year from December through March, peaking in January. Females produce between 30,000 to 490,000 eggs per season. Small juveniles are planktivorous, feeding on copepods, gammarid amphipods, cladocerans, euphausiids, other crustaceans and fish larvae. As they grow, their diet shifts to fishes, such as juvenile rockfishes, squids, octopuses, isopods, polychaete worms and krill.

Status of the Population

There has been no stock assessment of this species. However, there is clear evidence that olive rockfish have declined in abundance south of Pt. Conception.

Milton Love
University of California, Santa Barbara



Recreational Catch 1947-1999, Olive Rockfish

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

References

- Lea, R. N., R. D. McAllister and D. A. Ventresca. 1999. Biological aspects of nearshore rockfishes of the genus *Sebastes* from central California. Calif. Dep. Fish Game, Fish Bull. 177.
- Love, M. S. 1980. Isolation of olive rockfish, *Sebastes serranoides*, populations off southern California. Fish. Bull. U.S. 77:975-983.
- Love, M. S., J. E. Caselle and K. Herbinson. 1998. Declines in nearshore rockfish recruitment and populations in the southern California Bight as measured by impingement rates in coastal electrical generating stations. Fish. Bull. 96:492-501.
- Love, M. S., J. E. Caselle and W. V. Buskirk. 1998. A severe decline in the commercial passenger fishing vessel rockfish (*Sebastes* spp.) catch in the southern California Bight, 1980-1996. Fish. Bull. 39:180-195.
- Love, M. S. and W. V. Westphal. 1981. Growth, reproduction, and food habits of olive rockfish, *Sebastes serranoides*, off central California. Fish. Bull. U.S. 79:533-545.
- Pearson, D. E. 2000. Data availability, landings, and length trends of California's rockfish. NMFS Adm. Rep. SC-00-01.