

Calico Rockfish

History of the Fishery

Calico rockfish (*Sebastes dalli*) are taken in the southern and central California sport fisheries for nearshore rockfishes. During the 1980s, the estimated annual calico rockfish sport catch averaged 8,900 fish with a high of 21,000 fish taken in 1985. An onboard study of the southern California commercial passenger fishing vessel (CPFV) or partyboat fishery from 1985 through 1987, ranked calico rockfish among the top 20 species taken during two of the three years surveyed. The same study also showed that CPFV anglers discarded large numbers of calico rockfish at sea each year in a practice commonly known as "high grading." In high grading, only the largest fish were retained by anglers as part of their bag limits, and the smaller fish were selectively discarded. For calico rockfish, the estimated number of discards on CPFVs exceeded the number of calico rockfish that were kept by anglers each year. This illegal practice has been widespread at times in the past and has been difficult to curtail. A more recent estimate of annual California sport catches of calico rockfish averaged 5,700 fish per year between 1993 and 1999, with a high of 8,000 calico rockfish caught in 1995 and in 1998.

Calico rockfish comprise a very minor portion of the state's commercial catch. Their small size and scattered distribution probably preclude them from being targeted. Calico rockfish, however, may be one of several small rockfish species, including squarespot, honeycomb, halfbanded and starry rockfishes, that are caught and subsequently discarded at sea as an unmarketable bycatch in nearshore hook-and-line, trap, or trawl fisheries. The quantity of calico rockfish bycatch in these fisheries is currently undetermined.

Status of Biological Knowledge

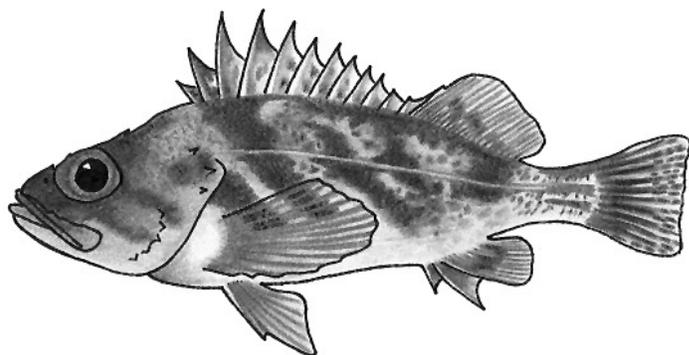
Calico rockfish range from Sebastian Viscaïno Bay, Baja California to San Francisco within a depth range of 60 to 840 feet. They are small, colorful rockfish that inhabit nearshore areas of southern and central California. Calico rockfish are distinguished by having a greenish yellow background color overlaid with dark-brown oblique bars on the side, and a black spot on the edge of the gill cover. Juvenile calico rockfish are found in areas of soft sand-silt sediment, and on artificial reefs. Adults inhabit rocky shelf areas where there is a mud-rock or sand-mud interface with fine sediments. They are usually associated with structures that provide vertical relief and sheltered habitat, including artificial reefs. The main diet of calico rockfish is pelagic crustaceans, including calanoid copepods. They are preyed upon by larger rockfish species, lingcod, cabezon, and salmon. Sea birds, sharks, and dol-

phins have also been known to feed on juvenile and adult calico rockfish.

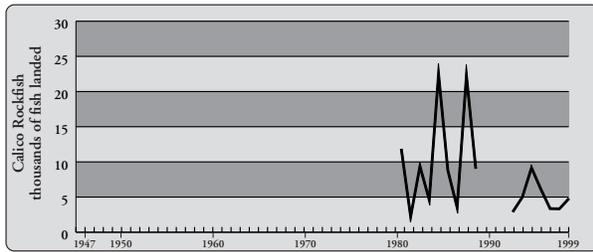
Calico rockfish up to 10 inches long and 1.25 pounds in weight have been measured. They have been aged to between 11 and 12 years. Male calico rockfish first become sexually mature at age seven and females reach sexual maturity at age nine. Spawning occurs in southern California between January and May, with peak spawning activity occurring in February. Fertilized eggs are present in November and December. The range of fecundity observed for calico rockfish was 1,700 to 18,000 eggs per female. The pelagic larval stage lasts from one to two months, and the post-larvae then settle out of the plankton between 0.08 and 0.1 inches in length.

Status of the Population

There are currently no estimates of abundance for calico rockfish in California. There were more calico rockfish landed annually by sport anglers in the 1980s than in the 1990s, which may have been a reflection of the abundance of that species during two strong El Niño events that occurred in the 1980s. Whether the reduced calico rockfish catch during the 1990s was a result of changing oceanic conditions or was due to actual depletion of calico rockfish stocks by sport and commercial fisheries is not known. Because of the relatively small size of adult calico rockfish, they are not usually targeted by either sport or commercial fishermen but are caught incidentally when other finfish species are targeted. Calico rockfish appear as bycatch in prawn trawls and other nearshore fisheries in southern California and are caught by sport anglers on CPFVs and private boats when they are fishing for other, larger benthic species.



Calico Rockfish, *Sebastes dalli*
Credit: L. Sinclair, Miller and Lea



Recreational Catch 1947-1999, Calico Rockfish

Data Source: RecFin data base for all gear types; data not available for 1980 & 1990-1992

Management Considerations

See the Management Considerations Appendix A for further information.

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