

White Croaker

History of the Fishery

Although not a highly prized species, the white croaker (*Genyonemus lineatus*) has been an important constituent of commercial and sport fisheries in California. Before 1980, most of the catch was in southern California. However, since 1980, the majority of the catch has been in central California. The changes in fishing methodology and area of greatest landings since 1980 are due primarily to the entrance of Southeast Asian refugees (mainly Vietnamese) into this fishery. Many of these refugees who settled in California's coastal areas were gillnet fishermen in their homelands and sought to earn their living here by that method of fishing. The underutilized white croaker resource (especially in central California) and moderate start-up costs required for gillnetting (small to medium-size boats and moderate gear costs) offered many of them an opportunity to enter the commercial fishing business. In contrast, most of the sport catch is in southern California. Anglers fishing from piers, breakwaters, and private boats account for about 90 percent of the catch.

Prior to 1980, white croaker landings averaged 658,000 pounds annually and exceeded one million pounds in several years. Peak landings in 1952 (88 percent in southern California) were probably in response to the total collapse of the sardine fishery that year. From 1980 through 1991, total landings have averaged 1.1 million pounds and were above one million pounds in all but four years. Since 1991, landings have averaged 461,000 pounds and have steadily declined to an all time low of 142,500 pounds in 1998.

Before 1980, the commercial catch of white croakers was primarily by round haul net (mainly lampara), although some were taken by trawl, gillnet, and hook-and-line. After 1980, most white croakers have been taken by gillnet and hook-and-line. Most of the commercial catch is sold in the fresh fish market, although a small amount is used for live bait. "Kingfish" is the most common name seen in markets. Also, small quantities of another croaker, the queenfish, are included in the commercial landing records, mostly for southern California.

Landings of white croaker by recreational anglers aboard commercial passenger fishing vessels, were highest in the

late 1940s and early 1950s, averaging about 70,000 fish per year. Since 1954, however, they have averaged well below 30,000 fish per year, with one exceptional peak in 1988 of about 120,000 fish. Landings from 1990 through 1998 have averaged about 12,000 fish per year, with approximately 96 percent of the landings from southern California.

Status of Biological Knowledge

White croaker is one of eight species of drums, from the family Sciaenidae, recorded off of California. *Genyonemus* is a combination of two Greek words, *genys*, meaning lower jaw, and *nemus*, meaning barbell. The species name *lineatus* is a Latin word meaning striped. White croaker are often sold in fish markets under the name kingfish, and they are often called tomcod, tommy, roncador, or ronkie by sportfishermen.

White croakers have subfusiform compressed bodies, inferior mouths with a subterminal lower jaw, falcate pectoral fins, thoracic pelvic fins, and a truncate caudal fin. They are typically silvery to brassy colored, with a small, but prominent black spot at the base of each pectoral fin and a cluster of minute barbells on the membranes underneath the lower jaw.

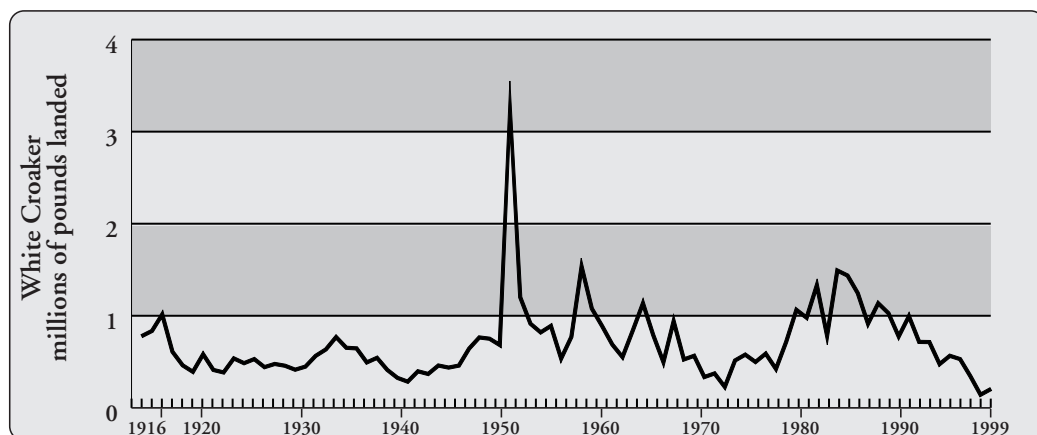
The white croaker is an abundant, nearshore species in California, usually found over soft, sandy-mud substrata. They range from Vancouver Island, British Columbia to Magdalena Bay, Baja California, but are not abundant north of Point Reyes, California. They usually swim in schools, and are found from the surf zone to depths as great as 780 feet and in shallow bays, sloughs, and lagoons. Most of the time, they occupy nearshore areas at depths of 10 to 100 feet, but sometimes are fairly abundant to a depth of 300 feet.

The maximum recorded length for white croaker is 16.3 inches; however, fish larger than about 12 inches rarely occur. Fish up to four pounds have been reported, but those weighing over two pounds are extremely rare. White croakers live to about 15 years and over 50 percent of both sexes are sexually mature by one year (about 5 1/2 inches for males, six inches for females). By three or four years and 7.5 inches, all white croakers are mature.

In southern California, white croakers spawn mainly from November through April, with peak months being January through March. In central California, they spawn all year and may have winter and summer spawning peaks (ovary weights were found to be highest in January and September and lowest in May). Females may spawn about once every five days and about 18 to 24 times each season, depending upon their size and age. Batches of eggs range from an estimated 800 eggs in a six-inch female to 37,200 in a 10-inch female. The fertilized eggs are pelagic and



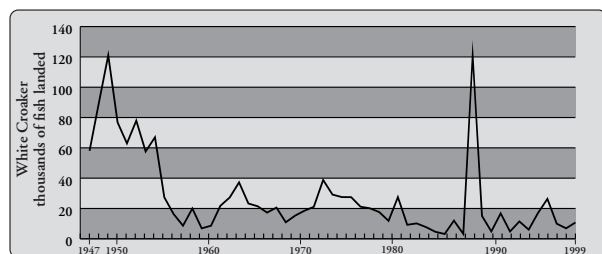
White Croaker, *Genyonemus lineatus*
Credit: DFG



**Commercial Landings
1916-1999, White Croaker**
Data Source: DFG Catch
Bulletins and commercial
landing receipts.

occur in depth ranges from about 25 to 120 feet. The larvae initially are pelagic and most abundant in ocean depth ranges from about 50 to 75 feet. As the larvae grow, they descend toward the bottom and migrate towards shore. Juveniles occur near the bottom where ocean depth is about 10 to 20 feet. As they mature, they migrate to somewhat deeper water.

White croaker are omnivores, their diet including a variety of worms, shrimps, crabs, squid, octopuses, clams, small fishes, and other items, living or dead. They feed primarily at night and on the bottom, although some midwater feeding occurs during the day. They are preyed upon by seals, sea lions, halibut, giant sea bass, bluefin tuna, and other fishes.



Recreational Catch 1947-1999, White Croaker

CPFV = commercial passenger fishing vessel (party boat); Recreational catch as reported by CPFV logbooks, logbooks not reported prior to 1947.

White croakers that live near marine waste discharges may concentrate toxic materials such as pesticides (DDT, DDE, etc.), polychlorinated biphenyls (PCB's), metals (zinc, selenium, mercury, etc.), and petroleum products in their bodies at levels that are considered hazardous for human consumption. Some white croakers in these areas are diseased and malformed and some show reproductive impairment. Current health guidelines advise against human consumption of white croakers from southern California waters in Santa Monica Bay, off the Palos Verdes Peninsula, and the Los Angeles-Long Beach Harbor area.

Status of the Population

The size of the white croaker population is not known. Although previous catch data indicated that the overall population was healthy and sustaining itself under fishing pressure, recent declines in commercial catches imply that future monitoring may be needed.

Management Considerations

See the Management Considerations Appendix A for further information.

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