Opaleye and Halfmoon

History of the Fishery

The commercial catch of opaleye (*Girella nigricans*) and halfmoon (*Medialuna californiensis*) has been small. Neither of these species is part of a designated fishery but both appear regularly as incidental catch in commercial and recreational fisheries.

During the 40 years prior to 1990, the average catch of halfmoon has been 16,714 pounds, with a high of 50,007 in 1956. Recently, catches have been well below this mean, with a peak in 1989 of 5,204 pounds. The mean catch of opaleye in the 43 recorded years prior to 1990 was 4,748 pounds with a high of 23,688 pounds in 1973. The mean catch for the last 10 years is 2,709, with very small catches recorded since 1995. Interestingly, a small number of halfmoon and opaleye are entering the live fish market. The 1999 landings of opaleye were largely live fish (616 pounds) and the price for the catch is now up to $1.37 per pound. Neither species was recorded in large numbers in the California Department of Fish and Game's gill and trammel net study, although the opaleye was at one time a bycatch of nearshore purse seiners.

CPFV landings of opaleye are low, averaging 679 fish per year since 1990. By contrast, CPFV catches of halfmoon have averaged over 50,000 fish per year. 1998 was an extremely poor year for catches of these species, yielding only eight percent and 16 percent of the average catch of opaleye and halfmoon respectively. In the last reported survey of pier and jetty fishing (1965-1966), both species were abundant and it is likely they remain an important part of that fishery today.

Status of Biological Knowledge

As herbivores, the members of the sea chub family, Kyphosidae, play an important role in kelp forest communities. They regulate kelp growth, and on occasion may overgraze, causing damage to newly transplanted or isolated kelp plants or small kelp beds. The opaleye reaches a length of 26 inches and a weight of 16 pounds, while the halfmoon reaches 19 inches and 5 pounds. Kyphosids have small mouths with a single prominent row of blade-like, incisor teeth that are used for cutting vegetation. The opaleye is olive green with two light spots under the mid-dorsal. The halfmoon is blue to blue-gray, sometimes with a lateral white stripe, and the spinous dorsal fin is much lower than the soft dorsal. Both species range from central California to Baja California. While the opaleye is more common north of Point Conception, the halfmoon extends its range to the south into the Gulf of California. Both reach a depth of a little over 100 feet.

Larvae of both species are pelagic and are followed by a pelagic juvenile schooling stage, which appears in the nearshore environment. Larval distributions mirror the adults latitudinally, with the larval stages distributed primarily in the neuston. CalCOFI data indicate that halfmoon larvae are occasionally taken well off shore, while most opaleye larvae are taken within 70 miles of the coast. Young opaleye leave the pelagic environment and enter the intertidal when they are about an inch long. They are found in relatively high tide pools preferring warm water (>75° F), and feed largely on small invertebrates. As they grow to a size of three to six inches, the young leave the pools and form small schools in the shallow subtidal, eventually changing their diet to include primarily algae. Adults browse in the kelp bed on kelp and other algae, often moving in medium sized schools. Young halfmoon stay in the shallow subtidal and kelp bed habitat occupying the same position as the adults. Juvenile opaleye have been reported to clean parasites from other fish on occasion.

Status of the Population

The abundance of opaleye and halfmoon, and their status as incidental catch rather than as targeted species, makes it unlikely that either the sport or commercial fisheries will have an effect on the populations. Data gathered in southern California since 1974 at Palos Verdes and King Harbor show no population trends and suggest both species are stable with regular recruitment.

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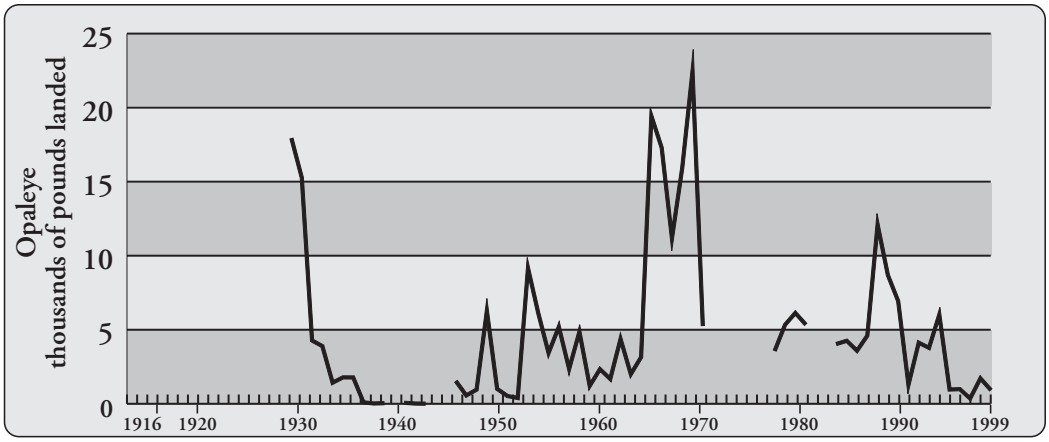
Opaleye, *Girella nigricans*
Credit: DFG



Commercial Landings 1916-1999, Opaleye
Landings data unavailable prior to 1930 and for 1941, 1945-1946, 1972, 176-1977, and 1982-1983. Data Source: DFG Catch Bulletins and commercial landing receipts.

References

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