

California Scorpionfish

History of the Fishery

The California scorpionfish (*Scorpaena guttata*) is a valuable commercial fish in southern California. For many years, the fishery experienced a long decline, with peak catches of 223,000 pounds in 1925 and fluctuating catches thereafter. However, the rise of the live fish fishery in the 1990s led to the fishery's resurgence, as this species' bright red color and hardness after capture has made it a favorite target. Today, about 85 percent of the commercial California scorpionfish catch goes to the live fish fishery. Catches in 1998 totaled about 75,000 pounds valued at \$175,000. Most fish are taken in traps or by hook-and-line.

California scorpionfish are a moderately important part of the sport fishery in southern California. They are taken primarily from party boats and private vessels, and occasionally from piers and jetties, mostly from Point Mugu southward.

Status of Biological Knowledge

California scorpionfish are easily distinguished from most other California fishes. They are a relatively heavy-bodied species, with strong head and fin spines, ranging in color from red to brown, often with purple blotches and always covered with dark spots. They reach a length of 17 inches.

California scorpionfish live from tide-pool depths to about 600 feet (usually in about 20-450 feet) from Santa Cruz to southern Baja California, and in the northern part of the Gulf of California. Preferring warmer water, the species is common as far north as Santa Barbara. While they are most abundant on hard bottom (such as rocky reefs, sewer pipes and wrecks), they are also found on sand.

California scorpionfish grow to 17 inches and some live at least 21 years. After four years of age, females grow faster than males and reach a larger size. Although a few

fish mature at six inches (one year), over 50 percent are mature by seven inches (two years) and all reproduce by nine inches (four years). Spawning occurs from April to August, peaking in June and July. Scorpionfish are oviparous, have external fertilization, and females produce eggs imbedded in the gelatinous walls of hollow, pear-shaped "egg-balloons." These paired structures, each five to 10 inches long, are joined at their small ends. The walls of these "balloons" are about 0.1 inch thick, transparent or greenish in color, and contain a single layer of eggs. Each egg is about .05 inch in diameter. The egg masses float near the surface and the eggs hatch within five days. Very young fish live in shallow water, hidden away in habitats with dense algae and bottom-encrusting organisms. Small crabs are probably the most important food of California scorpionfish, although other items, such as small fishes, octopuses, shrimps and even pebbles are sometimes eaten. These animals are primarily nocturnal and feed at night. Octopuses prey on small individuals. California scorpionfish make extensive spawning migrations in late spring and early summer, when most adults move to 12 to 360 foot depths, forming large spawning aggregations on or near the bottom. During spawning, these aggregations rise up off the bottom, sometimes approaching the surface. Spawning occurs in the same areas year after year, and it is likely that the same fish return repeatedly to the same spawning ground. When spawning ends, the aggregations disperse and many (though not all) of the fish move into shallower waters.

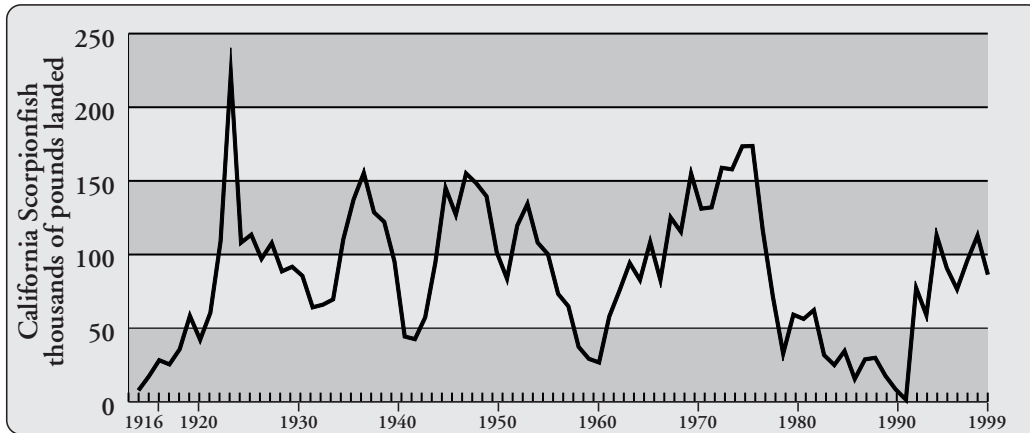
The sharp spines on the dorsal, anal and pelvic fins are poisonous. The toxin is produced in glands that lie at the base of each spine and run up to the tip through a groove. A wound, although painful, is seldom fatal, and bathing the wound in hot water can reduce the pain. The heat alters the toxin's structure making it harmless. One should be careful not to make the water so hot as to damage tissue.

Status of the Population

No population estimates exist for California scorpionfish. However, data from trawl studies conducted by the Los Angeles County Sanitation Districts, Southern California Coastal Water Research Project and the Orange County Sanitation District from 1974-1993 show that there are substantial short-term fluctuations in California scorpionfish abundance within the Southern California Bight.



California Scorpionfish, *Scorpaena guttata*
Credit: DFG



Commercial Landings 1916-1999, California Scorpionfish
Data Source: DFG Catch Bulletins and commercial landing receipts.

Management Considerations

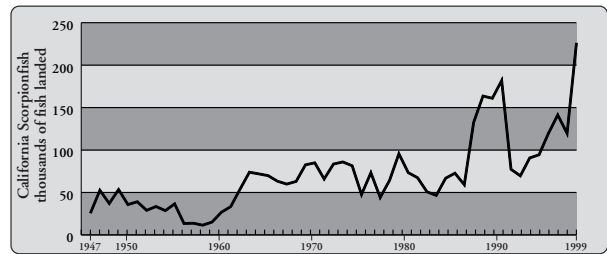
See the Management Considerations Appendix A for further information.

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References

Love, M. S., B. Axell, P. Morris, R. Collins and A. Brooks. 1987. Life history and fishery of the California scorpionfish, *Scorpaena guttata*, within the southern California Bight. Fish. Bull. US 85(1):99-116.

Stull, J. K. and C.-L. Tang. 1996. Demersal fish trawls off Palos Verdes, southern California, 1973-1993. Calif. Coop. Oceanic Res. Rep. 37:211-240.



Recreational Catch 1947-1999, California Scorpionfish
CPFV = commercial passenger fishing vessel (Party Boat); Recreational catch as reported by CPFV logbooks, logbooks not reported prior to 1947.