

STATE OF CALIFORNIA  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF FISH AND GAME  
BUREAU OF MARINE FISHERIES

FISH BULLETIN NO. 74

**The Commercial Fish Catch of California for the Year  
1947 With an Historical Review 1916-1947**

*By the Staff of the*  
BUREAU OF MARINE FISHERIES



1949

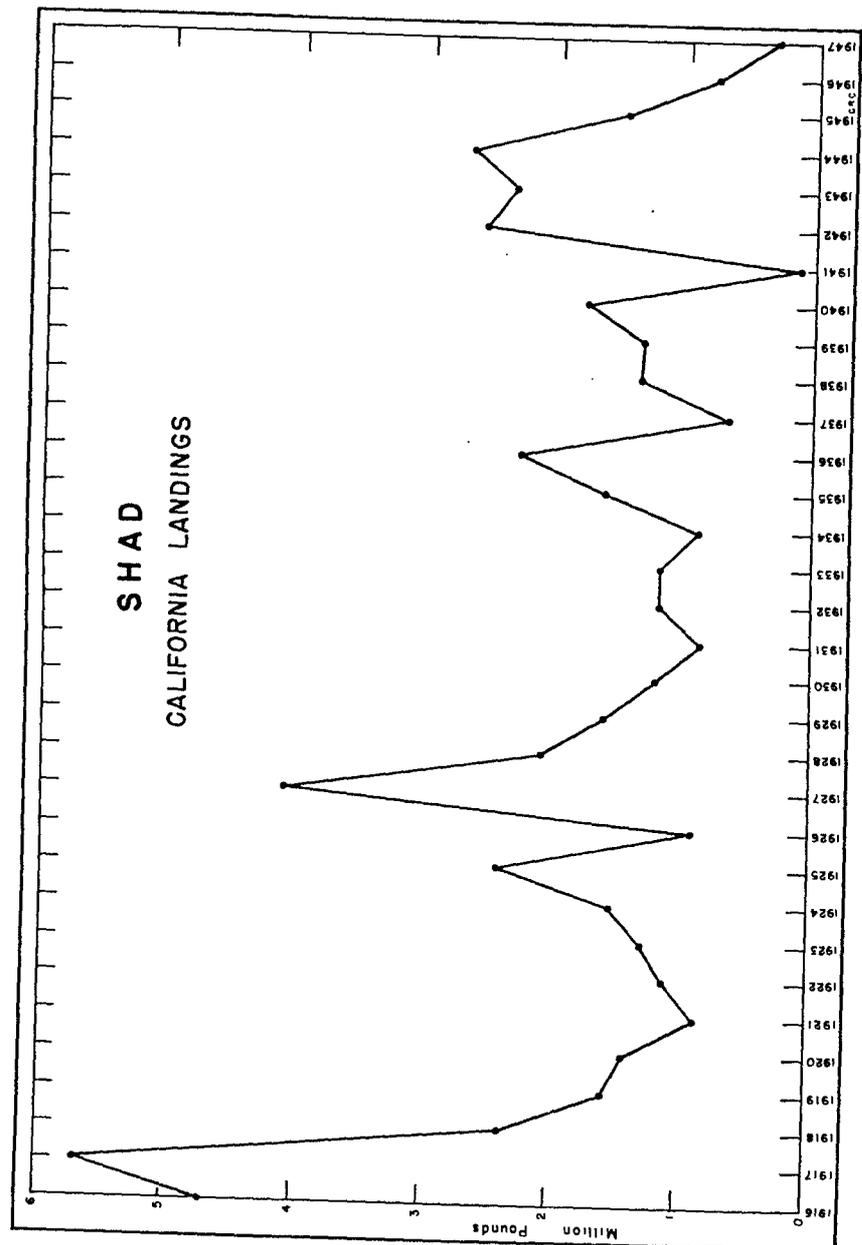


Figure 19. See Table 42

Under the present fishing laws the shad are well protected. They are taken commercially, during a two and one-half month open season extending from March 15th to June 1st, by drift gill nets ranging from 150 to 300 fathoms in length with a minimum stretched mesh of  $5\frac{1}{2}$  inches.

The commercial fishing district is confined to Fish and Game District 12B and includes Carquinez Straits, Suisun Bay, the Sacramento River to Rio Vista and the San Joaquin River to Convict Point on Venice Island. The salmon net fishing fleet of about 225 gill net boats and their crews of one or two men, usually two, does all the commercial shad fishing. The successful shad net is of  $5\frac{3}{4}$ - to  $6\frac{1}{2}$ -inch mesh,  $6\frac{1}{2}$ -inch being the most efficient. This size will also catch salmon of smaller sizes than do the salmon nets. Shad are not taken in the ocean to any extent except incidentally with nets that are being used for other fish.

Shad take a fly readily in freshwater, and in every stream in which they spawn there is a minor sport fishery. In the Mokelumne River they are caught during the run with hand dip nets made of chicken wire.

Because the shad season comes at the time of the spring salmon run and because the same men fish for both species with different gear, it is believed that the fluctuations in the catch reflect the relative abundance and the relative price of both species rather than the abundance of shad.

In the trade, the male shad is designated as buck and the female as roe shad. Because the roe or eggs are the most valuable part of the fish, roe shad bring the highest price to the fishermen. Naturally in this case the fishermen attempt to take as much of the roe shad as possible. The roe shad is the larger of the two and gills in a larger mesh net, the larger mesh allowing a good portion of the bucks to pass through. The average weight of the roe shad when taken in the bay and river is a little better than five pounds. Buck shad average  $3\frac{1}{2}$  pounds in weight.

A large part of the shad and shad roe is sold fresh locally. The rest of the catch is marketed on the Atlantic coast except for those that are canned or cured in brine. Much of the roe is frozen during the season to be held for future local consumption or for eastern shipment. A fairly large proportion is canned each year. Most of the canned shad and shad roe go to eastern and foreign markets. *Howard McCully*

References (see page 210) : 20, 72, 119, 122.

#### STRIPED BASS

Striped bass have prospered from the time they were introduced into California waters and have not only furnished this State with an important food fish but also with a popular sport fish. Transported from New Jersey, 137 striped bass, *Morone saxatilis*, were introduced into the waters of Carquinez Strait in 1879. In 1882, another plant was made of about 300 fish.

The commercial fishery started in 1880 when the first bass were brought to market. By 1889 the catch was large enough to be of importance. In 1902 the striped bass were second only to salmon in the commercial catch and were being shipped to eastern markets. The sport fishery became important about the same time.

This is probably one of the most remarkable cases of survival and acclimatization of introduced species. The 137 three- to eight-inch bass found themselves transplanted into an environment that offered them

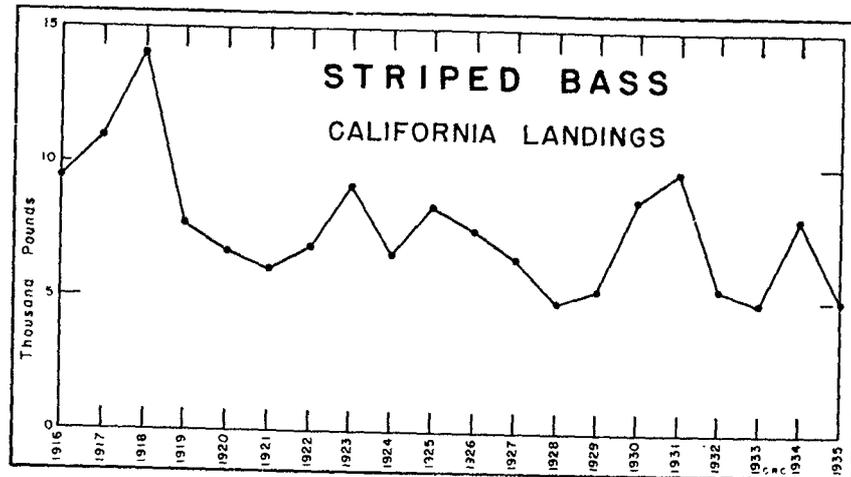


FIGURE 20. Commercial fishery ended in 1935. See Table 42

an abundant food supply. This was shown by the extraordinary growth of two 16-pound striped bass caught in 1883 only four years after the first planting. The fish planted in 1879 had successfully reproduced before the second introduction was made in 1882.

Shortly after their introduction they found their way to Monterey Bay and to the streams, sloughs and estuaries entering it. They moved northward into the Russian River and to several bays and lagoons just north of San Francisco. In the early 1900's they were planted in the Eel River and other streams of Humboldt and Del Norte Counties. By 1906 striped bass were being taken in the Columbia River. These fish have extended their runs many miles up the Sacramento and San Joaquin Rivers and their tributaries; they inhabit all sloughs and cuts throughout the delta region, which alone consists of over 700 miles of waterways.

Investigations of the life history of the striped bass on this coast, made by the California Division of Fish and Game, have proven that the nursery grounds of most striped bass taken in California waters are within the Sacramento and San Joaquin Rivers and their delta, there being a well-defined feeding and spawning migration to and from these areas.

Sportsmen now enjoy taking this game fish the year around in San Francisco Bay and the streams and sloughs entering it. Although there never has been a record kept of the amount of striped bass taken by anglers, it has been established that the sport catch has long been much larger than the commercial catch ever was.

Fishing for striped bass was completely unrestricted for 11 years after their introduction until the San Francisco County Board of Supervisors enacted a minimum size limit of eight pounds in 1890. The first state law was a minimum size limit of three pounds enacted in 1897. Since then the laws were made progressively harsher until the commercial fishery was ended in 1935 and the sportsmen in 1948 had a bag limit of five fish or 25 pounds and one fish.

Previous to 1931, when commercial fishing for striped bass with nets was prohibited, the fishery comprised 175 to 200 small commercial fishing

boats, and 350 to 400 fishermen. The average yearly catch for the last 10 years, 1926-1935 inclusive, amounted to about 658,000 pounds, which at 11 cents per pound (the average price paid during this period) realized \$72,380 per year to the fishermen.—Howard McCully.

References (see page 210) : 119, 122.

## CATFISH

Catfish were introduced into California waters from Pennsylvania in 1874, and later plants from the Mississippi Basin supplemented the original stock. These fish have thrived in most of the lakes and streams where they have been planted. They provide sport for thousands of anglers, and support an important commercial fishery in certain restricted areas. Excluding anadromous fishes, catfish lead all other fresh water species taken commercially in California both in amounts caught and in value.

Of the two species originally transplanted, the fork-tail catfish, *Ictalurus catus*, supplies the bulk of the commercial and sport catch. This fish is also called channel catfish, blue catfish or white catfish. The square-tail catfish, *Ameiurus nebulosus*, is more common in lakes than in rivers and streams. It is known as the yellow catfish, bullhead, horned pout or Sacramento catfish.

Since about 1920, the spotted catfish, *Ictalurus punctatus*, has been taken by sportsmen in the Colorado River and a few specimens have been reported from the upper Sacramento River. This species is a native of the Mississippi drainage.

Legal restrictions prohibit commercial catfishing in a large part of the State. Commercial fishermen keep out of some areas which are legal because the fish are not sufficiently abundant. As a result of these two types of restriction most catfish netting is conducted in the Sacramento River from the City of Sacramento to the river mouth, in the San Joaquin River below Stockton, and in many of the sloughs of the Sacramento-San Joaquin delta.

In recent years there has been no commercial fishing for catfish on the Sacramento River upstream from the City of Sacramento. It is believed that cold water released from Shasta Dam has forced the fish to move downstream to areas where more moderate temperatures prevail. The disappearance of the catfish from this upstream area makes it difficult not only to predict the future of the fishery, but to assess the effects of an increase in fishing effort.

Clear Lake formerly supported a commercial hook and line fishery for catfish. However, in 1931 a law was passed prohibiting the shipping of catfish out of the district in which Clear Lake is located, and the lake fishery was virtually abandoned. In 1941 legislation was adopted which abolished all commercial catfishing in the lake.

In the commercial fishing areas protection is afforded the catfish by a closed commercial season from May 1st through August 31st. This period includes the spawning season. A minimum size limit of seven inches dressed with head off or nine inches in the round is provided by law.

Fyke nets are permitted but there is a limit fixed on the size of mesh, circumference of the funnel opening and size of the net hoops.