

REVIEW OF THE PELAGIC WET FISHERIES FOR THE 1963-64, 1964-65, 1965-66 SEASONS

During the past 20 years the Pacific mackerel, jack mackerel and sardine fisheries have been major contributors to California's pelagic wet-fish landings. In the same period the northern anchovy fishery was considerably less important, being relegated primarily to fresh fish and live-bait landings. In recent years the sardine population has declined drastically and the anchovy has taken on new significance with the authorization of a fishery for reduction in 1965 (Table 1).

TABLE 1
**LANDINGS OF PELAGIC WET-FISHES
IN CALIFORNIA IN TONS, 1962-1966**

Year	Sar- dines	An- chovies	Pacific mackerel	Jack mackerel	Herring	Squid	Total
1962-----	7,682	1,382	24,289	44,990	653	4,684	83,680
1963-----	3,566	2,285	20,121	47,721	315	5,780	79,788
1964-----	6,569	2,488	13,414	44,846	175	8,217	75,709
1965-----	962	2,866	3,525	33,333	258	9,310	50,254
1966*-----	450	31,089	2,004	20,580	120	8,798	63,041

* Preliminary.

The vessels harvesting these species consist primarily of purse seiners, lampara boats and scoop boats. During the past 4 years, vessels have continued to leave the fishery; the fleet declining from 69 vessels in 1963 to 54 in 1966. Most of the loss was in the large purse seine group (over 60 feet) which decreased from 38 to 29 vessels.

The fleet operating from Baja California ports during the period 1963 through 1966 remained fairly stable, between 30 and 32 boats.

The demand for wet-fish was good during the past 4 years with cannery imposed vessel limits generally 50 tons or more. Concomitantly there was a gradual increase in the price paid to the fishermen with sardines increasing from \$60 to \$75 per ton and jack mackerel and Pacific mackerel rising from \$42.50 to \$75 per ton.

SARDINES

1963-64 Period (June through May)

For the second consecutive year, cannery season landings dropped to an all-time-low. Central California landings (August 1, 1963 to March 1, 1964) amounted to only 943 tons. Southern California landings (September 1, 1963 to March 1, 1964) were slightly higher at 1,089 tons. Samples from both areas indicated 62 percent of the catch was produced by the 1958 and 1959 year-classes. Statewide landings for the 1963-64 period were 2,942 tons.

In central California, primary areas of catch were Monterey Bay and the coastal areas from Point Sur to

Point Lopez. The southern California catch came principally from Santa Catalina Island, with smaller quantities taken at Horseshoe Kelp, San Nicolas Island and between Santa Cruz and Anacapa Islands.

TABLE 2
**SARDINE CATCH IN TONS, 1962-63 THROUGH 1965-66
(Period June Through The Following May)**

Year	California	Baja California	Total
1962-63-----	4,172	14,620	18,792
1963-64-----	2,942	18,384	21,326
1964-65-----	6,103	27,120	33,223
1965-66*-----	719	22,247	22,966

* Preliminary.

Baja California landings from September 1, 1963 to March 1, 1964 were approximately 6,880 tons; more than three times the landings in California. About 58 percent of the catch was from the 1958 and 1959 year-classes. Total catch for the period (June through May) was 18,384 tons. Sardine demand was good and most of the fish were canned. The fishermen received from \$32 to \$42 per ton.

1964-65 Period

The southern California cannery season opened on September 1, 1964. Approximately 2,600 tons of sardines were taken near San Nicolas Island during the first night of fishing. Many of the large purse seiners caught 100 tons or more. After the exceptional catches of the first night, landings deteriorated throughout the rest of the season. The statewide catch during the cannery season was about 5,200 tons, with nearly 4,000 tons from San Nicolas Island. About 80 percent of the fish taken for age determinations were from 3 to 5 years old (1958 to 1960 year-classes).

The total statewide catch during the 1964-65 period was 6,103 tons, with central California contributing only about 50 tons.

Baja California landings increased to more than 27,000 tons for the period June, 1964 through May, 1965. Landings during the southern California cannery season amounted to approximately 12,000 tons. The age distribution of the fish sampled was essentially the same as that for California, about 87 percent were from the 1958-59 and 1960 year classes. The price to the fishermen varied between \$32 and \$42 per ton.

1965-66 Period

Statewide landings during the cannery season were 363 tons for the poorest catch on record. Landings for central and southern California were 69 and 294 tons respectively, with no fish younger than the 1962 year-class present in the age samples. The statewide

catch during the 1965-66 period was approximately 719 tons with most of the fish going to the fresh fish markets, where the fishermen received from \$200 to \$400 per ton. The primary areas of catch were Santa Catalina Island and the Horseshoe Kelp area.

Landings in Baja California dropped to approximately 22,000 tons for the period June, 1965 through May, 1966. Landings from September 1, 1965 to March 1, 1966 amounted to nearly 7,400 tons. The demand for sardines was good; 32 purse seiners were kept busy supplying 10 canneries with fish. The price to the fishermen remained fairly stable at \$40 per ton.

ANCHOVY

In 1963 and 1964 anchovy catches were used in canning, as fresh fish and as live-bait. In November, 1965, the California Fish and Game Commission authorized the use of 75,000 tons of anchovies for reduction into fish meal. In late-November, 1965, the experimental anchovy fishery for reduction opened. Landings were negligible through the end of 1965, but began picking up in February of 1966, and by the end of the season (April 30, 1966) over 16,000 tons of anchovies had been landed. The Horseshoe Kelp area produced about 75 percent of the fish taken.

TABLE 3
COMMERCIAL LANDINGS AND LIVE-BAIT CATCH
OF ANCHOVIES IN TONS, 1962-1966

Year	Commercial Landings	Live-Bait	Total
1962.....	1,382	6,167	7,549
1963.....	2,285	4,442	6,727
1964.....	2,488	5,191	7,679
1965.....	2,866	6,148	9,014
1966*.....	31,089	6,636	37,725

* Preliminary.

Los Angeles-Long Beach Harbor provided most of the fish for the live-bait fishery during the period from 1963 to 1965.

The age composition of the 1963-64 live-bait catch at Port Hueneme, San Pedro and Newport were similar. Zero's, one's, and two's constituted between 80 and 90 percent of the fish sampled. The most

prominent group was the 1962 year-class (one-year-old fish). At Port Hueneme, 46 percent of the fish sampled were from the 1962 year-class; at San Pedro, 54 percent and at Newport, 45 percent.

In 1964-65, the one's (1963 year-class) were again dominant in the live-bait samples. At Port Hueneme the 1963 year-class made up 45 percent of the fish sampled; 37 percent at San Pedro and 67 percent at Newport.

MACKEREL (May-April)

Pacific mackerel landings have dropped steadily since 1962-63 when about 23,000 tons were taken. During the 1965-66 season the catch fell to 3,788 tons (Table 4), and the outlook for the next 2 seasons is not encouraging. The primary areas of catch during the past 3 seasons were Cortes and Tanner Banks, San Nicolas, Santa Catalina, and San Clemente Islands.

Jack mackerel landings have been on the decline since the 1961-62 season, when 54,706 tons were landed. The catch dropped to 33,837 tons for the 1965-66 season (Table 4). Major areas of catch for the 3 seasons 1963-64 through 1965-66 were Santa Cruz, Santa Barbara, Anacapa, Santa Catalina, San

TABLE 4
JACK AND PACIFIC MACKEREL CATCH IN TONS,
1962-63 THROUGH 1965-66
(Period May through April)

Year	Jack Mackerel	Pacific Mackerel
1962-63.....	48,422	22,627
1963-64.....	42,038	17,105
1964-65.....	39,548	12,437
1965-66*.....	33,837	3,788

* Preliminary.

Clemente, San Nicolas Islands and Cortes and Tanner Banks. In 1963-64 these areas produced approximately 50 percent of the statewide catch; in 1964-65 they accounted for 65 percent of the catch and in 1965-66, 75 percent of the catch came from these areas. *Kenneth D. Aasen, California Department of Fish and Game.*

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