

REVIEW OF THE PELAGIC WET-FISHERIES FOR 1971 AND 1972

Total wet-fish landings for 1971 dropped almost a third from the previous years high catch (Table 1). A decrease in success of the anchovy reduction fishery was responsible for this drop. Economic and sociological problems combined with poor availability during part of the year resulted in anchovy reduction

TABLE 1
Landings of Pelagic Wet-Fishes in
California in Tons; 1962-1971

Year	Sardine	Anchovy	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.....	439	31,140	2,315	20,431	121	9,512	63,958
1967.....	74	34,805	583	19,090	136	9,801	64,489
1968.....	62	15,538	1,567	27,834	179	12,466	57,646
1969.....	53	67,639	1,179	25,961	85	10,390	105,307
1970.....	221	96,243	311	23,873	158	12,295	133,101
1971.....	149	44,853	78	29,941	120	15,759	90,900

landings of 43,632 tons. Jack mackerel landings in 1971 totaled 29,941 tons, the highest since 1965, and squid landings were also up substantially from previous years. Sardine, Pacific mackerel, and herring landings remained at very low levels.

Pacific Sardine

Legislation passed in 1969 remained in effect through 1971 and the first half of 1972. The law allows 250 tons per year to be taken for dead bait, with a maximum landing of 3 tons per boat per calendar day. An incidental catch of 15% is permitted in mixed loads. There were 149 tons reported landed in 1971.

Northern Anchovy

The 1971-72 anchovy reduction season opened with no changes in seasons, quotas, or closed areas. There were 37 boats which had a total carrying capacity of over 3,000 tons that took out permits for the season.

TABLE 2
Anchovy Landings for Reduction in the
Southern and Northern Permit Areas
1965-66 through 1971-72

Season	Southern Permit Area	Northern Permit Area	Total
1965-1966*	16,468	375	16,843
1966-1967†	29,589	8,021	37,610
1967-1968‡	852	5,651	6,503
1968-1969§	25,314	2,736	28,050
1969-1970§	81,453	2,020	83,473
1970-1971§	80,095	657	80,752
1971-1972§	52,440	986	53,426

Seasons

- * November 12, 1965, through April 30, 1966.
- † October 1, 1966, through April 30, 1967.
- ‡ September 15, 1967, through May 15, 1968.
- § August 1 through May 15.

Landings in central California totaled 986 tons, while 52,440 tons were landed in southern California (Table 2). A number of factors were responsible for the decrease in catch from the previous 2 seasons. The 1971-72 season opened August 15 in the north and September 15 in the south, but the San Pedro fleet remained idle until October 8 due to a price dispute. Some boats began fishing at that time, but it was not until October 18 that the dispute was settled and the fleet began fishing in earnest. Fishermen received \$21.00 per ton of anchovies.

The completion of new reduction facilities enabled the fleet to land record daily (1,990 tons) and weekly (8,070 tons) catches during October. Near the end of that month the anchovy price dropped and the fleet put more emphasis on other species. In November a daily landing limit of 1,200 tons was imposed by the industry on the fleet due to a water quality problem in Fish Harbor. These factors plus an excellent showing of jack mackerel greatly restricted the anchovy reduction fishery at San Pedro. In January the price was again negotiated and modest landings were made during January and February. The Fish and Game Commission voted not to restrict fishing during February this year. Landings were low in March, April, and May. The season closed May 15 with a total of 53,426 tons of anchovies landed for reduction. About one third of the southern California catch was landed at Port Hueneme.

TABLE 3
Commercial Landings and Reported Live Bait
Catch of Anchovies in Tons; 1962-1971

Year	Reduction	Other Commercial	Live Bait	Total
1962.....	0	1,382	6,167	7,549
1963.....	0	2,285	4,442	6,727
1964.....	0	2,488	5,191	7,679
1965.....	170	2,696	6,148	9,014
1966.....	27,335	3,705	6,691	37,731
1967.....	32,349	2,455	5,387	40,191
1968.....	13,795	1,743	7,176	22,714
1969.....	65,204	2,435	5,538	73,177
1970.....	93,805	2,438	6,105	102,348
1971.....	43,632	1,221	3,825	48,678

Reported live bait catch was down in 1971, (Table 3), but this does not imply there was a scarcity of anchovies. Anchovies were readily available for live bait throughout 1971 and early 1972 except for the usual spring scarcity in the Santa Monica-Oxnard area.

Jack Mackerel

The 1971 landings of jack mackerel were the highest since 1965. Good availability as well as anchovy reduction fishery problems contributed towards the increased catch. Most fish were taken at Cortez Bank and Santa Catalina Island; however, San Clemente Island and the Horseshoe Kelp area also contributed. Fishermen received \$80 per ton for jack mackerel during 1971. Fish 1 and 2 years old dominated the fishery.

Fishing was fairly good the first 3 months of 1972, but dropped off in late spring. Landings improved in June. Over 8,000 tons were landed the first half of 1972, compared to 12,613 for this period the previous year.

Pacific Mackerel

Pacific mackerel landings for 1971 were a very low 78 tons. A moratorium was in effect all year and appeared to be quite successful. Meanwhile, the sport catch increased to more than 200,000 fish for 1971. Sampling data indicate that over 90% of the population consists of 1970 year class fish.

Squid

Squid landings of 15,759 tons in 1971 were the second highest in the history of the California fishery,

the highest landings being in 1946. Fluctuations in catch are primarily a result of canners' demand. Squid landings for the first half of 1972 were about 25% behind 1971 landings for the same period. Most were caught at Monterey.

Herring

Herring landings remained at a low level. A commercial fishery for herring eggs on seaweed has been established for several years in the San Francisco area. Another potential fishery utilizes roe of spawning herring for the production of "Kazanoko", a Japanese delicacy. Though the herring resource is relatively small, it is not presently utilized to its full extent.

Ralph H. Norberg

REVIEW OF THE PELAGIC WET-FISHERIES FOR 1972

Total wet-fish landings in California for 1971 were down appreciably from 1970. During 1971 a total of 90,897 tons of wet-fish was landed compared to the 133,101 tons landed in 1970 (Table 1).

The 1971 jack mackerel catch of 29,941 tons was the best since 1965. Most of the mackerel was caught at Cortes Bank and around Catalina Island. Jack mackerel also were taken from San Clemente Island, Santa Barbara Island, and from inshore waters along the southern California coast.

Squid landings jumped to 15,756 tons in 1971. It was only in 1946 that more squid were delivered to

was restricted by state law. A moratorium on Pacific mackerel prohibited all commercial landings except for an incidental catch of 18%. The sardine fishery was limited to a 250 ton quota for dead bait and each boat fishing sardines was allowed only one 3 ton delivery each day. Landings of 78 tons of Pacific mackerel and 149 tons of Pacific sardines were reported during 1971.

For 1972 the total wet-fish landings were slightly higher than those of 1971. Jack mackerel and squid landings of 25,559 tons and 10,081 tons were below those of the previous year, but anchovy landings were up nearly 25,000 tons. The reported sardine catch of 186 tons was somewhat higher than the 1971 catch, but did not reach the 250 ton quota. The fishery continued to be under the same restrictions as in 1971. Under a continuing moratorium, Pacific mackerel landings again dropped. Only 54 tons were landed in mixed loads with other species, usually jack mackerel.

During 1971, a total of 29 large purse seiners and 9 small seiners (under 60 ft.) fished in California waters. There was only one seiner based at Monterey and two fishing out of Port Hueneme. The remaining 35 seiners fished from San Pedro. Several of the seiners were larger boats with capacities of 150-200 tons. These seiners were attracted to the anchovy fishery during the fall of 1971. They also fished briefly for anchovies during the fall of 1972. One new steel hulled seiner, especially built for the San Pedro fishery, joined the fleet during 1972. Nineteen lampara boats fished along the coast.

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1970.....	221	96,243	311	23,873	158	12,295	133,101
1971.....	149	44,853	78	29,941	120	15,756	90,897
1972*.....	186	69,101	54	25,559	63	10,081	105,044

* Preliminary figures.

California ports. Over 60% of the catch was landed at Monterey, while most of the remaining catch was landed at Port Hueneme and San Pedro.

The anchovy catch was less than half that of the previous year. Only 44,853 tons of anchovies were landed in California ports compared to over 96,000 tons landed in 1970.

Pacific mackerel landings continued to drop as did landings of Pacific sardines. The catch of both species

Northern Anchovy

Landings for the 1971-72 anchovy reduction season totaled 53,426 tons (Table 2). A quota of 110,000 tons was in force during the season. In the southern permit area 52,440 tons were landed at Terminal Island and Port Hueneme, while 986 tons of anchovies were reduced at Moss Landing in the northern area.

The first anchovies of the season were landed at Moss Landing in August, but the northern season was shortened when the only processing plant closed in

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1969-1970	81,453	2,020	83,473
1970-1971	80,095	657	80,752
1971-1972	52,440*	986	53,426
1972-1973	75,142*	377	75,519

* Of these landings, 388 tons were reported as being caught in the northern zone in 1971-72, and 1,975 tons in 1972-73.

October. In the south, anchovy fishing was delayed a month from the September 15 opening by a price dispute. Following a settlement, the San Pedro fleet had excellent success landing nearly 7,000 tons of anchovies in 1 week. However, a water quality problem required curtailing the processors reduction capacities forcing daily landing limits on the boats. Fishermen continued to have reasonable success until early

March when the fish scattered and never schooled again throughout the rest of the season.

Fishermen received \$19.50 to \$21.00 per ton for their anchovies. The price was based on a sliding scale reflecting the world fish meal market which remained relatively low throughout the season.

The 1972-73 anchovy season, the eighth reduction season, also was under a 110,000 ton quota; 100,000 tons for the southern permit area and 10,000 tons for the northern area. As in the pervious year, the anchovy season started slowly until mid-October when fishermen switched their attention from other species and started to earnestly fish for anchovies. Due to a rising fish meal market, the price paid to fishermen started at \$24.00 per ton in October and rose to \$26.00 per ton by the end of November. There were few landings after mid-December due to poor weather, very poor availability of anchovies, and fleet effort on other species. Then at the beginning of April, anchovies began to school into dense spots. This behavior and a new price of \$47.50 per ton brought total fleet effort to the anchovy fishery and over 40,000 tons were landed for reduction in the last 6 weeks of the season.

At season's end, fishermen had delivered 75,142 tons of anchovies to southern area ports, but only 377 tons had been landed at Moss Landing.

Eugene Fleming