

Diego. The purse seine was then again introduced into the fishery. It had been tried first in the '90s and was supplanted by the lampara. The second trial proved more satisfactory and the purse seine and modifications thereof, frequently called ring nets, rapidly replaced the lampara. The purse seine has rings along the lead line which permit a quick closing of the net and a lessening of the chance for the fish to escape. The bag is also at one end rather than in the middle of the net as in the lampara. Throughout the years there have been many changes and modifications in the purse seine, and the nets in the present fishery differ greatly between boats but the general principal of the round haul net has been retained.

The most important changes have been the increase in size of nets and in size of vessels. From seines approximately 200 fathoms long, operated from gasoline driven boats of 30- to 50-foot length, the sardine fleet now consists of diesel engined vessels up to 100 feet in length, operating nets of 300 fathoms or more and with a carrying capacity for the largest ships of 250 tons. These larger vessels fish over a much greater area and the sardine fishermen scour the fishing grounds along the California coast from the Farallon Islands southward to the Mexican boundary and around all the Channel Islands off Southern California. Not only the range but also the efficiency of the fleet has increased through net changes to facilitate quick closure and by the addition of radio telephones and fathometers. Radio telephones enable the fishermen to communicate while on the fishing grounds and thus to aid each other in finding fish. The fathometer helps the fishermen to locate schools too far beneath the surface to be detected by visual means.

Although the efficiency of the sardine fleet has improved greatly the number of vessels has not increased since the mid-thirties. The total number of boats fishing out of the ports of San Francisco, Monterey and San Pedro are given by season in the following table.

TABLE 6
NUMBER OF SARDINE VESSELS FISHING IN CALIFORNIA WATERS

Season	Number of boats	Season	Number of boats
1930-31	149	1939-40	335
1931-32	157	1940-41	321
1932-33	168	1941-42	297
1933-34	200	1942-43	208
1934-35	242	1943-44	206
1935-36	249	1944-45	226
1936-37	316	1945-46	224
1937-38	379	1946-47	263
1938-39	325	1947-48	270

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