

UC San Diego

Fish Bulletin

Title

Fish Bulletin 132. The California Marine Fish Catch For 1964

Permalink

<https://escholarship.org/uc/item/1fc5h6zt>

Authors

Greenhood, Edward C
Mackett, David J

Publication Date

1965

**THE RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF FISH AND GAME
FISH BULLETIN 132
The California Marine Fish Catch For 1964**



By
EDWARD C. GREENHOOD
and
DAVID J. MACKETT
1965

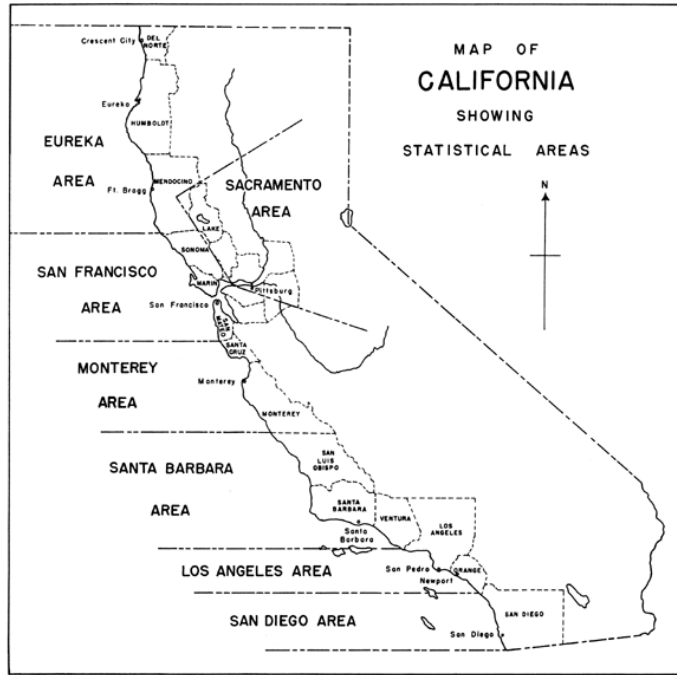


FIGURE 1

(2)

FIGURE 1

TABLE OF CONTENTS

	Page
California Marine Fish Catch for 1964	
Foreword -----	5
Explanation of Tables -----	6
Common and Scientific Names of Fishes, Crustaceans, and Mol- lusks in the 1964 Catch -----	9
Annual Landings and Shipments (Figure 2) -----	10
Annual Landings and Shipments, 1916 through 1964 -----	11
Landings and Shipments of Leading Species Ranked by Pounds --	11
Number of Licensed Commercial Fishermen -----	12
Number of Registered Fishing Boats by Length -----	12
Origin of Shipments, 1964 -----	13
Origin of Commercial Fish Landings, 1964 -----	14, 15
Monthly Landings and Shipments, 1964—Statewide -----	16-18
Monthly Landings and Shipments, 1964—by Areas -----	19-31
Value and Poundage, Annual Landings and Shipments by Areas, 1964 -----	32-34
Value of Landings and Shipments by Ports and Areas, 1964 --	35-43
Partyboat Sport Catch, 1955-1964 -----	44
Live Bait Catch, 1964 -----	45
Inshore Bait Landings, 1964 -----	45

FOREWORD

Catch bulletins provide records of California's commercial fisheries and their value to fishermen. They also summarize the marine partyboat angler's catch.

The report for 1964 is the 24th in the series. Prior records have been published regularly beginning with those for 1926 and 1927. In recent years, catch bulletins have been published annually instead of biennially.

Records are obtained from each wholesale fish dealer or processor who receives fish from fishermen or who processes fish. Partyboat operators record each trip's catch, and these records are also sent to the Department. Clerical personnel in strategic locations (Eureka, San Francisco, Monterey, Terminal Island, and San Diego) maintain contact with fish dealers and local Fish and Game wardens to insure that the records are accurate and transmitted promptly. All data are edited and subsequently processed by electric accounting machines.

Published figures are of national and international concern, but they are used primarily by fisheries scientists and state legislators to manage and regulate California's important fisheries. Chambers of commerce, members of the fishing industry, educators, and others also find these catch statistics of value.

Special acknowledgement is given to the staff of the Biostatistical Unit who process the many documents necessary for this publication. The assistance of the wardens along the coast and the aid forthcoming from the many fish wholesale dealers and canners is appreciated.

1. EXPLANATION OF TABLES

The tables of this report summarize the statistics of various fisheries operations in California during 1964. In general, this report covers: landings of the commercial fishing fleet of California; sport catches of the partyboat fleet; imports of fish from other states or foreign countries that are destined for processing in California; deliveries to retail stores of bait used for sportfishing; and catches of boats that supply partyboats, skiffs, and yachts with live bait.

One of the most important fishery statistics we present is the total landings of each species harvested by California's fishermen. In addition, it is essential to know where and when catches are made. The tables therefore show the month and area of landing for each variety.

Data are not available for some of California's fisheries operations. For instance, fish shipped into California that are utilized in a fresh state are not reported to our Department. Likewise, sport fishermen aboard private skiffs and yachts, or fishing from shore or piers are not required to report their catches; however, the Department investigates the catch and effort expended in these activities.

1.1. SOURCE OF DATA

Data on the commercial fishing fleet, bait deliveries, and imports are recorded on sales slips or receipts which are completed by fish dealers at the time of delivery. The receipts are transmitted to the Department twice each month. Each dealer is required by law to include on the receipt the following information concerning the transaction: weight of each species received; price paid to the fisherman; date; name of the fisherman; Department of Fish and Game registration number of boat; name of the dealer; and intended disposition of the fish (canned, fresh, etc.).

In addition, area of catch and type of gear used to catch the fish are reported for most landings.

The partyboat and live-bait boat catches are obtained from records or logs completed for each trip by the boat operator. The law requires skippers of partyboats to send records of their daily catches to the Department each month; however, the information received from the live-bait boats is given voluntarily.

The log of each fishing trip made by a partyboat contains the following information: count of each species taken; number of anglers; area fished; the number of hours fished; date; and boat identification.

Operators of live-bait boats report the number of net-sets and the number of scoops of bait sold each day. The species caught as well as the area fished are also given.

When fish receipts and fishing trip records are received, they are first edited and coded. The data are then punched into cards before being summarized with electric tabulating machines.

1.2. STATISTICAL AREAS

California is divided into seven areas for the purpose of reporting fisheries statistics. Each statistical area is named for a major port within its boundaries (Figure 1). Department personnel are responsible for collecting and inventorying landing receipts in each statistical area.

1.3. SPECIES

The species of fish landed or shipped into California are listed in Table 2. Both common and scientific names are given. Some varieties are reported collectively when, for economic or other reasons, dealers do not report a specific separation.

One example of species grouping is the animal-food category which consists of a variety of fish caught by trawling. In an attempt to determine the species comprising animal food landings, a sampling program has been conducted by biologists of the Department's Bottomfish Investigation. Based on their findings, the estimated weight each species contributed to the 1964 animal-food category is:

<i>Species</i>	<i>Percent</i>	<i>Pounds</i>
Sablefish	44.8	778,822
Pacific hake	15.9	276,412
Rockfish	12.6	219,044
Arrowtooth flounder	12.2	212,090
Dover sole	5.3	92,137
English sole	4.2	73,014
Rex sole	2.4	41,723
Twenty-one other species	2.6	45,199
	100.0	1,738,441

1.4. CONDITION

Most fish and shellfish landed in California are in a round condition; however, some species, such as salmon and swordfish, are eviscerated or cleaned before landing. The condition of fish landed and shipped into the State cannot always be determined; therefore, the weights summarized in the tables are as reported to the Department without regard to condition.

Starting with 1963 records, the oyster poundage is published as packed gallon weight instead of live (in the shell) weight. The packed gallon weight of Pacific oysters is estimated to be 15.5 percent of live weight landings; that for Eastern oysters is somewhat lower at 10.9 percent.

1.5. CONVERSIONS

Landings reported by units of measure other than pounds are equated to pounds by using appropriate conversion factors. Conversion factors

are determined periodically by sampling landings at delivery points. The factors applied to nine species during 1964 were:

Abalone, red	50 pounds per dozen
Abalone, pink	25 pounds per dozen
Abalone, green	35 pounds per dozen
Clam, Washington	7 pounds per dozen
Crab, market	2 pounds each
Crab, sand	.041 pounds per dozen
	4.5 pounds per gallon
Mudsucker	19 pounds per tray
	.465 pounds per dozen
Mussel	80 pounds per sack
	3.8 pounds per shucked pound
	30 pounds per gallon
Shrimp, ghost	.046 pounds per dozen

1.6. VALUE

Value is computed from prices paid to the fishermen. Values, therefore, reflect the contribution of the fishermen to the total worth of the fisheries. When the price paid for an individual landing is not specified, the average price for the species in the area in which it was landed is used.

2. TABLES

TABLE 1
Common and Scientific Names of Fishes, Crustaceans, and Mollusks in the 1964 Catch

Common name	Scientific name	Common name	Scientific name
FISHES			
Anchovy	<i>Engraulis mordax</i>	Shark	
Barracuda, California	<i>Sphyrna argentea</i>	Brown smooth-	
Blacksmith	<i>Chromis punctipinnis</i>	hound	<i>Triakis henlei</i>
Bonito, Pacific	<i>Sarda chilensis</i>	Leopard	<i>Triakis semifasciata</i>
Cabezon	<i>Scorpaenichthys marmoratus</i>	Pacific angel	<i>Squatina californica</i>
Cabrilla, spotted	<i>Epinephelus analogus</i>	Souppin	<i>Galeorhinus zyopterus</i>
Carp	<i>Cyprinus carpio</i>	Spiny dogfish	<i>Squalus acanthias</i>
Croaker		Thresher	<i>Alopias vulpinus</i>
White	<i>Genyonemus lineatus</i>	Small amounts of	
Small amounts of		others	
queenfish	<i>Scrippus politus</i>	Sheephead, California	<i>Pimelometopon pulchrum</i>
Dolphinfish	<i>Coryphaena hippurus</i>	Sierra	<i>Scomberomorus sierra</i>
Eel, moray	<i>Gymnothorax mordax</i>	Skate	
Flounder		Big	<i>Raja binoculata</i>
Arrowtooth	<i>Atheresthes stomias</i>	California	<i>Raja inornata</i>
Starry	<i>Platichthys stellatus</i>	Longnose	<i>Raja rhina</i>
Small amounts of		Small amounts of	
other flatfishes		others	<i>Rajiformes</i>
Flyingfish	<i>Cypselurus</i> spp.	Smelt	
Greenling, kelp	<i>Hexagrammos decogrammus</i>	Grunion	<i>Leuresthes tenuis</i>
Grouper	<i>Mycteroperca</i> spp.	Jacksmelt	<i>Atherinopsis californiensis</i>
Hake, Pacific	<i>Merluccius productus</i>	Surf	<i>Hypomesus pretiosus</i>
Halfmoon	<i>Medialuna californiensis</i>	Topsmelt	<i>Atherinops affinis</i>
Halibut		Smelt, whitebait	<i>Allosmerus elongatus</i>
California	<i>Paralichthys californicus</i>		<i>Spirinchus starksi</i>
Pacific	<i>Hippoglossus stenolepis</i>		Young of several others
Hardhead		Sole	
Sacramento black-		Dover	<i>Microstomus pacificus</i>
fish	<i>Orthodon microlepidotus</i>	English	<i>Parophrys vetulus</i>
Hardhead	<i>Mylopharodon conocephalus</i>	Petrale	<i>Eopsetta jordani</i>
Herring, Pacific	<i>Clupea pallasii</i>	Rex	<i>Glyptocephalus sachirus</i>
Lingcod	<i>Ophiodon elongatus</i>	Sand	<i>Psettichthys melanostictus</i>
Mackerel		Small amounts of	
Jack	<i>Trachurus symmetricus</i>	others	
Pacific	<i>Scomber diego</i>	Splittail	<i>Pogonichthys macrolepidotus</i>
Mudsucker, longjaw	<i>Gillichthys mirabilis</i>	Sturgeon	<i>Acipenser</i> spp.
Mullet, striped	<i>Mugil cephalus</i>	Sucker	<i>Catostomus</i> spp.
Oralaye	<i>Girella nigricans</i>	Swordfish	<i>Xiphias gladius</i>
Perch	Members of family Embiotocidae	Tuna	
Pompano, Pacific	<i>Palometa similima</i>	Albacore	<i>Thunnus alalunga</i>
Rockfish	All species of <i>Sebastes</i> and <i>Sebastes</i>	Bigeye	<i>Thunnus obesus</i>
Sablefish	<i>Anoplopoma fimbria</i>	Bluefin	<i>Thunnus thynnus</i>
Salmon		Skipjack	<i>Katsuwonus pelamis</i>
King	<i>Oncorhynchus tshawytscha</i>	Yellowfin	<i>Thunnus albacares</i>
Silver	<i>Oncorhynchus kisutch</i>	Turbot	
Sanddab	<i>Citharusichthys sordidus</i>	Curlfin	<i>Pleuronichthys decurrens</i>
Sardine	<i>Sardinops oeruela</i>	Diamond	<i>Hypsopelela guttulata</i>
Sargo	<i>Anisotremus davidsoni</i>	Hornyhead	<i>Pleuronichthys verticalis</i>
Sculpin	<i>Scorpaena guttata</i>	Small amounts of	
Sea bass, giant	<i>Stereolepis gigas</i>	others	
Seabass, white	<i>Cynoscion nobilis</i>	Wahoo	<i>Acanthopagium solanderi</i>
Shad	<i>Alosa sapidissima</i>	Whitefish, ocean	<i>Canolatilus princeps</i>
		Yellowtail, California	<i>Seriola dorsalis</i>
CRUSTACEANS			
Crab		Prawn	<i>Pandalus platyceros</i>
King	<i>Paralithodes camschatica</i>	Shrimp	
Market	<i>Cancer magister</i>	Bay	<i>Crago franciscorum</i>
Rock	<i>Cancer productus</i>		<i>Crago nigricauda</i>
	<i>Cancer antennarius</i>	Ghost	<i>Callinassa californicus</i>
	<i>Cancer anthonyi</i>	Ocean	<i>Pandalus jordani</i>
Sand	<i>Emerita analoga</i>	Red	<i>Hippolytina californica</i>
Lobster, spiny	<i>Panulirus interruptus</i>		
MOLLUSKS			
Abalone		Mussel	
Pink	<i>Haliotis corrugata</i>	Bay	<i>Mytilus edulis</i>
Red	<i>Haliotis rufescens</i>	Rock	<i>Mytilus californianus</i>
Green	<i>Haliotis fulgens</i>	Octopus	<i>Octopus</i> spp.
Clam		Oyster	
Freshwater	<i>Corbicula fluminea</i>	Eastern	<i>Crassostrea virginica</i>
Gaper	<i>Tresus nuttalli</i>	Giant Pacific	<i>Crassostrea gigas</i>
Jackknife	<i>Togelus californianus</i>	Snail, sea	<i>Kelletia kelletii</i>
Purple	<i>Sanguinolaria nuttalli</i>	Squid	<i>Loligo opalescens</i>

TABLE 1
Common and Scientific Names of Fishes, Crustaceans, and Mollusks in the 1964 Catch

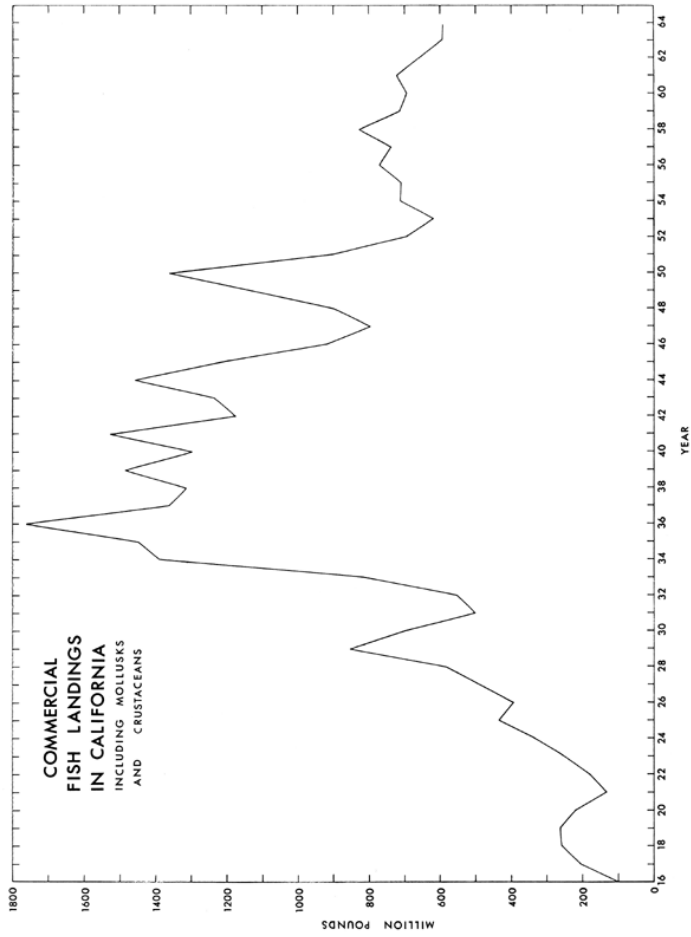


FIGURE 2. Total annual landings and shipments into California. Includes sardine deliveries to reduction ships, 1930-38 (see Table 2).

FIGURE 2. Total annual landings and shipments into California. Includes sardine deliveries to reduction ships, 1930-38 (see Table 2)

TABLE 2

Total Annual Landings and Shipments Into California of Commercial Fish, Mollusks, and Crustaceans, Includes Sardine Deliveries to Reduction Ships During 1930 Through 1938

Year	Thousands of pounds	Year	Thousands of pounds
1916	95,003	1941	1,529,148
1917	209,877	1942	1,173,414
1918	261,134	1943	1,234,049
1919	266,270	1944	1,459,446
1920	222,004	1945	1,216,467
1921	135,348	1946	919,850
1922	182,343	1947	795,499
1923	253,875	1948	900,540
1924	340,446	1949	1,135,325
1925	437,502	1950	1,366,596
1926	394,964	1951	904,088
1927	487,166	1952	694,977
1928	583,527	1953	618,899
1929	856,854	1954	713,406
1930	702,189	1955	710,714
1931	502,390	1956	772,549
1932	556,139	1957	738,550
1933	821,805	1958	832,919
1934	1,390,799	1959	713,491
1935	1,448,017	1960	694,663
1936	1,764,900	1961	725,253
1937	1,362,984	1962	663,107
1938	1,310,596	1963	592,899
1939	1,486,535	1964	591,131
1940	1,297,517		

TABLE 2

Total Annual Landings and Shipments Into California of Commercial Fish, Mollusks, and Crustaceans, Includes Sardine Deliveries to Reduction Ships During 1930 Through 1938

TABLE 3

Landings and Shipments of Leading Species Ranked by Pounds

1963				1964			
Species	Rank	Thousands of pounds	Thousands of dollars	Species	Rank	Thousands of pounds	Thousands of dollars
Yellowfin tuna	1	162,326	\$23,461	Yellowfin tuna	1	202,856	\$28,678
Skipjack	2	106,285	11,411	Jack mackerel	2	89,693	2,109
Jack mackerel	3	95,442	1,989	Albacore	3	74,721	12,266
Albacore	4	65,805	10,710	Skipjack	4	72,554	7,227
Pacific mackerel	5	40,243	861	Bluefin tuna	5	26,832	3,385
Bluefin tuna	6	32,702	3,724	Pacific mackerel	6	26,828	666
Rockfish	7	11,761	683	Squid	7	16,434	333
Squid	8	11,561	240	Sardine	8	13,137	500
Dover sole	9	9,782	599	Salmon	9	10,175	5,374
Salmon	10	8,035	4,110	Dover sole	10	9,265	560
Sardine	11	7,131	299	Rockfish	11	8,118	490
Anchovy	12	4,570	78	Anchovy	12	4,975	82
Abalone	13	4,354	627	English sole	13	4,593	354
English sole	14	4,254	329	Abalone	14	4,079	573
Pacific bonito	15	4,022	113	Petrale sole	15	2,698	323
Petrale sole	16	3,318	400	Sablefish	16	2,644	203
Ocean shrimp	17	2,093	202	Pacific bonito	17	2,612	66
Sablefish	18	1,998	136	Market crab	18	1,815	618
Market crab	19	1,951	688	Miscellaneous (animal food)	19	1,738	35
Rex sole	20	1,566	108	Rex sole	20	1,411	95
All others		13,700	2,050	All others		13,953	2,244
Totals		592,899	\$62,818	Totals		591,131	\$66,181

TABLE 3

Landings and Shipments of Leading Species Ranked by Pounds

TABLE 4
Number of Licensed Commercial Fishermen

Area of residence	License year*	
	1963-64	1964-65
Eureka	1,195	1,277
Sacramento	190	239
San Francisco	1,284	1,396
Monterey	684	694
Santa Barbara	659	761
Los Angeles	2,163	2,132
San Diego	1,736	1,750
Alaska, Washington and Oregon fishermen licensed in California	523	532
Mexican nationals licensed in California	64	83
Other	46	49
Totals.....	8,544	8,913

* April 1 to March 31.

TABLE 4
Number of Licensed Commercial Fishermen

TABLE 5
Number of Registered Fishing Boats by Length

License year*	Up to 24 feet	25 to 39 feet	40 to 64 feet	65 to 84 feet	85 to 99 feet	100 feet and over	Total
1963-1964	852	1,698	1,050	109	37	96	3,842†
1964-1965	1,021	1,679	1,108	121	35	98	4,062‡

* April 1 to March 31.

† The owners of 523 boats were issued fishing party licenses in 1963-64.

‡ The owners of 462 boats were issued fishing party licenses in 1964-65.

TABLE 5
Number of Registered Fishing Boats by Length

TABLE 6
Origin of Shipments of Fresh Fish Into California During 1964

Shipped from: Species	Pounds shipped to each area				Total pounds
	San Francisco	Monterey	Los Angeles	San Diego	
Continental United States:					
Sturgeon.....	---	---	32,585	---	32,585
Miscellaneous.....	92,000	---	---	---	92,000
Oregon, Washington, Canada and Alaska:					
Crab, king.....	21,492	---	---	---	21,492
Sablefish.....	---	---	20,169	---	20,169
Salmon.....	---	---	693,942	---	693,942
Shad.....	3,365	---	71,105	---	74,470
Smelt.....	---	4,105	---	---	4,105
Sturgeon.....	---	---	3,224	---	3,224
Miscellaneous.....	---	---	141,975	---	141,975
Mexico and Central America:					
Barracuda, California.....	---	---	803	---	803
Halibut, California.....	---	---	3,120	---	3,120
Seabass, white.....	---	---	797	---	797
Shark.....	---	---	1,520	---	1,520
Tuna, bluefin.....	---	---	69,159	---	69,159
Tuna, skipjack.....	---	---	1,349,815	199,318	1,549,133
Tuna, yellowfin.....	---	---	1,141,413	---	1,141,413
Miscellaneous.....	---	---	152	---	152
South America:					
Tuna, skipjack.....	---	---	2,176,167	1,698,732	3,874,899
Tuna, yellowfin.....	---	---	5,149,461	201,439	5,350,900
Japan:					
Sablefish.....	---	---	160,000	---	160,000
Tuna, albacore.....	1,804,676	---	26,500,712	187,805	28,493,193
Tuna, bigeye.....	62,712	---	27,935	---	90,647
Tuna, yellowfin.....	6,047,681	---	35,372,275	99,187	41,519,143
Australia:					
Tuna, albacore.....	---	---	2,733	---	2,733
Tuna, bluefin.....	---	---	3,591,522	---	3,591,522
Tuna, skipjack.....	8,040	---	---	---	8,040
Tuna, yellowfin.....	81,860	---	---	---	81,860
China (Formosa):					
Tuna, albacore.....	403,726	---	275	---	404,001
Tuna, bigeye.....	250,673	---	---	---	250,673
Tuna, yellowfin.....	1,359,421	---	137,740	---	1,497,161
Malaya:					
Tuna, albacore.....	251,727	---	2,862,934	---	3,114,661
Tuna, bigeye.....	143,843	---	92,822	---	236,665
Tuna, yellowfin.....	1,117,024	---	2,926,259	---	4,043,283
South Pacific Islands:					
Tuna, albacore.....	---	---	93,115	---	93,115
Tuna, skipjack.....	---	---	1,055,957	---	1,055,957
Tuna, yellowfin.....	---	---	165,198	---	165,198
Java:					
Tuna, skipjack.....	---	---	7,297	---	7,297
Tuna, yellowfin.....	---	---	36,658	---	36,658
Africa:					
Tuna, albacore.....	---	---	62,250	---	62,250
Total pounds.....	11,848,240	4,105	83,951,089	2,386,481	97,989,915

TABLE 6
Origin of Shipments of Fresh Fish Into California During 1964

TABLE 7
Origin of Commercial Fish Landings and Volume of Shipments Into California During 1964

Species	Landings of catches from				Shipments*	Grand total
	California waters	Waters north of State	Waters south of State	Total pounds		
Fish:						
Anchovy.....	4,975,089	----	----	4,975,089	----	4,975,089
Barracuda, California.....	251,025	----	83,115	334,140	803	334,943
Blacksmith.....	145,143	----	----	145,143	----	145,143
Bonito, Pacific.....	2,606,411	----	5,858	2,612,269	----	2,612,269
Cabazon.....	5,281	----	----	5,281	----	5,281
Cabrilla, spotted.....	----	----	13,592	13,592	----	13,592
Carp.....	194,527	----	72	194,527	----	194,527
Croaker, white.....	838,512	----	72	838,584	----	838,584
Flounder.....	418,932	2,054	----	420,986	----	420,986
Flounder, arrowtooth.....	9,735	----	----	9,735	----	9,735
Flyingfish.....	85,910	----	----	85,910	----	85,910
Grouper.....	----	----	164,030	164,030	----	164,030
Hake, Pacific.....	111,529	----	----	111,529	----	111,529
Halfmoon.....	10,023	----	20	10,043	----	10,043
Halibut, California.....	1,092,068	----	184,037	1,276,105	3,120	1,279,225
Halibut, Pacific.....	3,040	----	----	3,040	----	3,040
Hardhead.....	156,847	----	----	156,847	----	156,847
Herring, Pacific.....	349,270	----	----	349,270	----	349,270
Lingcod.....	810,301	25,375	701	836,377	----	836,377
Mackerel, jack.....	89,672,911	----	20,000	89,692,911	----	89,692,911
Mackerel, Pacific.....	26,827,216	----	665	26,827,881	----	26,827,881
Opaleye.....	2,001	----	----	2,001	----	2,001
Perch.....	131,359	----	1,756	133,115	----	133,115
Pompano, Pacific.....	121,222	----	----	121,222	----	121,222
Rockfish.....	7,860,973	193,489	74,050	8,117,912	----	8,117,912
Sablefish.....	2,419,191	44,206	55	2,463,452	180,169	2,643,621
Salmon.....	9,481,215	----	----	9,481,215	603,942	10,175,157
Sanddab.....	587,179	1,858	489	589,526	----	589,526
Sardine.....	13,137,483	----	----	13,137,483	----	13,137,483
Sculpin.....	77,585	----	16,640	94,225	----	94,225
Sea bass, giant.....	14,018	----	208,697	222,715	----	222,715
Seabass, white.....	550,817	----	840,264	1,391,081	797	1,391,878
Shad.....	----	----	----	----	74,470	74,470
Shark.....	606,402	----	40,167	646,569	1,520	648,089
Sheephead, California.....	13,404	----	4,530	17,934	----	17,934
Skate.....	222,705	----	----	222,705	----	222,705
Smelt.....	414,039	----	----	414,039	4,105	418,144
Smelt, whitebait.....	191,215	----	----	191,215	----	191,215
Sole, Dover.....	8,593,526	671,712	----	9,265,238	----	9,265,238
Sole, English.....	4,544,028	48,724	----	4,592,752	----	4,592,752
Sole, petrale.....	2,664,392	33,368	----	2,697,670	----	2,697,670
Sole, rex.....	1,394,180	16,467	----	1,410,647	----	1,410,647
Sole, sand.....	336,197	----	----	336,197	----	336,197
Sole, miscellaneous.....	46,946	268	51	47,265	----	47,265
Sturgeon.....	----	----	----	----	25,809	25,809
Swordfish.....	177,306	----	5,717	183,023	----	183,023
Tuna, albacore.....	33,867,547	----	8,683,164	42,551,011	32,169,953	74,720,964
Tuna, bigeye.....	----	----	----	----	577,985	577,985
Tuna, bluefin.....	4,655,330	----	18,515,928	23,171,258	3,660,681	26,831,939
Tuna, skipjack.....	3,988	----	66,054,966	66,058,954	6,495,326	72,554,280
Tuna, yellowfin.....	84	149,020,029	149,020,113	298,040,142	53,835,616	202,855,729
Turbot.....	92,810	470	----	93,280	----	93,280
Wahoo.....	----	----	4,248	4,248	----	4,248
Whitefish, ocean.....	975	----	796	1,771	----	1,771
Yellowtail, California.....	25,878	----	84,221	110,099	----	110,099
Miscellaneous.....	1,293	----	141	1,434	234,127	235,561
Miscellaneous (animal food).....	1,660,940	68,501	----	1,729,441	----	1,729,441

TABLE 7
Origin of Commercial Fish Landings and Volume of Shipments Into California During 1964

TABLE 7—Continued
Origin of Commercial Fish Landings and Volume of Shipments Into California During 1964

Species	Landings of catches from				Shipments*	Grand total
	California waters	Waters north of State	Waters south of State	Total pounds		
Crustacean:						
Crab, king.....	-----	----	----	-----	21,492	21,492
Crab, market.....	1,815,363	----	----	1,815,363	-----	1,815,363
Crab, rock.....	263,885	----	----	263,885	-----	263,885
Lobster, spiny.....	446,655	----	----	446,655	-----	446,655
Prawn.....	5,775	----	----	5,775	-----	5,775
Shrimp, ocean.....	968,325	131,822	----	1,100,147	-----	1,100,147
Mollusk:						
Abalone.....	4,079,223	----	----	4,079,223	-----	4,079,223
Clam, Washington.....	4,133	----	----	4,133	-----	4,133
Octopus.....	38,691	----	----	38,691	-----	38,691
Oyster, eastern.....	4,910	----	----	4,910	-----	4,910
Oyster, giant Pacific.....	1,354,737	----	----	1,354,737	-----	1,354,737
Squid.....	16,433,624	----	----	16,433,624	-----	16,433,624
Miscellaneous mollusk.....	467	----	----	467	-----	467
Total pounds.....	247,674,396	1,236,314	244,027,999	493,140,709	97,869,915	591,130,624

* For origin of shipments refer to Table 6.

TABLE 7
Origin of Commercial Fish Landings and Volume of Shipments Into California During 1964

TABLE 8
Monthly Landings and Shipments Into California During 1964

Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds
LANDINGS:													
Fish:													
Anchovy.....	349,063	57,005	320,737	215,100	501,840	327,508	432,091	612,977	605,673	885,759	512,031	144,005	4,075,089
Barracuda, California.....	94	15,243	10,869	75,793	31,473	87,216	7,868	7,473	1,121	23,542	69,916	27,458	321,140
Blacksmith.....	78,442	196,467	1,353	556	6,512	311,204	108,596	10,340	26,807	10,340	26,807	145,143	145,143
Bonito, Pacific.....	914	559	196	594	351	17	4	4	310	---	---	1,803	3,042,299
Californian.....	10,175	2,218	265	140	64	---	730	---	---	---	---	---	13,892
Carps.....	12,407	57,683	24,980	12,003	10,350	6,300	7,000	11,200	37,400	10,000	11,550	14,200	184,527
Croaker, white.....	103,426	40,808	78,537	53,440	67,529	61,731	23,263	19,355	31,110	27,042	30,558	300,745	838,584
Flounder.....	71,800	118,874	31,782	21,873	13,462	18,606	16,363	17,645	40,104	28,606	9,276	21,485	420,086
Flounder, arrowtooth.....	---	469	479	3,261	3,730	469	315	---	180	469	---	---	6,785
Flyingfish.....	---	---	---	---	---	13,000	22,413	37,744	12,567	186	---	---	85,910
Grouper.....	57,173	15,442	26,061	1,314	---	6,540	9,650	1,185	981	10,705	34,976	104,030	104,030
Hake, Pacific.....	2,495	1,600	4,487	21,820	22,530	34,447	14,098	6,853	920	1,860	---	100	111,529
Hallibut.....	94	---	---	---	60	60	380	3,737	3,086	---	1,180	1,448	10,943
Hallibut, California.....	174,195	207,696	124,222	61,665	40,512	77,500	127,296	99,910	67,991	75,557	91,308	118,693	1,278,103
Haddock, Pacific.....	---	---	---	---	578	670	975	560	611	52	---	---	3,040
Hardhead.....	8,419	27,100	38,055	12,955	12,450	13,300	1,203	3,300	1,600	10,150	9,375	18,660	156,817
Herring, Pacific.....	8,483	7,639	9,640	112,196	120,426	69,692	60	---	5,940	---	152	---	348,270
Langost.....	16,700	28,896	20,330	33,084	75,271	125,355	133,897	99,859	100,237	100,364	60,107	26,957	839,377
Mackerel, jack.....	144,191	3,203,398	8,946,555	6,110,181	3,054,820	14,004,877	4,570,359	6,606,988	11,464,053	11,615,182	10,928,288	6,144,017	89,692,911
Mackerel, Pacific.....	301,488	442,099	305,415	1,140,060	486,151	2,154,523	3,909,512	4,136,847	6,574,701	4,564,701	2,737,050	75,325	26,827,381
Opaleye.....	---	182	19	---	28	28	43	39	325	722	416	18	2,001
Perch.....	14,834	14,303	20,955	25,811	230	1,212	12,871	12,818	12,391	3,386	6,917	5,187	132,115
Pompano, Pacific.....	985	1,926	4,273	1,065	4,990	7,816	3,814	1,974	48,392	2,315	7,840	32,889	121,222
Rockfish.....	741,071	945,978	509,678	559,800	674,416	786,500	669,945	639,031	706,917	87,512	380,068	428,158	8,117,912
Sablefish.....	46,614	198,992	137,973	154,808	222,195	241,814	289,862	176,562	243,762	430,462	210,206	110,202	2,463,452
Salmon.....	16,139	23,131	52,305	67,098	67,031	62,510	71,991	59,558	67,838	40,253	33,763	19,883	889,526
Sardine.....	128,315	331,185	492,971	447,081	348,610	682,649	135,389	378,015	7,847,370	1,497,003	960,455	271,525	13,157,465
Scupin.....	11,890	8,787	2,470	5,177	2,710	9,009	15,061	18,841	10,486	---	3,001	---	94,225

FISH BULLETIN 132

TABLE 8
Monthly Landings and Shipments Into California During 1964

Sea bass, giant.....	25,107	20,254	23,009	25,072	6,011	12,541	20,803	5,471	16,564	2,460	16,910	26,221	222,715
Sea bass, white.....	88,383	140,437	156,396	115,035	110,283	89,485	62,505	218,281	137,238	123,522	130,290	48,408	1,291,081
Shark.....	46,438	34,653	31,261	29,743	78,762	99,075	77,262	34,004	50,279	48,390	54,273	41,797	646,869
Sheepshead, California.....	3,118	4,171	675	729	434	1,275	1,888	1,736	833	1,914	701	1,040	17,651
Skate.....	18,762	27,997	29,168	25,888	24,972	21,171	17,802	13,429	13,383	10,905	9,855	9,375	222,705
Smelt.....	8,897	40,444	50,538	14,742	20,800	38,887	65,010	55,886	56,236	45,997	11,237	5,665	414,039
Snell, whitehead.....	10,295	34,554	11,364	20,071	29,419	24,455	31,450	29,266	.....	.....	.....	.....	191,215
Sole, Dover.....	67,419	489,868	785,189	883,194	918,195	992,815	1,173,110	959,847	1,073,278	1,477,190	602,649	137,887	9,583,238
Sole, English.....	224,564	312,888	272,780	413,780	348,401	389,871	469,173	471,616	393,870	494,563	415,410	296,567	4,522,752
Sole, petrale.....	108,999	112,425	188,985	296,784	299,177	336,553	243,120	188,466	229,610	263,912	230,226	202,783	2,697,670
Sole, rex.....	117,022	135,915	103,968	91,333	107,844	112,681	135,290	126,826	133,845	144,524	118,298	83,121	1,410,647
Sole, sand.....	88,833	101,856	23,820	10,445	5,759	3,357	5,910	5,556	15,188	23,728	16,123	38,652	326,197
Sole, miscellaneous.....	1,918	2,091	4,728	3,796	6,285	7,745	1,945	4,521	4,528	2,197	2,659	3,221	47,265
Swordfish.....	.....	.....	.....	.....	.....	5,075	17,719	47,770	42,063	38,040	12,237	.....	183,023
Tuna, albacore.....	7,234	.....	.....	.....	.....	.....	3,569,191	14,777,347	9,194,805	9,511,809	5,175,225	32,4487	42,831,611
Tuna, bluefin.....	.....	8,880	.....	.....	48,719	505,378	4,620,013	8,608,441	6,472,337	2,410,418	430,833	60,839	23,171,258
Tuna, skipjack.....	7,227,245	3,726,399	7,446,139	3,925,158	6,065,792	6,271,073	5,214,991	5,734,186	3,880,888	7,486,492	3,354,712	6,225,518	66,038,954
Tuna, yellowfin.....	4,768,117	11,618,793	20,229,308	21,557,016	22,592,720	21,861,540	10,553,189	7,609,220	4,957,100	4,510,628	4,967,149	10,253,739	149,020,113
Turbot.....	11,295	19,692	13,725	5,815	3,057	1,077	4,451	4,296	8,415	4,502	6,208	10,744	93,289
Walrus.....	.....	.....	.....	2,119	.....	440	.....	.....	.....	.....	.....	1,689	4,248
Whitefish, ocean.....	.....	496	80	73	67	.....	154	.....	61	97	191	843	1,771
Yellowtail, California.....	7,344	3,225	6,902	7,483	9,071	10,714	2,455	3,527	9,308	12,634	18,608	18,348	110,099
Miscellaneous.....	212	251	21	11	123	184	809	183	.....	70	30	.....	1,834
Miscellaneous (animal food).....	118,007	46,190	56,250	61,673	134,442	105,124	282,227	333,780	194,184	323,419	46,972	36,167	1,738,441
Crustacean:													
Crab, market.....	359,164	154,586	118,558	91,650	67,396	32,518	3,264	.....	.....	.....	431,490	556,427	1,815,363
Crab, rock.....	15,485	21,510	20,575	26,652	16,350	26,022	20,254	34,029	35,885	22,301	14,253	10,629	283,885
Lobster, spiny.....	72,725	83,419	18,094	.....	.....	.....	.....	.....	145,818	92,503	64,125	416,655	.....
Prawn.....	2,398	904	108	.....	.....	.....	.....	.....	60	191	917	1,311	5,775
Shrimp, ocean.....	.....	.....	.....	.....	211,749	285,850	230,583	365,423	1,660	4,880	.....	.....	1,100,147
Mollusk:													
Abalone.....	178,080	.....	251,928	378,650	409,340	327,831	527,627	514,831	345,593	503,940	368,720	272,465	4,070,223
Clam, Washington.....	26	1,702	1,163	1,242	.....	.....	.....	.....	.....	.....	.....	.....	4,133
Octopus.....	10,633	12,747	4,445	5,990	5,220	2,113	490	421	285	.....	45	861	38,691
Oyster, eastern.....	391	2,922	550	.....	.....	.....	.....	.....	.....	394	453	390	4,910
Oyster, giant Pacific.....	131,046	128,295	126,623	100,759	105,174	94,263	54,082	55,486	82,210	168,894	178,292	141,613	1,334,727
Squid.....	690,870	998,340	206,811	829,975	2,403,629	2,622,475	1,716,190	1,517,147	368,727	44,100	1,038,625	3,226,555	18,433,624
Miscellaneous mollusk.....	40	64	41	32	42	44	12	24	38	.....	14	.....	467
Total pounds.....	21,941,882	23,597,971	41,259,506	38,733,544	41,624,822	55,662,846	43,726,099	56,340,685	55,778,078	51,197,324	33,303,352	29,974,600	493,140,709

MARINE FISH CATCH FOR 1964

17

TABLE 8—Cont'd.

TABLE 8—Continued
Monthly Landings and Shipments Into California During 1964

Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds
SHIPMENTS:^a													
Fish:													
Harrocks, California.....	----	----	----	528	----	----	275	----	----	----	----	----	803
Haddock, California.....	600	----	----	440	----	----	1,241	839	----	----	----	----	3,120
Sablefish.....	4,643	50,000	14,777	3,488	45,788	----	33,100	20,505	7,856	35,207	95,454	379,961	693,942
Seabass, white.....	75	----	----	----	----	----	639	83	----	----	----	----	797
Shad.....	----	50,000	----	----	----	22,405	2,065	----	----	----	----	----	74,470
Shark.....	43	----	50	----	----	295	718	414	----	----	----	----	1,520
Shell.....	1,612	1,612	----	----	----	1,820	1,260	----	1,025	----	----	----	4,105
Sturgeon.....	3,427,882	1,729,153	2,123,859	2,369,920	2,625,039	3,140,196	1,270,122	1,361,772	3,031,778	3,804,745	4,296,061	2,982,426	32,169,953
Tuna, albacore.....	122,691	103,462	11,016	71,920	10,659	103,789	60,520	57,054	24,221	----	12,353	----	577,985
Tuna, bluefin.....	1,750,898	----	----	138,987	2,818,809	----	30,150	603,720	----	----	----	----	3,590,981
Tuna, skipjack.....	5,847,396	3,294,158	2,995,643	891,279	616	169,093	271,942	1,621,464	74,724	1,255,275	482,023	4,465,326	6,465,326
Tuna, yellowfin.....	36,750	30,000	----	30,000	30,000	32,083	97	30,000	----	----	----	----	54,127
Miscellaneous.....	----	----	----	----	----	----	----	----	----	----	----	----	----
Crustacean:													
Crab, king.....	----	----	----	----	----	----	----	----	----	----	----	21,492	21,492
Total pounds.....	11,164,840	5,260,666	5,196,294	11,198,715	5,838,369	10,469,514	6,341,911	5,637,336	11,545,479	8,360,815	8,280,896	8,505,980	97,989,915
Grand total.....	33,106,722	28,858,637	48,455,800	49,932,259	47,963,191	66,132,360	50,088,010	61,978,021	67,323,357	89,000,709	97,989,915	38,569,880	644,640,646

^a For origin of shipments refer to Table 6.

59,558,139 41,884,848

591,130,694

RIGHT COLUMN: 13

TABLE 8
Monthly Landings and Shipments Into California During 1964

TABLE 9
Monthly Landings of Commercial Fishing Boats in the Eureka Area During 1964

Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds
LANDINGS FROM:													
California waters:													
Fish:													
Cabezon.....							4	15,011	19,403	2,784	822	1,038	4
Flounder.....	397	481	8,651	10,572	6,555	11,840	12,198	.....	.....	.....	.....	.....	83,458
Flounder, arrowtooth.....	409	479	3,041	3,789	493	.....	.....	.....	189	255	.....	.....	9,053
Hallibut, California.....	291	40	25	30	4	.....	.....	.....	.....	.....	.....	.....	392
Hallibut, Pacific.....	.....	.....	.....	.....	578	670	975	360	401	53	.....	.....	3,010
Herring, Pacific.....	.....	320	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	320
Langrod.....	1,471	8,323	6,681	32,539	35,723	61,409	104,893	60,729	52,882	48,448	16,903	2,290	432,357
Mackerel, jack.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	860
Perch.....	8,809	4,828	4,137	5,823	.....	.....	10,565	9,097	1,682	803	751	376	44,372
Rockfish.....	28,052	124,419	109,495	163,702	108,275	147,926	211,701	204,414	138,866	297,144	127,694	29,772	1,691,971
Shblefish.....	10,743	13,147	36,176	79,803	117,760	83,350	127,107	101,372	93,234	295,346	105,120	25,313	1,032,471
Salmon.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5,423,263
Sanddab.....	432	4,131	5,114	7,248	16,425	30,241	31,923	20,977	10,031	9,310	5,303	229	145,766
Shark.....	.....	942	155	7,030	10,039	7,455	4,885	.....	377	82	64	.....	30,559
Skate.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Smelt.....	40	15,290	10,573	4,354	15,063	37,322	53,922	47,632	48,952	8,690	.....	.....	230,900
Smelt, whitebait.....	10,326	34,032	10,423	17,852	24,946	25,030	31,297	29,395	.....	.....	.....	.....	180,392
Sole, Dover.....	34,420	12,008	110,705	232,582	553,890	570,300	832,763	831,455	732,303	1,160,497	407,699	50,505	5,880,531
Sole, English.....	7,360	40,000	77,824	126,052	111,057	132,922	307,745	285,832	207,445	221,063	174,825	3,879	1,733,796
Sole, petrale.....	70,989	34,370	40,957	73,146	109,071	126,158	152,935	67,182	104,299	137,072	59,369	82,580	1,057,319
Sole, rex.....	28,830	21,648	27,081	43,174	58,016	68,983	91,098	75,771	62,290	81,230	42,835	22,293	626,249
Sole, sand.....	524	283	922	2,788	1,952	1,592	4,093	2,403	928	.....	.....	.....	130
Sole, miscellaneous.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6
Tuna, albacore.....	.....	.....	.....	.....	.....	.....	15,546	1,822,291	1,619,576	1,248,217	44,788	.....	4,750,418
Turbot.....	36	.....	182	.....	140	.....	1,048	.....	3,200	885	.....	.....	5,489
Miscellaneous (animal food).....	.....	.....	.....	.....	.....	16,476	161,880	247,710	79,394	249,740	25,229	3,098	783,527
Crustacean:													
Crab, market.....	230,882	95,277	107,243	85,486	62,507	19,377	3,364	.....	.....	.....	.....	.....	380,440
Crab, rock.....	825	775	900	1,250	1,100	1,100	1,300	800	800	500	.....	.....	8,200
Shrimp, ocean.....	.....	.....	.....	.....	175,900	241,850	194,690	347,453	.....	.....	.....	.....	.....
Mollusk:													
Clam, Washington.....	26	1,702	1,183	1,242	770	543	83	36	.....	.....	.....	.....	4,133
Octopus.....	335	2,202	295	554	770	.....	.....	.....	.....	.....	.....	.....	4,815
Oyster, giant Pacific.....	96,389	85,342	88,649	53,157	65,415	60,954	26,807	26,103	51,280	126,357	133,653	82,417	894,512
Total pounds.....	629,903	507,502	646,151	1,105,431	2,779,781	2,953,839	4,128,281	5,302,768	3,342,326	3,898,778	1,145,721	684,757	26,760,279

MARINE FISH CATCH FOR 1964
19

TABLE 9
Monthly Landings of Commercial Fishing Boats in the Eureka Area During 1964

TABLE 9—Continued
Monthly Landings of Commercial Fishing Boats in the Eureka Area During 1964

Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds
Waters north of State:													
Fish:													
Flounder.....	540	348	49	75	539	.....	.....	.....	87	446	.....	.....	2,054
Langcod.....	188	465	989	2,428	7,556	2,582	.....	.....	5,207	5,960	.....	.....	25,375
Rockfish.....	39,461	24,505	33,051	13,743	20,272	17,788	.....	.....	15,332	19,224	10,260	.....	183,480
Sablefish.....	8	109	5,179	3,823	7,419	5,526	.....	.....	2,056	13,482	2,634	.....	44,206
Sanddab.....	10	189	95	70	1,057	36	.....	.....	409	.....	.....	.....	1,858
Sole, Dover.....	.....	1,611	93,203	86,846	176,342	56,179	.....	.....	50,065	145,218	53,308	.....	671,712
Sole, flounder.....	5,130	5,332	5,470	2,857	11,084	2,963	.....	.....	8,892	7,121	.....	.....	48,724
Sole, petrale.....	1,718	4,093	3,163	3,021	5,234	3,505	.....	.....	5,201	6,474	369	.....	33,968
Sole, rex.....	100	619	3,298	1,801	4,935	1,207	.....	.....	1,236	2,968	113	.....	16,467
Sole, miscellaneous.....	470	.....	.....	.....	.....	.....	.....	.....	268	.....	.....	.....	268
Turbot.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	470
Miscellaneous (animal food).....	.....	.....	.....	.....	.....	.....	14,721	.....	25,625	28,155	.....	.....	68,501
Crustacean:													
Shrimp, ocean.....	.....	.....	.....	.....	30,000	43,500	48,100	10,222	.....	.....	.....	.....	131,822
Total pounds.....	47,685	37,493	148,478	144,646	277,913	152,637	10,222	123,408	229,118	86,714	.....	.....	1,238,314
Grand total.....	629,909	555,167	683,644	1,253,909	2,924,430	2,966,782	4,280,921	5,312,990	3,465,733	4,127,896	1,212,435	684,767	27,998,693

FISH BULLETIN 12

TABLE 9
Monthly Landings of Commercial Fishing Boats in the Eureka Area During 1964

TABLE 10
 Monthly Landings and Shipments of Commercial Fish Into the San Francisco Area During 1964 *

Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds
LANDINGS FROM:													
California waters:													
Pisc:													
Anchovy.....	12,807	31,685	24,980	10,000	12,000	9,350	3,960	11,300	4,900	10,600	11,550	3,000	30,110
Carp.....	1,013	685	1,235	202	980	370	153	13,251	3,490	1,050	205	23,177	184,827
Craker, white.....	65,090	90,604	13,170	3,067	1,569	1,659	1,783	1,579	19,654	19,427	7,052	19,267	233,778
Flounder.....	.....	.....	.....	220	.....	.....	315	.....	.....	145	.....	.....	680
Flounder, arrowtooth.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hake, Pacific.....	2,405	.....	.....	1,650	9,405	1,495	2,475	.....	.....	.....	.....	.....	17,520
Halibut, California.....	64,318	61,813	6,870	705	8,418	8,376	4,944	4,858	1,468	6,217	7,428	11,458	183,090
Harthead.....	8,419	27,100	38,005	12,995	12,450	13,300	1,203	3,300	1,600	10,150	9,375	18,500	156,417
Herring, Pacific.....	8,463	7,316	8,640	.....	.....	.....	.....	.....	.....	.....	.....	.....	6,073
Lingcod.....	13,111	11,371	8,582	11,565	30,334	42,657	18,834	33,387	37,404	38,871	18,779	10,255	273,648
Mackerel, jack.....	38	.....	.....	.....	.....	.....	.....	449	415	320	475	.....	1,607
Perch.....	1,000	1,853	4,202	5,926	102	.....	.....	283	1,326	1,172	639	216	615
Rockfish.....	222,001	246,102	85,935	65,337	111,217	157,914	72,228	64,107	162,250	230,602	156,853	101,152	1,750,917
Sablefish.....	13,450	126,989	83,799	50,543	48,563	70,304	69,363	39,711	75,932	83,720	70,505	61,867	826,330
Salmon.....	.....	.....	.....	372,146	237,862	654,800	1,303,114	654,782	65,949	.....	.....	.....	3,607,664
Sardine.....	11,745	16,750	20,185	36,965	36,615	19,405	20,120	29,670	38,460	19,787	26,748	17,264	368,823
Sardine, white.....	.....	.....	.....	31	.....	.....	.....	.....	.....	.....	.....	.....	31
Shad.....	10,795	7,546	8,782	6,101	8,306	11,244	4,445	16,510	17,472	15,329	16,309	10,485	136,224
Shark.....	13,400	18,020	14,375	7,560	6,350	5,350	6,400	8,800	7,650	6,900	7,875	7,300	107,370
Skate.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Smelt.....	4,501	23,634	36,930	6,026	5,675	3,184	1,829	2,073	2,428	1,757	120	.....	88,187
Smelt, whiteback.....	.....	602	941	2,219	4,464	2,305	362	.....	.....	.....	.....	.....	10,853
Sole, Dover.....	32,996	468,890	666,074	228,470	229,846	204,498	214,924	70,814	238,780	160,715	136,602	84,286	2,737,004
Sole, English.....	176,530	200,942	75,704	96,470	130,290	124,833	117,555	151,175	246,400	212,631	212,423	247,037	1,962,680
Sole, petrale.....	29,956	55,838	66,717	77,815	79,563	62,889	51,255	94,245	80,900	92,077	151,613	105,221	948,109
Sole, rex.....	31,825	61,412	42,459	32,105	34,510	34,433	31,605	35,850	57,101	42,104	31,468	25,211	459,783
Sole, sand.....	67,871	75,243	15,965	3,376	1,611	2,365	420	7,715	14,905	22,442	15,533	34,246	256,284
Sole, miscellaneous.....	.....	.....	.....	14	12	116	176	.....	237	524	181	.....	2,413
Tuna, albacore.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Turbot.....	4,565	11,620	5,060	3,040	940	1,035	3,195	303,046	618,723	367,244	38,372	813	1,328,881
Miscellaneous.....	69	122	21	.....	18	.....	.....	450	.....	2,799	6,988	10,205	57,588
Miscellaneous (animal food).....	.....	.....	.....	.....	.....	830	11,595	3,803	7,605	7,155	5,284	6,623	42,617

MARINE FISH CATCH FOR 1964

TABLE 10

Monthly Landings and Shipments of Commercial Fish Into the San Francisco Area During 1964

TABLE 10—Continued
Monthly Landings and Shipments of Commercial Fish Into the San Francisco Area During 1964 *

Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds
LANDINGS:—Continued													
California Waters—Continued													
Crustacean:													
Crab, market.....	127,141	55,813	9,537	5,430	4,510	13,129	.....	.....	.....	.....	430,153	175,296	821,006
Crab, rock.....	.....	98	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	89
Shrimp, ocean.....	.....	.....	.....	.....	2,849	500	17,823	7,750	1,180	4,880	.....	.....	34,982
Mollusk:													
Alalane.....	713	.....	4,880	3,738	3,296	4,959	10,018	4,733	1,775	2,259	417	1,933	38,721
Octopus.....	5,739	8,945	3,545	2,960	1,782	1,020	250	385	165	45	66	295	23,167
Oyster, eastern.....	391	2,032	850	.....	.....	.....	.....	.....	.....	394	525	690	4,910
Oyster, giant Pacific.....	17,475	20,512	19,963	17,712	15,819	14,375	11,568	17,170	18,854	14,318	19,288	21,208	205,293
Total pounds.....	948,017	1,633,266	1,275,736	1,077,323	1,034,063	1,675,856	2,122,344	1,527,626	1,815,414	1,379,917	1,382,291	996,318	16,868,071
Waters south of State:													
Fish:													
Tuna, albacore.....	.....	.....	.....	.....	.....	.....	8,317	.....	.....	.....	.....	.....	8,317
Tuna, skipjack.....	.....	.....	191,092	.....	103,387	510,868	370,797	.....	.....	.....	.....	.....	1,186,971
Tuna, yellowfin.....	.....	195,000	665,327	.....	495,217	149,975	172,352	.....	.....	.....	.....	.....	1,511,869
Total pounds.....	.....	195,000	786,419	.....	513,704	690,368	551,466	.....	.....	.....	.....	.....	2,706,857
SHIPMENTS:†													
Fish:													
Shad.....	.....	.....	.....	.....	.....	.....	1,300	2,965	.....	.....	.....	.....	3,305
Tuna, albacore.....	521,337	30,660	142,275	312,179	39,800	185,915	.....	23,093	335,584	213,562	45,875	606,750	2,492,129
Tuna, bigeye.....	70,771	103,462	11,016	71,920	10,959	103,789	60,520	22,369	.....	.....	2,192	.....	457,278
Tuna, skipjack.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5,940
Tuna, yellowfin.....	1,224,437	1,100,949	955,679	971,092	332,351	642,346	244,420	273,478	606,666	580,588	846,210	787,870	8,605,985
Miscellaneous.....	.....	.....	30,000	.....	30,000	.....	32,000	.....	.....	.....	.....	.....	92,000
Crustacean:													
Crab, king.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	21,492	21,492
Total pounds.....	1,819,545	1,235,080	1,178,970	1,355,191	413,200	933,250	339,005	327,210	942,250	794,150	894,277	1,416,112	11,648,240
Grand total.....	2,767,562	3,063,346	3,241,125	2,432,514	1,860,987	3,269,474	3,012,715	1,854,838	2,767,664	2,174,067	2,276,568	2,412,430	31,223,268

* Includes Sacramento area landings.
 † For origin of shipments refer to Table 6.

TABLE 10
Monthly Landings and Shipments of Commercial Fish Into the San Francisco Area During 1964

TABLE 11
Monthly Landings and Shipments of Commercial Fish Into the Monterey Area During 1964

Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds
LANDINGS FROM:													
California Waters:													
Fish:													
Anchovy	328,087	17,000	89,900	42,900	294,900	115,333	208,790	250,275	361,228	820,884	277,832	27,200	2,833,229
Bonito, Pacific	223	86	11	---	78	17	334	---	285	986	60	---	1,285
Cabovero	390	8,100	3,929	12,913	6,891	11,666	15,565	6,763	7,230	2,843	1,861	6,139	87,823
Craker, white	8,404	15,943	7,786	5,839	6,960	4,151	2,073	731	9,159	5,786	1,488	---	69,113
Flounder	---	1,500	4,457	20,189	13,100	4,417	5,991	4,565	620	1,890	---	100	66,799
Hake, Pacific	2,168	4,999	2,350	4,531	1,381	8,755	6,977	4,696	4,020	1,289	1,216	785	42,819
Herring, California	---	---	---	112,186	130,425	69,662	60	5,940	---	---	---	---	318,273
Lingcod	1,269	1,317	2,450	4,116	3,700	5,904	2,305	3,948	4,161	4,017	---	---	37,107
Mackerel, jack	1,250	131,200	30,585	11,250	560	487,845	61,927	72,990	887,215	643,890	169,953	---	2,584,160
Mackerel, Pacific	---	---	---	---	---	---	50	547	1,814	147	---	---	2,558
Perch	198	820	9,165	6,092	50	275	---	12	12	24	---	---	16,838
Pompano, Pacific	---	25	1,935	3,873	1,796	336	972	46,665	1,484	63	---	---	54,194
Rockfish	178,632	189,729	61,375	110,524	280,797	282,689	233,404	242,393	262,676	170,194	151,614	151,487	2,174,861
Sablefish	21,012	82,516	12,072	3,690	52,945	73,903	96,132	35,244	52,759	29,919	30,177	---	410,717
Salmon	---	---	---	63,108	62,273	106,069	56,793	48,796	11,383	---	---	---	378,421
Sardines	2,820	1,447	14,447	20,413	12,255	10,339	13,097	7,458	9,655	18,645	1,432	504	112,212
Scallop	88,900	297,000	---	---	---	1,812	4,275	6,070	13,641	2,346	1,212	---	411,556
Scallop, white	102	101	52	199	112	7	28	47	23,008	1,542	555	---	26,338
Shark	4,743	3,698	2,094	1,022	4,118	5,083	7	670	5,820	1,050	8,742	3,651	41,820
Skate	2,302	7,450	140,400	10,600	8,205	7,795	6,472	7,613	5,250	1,916	1,916	1,875	77,828
Squid	---	570	2,710	2,627	2,634	3,690	1,473	1,681	2,250	10,670	1,580	1,620	36,731
Sole, Dover	---	---	5,493	5,045	9,280	14,820	13,765	14,378	3,270	890	905	---	67,116
Sole, English	10,385	26,358	40,910	79,833	48,530	19,837	18,160	28,654	33,270	45,250	19,930	---	19,550
Sole, petrale	2,410	11,828	35,372	41,350	21,337	16,100	10,828	10,346	19,875	14,515	7,616	9,360	200,837
Sole, rex	25,510	34,000	21,419	7,920	8,270	3,380	4,590	4,055	3,956	13,782	30,035	25,335	183,252
Sole, mixed	---	---	---	725	---	---	---	---	38	---	---	---	783
Sole, miscellaneous	1,008	1,767	454	462	1,424	643	398	587	2,420	1,578	1,827	---	15,333
Swordfish	---	---	---	---	---	---	---	---	308	308	---	---	616
Tuna, albacore	---	---	---	---	---	---	22,782	349,550	629,193	743,659	527,256	---	2,272,440
Tuna, skipjack	---	---	---	---	---	---	---	---	104	---	---	---	104
Turbot	---	---	---	175	915	---	---	---	---	---	---	---	1,090
Miscellaneous	25	70	---	---	100	---	---	---	---	---	---	---	208
Miscellaneous (animal food)	3,150	4,570	555	2,650	8,300	7,400	4,000	6,775	1,300	2,625	2,575	2,980	46,880

MARINE RESEARCH BOARD 1964

23

TABLE 11
Monthly Landings and Shipments of Commercial Fish Into the Monterey Area During 1964

TABLE 11—Continued
 Monthly Landings and Shipments of Commercial Fish Into the Monterey Area During 1964

Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds
LANDINGS FROM:—Continued													
California Waters:—Continued													
Crustaceans:													
Crab, market.....	980	3,207	1,241	145	52	....	....	....	....	....	1,284	771	7,780
Crab, rock.....	18	227	384	....	14	....	....	....	....	46	191	917	543
Prawn.....	2,298	504	108	....	....	....	....	....	....	....	....	....	5,775
Mollusk:													
Abalone.....	....	....	....	....	....	....	60	350	....	....	....	....	410
Octopus.....	4,324	1,332	575	....	66	120	....	....	....	....	129	112	6,678
Oyster, giant Pacific.....	....	1,946	....	3,626	....	....	....	....	605	212	1,386	884	8,449
Scallop.....	....	....	175	98,025	2,425,429	2,913,340	1,641,610	1,516,917	368,737	41,100	91,499	3,900	9,101,823
Miscellaneous mollusk.....	40	64	41	32	36	44	12	34	38	51	14	55	401
Total pounds.....	691,419	790,413	364,159	703,834	3,358,215	4,156,511	2,378,433	2,630,810	2,721,636	2,591,788	1,351,636	372,796	22,111,950
SHIPMENTS:*													
Fish:													
Smelt.....	....	....	....	....	....	1,820	1,260	....	....	1,025	....	....	4,105
Total pounds.....	....	....	....	....	....	1,820	1,260	....	....	1,025	....	....	4,105
Grand total.....	691,419	790,413	364,159	703,834	3,358,215	4,158,331	2,379,693	2,630,810	2,721,636	2,592,813	1,351,936	372,796	22,116,055

* For origin of shipments refer to Table 6.

U.S. GOVERNMENT PRINTING OFFICE: 1964

TABLE 11
 Monthly Landings and Shipments of Commercial Fish Into the Monterey Area During 1964

TABLE 12
Monthly Landings of Commercial Fishing Boats in the Santa Barbara Area During 1964

Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds
LANDINGS FROM:													
California waters:													
Fish:													
Anchovy.....	.....	6,914	1,343	35,872	.....	1,100	.....	.....	.....	13,940	901	.....	1,100
Barracuda, California.....	.....	89	.....	.....	2	223	941	3,410	4,734	1,895	101	561	11,956
Cabotte.....	691	473	185	561	273	.....	.....	.....	.....	.....	729	365	3,248
Croaker, white.....	.....	.....	.....	.....	.....	.....	65	816	.....	.....	.....	.....	881
Flounder.....	7,659	8,303	4,827	2,326	903	417	309	524	548	198	176	65	26,585
Hake, Pacific.....	.....	.....	.....	.....	.....	28,335	4,320	2,420	.....	.....	.....	.....	37,185
Haddock, California.....	46,797	39,548	35,505	26,626	23,169	22,592	41,629	25,679	28,716	26,433	21,751	34,769	371,218
Langcod.....	899	2,566	1,752	3,418	4,319	5,651	5,282	1,723	1,533	1,636	7,975	6,683	48,419
Mackerel, jack.....	67,220	1,069,649	739,909	289,629	.....	274,480	67,600	1,916,925	2,041,080	1,695,680	2,204,200	1,884,550	12,183,795
Mackerel, Pacific.....	.....	.....	.....	.....	.....	.....	.....	10,200	637,780	200,400	.....	.....	848,380
Perch.....	3,734	3,893	2,139	6,560	13	.....	1,598	2,670	1,243	643	2,407	3,070	27,970
Pompano, Pacific.....	.....	.....	.....	.....	.....	.....	1,912	951	.....	.....	.....	.....	2,876
Rockfish.....	226,121	238,694	161,650	89,967	119,156	122,063	90,289	62,475	142,442	132,910	103,818	93,743	1,884,298
Sablefish.....	1,150	4,220	5,630	11,683	15,582	4,565	11,039	180	17,710	8,001	1,680	3,782	85,215
Salmon.....	.....	.....	250	3,104	6,270	30,760	65,299	54,251	12,342	.....	.....	.....	172,056
Sardine.....	.....	.....	.....	.....	279	.....	.....	4	.....	.....	.....	.....	533
Sea bream, gray.....	23,000	.....	149	36	45	70	.....	136,435	45,886	91,606	.....	.....	137,030
Sea bass, white.....	3,978	7,624	618	477	432	271	4,706	7,491	9,145	7,568	16,585	6,656	63,552
Shark.....	2,179	1,577	2,616	2,209	35,577	35,442	33,028	2,175	3,634	2,037	2,860	2,166	125,499
Sheepshead, California.....	110	474	110	.....	.....	.....	.....	.....	30	193	108	74	1,009
Slate.....	2,804	1,663	355	123	138	515	45	100	233	.....	.....	.....	5,962
Sole, Dover.....	29,628	5,979	9,255	3,894	38,323	28,855	55,479	40,266	19,008	900	6,455	2,266	208,875
Sole, English.....	29,689	33,651	73,019	74,215	55,247	81,290	25,320	7,755	5,963	7,626	8,232	25,701	427,848
Sole, petrale.....	5,644	8,631	40,816	101,310	86,185	126,172	24,452	13,723	19,445	13,774	11,259	5,622	457,053
Sole, rock.....	20,157	18,665	12,280	4,839	5,247	980	3,690	11,160	9,362	4,440	13,817	10,282	124,896
Sole, sand.....	.....	29,328	7,173	2,654	2,486	294	82	.....	.....	1,296	500	.....	556
Sole, miscellaneous.....	71	.....	3,925	3,007	2,251	142	19	.....	.....	.....	.....	.....	888
Swiftfish.....	.....	.....	.....	.....	.....	.....	.....	4,173	831	4,851	.....	.....	13,857
Tuna, albacore.....	109	.....	.....	.....	.....	.....	16,936	340,845	1,243,790	1,435,678	829,418	24,968	3,891,744
Turbot.....	6,694	7,692	8,483	2,600	1,05	42	213	.....	.....	818	220	.....	38,270
Whitefish, ocean.....	.....	45	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	48
Yellowtail, California.....	.....	.....	.....	.....	.....	.....	.....	51	.....	17	.....	.....	68
Miscellaneous (animal food).....	18	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	24
	114,837	41,829	55,695	59,623	126,142	80,418	90,031	75,779	80,260	35,740	13,855	23,166	796,616

MARINE FISH CATCH FOR 1964

21

TABLE 12
Monthly Landings of Commercial Fishing Boats in the Santa Barbara Area During 1964

TABLE 12—Continued
 Monthly Landings of Commercial Fishing Boats in the Santa Barbara Area During 1964

Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds
LANDINGS FROM:—Continued													
California waters:—Continued													
Crustaceans:													
Crab, market.....	101	189	527	889	227	12	.....	.....	.....	.....	53	56	2,134
Crab, rock.....	7,681	11,276	9,297	17,248	5,277	11,510	2,517	18,168	20,613	9,481	2,456	1,423	118,887
Lobster, spiny.....	27,310	18,132	9,905	.....	.....	.....	.....	.....	.....	19,872	13,188	15,094	103,771
Mollusk:													
Abalone.....	118,650	.....	177,417	245,504	290,007	147,936	320,316	373,808	215,071	323,603	276,777	185,954	2,673,533
Octopus.....	235	245	30	176	632	430	130	.....	120	.....	.....	.....	1,968
Oyster, giant Pacific.....	17,191	20,685	20,011	26,864	23,942	19,033	15,077	12,213	11,481	15,307	24,265	57,104	245,483
Squid.....	.....	47,000	.....	8,400	2,380	.....	230	.....	.....	42,500	372,570	469,580	6
Miscellaneous mollusk.....	.....	.....	.....	.....	6	.....	.....	.....	.....	.....	.....	.....	.....
Total pounds.....	755,207	1,606,507	1,384,693	985,255	851,702	1,021,754	885,411	3,124,791	4,988,820	4,059,628	3,605,741	2,860,298	26,127,807
Waters south of State:													
Fish:													
Mackerel, jack.....	.....	.....	.....	.....	.....	.....	.....	10,000	.....	.....	.....	.....	10,000
Tuna, albacore.....	.....	.....	.....	.....	.....	.....	.....	88	.....	.....	.....	.....	88
Total pounds.....	.....	.....	.....	.....	.....	.....	.....	10,088	.....	.....	.....	.....	10,088
Grand total.....	755,207	1,606,507	1,384,693	985,255	851,702	1,021,754	885,411	3,134,879	4,998,908	4,059,628	3,605,741	2,860,298	26,137,895

FISH BULLETIN 132

TABLE 12
 Monthly Landings of Commercial Fishing Boats in the Santa Barbara Area During 1964

TABLE 13
 Monthly Landings and Shipments of Commercial Fish Into the Los Angeles Area During 1964

Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds
LANDINGS FROM:													
California waters:													
Fish:													
Anchovy.....	20,290	39,485	222,248	166,600	207,340	201,735	227,041	362,402	239,945	65,175	234,190	113,805	2,107,555
Barracuda, California.....	4	8,140	7,676	33,716	29,762	86,680	6,799	4,154	1,409	7,951	.....	.....	183,682
Blacksmelt.....	.....	.....	.....	.....	.....	.....	108,996	10,740	23,907	.....	.....	.....	143,142
Bonito, Pacific.....	50,046	188,365	954	573	3,558	308,120	410,134	399,797	625,223	294,789	87,160	82,467	2,460,626
Cabezon.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	116
Croaker, white.....	101,898	31,586	73,197	39,125	59,634	48,809	7,359	3,177	10,345	21,909	27,222	294,937	723,678
Flounder.....	94	.....	.....	.....	.....	15,000	28,413	37,744	12,267	186	.....	.....	83,619
Halibut.....	47,922	80,068	65,771	16,732	6,029	16,134	10,410	13,165	8,105	13,012	46,506	36,155	59,848
Halibut, California.....	40	151	72	49	67	110	25	.....	.....	.....	33	47	594
Langood.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mackerel, jack.....	85,883	2,021,358	8,076,370	5,839,911	3,054,290	13,244,552	4,441,732	4,696,654	8,535,245	12,375,192	8,552,700	4,183,642	74,917,399
Mackerel, Pacific.....	307,236	441,812	305,290	1,139,542	485,596	2,154,523	3,900,030	4,125,540	5,934,495	4,364,089	2,737,959	75,525	25,973,510
Onchyle.....	.....	183	19	.....	.....	28	43	39	835	722	416	16	2,901
Percs.....	3,653	2,884	1,122	229	65	837	1,184	290	7,999	1,157	3,299	604	22,814
Pompano, Pacific.....	955	1,554	4,373	870	3,117	6,060	1,546	68	1,727	831	7,780	32,889	61,770
Rockfish.....	58,872	91,282	40,130	69,832	42,743	35,906	21,257	23,682	7,428	16,014	19,531	30,747	457,394
Sublefin.....	288	112	187	.....	114	.....	.....	70	.....	.....	.....	185	926
Salmon.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	41
Sardines.....	15,315	34,185	463,971	447,030	285,060	630,828	129,003	217,510	7,058,190	1,346,607	632,763	125,278	11,686,711
Southern.....	166	451	162	367	419	2,719	3,678	4,266	2,263	875	715	329	16,110
Sea bream, giant.....	95	451	390	110	1,327	2,847	1,901	730	87	895	98	194	9,035
Seacock, white.....	1,563	29,474	3,701	8,077	14,428	40,352	55,465	156,160	55,173	10,127	584	3,852	397,375
Shark.....	13,435	10,272	9,670	6,532	11,593	30,321	23,691	18,228	14,226	23,740	15,334	11,164	187,425
Sheepshead, California.....	304	1,919	95	32	300	490	82	607	185	.....	.....	.....	4,209
Skate.....	20	122	233	183	39	46	.....	16	.....	.....	.....	.....	675
Sole.....	4,356	690	325	1,735	28	4,820	7,785	4,510	2,520	18,580	9,137	4,645	59,131
Sole, English.....	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sole, miscellaneous.....	219	263	233	56	135	219	484	279	221	80	34	65	2,294
Swordfish.....	.....	.....	.....	.....	.....	3,975	14,478	40,877	23,246	46,825	10,197	.....	139,598

MARINE FISH CATCH FOR 1964

TABLE 13
 Monthly Landings and Shipments of Commercial Fish Into the Los Angeles Area During 1964

TABLE 13—Continued
Monthly Landings and Shipments of Commercial Fish Into the Los Angeles Area During 1964

Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds
LANDINGS FROM—Continued													
California waters—Continued													
Fish—Continued													
Tuna, albacore.....	.....	.....	.....	.....	.....	.....	1,942,904	5,051,138	2,798,643	3,832,308	3,095,613	109,253	16,829,859
Tuna, bigeye.....	.....	.....	.....	.....	.....	250	20,903	3,528,633	628,968	68,610	.....	.....	4,586,394
Tuna, skipjack.....	.....	.....	.....	.....	.....	.....	.....	.....	459	2,658	.....	.....	3,117
Turbot.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
Whitefish, ocean.....	.....	128	80	.....	67	.....	.....	.....	.....	.....	.....	.....	881
Yellowtail, California.....	54	.....	132	.....	5,142	7,799	1,715	1,077	2,830	1,061	142	.....	19,672
Miscellaneous.....	.....	12	.....	11	10	152	107	.....	.....	70	30	.....	392
Crustacean:													
Crab, rock.....	6,821	7,008	9,740	8,154	9,959	13,412	16,607	15,121	14,172	11,624	10,211	7,376	130,215
Lobster, spiny.....	24,187	17,988	4,118	.....	.....	.....	.....	.....	.....	57,063	36,844	.....	23,659
Mollusk:													
Abalone.....	42,900	.....	53,425	65,926	83,300	144,599	157,182	114,838	111,286	169,432	74,765	70,700	1,124,070
Octopus.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	83
Squid.....	960,670	951,340	202,825	731,650	172,800	6,855	74,550	.....	.....	3,000	90,183	2,850,085	6,858,110
Total pounds.....	1,749,632	3,971,223	9,553,498	8,609,371	4,477,379	17,008,786	11,656,896	19,046,639	26,127,103	22,663,767	16,801,981	8,658,262	149,724,967
Waters south of State:													
Fish:													
Barracuda, California.....	60	.....	800	4,900	.....	.....	.....	.....	.....	4	41,824	26,518	72,216
Bonito, Pacific.....	10,175	2,216	255	140	64	.....	.....	.....	.....	.....	150	.....	150
Cabeilla, spotted.....	20,640	1,253	21,535	970	.....	6,540	9,650	.....	1,185	.....	6,935	25,025	124,233
Groupers.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	14,748
Halibut, California.....	382	723	.....	135	565	841	.....	285	9,297	38	6,202	.....	33,216
Lingcod.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	420	170	.....	590
Mackerel, jack.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10,000
Perch.....	40	315	190	1,116	.....	.....	.....	.....	.....	.....	.....	.....	1,661
Rockfish.....	186	8,497	1,815	355	.....	6,040	3,170	.....	.....	655	985	276	21,969
Sea bass, giant.....	18,198	7,323	12,823	19,161	3,401	8,990	7,908	.....	15,808	20,741	7,946	.....	138,328
Sebaste, white.....	43,276	83,844	100,782	78,839	87,841	45,178	232	21,000	40,620	70,796	80,466	22,570	684,144
Shark.....	6,101	6,513	3,100	685	629	2,185	2,108	300	1,513	632	2,447	.....	5,803
Sheepshead, California.....	291	95	115	.....	.....	.....	.....	.....	.....	.....	.....	300	801
Suez fish.....	.....	.....	.....	.....	.....	.....	654	.....	.....	3,763	1,085	.....	5,532
Tuna, albacore.....	7,125	.....	.....	.....	.....	.....	349,961	2,294,414	586,001	130,478	4,569	420	3,359,968

FISH BULLETIN 132

TABLE 13
Monthly Landings and Shipments of Commercial Fish Into the Los Angeles Area During 1964

Tuna, bluefin.....	8,880			48,710	187,209	3,825,828	4,204,407	5,116,383	2,034,514	430,533	29,510	15,886,080
Tuna, skipjack.....	6,493,820	2,944,332	5,652,355	3,166,828	4,171,856	4,800,862	4,662,490	2,106,629	4,974,448	2,944,946	5,291,953	32,206,418
Tuna, yellowfin.....	8,612,801	7,874,716	16,570,896	18,054,155	18,842,694	18,030,447	8,531,571	5,123,491	3,133,763	3,544,313	3,316,797	7,858,695
Whitefish, ocean.....							41					41
Yellowtail, California.....	5,314	2,522	5,228	5,313	2,697	1,727	237		1,808	1,842	10,850	14,530
Miscellaneous.....							9					82,096
												41
Total pounds.....	15,248,209	10,941,321	22,370,214	21,331,367	23,158,556	23,358,004	17,129,661	16,937,419	10,686,788	10,799,883	6,860,730	13,314,239
SHIPMENTS*.....	15,248,209	10,941,321	22,370,214	21,331,367	23,158,556	23,358,004	17,129,661	16,937,419	10,686,788	10,799,883	6,860,730	13,314,239
Fish:												
Barracuda, California.....				828			275					803
Halibut, California.....	600			440			1,241	839				3,120
Salmon.....	4,643	45,503	14,777	3,488	43,758		33,100	29,505	7,856	33,897	93,454	379,961
Seabass, white.....	75						639	83				707
Shad.....			50,000			21,105						71,105
Shark.....	43			50		295	718	414				1,520
Sturgeon.....	1,612	1,612						20,327				35,809
Tuna, albacore.....	2,903,545	1,698,494	1,981,584	2,057,741	2,583,149	2,954,281	1,279,122	1,338,679	2,690,194	3,403,378	4,250,186	29,322,919
Tuna, bigeye.....	51,920						34,455	24,221				120,757
Tuna, bluefin.....					138,987	2,848,809		69,159	603,726			3,660,681
Tuna, skipjack.....	1,759,898		858,745		516	109,095		263,002		1,655,507	882,023	4,589,238
Tuna, yellowfin.....	4,622,959	2,193,237	1,970,963	6,718,559	2,758,759	3,405,822	4,686,466	3,573,023	5,880,072	3,857,029	1,665,545	44,529,044
Miscellaneous.....		86,780				35,850	85	67	36,000			33,375
Total pounds.....	9,345,295	4,025,586	4,017,324	9,639,551	5,625,169	9,435,257	6,001,646	5,310,129	8,981,765	7,303,101	7,187,301	7,178,968
Grand total.....	26,343,138	18,938,130	35,941,036	38,680,319	33,161,104	49,800,047	34,788,173	41,293,584	46,095,656	40,786,751	30,853,012	28,551,469

* For origin of shipments refer to Table 6.

MARINE FISH CATCH FOR 1964

29

TABLE 13—Cont'd.

TABLE 14
Monthly Landings and Shipments of Commercial Fish Into the San Diego Area During 1964

Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds
LANDINGS FROM:													
California waters:													
Fish:													
Anchovy.....	686	1,120	1,589	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,395
Barracuda, California.....	.....	159	141	2,207	1,711	535	886	639	.....	.....	.....	65	6,373
Bonito, Pacific.....	14,596	11,013	423	13	2,552	2,951	8,228	26,135	18,583	28,460	14,945	4,065	132,261
Craker, white.....	185	527	14	10	89	586	121	426	284	120	415	281	3,231
Hake, Pacific.....	.....	.....	.....	.....	25	.....	.....	.....	.....	.....	.....	.....	25
Halibut.....	.....	.....	.....	.....	.....	.....	57	118	.....	.....	.....	.....	175
Halibut, California.....	9,837	20,110	13,055	8,997	6,910	18,744	15,615	14,866	8,215	4,682	4,904	19,214	142,342
Limcod.....	.....	.....	.....	.....	98	.....	.....	.....	.....	12	.....	55	176
Mackerel, Pacific.....	252	92	.....	818	555	.....	432	215	639	65	.....	.....	2,768
Perch.....	.....	.....	.....	.....	.....	.....	.....	323	813	290	253	414	3,363
Pompano, Pacific.....	.....	380	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	380
Rockfish.....	9,900	21,115	19,866	23,982	28,398	33,673	13,412	11,671	6,399	7,340	8,894	7,392	191,832
Sablefish.....	.....	.....	.....	86	273	173	.....	.....	.....	.....	.....	.....	532
Sandfish.....	142	794	2,829	2,307	1,300	1,465	1,273	1,451	2,825	2,110	304	1,785	18,385
Sardine.....	.....	.....	.....	65,439	.....	.....	109	13,000	22,459	66,296	24,570	3,200	198,220
Seoulin.....	11,784	8,336	2,414	3,810	2,291	6,290	7,457	4,830	4,290	2,501	2,886	2,587	61,475
Sea bass, giant.....	220	137	20	243	468	634	454	1,110	189	145	300	79	2,999
Sea bass, white.....	2,317	612	4,430	1,632	3,118	2,837	2,524	29,612	3,125	1,329	884	220	52,180
Shark.....	8,596	5,027	4,237	10,819	18,314	13,665	13,027	11,746	7,965	5,127	7,232	8,463	114,258
Sheepshead, California.....	2,027	1,983	255	197	134	785	723	291	38	1,126	453	174	8,186
Solo, petrale.....	.....	.....	.....	.....	.....	.....	984	.....	.....	.....	.....	.....	984
Solo, miscellaneous.....	20	61	165	257	2,463	6,619	3,868	2,631	325	5	17	.....	16,306
Sweetfish.....	.....	.....	.....	.....	1,100	2,583	2,720	8,436	4,586	2,140	.....	.....	21,565
Tuna, albacore.....	.....	.....	.....	.....	.....	185,791	1,177,852	1,090,690	1,506,500	621,699	.....	.....	189,433
Tuna, bluefin.....	.....	.....	.....	.....	.....	.....	4,340	60,382	.....	.....	.....	.....	68,966
Tuna, skipjack.....	.....	.....	.....	.....	.....	.....	.....	333	124	310	.....	.....	767
Tuna, yellowfin.....	.....	.....	.....	.....	.....	.....	84	.....	.....	.....	.....	.....	84
Whitefish, ocean.....	.....	.....	.....	73	.....	.....	.....	.....	.....	.....	.....	.....	99
Yellowtail, California.....	.....	.....	.....	238	1,092	1,227	16	530	1,822	787	232	15	6,138
Miscellaneous.....	.....	30	.....	.....	.....	.....	285	47	.....	.....	.....	.....	362
Crustacean:													
Crab, rock.....	110	1,956	294	.....	.....	.....	.....	.....	.....	676	1,656	2,139	6,792
Lobster, spiny.....	21,229	17,299	4,341	.....	.....	.....	.....	.....	.....	68,943	42,801	24,474	170,858

FISH BULLETIN 132

TABLE 14
Monthly Landings and Shipments of Commercial Fish Into the San Diego Area During 1964

	15,826	16,209	33,692	32,553	30,340	40,051	21,402	17,461	8,626	16,764	7,878	240,499
Mollusk:												
Alabaster.....		3,911										3,911
Squid.....												
Total pounds.....	97,097	90,781	74,100	88,995	165,909	118,762	303,211	1,330,203	1,225,355	1,782,318	757,150	278,001
Waters south of State:												
Fish:												
Barracuda, California.....			909				183	2,780	24	947	4,181	875
Bonito, Pacific.....			31				829	920	78	175	905	3,459
Croaker, white.....			72									72
Groupers.....	6,553	14,086	4,129	344						984	3,770	9,561
Halibut.....										20		20
Halibut, California.....	2,780	95	745	287	5,534	5,078	48,904	38,423	8,039	23,876	9,298	7,762
Langcod.....			49									111
Mackerel, Pacific.....			165	123								665
Perch.....				95								95
Rockfish.....	7,306	16,889	5,728	3,970	55	100	1,596	349	925	2,639	1,619	11,677
Sablefish.....												55
Sandfish.....				49				149				489
Sculpin.....								3,928	9,755	2,924	35	16,449
Sea bass, giant.....	6,694	12,333	9,654	5,822	700		10,488	3,601	230	2,800	8,284	12,063
Snappers, white.....	7,147	8,682	46,813	29,111	4,352	346		5,041	1,175	18,909	22,115	15,735
Shark.....	389		1,122	2,605	225	1,165	1,187	892	49	53	242	8,161
Shepherd, California.....	289						1,083	338	600	190	149	3,629
Sole, miscellaneous.....			11					40				81
Swordfish.....										185		185
Tuna, albacore.....							1,029,187	3,438,090	968,279	177,725	10,510	5,314,791
Tuna, bluefin.....												30,729
Tuna, skipjack.....	731,725	782,067	1,602,883	754,330	1,788,516	317,819	736,242	571,157	996,604	307,297	409,888	3,043,313
Tuna, yellowfin.....	1,155,356	2,970,077	3,993,233	3,882,855	3,341,709	3,690,420	2,149,356	1,605,745	1,823,347	765,715	850,352	2,377,044
Wahoo.....				2,119		949						1,989
Whitefish, ocean.....		323						97				333
Yellowtail, California.....	1,976	703	1,542	1,873	149		253	1,929	3,823	8,944	7,174	3,805
Miscellaneous.....	100											100
Total pounds.....	1,922,392	3,814,273	4,767,043	4,683,460	5,141,294	4,698,023	4,417,886	6,420,719	4,449,329	3,822,127	1,328,088	3,400,929
SHIPMENTS*:												
Fish:												
Tuna, albacore.....												187,805
Tuna, skipjack.....				2,334					1,021,464		74,734	199,318
Tuna, yellowfin.....				201,459		99,187						300,626
Total pounds.....				203,873		99,187			1,021,464		262,529	199,318
Grand total.....	2,019,469	3,808,054	4,841,143	4,876,428	5,306,773	4,815,972	4,721,097	7,750,922	7,296,046	5,836,984	2,284,556	3,897,930

* For origin of shipments refer to Table 6.

MARINE FISH CATCH FOR 1964

31

TABLE 14—Cont'd.

TABLE 15
Value of Landings and Shipments of Commercial Fish Into California by Area, 1964

Species	Eureka	*San Francisco	Monterey	Santa Barbara	Los Angeles	San Diego	Total
LANDINGS:							
Fish:							
Anchovy.....	---	30,110	2,833,229	1,100	2,107,255	3,395	4,975,089
	---	\$2,535	\$44,315	\$65	\$34,977	\$169	\$82,061
Barracuda, California..	---	---	---	58,970	256,896	16,272	334,140
	---	---	---	\$8,914	\$43,842	\$2,505	\$54,961
Blacksmith.....	---	---	---	---	145,143	---	145,143
	---	---	---	---	\$2,981	---	\$2,981
Bonito, Pacific.....	---	---	1,265	11,956	2,460,776	138,272	2,612,269
	---	---	\$56	\$262	\$59,971	\$5,406	\$65,695
Cabezon.....	4	---	1,913	3,248	---	---	5,261
	---	---	\$70	\$193	\$11	---	\$274
Cabrilla, spotted.....	---	---	---	---	13,592	---	13,592
	---	---	---	---	\$2,190	---	\$2,190
Carp.....	194,527	---	---	---	---	---	194,527
	\$11,466	---	---	---	---	---	\$11,466
Croaker, white.....	---	23,177	87,525	881	723,678	3,323	838,584
	---	\$1,983	\$5,389	\$35	\$31,490	\$309	\$39,176
Flounder.....	91,512	233,776	69,113	26,585	---	---	420,986
	\$4,675	\$13,059	\$6,209	\$1,424	---	---	\$25,367
Flounder, arrowtooth.....	9,055	680	---	---	---	---	9,735
	\$391	\$28	---	---	---	---	\$419
Flyingfish.....	---	---	---	---	85,910	---	85,910
	---	---	---	---	\$10,814	---	\$10,814
Grouper.....	---	---	---	---	124,233	39,797	164,030
	---	---	---	---	\$27,445	\$9,584	\$37,029
Hake, Pacific.....	---	17,520	56,799	37,185	---	25	111,529
	---	\$295	\$924	\$586	---	\$1	\$1,806
Halfmoon.....	---	---	---	---	9,848	195	10,043
	---	---	---	---	\$1,878	\$25	\$1,903
Halibut, California.....	392	183,690	42,919	371,218	384,113	293,773	1,276,105
	\$98	\$43,473	\$10,359	\$81,855	\$90,569	\$62,428	\$288,782
Halibut, Pacific.....	3,040	---	---	---	---	---	3,040
	\$917	---	---	---	---	---	\$917
Hardhead.....	---	156,847	---	---	---	---	156,847
	---	\$41,515	---	---	---	---	\$41,515
Herring, Pacific.....	320	30,677	318,273	---	---	---	349,270
	\$15	\$2,603	\$29,794	---	---	---	\$32,412
Lingcod.....	457,732	273,648	57,107	46,419	1,194	287	836,377
	\$33,355	\$21,644	\$5,447	\$3,892	\$115	\$28	\$64,481
Mackerel, jack.....	860	1,697	2,584,160	12,178,795	74,927,399	---	89,692,911
	\$25	\$75	\$66,116	\$238,922	\$1,804,131	---	\$2,109,269
Mackerel, Pacific.....	---	---	2,558	848,380	25,973,510	3,433	26,827,881
	---	---	\$64	\$17,691	\$648,477	\$203	\$666,435
Opaleye.....	---	---	---	---	2,001	---	2,001
	---	---	---	---	\$334	---	\$334
Perch.....	44,572	17,574	16,836	27,970	24,475	1,688	133,115
	\$5,154	\$3,379	\$2,397	\$6,079	\$3,050	\$269	\$20,328
Pompano, Pacific.....	---	---	56,196	2,876	61,770	380	121,222
	---	---	\$19,007	\$628	\$13,505	\$95	\$33,235
Rockfish.....	1,885,160	1,750,317	2,174,861	1,584,298	479,393	243,883	6,117,912
	\$94,033	\$95,220	\$119,574	\$90,845	\$60,918	\$29,526	\$490,116
Sablefish.....	1,136,677	926,330	410,717	86,215	928	567	2,463,462
	\$109,190	\$31,866	\$17,992	\$3,513	\$95	\$47	\$162,703
Salmon.....	5,423,263	3,507,464	378,421	172,026	41	---	9,481,215
	\$2,660,676	\$2,046,658	\$215,418	\$89,834	\$23	---	\$5,012,609
Sanddab.....	148,618	308,823	112,212	533	266	19,074	569,526
	\$11,849	\$20,244	\$6,949	\$32	\$57	\$1,995	\$44,126
Sardine.....	---	31	414,556	839,965	11,686,711	196,220	13,137,483
	---	\$7	\$20,847	\$24,615	\$431,583	\$23,097	\$500,149
Sculpin.....	---	---	---	---	16,110	78,115	94,225
	---	---	---	---	\$5,401	\$21,213	\$26,614
Sea bass, giant.....	---	---	---	984	145,363	76,368	222,715
	---	---	---	\$129	\$23,399	\$12,378	\$35,906
Seabass, white.....	---	9,371	26,338	65,552	1,081,520	208,300	1,391,081
	---	\$2,272	\$4,865	\$16,893	\$244,758	\$40,563	\$309,351
Shark.....	1,075	136,324	41,820	125,499	219,432	122,419	646,569
	\$71	\$7,100	\$1,472	\$12,831	\$28,148	\$13,966	\$62,588
Sheephead, California..	---	---	---	1,069	5,110	11,815	17,934
	---	---	---	\$67	\$78	\$67	\$1,412
Skate.....	30,930	107,370	77,828	5,902	675	---	222,705
	\$122	\$1,226	\$1,195	\$280	\$69	---	\$2,892
Smelt.....	230,000	86,157	36,751	---	59,131	---	414,039
	\$12,641	\$10,951	\$2,378	---	\$2,567	---	\$28,427
Smelt, whitebait.....	180,362	10,853	---	---	---	---	191,215
	\$13,432	\$1,166	---	---	---	---	\$14,598

TABLE 15
Value of Landings and Shipments of Commercial Fish Into California by Area, 1964

TABLE 15—Continued
Value of Landings and Shipments of Commercial Fish Into California by Area, 1964

Species	Eureka	*San Francisco	Monterey	Santa Barbara	Los Angeles	San Diego	Total
LANDINGS—Continued:							
Fish—Continued:							
Sole, Dover.....	6,252,243	2,737,004	67,116	208,875	-----	-----	9,265,238
	\$390,708	\$154,077	\$3,355	\$12,350	-----	-----	\$560,490
Sole, English.....	1,732,430	1,992,680	399,787	427,848	7	-----	4,552,752
	\$140,232	\$154,450	\$30,733	\$28,681	-----	-----	\$354,105
Sole, petrale.....	1,090,687	948,109	200,837	457,053	-----	984	2,697,670
	\$124,846	\$118,010	\$26,225	\$53,314	-----	\$246	\$322,641
Sole, rex.....	642,716	459,763	183,252	124,896	-----	-----	1,410,647
	\$46,396	\$31,213	\$9,172	\$8,615	-----	-----	\$95,396
Sole, sand.....	15,951	256,284	763	63,199	-----	-----	336,197
	\$1,745	\$29,565	\$98	\$7,348	-----	-----	\$38,756
Sole, miscellaneous.....	274	2,413	15,353	10,574	2,294	16,357	47,265
	\$16	\$135	\$1,502	\$460	\$241	\$4,063	\$6,417
Swordfish.....	-----	-----	906	15,237	145,130	21,750	183,023
	-----	-----	\$480	\$7,641	\$82,792	\$11,852	\$102,740
Tuna, albacore.....	4,750,418	1,336,798	2,272,440	3,891,832	20,189,827	10,109,696	42,551,011
	\$653,095	\$184,280	\$312,733	\$538,029	\$3,261,568	\$1,630,008	\$6,579,713
Tuna, bluefin.....	-----	-----	-----	-----	20,472,444	2,698,814	23,171,258
	-----	-----	-----	-----	\$2,490,314	\$336,279	\$2,826,593
Tuna, skipjack.....	-----	1,186,971	104	-----	-----	-----	1,187,075
	-----	\$127,101	\$8	-----	-----	-----	\$127,109
Tuna, yellowfin.....	-----	1,511,669	-----	-----	119,794,239	27,714,205	148,020,113
	-----	\$232,088	-----	-----	\$15,956,644	\$3,660,804	\$19,849,536
Turbot.....	5,959	57,958	1,090	28,270	3	-----	93,280
	\$539	\$5,054	\$21	\$1,473	-----	-----	\$4,887
Wahoo.....	-----	-----	-----	-----	-----	4,248	4,248
	-----	-----	-----	-----	-----	\$849	\$849
Whitefish, ocean.....	-----	-----	-----	45	872	854	1,771
	-----	-----	-----	\$3	\$68	\$67	\$138
Yellowtail, California.....	-----	-----	-----	68	71,738	38,293	110,099
	-----	-----	-----	\$7	\$8,253	\$3,434	\$11,694
Miscellaneous.....	-----	299	206	34	433	462	1,434
	-----	\$76	\$12	\$3	\$85	\$78	\$254
Miscellaneous (animal food).....	852,028	42,917	46,880	796,616	-----	-----	1,738,441
	\$17,040	\$858	\$937	\$15,945	-----	-----	\$34,780
Crustacean:							
Crab, market.....	984,440	821,009	7,780	2,134	-----	-----	1,815,363
	\$297,849	\$315,570	\$3,320	\$938	-----	-----	\$617,677
Crab, rock.....	9,250	98	643	116,887	130,215	6,792	263,885
	-----	\$9	\$47	\$7,259	\$16,157	\$322	\$23,794
Lobster, spiny.....	-----	-----	-----	103,771	163,799	179,085	446,655
	-----	-----	-----	\$66,321	\$116,251	\$126,306	\$308,878
Prawn.....	-----	-----	5,775	-----	-----	-----	5,775
	-----	-----	\$4,050	-----	-----	-----	\$4,050
Shrimp, ocean.....	1,065,165	34,982	-----	-----	-----	-----	1,100,147
	\$106,516	\$3,701	-----	-----	-----	-----	\$110,217
Mollusk:							
Abalone.....	-----	38,721	410	2,675,523	1,124,070	240,499	4,079,223
	-----	\$7,238	\$89	\$405,518	\$137,207	\$22,669	\$572,811
Clam, Washington.....	4,133	-----	-----	-----	-----	-----	4,133
	\$635	-----	-----	-----	-----	-----	\$635
Octopus.....	4,815	25,167	6,878	1,998	33	-----	38,691
	\$200	\$1,181	\$664	\$115	\$7	-----	\$2,167
Oyster, eastern.....	-----	4,910	-----	-----	-----	-----	4,910
	-----	\$10,277	-----	-----	-----	-----	\$10,277
Oyster, giant Pacific.....	894,512	208,293	8,449	243,483	-----	-----	1,354,737
	\$161,012	\$37,492	\$1,520	\$43,826	-----	-----	\$243,850
Squid.....	-----	-----	9,101,623	469,960	6,656,110	3,911	16,433,624
	-----	-----	\$242,350	\$4,516	\$54,957	\$97	\$332,920
Miscellaneous mollusk.....	-----	-----	461	6	-----	-----	467
	-----	-----	\$114	-----	-----	-----	\$114
Total pounds.....	27,996,593	19,575,028	22,111,950	26,137,895	342,161,328	55,155,915	493,140,709
Total value.....	\$4,887,273	\$3,769,149	\$1,218,767	\$1,801,947	\$30,915,228	\$7,333,310	\$49,925,674

TABLE 15
Value of Landings and Shipments of Commercial Fish Into California by Area, 1964

TABLE 15—Continued

Value of Landings and Shipments of Commercial Fish Into California by Area, 1964

Species	Eureka	*San Francisco	Monterey	Santa Barbara	Los Angeles	San Diego	Total
SHIPMENTS:†							
Fish:							
Barracuda, California.....	----	----	----	----	803	----	803
Halibut, California.....	----	----	----	----	\$126	----	\$126
Sablefish.....	----	----	----	----	3,120	----	3,120
Salmon.....	----	----	----	----	\$754	----	\$754
Seabass, white.....	----	----	----	----	180,169	----	180,169
Shad.....	----	3,365	----	----	\$40,446	----	\$40,446
Shark.....	----	\$1,953	----	----	693,942	----	693,942
Smelt.....	----	----	4,105	----	\$361,748	----	\$361,748
Sturgeon.....	----	----	\$492	----	797	----	797
Tuna, albacore.....	----	2,460,129	----	----	\$248	----	\$248
Tuna, bigeye.....	----	457,228	----	----	71,105	----	74,470
Tuna, bluefin.....	----	\$55,406	----	----	\$6,032	----	\$7,985
Tuna, skipjack.....	----	8,040	----	----	1,520	----	1,520
Tuna, yellowfin.....	----	\$824	----	----	\$209	----	\$209
Miscellaneous.....	----	\$1,697,230	----	----	35,809	----	35,809
Miscellaneous.....	----	\$9,199	----	----	\$17,743	187,805	\$2,169,953
Crab, king.....	----	21,492	----	----	\$5,172,053	\$34,374	\$5,686,240
	----	----	----	----	120,757	----	577,985
	----	----	----	----	\$12,012	----	\$67,418
	----	----	----	----	3,660,681	----	3,660,681
	----	----	----	----	\$558,575	1,998,050	\$558,575
	----	8,605,986	----	----	4,589,236	\$186,542	6,495,326
	----	\$1,697,230	----	----	\$415,539	\$300,626	\$603,005
	----	\$92,000	----	----	44,929,004	\$300,626	53,835,616
	----	\$9,199	----	----	\$7,087,410	\$44,265	\$8,828,905
	----	21,492	----	----	142,127	----	234,127
	----	----	----	----	\$72,396	----	\$81,595
Total pounds.....	----	11,648,240	4,105	----	83,851,089	2,386,481	97,989,915
Total value.....	----	\$2,244,525	\$492	----	\$13,745,391	\$265,081	\$16,255,489
GRAND TOTAL POUNDS	27,998,593	31,223,268	22,116,055	26,137,895	426,112,417	57,542,396	591,130,624
GRAND TOTAL VALUE	\$4,887,273	\$6,013,674	\$1,219,259	\$1,801,947	\$44,660,619	\$7,568,391	\$66,181,163

* Includes Sacramento area landings.
† For origin of shipments refer to Table 6.

TABLE 15
Value of Landings and Shipments of Commercial Fish Into California by Area, 1964

TABLE 16
Value of Landings by Port, Eureka Area, 1964

	Value	Pounds
EUREKA AREA TOTALS	\$4,887,273	27,996,593
Eureka		
Salmon.....	\$1,013,872	2,086,528
Albacore.....	372,662	2,710,631
Giant Pacific oyster.....	161,012	894,512
Dover sole.....	158,237	2,532,157
Market crab.....	117,761	389,221
Ocean shrimp.....	73,266	732,660
Petrale sole.....	45,547	397,911
English sole.....	41,067	521,987
Sablefish.....	35,563	370,211
Rockfish.....	25,877	527,929
Rex sole.....	19,690	272,763
Lingcod.....	9,195	126,184
Sanddab.....	5,937	74,464
All other species.....	11,348	204,403
Totals.....	\$2,091,034	11,841,561
Fort Bragg		
Salmon.....	\$1,185,121	2,311,101
Albacore.....	265,742	1,932,928
Market crab.....	82,662	273,212
Dover sole.....	64,450	1,031,358
Petrale sole.....	40,054	349,919
English sole.....	31,485	400,190
Rockfish.....	22,822	456,413
Sablefish.....	20,105	209,295
Rex sole.....	9,390	130,076
Lingcod.....	9,216	126,474
All other species.....	14,876	394,824
Totals.....	\$1,745,923	7,615,790
Crescent City		
Salmon.....	\$236,347	568,697
Market crab.....	65,188	225,372
Ocean shrimp.....	33,202	332,025
English sole.....	19,480	247,605
Albacore.....	14,580	106,051
Dover sole.....	13,161	210,603
Petrale sole.....	12,188	106,479
Rockfish.....	10,569	202,595
Lingcod.....	6,215	85,291
All other species.....	11,319	142,735
Totals.....	\$425,249	2,227,453
Fields Landing		
Dover sole.....	\$154,890	2,478,125
Sablefish.....	51,886	540,138
English sole.....	45,200	612,648
Rockfish.....	34,765	698,223
Petrale sole.....	27,057	236,378
Salmon.....	20,411	45,437
Rex sole.....	15,463	214,207
Miscellaneous (animal food).....	12,251	612,593
Market crab.....	8,901	29,419
Lingcod.....	8,729	119,783
Smelt.....	5,328	94,643
All other species.....	11,238	143,781
Totals.....	\$399,089	5,825,375

TABLE 16
Value of Landings by Port, Eureka Area, 1964

TABLE 16—Continued
Value of Landings by Port, Eureka Area, 1964

	Value	Pounds
Albion		
Salmon.....	\$106,343	206,469
Totals.....	\$106,343	206,469
Point Arena		
Salmon.....	\$76,631	148,777
All other species.....	14	282
Totals.....	\$76,645	149,059
Trinidad		
Salmon.....	\$21,852	56,062
Market crab.....	20,337	67,216
All other species.....	8	108
Totals.....	\$42,197	123,386
All other ports		
All species.....	\$793	9,500
Totals.....	\$793	9,500

TABLE 16
Value of Landings by Port, Eureka Area, 1964

TABLE 17
Value of Landings and Shipments by Port, San Francisco Area, 1964 *

	Value	Pounds
SAN FRANCISCO AREA TOTALS.....	\$6,013,674	31,223,268
San Francisco		
Yellowfin tuna.....	\$1,929,318	10,117,655
Albacore.....	484,219	2,491,364
Salmon.....	370,888	633,132
Market crab.....	142,410	370,505
Dover sole.....	128,214	2,277,585
Skipjack.....	127,925	1,195,011
English sole.....	102,746	1,325,525
Petrale sole.....	93,243	749,124
Rockfish.....	81,640	1,498,619
Bigeye tuna.....	55,406	457,238
California halibut.....	35,768	151,135
Sablefish.....	27,935	724,401
Sand sole.....	27,048	234,464
Rex sole.....	22,446	330,644
Sanddab.....	18,354	279,993
Lingcod.....	13,178	166,605
Flounder.....	8,980	160,761
Smelt.....	5,300	52,790
All other species.....	18,263	334,281
Totals.....	\$3,693,281	23,550,822
Bodega Bay		
Salmon.....	\$531,319	909,742
Market crab.....	98,905	257,318
English sole.....	46,863	604,580
Petrale sole.....	21,148	169,910
Dover sole.....	16,050	285,110
Rex sole.....	7,365	108,494
Rockfish.....	7,231	127,547
Albacore.....	6,470	46,934
All other species.....	21,437	333,455
Totals.....	\$756,788	2,843,090
Sausalito		
Salmon.....	\$515,683	890,937
Albacore.....	77,345	561,074
All other species.....	8,637	67,431
Totals.....	\$601,665	1,519,442
Point Reyes		
Salmon.....	\$295,177	503,883
Giant Pacific oyster.....	31,020	172,338
Market crab.....	26,809	69,747
Rockfish.....	5,184	98,447
All other species.....	22,529	256,172
Totals.....	\$380,719	1,100,587
Princeton		
Salmon.....	\$234,518	400,336
Market crab.....	34,533	89,844
Abalone.....	7,238	38,721
All other species.....	1,757	20,789
Totals.....	\$278,046	549,690

TABLE 17
Value of Landing and Shipments by Port, San Francisco Area, 1964

TABLE 17—Continued
Value of Landings and Shipments by Port, San Francisco Area, 1964 *

	Value	Pounds
Oakland		
Albacore.....	\$96,159	697,555
Salmon.....	91,003	155,348
Dover sole.....	8,730	155,070
Market crab.....	7,838	20,391
All other species.....	1,856	44,707
Totals.....	\$205,586	1,073,071
Clear Lake		
Hardhead.....	\$40,517	153,078
Carp.....	9,083	154,100
Totals.....	\$49,600	307,178
Tomales Bay		
Eastern oyster.....	\$10,277	4,910
Giant Pacific oyster.....	5,508	30,602
All other species.....	9,754	84,473
Totals.....	\$25,539	119,985
Richmond		
All species.....	\$9,953	94,165
Totals.....	\$9,953	94,165
Berkeley		
Salmon.....	\$7,614	13,302
All other species.....	472	2,251
Totals.....	\$8,086	15,553
All other ports		
All species.....	\$4,411	49,685
Totals.....	\$4,411	49,685

* Includes Sacramento area landings.

TABLE 17
Value of Landing and Shipments by Port, San Francisco Area, 1964

TABLE 18
Value of Landings and Shipments by Port, Monterey Area, 1964

	Value	Pounds
MONTEREY AREA TOTALS.....	\$1,219,269	22,116,055
Moss Landing		
Albacore.....	\$275,814	2,004,169
Salmon.....	140,617	247,014
Jack mackerel.....	49,059	1,940,974
Anchovy.....	41,449	2,649,980
Squid.....	35,461	1,324,900
Pacific herring.....	19,074	203,753
Sardine.....	12,556	249,680
Pacific pompano.....	11,982	35,427
All other species.....	29,212	335,645
Totals.....	\$615,824	8,991,542
Monterey		
Squid.....	\$205,621	7,706,949
Rockfish.....	118,530	2,163,894
Albacore.....	36,167	262,804
Salmon.....	35,288	62,228
English sole.....	26,188	332,149
Petrale sole.....	21,558	165,099
Jack mackerel.....	16,364	639,533
Sablefish.....	14,867	339,382
Rex sole.....	8,968	179,185
Sardine.....	8,261	164,276
Sanddab.....	5,882	94,995
All other species.....	29,809	506,730
Totals.....	\$527,503	12,617,224
Santa Cruz		
Salmon.....	\$39,513	69,179
Pacific herring.....	9,260	98,920
California halibut.....	6,883	28,517
All other species.....	20,276	310,673
Totals.....	\$75,932	507,289

TABLE 18
Value of Landings and Shipments by Port, Monterey Area, 1964

TABLE 19
Value of Landings by Port, Santa Barbara Area, 1964

	Value	Pounds
SANTA BARBARA AREA TOTALS	\$1,801,947	26,137,895
Morro Bay		
Albacore.....	\$525,361	3,800,201
Abalone.....	169,066	1,102,677
Jack mackerel.....	67,804	3,456,235
Rockfish.....	60,978	1,031,772
Giant Pacific oyster.....	43,826	243,483
Salmon.....	21,145	39,693
Petrale sole.....	17,054	146,203
Sardine.....	16,571	565,465
Dover sole.....	8,896	150,455
Miscellaneous (animal food).....	7,288	364,113
Perch.....	5,576	25,743
All other species.....	25,514	314,296
Totals.....	\$969,079	11,240,336
Santa Barbara		
Abalone.....	\$223,359	1,484,959
Spiny lobster.....	54,529	85,319
California halibut.....	51,886	235,305
Rockfish.....	15,933	289,453
English sole.....	14,441	215,422
Shark.....	10,140	100,612
California barracuda.....	8,576	58,718
Rock crab.....	6,944	111,805
Petrale sole.....	6,197	53,127
Swordfish.....	6,083	12,130
White seabass.....	5,517	21,409
Miscellaneous (animal food).....	5,198	250,694
All other species.....	3,103	77,272
Totals.....	\$412,206	3,005,225
Port Hueneme		
Jack mackerel.....	\$165,656	8,444,160
Pacific mackerel.....	17,478	838,180
Albacore.....	12,298	88,960
California halibut.....	12,084	54,803
Abalone.....	10,779	72,792
Spiny lobster.....	8,373	13,101
Sardine.....	7,792	265,900
All other species.....	7,341	498,380
Totals.....	\$241,801	10,276,276
Avila		
Salmon.....	\$68,402	131,812
Petrale sole.....	30,096	287,238
Rockfish.....	13,126	251,676
English sole.....	10,374	154,751
California halibut.....	8,480	38,498
White seabass.....	7,840	30,424
Sand sole.....	5,999	43,854
All other species.....	16,503	354,164
Totals.....	\$159,839	1,262,417
Ventura		
California halibut.....	\$5,978	27,110
All other species.....	4,295	25,119
Totals.....	\$10,273	52,229
Oxnard		
Jack mackerel.....	\$5,462	278,400
All other species.....	1,408	12,110
Totals.....	\$6,870	290,510
All other ports		
All species.....	\$1,879	10,902
Totals.....	\$1,879	10,902

TABLE 19
Value of Landings by Port, Santa Barbara Area, 1964

TABLE 20
Value of Landings and Shipments by Port, Los Angeles Area, 1964

	Value	Pounds
LOS ANGELES AREA TOTALS	\$44,660,619	426,112,417
Terminal Island		
Yellowfin tuna.....	\$22,089,448	164,313,203
Albacore.....	8,378,881	49,373,713
Skijack.....	5,603,327	56,797,811
Bluefin tuna.....	2,982,517	23,587,404
Jack mackerel.....	1,483,776	61,622,726
Pacific mackerel.....	526,810	21,100,386
Sardine.....	349,389	9,469,475
Squid.....	58,300	4,706,215
Pacific bonito.....	25,424	1,043,223
Bigeye tuna.....	12,012	120,757
All other species.....	930	10,826
Totals.....	\$42,410,774	392,136,919
San Pedro		
White seabass.....	\$221,224	977,528
Jack mackerel.....	83,102	3,451,323
Sardine.....	82,043	2,221,616
Abalone.....	72,456	589,831
California halibut.....	67,123	284,673
Bluefin tuna.....	66,326	545,256
Spiny lobster.....	58,668	82,665
Rockfish.....	57,375	451,328
Yellowfin tuna.....	54,606	409,950
Swordfish.....	53,128	93,159
Pacific mackerel.....	45,862	1,836,912
Albacore.....	43,116	266,896
California barracuda.....	41,517	246,855
Pacific bonito.....	28,422	1,166,235
White croaker.....	27,591	643,726
Grouper.....	27,445	124,233
Squid.....	26,197	2,114,742
Anchovy.....	23,544	1,418,469
Giant sea bass.....	22,944	142,538
Pacific pompano.....	13,149	60,136
Shark.....	11,760	92,236
Flyingfish.....	9,834	78,124
California yellowtail.....	7,718	67,090
Rock crab.....	6,811	54,891
All other species.....	12,090	146,232
Totals.....	\$1,164,051	17,566,644
Los Angeles		
Salmon.....	\$361,748	693,942
Sablefish.....	40,446	180,169
Sturgeon.....	17,743	35,809
Shad.....	6,032	71,105
All other species.....	74,126	151,975
Totals.....	\$500,095	1,133,000
Wilmington		
Jack mackerel.....	\$188,290	7,819,856
Pacific mackerel.....	47,251	1,892,559
Anchovy.....	7,803	470,089
Pacific bonito.....	5,648	231,757
All other species.....	5,426	171,188
Totals.....	\$254,418	10,585,449

TABLE 20
Value of Landings and Shipments by Port, Los Angeles Area, 1964

TABLE 20—Continued
Value of Landings and Shipments by Port, Los Angeles Area, 1964

	Value	Pounds
Newport Beach		
Abalone.....	\$64,314	529,734
Jack mackerel.....	48,951	2,033,000
Pacific mackerel.....	28,512	1,142,000
Swordfish.....	26,472	46,419
Shark.....	14,627	118,323
California halibut.....	13,633	57,820
Albacore.....	8,935	55,308
White seabass.....	8,920	39,417
Spiny lobster.....	8,915	12,561
All other species.....	4,600	177,915
Totals.....	\$227,879	4,207,497
Santa Monica		
Spiny lobster.....	\$15,005	21,142
White seabass.....	11,549	51,033
California halibut.....	8,928	37,866
All other species.....	7,361	79,078
Totals.....	\$42,843	189,119
Long Beach		
Spiny lobster.....	\$16,878	23,782
All other species.....	10,135	124,195
Totals.....	\$27,013	147,977
San Clemente		
Spiny lobster.....	\$13,100	18,458
All other species.....	71	567
Totals.....	\$13,171	19,025
Redondo Beach		
Rock crab.....	\$7,684	61,927
All other species.....	4,815	36,693
Totals.....	\$12,499	98,620
All other ports		
All species.....	\$7,876	28,167
Totals.....	\$7,876	28,167

TABLE 20
Value of Landings and Shipments by Port, Los Angeles Area, 1964

TABLE 21
Value of Landings and Shipments by Port, San Diego Area, 1964

	Value	Pounds
SAN DIEGO AREA TOTALS.....	\$7,598,391	57,642,316
San Diego		
Yellowfin tuna.....	\$3,705,069	28,014,831
Albacore.....	1,664,260	10,297,365
Skipjack.....	1,496,004	14,560,394
Bluefin tuna.....	336,279	2,898,814
Spiny lobster.....	109,778	155,649
California halibut.....	61,378	288,833
White seabass.....	39,895	204,868
Rockfish.....	28,605	236,396
Abalone.....	22,669	240,499
Sardine.....	23,097	196,220
Sculpin.....	21,196	78,053
Shark.....	12,743	120,391
Giant sea bass.....	12,354	76,218
Swordfish.....	11,852	21,750
Grouper.....	9,584	39,797
Pacific bonito.....	5,245	134,138
All other species.....	18,453	128,973
Totals.....	\$7,578,461	57,493,189
Oceanside		
Spiny lobster.....	\$6,156	8,729
All other species.....	3,150	20,761
Totals.....	\$9,306	29,490
All other ports		
Spiny lobster.....	\$10,372	14,707
All other species.....	252	5,010
Totals.....	\$10,624	19,717

TABLE 21
Value of Landings and Shipments by Port, San Diego Area, 1964

TABLE 22
 Statewide Commercial Partyboat Catch by Species
 (Not including anchored barges)
 1955-1964 *

Species	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964
Barracuda, California.....	154,992	87,603	877,184	782,723	1,105,895	755,408	391,884	335,607	483,699	303,070
Basw, hcp and sand.....	497,343	470,362	695,071	663,671	428,426	478,656	613,094	789,149	1,219,344	1,103,394
Bonito, Pacific.....	22,409	61,404	258,555	422,568	776,386	1,199,919	849,426	798,725	775,719	1,298,804
Cabezon.....	12,396	18,195	14,479	9,909	6,329	2,416	2,939	4,628	9,726	6,491
Habitat, California.....	35,802	21,661	10,795	16,102	25,365	48,310	108,011	118,966	125,669	141,465
Langcod.....	20,113	37,649	38,012	39,801	31,206	28,232	23,466	23,369	27,313	25,293
Mackerel, jack.....	20,473	22,993	6,878	27,867	11,820	8,857	28,901	9,029	6,512	6,577
Mackerel, Pacific.....	151,018	121,136	151,960	136,607	88,652	79,370	113,088	116,738	146,569	101,219
Rackfish.....	1,747,707	2,696,708	1,305,151	1,961,132	1,177,976	1,018,673	898,611	955,438	892,659	995,801
Salmon.....	128,978	114,505	44,701	62,676	55,945	37,941	42,965	87,612	72,157	92,021
Sculpin.....	28,613	36,558	13,473	13,743	11,477	15,111	26,672	33,311	53,896	73,844
Sableau, white.....	30,103	19,785	19,000	24,639	10,669	15,667	14,082	14,964	19,809	14,801
Sheephead, California.....	14,032	11,780	15,105	18,120	17,166	11,451	15,210	15,488	18,442	29,822
Tuna, albacore.....	78,888	65,811	41,540	6,482	39	76,075	184,891	222,311	158,272	112,358
Tuna, bluefin.....	8,179	34,187	6,428	884	1,398	67	2,988	2,483	737	693
Whitefish, ocean.....	9,508	7,551	4,389	6,143	5,668	5,850	6,647	6,157	6,211	6,949
Yellowtail, California.....	36,468	29,198	242,988	123,584	457,350	234,969	42,367	21,826	45,705	39,104
All others.....	99,031	92,657	561,485	44,659	28,059	36,152	87,984	92,776	142,630	114,400
Total number of fish.....	3,112,883	3,262,996	3,496,568	3,960,889	4,328,678	4,093,034	3,453,433	3,655,993	4,278,592	4,434,176
Number of angler days†.....	496,286	323,063	536,175	515,152	587,154	516,255	465,805	593,866	643,155	695,445
Number of anglers.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

* See Fish Bulletin No. 121 for historical records 1939-1961.
 † Not available after 1951.

FISH BULLETIN 132

TABLE 22
 Statewide Commercial Partyboat Catch by Species (Not including anchored barges) 1955-1964

TABLE 23
Recorded Catch of Live Bait for Saltwater Sportfishing, 1964

Species	Thousands of pounds*
Anchovy.....	10,382
Herring, Pacific.....	18
Sardine, adult.....	283
Sardine, juvenile.....	1
Miscellaneous†.....	26
Total pounds.....	10,710

* Weights are estimated from voluntary records submitted by 20 boats. A conversion factor of 12.5 pounds per live bait scoop is used. The weights of a scoop of live bait varies between 10 and 15 pounds. The records represent almost all of the live bait landings, however, they should be regarded as minimal.
† Consists primarily of queenfish and white croaker.

TABLE 23
Recorded Catch of Live Bait for Saltwater Sportfishing, 1964

TABLE 24
Inshore Bait Landings
Pounds and Value
1964

Species	Statewide*	Sacramento	San Francisco	Los Angeles	San Diego
Clam					
Freshwater.....	214,363	33,694	180,669	--	--
	\$22,500	\$3,369	\$19,131		
Jackknife.....	72,500	--	--	30,917	41,583
	\$36,702			\$16,282	\$20,420
Purple.....	4,386	--	--	2,115	2,271
	\$1,920			\$1,050	\$870
Crab, sand.....	5,130	--	229	4,896	5
	\$9,660		\$101	\$9,539	\$20
Mudsucker, longjaw.....	7,306	--	--	--	--
	\$7,346				
Mussel (bay and rock).....	67,827	--	75	54,380	13,372
	\$6,264		\$7	\$4,974	\$1,283
Sculpin, staghorn.....	681	46	635	--	--
	\$1,167	\$91	\$1,076		
Shrimp					
Ghost.....	4,699	--	--	3,526	1,173
	\$22,423			\$16,081	\$6,342
Red.....	2,446	--	--	--	--
	\$3,913				
Miscellaneous.....	645	--	222	15	408
	\$1,807		\$1,184	\$11	\$612
Total.....	379,983				
	\$113,702				

* Some figures are reported only statewide to avoid revealing the business of an individual in an area.

TABLE 24
Inshore Bait Landings Pounds and Value 1964