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

FISH BULLETIN No. 58

The Commercial Fish Catch of California for the Year 1940



BY
*THE STAFF OF THE
BUREAU OF MARINE FISHERIES*
1942

FOREWORD

Seventh in a series of bulletins dealing with the commercial fish landings in California, this issue publishes the monthly and yearly totals for 1940. Also included are the values of the catches for 1939 and 1940.

The publication is the work of the members of the staff of the Bureau of Marine Fisheries of the California Division of Fish and Game, with the responsibility for the final compilations resting with the statistical unit of the Bureau. The cooperation of the Division's Bureau of Patrol and Law Enforcement in the collection of the original material is gratefully acknowledged.

September, 1941

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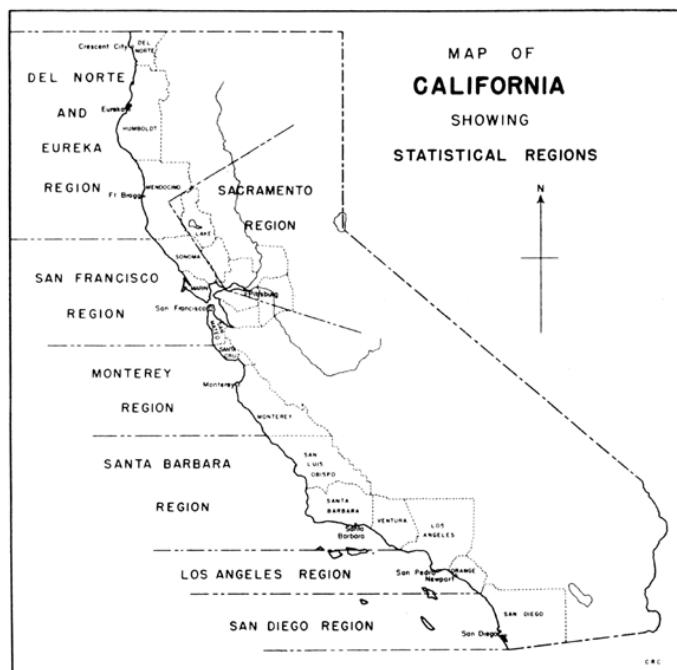


FIG. 1

FIG. 1

COMMERCIAL FISH CATCH OF CALIFORNIA

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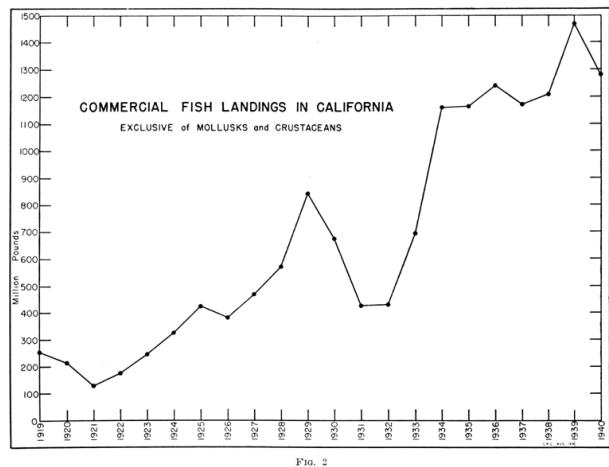


FIG. 2

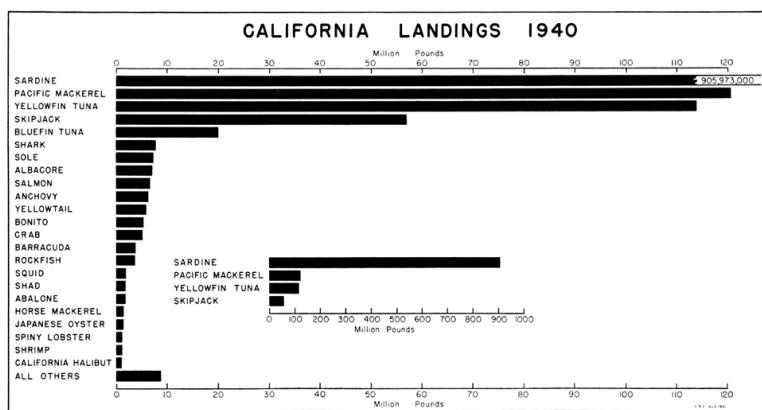


FIG. 3

1. INTRODUCTION

The success of any program for the collection of fisheries statistics depends upon its flexibility as well as its uniformity. Uniformity is necessary to make records comparable from year to year, but at the same time sufficient flexibility must be maintained to meet changing conditions and new demands. Such is the basis for the fisheries statistics collected and compiled by the California Division of Fish and Game.

The series of "Catch Bulletins," of which this is the seventh, is intended primarily to make available the summaries of commercial fish landings in each region of the State. These are presented as in former years. In addition, supplementary tables are included to aid in understanding our fisheries. Of such are the tables of numbers and nativity of commercial fishermen and the number of boats of each type engaged in the fishery. These have proven of much interest and they are again included in this bulletin.

An important factor influencing fishing effort is the price paid to fishermen, and we find instances of fishing vessels being shifted from one fishery to another because of price inducements. Probably the most outstanding example of this is the unforeseen rapid development of the shark fishery because of the high prices offered for the liver oils containing their high potency of vitamin A. From prices paid and pounds delivered, the value of catch of each species may be determined and a summary of such values is presented in this bulletin for the first time.

There has been a steady development of sport fishing in the ocean waters of southern California. Not only has this catch mounted to an impressive volume, but the amount of small fish required as bait for this army of anglers must be considered together with its effect on the several species used as bait. Our statistical records, therefore, have been expanded to include not only the sport catch itself but also the harvesting of the small sized fishes used by the anglers for bait. A preliminary summary of our bait catch records is presented in the following pages.—*W. L. Scofield.*

2. VALUE OF THE COMMERCIAL FISH LANDINGS

In 1940 the California Division of Fish and Game started making its own compilations of the value of its commercial fisheries. Prior to this time the State collected the raw data and the actual computation was done by the U. S. Bureau of Fisheries (now the U. S. Fish and Wildlife Service). The present bulletin contains annual value tables for 1939 and 1940 as well as the more detailed tables of landings made in 1940. For this report we have chosen to regard the value of a catch of fish as the amount paid the fisherman and to consider every increase beyond that point as processing and handling costs.

Fish, even more than most commodities, are subject to the laws of supply and demand. At a cannery the demand is relatively steady, hence there is a comparatively steady contract price. Fish landed during heavy runs are canned and held in warehouses till they can be sold. At fresh fish markets a different situation exists. Fresh fish is a highly perishable commodity which must be handled with the greatest possible speed in spite of occasional sudden and unpredictable changes in the catch. At times the prices may vary widely from day to day or even from hour to hour.

Some fish sell at a very low price. Sardines sold for bait are taken in small quantities and usually command about two cents per pound. Sardines sold to the canneries are taken by large boats close to the home port, and loads of a hundred tons are common. In 1940 the canneries paid \$11 per ton. Much of the profit in sardines comes from sardine oil. Competition with sardine oil from Japan used to help keep the price down, but now the Japanese supply is cut off, the demand for oil is rising and the late 1941 price of sardines is \$17.

Yellowfin tuna, like sardines, are taken in large quantities, but the boats must go thousands of miles and must often spend days catching bait before they can begin tuna fishing. Then after they catch their tuna they must carefully refrigerate them. In 1940 yellowfin tuna brought the fishermen \$120 per ton.

Spiny lobsters are taken a few, very few, at a time by men who must make, repair and tend a long string of lobster traps. The fishermen received an average price of over 15 cents per pound (over \$300 per ton) during 1940, but even at this high price the average lobster fisherman works very hard for very little.

2.1. Computation of Values

As mentioned, the values given in this bulletin represent amounts paid to the fishermen by the canneries and markets. Roughly 99 per cent of the fish in these tables is actually sold by fishermen to canneries or markets. The remainder is caught by members of marketing firms, and for this fish the values represent an estimate of the amount which the catches would have brought independent fishermen on an open market.

The values given are computed as follows. The California Division of Fish and Game issues receipt books to each buyer. Whenever the buyer purchases fish from a fisherman he fills out one of these receipts in triplicate and is required to list (among other items) the weight of each species caught and the price paid. The dealer, the fisherman and the Division each receive one copy.

The information is transferred to punch cards in the Division of Fish and Game statistical department. The figures on the cards are then totaled on electrical tabulating machinery in almost any way that may be desired. In most of the statistical summaries, tables are compiled by months for the eight statistical regions into which the State is divided. This was done in calculating values, but to reduce the number of tables in this publication seven regions are used and only the yearly totals are shown.

For the work under discussion, the monthly catch of each species is listed so as to show the amount landed at each price. From these figures the value is readily calculated. Sometimes at a cannery, part or all of a load of fish (nearly always tuna) is condemned by the State Board of Health. Condemned fish is accepted by the cannery and made into fertilizer but nothing is paid to the fishermen for it. Such fish is included in the catch figures as it was caught and landed, but in computing values it is recorded as being of no value inasmuch as the fishermen received nothing for it.

During 1939 and 1940 there was an appreciable proportion of the receipts on which no price was given. The general rule in such instances was to apply the average price paid for the species during that month. In a few cases almost the entire regional landings of some lesser species would be delivered in one or two loads, and if no price was recorded it was necessary to estimate the value by noting prices paid for similar quantities the preceding and following months, the same month of the preceding or following year, and in neighboring regions. The obvious solution for the future is to make certain that prices are not omitted on the receipts. This is being done.

Most of the fish landed by members of marketing firms can not be evaluated by the methods just described. The firms do not buy from fishermen, hence there is no price actually paid for the fish. Many of the species so handled are seldom taken by independent fishermen, hence we can not apply the prevailing market prices. So far our solution has been to ask officials of some of these companies to estimate for us what would be a fair price for each species, considering its abundance or scarcity during that month.

From Monterey northward, most of the trawler (drag net) caught fish is taken by marketing firms. Most bottom species are caught in quantity by drag nets and some species, such as sole, sand dabs and flounders, are seldom taken by any other method. The bulk of the shrimp catch is taken by marketing firms, but there is a fair number of independent shrimp fishermen. Oysters in California are raised, harvested and marketed by the same companies on privately owned beds.

These are the first value tables issued by the California Division of Fish and Game. As further use for such material develops, we will attempt to expand the tables in whatever manner seems most useful.—*Donald H. Fry, Jr.*

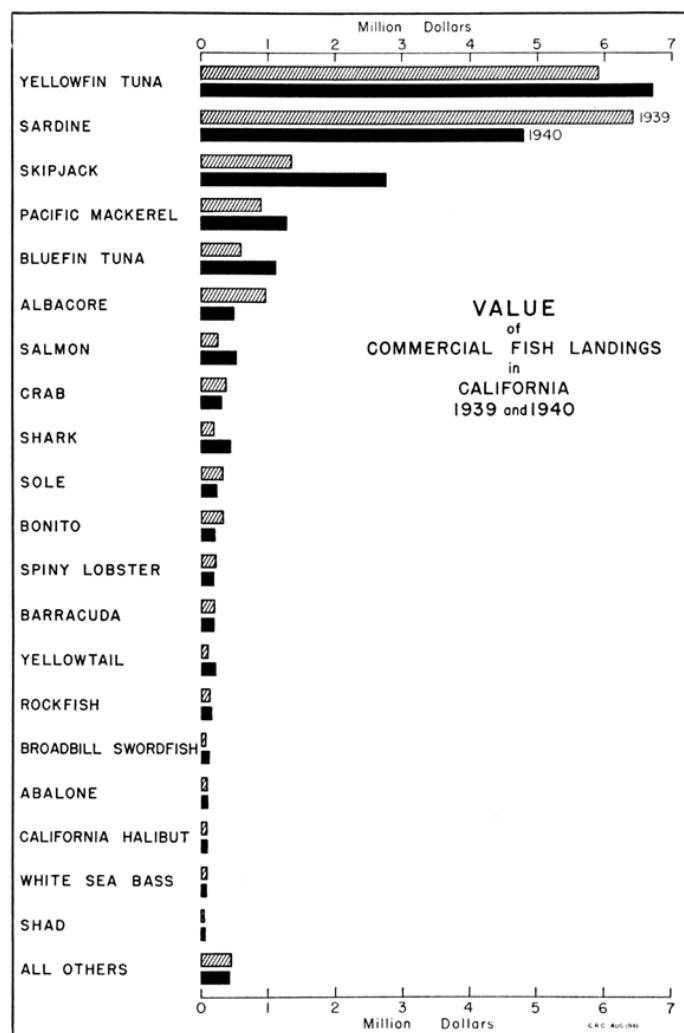


FIG. 4. Values of commercial fish landings in California, 1939 and 1940. In poundage the sardine catch is greater than that of all other species combined, but sardines are a very cheap fish and are exceeded in value by the comparatively expensive yellowfin tuna.

FIG. 4. Values of commercial fish landings in California, 1939 and 1940. In poundage the sardine catch is greater than that of all other species combined, but sardines are a very cheap fish and are exceeded in value by the comparatively expensive yellowfin tuna

TABLE 1
VALUE OF COMMERCIAL FISH LANDINGS IN THE EUREKA REGION DURING 1939 AND 1940
Fishing Boat Landings

Species	1939		1940	
	Pounds	Value	Pounds	Value
Cabezone.....			159	\$2
Cultus, Pacific.....	312,503	\$9,857	352,084	11,368
Flounder, Starry.....	242,197	6,248	197,290	5,013
Hake.....	3,870	39	4,980	49
Halibut, California.....	1,725	162	5,825	407
Halibut, Northern.....	377,771	28,684	247,412	18,446
Herring, Pacific.....	14,475	129	34,003	348
Mackerel, Pacific.....	18			
Perch.....	4,875	154	2,128	64
Rockfish.....	755,440	27,665	583,005	21,417
Sablefish.....	595,693	21,465	374,919	12,403
Salmon.....	1,675,116	138,590	3,369,492	264,719
Sand Dab.....	219,305	8,553	307,276	12,034
Sardine.....			765	22
Sea-trout, California.....	11	1		
Shark.....	38,472	1,015	649,977	81,135
Skate.....	58,650	584	23,749	252
Smelt.....	21,985	622	31,300	898
Sole.....	4,138,353	147,988	3,687,071	122,083
Tomcod.....	3,805	152	2,196	84
Tuna, Albacore.....	2,922	131	215	15
Turbot.....	420	17	700	24
Whitebait.....	140,041	10,330	108,054	7,493
Miscellaneous Fish.....	111,625	988	114,276	989
Crustacean:				
Crab.....	2,013,809	89,176	1,268,256	72,533
Mollusk:				
Clam, Soft-shell.....	534	53	314	32
Clam, Miscellaneous.....	17,738	694	21,275	772
Mussel.....	1,800	22		
Octopus.....	2,538	107	2,797	121
Oyster, Eastern.....	6,522	226		
Oyster, Native.....	1,905	134	9,360	655
Scallop.....	300	15		
Totals.....	10,764,418	\$493,801	11,399,478	\$633,378

TABLE 1
VALUE OF COMMERCIAL FISH LANDINGS IN THE EUREKA REGION DURING 1939 AND 1940

TABLE 2
VALUE OF COMMERCIAL FISH LANDINGS IN THE SACRAMENTO REGION DURING 1939 AND 1940
Fishing Boat Landings

Species	1939		1940	
	Pounds	Value	Pounds	Value
Carp.....	14,213	\$356	10,044	\$234
Catfish.....	217,014	27,455	151,630	21,702
Flounder, Starry.....	370	8	104	3
Hardhead.....	12,921	1,869	4,962	741
Pike.....	183	8	161	5
Salmon.....	496,933	57,024	1,515,588	120,094
Sardine.....	95,572,075	524,067	60,367,700	315,357
Shad.....	1,316,295	48,478	1,763,184	52,534
Split-tail.....	15,461	503	12,118	434
Sucker.....	53	2	106	2
Totals.....	97,645,518	\$659,770	63,825,597	\$511,106

TABLE 2
VALUE OF COMMERCIAL FISH LANDINGS IN THE SACRAMENTO REGION DURING 1939 AND 1940

TABLE 3
VALUE OF COMMERCIAL FISH LANDINGS IN THE SAN FRANCISCO REGION DURING 1939 AND 1940
Fishing Boat Landings

Species	1939		1940	
	Pounds	Value	Pounds	Value
Anchovy	214,907	\$2,769	13,775	\$277
Cabzone	208	2	1,488	17
Cultus, Pacific	193,966	5,970	271,088	9,399
Eel			7	
Flounder, Starry	478,092	12,847	582,027	15,235
Hake	9,641	94	13,058	179
Halibut, California	25,261	2,252	61,987	4,648
Halibut, Northern	21	2	517	5
Herring, Pacific	278,399	2,029	413,486	2,158
Kingfish	5,389	234	16,510	432
Mackerel, Pacific	95	4	928	36
Perch	57,995	1,894	22,447	634
Ratfish	750	4		
Rock Bass			114	17
Rockfish	390,123	14,700	454,696	17,510
Sablefish	14,757	445	77,681	2,503
Salmon	438,141	36,886	1,177,086	91,404
Sand Dab	512,689	20,161	420,038	16,801
Sardine	396,270,664	2,183,573	170,991,694	888,384
Sea-bass, White	16,817	1,67	27,569	2,906
Shad	170	33	843	27
Shark	4,631,579	89,865	4,934,940	258,047
Skate	204,598	2,044	160,628	1,611
Smelt	172,313	6,307	116,461	4,227
Sole	4,207,821	124,825	3,423,981	97,711
Tomeod	870	35	2,371	98
Tuna, Albacore	462,274	23,785	48,371	3,330
Tuna, Bluefin	4,715	231		
Turbot	99,463	3,817	54,817	2,164
Whitebait	22,444	1,670	17,478	1,237
Miscellaneous Fish	72,364	628	75,004	743
Crustacean:				
Crab	3,561,416	265,838	3,856,126	226,580
Shrimp	1,173,979	16,397	1,080,190	13,096
Mollusk:				
Clam, Soft-shell	75,187	3,414	62,921	2,858
Clam, Miscellaneous	7,799	434	5,215	262
Octopus	3,030	181	5,684	287
Oyster, Eastern	124,162	8,691	113,358	7,938
Oyster, Japanese	1,629,662	40,741	1,174,726	29,369
Oyster, Native	11,846	831	15,164	1,099
Snail			100	1
Totals	415,375,904	\$2,875,145	189,694,484	\$1,703,310

TABLE 3
VALUE OF COMMERCIAL FISH LANDINGS IN THE SAN FRANCISCO REGION DURING 1939 AND 1940

TABLE 4
VALUE OF COMMERCIAL FISH LANDINGS IN THE MONTEREY REGION DURING 1939 AND 1940
Fishing Boat Landings

Species	1939		1940	
	Pounds	Value	Pounds	Value
Anchovy.....	11,970	\$242	37,440	\$264
Cabzone.....	3,586	41	1,160	15
Cultus, Pacific.....	67,297	3,268	67,147	3,357
Flounder, Starry.....	16,295	535	24,476	618
Hake.....	150	2		
Halibut, California.....	28,887	2,000	20,655	1,971
Herring, Pacific.....	1,175	14	3,595	72
Kingfish.....	189,032	7,323	122,166	4,695
Mackerel, Horse.....	82,495	6,518	110,267	7,131
Mackerel, Pacific.....	828,433	22,510	452,036	18,033
Perch.....	25,933	1,088	9,635	427
Pompano, California.....	101	69	420	108
Rockfish.....	1,328,520	53,039	1,658,496	65,201
Sablefish.....	33,918	626	86,723	1,206
Salmon.....	125,498	12,266	613,224	54,528
Sand Dab.....	84,025	3,631	42,842	1,985
Sardine.....	429,599,487	2,374,221	365,115,401	1,929,969
Sea-bass, Black.....	245	12	661	30
Sea-bass, White.....	103,789	9,307	133,321	8,733
Sea-trout, California.....	13			
Shad.....	3			
Shark.....	1,823,882	34,353	814,276	37,704
Skate.....	30,735	385	1,041	31
Smelt.....	431	410	100,011	4,094
Sole.....	1,174,532	37,772	130,795	4,625
Tuna - Albacore.....	4,528,822	234,920	834,726	58,752
Tuna, Bluefin.....	28	1	4,689	391
Tuna, Bonito.....	4,702	177	3,932	293
Turbot.....	4,398	433	6,541	219
Whitebait.....	6,186	65	1,917	160
Miscellaneous Fish.....			1,443	38
Totals.....	442,512,761	\$2,889,091	370,938,124	\$2,277,274

TABLE 4
VALUE OF COMMERCIAL FISH LANDINGS IN THE MONTEREY REGION DURING 1939 AND 1940

TABLE 5
VALUE OF COMMERCIAL FISH LANDINGS IN THE SANTA BARBARA REGION DURING 1939 AND 1940
Fishing Boat Landings

Species	1939		1940	
	Pounds	Value	Pounds	Value
Barracuda.....	180,499	\$14,357	127,125	\$6,927
Cabzone.....	229	8	532	29
Cultus, Pacific.....	931	40	786	38
Flounder, Starry.....	2,264	90	192	6
Flying Fish.....	81	4		
Halibut, California.....	330,333	25,362	398,921	30,108
Halibut, Northern.....	33	4	50	4
Herring, Pacific.....	1,456	39	200	4
Kingfish.....	539	19	288	9
Mackerel, Horse.....			45	1
Mackerel, Pacific.....	20,083	642	341,104	3,318
Perch.....	20,366	918	1,028	39
Pompano, California.....			1,582	285
Rock Bass.....	39,401	2,722	55,469	2,752
Rockfish.....	201,039	8,332	300,707	12,093
Sablefish.....	23		183	11
Sand Dab.....	7		55	2
Sardine.....	3,625	60	58,126	415
Solepin.....	402	17	388	11
Sea Bass, Black.....	13,373	739	13,079	694
Sea Bass, White.....	221,874	17,870	204,291	17,929
Shark.....	2,490,123	52,575	911,221	35,967
Sheepshead.....	24,849	816	36,566	1,248
Skate.....	31,564	317	34,448	380
Smelt.....	24,657	892	20,863	762
Sole.....	216,694	5,907	129,636	3,447
Swordfish, Broadbill.....	75,080	8,889	31,1978	41,000
Tuna, Albacore.....	1,561,755	86,314	1,108,308	76,364
Tuna, Bluefin.....	9,727	584	15,882	993
Tuna, Bonito.....	37,572	1,010	18,866	667
Tuna, Skipjack.....	10		299	15
Tuna, Yellowfin.....	75	4		
Turbot.....			3	
Whitefish, Ocean.....	13,516	720	36,752	1,724
Yellowtail.....			536	24
Miscellaneous Fish.....	10,201	430	14,362	594
Crustacean:				
Lobster, Spiny.....	122,238	22,023	94,091	17,524
Mollusk:				
Abalone.....	1,011,937	40,406	910,559	52,095
Clam, Pismo.....	176,364	8,947	153,954	7,996
Clam, Miscellaneous.....	20			
Octopus.....	167	7	48	1
Oyster, Eastern.....			2	
Oyster, Japanese.....	29,693	1,106	117,779	3,027
Totals.....	6,882,800	\$303,080	5,420,174	\$318,183

TABLE 5
VALUE OF COMMERCIAL FISH LANDINGS IN THE SANTA BARBARA REGION DURING 1939 AND 1940

TABLE 6
VALUE OF COMMERCIAL FISH LANDINGS IN THE LOS ANGELES REGION DURING 1939 AND 1940
Fishing Boat Landings

Species	1939		1940	
	Pounds	Value	Pounds	Value
Anchovy.....	1,921,024	\$19,205	6,251,827	\$56,962
Barracuda.....	2,418,211	110,977	2,949,489	141,099
Cabezone.....			53	1
Cabrilla.....	88,579	4,635	17,541	948
Catfish.....	22	4		
Cultus, Pacific.....	1,730	105	624	29
Flying Fish.....	20,126	863	37,709	1,482
Grouper.....	20,940	1,378	5,497	391
Hake.....			11	
Halibut, California.....	332,249	27,826	301,711	28,136
Kingfish.....	347,119	7,177	272,428	5,382
Mackerel, Horse.....	3,676,380	30,026	1,310,346	15,556
Mackerel, Pacific.....	73,654,557	768,832	116,061,349	1,219,019
Mackerel, Spanish.....	12,570	497	2,847	170
Mullet.....	97	8		
Perch.....	30,773	2,019	20,681	1,540
Pompano, California.....	3,203	814	8,574	1,525
Rock Bass.....	108,798	7,530	123,510	8,697
Rockfish.....	355,768	14,944	337,559	14,639
Sablefish.....	122,653	6,149	34,279	1,796
Salmon.....			24	3
Sand Dab.....	5,178	1,055	8,832	1,065
Sardine.....	235,516,841	1,328,384	309,332,556	1,650,990
Sculpin.....	1,180,808	7,838	87,599	7,099
Seabass, Black.....	212,456	11,758	276,882	15,757
Seahorse, White.....	333,890	26,443	350,919	27,731
Shark.....	209,503	9,650	377,748	25,392
Sheepshead.....	29,836	1,050	17,122	637
Skate.....	11,307	271	7,773	163
Smelt.....	148,970	6,007	150,686	5,758
Sole.....	5,533	310	14,353	722
Swordfish, Broadbill.....	260,726	31,405	399,068	56,764
Tuna, Albacore.....	2,898,977	179,714	1,291,808	89,590
Tuna, Bluefin.....	10,369,609	527,097	17,187,035	962,159
Tuna, Bonito.....	5,760,121	283,568	4,135,731	153,413
Tuna, Skipjack.....	13,189,845	570,853	24,077,928	1,134,132
Tuna, Yellowfin.....	36,150,712	1,922,309	33,342,557	1,931,203
Turbot.....			63	2
Whitefish, Ocean.....	10,644	578	10,481	514
Yellowtail.....	1,011,252	33,373	3,271,641	108,783
Miscellaneous Fish.....	69,878	3,254	35,337	5,291
Totals.....	395,673,731	\$5,986,806	522,415,342	\$7,713,539

Shipments to Canneries from Other States and Foreign Countries

Species	1939		1940	
	Pounds	Value	Pounds	Value
Tuna, Albacore.....	6,422,872	\$396,609	2,908,432	\$211,064
Tuna, Bluefin.....	44	2		
Tuna, Skipjack.....	1,066,059	47,650	260,367	13,295
Tuna, Yellowfin.....			138,309	4,303
Totals.....	7,488,975	\$444,261	3,307,108	\$228,662

TABLE 6
VALUE OF COMMERCIAL FISH LANDINGS IN THE LOS ANGELES REGION DURING 1939 AND 1940

TABLE 7
VALUE OF COMMERCIAL FISH LANDINGS IN THE SAN DIEGO REGION DURING 1939 AND 1940
Fishing Boat Landings

Species	1939		1940	
	Pounds	Value	Pounds	Value
Anchovy.....			14,755	\$133
Barracuda.....	1,493,344	\$61,082	620,669	24,963
Cabilla.....	22,758	917	73,038	2,675
Cultus, Pacific.....	545	19	454	23
Flounder, Starry.....	93	6		
Flying Fish.....	114	7		
Grouper.....	20,490	788	73,326	2,901
Halibut, California.....	297,591	21,585	219,291	18,156
Herring, Pacific.....	6,737	68	1,969	32
Kelpfish.....	225	22	396	21
Mackerel, Horse.....	1,280	32	11,979	133
Mackerel, Pacific.....	6,396,188	65,544	3,648,295	39,597
Mackerel, Spanish.....	3,471	201	85	3
Mullet.....	2,921	233	2,004	152
Perch.....	245	7	2,448	72
Pompano, California.....			103	13
Rock Bass.....	117,954	5,770	66,409	3,834
Rockfish.....	302,236	12,680	234,356	10,847
Sand Dab.....			35	3
Sardine.....	831,639	4,423	2,107,161	9,025
Solepin.....	39,418	1,901	33,865	1,810
Sebastas, Black.....	234,511	11,177	75,155	3,080
Sea-bass, Short-fin.....	2,690	250	356	46
Sea-bass, White.....	318,026	22,667	197,211	13,022
Shark.....	34,191	536	171,022	2,989
Sheepshead.....	16,676	560	8,229	313
Skate.....			448	7
Smelt.....	7,780	274	28,894	1,058
Sole.....	1,859	123	1,916	158
Swordfish, Broadbill.....	258,554	24,103	175,256	20,295
Tuna, Albacore.....	545,612	34,113	601,888	42,902
Tuna, Bluefin.....	1,451,620	74,167	2,762,962	152,974
Tuna, Bonito.....	1,121,154	36,325	1,134,365	42,155
Tuna, Skipjack.....	16,930,369	729,411	32,571,388	1,698,42
Tuna, Yellowfin.....	74,267,014	3,990,049	80,417,343	4,776,198
Whitefish, Ocean.....	19,528	916	12,343	490
Yellowtail.....	1,855,036	62,298	2,684,627	94,413
Miscellaneous Fish.....	1,375	62	940	46
Crustacean:				
Lobster, Spiny.....	983,132	147,966	823,445	118,497
Mollusk:				
Squid.....	1,455	44	39,430	712
Totals.....	107,589,348	\$5,311,146	128,818,777	\$6,993,360

Shipments to Canneries from Other States and Foreign Countries

Species	1939		1940	
	Pounds	Value	Pounds	Value
Tuna, Albacore.....			229,264	\$20,628
Totals.....			229,264	\$20,628

TABLE 7
VALUE OF COMMERCIAL FISH LANDINGS IN THE SAN DIEGO REGION DURING 1939 AND 1940

TABLE 8
VALUE OF COMMERCIAL FISH LANDINGS IN CALIFORNIA DURING 1939 AND 1940

Species	1939		1940	
	Pounds	Value	Pounds	Value
Anchovy	2,147,001	\$22,216	6,317,797	\$57,636
Balao	4,092,054	180,416	3,667,293	172,989
Cabzone	4,023	51	3,392	64
Cabrilla	111,337	5,552	90,579	3,623
Carp	14,213	356	10,044	234
Catfish	217,036	27,459	151,630	21,702
Cultus, Pacific	576,072	19,259	692,183	24,214
Eel			7	
Flounder, Starry	739,311	19,734	804,089	20,875
Flying Fish	20,321	874	37,709	1,482
Grouper	41,430	2,161	78,823	3,292
Hake	13,661	135	18,149	228
Hake, California	1,016,046	74,387	1,030,080	83,267
Haddock, Northern	37,825	28,690	248,279	18,545
Hardhead	12,021	1,889	4,962	741
Herring, Pacific	302,242	2,279	453,193	2,614
Kingfish	542,901	14,775	412,228	10,539
Mackerel, Horse	3,760,155	36,576	1,432,637	22,821
Mackerel, Pacific	80,900,374	857,122	120,503,712	1,280,003
Mackerel, Spanish	16,041	698	2,932	173
Mullet	3,018	241	2,004	152
Perch	140,187	6,080	58,367	2,776
Pike	183	8	161	5
Pompano, California	3,404	913	10,679	1,931
Ratfish	70	4		
Rock Bass	266,153	16,022	245,502	15,300
Rockfish	3,333,126	131,360	3,569,529	141,797
Sablefish	767,044	28,685	573,785	17,919
Salmon	2,735,688	244,766	6,675,414	530,748
Sand Dab	821,204	33,406	779,078	31,890
Sardine	1,160,793,581	6,414,708	905,573,403	4,796,162
Sealipn	128,628	9,302	122,133	8,920
Sea-bass, Black	460,825	24,426	365,437	20,461
Sea-bass, Short-fin	2,600	250	356	46
Sea-bass, White	994,396	77,884	913,311	70,311
Sea-trout, California	24			
Shad	1,316,785	45,511	1,764,027	59,561
Shark	9,227,750	187,694	7,850,184	441,234
Sheepshead	1,361	2,426	61,917	2,198
Skate	336,854	3,601	238,287	2,574
Smelt	474,936	18,421	449,135	16,797
Sole	9,744,792	316,925	7,387,752	228,746
Split-tail	15,461	503	12,118	434
Sucker	53	2	106	2
Swordfish, Broadbill	594,360	64,406	886,902	118,059
Tomeid	4,675	187	4,567	182
Tuna, Albacore	16,423,234	955,586	7,023,012	502,645
Tuna, Bluefin	11,835,715	602,081	19,970,268	1,116,517
Tuna, Bonito	9,181,875	320,944	5,234,144	196,128
Tuna, Skipjack	31,181,650	1,347,694	56,510,522	2,556,154
Tuna, Yellowfin	110,417,891	5,912,362	113,898,209	6,711,704
Turbot	104,585	4,011	62,124	2,409
Whitebait	166,883	12,433	127,449	8,890
Whitefish, Ocean	43,688	2,214	59,606	2,728
Yellowtail	2,866,288	95,671	5,956,804	203,220
Miscellaneous Fish	271,829	5,427	241,562	7,701
Crustacean:				
Crab	5,953,361	373,809	5,151,014	301,175
Crab, Rock	3,984	199	3,460	189
Lobster, Spiny	1,289,896	207,218	1,096,821	169,903
Shrimp	1,180,250	17,216	1,082,551	13,535
Mollusk:				
Abalone	1,804,440	77,259	1,724,084	92,744
Clam, Pismo	192,694	9,904	167,478	8,499
Clam, Soft-shell	75,721	3,467	63,235	2,890
Clam, Miscellaneous	46,191	2,701	40,497	2,006
Mussel	1,800	22	100	
Octopus	29,539	1,697	26,580	1,751
Oyster, Eastern	130,684	8,917	113,360	7,938
Oyster, Japanese	1,659,355	41,847	1,292,505	32,396
Oyster, Native	13,751	965	24,524	1,754
Scallop	300	15		
Snail			225	2
Squid	1,162,056	22,740	1,800,632	30,157
Totals	1,483,933,455	\$18,963,100	1,296,048,348	\$20,399,440

This table includes actual landings at California ports by the commercial fishing fleet (Fishing Boat Landings) and shipments by truck, rail, and ocean liner to California canneries from other states and foreign countries.

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TABLE 8
VALUE OF COMMERCIAL FISH LANDINGS IN CALIFORNIA DURING 1939 AND 1940

3. BAIT RECORDS

Along the coast of southern California from Ventura County south to San Diego a considerable fishery for live bait for the use of sport fishing boats has developed. Each year more and more people participate in ocean sport fishing and the live bait fishery has expanded correspondingly. This increase has emphasized the need for adequate records of the amount and kinds of bait used in this fishery. The method of collecting these records is summarized together with a brief description of the fishery.

The busiest season is from about the first of May to the end of September, though some of the boats operate throughout the year. Frequently, the boats are used for other kinds of fishing during the winter.

Several species are involved in the bait catch but anchovies and sardines are the most important, comprising 98 per cent of the total. The fish taken are from 2½ to 6 inches long. Smaller fish usually escape through the net and larger fish are not so satisfactory. Sardines of bait size are all immature fish whereas about half the anchovies taken are adults. Although not desirable for bait, immature kingfish, queenfish and smelt are often taken with the anchovies and sardines.

The fishermen begin their search for live bait at about daybreak and continue until midday if fish are not found. A school of fish is located by their "flipping" at the surface which they often do while feeding. If they are being pursued by predatory fish they will often break the surface in large numbers. If the fish do not show, the net is sometimes set "blind" in a likely location. The boats engaged in this type of fishing are about 35 feet long and have enough beam aft to support a tank of sea water weighing five tons or more. There must be enough additional space on the stern for four men to pull in the net and stack it. The nets used are lamparas or round haul nets and are from 75 to 150 fathoms long and 5 to 15 fathoms deep.¹ The mesh of the net diminishes from four inches near the ends to one-half inch in the center or "bag".

The net is set in a circle around the school and then pulled onto the boat as rapidly as possible. As the net is pulled in, the fish are concentrated in one portion of the net from which they are transferred to the bait tank with a long-handled scoop net which holds from 7 to 25 pounds of fish. The tank is supplied with a constant flow of fresh sea water sufficient to change the water in the tank about every 15 minutes. The number of scoops is always counted, as crowding will kill the whole catch.

In addition to the bait transferred directly from the net to the sport fishing boats or used from the tank of the bait boat, many of the boat operators hold fish in receivers. These are series of boxes made

¹ Scofield, W. L. Sardine fishing methods at Monterey, California. California Division of Fish and Game. Fish Bulletin, no. 19, 61 pp., 1929.

of slats and sunk in the water so that their lids are just above the surface. These boxes are generally about six feet square and six feet deep and are used to maintain a supply of bait over a period of more than a day. Under ideal conditions, sardines can be kept indefinitely but anchovies do not survive for more than a few days.



FIG. 5. Transferring live bait from the bait boat to the receiver.
Photograph courtesy of Los Angeles Times.

FIG. 5. Transferring live bait from the bait boat to the receiver. Photograph courtesy of Los Angeles Times

Early in the summer of 1938 a program of estimating the relative abundance of bait was started by the Bureau of Marine Fisheries. This information was gathered by personal interviews about every two weeks with the captains of the bait boats. Four levels of abundance were recognized: (1) sufficient bait, usually enough to fill the demand, was taken with the first haul; (2) enough bait to fill the demand but difficult to obtain; (3) some bait but not enough to fill the demand;

and (4) no bait at all. Estimates were made of the ratio of sardines to the total. This method of gathering information did not prove very accurate but laid the groundwork for the system used the following year. As live bait is not brought ashore and is sold directly to other fishermen, it is not included in the regular records of commercial fish landings collected by the California Division of Fish and Game. In 1939 forms were supplied to the fishermen to obtain a more uniform and exact record. The completed daily forms are mailed to the Division each month. This information is recorded on punch cards, compiled and analyzed.

These records do not include the bait used by the commercial tuna boats.

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF FISH AND GAME

Daily Bait Record

Date	<u>Aug. 3, 1941</u>	Town	<u>San Pedro</u>
No. of hauls	<u>5</u>	Fish and Game No.	<u>5621</u>
Block areas fished	<u>719</u>	Boat name	<u>Jitters</u>

Indicate below the number of scoops of each species taken. If you fished and even though no fish were caught fill in the blanks above.

SPECIES		NO. OF SCOOPS
SARDINES	100	<u>5</u>
ANCHOVIES	110	<u>60</u>
QUEENFISH (Herring)	440	
SMELT	180	<u>1</u>
KINGFISH (Tomcod)	435	

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STATE PRINTING OFFICE

No 56402



FIG. 6. Form used by bait fishermen in reporting catches of live bait.

FIG. 6. Form used by bait fishermen in reporting catches of live bait

As the fishermen record their catches in numbers of scoops of bait taken, it is necessary to convert the figures to pounds. The conversion factor was determined by weighing from 50 to 100 scoops of live fish under regular operating conditions on each of seven boats. The average was 17 pounds per scoop. The scoop is the unit of measure accepted by the bait business and is worth from 33 cents to a dollar.

TABLE 9
LIVE BAIT USED BY SPORT FISHERMEN

	<i>Tons</i>	
	<i>1939</i> <i>(26 Boats)</i>	<i>1940</i> <i>(30 Boats)</i>
Sardines	573.4	335.9
Anchovies	1503.2	2006.0
Smelt	3.0	5.7
Kingfish	9.4	6.5
Queenfish	37.6	35.0
Total	2126.6	2389.1

TABLE 9
LIVE BAIT USED BY SPORT FISHERMEN

In the table are shown the tons of live bait recorded in 1939 and 1940. It has not yet been possible to obtain complete records from all the boats. However, the figures in this table represent about 80 per cent of the live bait taken for sport fishing. As mentioned previously almost all the live bait taken is either sardines or anchovies. For the 1939 and 1940 seasons, the table indicates that the catch of anchovies far exceeded that of sardines, in spite of the fact that sardines are usually preferred when both species are available. Collection of records over a series of years will give a measure of the relative abundance of anchovies and sardines and of the changes in this ratio which take place from year to year.

The table also shows that the total catch for 1940 was greater than for 1939. This was the result of a greater demand for bait and a larger number of boats operating. It does not indicate a greater abundance of bait, for the average total catch per boat was 3 per cent more in 1939 than in 1940. It is interesting to note that the larger total catch in 1940 resulted from an increase in the tonnage of anchovies whereas the catch of sardines decreased. The general opinion among the bait men was that in 1940 unusually large numbers of anchovies were present which offset any scarcity of other species, especially sardines.—*J. Alfred Aplin*.

4. COMMERCIAL FISHERMEN

For the 1940-1941 license year there was a total of 9,047 commercial fishermen along the coast and the rivers of California. Because of their fishing operations on the high seas and near defense areas, there is a widespread interest in the nationalities of the fishermen. Fifty per cent of the fishermen in California are of foreign birth, but only 25 per cent of the State's total are actually aliens. Half of the 4,531 foreign born have acquired citizenship and one-fifth have taken out first naturalization papers. Eight per cent of the 9,047 are Japanese who are denied citizenship and 5 per cent other nationals who have made no offer of allegiance.

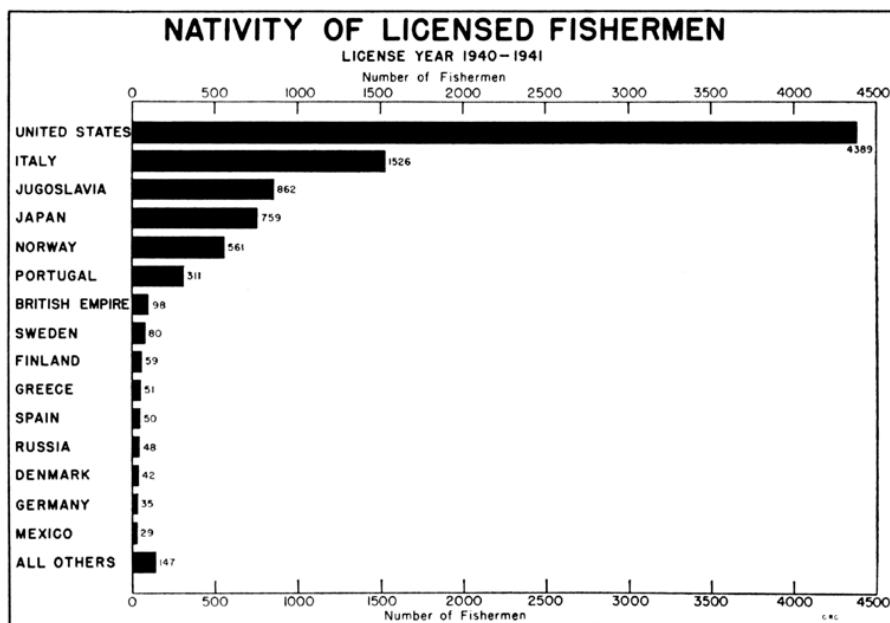


FIG. 7

FIG. 7

There are few trades whose membership is so carefully identified or whose activities are as closely followed in this State. In addition to the California Division of Fish and Game marine patrol, the market and marine sport fishermen are under the close surveillance of at least five federal agencies which patrol the seas and the waterfront. The men are licensed, the boats registered, and the fish reported on sales receipts. Additional checks are made on fishermen returning from foreign waters.

At the 1941 session of the State Legislature a new law was enacted, requiring an additional registration and identification of the fishermen and boat owners. Each commercial fisherman and boat owner is

required to register at an office of the Division of Fish and Game and to furnish two copies of a photograph of himself, at which time he is fingerprinted. He is issued an identification card which must be renewed every five years. This applies to all commercial fishermen, whether alien or citizen.—*Geraldine Conner.*

TABLE 10 1940-1941 LICENSED COMMERCIAL FISHERMEN	
Citizens:	
United States born (excluding orientals) -----	4,060
United States born Chinese -----	38
United States born Japanese -----	289
Naturalized citizens -----	2,276
Noncitizens:	
First naturalization papers-----	989
Aliens -----	1,266
Nativity not recorded-----	129
Total licensed commercial fishermen, 1940-1941-----	9,047

TABLE 10
1940-1941 LICENSED COMMERCIAL FISHERMEN

TABLE 11
CALIFORNIA COMMERCIAL FISHERMEN, LICENSE YEAR 1940-1941

Region of residence	Nativity	Number of fishermen	Total by region
Eureka-----	United States.....	151	
	Finland.....	32	
	All others.....	69	252
Sacramento-----	United States.....	229	
	Italy.....	151	
	Greece.....	28	
	All others.....	26	434
San Francisco-----	United States.....	479	
	Italy.....	436	
	Norway.....	298	
	Jugoslavia.....	83	
	Japan.....	35	
	All others.....	105	1,436
Monterey-----	United States.....	557	
	Italy.....	439	
	Japan.....	77	
	Spain.....	36	
	All others.....	86	1,195
Santa Barbara-----	United States.....	308	
	Italy.....	15	
	Portugal.....	12	
	All others.....	58	393
Los Angeles-----	United States.....	1,815	
	Jugoslavia.....	718	
	Japan.....	494	
	Italy.....	206	
	Norway.....	79	
	All others.....	222	3,534
San Diego-----	United States.....	703	
	Italy.....	264	
	Portugal.....	251	
	Japan.....	152	
	Mexico.....	21	
	All others.....	61	1,452
Alaska, Washington, Oregon and other out of state fishermen licensed in California-----	Norway.....	148	
	United States.....	146	
	Jugoslavia.....	38	
	All others.....	19	351
Total licensed commercial fishermen, 1940-1941-----			9,047

TABLE 11
CALIFORNIA COMMERCIAL FISHERMEN, LICENSE YEAR 1940-1941

5. COMMERCIAL FISHING FLEET

During 1939 and early 1940 there was a noticeable increase in the number of large boats being built and registered to enter the California fishing fleet. Most of these were purse seine vessels and alarm was felt because of the possible effect of this added fishing effort on the sardine and mackerel fisheries. But the 1940-1941 boat census shows no increase in the number of these larger boats actually engaged in fishing as the United States Navy bought many of the new sturdy purse seiners and Mexico also came into the market for boats of this type, all to be used in coast defense work. The British Government also purchased a number of the fast taxi-type craft from the west coast.

The increase of 350 boats in the 1940-1941 registration over the previous year is most noticeable in the group between 25 feet and 39 feet long. This is due to the new development in the shark fishery, intensive mackerel fishing and the steady development of the marine sport fishery. Since the party boats sell their excess catches and the commercial boats occasionally take out sport fishermen and all exploit the same species, the two groups actually comprise one commercial fleet. During 1940, 602 party boat permits were issued.—*Geraldine Conner.*

TABLE 12
COMMERCIAL FISHING FLEET, 1940-1941 *

Region of home port	Number of boats, grouped by length					Total number of boats from each region
	Up to 24 feet	25 to 39 feet	40 to 64 feet	65 to 84 feet	85 feet and over	
Eureka.....	12	189	21	—	—	222
Sacramento.....	98	156	5	1	—	260
San Francisco.....	43	451	68	22	6	590
Monterey.....	99	196	45	68	4	412
Santa Barbara.....	66	106	32	1	—	205
Los Angeles.....	257	642	233	109	39	1,280
San Diego.....	46	113	77	26	50	312
Alaska, Washington and Oregon.....	2	34	58	70	9	173
Total number of boats.....	623	1,887	539	297	108	3,454

* Market fishermen's license year is April 1 of one year to March 31 of the following year.

TABLE 12
COMMERCIAL FISHING FLEET, 1940-1941

6. TABLES OF COMMERCIAL FISH LANDINGS IN CALIFORNIA, 1940

The tables of commercial fish landings in California for the year 1940 differ from those previously published in that they do not include the record of shipments of fresh and frozen fish from other states and foreign countries to the fresh fish markets in California. This record has been omitted because it is a voluntary report; it is incomplete and therefore misleading. The law requires that the California Division of Fish and Game be given a complete record of all fresh and frozen fish, mollusks and crustaceans landed in the State by the commercial fishing boats and licensed fishermen, and it also requires a record of shipments of fresh or frozen fish from other states and countries for use in the California canneries. All voluntary records of fish shipped to the markets from outside the State are compiled, but like the bait records and the landings of the party fishing boats, this poundage is included in a separate category and not confused with the production records of our market fishermen.

In this connection it will be noted that the tables include fishing boat landings from California waters and from waters to the north and south of the State and shipments by truck, rail and cargo vessel to California canneries from outside the State. In the State-wide tables, including the table of values (Table 8), shipments and fishing boat landings are combined, whereas in the regional tables which follow, shipments and fishing boat landings are kept separate and the points of origin of the fish are shown. In the regional tables of value (Tables 1 2 3 4 5 6 7, inc.) fishing boat landings only are shown, but no separation is made for origin. Thus, the different types of tables present the same information in a variety of ways and any apparent discrepancies between tables are due to differences in their contents.

In the tables for 1939 and 1940, we acknowledge an error in the shark figures due to the fact that in this rapidly developing fishery, the demand for livers exceeded that for the meat and some fishermen made a practice of dumping the carcasses at sea. A new law gives the necessary control of the shark fishery for the future, and since a correcting factor for the total here presented would be conjecture we give the weights as reported to us. A similar condition existed in the shad fishery during 1940, where quantities of shad roe were reported rather than the round weight for the roe shad. The percentage of error introduced into the balance of the tables for cleaning loss is not of alarming proportions.

The boundaries of the regions of landing shown in the tables are as follows:

Eureka region: Del Norte, Humboldt and Mendocino counties.

Sacramento region: Sacramento and San Joaquin river systems with the delta areas, including Suisun Bay and Lake County.

San Francisco region: Sonoma, Marin, San Francisco and San Mateo counties, including San Francisco and San Pablo bays.

Monterey region: Santa Cruz and Monterey counties.

Santa Barbara region: San Luis Obispo, Santa Barbara and Ventura counties.

Los Angeles region: Los Angeles and Orange counties.

San Diego region: San Diego and Imperial counties.

The following conversion factors are used when shellfish are reported in numbers rather than in pounds: crabs, 2 pounds each; abalones, 50 pounds per dozen; gaper clams, 2 pounds each; Pismo clams, 24 pounds per limit of 15; Washington clams, 7 pounds per dozen; eastern oysters, 30 pounds per hundred; Japanese oysters, 50 pounds per hundred, or 8 pounds per gallon cleaned.—*Geraldine Conner*.

ORIGIN OF COMMERCIAL FISH LANDINGS IN CALIFORNIA DURING 1940

Species	California	North of State Boundary	South of International Boundary	Japan	Total pounds
Anchovy.....	6,317,797				6,317,797
Barracuda.....	2,545,380		1,151,903		3,697,283
Cabezone.....	3,392				3,392
Cabrilla.....			90,579		90,579
Carp.....	10,044				10,044
Catfish.....	151,630				151,630
Cultus, Pacific.....	690,522	1,350	311		692,183
Eel.....	7				7
Flounder, Starry.....	803,829	260			804,089
Frigate Fish.....	37,709				37,709
Grouper.....			78,823		78,823
Hake.....	18,049				18,049
Halibut, California.....	921,531		86,549		1,008,080
Halibut, Northern.....	247,659	620			248,279
Hardhead.....	4,962				4,962
Herring, Pacific.....	453,193				453,193
Kingfish.....	412,228				412,228
Mackerel, Horse.....	1,432,637				1,432,637
Mackerel, Pacific.....	120,503,712				120,503,712
Mackerel, Spanish.....			2,932		2,932
Mullet.....	2,004				2,004
Percula.....	55,612		355		55,612
Pike.....	161				161
Pompano, California.....	10,593		86		10,579
Rock Bass.....	239,510		5,992		245,502
Rockfish.....	3,480,614	1,450	87,465		3,569,529
Sablefish.....	573,755				573,755
Salmon.....	6,674,775	639			6,674,775
Sand Dab.....	777,209	1,870			779,078
Sardine.....	905,973,203		200		905,973,403
Sculpin.....	122,071		62		122,133
Sea-bass, Black.....	42,784		322,653		365,437
Sea-bass, Short-fin.....	356				356
Sea-bass, White.....	809,211				809,211
Shad.....	1,764,027		104,080		1,764,027
Shark.....	7,855,989		3,195		7,859,184
Sheepshead.....	55,749		6,168		61,917
Skate.....	238,287				238,287
Smelt.....	448,077		1,055		449,135
Sole.....	7,290,577	97,175			7,387,752
Split-tail.....	12,118				12,118
Sucker.....	106				106
Swordfish, Broadbill.....	829,971		56,931		886,902
Tomcod.....	4,567				4,567
Tuna, Albacore.....	2,331,938	3,255,558	880	1,434,342	7,023,012
Tuna, Bluefin.....	18,849,058		1,120,300		19,970,268
Tuna, Skipjack.....	3,453,098		1,737,895		5,290,964
Tuna, Yellowfin.....	2,985,111		53,665,044	260,367	56,910,522
Turbot.....	237,527		113,660,682		113,898,209
Whiting.....	62,124				62,124
Whitefish, Ocean.....	127,449				127,449
Whitefish, Yellowtail.....	47,565		12,041		59,606
Yellowtail.....	329,036		5,627,768		5,956,804
Miscellaneous Fish.....	237,759	3,060	743		241,562
Total [pounds].....	1,112,348,855	3,364,370	178,640,414	1,694,709	1,296,048,348

This table includes actual landings at California ports by the commercial fishing fleet (Fishing Boat Landings) and shipments by truck, rail, and ocean liner to California canneries from other states and foreign countries.

REGION OF LANDING OF COMMERCIAL FISH LANDINGS IN CALIFORNIA DURING 1940

Species	Eureka Region	Sacramento Region	San Francisco Region	Monterey Region	Santa Barbara Region	Los Angeles Region	San Diego Region	Total pounds	DAVIS DIVISION OF FISHERY AND GAME
Anadory			13,773	37,449		6,251,827	14,755	6,817,797	
Barracuda			1,488		127,125	2,449,489	620,699	3,697,283	
Cabonone	159		1,169	352	53			3,392	
Codfish					17,541		73,033	90,570	
Carp			10,044					10,044	
Codfish			151,530					113,000	
Cuttle, Pacific	332,084		271,085	67,147	786	624	454	692,183	
Ed.								7	
Floounder, Starry	197,290	104	582,027	24,476	192			804,680	
Flying Fish						37,709		37,709	
Grouper						5,407	73,326	78,823	
Hake						11		18,940	
Halibut, California	4,980		13,058					1,008,080	
Halibut, Northern	5,825		61,087	20,655	398,621	301,701	219,291	248,270	
Haddock	247,412	4,962	817	50				4,962	
Herring, Pacific	34,003		413,486	3,595	200			453,193	
Kingfish			16,510	128,691	281			142,228	
Mackerel, Horse				110,267	45	1,310,346	11,979	1,432,637	
Mackerel, Pacific				928	452,036	341,104	116,061,349	3,648,295	120,565,712
Mackerel, Spanish								552	
Mullet						2,847		2,004	
Percy		2,128		22,447	9,635	1,028	20,681	2,448	2,004
Pike			161					161	
Pompano, California				420	1,482	8,574	103	10,679	
Rock Bass			114		55	121,119	98,119	249,292	
Rockfish	583,695		454,696	1,658,696	300,707	337,459	234,356	3,569,529	
Solefish	374,919			56,723	183	34,279		375,785	
Salmon			3,292,629	1,177,536	631,214	55		6,251,441	
Sand Dab	307,276		1,515,588	420,038	42,842	8,832	35	779,078	
Sardine			753	60,367,760	363,115,401	58,103	309,332,556	2,107,207	905,318,040
Sealipine					368	57,399	33,896	122,133	
Sea-lion, Black					661	13,039	275,832	75,155	365,437
Sea-Sparrow							35	350	
Sea-bass, White								197,211	913,311
Shad			1,763,184	27,599	133,321	204,291	350,919		
Shark	649,072		4,034,649	845	814,376	911,221	377,748	171,029	7,764,027
Sheepshead						36,565	17,122	5,229	7,534,384
Skate		29,746		100,638	11,041	34,945	7,773	61,917	
Smelt			31,200	116,461	100,911	26,933	150,999	446	283,282
Sole								449,135	
Spotted-tail			3,687,071		3,423,981	130,795	129,636	14,353	7,387,752
				12,118				1,916	12,118

	106	106	106	106	106	106	COMMERCIAL FISH CATCH OF CALIFORNIA
Sardine							
Seawhite, Broadbill	2,196			311,978	399,998	175,536	\$88,902
Tomcod		2,371					5,567
Tuna, Albacore	215	48,371	834,726	1,105,383	4,555,240	821,102	7,023,012
Tuna, Skipjack			599	15,582	11,857,033	2,932,360	16,573,298
Tuna, Bonito				3,952	18,866	4,133,781	1,134,365
Tuna, Skipjack					299	24,429,295	3,841,384
Tuna, Bonito						55,480,899	8,402,322
Turbot		700	54,817	6,541	3	56,343	113,895,209
Whitefish		105,094	17,471	1,917			
Whiting, Ocean					35,782	10,481	56,606
Yellowtail					536	3,271,641	2,684,627
Miscellaneous Fish	114,276		75,004	1,443	14,362	35,357	940
Crustacean							
Crab, Rock		1,268,256		3,856,126	26,632		5,151,014
Lobster, Spiny						3,499	3,460
Shrimp				1,080,100	2,361	179,283	835,445
Mollusks							1,093,834
Avalanche							1,082,531
Clam, Cockle				1,857			
Clam, Copper				2,988			
Clam, Pismo					13,524	153,944	14,476
Clam, Rarot							3,298
Clam, Scallops		59					167,478
Clam, Washington		314		62,621			5
Mussel		21,225		1,758			61,235
Octopus		2,797		5,854	17,599	48	22,083
Oyster, Eastern				113,338			
Oyster, Native		9,360		11,117		117,779	10,190
Seal				15,164			26,380
Squid				100			113,390
Total pounds		11,399,478	63,825,507	189,694,451	370,938,124	5,420,174	525,722,450
						106,870	39,490
							1,800,632
							1,296,048,348

This table includes actual landings at California ports by the commercial fishing fleet (Fishing Boat Landings) and shipments by truck, rail, and ocean liner to California canneries from other states and foreign countries.

MONTHLY COMMERCIAL FISH LANDINGS IN CALIFORNIA DURING 1940

Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds	Division	
Anchovy	352,504	346,227	119,698	9,169	24,915	5,095	157,072	663,880	680,206	1,489,337	1,614,056	645,276	6,317,757	W. COAST	
Barracuda	288,265	158,270	377,460	96,771	37,100	37,412	381,270	236,175	158,346	368,200	244,895	177,025	3,597,263	3,392	
Cakebass	35	101	770	117	333	344	350	588	92	124	117	117	96,797		
Califilla	9,781	24,479	9,491	14,833	25,615	345	8,055	—	—	15	126	386	623	275	
Cod	364	4,432	4,227	4,444	107	—	—	—	—	—	—	14,763	10,044		
Catfish	7,215	7,725	26,892	31,659	2,474	2,290	2,285	2,668	17,533	18,515	18,515	17,701	151,630		
Chub, Pacific	12,198	33,352	71,198	45,289	35,714	26,156	33,049	61,859	51,349	67,898	170,319	64,644	692,146		
Edulis, Pacific	—	—	—	—	—	—	—	—	—	7	—	—	7		
Flounder, Starry	36,295	97,909	130,840	46,589	68,459	97,102	97,566	38,818	31,387	92,826	50,185	16,170	804,059		
Frigate	—	—	—	—	—	—	—	—	—	—	—	—	—		
Grouper	5,325	3,745	5,768	12,845	26,468	894	15,815	16,200	11,115	1,827	351	50	75,824		
Hake	—	—	—	—	—	—	—	—	—	—	—	—	—		
Haddock, California	98,549	130,421	138,829	111,961	103,060	63,060	60,709	84,913	49,131	49,131	49,131	49,131	426,601	1,008,080	
Hake, Northern	—	—	—	30	94,775	45,828	53,447	42,189	4,075	7,841	340	53	245,279		
Hake, Pacific	24	33	21	44	—	—	—	—	—	—	—	716	4,144		
Herring, Pacific	247,935	165,714	15,329	1,404	3,975	—	—	—	—	—	—	1,014	17,525	453,193	
Kingfish	26,494	35,579	50,877	53,843	40,476	33,696	29,466	20,544	34,347	31,822	32,807	21,567	417,228		
Mackerel, Herring	30,699	30,272	32,772	32,772	32,772	32,772	32,772	32,772	32,772	32,772	32,772	32,772	32,772	32,772	
Mackerel, Pacific	15,624,379	8,725,800	3,965,384	43,194	118,344	156,570	2,410,055	4,734,637	8,054,234	33,104,333	27,575,497	14,008,664	120,503,712		
Mackerel, Spanish	156	1,739	—	—	—	—	—	—	—	441	497	55	2,000		
Mullet	—	—	—	—	—	—	—	—	—	—	—	—	1,304		
Perch	3,504	6,983	12,660	14,016	833	396	7,060	4,725	4,379	4,145	1,086	1,430	58,367		
Pike	—	—	—	—	—	—	—	—	—	—	—	—	18,300		
Pompano, California	2,295	868	1,647	136	75	2	65,962	61	2,099	3,069	275	220	10,579		
Rock Bass	12,587	11,446	24,696	16,316	28,993	29,523	33,285	32,285	10,900	9,044	12,533	10,642	246,562		
Rudderfish	249,115	340,674	52,070	410,715	38,070	26,270	33,070	75,270	141,270	241,270	239,270	239,270	1,566,270		
Sabinefish	18,535	6,396	15,525	37,990	39,742	58,640	150,279	50,389	45,389	70,366	45,359	14,198	573,755		
Salmon	26,699	44,576	65,302	294,938	1,114,114	66,115	1,125,933	2,214,343	1,063,450	1,063,450	1,063,450	1,063,450	1,063,450	6,753,411	
Sand Dab	20,699	29,464	29,464	29,464	29,464	29,464	29,464	29,464	29,464	29,464	29,464	29,464	32,333	29,464	
Sardine	120,853,654	74,267,332	18,243,827	203,570	174,431	133,068	246,399	3,856,046	6,824,350	107,475,706	303,451,828	180,200,776	905,973,413		
Seabass, Black	19,084	8,499	4,733	17,533	8,919	11,880	63,000	38,000	62,543	52,603	19,896	10,641	365,437		
Seabass, Short-fin	—	—	—	—	—	—	—	—	—	—	—	—	—		
Seadragon	38,624	17,937	22,583	20,672	15,070	72,000	155,806	362,618	114,387	49,546	17,478	46,388	913,311		
Shad	—	450	77,150	703,024	983,402	—	—	—	—	—	—	—	1,754,027		
Shark	766,446	47,000	94,100	141,000	38,000	500,110	529,412	94,012	1,058,470	801,466	348,448	801,466	7,804,524		
Slipperjack	11,238	10,500	12,882	1,039	2,264	1,549	1,530	726	4,651	4,333	4,308	4,333	81,817		
Skate	43,129	32,452	26,165	18,399	16,636	8,594	9,011	14,933	15,290	16,138	11,326	26,214	238,257		
Smelt	41,229	45,148	33,200	30,832	30,838	30,838	30,838	30,838	31,496	31,496	31,496	31,496	39,432	449,123	
Soles	710,611	566,912	572,215	694,087	631,767	638,042	634,416	614,070	553,499	717,623	699,184	352,626	7,337,722		

	406	578	236	230	427	30		383	1,751	4,172	2,744	1,061	12,115	
Sucker.....	14	12	75			9	37,600	149,842	328,799	232,020	106,730	11,882	5	106
Swordfish, Broadbill.....	488	481	388	197	63	33	4,000	1,000	1,000	1,000	1,000	1,000	886,902	
Tuna, Albacore.....	488	481	388	197	63	58	716,127	1,908,591	4,110,422	130,841	59,570	77,896	7,023,012	
Tuna, Bigfin.....	56,867	46,579	179,546	12,000		5,751,361	4,907,519	2,057,633	3,174,553	734,176	97,485	209	463	4,267
Tuna, Bonito.....	323,180	133,684	108,654	73,180	34,444	45,600	3,120,571	2,400,000	2,400,000	2,400,000	2,400,000	2,400,000	19,970,268	
Tuna, Skipjack.....	561,931	542,431	1,653,674	5,532,419	3,443,069	3,120,571	5,120,571	5,120,571	10,110,271	7,834,277	8,115,834	5,968,771	4,033,669	56,910,522
Tuna, Yellowtail.....	8,000	5,200	3,900	1,700	1,200	12,830	10,270	16,000	10,360,000	7,000,000	6,888	8,084	8,769,213	8,447,699
Turbot.....	1,667	8,150	4,474	12,159	12,402	2,270	4,660	6,331	6,331	5,339	5,309	50	1,289	127,440
Whiting.....	13,227	17,417	24,022	22,113	12,362	12,403	12,264	12,264	12,264	8,084	2,084	2,084	5,340	50,090
Whitefish, Ocean.....	12,550	12,550	12,550	12,550	12,550	12,550	12,550	12,550	12,550	12,550	12,550	12,550	12,550	12,550
Yellowtail.....	106,124	99,212	91,570	172,550	145,550	330,107	476,427	2,710,533	879,774	192,444	333,469	418,042	5,000,894	241,592
Miscellaneous Fish.....	10,656	18,484	19,780	22,579	21,147	30,552	26,957	16,792	19,652	25,407	20,490	11,085		
Crustacean:														
Crab, Rock.....	344,712	402,126	557,040	658,642	602,966	496,514	558,565	345,602	1,398	655,306	437,865	5,111,014		
Crab, Rock, Spiny.....	762	334	392	131		398	389	160		492	308	94	3,490	
Lobster, Spiny.....	240,990	201,922	128,431							130,523	196,724	204,556	1,096,821	
Shrimp.....	20,898	36,744	47,279	54,929	68,479	137,138	264,891	192,755	84,740	63,102	77,541	40,024	1,082,551	
Mollusks:														
Abalone.....	21,150	25,614	161,600	85,200	384,375	187,550	228,025	136,825	155,450	113,650	178,154	71,903	1,724,084	
Clam, Cockle.....	1,144	2,614	2,797	2,060	1,484	1,440	2,361	198	40	248	44	46	14,474	
Clam, Common.....	200	400	762	599	300	300	300	300	300	300	300	300	157,785	
Clam, Pismo.....	12,203	12,899	16,519	12,952	12,931	15,627	18,876	16,972	12,110	13,178	14,114	8,084	50	
Clam, Razor.....						50								
Clam, Scallop.....	4,124	4,011	4,280	4,047	4,000	3,750	5,156	5,156	6,790	7,883	5,464	4,551	63,400	
Clam, Washington.....	2,569	2,976	2,960	2,349	358	128	88	104	3,112	5,334	2,732	2,233	22,983	
Octopus.....	338	692	1,592	1,478	3,409	5,907	4,741	1,245	1,468	1,503	2,515	1,402	26,560	
Oyster, Eastern.....	10,528	11,636	11,682	9,183	5,140	5,398	5,009	5,975	5,967	10,844	12,231	14,867	113,390	
Oyster, Pacific.....	125,093	130,093	118,093	50,931	35,000	44,500	53,500	29,000	13,580	172,758	154,421	159,598	1,262,505	
Oyster, Native.....	2,280	1,680	2,470	1,610	3,358	3,702	4,075	2,093	1,510	1,510	1,510	1,510	100	225
Smelt.....										125	125	125		
Squid.....	2,396	50,771	26,520	66,525	1,219,185	76,620	179,520	43,005	31,508	15,500	38,197	43,383	1,500,632	
Total pounds.....	150,949,620	93,026,432	36,116,466	18,697,544	29,659,459	23,801,654	33,703,877	47,204,418	44,845,144	254,875,920	352,033,313	211,068,291	1,296,048,348	

This table includes actual landings at California ports by the commercial fishing fleet (Fishing Boat Landings) and shipments by truck, rail, and ocean liner to California canneries from other states and foreign countries.

COMMERCIAL FISHING CATCHES OF CALIFORNIA

COMMERCIAL FISH LANDINGS IN THE EUREKA REGION DURING 1940

Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds	
Cetacean:													159	
Catfish, Pacific	6,189	18,547	35,591	25,705	10,555	11,411	33,484	47,705	27,878	25,700	85,916	22,073	356,234	
Flounder, Starry	150	6,541	10,095	14,976	5,400	48,290	69,825	17,198	8,460	5,740	8,725	1,330	197,609	
Hake	230	1,000	250	1,350	1,500	300	450	4,746	
Halibut, California	3,935	1,890	250	1,350	1,500	300	3,823	5,243	
Halibut, Northern	94,775	45,528	52,807	42,189	4,076	7,363	1	53	246,782	246,782	
Herring, Pacific	22,610	10,289	10,194	10,194	10,194	10,194	10,194	10,194	10,194	10,194	10,194	10,194	2,128	
Perci	230	10,289	365	1,533	1,533	
Rockfish	12,932	43,596	68,598	63,133	34,045	34,525	52,595	30,694	21,931	53,575	80,034	22,569	367,946	
Sabine Fish	9,891	3,258	6,425	1,000	250	36,655	44,349	134,506	43,275	31,673	33,869	6,444	3,185	374,919
Salmon	53,117	443,191	242,036	779,954	1,476,991	373,564	44,371	19,694	42,005	29,115	3,368,533
Salmon, Pink	225	6,158	24,961	46,188	19,120	19,120	19,120	19,120	19,120	19,120	19,120	19,120	36,699	
Sardine	700	45,350	45,350	45,350	45,350	45,350	45,350	45,350	763	
Shark	11,424	8,564	506	35	15	235	1,473	7,651	208,574	136,933	155,323	118,975	649,577	
Skate	200	1,000	1,000	6,020	2,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	3,527	
Smelt	64	114	1,470	676	70	5,405	6,843	4,825	3,341	7,693	683	107	31,300	
Sole	48,453	243,408	376,825	496,137	182,371	229,305	341,217	368,340	274,364	483,890	496,137	10,625	3,384,102	
Tuna	215	1,215	2,196	
Tuna, Albacore	700	215	700	
Whitebait	11,903	16,738	22,644	18,367	10,755	6,756	9,439	5,289	5,481	635	27	108,654	108,654	
Miscellaneous Fish	1,155	5,320	12,030	16,093	6,760	9,295	15,336	8,945	5,905	14,062	10,935	5,380	111,216	
Crustacean:														
Crab	128,882	117,694	188,220	207,004	242,550	147,744	154,950	64,580	1,368	13,826	1,266,168	
Menhaden	50	50	50	
Clam, Raror	87	69	62	36	12	24	12	12	12	12	314	
Clam, Soft-shell	2,341	2,695	2,653	2,105	222	12	12	12	12	3,290	2,845	2,237	21,225	
Clam, Washington	77	93	280	56	12	68	12	158	101	1,183	144	144	347	
Oyster, Native	2,320	1,680	2,240	1,520	1,600	9,360	
Total pounds	257,564	489,042	749,444	1,106,231	1,044,574	854,476	1,719,321	2,124,783	1,000,921	810,622	789,389	347,207	11,290,666	

Continued on next page.

COMMERCIAL

COMMERCIAL
CATCHES OF CALIFORNIA

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COMMERCIAL FISH LANDINGS IN THE EUREKA REGION DURING 1940—Continued

Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds
Clitellus, Pacific			200			600		260		450		100	1,350
Flounder, Starry						620							250
Halibut, Northern			550			700							620
Brockfish						100		356		225			200
Salmon						130		469					1,450
Sand Dab			1,150			20,140		36,115		4,000			1,570
Sole			17,470			900		400		4,375			1,320
Miscellaneous Fish			400			1,600							5,990
Crustacean:													2,088
Crab								480	744	45			
Total pounds			29,591					31,730	43,795	4,671	4,825		2,900
GRAND TOTAL, Eureka Region	257,564	486,042	770,035	1,106,231	1,044,874	886,205	1,763,116	2,129,456	1,005,746	810,622	789,389	350,197	11,399,478

COMMERCIAL FISH LANDINGS IN THE SACRAMENTO REGION DURING 1940

Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds
Carp	364	1,362	4,321	2,221	244	107		15	126	386	623	275	10,044
Carfin	7,215	7,725	26,862	31,659	2,474	2,290	2,205	2,668	17,553	14,763	18,515	17,701	151,630
Flounder, Starry					104								104
Hardhead	24	53	21	4									
Pike	12		33	31									
Salmon	26,500	31,000	45,583	116,996	400,893	68,408		137,645	697,459	30	55		161
Sardine	3,87,500	3,308,000								20,476,100	23,559,500	9,135,500	1,315,388
Shad	406	475	77,150	702,182	983,402	427	30		383	1,751	4,172	2,744	1,061
Spotted-Tail	14	12	75									5	12,118
Sucker													109
GRAND TOTAL, Sacramento Region	3,932,130	3,349,286	154,281	833,323	1,387,544	70,925	2,205	140,711	706,989	20,489,451	23,579,738	9,158,994	63,825,597

COMMERCIAL FISH LANDINGS IN THE SAN FRANCISCO REGION DURING 1940
Fishing Boat Landings from California Waters

Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds	
Anchovy													13,775	
Codfish	35	93	92	30	29	800				55	100	117	1,480	
Cuttle, Pacific	2,079	13,232	32,332	14,545	21,844	10,727	12,550	8,866	20,502	35,652	65,191	31,948	271,088	
Halibut, Ed.													7	
Hounder, Starry	35,097	90,910	119,423	17,428	57,052	47,942	27,040	21,573	22,512	87,015	41,200	14,833	582,027	
Hake			95		4,633	2,960	1,920	880	468	1,627	575	13,058		
Haddock, Northern	1,516	7,996	11,446	5,346	5,100	2,746	3,740	10,525	2,142	1,600	6,759	3,088	61,876	
Herring, Pacific	224,325	155,303	15,126		1,800						300	16,530	413,486	
Kingfish	1,776	3,103	1,551	991	100	2,538	897	232	548	274	1,004	457	19,210	
Mackerel, Pacific								18	180	400			928	
Perci.	1,447	4,227	7,144	4,102	200			1,470	888	922	1,096	337	622	
Rock Bass			114										114	
Rockfish	33,288	38,451	70,709	37,434	47,731	38,501	27,093	17,042	26,502	44,961	37,911	34,686	451,606	
Sablefish	6,995	10,569	10,300	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	77,581	
Salmon			13,570	12,970		149,670	139,674	275,418	599,964	2,529			1,177,088	
Sand Dab	55,189	43,177	27,399	14,320	91,818	42,362	31,442	22,873	25,373	23,234	21,564	22,550	420,038	
Sardine	4,500	5,470	21,449	19,991	9,991	2,000	3,711	6,486	6,486	6,486	6,486	23,270	170,494	
Sea-Bass, White			13	980				85	1,993	9,905	9,119	3,321	2,853	
Shad				843									27,569	
Shark	525,400	354,745	52,608	40,238	37,099	63,176	257,725	525,694	1,332,763	588,475	588,875	588,675	4,934,949	
Skate	33,786	24,872	14,965	4,725	15,155	4,403	5,741	8,245	8,690	10,771	8,875	160,628		
Smelt			13,200	12,700	12,700	7,000	7,000	4,000	4,000	4,000	4,000	4,000	15,641	
Sole	662,222	307,883	157,605	70,832	456,907	368,528	230,160	232,234	266,354	226,650	197,788	237,341	3,423,981	
Tomcod		488	481	389	197	45	18			340	198	30	2,371	
Tuna, Bluefin							108	2,265	29,000	1,384	1,384	1,384	48,271	
Turbot	1,477	2,680	4,225	5,195	10,425	2,279	4,550	6,731	6,288	4,084	1,737	1,545	54,817	
Whitefish	1,324	650	1,333	3,012	1,887	4,254	4,253	7,28	224	224	224	224	21,617	
Miscellaneous Fish	1,736	9,499	4,302	2,181	3,664	5,033	4,901	5,129	11,143	5,940	5,762	4,592	21,034	
Crustacean:														
Cray	211,822	339,384	363,324	447,334	358,676	347,288	402,260	280,914	-----	683,454	421,400	3,856,128		
Shrimp		20,531	36,744	47,379	54,477	60,230	137,158	264,531	192,278	84,740	63,039	76,963	35,340	1,690,169
Mollusk:														
Clam, Cockle	19	35	32	47	60	46	49	36	40	32	44	32	469	
Clam, Green	220	449	292	390	300	320	230	240	140	200	200	200	2,986	
Clam, Soft-shell	4,037	3,942	4,250	3,985	4,000	3,870	5,123	5,744	6,766	7,871	8,452	4,851	62,021	
Clam, Washington			228	367	275	152	136	128	88	104	96	64	104	
Oyster, Eastern	173	223	569	494	626	145	226	172	388	327	327	327	5,684	
Oyster, Eastern	10,528	11,636	11,982	9,193	6,140	5,368	5,009	5,975	9,967	10,842	12,231	14,867	113,358	
Oyster, Japanese	120,442	129,471	108,595	77,216	46,303	40,054	55,503	65,291	69,228	130,000	137,000	142,261	1,174,726	
Oyster, Japanese	60	30	270	90	17,476	4,702	4,078	2,063	140	1,476	1,476	1,476	15,154	
Sail													100	
GRAND TOTALS, San Francisco Region	6,508,650	7,091,700	11,108,484	892,928	1,492,549	1,308,574	1,664,309	5,745,319	8,422,705	65,299,708	65,310,578	24,881,895	189,694,484	

DIVISION OF FISH AND GAME

COMMERCIAL FISH LANDINGS IN THE MONTEREY REGION DURING 1940													
Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds
Anchoa													37,440
Caballa													1,169
Cultus, Pacific	3,798	1,699	2,972	3,039	4,426	3,966	6,364	5,101	2,519	6,340	17,223	10,003	67,147
Flounders, Gray	481	158	141	14,153	8,070	8,070	1,581	1,581	1,581	2,029	2,029	2,281	24,476
Halibut, California	3,278	2,247	919	2,226	732	459	1,508	1,578	2,632	1,588	1,588	1,588	20,553
Herring, Pacific													3,568
Kingfish	5,683	10,699	8,815	21,047	21,047	13,020	6,661	13,393	1,577	5,556	14,962	8,855	121,159
Mackerel, Horse	1,280	393	334	6,840	6,461	20,311	23,532	11,538	22,538	5,237	5,276	6,338	110,267
Mackerel, Pacific	88,512	59,694	51,286	24,444	6,585	18,172	14,184	45,498	64,379	50,122	18,620	9,747	452,036
Pompano													9,420
Pompano, California													9,420
Rockfish	131,455	157,513	209,372	213,312	178,193	134,143	164,064	106,117	106,117	117,269	76,343	1,686,991	1,686,991
Sablefish													88,723
Salmon	737	1,628	1,848	3,401	6,327	8,348	10,329	3,217	4,045	15,101	22,609	9,237	88,723
Salmon, Dab													613,224
Sardine	184	3,114	4,624	6,499	123,991	141,698	268,798	71,905	15,101	2,851	2,812	1,114	442
Sea-bass, Black	60,101,645	35,577,963	69,053	180,330	95,053	114,555	154,998	183,499	35,463	112,005,380	82,647,647	71,044,389	363,115,401
Sea-bass, White	254	76	35	59	106	175	474	71,186	51,125	8,545	625	133,221	133,221
Seabream													184,276
Shark	202,169	86,521	1,781	44	175	6,542	23,568	58,444	118,010	58,101	79,753	154,177	154,177
Skate													184,276
Smelt	2,618	1,670	1,445	1,127	1,437	11,408	13,789	9,458	10,081	19,034	12,284	9,579	100,031
Sole	1,961	2,273	15,089	59,204	17,038	18,029	15,735	1,409	837	1,094	228	43	130,795
Tuna, Albacore													88,723
Tuna, Bonito													4,689
Tuna, Skipjack	5,315	120	170	205	3,955	1,972	112	112	112	11	33	3,632	3,632
Whitetail													6,541
Miscellaneous Fish	11		232	200	70	230	142	30	314	14	57	57	1,917
													1,443
Crustacean:													
Crab	4,008	5,710	4,730	4,004	1,740	1,302	614	60	60	1,822	2,042	26,632	
Shrimp	68				452	249				63	1,038	484	2,361
Mollusk:													
Absalone													
Clam, Pismo	1,380	1,911	75,150	42,575	200,925	83,100	143,750	93,890	123,200	6,973	28,425	12,500	813,400
Mussel		100	2,334	784						1,483	3,237	2,375	13,524
Octopus	58	280	652	952	2,458	4,971	4,428	974	1,178	637	461	549	17,599
Squid	30	25,710	45,125	1,219,182	70,620	179,620	40,330	29,505	14,353	11,553	8,897	1,654,332	
GRAND TOTALS, Monterey Region	60,556,102	30,215,854	485,055	769,266	1,924,319	794,401	843,662	879,575	1,138,567	112,353,191	83,012,632	71,960,500	370,938,124

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COMMERCIAL FISH LANDINGS IN THE SANTA BARBARA REGION DURING 1940
Fishing Boat Landings from California Waters

Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds	DIVISION
Barracuda			11,310	21,309	22,175		1,565	332	21,091	13,020	31,664	4,659	127,125	
Cabover, Pacific					15	114	80	194		143	174	163	532	
Codfish, Starry				65	15	52	41	78		34	35		787	
Habitat, California	48,759	30,024	32,917	15,535	35,996	38,664	38,331	44,874	45,137	33,096	18,624	18,393	398,371	
Hake, Northern						209	20						50	
Herring, Pacific						40	105						288	
Mackerel, Horse							51	42	25	30			45	
Mackerel, Pacific	1,304	405	498		2,516	2,704	1,119	441	6,228	26,513	32,587	246,789	341,104	
Petrel		39	75	169		12		22	169	34			1,028	
Pompano, California													1,382	
Rock Bass	3,735	7,152	15,134	4,742	2,959	2,863	4,250	3,396	737	1,078	4,811	5,343	36,469	
Rockfish	31,672	31,762	31,947	19,489	30,829	26,751	19,967	14,935	11,670	15,987	41,369	10,272	399,767	
Sablefish						13		150					183	
Sand Dab													183	
Sardine			3,745	1,535		263	499	763	840		8	47	55	
Sedlpin						111	104	112		24		2	58,120	
Sea Bass, Black	615	549	948	2,954		3,704	653	833	44	924	617		13,020	
Sea Bass, White	31,829	14,026	7,105	6,653		23,804	25,562	50,843	19,044	11,944	5,788	6,210	204,291	
Shark	21,674	17,692	27,500	42,304	245	42,485	97,287	87,807	10,770	11,176	5,435	8,188	911,221	
Sheepshead	2,428	3,072	5,835	5,685	92	1,383	711			199	1,755		252,566	
Skate	6,476	4,508	2,561	2,815	71	1,540	1,088	2,190	2,332	2,300	1,444	2,320	34,648	
Smelt	368	282	2,537	3,085	81	1,712	32	31	150	27	20,683		20,683	
Sole	6,013	8,731	9,973	24,761	23,326	17,217	8,652	9,599	6,517	4,706	4,179	5,152	129,636	
Swordfish, Broadbill					9	432	39,465	103,991	104,359	32,110	9,582		311,975	
Tuna, Albacore						35	125	125	125	67,623	67,623	143	1,169,288	
Tuna, Bluefin						1,585	8,152		3,110	2,735			15,382	
Tuna, Skipjack	206		16	153		77	7	344	3,015	1,564	9,920	3,364	18,560	
Turbot										28	18		299	
Whiting, Ocean	8,588	7,116	6,431	2,784	1,616	231	928	397		261	5,499	2,935	36,782	
Yellowtail	209	261	487	835	1,996	3,805	1,631	1,099	408	11	185	321	2,410	536
Miscellaneous Fish													14,362	
GRAND TOTALS, Santa Barbara Region	213,811	155,236	294,992	217,396	578,612	674,456	347,234	514,709	1,196,342	395,996	421,617	439,829	5,420,174	

COMMERCIAL FISH LANDINGS IN THE LOS ANGELES REGION DURING 1940

Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds
Atherina.....	532,549	346,227	118,968	5,444	6,768	3,693	157,072	663,880	625,916	1,469,327	1,888,461	630,521	6,251,827
Barracuda.....	1,123	1,071	182,550	512,102	388,269	321,454	265,950	198,888	34,088	13,224	3,733	11,493	1,884,555
Cabazon.....	74	29	56	270	16	53	140	26	26	53
Chinook, Pacific.....	25	140	26	37,700
Dolphin, Hake.....	11	11	11	11
Herring, California.....	30,308	54,702	65,332	54,499	27,612	19,432	16,038	5,055	4,968	4,318	6,630	11,337	301,701
Kingfish.....	18,924	21,735	37,829	30,874	22,751	18,096	21,983	15,889	32,762	22,720	16,719	12,146	272,421
Mackerel, Horse.....	28,875	18,712	24,040	13,990	11,688	55,538	269,771	232,240	365,723	189,073	42,511	1,161	1,161
Mackerel, Pacific.....	13,600	9,642	3,890	570	3,906	9,003	103,261	50,578	4,080	8,240	3,079,630	27,317,447	13,485,519
Peech.....	1,791	2,571	4,308	4,335	479	143	2,332	1,404	1,364	301	240	14,185	800
Pompano, California.....	2,252	2,252	1,443	2	53	17	17	17	20,681
Rock Bass.....	3,772	1,695	7,558	10,183	20,215	21,625	26,824	16,641	4,636	2,166	3,688	2,836	122,212
RoeDish.....	22,145	32,016	78,543	18,539	17,576	21,205	12,033	7,186	14,134	18,737	31,702	62,792	357,550
Sailfish.....	3,779	2,758	9,268	3,845	2,817	2,179	2,107	2,104	1,094	1,094	1,094	1,094	34,640
Salmon.....	7	17	24	24
Sand Dab.....	1,373	1,353	1,353	1,353	1,353	1,353	1,353	1,353	1,353	1,353	1,353	1,353	8,286
Sardine.....	52,307,299	29,533,434	18,45,436	1,050	9,300	10,333	89,548	52,727	354,715	1,014,446	133,409,632	74,396,351	306,332,556
Sealipn.....	2,927	4,390	7,473	7,796	11,374	13,396	11,126	10,542	5,651	5,542	5,837	1,345	82,896
Sebastas, Black.....	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233
Sebastas, White.....	1,233	1,233	12,248	11,564	32,874	67,458	181,666	10,828	3,669	2,350	4,392	341,531	377,016
Shark.....	4,227	9,314	11,617	53,950	104,620	97,174	52,298	13,632	8,457	8,179	12,725	6,421	1,162
Skatehead.....	1,052	943	5,372	5,372	5,372	5,372	5,372	5,372	5,372	5,372	5,372	5,372	5,372
Skate.....	408	529	1,438	1,547	884	904	299	662	275	255	329	219	7,773
Smelt.....	18,170	18,859	13,599	9,671	8,733	5,726	4,384	9,114	13,632	20,114	15,341	12,290	143,533
Sole.....	241	322	1,114	1,545	2,433	1,023	1,229	544	383	473	293	293	397,833
Swordfish, Broadbill.....	28,001	79,111	140,231	65,276	52,914	2,260	16,474,185
Tuna, Albacore.....	56,292	48,899	47,175	4,960,307	417,469	17,49,029	4,343,946	627,231	53,728	15	11,111	20,111	24,011
Tuna, Bonito.....	71,800	15,057	54,328	49,619	16,903	10,454	50,655	417,469	363,583	18,212	3,827	2,808,571	1,161,266
Tuna, Yellowfin.....	215	8,445	51,588	51	11,252	71,561	71,561	71,561
Turbot.....	10	44
Whiting, Ocean.....	1,675	370	2,679	1,142	1,052	198	292	324	158	562	730	564	9,776
Yellowtail.....	12	2,747	20,880	34,712	8,028	8,985	4,365	969	570	30	2,280	8,581	8,581
Miscellaneous Fish.....	1,271	405	1,967	3,268	4,751	11,457	3,184	1,169	1,322	4,538	1,377	470	35,389
Crab, Rock.....	762	334	392	131	398	389	160	492	308	94	3,460
Lobster, Spiny.....	8,458	6,558	2,636	53,367	38,606	21,938	131,563
Mollusk:	50	75	125	125
Anemone.....	1,125	2,579	2,765	2,013	1,424	1,394	2,315	162	216	145	145	145
Clam, Cockle.....	48	19	214	452	452	452
Octopus.....	125	125	125	125
Squid.....	46,417	810	21,700	2,003	4,643	4,643	28,620	28,620	106,870
Total pounds.....	68,134,579	39,810,487	22,699,636	1,286,083	5,740,639	4,633,756	3,345,499	10,648,099	12,704,158	35,654,073	162,682,782	88,756,768	457,696,531

COMMERCIAL FISH CATCH OF CALIFORNIA

Continued on next page.

COMMERCIAL FISH LANDINGS IN THE LOS ANGELES REGION DURING 1940—Continued
Fishing Boat Landings from Waters North of the State Boundary

Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds
Tuna, Albacore.....										1,080,922			1,080,922
Total pounds.....										1,080,922			1,080,922

Fishing Boat Landings from Waters South of the International Boundary

Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds
Barracuda.....	167,613	147,613	72,425			73			70,140	256,716	200,649	146,403	1,064,534
Calivella.....	9,781		7,415			345					50		17,541
Grouper.....	4,829		618								441	405	5,492
Mackerel, Spanish.....	150		1,759								75		2,457
Rock Bass.....	788					425							1,288
Sea-bass, Black.....	15,798		1,356			3,785	21,104	81,573	60,338	45,625	18,388	108	251,573
Seabream, Black.....	147		419	140		100					327	4,400	5,000
Shark.....	650							17			112		129
Swordfish, Broadbill.....													650
Tuna, Bluefin.....			179,846	205,885	5,546			1,200		626			1,203
Tuna, Skipjack.....	1,953							153,861	121,110		45,604		712,850
Tuna, Yellowfin.....	151,067	169,933	1,464,576	4,831,461	2,967,867	1,763,213	2,951,243	4,108,881	271,888		7,435	5,765	1,200,000
Whiting.....	917,408	889,744	1,292,348	3,111,689	6,962,332	3,859,158	7,649,571	2,943,376	2,145,011	1,882,963	1,831,068	1,075,533	951,047
Yellowtail.....	703					7,970	116,033	309,953	2,200,344	400,494	45,428	27,490	705
Miscellaneous Fish.....	11,338	13	13,433	43,385					110		32	6	148
Cuttlefish.....											1,157	6,244	47,722
Bobcat, Spiny.....	8,783	16,038	14,450										
Total pounds.....	1,291,109	1,224,680	3,059,095	8,192,416	9,976,855	5,773,335	11,274,436	9,867,561	4,752,272	3,449,121	2,415,102	2,368,107	63,643,889

DIVISION OF FISHERIES

Continued on next page.

COMMERCIAL FISH CATCH OF CALIFORNIA

COMMERCIAL FISH LANDINGS IN THE LOS ANGELES REGION DURING 1940—Continued

Shipments to Canneries from North of the State Boundary

Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds
Tuna, Albacore.....	12,000	46,552	828,324	714,923	27,170	1,629,269
Total pounds.....	12,000	46,552	828,324	714,923	27,170	1,629,269

Shipments to Canneries from South of the International Boundary

Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds
Tuna, Yellowfin.....	138,309	138,309
Total pounds.....	138,309	138,309

Shipments to Canneries from Japan

Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds
Tuna, Albacore.....	57,590	102,887	100,190	471,530	377,493	351,974	77,866 1,279,163
Tuna, Skipjack.....	57,590	102,887	100,190	471,530	377,493	351,974	269,367
Total pounds.....	57,590	102,887	100,190	471,530	377,493	351,974	77,866 1,539,530
GRAND TOTALS, Los Angeles Region.....	69,425,688	41,035,167	25,816,321	9,593,089	15,717,494	10,807,081	15,138,587	21,859,786	19,604,249	40,408,196	165,125,054	91,196,741	525,722,450

COMMERCIAL FISH LANDINGS IN THE SAN DIEGO REGION DURING 1940

Fishing Boat Landings from California Waters

Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds	DIVISION OF FISH AND GAME
Anchovy	89,737	4,547	110,781	29,554	17,035	51,739	116,877	86,286	13,505	7,067	4,853	14,755	1,475	
Barracuda	70	45	18,097	6,869	526	290	4,372	19,378	2,139	16,018	1,531	132,742	532,700	143
Cod, Pacific	14,514	35,452	18,097	13,565	6,869	526	290	4,372	19,378	2,139	16,018	1,531	132,742	143
Halibut, California	14,514	35,452	18,097	13,565	6,869	526	290	4,372	19,378	2,139	16,018	1,531	132,742	143
Herring, Pacific	111	52	10	—	—	—	—	—	—	160	252	122	174	1,050
King Mackerel	111	52	10	—	—	—	—	—	—	160	252	122	174	836
Mackerel, Horse	324,105	16,326	13,880	14,313	18,886	30,803	18,451	657,251	58,877	11,620	189,643	266,029	3,648,675	11,876
Mackerel, Pacific	324,105	16,326	13,880	14,313	18,886	30,803	18,451	657,251	58,877	11,620	189,643	266,029	3,648,675	2,004
Mahi-mahi	—	—	—	61	262	37	539	560	515	—	—	—	—	2,004
Perc	—	—	—	—	141	108	90	1,734	—	—	—	—	—	—
Perch	—	—	—	17	—	—	—	—	—	—	—	—	—	17
Pollock, California	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Rock Bass	4,196	1,758	1,206	512	4,460	5,066	14,818	14,339	4,698	4,355	3,961	2,375	61,715	
Rockfish	9,005	21,209	36,978	26,267	4,049	9,282	16,673	2,797	2,368	4,606	8,070	14,141	21,106	33,894
Sabretooth	—	—	—	—	—	—	—	—	—	—	—	—	—	35
Sardine	19,410	1,205	1,193	409	1,463	490	1,470	986	296	—	—	—	—	35
Sealip	4,024	2,448	4,223	3,815	1,654	2,977	1,477	69	294	2,635	4,015	1,054	2,106	33,894
Seaperch, Black	904	98	237	411	948	719	376	762	20	—	9,801	2,530	—	—
Sea-bass, Short-fin	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Seabream, White	4,154	1,458	2,024	522	1,249	12,424	32,354	21,139	8,156	2,500	571	15,394	102,510	
Shark, Blue	1,561	2,660	4,034	3,879	13,677	63,473	63,479	6,476	4,705	401	1,419	1,351	167,556	
Sheepshead	35	33	162	22	34	22	22	22	22	85	1,083	1,083	1,083	22
Shark, Sandbar	30	312	—	—	34	—	—	—	—	59	1,050	1,050	1,050	446
Smelt	1,702	1,989	1,599	2,629	2,441	2,165	2,690	1,350	3,246	4,068	1,627	1,801	27,820	1,916
Soles	68	163	744	694	65	9,167	26,471	51,764	31,032	1,729	—	—	120,160	
Swordfish, Broadbill	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tuna, Albacore	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tuna, Bonito	210,201	101,976	38,199	22,413	65,153	636,301	151,243	162,994	58,131	153	251	660	1,265	2,353,512
Tuna, Skipjack	—	—	—	—	—	—	—	—	—	—	—	—	—	724,674
Tuna, Yellowfin	—	—	—	—	—	—	—	—	—	—	—	—	—	2,004
Whitefish, Ocean	—	—	—	25	—	—	—	—	72,989	38,257	49,162	5,627	166,026	
Yellowtail	19,245	3,274	57,086	24,685	79,102	31,715	9,636	12,725	5,627	42	123	515	1,777	244,919
Other Various Fish	79	12	—	36	45	103	—	—	70	—	1,502	442	87	345
Crustacean:										34,173	11,235	6,477	55,448	
Lobster, Spiny	1,360	1,681	520	—	—	—	—	—	—	—	—	—	—	
Mollusk:	2,396	4,324	—	—	—	—	—	—	—	—	26,642	6,068	39,430	
Squid	—	—	—	—	—	—	—	—	—	—	—	—	—	
Total pounds	916,695	202,741	292,052	410,349	805,544	787,824	2,426,979	2,070,703	1,291,368	1,383,155	915,462	1,985,107	13,485,979	

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COMMERCIAL FISH LANDINGS IN THE SAN DIEGO REGION DURING 1940—Continued

Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds	COMMERCIAL FISH CATCH OF CALIFORNIA
Barracuda.....	29,792	950	4,283	235	114	8,053	969	19,532	11,808	3,576	15,650		56,969	
Catfish.....		22,479	2,076	14,833	25,615								73,038	
Cuttlefish, Pacific.....													213	311
Groupers, Pacific.....	499	3,745	5,159	12,545	36,498	804	13,815	8,429	23,369	11,956	6,049	4,971	73,250	86,549
Hallibut, California.....		10,170	15,364	6,174	2,070								83	353
Mackerel, Spanish.....														3,096
Percies.....			355											5,518
Pompano, California.....														1,558
Rock Bass.....	95	871	234	881	975	144	1,509	884	2,545	86	86	86	4,994	
Rockfish.....	4,817	16,147	15,278	2,570	18,814	2,574	1,509	606	3,697	9,658	11,767	87	87,465	
Sardines.....				62									209	
Sculpin.....													62	
Seabass, Black.....	1,059	6,774	1,293	10,143	2,826	510	35,210	252	1,099	2,508	140	9,271	71,080	
Seabass, White.....	1,817	789	25	25	2,507	9,843	34,251	14,242	12,096	125	16,550	94,092		
Sharks.....					411	1,345	407	142	208				3,550	3,096
Sleepers.....	461	400	208	201			142			63	106	333	861	2,033
Solefish.....								19	24	23	23			
Swordfish, Broadbill.....								3,556	30,813	20,727				
Tuna, Albacore.....													55,066	
Tuna, Bluefin.....			575										580	
Tuna, Skipjack.....	26,320	18,631	352	1,398	320	175,890	155,567	3,500	1,248	38,867	194	192,492	407,450	
Tuna, Yellowfin.....	419,124	372,408	410,608	50,968	475,982	1,274	2,761,204	5,206	15,343	48,963	55,715	50,244	29,496	409,691
Whiting, Ocean.....	7,760,238	4,576,596	6,619,945	4,138,305	5,942,097	6,675,821	8,478,526	7,459,532	3,418,146	5,000,000	5,000,000	5,000,000	5,000,000	29,251,317
Yellowtail.....	75,329	95,626	18,541	83,404	24,099	17,424	147,931	493,101	472,709	103	1,184	3,189	2,294	11,336
Miscellaneous Fish.....	195		400										305,527	405,575
 Crustacean:														
Lobster, Spiny.....	216,237	172,216	105,308							275	120,469	152,462	767,997	
Total pounds.....	8,538,889	5,090,406	7,192,246	4,884,995	6,708,533	8,472,487	11,472,681	13,891,737	11,032,856	13,691,911	12,856,433	11,095,031	114,558,216	

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COMMERCIAL FISH LANDINGS IN THE SAN DIEGO REGION DURING 1940—Continued

Fishing Boat Landings from Waters North of the State Boundary

Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds
Tuna, Albacore	12,350	459,232	471,582
Total pounds	12,350	459,232	471,582

Shipments to Canneries from North of the State Boundary

Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds
Tuna, Albacore	52,695	21,390	74,085
Total pounds	52,695	21,390	74,085

Shipments to Canneries from Japan

Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds
Tuna, Albacore	105,104	50,075	155,179
Total pounds	105,104	50,075	155,179
GRAND TOTALS, San Diego Region	9,455,575	5,295,147	7,484,298	5,295,344	7,514,097	9,290,311	14,004,764	15,934,895	12,803,456	15,127,761	13,794,285	13,080,138	129,048,041

COMMON AND SCIENTIFIC NAMES OF FISHES, CRUSTACEANS AND MOLLUSKS
FISHES

<i>Common name</i>	<i>Scientific name</i>
Anchovy	<i>Anchoviella compressa</i> <i>Anchoviella delicatissima</i> <i>Engraulis mordax</i>
Barracuda	<i>Sphyraena argentea</i>
Cabezone	<i>Scorpaenichthys marmoratus</i>
Cabrilla	<i>Epinephelus analogus</i> Various species of <i>Mycteroherperca</i>
Carp	<i>Cyprinus carpio</i>
Catfish	<i>Ameiurus catus</i> <i>Ameiurus nebulosus</i>
Cultus, Pacific	<i>Ophiodon elongatus</i>
Eel	<i>Cebidichthys violaceus</i> <i>Xiphister mucosus</i> Other stichaeids and blenniids <i>Gymnothorax mordax</i>
Flounder, Starry	<i>Platichthys stellatus</i>
Flying Fish	<i>Cypselurus californicus</i>
Grouper	Various species of <i>Mycteroherperca</i>
Hake	<i>Merluccius productus</i>
Halibut, California	<i>Paralichthys californicus</i>
Halibut, Northern	<i>Hippoglossus stenolepis</i>
Hardhead	<i>Orthodon microlepidotus</i> <i>Mylopharodon conocephalus</i>
Herring, Pacific	<i>Clupea pallasii</i>
Kingfish	<i>Genyonemus lineatus</i>
Small percentage	<i>Seriphus politus</i>
of Queenfish	
Mackerel, Horse	<i>Trachurus symmetricus</i>
Mackerel, Pacific	<i>Pneumatophorus diego</i>
Mackerel, Spanish	<i>Scomberomorus sierra</i>
Mullet	<i>Mugil cephalus</i>
Perch	
Halfmoon	<i>Medialuna californiensis</i>
Opal-eye	<i>Girella nigricans</i>
Salt-water	Various members of the <i>Embiotocidae</i>
Sargo	<i>Anisotremus davidsoni</i>
Pike	<i>Ptychocheilus grandis</i>
Pompano, California	<i>Palometa simillima</i>
Rock Bass	<i>Paralabrax clathratus</i> <i>Paralabrax nebulifer</i>
Rockfish	All species of <i>Sebastodes</i> and <i>Sebastolobus</i> found in California waters
Sablefish	<i>Anoplopoma fimbria</i>
Salmon	<i>Oncorhynchus tshawytscha</i> <i>Oncorhynchus kisutch</i>
Sand Dab	<i>Citharichthys stigmaeus</i> <i>Citharichthys sordidus</i>
Sardine	<i>Sardinops caerulea</i>
Sculpin	<i>Scorpaena guttata</i>
Sea-bass, Black	<i>Stereolepis gigas</i>
Sea-bass, Short-fin	<i>Cynoscion parvipinnis</i>
Sea-bass, White	<i>Cynoscion nobilis</i>
Shad	<i>Alosa sapidissima</i>
Shark	<i>Alopias vulpes</i> <i>Galeorhinus zyopterus</i> <i>Mustelus californicus</i> <i>Notorynchus maculatus</i> <i>Prionace glauca</i> <i>Rhinotriakis henlei</i> <i>Squalus suckleyi</i> <i>Triakis semifasciata</i> Small percentage of other species
Sheepshead	<i>Pimelometopon pulcher</i>
Skate	<i>Raja binoculata</i> <i>Raja inornata</i> <i>Raja rhina</i> And other species
Smelt	<i>Atherinops affinis</i> <i>Atherinopsis californiensis</i> <i>Leuresthes tenuis</i> <i>Hypomesus pretiosus</i> Small percentage of other <i>Osmeridae</i>
Sole	<i>Eopsetta jordani</i> <i>Glyptocephalus zachirus</i> <i>Parophrys vetula</i> Several other pleuronectids
Split-tail	<i>Pogonichthys macrolepidotus</i>
Sucker	<i>Catostomus occidentalis</i>
Swordfish, Broadbill	<i>Xiphias gladius</i>

Tomcod	<i>Microgadus proximus</i>
Tuna	
Albacore	<i>Germo alalunga</i>
Bluefin	<i>Thunnus thynnus</i>
Bonito	<i>Sarda lineolata</i>
Skipjack	<i>Katsuwonus pelamis</i>
Yellowfin	<i>Neothunnus macropterus</i>
Turbot	<i>Hypsopsetta guttulata</i> <i>Pleuronichthys decurrens</i> <i>Pleuronichthys verticalis</i> Possibly a small percentage of other pleuronectids
Whitebait	<i>Allosmerus attenuatus</i> <i>Spirinchus starksii</i> Young of several species of fishes
Whitefish, Ocean	<i>Caulolatilus princeps</i>
Yellowtail	<i>Seriola dorsalis</i>

CRUSTACEANS

Crab	Cancer magister
Crab, Rock	Cancer antennarius
	Cancer anthonyi
	Cancer productus
Lobster, Spiny	Panulirus interruptus
Shrimp	Crago franciscorum and Crago nigricauda

MOLLUSKS	
Abalone	<i>Haliotis fulgens</i>
Cockle	<i>Haliotis rufescens</i>
Clam, Cockle	<i>Paphia staminea</i>
Clam, Gaper	Species of <i>Chione</i>
Clam, Pismo	<i>Schizothaerus nuttallii</i>
Clam, Razor	<i>Tivela stultorum</i>
Clam, Soft-shell	<i>Siliqua patula</i>
Clam, Washington	<i>Mya arenaria</i>
Mussel	<i>Saxidomus nuttalli</i>
Octopus	<i>Mytilus californianus</i>
Oyster, Eastern	<i>Mytilus edulis</i>
Oyster, Japanese	<i>Polypus hongkongensis</i>
Oyster, Native	<i>Polypus bimaculatus</i>
Snail	Various species of gastropods
Squid	<i>Ostrea virginica</i>
	<i>Ostrea gigas</i>
	<i>Ostrea lurida</i>
	Loligo opalescens
	Small percentage of other species