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**STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF FISH AND GAME
FISH BULLETIN 154
California Marine Fish Landings For 1970**



by
Robert R. Bell
1971

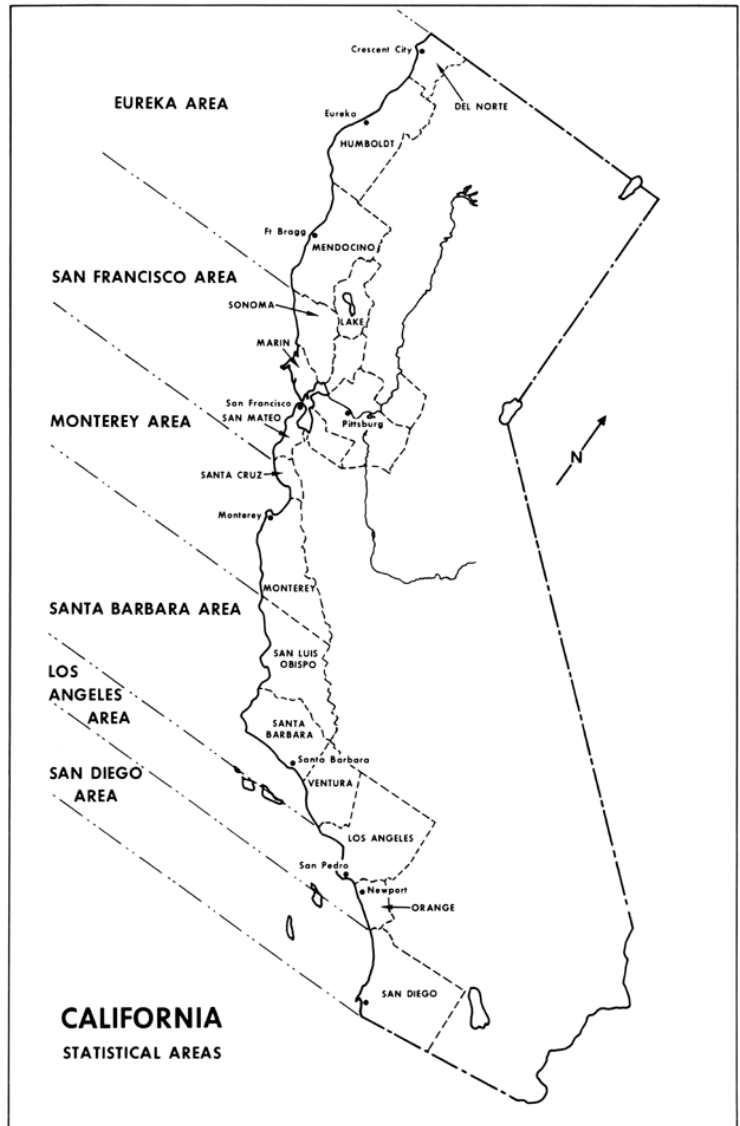


FIGURE 1. Geographical areas used to summarize California Fisheries statistics.

(2)

FIGURE 1. Geographical areas used to summarize California Fisheries statistics.

TABLE OF CONTENTS

	Page
Foreword -----	5
Explanation of Tables -----	6
Common and Scientific Names of Fishes, Crustaceans and Mollusks in the 1970 Catch -----	9
Annual Landings and Shipments (Figure 2) -----	10
Annual Landings and Shipments, 1916 through 1970 -----	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 -----	13
Origin of Commercial Fish Landings -----	14
Monthly Landings and Shipments—Statewide -----	16
Monthly Landings and Shipments—by Area -----	18
Value and Poundage, Annual Landings and Shipments by Area ----	32
Value of Landings and Shipments by Ports and Areas -----	35
Partyboat Sport Catch, 1961–1970 -----	45
Inshore Bait Landings, 1970 -----	46
Live Bait Catch, 1966–1970 -----	46
Appendix A—Species Composition of Salmon Landings -----	47
Table I—California Commercial Troll Salmon Landings—1970 --	47
Table II—California Ocean Recreational Salmon Landings and Success—1970 -----	48

FOREWORD

Landing bulletins provide records of amounts and values of various living marine resources taken by California's commercial fisheries, and summarize catches made by the partyboat sportfishing industry. They also detail the small quantities of freshwater fish taken commercially in inland areas. These data provide the basic background for managing California's marine fishery resources. The published figures are of local, national, and international significance, and are used by fisheries scientists, legislators, educators, members of the fishing industry, and others interested in California fisheries.

This report for 1970 is the 30th in the series of landing bulletins. The first, published in 1929, contained the records of the 1926 and 1927 commercial fish landings.

California's fishery statistics are based on a system whereby fish dealers, processors, and partyboat operators send duplicate copies of their landing records to the Department. The statistical system and methods used to collect the records were fully described in Fish Bulletin 86, which reported the catch for 1950. In the intervening years, methods and equipment have been modified as conditions warranted, but the basic principles have remained unchanged.

Credit for this publication belongs to the Marine Fisheries Statistics Unit personnel who process the many documents necessary for its publication. Special acknowledgment is given to Marine Resources Region wardens and the clerks in field offices whose efforts help provide completeness of records. The cooperation of the many wholesale fish dealers and canners is appreciated.

1. EXPLANATION OF TABLES

Tables in this bulletin summarize statistics of various fishery operations in California during 1970. Five types of activity are being reported this year: landings of commercial fishermen in California; imports of tuna from other states or foreign countries destined for processing in California; sport catches of the partyboat fleet; landings of in-shore species used for bait; and catches of boats supplying live bait for sportfishing. In addition, Appendix A details the species composition of the 1970 ocean salmon landings.

Statistics presented in this publication do not encompass all fishing activities in California since not all of these functions are reported. For example: sportfishing from private boats or from shore is not reported, nor is the quantity of fish imported for use in a fresh state compiled. Department biologists do sample some facets of the sportfishery, but since this is part of specific studies, most of the results are not reported here.

The Department annually publishes a circular which enumerates some of the fishery products produced from the catch. The 1970 figures are contained in circular No. 45, "Statistical Report of Fresh, Canned, Cured and Manufactured Fishery Products for 1970" (Bell, 1971).

1.1. SOURCE OF DATA

Data on each commercial landing, inshore bait delivery, and import are recorded on receipts by fish dealers or processors at the time of delivery. Copies of these documents are transmitted to the Department twice each month. For each transaction, the dealer is required to provide the species weight and price paid to the fishermen. The date of the transaction, the fisherman's name, the fishing boat registration number, and intended use of the fish (canning, fresh, etc.) also are required. In addition, the specific area where the fish were caught and type of gear used usually are reported.

Partyboat catch data are obtained from logs completed by the boat operator. The log for each trip includes the number of each species taken, number of anglers, number of hours fished, and the specific area fished. The date, boat name, and boat registration number also are furnished. Copies of these records are sent to the Department monthly.

Operators of boats supplying live bait keep a voluntary daily log showing number of sets, species caught, area fished, and number of scoops of bait sold. Copies of these logs are furnished the Department monthly. While these records represent most live bait landings, the reported catch should be regarded as minimal.

Clerical personnel at field offices in Eureka, Monterey, Long Beach, 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 received by the Department are carefully edited for completeness and coded to facilitate processing. The data are then punched into cards and summarized with electric tabulating machines.

1.2. STATISTICAL AREAS

California is divided into seven areas for the purpose of reporting fisheries statistics (Figure 1). Each statistical area is named for a major port within its boundaries. Sacramento area landing statistics are incorporated with San Francisco totals in the tables.

1.3. SPECIES

The common and scientific names of species reported in 1970 are listed in Table 1. Some varieties are reported only collectively when, for economic or other reasons, a specific separation is not practical. A further combination of species is made in preparing the tables.

The "Miscellaneous (Animal Food)" category consists of a variety of low value species caught by trawling. Since it is impractical for dealers to report the many species separately, Department biologists periodically sample this catch to determine its species composition. Based on this sampling, the percentage and weight compositions of 1970 animal-food landings are as follows:

<i>Species</i>	<i>Percent</i>	<i>Pounds</i>
Hake	25.1	265,410
Rockfish	21.2	224,171
Arrowtooth flounder	15.9	168,128
Dover sole	13.1	138,521
Sablefish	8.8	93,052
English sole	7.1	75,076
Sanddab	2.0	21,148
Rex sole	1.5	15,861
Twenty-three other species	5.3	56,043
	100.0	1,057,411

Salmon landings reported in the tables are for all species combined. However, biologists from the Department's Anadromous Fisheries Branch sample the commercial and sport salmon fisheries to determine species composition of catches and to obtain estimates of the unreported skiff catch. The sampling methods and results for 1952 and 1965 were detailed by Jensen and Swartzell (1967); since 1966, results have been presented annually in the landing bulletins. Appendix A details the salmon catch for 1970.

1.4. CONDITION

Most fish and shellfish are landed in a round condition; however, some species, such as barracuda, salmon, and swordfish are usually eviscerated or cleaned before being brought ashore. The condition of fish landed or shipped into the state cannot always be determined, so the tables summarize weights as reported to the Department without regard to condition.

Since 1963, oyster landings have been reported as packed weight rather than weight in the shell. Packed weight is estimated to be 15.5% of the live weight for Pacific oysters and 10.9% for eastern oysters.

Landings reported in measurements other than weight are equated to pounds using conversion factors determined by periodic sampling.

Factors used in 1970 were:

Abalone, red	50 pounds per dozen
Abalone, pink	25 pounds per dozen
Abalone, white	25 pounds per dozen
Abalone, green	35 pounds per dozen
Clam, Washington	7 pounds per dozen
Crab, market	2 pounds each
Live bait	12.5 pounds per scoop

1.5. VALUE

Value is computed from prices paid to fishermen. Area value figures are ascertained by summing the value of all individual landings in that area. The value for an individual port within an area is calculated from weights of each species landed at that port and the average price paid for the species in that area. When the price paid for an individual landing is not specified, the average price paid for the species in the area is used.

1.6. INSHORE BAIT

The inshore bait fishery takes several kinds of fish and invertebrates from bays, rivers, and intertidal regions for sale as bait. Records of this fishery have been published as a separate summary in the landing bulletins since 1963. Conversion factors used for inshore bait for 1970 were as follows:

Crab, sand	0.041 pound per dozen
	4.5 pounds per gallon
Crab, shore	0.013 pound per dozen
Mudsucker	0.465 pound per dozen
Mussel	80.000 pounds per sack
Sculpin, staghorn	0.065 pound per sack
Shrimp, ghost	0.082 pound per dozen

1.7. REFERENCES

- Bell, Robert R. 1971. Statistical report of fresh canned, cured and manufactured fishery products for 1970. Calif. Dept. Fish and Game, Circular, (45): 1-15.
- Jensen, Paul T., and Phillip G. Swartzell. 1967. California salmon landings 1952 through 1965, Calif. Dept. Fish and Game, Fish Bull., (135): 43-57.

TABLES

MARINE FISH CATCH FOR 1970

9

TABLE 1
Common and Scientific Names of Fishes, Crustaceans, and Mollusks in the 1970 Catch

Common name	Scientific name	Common name	Scientific name
FISHES			
Anchovy.....	<i>Engraulis mordax</i>	Sargo.....	<i>Anisotremus davidsoni</i>
Barracuda, California..	<i>Sphyraena argentea</i>	Sculpin.....	<i>Scorpaena guttata</i>
Bass, rock.....	<i>Paralabraz clathratus</i>	Sculpin, Pacific staghorn	<i>Leptocottus armatus</i>
Kelp bass.....	<i>Paralabraz clathratus</i>	Sea bass, giant.....	<i>Stereolepis gigas</i>
Sand bass.....	<i>Paralabraz nebulifer</i>	Seabass, white.....	<i>Cynoscion nobilis</i>
Spotted sand bass.....	<i>Paralabraz maculofasciatus</i>	Shark.....	<i>Cetorhinus maximus</i>
Blacksmith.....	<i>Chromis punctipinnis</i>	Basking.....	<i>Prionace glauca</i>
Bonito, Pacific.....	<i>Sarda chilensis</i>	Blue.....	<i>Isurus ozyrinchus</i>
Cabezon.....	<i>Scorpaenichthys marmoratus</i>	Bonito.....	<i>Triakis semifasciata</i>
Cabrilla, spotted.....	<i>Epinephelus analogus</i>	Leopard.....	<i>Squatina californica</i>
Croaker.....	<i>Genyonemus lineatus</i>	Pacific angel.....	<i>Galeorhinus gzypterus</i>
White.....	<i>Seriplus polyus</i>	Soupfin.....	<i>Squalus acanthias</i>
Queenfish.....	<i>Coryphaena hippurus</i>	Spiny dogfish.....	<i>Alopias vulpinus</i>
Dolphinfish.....	<i>Gymnothorax mordax</i>	Thresher.....	Various species
Eel.....	<i>Anarrichthys ocellatus</i>	Miscellaneous.....	Various species
California moray.....	<i>Atheresthes stomias</i>	Sheephead, California..	<i>Pinelomelotopon pulchrum</i>
Wolf.....	<i>Platichthys stellatus</i>	Skate.....	<i>Myliobatis californica</i>
Flounder.....	Various species	Bat ray.....	<i>Raja binoculata</i>
Arrowtooth.....	<i>Cypselurus</i> spp.	Big skate.....	<i>Raja inornata</i>
Starry.....	<i>Cyprinus carpio</i>	California skate.....	<i>Raja rhina</i>
Miscellaneous.....	<i>Mylopharodon conocephalus</i>	Longnose skate.....	<i>Rhinobaltes productus</i>
Flyingfish.....	<i>Lavinia exilicauda</i>	Shovelnose guitarfish.....	Various species
Freshwater fish.....	<i>Orthodon microlepidotus</i>	Miscellaneous.....	Various species
Carp.....	<i>Hexagrammos decagrammus</i>	Smelt.....	<i>Atherinopsis californiensis</i>
Hardhead.....	<i>Mycteroperca</i> spp.	Jacksmelet.....	<i>Spirinchus starksi</i>
Hitch.....	<i>Merluccius productus</i>	Night smelt.....	<i>Hypomesus pretiosus</i>
Sacramento blackfish.....	<i>Medialuna californiensis</i>	Surf smelt.....	<i>Allosmerus elongatus</i>
Greenling, kelp.....	<i>Paralichthys californicus</i>	Smelt, whitebait.....	<i>Spirinchus starksi</i>
Grouper.....	<i>Hypoglossus stenolepis</i>	Young of several spp.	
Hake, Pacific.....	<i>Ophiodon elongatus</i>	Sole.....	<i>Microstomus pacificus</i>
Halfmoon.....	<i>Trachurus symmetricus</i>	Dover.....	<i>Parophrys vetulus</i>
Halibut.....	<i>Scomber japonicus</i>	English.....	<i>Eopsetta jordani</i>
California.....	<i>Gillichthys mirabilis</i>	Petrale.....	<i>Glyptocephalus zachirus</i>
Pacific.....	<i>Girella nigricans</i>	Rex.....	<i>Lepidopsetta bilineata</i>
Herring, Pacific.....	<i>Gadus macrocephalus</i>	Rock.....	<i>Psettichthys melanostictus</i>
Lingcod.....	Members of family Embiotocidae	Sand.....	<i>Isopsetta isolepis</i>
Mackerel.....	<i>Peprilus simillimus</i>	Scalyfin.....	Various species
Jack.....	Various species of <i>Sebastes</i> and <i>Seriplus</i> spp.	Miscellaneous.....	Various species
Pacific.....	<i>Anaplopoma fimbria</i>	Swordfish.....	<i>Xiphias gladius</i>
Mudsnucker, longjaw.....	<i>Xenistius californiensis</i>	Tuna.....	<i>Thunnus alalunga</i>
Opaleye.....	<i>Oncorhynchus tshawytscha</i>	Albacore.....	<i>Thunnus obesus</i>
Pacific cod.....	<i>Oncorhynchus gorbuscha</i>	Bigeye.....	<i>Thunnus thynnus</i>
Perch.....	<i>Oncorhynchus kisutch</i>	Bluefin.....	<i>Katsuwonus pelamis</i>
Pompano, Pacific.....	<i>Citharichthys sordidus</i>	Skipjack.....	<i>Thunnus albacares</i>
Rockfish.....	<i>Sardinops caeruleus</i>	Yellowfin.....	
Sablefish.....		Turbot.....	<i>Pleuronichthys decurrens</i>
Salema.....		Curlfin.....	<i>Hypsopsetta guttulata</i>
Salmon.....		Diamond.....	<i>Pleuronichthys verticalis</i>
King.....		Hornyhead.....	Various species
Pink.....		Miscellaneous.....	Various species
Silver.....		Wahoo.....	<i>Acanthocybium solanderi</i>
Sanddab.....		Whitefish, ocean.....	<i>Caulolatilus princeps</i>
Sardine.....		Yellowtail, California..	<i>Seriola dorsalis</i>
CRUSTACEANS			
Crab.....		Prawn.....	<i>Eusicyonia ingentis</i>
Market.....	<i>Cancer magister</i>	Ridgeback.....	<i>Pandalus platyceros</i>
Rock.....	<i>Cancer productus</i>	Spot.....	<i>Crago franciscorum</i>
Sand.....	<i>Cancer antennarius</i>	Shrimp.....	<i>Crago nigricauda</i>
Shore.....	<i>Cancer anthonyi</i>	Bay.....	<i>Callinassa californicus</i>
Spider.....	<i>Emerita analoga</i>	Ghost.....	<i>Pandalus jordani</i>
Crayfish.....	<i>Hemigrapsus oregonensis</i>	Ocean.....	<i>Hippolytina californica</i>
Lobster, spiny.....	<i>Pachygrapsus crassipes</i>	Red.....	
	<i>Loxorhynchus</i> sp.		
	<i>Astacus trolchipes</i>		
	<i>Panulirus interruptus</i>		
MOLLUSKS			
Abalone.....		Mussel.....	
Black.....	<i>Haliotis cracherodii</i>	Bay.....	<i>Mytilus edulis</i>
Green.....	<i>Haliotis fulgens</i>	Rock.....	<i>Mytilus californianus</i>
Pink.....	<i>Haliotis corrugata</i>	Octopus.....	<i>Octopus</i> spp.
Red.....	<i>Haliotis rufescens</i>	Oyster.....	<i>Crassostrea virginica</i>
Threaded.....	<i>Haliotis assimilis</i>	Eastern.....	<i>Ostrea edulis</i>
White.....	<i>Haliotis sorenseni</i>	European flat.....	<i>Crassostrea gigas</i>
Clam.....		Giant Pacific.....	<i>Loiigo opalescens</i>
Freshwater.....	<i>Corbicula fluminea</i>	Squid.....	
Jackknife.....	<i>Tagelus californianus</i>		
Littleneck.....	<i>Paphia staminea</i>		
Purple.....	<i>Senpulinaria nuttalli</i>		
Washington.....	<i>Saxidomus nuttalli</i>		

TABLE 1
Common and Scientific Names of Fishes, Crustaceans, and Mollusks in the 1970 Catch

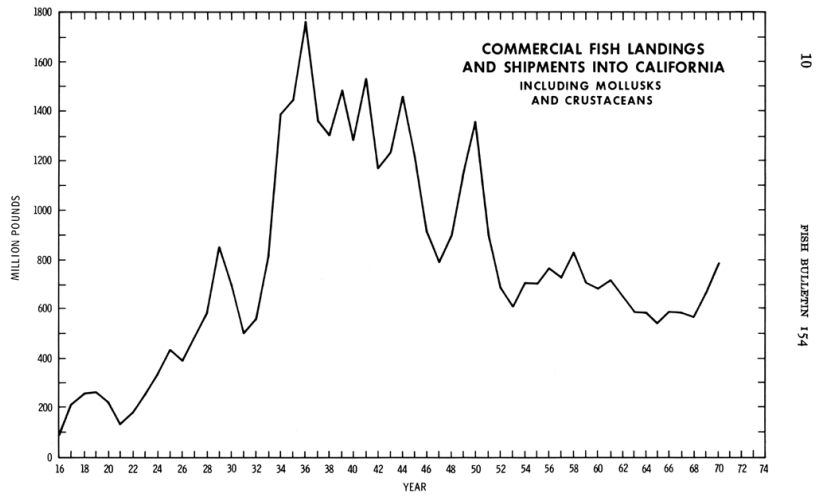


FIGURE 2. Total annual landings and shipments into California (see Table 2). Sardine deliveries to reduction ships, 1930-38 are included. Since 1965, tunas are the only species included in shipments.

FIGURE 2. Total annual landings and shipments into California (see Table 2). Sardine deliveries to reduction ships, 1930-38 are included. Since 1965, tunas are the only species included in shipments.

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	1,528,892
1917	209,877	1942	1,173,414
1918	261,134	1943	1,234,049
1919	266,270	1944	1,459,456
1920	222,004	1945	1,216,501
1921	135,348	1946	919,822
1922	182,343	1947	795,499
1923	253,875	1948	900,467
1924	340,446	1949	1,135,339
1925	437,502	1950	1,366,676
1926	394,964	1951	904,114
1927	487,166	1952	694,996
1928	583,527	1953	618,919
1929	856,854	1954	713,410
1930	702,189	1955	710,713
1931	502,390	1956	772,551
1932	556,139	1957	738,550
1933	821,805	1958	832,919
1934	1,390,798	1959	713,423
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	1,297,518	1965*	544,480
		1966	591,533
		1967	589,028
		1968	567,214
		1969	672,793
		1970	798,415

* Beginning in 1965 only tuna shipments are recorded.

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 *

1969				1970			
Species	Rank	Thousands of pounds	Thousands of dollars	Species	Rank	Thousands of pounds	Thousands of dollars
Yellowfin tuna	1	240,747	\$40,536	Yellowfin tuna	1	261,817	\$50,399
Anchovy	2	135,278	1,353	Anchovy	2	192,485	2,157
Albacore tuna	3	71,055	18,021	Skipjack tuna	3	96,918	15,868
Jack mackerel	4	51,921	1,967	Albacore tuna	4	73,112	22,274
Skipjack tuna	5	48,680	6,558	Jack mackerel	5	47,746	1,881
Squid	6	20,779	555	Squid	6	24,591	667
Pacific bonito	7	17,202	805	Market crab	7	15,414	3,946
Bluefin tuna	8	15,607	2,462	Dover sole	8	15,161	1,233
Dover sole	9	12,919	925	Rockfish	9	10,687	824
Rockfish	10	9,227	694	Bluefin tuna	10	9,531	1,803
Market crab	11	7,939	2,295	Pacific bonito	11	9,192	651
Salmon	12	6,151	3,843	Salmon	12	6,612	5,101
Sablefish	13	4,157	310	Sablefish	13	4,428	319
English sole	14	3,804	334	Ocean shrimp	14	4,048	567
Abalone	15	3,658	1,161	Petrale sole	15	3,416	531
Ocean shrimp	16	2,948	413	English sole	16	3,282	324
Petrale sole	17	2,867	414	Abalone	17	2,901	948
Miscellaneous animal food	18	2,412	48	Rex sole	18	1,741	190
Pacific mackerel	19	2,357	122	Lingcod	19	1,531	139
Rex sole	20	2,259	218	Swordfish	20	945	534
All others		10,826	2,402	All others		12,857	3,023
Totals		672,793	\$85,436	Totals		798,415	\$113,379

* Only the tunas are included in the shipments.

TABLE 3
Landings and Shipments of Leading Species Ranked by Pounds

TABLE 4
Number of Licensed Commercial Fishermen

Area of residence	License year*	
	1969-70	1970-71
Eureka.....	1,977	1,735
Sacramento.....	508	409
San Francisco.....	1,852	1,546
Monterey.....	910	712
Santa Barbara.....	911	751
Los Angeles.....	1,912	1,744
San Diego.....	1,452	1,386
Alaska, Washington and Oregon fishermen licensed in California.....	414	627
Mexican nationals licensed in California.....	12	19
Other.....	41	40
Totals.....	9,989	8,969

* 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
1969-70.....	1,703	1,828	1,050	140	20	107	4,848†
1970-71.....	1,202	1,666	1,175	156	30	108	4,337‡

* April 1 to March 31.

† The owners of 479 boats were issued fishing party licenses in 1969-70.

‡ The owners of 457 boats were issued fishing party licenses in 1970-71.

TABLE 5
Number of Registered Fishing Boats by Length

TABLE 6
Origin of Shipments Received for Processing in California During 1970 *

Shipped from: Species	Pounds shipped to each area		Total pounds
	Los Angeles	San Diego	
Oregon, Washington, Canada and Alaska:			
Tuna, albacore.....	11,130,440	1,009,615	12,830,055
Tuna, skipjack.....	446	---	446
Mexico and Central America:			
Tuna, skipjack.....	41,172	11,925	53,097
Tuna, yellowfin.....	759,197	1,123,408	1,882,605
South America:			
Tuna, albacore.....	4,554,035	---	4,554,035
Tuna, skipjack.....	1,142,638	---	1,142,638
Tuna, yellowfin.....	208,186	---	208,186
Japan:			
Tuna, albacore.....	16,643,430	750,943	17,394,373
Tuna, bigeye.....	763,510	---	763,510
Tuna, skipjack.....	14,249,183	1,943,237	16,192,420
Tuna, yellowfin.....	22,383,429	259,902	22,643,331
Australia:			
Tuna, bluefin.....	876,197	---	876,197
China (Formosa):			
Tuna, albacore.....	290,100	---	290,100
Tuna, skipjack.....	70,815	---	70,815
Tuna, yellowfin.....	573,993	40,118	614,111
Malaya:			
Tuna, albacore.....	1,854,711	1,079,425	2,934,136
Tuna, bigeye.....	31,480	---	31,480
Tuna, yellowfin.....	2,461,033	272,521	2,733,554
Philippines:			
Tuna, bigeye.....	50,215	---	50,215
Tuna, skipjack.....	3,710	---	3,710
Tuna, yellowfin.....	582,889	---	582,889
South Pacific Islands:			
Tuna, albacore.....	4,346,974	830,770	5,177,744
Tuna, skipjack.....	2,974,144	---	2,974,144
Tuna, yellowfin.....	840,772	355,265	1,196,027
Total pounds.....	86,832,699	8,367,119	95,199,818

* Beginning in 1965 only tuna shipments are recorded.

TABLE 6
Origin of Shipments Received for Processing in California During 1970

TABLE 7
Origin of Commercial Fish Landings and Volume of Shipments into California During 1970

Species	Landings of catches from					Total pounds	Tuna shipments*	Grand total
	California waters	Waters north of State	Waters south of State	Central Pacific waters	African waters			
Fish:								
Anchorovy.....	192,485,074	----	----	----	----	192,485,074	----	192,485,074
Barracuda, California.....	22,208	----	2,089	----	----	24,297	----	24,298
Blackfish, Sacramento.....	412,430	----	----	----	----	412,430	----	412,430
Blacksmith.....	1,182,519	----	----	----	----	1,182,519	----	1,182,519
Bonito, Pacific.....	8,192,304	----	398,516	----	----	8,590,820	----	8,590,820
Cabazon.....	10,698	----	----	----	----	10,698	----	10,698
Carp.....	388,830	----	----	----	----	388,830	----	388,830
Croaker, white.....	564,871	----	----	----	----	564,871	----	564,871
Flounder.....	277,814	2,229	----	----	----	277,814	----	277,814
Flounder, arrowtooth.....	6,120	----	----	----	----	6,120	----	6,120
Flyingfish.....	78,631	----	----	----	----	78,631	----	78,631
Greenling, kelp.....	148	----	----	----	----	148	----	148
Grouper.....	7,142	----	7,142	----	----	7,142	----	7,142
Hake, Pacific.....	9,775	----	----	----	----	9,775	----	9,775
Halmson.....	38,609	----	85	----	----	38,694	----	38,694
Halibut, California.....	316,988	----	849	----	----	317,837	----	317,837
Herring, Pacific.....	316,988	----	----	----	----	316,988	----	316,988
Lingcod.....	1,631,399	25,147	----	----	----	1,656,546	----	1,656,546
Mackerel, jack.....	47,746,599	----	88	----	----	47,746,687	----	47,746,687
Mackerel, Pacific.....	621,919	----	611	----	----	622,530	----	622,530
Opaleye.....	22,452	----	----	----	----	22,452	----	22,452
Perech.....	241,469	----	490	----	----	241,959	----	241,959
Pompano, Pacific.....	131,368	----	----	----	----	131,368	----	131,368
Rockfish.....	10,488,644	182,583	48,093	----	----	10,680,320	----	10,680,320
Sablefish.....	4,428,077	186,582	----	----	----	4,614,659	----	4,614,659
Salmon.....	16,450	----	----	----	----	16,450	----	16,450
Sea bass.....	6,611,522	861	----	----	----	6,612,383	----	6,612,383
Sandfish.....	678,595	1,615	338	----	----	680,548	----	680,548
Sardine.....	442,319	----	----	----	----	442,319	----	442,319
Sargo.....	548	----	848	----	----	1,396	----	1,396
Starry, Pacific.....	28,300	----	----	----	----	28,300	----	28,300
Sculpin.....	78,313	----	78,648	----	----	156,961	----	156,961
Sea bass, giant.....	11,940	----	117,691	----	----	129,631	----	129,631
Seabass, white.....	428,299	----	675,149	----	----	1,103,448	----	1,103,448
Shark.....	386,697	----	33,721	----	----	420,418	----	420,418

14

FISH BULLETIN 154

TABLE 7
Origin of Commercial Fish Landings and Volume of Shipments Into California During 1970

Shropshire, England	8,457	----	500	----	----	2,205	----	3,005
Spain	163,282	----	----	----	----	150,000	----	150,000
Spain, Canary Islands	96,321	----	----	----	----	84,481	----	84,481
Spain, Gibraltar	90,612	----	----	----	----	4,810	----	4,810
Sole, Dover	13,920,454	1,503,455	----	----	----	16,150,000	----	16,150,000
Sole, English	3,227,266	44,859	----	----	----	3,080,616	----	3,080,616
Sole, French	3,944,704	71,555	----	----	----	3,870,450	----	3,870,450
Sole, Irish	1,380,790	83,318	----	----	----	1,761,479	----	1,761,479
Sole, Italian	184,780	800	----	----	----	185,281	----	185,281
Sole, Netherlands	10,781	----	----	----	----	10,781	----	10,781
Spain	250,113	----	15,450	----	----	94,766	----	94,766
Tuna, Alaska	22,248,120	1,474,172	2,611,433	----	----	36,621,114	49,000,000	72,111,137
Tuna, Bering	155	----	18,422	----	----	15,400	200,000	200,000
Tuna, Gulf	500,313	----	3,343,028	----	----	3,320,300	270,100	3,611,400
Tuna, Atlantic	272,244	----	71,804,258	250,000	2,317,457	70,400,000	30,000,000	251,770,000
Tuna, Yellowfin	114,003	----	258,181,718	2,401,150	3,320,595	321,238,650	92,000,000	261,217,341
Tuna, Bluefin	50,207	----	----	----	----	30,000	----	30,000
Walrus	251	----	145	----	----	500	----	450
Whale, humpback	251	----	207	----	----	1,770	----	1,770
Whale, California	2,572	----	127,800	----	----	120,000	----	120,000
Whale, North Pacific	1,500	----	810	----	----	3,320	----	3,320
Whale, Southern	500,157	77,000	----	----	----	1,007,411	----	5,007,411
Whale, other	18,413,500	----	----	----	----	15,413,500	----	15,413,500
Whale, minke	400	----	----	----	----	400,000	----	400,000
Whale, sperm	168,714	----	----	----	----	150,714	----	168,714
Whale, other	220,000	----	----	----	----	250,000	----	220,000
Whale, other	20,500	----	----	----	----	20,500	----	20,500
Whale, other	2,275	----	----	----	----	2,275	----	2,275
Whale, other	4,047,000	98,700	----	----	----	4,047,000	----	4,047,000
Whale, other	2,000,010	----	----	----	----	2,000,010	----	2,000,010
Whale, other	700	----	----	----	----	700	----	700
Whale, other	1,000	----	----	----	----	1,000	----	1,000
Whale, other	10,740	----	----	----	----	10,740	----	10,740
Whale, other	1,100,700	----	----	----	----	1,100,700	----	1,100,700
Whale, other	24,800,000	----	----	----	----	24,800,000	----	24,800,000
Whale, other	470	----	----	----	----	470	----	470
Total species	570,000,000	1,500,000	200,000,000	4,000,000	1,000,000	700,000,000	90,000,000	1,000,000,000

* For origin of shipments refer to Table 5. Beginning in 1990 only base shipments are reported.

MARINE FISH CATCH FOR 1970

1-13

TABLE 7 [continued]

TABLE 8
Monthly Landings and Shipments Into California During 1970

Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds
LANDINGS:													
Fish:													
Anchovy.....	23,439,832	11,804,456	16,477,020	799,938	16,909,612	417,658	818,738	2,202,187	17,710,640	38,889,727	34,056,143	29,259,225	192,485,074
Barracuda, California.....	---	---	10,020	2,218	4,352	8,405	903	183	549	---	248	---	24,588
Blackfish, Sacramento.....	126,600	105,336	35,984	7,800	---	---	---	---	350	19,850	47,300	69,210	412,430
Blacksmith.....	---	---	---	27,275	19,620	345,888	143,717	355,540	298,660	58,720	---	---	1,153,519
Bonito, Pacific.....	104,169	245,061	83,787	419,237	327,621	243,001	191,893	2,800,178	2,112,377	458,238	786,256	1,360,469	9,192,304
Cabeson.....	1,140	958	2,137	611	140	57	51	172	919	2,529	1,103	871	10,698
Carp.....	116,688	90,688	28,179	7,790	---	---	---	---	1,850	8,390	33,523	100,943	353,830
Crusker, white.....	81,928	53,012	34,503	35,163	30,223	20,526	119,548	17,095	27,254	41,140	84,489	57,090	284,871
Flounder.....	18,080	29,682	83,076	21,607	7,199	11,172	15,564	58,450	20,178	21,631	18,661	5,614	277,814
Flounder, arrowtooth.....	1,853	1,554	166	---	1,140	965	---	---	685	---	---	---	248
Flyingfish.....	---	---	---	6,495	28,305	23,692	15,660	3,337	1,233	---	---	---	78,631
Greenling, kelp.....	---	128	12	8	---	---	---	---	---	---	---	---	148
Groupers.....	6,570	1,572	---	---	---	---	---	---	---	---	---	---	7,142
Hake, Pacific.....	1,273	50	2,775	1,854	9,070	8,354	3,894	5,169	2,405	3,670	270	135	38,609
Halibut, California.....	18,738	39,811	30,148	18,018	24,143	29,378	28,105	14,138	6,817	8,131	20,916	22,275	257,444
Herring, Pacific.....	24,539	2,569	115	41,520	124,020	72,900	20,100	28,138	---	---	---	---	2,127
Lincoln.....	12,231	38,284	39,682	49,205	53,140	210,129	375,614	353,283	178,956	120,856	54,472	31,447	1,531,999
Mackerel, jack.....	1,385,953	499,421	1,817,925	1,588,132	6,006,842	2,089,651	4,277,960	4,538,698	6,122,697	10,883,215	5,323,980	3,083,105	47,744,909
Mackerel, Pacific.....	6,062	8,201	610	1,571	161,199	127,227	198,812	52,115	11,175	38,937	---	---	621,919
Opaleye.....	300	---	1,943	43	3,139	1,212	757	4,200	7,325	4,142	---	---	22,432
Perch.....	8,855	15,590	42,900	32,457	3,971	30,254	7,582	40,079	15,071	15,827	11,868	6,063	241,409
Pompano, Pacific.....	2,260	7,879	9,796	4,885	6,538	4,566	11,291	20,282	20,205	12,569	29,187	131,388	---
Rockfish.....	494,166	792,387	1,079,478	1,226,025	1,115,316	1,141,428	1,371,729	850,737	679,234	1,068,972	598,801	492,344	10,688,844
Sablefish.....	227,593	399,941	472,000	329,002	232,088	376,290	371,045	358,548	401,678	499,444	374,731	404,566	4,428,077
Salmon.....	---	---	---	---	---	16,450	---	---	---	---	---	---	16,450
Salmon, Pacific.....	18,206	47,254	35,223	229,889	1,171,789	2,114,084	1,604,889	1,111,226	379,276	91,269	34,622	6,611,822	6,611,822
Sardine.....	9,983	11,288	48,474	63,192	34,013	93,660	107,160	32,815	38,813	---	8,071	870	442,319
Sardine, Pacific.....	---	---	---	---	548	---	---	---	---	---	---	---	548
Saury, Pacific.....	---	---	---	8,000	---	---	---	---	14,700	5,600	---	---	28,300
Sea bass, giant.....	1,112	6,698	1,510	2,734	14,499	26,722	29,274	24,207	12,705	12,039	9,043	13,408	154,911
Shad, white.....	12,232	23,678	27,980	9,851	14,484	18,770	4,691	899	5,069	5,088	3,114	3,205	129,641
Shad, white, Pacific.....	53,614	128,793	126,054	130,898	81,663	48,163	41,095	220,535	198,914	52,663	53,890	47,291	1,191,445
Shark.....	22,966	11,262	20,410	19,635	38,009	64,426	70,844	38,804	24,343	42,850	37,587	29,183	420,318
Sheepshead, California.....	142	467	434	277	594	374	422	277	146	55	569	138	3,805
Skate.....	4,427	8,156	5,793	9,798	24,964	24,639	9,815	8,453	2,275	3,000	3,157	805	102,952
Smelt.....	313	3,873	8,442	12,524	21,038	70,256	89,637	127,843	100,002	88,119	31,202	292	561,521
Smelt, whitehead.....	35	22,192	19,892	27,995	69,853	65,735	31,655	11,173	663	---	---	---	249,813
Sole, Dover.....	431,737	1,048,740	830,073	1,440,617	1,298,663	2,354,233	1,729,464	1,718,838	1,347,289	1,685,898	773,808	505,524	15,160,888

16
FISH BULLETIN 14

TABLE 8
Monthly Landings and Shipments Into California During 1970

Sole, English.....	191,310	268,534	210,024	290,955	234,628	191,523	247,295	520,545	409,092	306,979	238,093	172,968	3,282,518
Sole, petrale.....	234,727	546,494	223,080	195,509	285,943	273,673	378,579	463,292	373,198	266,654	229,351	244,000	3,415,708
Sole, rex.....	84,419	163,166	92,893	200,785	130,966	141,656	153,502	209,223	184,468	165,343	131,217	84,541	1,741,479
Sole, sand.....	14,676	13,817	28,679	11,277	3,583	6,598	13,271	25,738	7,944	10,322	29,432	27,764	165,291
Sole, miscellaneous.....	1,966	1,132	616	869	1,554	1,403	2,980	4,128	1,071	1,847	1,071	614	19,751
Swordfish.....	1,344	-----	-----	-----	221	16,177	256,486	228,515	122,598	212,889	99,810	6,705	944,745
Tuna, albacore.....	-----	-----	-----	-----	-----	-----	190,166	7,117,794	8,251,909	12,695,637	1,753,809	52,449	29,931,714
Tuna, bigeye.....	30,965	193	-----	-----	62,352	803,420	4,439,003	3,055,956	275,449	187,619	908	-----	2,655,295
Tuna, bluefin.....	916,269	4,252,138	1,882,277	5,981,269	8,738,293	8,019,792	7,470,599	7,303,514	4,645,264	12,859,203	7,174,838	6,846,935	76,486,634
Tuna, skipjack.....	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Tuna, yellowfin.....	9,284,911	43,043,215	41,889,861	27,073,172	30,900,080	11,927,574	8,756,292	12,355,384	10,323,772	14,407,300	10,482,296	10,512,711	231,955,638
Halibut.....	312	2,453	2,489	4,064	6,575	4,536	1,314	1,480	942	2,555	924	663	28,067
Walrus.....	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Whitfish, ocean.....	18	-----	618	-----	850	479	-----	40	-----	350	-----	273	1,778
Yellowtail, California.....	13,324	32,067	13,847	10,244	8,224	11,869	3,122	15,094	21,468	12,130	12,713	38,129	184,222
Miscellaneous.....	409	1,244	137	-----	6	962	125	195	24	-----	-----	-----	2,723
Miscellaneous (animal food).....	43,032	60,585	63,990	66,875	57,204	101,705	150,427	114,823	147,384	134,448	83,377	53,589	1,057,411
Crustacean:	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Crab, market.....	64,742,229	5,205,132	12,461,131	827,568	562,943	162,858	19,014	-----	-----	-----	216,096	699,015	15,413,589
Crab, rock.....	54,331	54,767	67,210	41,365	41,979	44,123	43,825	39,527	31,786	28,054	49,244	53,566	539,379
Crab, spider.....	807	203	-----	278	30	14	-----	-----	-----	-----	-----	-----	1,032
Crayfish.....	-----	-----	-----	-----	5,983	22,367	53,719	22,055	2,600	-----	53,133	1,113	196,714
Lobster, spiny.....	29,680	32,387	18,964	198	-----	-----	-----	-----	-----	-----	50,203	39,193	223,399
Prawn, spot.....	2,347	2,766	2,044	198	702	1,024	5,048	3,864	-----	-----	2,017	2,240	22,259
Shrimp, bay.....	-----	-----	-----	-----	192	-----	880	1,145	-----	-----	-----	259	2,378
Shrimp, ocean.....	-----	-----	-----	-----	806,102	1,015,919	1,788,249	401,589	35,730	-----	-----	-----	4,047,589
Mollusk:	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Albacore.....	249,636	-----	187,050	286,290	352,418	264,499	279,207	232,209	277,970	271,243	264,437	235,264	2,900,813
Mussel.....	45	190	200	250	-----	-----	-----	-----	-----	-----	-----	50	735
Octopus.....	248	622	1,105	160	116	330	491	713	45	72	22	25	3,928
Oyster, eastern.....	1,641	1,523	464	1,247	1,444	1,095	1,694	1,259	1,908	1,558	1,389	1,854	18,745
Oyster, giant Pacific.....	105,818	97,643	108,433	111,867	106,266	55,433	53,062	48,919	66,199	100,408	126,293	127,544	1,102,739
Squid.....	2,775,783	2,608,385	1,706,050	263,250	2,932,705	3,396,500	1,600,955	776,325	359,800	60,200	3,407,647	4,706,263	24,599,865
Miscellaneous mollusk.....	92	76	100	22	-----	-----	-----	-----	-----	-----	31	108	46
Total pounds.....	46,914,359	71,607,102	69,076,592	41,973,370	73,206,114	36,360,398	37,799,718	48,549,965	55,973,853	96,392,978	66,702,426	59,385,733	703,215,904
SHIPMENTS:*	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Fish:	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Tuna, albacore.....	1,722,799	3,856,786	1,208,323	1,610,145	1,731,056	748,657	4,923,183	6,884,212	10,066,397	3,708,948	1,844,182	5,075,550	43,180,443
Tuna, bigeye.....	50,215	-----	-----	-----	-----	-----	222,840	407,160	164,990	-----	-----	-----	845,208
Tuna, bluefin.....	-----	-----	-----	-----	-----	-----	826,440	-----	49,757	-----	-----	-----	876,197
Tuna, skipjack.....	3,203,315	3,605,839	3,656,045	1,954,575	487,060	4,666,050	139,218	4,322,198	4,666,477	6,739,892	2,302,818	179,960	147,070
Tuna, yellowfin.....	-----	-----	-----	-----	-----	-----	2,817,187	1,673,352	1,138,177	1,338,714	1,929,314	29,890,703	20,437,270
Total pounds.....	4,982,039	7,462,625	4,864,368	3,576,645	2,218,116	5,553,932	13,783,728	14,774,038	18,544,831	7,199,668	3,762,866	8,476,947	95,199,818
Grand total.....	51,896,398	79,069,727	73,940,960	45,549,815	75,427,220	41,914,330	51,533,443	63,323,998	73,818,683	103,592,676	70,465,292	67,862,686	798,415,322

* For origin of shipments refer to Table 6. Beginning in 1965 only tuna shipments are recorded.

TABLE 8 [continued]

MAINE FISH CATCH FOR 1970
17

TABLE 9
Monthly Landings of Commercial Fishing Boats in the Eureka Area During 1970

Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds
LANDINGS FROM:													
California waters:													
Fish:													
Bonito, Pacific.....	.....	.....	.....	.....	.....	.....	.....	30	244	.....	.....	.....	274
Cabazon.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12
Flounder.....	7,157	18	1,412	2,767	4,654	3,317	8,184	45,050	10,335	12,814	3,115	1,272	100,065
Flounder, arrowtooth.....	1,853	1,554	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,655
Greenling, kelp.....	.....	1	8	1	.....	.....	.....	.....	.....	.....	.....	.....	10
Hake, Pacific:													
Haddock.....	.....	.....	.....	.....	.....	.....	3	16	.....	.....	.....	.....	19
Hallibut, California.....	.....	.....	.....	.....	.....	10	80	53	46	.....	.....	.....	219
Langcod.....	3,363	10,023	12,824	39,660	49,108	109,299	181,872	263,053	119,733	79,267	18,648	4,183	894,823
Porch.....	1,943	4,608	8,058	6,988	.....	.....	2,360	18,099	12,018	7,607	4,237	1,556	65,414
Rockfish.....	122,758	292,145	273,565	286,907	245,063	434,065	458,209	389,173	367,066	506,385	222,171	141,352	3,734,459
Subfish.....	135,935	350,392	287,792	240,596	178,248	271,402	177,806	293,189	203,803	252,464	168,061	206,917	2,673,605
Salmon.....	.....	.....	100,508	874,495	1,371,754	1,051,037	748,443	120,253	.....	.....	.....	.....	3,646,090
Sandlab.....	9,068	14,292	10,697	23,895	29,473	34,528	48,483	73,554	47,056	60,332	15,789	1,219	368,418
Shark.....	80	.....	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	643
Slate.....	15	.....	.....	4,380	19,830	22,639	6,885	715	.....	.....	.....	.....	54,444
Smelt.....	.....	362	517	2,899	11,338	47,478	79,482	119,480	89,670	44,859	382	.....	396,467
Smelt, whitebait.....	.....	35	21,967	17,384	53,423	51,616	55,821	26,619	11,193	869	.....	.....	218,301
Sole, Dover.....	340,485	864,076	695,311	1,243,177	1,069,659	2,104,129	1,544,882	1,534,946	1,213,339	1,223,259	544,803	348,310	12,726,666
Sole, English.....	23,554	63,408	77,124	212,219	116,821	108,877	145,273	396,637	242,339	122,798	59,185	17,121	1,605,317
Sole, petrale.....	175,222	275,741	124,286	81,288	124,105	149,566	221,284	211,838	164,873	195,319	101,607	160,671	1,859,909
Sole, rex.....	59,839	108,389	82,723	167,861	97,088	122,821	135,039	191,794	155,307	113,019	74,314	35,404	1,313,688
Sole, sand.....	1,181	464	503	654	1,199	3,358	19,826	21,993	6,549	3,086	2,900	224	62,537
Sole, miscellaneous.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
Tuna, albacore.....	.....	.....	.....	.....	.....	.....	.....	94,671	2,850,072	3,270,054	827,550	.....	7,067,931
Turbot.....	56	356	48	341	.....	.....	.....	646	277	.....	214	.....	1,637
Miscellaneous.....	.....	1,213	155	.....	.....	83	.....	10	.....	.....	.....	.....	1,481
Miscellaneous (animal food).....	23,407	29,360	24,989	9,611	18,665	53,689	68,650	54,423	77,989	63,098	20,702	5,987	450,570
Crustaceans:													
Crab, market.....	6,296,047	5,082,229	1,209,917	804,013	541,695	144,800	19,016	.....	.....	.....	.....	.....	447,845
Crab, rock.....	.....	.....	.....	.....	240	555	440	240	.....	.....	.....	220	6
Shrimp, ocean.....	.....	.....	.....	.....	565,837	827,025	1,788,249	375,269	.....	.....	.....	.....	3,565,370

FISHERY BULLETIN 154

TABLE 9
Monthly Landings of Commercial Fishing Boats in the Eureka Area During 1970

TABLE 10
Monthly Landings of Commercial Fishing Boats in the San Francisco Area During 1970 *

Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds
LANDINGS FROM:													
California waters:													
Fish:													
Anchovy.....					16,120	13,440	17,200	61,000	45,960	40,880	29,520	62,110	217,730
Blackfish, Sacramento.....	126,600	105,536	35,964	7,800					550	19,850	47,300		412,439
Bonito, Pacific.....								1,109	497	30			1,636
Cabazon.....								180					183
Chub.....	116,698	90,908	26,179	7,700					1,850	8,300	32,460	100,850	385,945
Croaker, white.....	1,345	380		85		287	668	456	668	1,120	585	880	6,574
Flounder.....	5,120	17,472	39,834	12,390	865	4,785	2,243	9,456	7,667	8,338	15,515	4,242	129,048
Flounder, sparrowhoth.....			193		1,160				565				2,465
Hake, Pacific.....					5,400								5,400
Haddock, California.....	9,092	9,838	11,849	3,379	467	395	2,108	5,317	734	2,077	13,722	22,822	81,598
Herring, Pacific.....	24,430	2,560	115										2,117
Lingcod.....	4,889	6,206	7,321	3,236	15,510	36,589	107,812	61,431	35,692	17,488	21,642	15,670	336,456
Mackerel, jack.....	4,163	7,704	7,569	9,457				22		1,575			1,607
Percy.....								579	917	2,752	2,698	3,482	41,567
Rockfish.....	36,634	121,596	89,209	21,763	24,750	51,908	54,711	59,694	54,875	109,045	76,272	69,816	770,413
Sablefish.....	31,140	43,849	28,068	14,250	100	8,691	15,527	14,565	40,580	70,651	36,635	43,706	347,782
Salmon.....			82,547	401,023	601,699	388,769	224,109	222,288	227				1,012,462
Sanddab.....	8,143	11,692	13,850	19,287	29,219	20,795	20,270	12,953	15,190	22,145	15,740	6,495	195,760
Shark.....	2,475	1,735	1,855	1,194	573	695	5,779	748	13,855	11,522	6,560		46,882
Skate.....	2,600	4,200	4,200	1,200	400			800	624	1,200	2,003		17,227
Smelt.....	287	3,082	6,835	7,129	14,776	21,115	9,335	4,835	8,322	1,535	95		77,347
Smelt, whitebait.....		285	2,478	4,572	9,227	9,884	4,786	70					31,312
Sole, Dover.....	91,142	179,519	85,911	43,794	60,281	65,608	46,085	43,475	36,955	277,667	101,997	86,295	1,108,063
Sole, English.....	110,378	91,028	43,142	31,767	67,632	30,293	48,510	48,195	58,720	106,151	119,633	105,025	876,784
Sole, petrale.....	35,243	44,274	37,732	43,781	111,493	55,190	101,615	93,584	109,479	99,960	96,074	81,125	911,477
Sole, rex.....	16,430	24,213	28,590	14,923	10,562	8,585	10,375	6,270	13,485	35,589	24,312	19,297	232,931
Sole, sand.....	12,120	8,640	22,360	7,755	900	1,705	850	1,975	1,125	7,028	25,840	23,930	114,328
Sole, miscellaneous.....							660			90			520
Tuna, albacore.....							2,143	1,045,127	1,485,222	1,662,322	94,211	20,465	4,310,700
Turbot.....		860	1,035	1,540			410	855	665	2,555	710	38	8,738
Miscellaneous.....	309		2				125						438
Miscellaneous (animal food).....					5,400	9,183		1,268	6,663	4,490			27,035

FISH BULLETIN 154

TABLE 10
Monthly Landings of Commercial Fishing Boats in the San Francisco Area During 1970

TABLE 11
Monthly Landings of Commercial Fishing Boats in the Monterey Area During 1970

Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds
LANDINGS FROM:													
California waters:													
Fish:													
Anchovy.....	.....	.....	.....	383,050	230,250	10,200	32,650	713,600	13,000	220,450	303,800	.....	1,907,200
Bonito, Pacific.....	.....	35	.....	.....	.....	.....	.....	2,950	32,922	35,947	1,490	.....	73,449
Caboton.....	346	221	1,809	423	.....	.....	13	10	919	2,119	911	659	7,436
Craker, white.....	4,820	13,350	2,659	4,312	4,739	9,896	101,463	9,183	12,294	107,10	20,854	.....	187,316
Flounder.....	8,773	8,230	8,016	2,151	1,490	3,064	8,102	3,847	2,082	128	.....	.....	26,834
Greenling, kelp.....	.....	125	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	125
Hake, Pacific.....	.....	.....	.....	375	1,490	290	290	.....	.....	.....	.....	.....	2,875
Habitat, California.....	1,055	955	615	415	487	401	2,269	2,814	307	33	23	16	10,430
Herring, Pacific.....	2,960	2,819	4,210	41,250	124,030	72,800	20,100	28,138	.....	.....	.....	.....	286,818
Lingcod.....	.....	.....	2,038	16,029	43,739	59,199	12,331	7,048	11,139	10,336	6,701	.....	179,228
Mackerel, jack.....	.....	.....	6,265	81,482	153,115	2,680	13,402	165,418	46,720	21,000	161,825	535	514,652
Perch.....	179	518	784	9,818	.....	.....	445	377	138	184	20	3	12,435
Pompano, Pacific.....	140	685	72	893	1,315	2,130	1,215	1,873	398	487	.....	.....	9,809
Rockfish.....	39,897	72,290	337,241	583,141	478,179	339,413	430,042	123,058	127,761	145,478	98,511	80,419	2,875,239
Sablefish.....	60,518	2,574	149,175	50,315	46,790	73,242	170,185	123,729	150,334	116,835	132,315	145,095	1,220,107
Salmon.....	.....	.....	.....	49,864	175,133	108,769	115,782	92,515	9,915	.....	.....	.....	642,978
Sandlap.....	565	21,125	9,946	8,881	8,821	1,865	2,194	20,264	19,286	9,229	2,913	2,378	110,607
Saury, Pacific.....	.....	.....	.....	.....	.....	.....	.....	14,700	5,600	.....	.....	.....	20,300
Seabass, white.....	29	.....	.....	47	.....	.....	.....	1,868	3,060	2,598	3,172	896	11,688
Shark.....	70	582	600	411	325	2,940	1,358	2,008	2,570	4,933	6,682	3,423	24,902
Skate.....	1,812	3,490	1,765	4,000	4,440	1,410	2,730	4,038	1,668	1,830	1,154	505	29,642
Squid.....	11	429	725	1,018	1,085	1,103	905	818	1,425	890	56	7	8,322
Sole, Dover.....	110	.....	965	6,096	465	2,545	14,995	8,215	985	2,280	5,175	.....	42,430
Sole, English.....	6,998	31,760	27,215	19,815	35,845	17,315	21,540	62,075	51,285	41,428	23,225	14,885	394,999
Sole, petrale.....	1,845	9,190	43,000	11,205	17,290	5,180	16,894	63,222	37,125	23,340	20,738	.....	18,526
Sole, rex.....	2,460	11,655	2,415	2,455	7,070	345	830	4,915	7,705	6,100	8,750	24,220	78,920
Sole, sand.....	1,365	1,820	1,905	705	1,190	1,325	1,595	685	270	.....	.....	.....	10,850
Sole, miscellaneous.....	.....	.....	.....	473	1,144	404	1,561	3,750	1,671	1,410	862	.....	11,775
Swordfish.....	.....	.....	.....	.....	.....	.....	1,499	312,771	1,896,752	2,488,150	109,501	.....	4,598,526
Tuna, albacore.....	.....	.....	.....	.....	.....	.....	.....	45	.....	.....	.....	.....	45
Miscellaneous.....	.....	.....	450	900	.....	.....	.....	.....	.....	.....	.....	.....	1,350
Miscellaneous (animal food).....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

FISH BULLETIN 134

TABLE 11
Monthly Landings of Commercial Fishing Boats in the Monterey Area During 1970

TABLE 12
Monthly Landings of Commercial Fishing Boats in the Santa Barbara Area During 1970

Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds
LANDINGS FROM:													
California waters:													
Fish:													
Anchovy.....	1,180,300	441,200	299,400	20,700	468,600	41,600	594,740	41,200	2,373,610	6,174,760	4,734,750	3,243,500	19,614,260
Barracuda, California.....				254					10	308			572
Bonito, Pacific.....	2,671	1,098		18			30	189,623	48,872	44,753	172,379	178,929	636,379
Cabezon.....	794	978	383	188	140	57	38	6		419	192	179	2,902
Croaker, white.....			1,300			990	1,300	250	150	10			3,800
Flounder.....	30	2,378	3,814	4,199									10,421
Greenling, big.....			4	7									11
Hake, Pacific.....									1,135	324	25		1,484
Halibut, California.....	6,438	11,263	8,733	3,773	8,309	5,966	13,167	3,616	23,416	3,954	1,027	7,075	77,396
Lingcod.....	924	1,009	1,593	4,152	7,416	18,220	22,805	12,096	11,569	10,177	5,209	4,734	96,906
Mackerel, jack.....	314,603	241,850	411,450	142,350	606,620	260,371	226,476	192,696	74,130	600,770	400,300		3,388,416
Mackerel, Pacific.....	797						1,818	1,624	1,770	4,872	2,813	1,699	22,560
Perch.....	1,356	1,153	1,377	4,535	4			188	3,388	180	180		8,522
Pompano, Pacific.....			69										110
Rockfish.....	168,348	196,424	251,989	254,962	261,967	242,428	328,575	247,547	91,305	192,829	114,847	103,034	2,457,155
Salmon.....				2,970	20,238	41,501	71,281	45,707	28,828	42			208,567
Sanddab.....	400	131		114	54		820						1,519
Sea bass, giant.....			27	62	871	218							978
Seabass, white.....	2,342	791	1,023	6,158	1,250	872	3,170	12,082	4,903	8,115	8,372	1,938	51,316
Shark.....	3,759	2,044	4,503	3,451	8,663	22,553	31,417	5,324	11,053	10,971	3,426	2,574	199,738
Sheepshead, California.....	40	200	28	5	77	90			5				53
Skate.....		556		183	4				93				1,634
Sole, Dover.....			15	510	1,840	6,350	10,160	5,653	4,800	1,347	125		30,726
Sole, English.....	50,470	80,488	45,637	24,745	10,319	12,914	7,600	10,948	46,215	32,711	35,750	36,237	391,623
Sole, petrale.....	2,717	4,648	15,425	28,891	26,733	62,118	27,911	25,004	46,930	18,221	8,090		4,575
Sole, rex.....	5,490	8,555	6,845	8,900	6,490	5,665	3,600	1,885	2,675	5,545	6,285	2,810	62,215
Sole, sand.....	10	2,593	3,911	2,763				1,093				912	14,614
Sole, miscellaneous.....	1,894	1,128	483	281	395	991	806	43	777	214	222		8,894
Swordfish.....							13,342	43,122	29,746	24,200	12,781		122,231
Tuna, albacore.....							267	130,647	921,438	2,423,459	723,177	4,058	5,203,944
Tuna, bluefin.....											19		19
Tuna, skipjack.....										185	1,184		1,369
Turbot.....	256	1,217	1,406	2,143	6,675	4,126	1,244						425
Yellowtail, California.....										55	15		70
Miscellaneous.....													246
Miscellaneous (animal food).....	10,623	31,223	29,580	31,190	22,860	38,235	80,215	52,223	62,730	61,534	55,340	18,495	501,172

FISH BULLETIN 174

TABLE 12
Monthly Landings of Commercial Fishing Boats in the Santa Barbara Area During 1970

Crustacean:																				
Crab, market.....	.....	12	93	873	454	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,133
Crab, rock.....	25,420	24,775	15,007	14,985	15,217	17,710	12,130	10,349	11,091	7,377	23,304	29,547	207,512	1,032	.....	.....	.....	.....	.....	207,512
Crab, spider.....	907	203	.....	278	30	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	203
Lobster, spiny.....	13,978	16,153	8,922	.....	.....	.....	.....	.....	.....	14,611	16,707	16,871	83,620	.....	.....	.....	.....	.....	.....	83,620
Prawn, spot.....	.....	.....	.....	.....	702	1,024	5,048	3,864	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10,658
Shrimp, ocean.....	.....	.....	.....	4,875	80	.....	23,330	35,750	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	66,685
Mollusk:																				
Abalone.....	129,511	.....	117,152	159,738	173,030	126,913	128,499	107,236	131,794	148,067	83,295	70,897	1,375,132	.....	.....	.....	.....	.....	.....	.....
Oyster, giant Pacific.....	22,354	22,963	23,584	21,350	18,697	12,853	12,585	13,972	13,343	14,912	29,299	19,906	219,987	.....	.....	.....	.....	.....	.....	.....
Squid.....	586,000	886,530	657,500	162,400	263,630	308,930	162,310	184,000	8,000	6,750	448,550	1,205,300	4,878,300	.....	.....	.....	.....	.....	.....	.....
Miscellaneous mollusk.....	92	76	100	22	.....	.....	.....	.....	.....	.....	31	108	46	.....	.....	.....	.....	.....	.....	475
Grand total.....	2,040,804	1,983,109	1,915,686	906,374	1,834,963	1,226,953	1,762,080	1,371,387	3,955,178	10,821,277	6,884,794	4,953,651	40,156,224	.....	.....	.....	.....	.....	.....	.....

MARINE FISH CATCH FOR 1970

25

TABLE 12 [continued]

TABLE 13
 Monthly Landings and Shipments of Commercial Fish Into the Los Angeles Area During 1970

Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds
LANDINGS FROM:													
California waters:													
Fish:													
Anchovy.....	22,259,832	11,363,256	16,177,620	396,188	16,191,642	352,418	174,146	1,395,887	15,277,470	32,153,637	28,988,073	26,015,725	170,745,694
Barracuda, California.....	-----	-----	9,430	7,777	3,020	1,737	97	190	339	-----	-----	-----	14,473
Blacksmith.....	-----	-----	27,276	19,030	314,807	143,585	355,549	236,550	67,720	-----	-----	-----	1,184,106
Booby, Pacific.....	101,097	242,420	83,600	418,806	327,027	44,835	67,902	2,527,345	2,026,352	374,460	604,342	1,130,687	7,948,773
Cabezon.....	-----	165	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	165
Carp.....	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	92	93	185
Croaker, white.....	85,193	39,449	29,832	30,260	25,424	9,223	16,139	7,226	12,888	30,990	42,437	62,969	351,790
Flycatcher.....	-----	-----	6,498	28,308	23,692	13,404	3,337	1,233	-----	-----	-----	-----	76,269
Hallowell.....	-----	20	2,671	296	140	621	290	3,935	2,405	3,470	9	-----	14,771
Halibut, California.....	340	4,882	5,756	7,074	13,228	22,092	7,404	1,914	1,674	1,237	2,765	1,922	70,608
Lingcod.....	-----	33	-----	-----	68	90	137	-----	38	-----	198	116	607
Mackerel, jack.....	1,061,450	287,701	1,490,210	1,364,400	5,481,607	1,826,952	4,138,765	4,178,562	6,071,837	10,222,570	4,781,770	3,682,570	43,846,994
Mackerel, Pacific.....	5,185	8,201	410	1,540	180,402	125,890	198,310	52,115	11,176	38,900	15,910	-----	618,038
Opaleye.....	-----	-----	1,221	2,327	862	430	4,300	7,225	5,980	-----	-----	-----	20,558
Perch.....	693	1,607	24,108	1,366	1,074	27,358	181	28,832	1,095	725	1,297	308	88,294
Pompano, Pacific.....	2,110	7,193	9,654	3,992	4,623	2,436	177	6,134	19,764	19,618	12,859	29,077	117,637
Rockfish.....	12,187	72,929	77,476	27,822	36,076	38,149	42,427	2,724	8,378	11,373	21,868	28,566	279,975
Salmon.....	-----	-----	-----	-----	-----	-----	16,450	-----	-----	-----	-----	-----	16,450
Salmon, steelhead.....	-----	-----	140	-----	-----	-----	-----	162	12	-----	-----	-----	194
Sanddab.....	-----	-----	-----	-----	-----	-----	-----	-----	60	-----	-----	-----	450
Sardine.....	383	11,268	13,374	4,042	18,113	92,660	107,145	9,235	7,663	-----	2,271	470	267,294
Scaup, Pacific.....	-----	-----	8,000	-----	-----	-----	-----	-----	-----	-----	-----	-----	8,000
Seeltin.....	254	321	684	290	99	80	21	8	13	45	-----	-----	1,684
Sea urchin, giant.....	211	745	31	150	85	1,438	1,768	389	2,216	39	369	761	8,180
Snook, white.....	3,705	15,654	-----	1,743	5,235	7,008	10,264	103,402	51,649	10,766	10,459	10,966	230,886
Shark.....	10,819	2,702	1,568	6,386	13,095	18,741	8,751	9,885	5,579	4,066	10,189	5,441	96,962
Sheepshead, California.....	-----	-----	247	-----	32	-----	224	295	105	8	39	-----	639
Skate.....	-----	-----	35	-----	-----	-----	-----	-----	-----	-----	-----	-----	35
Steelhead.....	16	-----	365	682	2,689	690	314	2,710	585	38,523	30,429	385	77,915
Sole, English.....	-----	-----	-----	-----	-----	-----	-----	49	-----	-----	15	-----	64

FISH BULLETIN 134

TABLE 13
 Monthly Landings and Shipments of Commercial Fish Into the Los Angeles Area During 1970

Sole, miscellaneous.....							224			10		244
Swordfish.....	1,344			221	14,478	216,390	180,915	70,254	151,459	41,298	2,123	667,680
Tuna, albacore.....						26,110	732,708	609,870	2,387,628	844,546	21,412	4,532,074
Tuna, bigeye.....				42	61,953	17,650	133	62,114	110,125	12,601		257,675
Tuna, bluefin.....												
Tuna, skipjack.....	890						270,958	68,018	23,856	431	498	364,171
Tuna, yellowfin.....	499			1,680			91,570	14,695	3,541			111,886
Whitefish, ocean.....							20					20
Yellowtail, California.....	76	838		1,087	1,411	1,305	2,524	6,302	1,540	1,516	7,422	23,852
Miscellaneous.....	100			6			4		24			170
Crustacean:												
Crab, rock.....	27,332	24,181	41,355	26,089	26,396	25,960	31,055	28,938	20,475	20,369	23,092	22,314
Lobster, spiny.....	11,079	12,920	7,507							14,882	19,963	13,221
Mollusk:												
Abalone.....	71,118		43,338	94,012	130,846	96,626	80,085	85,844	85,298	82,852	153,693	112,308
Octopus.....												
Squid.....	2,186,483	1,719,055	1,048,250	100,850	493,125	208,570	731,560	248,450		1,489,820	2,886,150	11,085,253
Total pounds.....	25,804,338	13,785,657	18,978,927	2,527,699	22,988,131	3,350,202	6,044,287	10,378,201	24,800,963	45,660,686	36,759,636	33,395,712
Waters north of State:												
Fish:												
Tuna, albacore.....										991,524		991,524
Total pounds.....										991,524		991,524
Waters south of State:												
Fish:												
Barracuda, California.....			400	1,840								2,040
Bonito, Pacific.....		1,500	187	155		158,508	14,810	48,797		4,975	870	229,502
Groupers.....	5,570											5,570
Halibut, California.....		151	65					39		20		15
Mackerel, jack.....												85
Rockfish.....	14,185	715	6,045	4,315	3,119	1,217	1,745				3,490	34,821
Shrimp.....						348						348
Sea bass, giant.....	12,601	14,057	22,033	9,703	7,789	7,454	1,620		2,883	4,867	2,255	89,894
Sea bass, white.....	38,092	89,489	114,987	132,419	64,153	16,228	20,944	54,663	17,102	21,921	31,659	589,168
Shark.....	3,604	1,206	1,120	389						1,035		7,245
Sheephead, California.....		22	33		233							288
Swordfish.....									235			235
Tuna, albacore.....							7,667	381,454	6,107	44,036	964	440,218
Tuna, bigeye.....							16,525					16,525
Tuna, bluefin.....	30,095			62,310	454,198	3,169,230	2,382,564	91,347	90,636			6,160,280

MAINE FISH CATCH FOR 1970
27

TABLE 13 [continued]

TABLE 13—Continued
Monthly Landings and Shipments of Commercial Fish Into Los Angeles Area During 1970

Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds
Tuna, skipjack.....	419,962	3,592,250	1,588,360	4,949,735	6,078,314	6,591,789	5,855,591	5,561,121	3,039,956	7,474,009	4,085,617	3,996,475	53,741,179
Tuna, yellowfin.....	7,599,104	31,210,982	33,837,456	20,723,354	24,817,617	10,434,842	7,312,493	10,450,294	9,286,900	11,633,927	8,604,197	8,258,609	184,348,548
Whitefish, ocean.....	---	---	---	---	---	198	---	---	---	95	---	---	773
Yellowtail, California.....	12,721	28,304	12,924	10,167	4,131	6,228	1,633	4,967	7,661	4,366	7,992	18,317	119,413
Total pounds.....	8,135,624	34,847,776	35,581,780	25,822,068	31,637,666	17,071,300	16,663,270	18,773,134	12,421,906	19,274,682	12,730,724	12,287,712	245,788,012
Central Pacific waters:													
Fish:													
Tuna, skipjack.....	---	---	---	---	---	---	---	63,090	---	428,830	310,555	27,030	829,505
Tuna, yellowfin.....	---	---	---	---	---	---	---	950,170	---	1,924,815	399,630	168,105	3,421,720
Total pounds.....	---	---	---	---	---	---	---	1,022,260	---	2,353,645	680,185	195,135	4,251,225
African waters:													
Fish:													
Tuna, skipjack.....	---	---	---	---	---	---	---	---	---	---	---	1,047,785	1,047,785
Tuna, yellowfin.....	---	---	---	---	---	---	---	---	---	---	---	590,552	590,552
Total pounds.....	---	---	---	---	---	---	---	---	---	---	---	1,648,337	1,648,337
SHIPMENTS: ^a													
Fish:													
Tuna, albacore.....	1,722,799	3,275,350	1,208,323	1,537,707	1,071,748	748,657	3,542,967	5,374,072	8,948,943	3,708,948	1,844,182	5,047,794	38,810,660
Tuna, bigeye.....	50,315	---	---	---	---	---	222,840	407,190	164,990	---	---	---	845,205
Tuna, bluefin.....	---	---	---	---	---	---	328,440	---	---	49,757	---	---	876,197
Tuna, skipjack.....	3,210	---	---	---	---	---	139,216	4,322,195	5,174,210	2,302,316	579,960	1,472,078	18,482,188
Tuna, yellowfin.....	3,205,315	3,333,318	3,482,104	831,167	487,090	4,966,059	3,133,811	2,787,187	1,673,352	1,098,059	1,338,714	1,903,353	27,809,499
Total pounds.....	4,982,039	6,608,668	4,690,427	2,358,874	2,158,808	5,553,022	12,047,354	13,226,341	15,860,095	7,159,580	3,762,856	8,423,225	86,832,699
Grand total.....	38,922,201	55,242,101	59,251,134	30,706,641	56,784,605	26,575,434	34,684,911	43,399,936	63,083,384	75,340,287	63,833,401	56,150,101	684,086,116

^a For origin of shipments refer to Table 6. Beginning in 1968 only tuna shipments are recorded

FISH BULLETIN 154

TABLE 13 [continued]

TABLE 14
 Monthly Landings and Shipments of Commercial Fish Into the San Diego Area During 1970

Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds
LANDINGS FROM:													
California waters:													
Fish:													
Barracuda, California.....			190	324	1,932	3,648	806	63					6,963
Blacksmith.....						981	332						1,313
Bonito, Pacific.....	401	18		118	564	7,240	36,168	77,827	3,447	2,856	1,870	2,738	133,277
Croaker, white.....	670	733	712	316	70	290	78	144		410	963	605	4,551
Flounder.....							5	127					167
Flyingfish.....							2,265						2,265
Hallibut.....	1,273		104	1,228	8,321	7,743	3,574	1,864					23,773
Hallibut, California.....	1,184	3,414	3,069	1,456	1,415	614	477	675	380	790			16,747
Herring, Pacific.....													10
Lincod.....	35	12	35	14	12	7	99	8	68	67		121	44
Mackerel, jack.....							218	477					695
Mackerel, Pacific.....	80		200	31	797	987	341			37			2,473
Opaleye.....	390		22	43	793	350	437			162			2,997
Porgy.....	602		904	293	2,483	2,998	2,219	540	300				10,349
Rockfish.....	10,061	26,094	31,858	33,761	46,369	18,788	16,357	4,485	11,451	14,478			15,336
Sablefish.....													756
Sardine.....	6,600		32,100	69,150	15,000			283					5,800
Southern California.....	500	6,318	836	3,534	6,543	6,281	10,164	3,399	1,644	12,584	9,643	13,403	174,395
Southern white.....		348	97	76	1,514	311				312	400		74,649
Sebastes, white.....	944	3,708	772	266	2,904	4,332	6,308	47,490	30,006	3,862	7,101		23,888
Shark.....	1,152	1,849	3,490	4,074	10,631	13,929	28,003	15,773	4,153	7,901	6,195	11,105	107,465
Striped, California.....	102	245	176	272	271	265	196	12	36	47			2,090
Sole, English.....								70					70
Sole, miscellaneous.....	2	4	133	118	15	8	62						45
Swordfish.....							22,655	25,083	2,779	36,103	45,733	4,582	137,215
Tuna, albacore.....							12,280	232,099	121,590	141,796	79,461	6,514	593,710
Tuna, bluefin.....		193						665	638	1,615	908		4,319
Tuna, skipjack.....								2,492	2,972	7,590	736		13,698
Tuna, yellowfin.....							174	747	971	1,058	72		3,022
Witchamound.....	18		612				40			355			621
Yellowtail, California.....	75		149		1,974	1,348	310	7,273	7,566	6,054	3,223	4,390	32,383
Miscellaneous.....							15						15

MARINE FISH CATCH FOR 1970

TABLE 14—Continued
Monthly Landings and Shipments of Commercial Fish Into the San Diego Area During 1970

Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds
Crustacean:													
Crab, rock.....	971	5,639	31	291	126	.....	.....	.....	120	308	2,391	1,899	11,476
Lobster, spiny.....	4,825	4,334	2,483	.....	.....	.....	.....	.....	.....	25,940	13,533	9,040	59,867
Mollusk:													
Abalone.....	48,977	.....	24,755	28,111	44,323	36,401	68,390	33,337	58,082	37,332	47,199	50,166	479,093
Ostropod.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	55	.....	.....	55
Squid.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	132	.....	132
Total pounds.....	81,762	52,907	101,904	133,576	146,508	106,709	213,082	479,274	274,168	301,812	239,867	144,266	2,275,554
Waters north of State:													
Fish:													
Tuna, albacore.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	482,649
Total pounds.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	482,649
Waters south of State:													
Fish:													
Barramunda, California.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	40	40
Blacksmith.....	.....	.....	.....	.....	.....	100	.....	.....	.....	.....	.....	.....	100
Bonito, Pacific.....	.....	.....	.....	160	.....	32,418	72,983	12,461	.....	43	189	300	169,014
Groupers.....	.....	1,872	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,872
Halibut.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	65
Halibut, California.....	37	.....	57	15	147	.....	.....	.....	.....	.....	.....	.....	256
Mackerel, Pacific.....	.....	.....	.....	.....	.....	450	161	.....	.....	.....	.....	.....	611
Perch.....	.....	100	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	100
Rockfish.....	296	3,467	2,487	.....	205	3,186	2,677	70	.....	246	380	248	13,262
Sardines.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	138
Sculpin.....	.....	59	50	.....	7,707	19,348	19,188	20,900	11,048	.....	.....	.....	78,648
Sea bass, giant.....	.....	8,828	5,772	.....	5,034	7,198	1,183	.....	.....	.....	.....	.....	27,711
Sea bass, white.....	8,612	17,172	19,272	312	8,074	19,977	809	.....	2,407	5,103	3,727	.....	88,978
Shark.....	1,466	1,094	7,264	4,033	4,771	5,660	629	.....	240	389	.....	.....	28,476
Swordfish.....	.....	.....	.....	.....	.....	.....	1,999	.....	180	10,819	.....	.....	15,397
Tuna, albacore.....	.....	.....	.....	.....	.....	.....	.....	15,329	1,433,216	198,068	265,269	177,158	2,071,218
Tuna, bluefin.....	.....	.....	.....	.....	.....	.....	88,159	1,237,743	730,613	73,339	82,848	.....	2,332,702
Tuna, skipjack.....	285,897	749,838	296,917	1,031,474	2,087,381	1,428,002	1,614,999	1,905,943	1,531,662	4,137,814	1,695,844	1,046,837	17,813,149
Tuna, yellowfin.....	1,688,377	11,838,133	8,082,238	6,340,618	6,986,312	1,402,942	1,243,815	844,003	1,001,206	1,262,798	631,399	288,376	49,333,472
Walrus.....	.....	.....	.....	.....	.....	650	.....	.....	.....	.....	.....	.....	650

FISH BULLETIN 154

TABLE 14 [continued]

Whitetail, ocean.....	.....	.....	.....	.....	.....	881	.....	.....	.....	.....	.....	.....	261
Yellowtail, California.....	450	2,905	783	77	1,022	2,882	.....	260	.....	146	.....	.....	8,535
Miscellaneous.....	.....	.....	.....	.....	.....	235	.....	105	.....	.....	.....	.....	840
Total pounds.....	2,092,233	12,617,869	8,384,937	7,386,589	8,166,774	3,102,286	4,233,617	4,948,351	2,890,842	5,774,781	2,528,880	1,353,943	63,451,002
African waters:													
Fish:													
Tuna, skipjack.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	756,690	1,081,755	731,277	2,669,692
Tuna, yellowfin.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	851,173	856,995	599,569	2,437,740
Total pounds.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,327,863	1,938,750	1,330,846	5,097,432
SHIPMENTS*:													
Fish:													
Tuna, albacore.....	.....	881,436	.....	82,438	59,208	.....	1,351,116	1,110,140	1,118,864	.....	.....	27,761	4,360,733
Tuna, skipjack.....	.....	.....	.....	11,522	.....	.....	.....	377,655	1,868,692	.....	.....	.....	1,955,162
Tuna, yellowfin.....	.....	272,821	173,941	1,123,408	.....	.....	355,255	60,000	.....	40,118	.....	25,961	2,051,204
Total pounds.....	.....	853,657	173,941	1,211,771	59,208	.....	1,736,371	1,547,695	2,684,236	40,118	.....	53,722	8,367,119
Grand total.....	2,173,995	13,624,733	8,660,782	8,737,835	8,372,890	3,208,995	6,182,970	6,975,320	5,618,246	7,937,193	4,707,220	3,312,777	79,613,796

* For origin of shipments refer to Table 6. Beginning in 1965 only tuna shipments are recorded.

MARINE FISH CATCH FOR 1970

31

TABLE 14 [continued]

TABLE 15
Value of Landings and Shipments of Commercial Fish Into California by Area, 1970

Species	Eureka	San Francisco*	Monterey	Santa Barbara	Los Angeles	San Diego	Total
LANDINGS:							
Fish:							
Anchovy.....	----	217,720 \$21,772	1,807,500 \$33,391	19,614,260 \$224,697	170,745,594 \$1,877,424	----	192,485,074 \$2,157,184
Barracuda, California..	----	----	----	572 \$166	17,013 \$4,737	7,003 \$2,023	24,588 \$6,926
Blackfish, Sacramento..	----	412,430 \$123,275	----	----	----	----	412,430 \$123,275
Blacksmith.....	----	----	----	----	1,184,106 \$39,830	1,413 \$181	1,185,519 \$40,011
Bonito, Pacific.....	274 \$32	1,636 \$165	73,449 \$3,820	636,379 \$41,653	8,178,275 \$584,008	302,291 \$21,677	9,192,304 \$651,355
Cabazon.....	12 ----	183 \$18	7,436 \$406	2,902 \$173	165 \$16	----	10,698 \$613
Carp.....	----	385,645 \$26,918	----	----	185 ----	----	385,830 \$26,918
Croaker, white.....	----	6,574 \$583	197,916 \$10,651	3,800 \$204	351,760 \$32,283	4,821 \$540	564,871 \$44,561
Flounder.....	102,294 \$5,741	128,048 \$8,948	36,884 \$2,938	10,421 \$942	----	167 \$26	277,814 \$18,595
Flounder, arrowtooth..	3,655 \$222	2,465 \$107	----	----	----	----	6,120 \$329
Flyingfish.....	----	----	----	----	76,366 \$11,262	2,265 \$367	78,631 \$11,629
Greenling, kelp.....	10 ----	----	125 \$7	11 ----	----	----	146 \$7
Grouper.....	----	----	----	----	5,570 \$1,393	1,572 \$393	7,142 \$1,786
Hake, Pacific.....	19 ----	5,400 \$108	2,875 \$57	1,481 \$30	----	----	9,775 \$195
Halfmoon.....	----	----	----	----	14,771 \$3,170	23,838 \$5,331	38,609 \$8,501
Halibut, California....	219 \$110	81,598 \$22,154	10,430 \$3,099	77,396 \$30,938	70,798 \$27,934	17,003 \$6,978	257,444 \$91,213
Herring, Pacific.....	----	29,340 \$9,049	286,616 \$27,702	----	----	10 \$1	315,968 \$36,752
Lingcod.....	917,570 \$87,762	336,456 \$27,286	179,258 \$14,929	96,806 \$8,523	657 \$113	552 \$78	1,531,399 \$138,691
Mackerel, jack.....	----	1,597 \$81	514,652 \$23,970	3,383,416 \$128,899	43,846,149 \$1,728,106	695 \$32	47,746,509 \$1,881,088
Mackerel, Pacific.....	----	----	----	797 \$43	618,038 \$49,090	3,084 \$424	621,919 \$49,557
Opaleye.....	----	----	----	----	20,355 \$3,132	2,097 \$401	22,452 \$3,533
Perch.....	65,414 \$13,584	41,857 \$14,056	12,435 \$2,440	22,590 \$6,634	88,364 \$4,424	10,749 \$1,847	241,409 \$42,985
Pompano, Pacific.....	----	----	9,809 \$4,744	3,922 \$600	117,637 \$36,018	----	131,368 \$41,362
Rockfish.....	3,917,022 \$241,586	770,413 \$56,833	2,875,230 \$224,269	2,457,155 \$171,390	414,806 \$81,530	282,218 \$48,926	10,686,844 \$824,534
Sablefish.....	2,859,167 \$217,872	347,762 \$18,499	1,220,107 \$82,768	----	----	1,041 \$111	4,428,077 \$319,250

TABLE 15
Value of Landings and Shipments of Commercial Fish Into California by Area, 1970

TABLE 15—Continued
Value of Landings and Shipments of Commercial Fish Into California by Area, 1970

Species	Eureka	San Francisco*	Monterey	Santa Barbara	Los Angeles	San Diego	Total
Salema.....	----	----	----	----	16,450	----	16,450
					\$493		\$493
Salmon.....	3,947,351	1,912,462	542,978	208,567	164	----	6,811,522
	\$2,892,007	\$1,549,096	\$473,786	\$186,150	\$114	----	\$5,101,153
Sanddab.....	370,031	195,760	110,607	1,519	450	138	678,505
	\$40,649	\$20,324	\$8,943	\$194	\$102	\$69	\$70,281
Sardine.....	----	----	----	----	267,924	174,395	442,319
					\$57,705	\$43,596	\$101,301
Sargo.....	----	----	----	----	548	----	548
					\$99		\$99
Saury, Pacific.....	----	----	20,300	----	8,000	----	28,300
			\$427		\$400		\$827
Seulpin.....	----	----	----	----	1,664	153,297	154,961
					\$668	\$45,770	\$46,438
Sea bass, giant.....	----	----	----	678	98,064	30,799	129,541
				\$102	\$22,223	\$7,360	\$29,685
Seabass, white.....	----	----	11,998	51,316	820,054	218,077	1,101,445
			\$4,391	\$19,245	\$286,889	\$75,539	\$386,164
Shark.....	648	46,882	24,902	109,738	104,207	133,941	420,318
	\$44	\$2,128	\$1,435	\$12,973	\$14,849	\$21,891	\$53,320
Sheephead, California..	----	----	----	498	1,227	2,080	3,805
				\$48	\$118	\$261	\$427
Skate.....	54,444	17,227	29,642	1,634	35	----	102,982
	\$1	\$230	\$592	\$128	\$3		\$994
Smelt.....	396,467	77,347	9,822	----	77,915	----	561,551
	\$33,458	\$9,364	\$1,177		\$4,062		\$48,061
Smelt, whitebait.....	218,501	31,312	----	----	----	----	249,813
	\$26,828	\$4,220					\$31,048
Sole, Dover.....	13,979,118	1,108,603	42,430	30,735	----	----	15,160,886
	\$1,148,086	\$80,484	\$2,583	\$1,844			\$1,232,997
Sole, English.....	1,650,299	876,784	384,066	391,033	64	70	3,282,316
	\$168,979	\$57,765	\$34,300	\$32,642	\$12	\$10	\$323,708
Sole, petrale.....	1,967,424	911,477	265,544	271,263	----	----	3,415,708
	\$309,126	\$137,651	\$42,815	\$41,423			\$531,015
Sole, rex.....	1,366,413	232,931	78,920	63,215	----	----	1,741,479
	\$150,676	\$25,652	\$8,815	\$6,659			\$189,802
Sole, sand.....	53,499	114,328	10,850	14,614	----	----	193,291
	\$5,903	\$14,153	\$1,358	\$1,757			\$23,171
Sole, miscellaneous....	3	520	11,776	6,804	244	404	19,751
		\$57	\$1,294	\$703	\$37	\$116	\$2,207
Swordfish.....	----	----	997	122,321	667,815	153,812	944,745
			\$598	\$64,157	\$384,458	\$84,833	\$534,046
Tuna, albacore.....	7,067,951	4,310,700	4,508,626	5,203,044	5,693,816	3,147,577	29,931,714
	\$1,787,074	\$1,113,206	\$1,174,224	\$1,362,116	\$1,568,385	\$840,624	\$7,845,629
Tuna, bigeye.....	----	----	----	----	18,460	----	18,460
					\$3,407		\$3,407
Tuna, bluefin.....	----	----	----	19	6,418,355	2,236,921	8,655,295
				\$7	\$1,200,022	\$395,762	\$1,595,791
Tuna, skipjack.....	----	----	----	1,505	55,982,620	20,496,509	76,480,634
				\$210	\$8,793,770	\$3,289,329	\$12,083,309
Tuna, yellowfin.....	----	----	----	----	188,682,403	43,274,235	231,956,638
					\$34,150,388	\$7,736,816	\$41,887,204

TABLE 15 [continued]

TABLE 15—Continued
Value of Landings and Shipments of Commercial Fish Into California by Area, 1970

Species	Eureka	San Francisco*	Monterey	Santa Barbara	Los Angeles	San Diego	Total
LANDINGS:—Continued							
Fish:—continued							
Turbot.....	1,937 \$177	8,738 \$444	----	17,392 \$1,223	----	----	28,067 \$1,844
Wahoo.....	----	----	----	----	----	650 \$65	650 \$65
Whitefish, ocean.....	----	----	----	----	586 \$51	1,192 \$183	1,778 \$234
Yellowtail, California..	----	----	----	70 \$10	143,265 \$20,329	40,888 \$4,459	184,223 \$24,798
Miscellaneous.....	1,461 \$60	436 \$11	45 \$1	256 \$18	170 \$55	355 \$88	2,723 \$233
Miscellaneous (animal food).....	527,854 \$10,558	27,035 \$540	1,350 \$20	501,172 \$10,019	----	----	1,057,411 \$21,137
Crustacean:							
Crab, market.....	14,545,562 \$3,644,924	865,620 \$299,668	1,275 \$533	1,132 \$566	----	----	15,413,589 \$3,945,691
Crab, rock.....	1,701	----	1,414 \$71	207,512 \$16,999	317,476 \$41,574	11,476 \$1,078	539,579 \$59,722
Crab, spider.....	----	----	----	1,032 \$52	----	----	1,032 \$52
Crayfish.....	----	106,714 \$41,850	----	----	----	----	106,714 \$41,850
Lobster, spiny.....	----	----	----	85,920 \$104,925	79,622 \$93,471	59,857 \$69,924	225,399 \$268,320
Prawn, spot.....	----	----	11,621 \$11,098	10,638 \$5,332	----	----	22,259 \$16,430
Shrimp, bay.....	----	2,276 \$1,084	----	----	----	----	2,276 \$1,084
Shrimp, ocean.....	3,682,125 \$515,498	298,769 \$41,651	----	66,695 \$9,850	----	----	4,047,589 \$567,199
Mollusk:							
Abalone.....	----	30,668 \$12,149	----	1,375,132 \$470,471	1,015,920 \$331,060	479,093 \$133,836	2,900,813 \$947,516
Mussell.....	----	----	735 \$16	----	----	----	735 \$16
Octopus.....	1,676 \$34	1,407 \$63	751 \$98	----	37 \$13	55 \$11	3,926 \$219
Oyster, eastern.....	----	16,745 \$49,230	----	----	----	----	16,745 \$49,230
Oyster, giant Pacific....	663,455 \$597,109	219,297 \$197,368	----	219,987 \$197,988	----	----	1,102,739 \$992,465
Squid.....	----	----	8,627,115 \$346,627	4,678,300 \$70,561	11,085,253 \$249,584	197 \$20	24,590,865 \$566,962
Miscellaneous mollusk.....	----	----	----	475 \$5,529	----	----	475 \$5,529
Total pounds.....	59,363,576	14,183,162	22,012,488	40,156,224	497,253,417	71,246,637	703,215,504
Total value.....	\$11,898,100	\$4,018,740	\$2,548,293	\$3,238,693	\$51,708,811	\$12,841,076	\$66,253,713

TABLE 15 [continued]

TABLE 15—Continued
Value of Landings and Shipments of Commercial Fish Into California by Area, 1970

Species	Eureka	San Francisco*	Monterey	Santa Barbara	Los Angeles	San Diego	Total
SHIPMENTS:†							
Fish:							
Tuna, albacore.....	----	----	----	----	38,819,690	4,360,753	43,180,443
					\$13,039,821	\$1,388,669	\$14,428,490
Tuna, bigeye.....	----	----	----	----	845,205	----	845,205
					\$193,516	----	\$193,516
Tuna, bluefin.....	----	----	----	----	876,197	----	876,197
					\$207,625	----	\$207,625
Tuna, skipjack.....	----	----	----	----	18,482,108	1,955,182	20,437,270
					\$3,395,815	\$389,280	\$3,785,095
Tuna, yellowfin.....	----	----	----	----	27,809,499	2,051,204	29,860,703
					\$8,036,580	\$474,757	\$8,511,337
Total pounds.....	----	----	----	----	88,832,699	8,367,119	95,199,818
Total value.....	----	----	----	----	\$24,873,357	\$2,252,706	\$27,126,063
GRAND TOTAL POUNDS.	58,363,576	14,183,162	22,012,488	40,156,224	584,086,116	79,613,756	798,415,322
GRAND TOTAL VALUE.	\$11,898,100	\$4,018,740	\$2,548,293	\$3,235,693	\$76,582,168	\$15,093,782	113,379,776

* Includes Sacramento area landings.

† For origin of shipments refer to Table 6. Beginning in 1965 only tuna shipments are recorded.

TABLE 15 [continued]

TABLE 16
Value of Landings by Port, Eureka Area, 1970

	Pounds	Value
EUREKA		
Market crab.....	6,892,868	\$1,727,261
Salmon.....	1,692,601	1,255,187
Albacore.....	4,784,464	1,209,713
Dover sole.....	8,363,247	686,862
Giant Pacific oyster.....	663,455	597,109
Ocean shrimp.....	1,039,418	145,519
Petrale sole.....	796,235	125,106
Rockfish.....	1,982,723	118,960
Sablefish.....	1,371,608	104,518
Rex sole.....	770,119	84,922
English sole.....	743,164	76,095
Sanddab.....	246,123	27,037
Smelt.....	289,990	23,925
Lingcod.....	189,132	18,090
Whitebait smelt.....	115,075	14,129
Miscellaneous (animal food).....	522,214	10,445
Perch.....	39,010	7,999
Sand sole.....	21,041	2,321
Flounder.....	37,244	2,090
All other species.....	61,490	397
Port totals.....	30,621,221	\$6,237,685
Crescent City		
Market crab.....	6,061,228	\$1,518,863
Salmon.....	848,871	580,841
Ocean shrimp.....	2,642,707	369,979
Dover sole.....	2,576,726	211,623
Albacore.....	257,075	64,999
Petrale sole.....	385,067	57,360
English sole.....	506,620	51,874
Rockfish.....	752,345	47,040
Rex sole.....	347,051	38,270
Lingcod.....	267,111	25,548
Sablefish.....	272,227	20,744
Whitebait smelt.....	78,726	9,666
Sanddab.....	75,116	8,252
Perch.....	26,011	5,503
Sand sole.....	31,960	3,527
Flounder.....	54,455	3,056
Smelt.....	34,650	2,938
All other species.....	7,306	194
Port totals.....	15,205,252	\$3,020,277
Fort Bragg		
Salmon.....	1,118,655	\$847,676
Albacore.....	2,026,412	512,362
Market crab.....	1,076,039	269,641
Dover sole.....	3,039,145	249,601
Petrale sole.....	806,122	126,660
Sablefish.....	1,215,332	92,610
Rockfish.....	1,181,954	75,586
Lingcod.....	461,274	44,119
English sole.....	400,515	41,010
Rex sole.....	249,243	27,484
Smelt.....	65,937	5,951
Sanddab.....	48,792	5,360
Whitebait smelt.....	24,700	3,033
All other species.....	14,389	934
Port totals.....	11,728,509	\$2,302,027
Trinidad		
Market crab.....	515,427	\$129,159
Salmon.....	108,351	76,260
All other species.....	19	2
Port totals.....	623,797	\$205,421

TABLE 16
Value of Landings by Port, Eureka Area, 1970

TABLE 16—Continued
Value of Landings by Port, Eureka Area, 1970

	Pounds	Value
Albion		
Salmon.....	109,667	\$81,723
Port totals.....	109,667	\$81,723
Point Arena		
Salmon.....	63,936	\$46,188
Port totals.....	63,936	\$46,188
All other ports		
Salmon.....	5,270	\$4,132
All other species.....	5,924	\$647
Totals.....	11,194	\$4,779
EUREKA AREA TOTALS.....	58,363,576	\$11,898,100

TABLE 16 [continued]

TABLE 17
Value of Landings by Port, San Francisco Area, 1970 *

	Pounds	Value
Bodega Bay		
Salmon.....	811,821	\$651,881
Albacore.....	419,885	108,432
Market crab.....	203,366	70,403
English sole.....	476,693	47,716
Ocean shrimp.....	298,769	41,851
Petrale sole.....	166,457	25,138
Dover sole.....	222,149	16,128
Rex sole.....	101,226	11,148
Rockfish.....	128,206	10,201
Smelt.....	71,963	8,692
Lingcod.....	105,186	8,530
Sanddab.....	58,440	6,067
Sablefish.....	52,857	2,812
Whitebait smelt.....	19,550	2,635
Flounder.....	34,892	2,438
All other species.....	20,068	1,503
Port totals.....	3,191,528	\$1,015,475
San Francisco		
Salmon.....	249,527	\$203,889
Market crab.....	427,601	148,031
Petrale sole.....	757,575	111,389
Dover sole.....	858,635	62,336
Rockfish.....	618,056	44,776
English sole.....	396,336	39,673
California halibut.....	71,120	19,309
Lingcod.....	226,058	18,333
Sablefish.....	283,260	15,068
Rex sole.....	129,755	14,289
Sanddab.....	135,987	14,119
Albacore.....	54,533	14,088
Sand sole.....	112,863	13,972
Pacific herring.....	21,915	6,759
Flounder.....	92,284	6,449
Abalone.....	8,979	3,580
Shark.....	42,440	1,922
Perch.....	5,539	1,849
All other species.....	56,585	2,135
Port totals.....	4,529,068	\$741,946
Sausalito		
Albacore.....	1,639,037	\$423,269
Salmon.....	239,118	194,148
Anchovy.....	217,720	21,772
Market crab.....	49,565	17,159
All other species.....	7,717	1,701
Port totals.....	2,153,157	\$658,049
Oakland		
Albacore.....	2,197,191	\$567,408
Salmon.....	85,827	69,672
Dover sole.....	27,819	2,020
All other species.....	11,543	816
Port totals.....	2,322,380	\$639,916
Point Reyes		
Salmon.....	245,944	\$200,508
Giant Pacific oyster.....	193,160	173,844
Market crab.....	103,714	35,905
All other species.....	1,129	100
Port totals.....	543,947	\$410,357
Princeton		
Salmon.....	273,963	\$223,816
Market crab.....	76,358	26,434
Abalone.....	21,689	8,589
California halibut.....	9,374	2,545
Whitebait smelt.....	11,062	1,491

TABLE 17
Value of Landings by Port, San Francisco Area, 1970

TABLE 17—Continued
Value of Landings by Port, San Francisco Area, 1970 *

	Pounds	Value
Princeton—Continued		
Rockfish.....	17,987	\$1,457
Petrale sole.....	7,445	1,124
All other species.....	20,274	1,849
Port totals.....	438,052	\$267,305
Clear Lake		
Blackfish, Sacramento.....	412,430	\$123,275
Carp.....	385,641	26,918
All other species.....	4	---
Port totals.....	798,075	\$150,193
Tomales Bay		
Eastern oyster.....	16,667	\$49,001
Giant Pacific oyster.....	25,975	23,378
Pacific herring.....	5,308	1,637
Perch.....	3,695	1,201
All other species.....	4,477	570
Port totals.....	56,122	\$75,787
Richmond		
Perch.....	18,031	\$6,084
All other species.....	3,847	1,566
Port totals.....	21,878	\$7,650
Berkeley		
Salmon.....	5,538	\$4,523
Perch.....	3,284	1,144
All other species.....	2,034	647
Port totals.....	10,856	\$6,314
All other ports		
Crayfish.....	106,714	\$41,850
Perch.....	6,008	2,064
Market crab.....	4,750	1,644
All other species.....	627	190
Totals.....	118,099	\$45,748
SAN FRANCISCO AREA TOTALS.....	14,183,162	\$4,018,740

* Includes Sacramento area landings.

TABLE 17 [continued]

TABLE 18
Value of Landings by Port, Monterey Area, 1970

	Pounds	Value
Moss Landing		
Albacore.....	3,681,371	\$958,774
Salmon.....	362,950	316,668
Anchovy.....	1,783,750	31,225
Pacific herring.....	264,168	25,532
Squid.....	625,875	25,140
Petrale sole.....	67,739	10,922
Jack mackerel.....	221,650	10,323
Rockfish.....	90,756	9,180
English sole.....	75,788	7,140
Sanddab.....	55,102	4,455
Sablefish.....	46,285	3,140
White croaker.....	56,461	3,038
Flounder.....	30,754	2,449
Pacific bonito.....	44,452	2,312
Lingcod.....	17,653	1,470
California halibut.....	4,606	1,369
Sand sole.....	10,850	1,358
Rex sole.....	14,965	1,292
All other species.....	38,373	4,135
Port totals.....	7,493,548	\$1,419,922
Monterey		
Squid.....	8,001,240	\$321,387
Albacore.....	619,137	213,336
Rockfish.....	2,768,204	213,228
Sablefish.....	1,173,822	79,628
Salmon.....	84,667	73,892
Petrale sole.....	197,605	31,693
English sole.....	298,175	27,150
Jack mackerel.....	291,740	13,588
Lingcod.....	144,983	12,075
Spot prawn.....	11,621	11,098
White croaker.....	138,507	7,454
Rex sole.....	63,955	5,523
Sanddab.....	55,461	4,484
Anchovy.....	123,750	2,166
Pacific herring.....	22,350	2,160
Perch.....	10,358	2,032
Dover sole.....	28,905	1,760
Pacific bonito.....	24,612	1,280
California halibut.....	4,198	1,247
Miscellaneous sole.....	10,591	1,163
All other species.....	62,483	3,001
Port totals.....	14,326,564	\$1,029,545
Santa Cruz		
Salmon.....	95,361	\$83,226
White seabass.....	11,891	4,352
Pacific pompano.....	6,893	3,334
Albacore.....	8,118	2,114
Rockfish.....	16,270	1,861
Lingcod.....	16,622	1,394
All other species.....	37,221	2,555
Port totals.....	192,376	\$98,826
MONTEREY AREA TOTALS.....	22,012,488	\$2,548,293

TABLE 18
Value of Landings by Port, Monterey Area, 1970

TABLE 19
Value of Landings by Port, Santa Barbara Area, 1970

	Pounds	Value
Morro Bay		
Albacore.....	4,555,863	\$1,192,689
Giant Pacific oyster.....	219,987	197,988
Rockfish.....	1,406,927	97,654
Salmon.....	69,975	63,223
Abalone.....	163,681	56,749
Petrale sole.....	99,731	15,229
California halibut.....	20,784	8,308
Spiny lobster.....	5,362	6,548
Lingcod.....	74,400	6,544
Perch.....	19,351	5,720
Miscellaneous mollusk.....	475	5,529
Rock crab.....	59,072	4,839
English sole.....	45,740	3,818
Rex sole.....	15,320	1,614
White seabass.....	3,800	1,425
All other species.....	74,479	4,689
Port totals.....	6,834,947	\$1,672,566
Santa Barbara		
Abalone.....	1,043,683	\$356,084
Spiny lobster.....	47,599	58,127
Swordfish.....	91,673	48,082
Rockfish.....	545,349	37,478
English sole.....	269,118	22,465
Pacific bonito.....	216,504	14,171
White seabass.....	32,866	12,326
Rock crab.....	135,228	11,078
California halibut.....	24,734	9,887
Shark.....	82,238	9,812
Miscellaneous (animal food).....	351,022	7,017
Petrale sole.....	44,096	6,734
Spot prawn.....	10,574	5,300
Salmon.....	4,794	4,318
Rex sole.....	26,715	2,814
Albacore.....	9,159	2,398
All other species.....	12,396	999
Port totals.....	2,947,748	\$609,090
Port Hueneme		
Anchovy.....	19,475,160	\$223,004
Jack mackerel.....	3,383,123	128,888
Squid.....	4,878,300	70,561
Pacific bonito.....	368,774	24,138
Abalone.....	24,834	8,466
Swordfish.....	16,017	8,401
California halibut.....	17,219	6,883
Spiny lobster.....	2,286	2,792
Turbot.....	17,375	1,222
All other species.....	13,287	1,404
Port totals.....	28,196,375	\$475,759
Avila		
Albacore.....	635,649	\$166,408
Salmon.....	153,743	118,560
Abalone.....	121,105	41,990
Rockfish.....	496,466	34,689
Petrale sole.....	125,498	19,164
Ocean shrimp.....	66,695	9,850
English sole.....	74,345	6,206
White seabass.....	14,204	5,327
California halibut.....	7,757	3,101
Rex sole.....	21,180	2,231

TABLE 19
Value of Landings by Port, Santa Barbara Area, 1970

TABLE 19—Continued
Value of Landings by Port, Santa Barbara Area, 1970

	Pounds	Value
Avila—Continued		
Miscellaneous (animal food).....	108,850	\$2,176
Lingcod.....	20,093	1,767
Sand sole.....	14,519	1,746
Pacific bonito.....	22,417	1,467
Dover sole.....	21,463	1,288
Rock crab.....	12,202	1,000
All other species.....	29,490	3,800
Port totals.....	1,925,676	\$420,770
Oxnard		
Spiny lobster.....	30,418	\$37,146
Swordfish.....	12,519	6,566
Abalone.....	15,677	5,118
California halibut.....	6,439	2,574
Anchovy.....	139,100	1,593
Pacific bonito.....	18,894	1,040
All other species.....	9,852	1,604
Port totals.....	229,899	\$55,641
Ventura		
Abalone.....	6,152	\$2,064
Rockfish.....	4,152	1,002
All other species.....	874	501
Port totals.....	11,178	\$3,567
All other ports		
Shark.....	9,811	\$1,140
All other species.....	590	160
Totals.....	10,401	\$1,300
SANTA BARBARA AREA TOTALS.....	40,156,224	\$3,238,683

TABLE 19 [continued]

TABLE 20
Value of Landings and Shipments by Port, Los Angeles Area, 1970

	Pounds	Value
Terminal Island		
Landings:		
Yellowfin tuna.....	187,921,774	\$34,012,719
Skipjack tuna.....	55,598,118	8,733,372
Anchovy.....	166,667,500	1,832,473
Albacore.....	5,615,884	1,546,917
Jack mackerel.....	37,864,255	1,491,948
Bluefin tuna.....	5,862,964	1,096,182
Pacific bonito.....	6,015,688	429,578
Squid.....	2,209,733	49,752
Blacksmith.....	147,080	4,947
Bigeye tuna.....	18,490	3,407
Pacific mackerel.....	33,260	2,641
Total landings.....	467,934,706	\$49,203,936
Shipments:*		
Albacore.....	38,819,690	\$13,039,821
Yellowfin tuna.....	27,809,474	8,036,573
Skipjack tuna.....	18,482,108	3,395,815
Bluefin tuna.....	876,197	207,625
Bigeye tuna.....	845,205	193,516
Total shipments.....	86,832,674	\$24,873,350
Port totals.....	554,767,380	\$74,077,286
San Pedro		
Landings:		
Abalone.....	1,007,241	\$328,191
White seabass.....	795,197	278,193
Swordfish.....	357,674	205,911
Squid.....	8,875,520	199,832
Pacific bonito.....	1,997,234	142,622
Yellowfin tuna.....	760,083	137,570
Jack mackerel.....	2,858,487	112,661
Bluefin tuna.....	555,358	103,834
Rockfish.....	372,583	73,150
Skipjack tuna.....	383,980	60,316
Sardine.....	267,924	57,705
Pacific mackerel.....	584,788	46,449
Pacific pompano.....	116,920	35,798
Spiny lobster.....	29,947	35,156
White croaker.....	344,213	31,521
Rock crab.....	230,051	30,125
California halibut.....	70,798	27,934
Giant sea bass.....	96,114	21,781
California yellowtail.....	138,869	19,705
Shark.....	100,861	14,369
Albacore.....	49,572	13,655
Anchovy.....	1,062,791	11,686
Blacksmith.....	334,398	11,248
Flyingfish.....	73,491	10,838
Perch.....	86,553	4,336
California barracuda.....	14,676	4,086
Smelt.....	73,915	3,895
Halfmoon.....	14,771	3,170
Opaleye.....	20,355	3,132
Grouper.....	5,570	1,393
All other species.....	30,085	2,156
Total landings.....	21,710,019	\$2,032,418
Shipments:		
All other species.....	25	\$7
Total shipments.....	25	\$7
Port totals.....	21,710,044	\$2,032,425

TABLE 20
Value of Landings and Shipments by Port, Los Angeles Area, 1970

TABLE 20—Continued
Value of Landings and Shipments by Port, Los Angeles Area, 1970

	Pounds	Value
Wilmington		
Landings:		
Jack mackerel.....	3,133,342	\$123,494
Anchovy.....	2,841,426	31,243
Blacksmith.....	702,628	23,635
Pacific bonito.....	156,600	11,183
All other species.....	4,000	167
Port totals.....	6,837,996	\$189,722
Newport Beach		
Landings:		
Swordfish.....	235,049	\$135,317
Spiny lobster.....	7,277	8,543
Albacore.....	23,023	6,342
White seabass.....	13,913	4,867
Rockfish.....	10,761	2,357
All other species.....	13,439	2,083
Port totals.....	303,462	\$159,539
Long Beach		
Landings:		
Spiny lobster.....	28,585	\$33,557
Rockfish.....	19,317	4,183
Rock crab.....	22,468	2,942
Anchovy.....	183,877	2,022
Swordfish.....	2,646	1,523
All other species.....	16,676	2,656
Port totals.....	273,569	\$46,883
Santa Monica		
Landings:		
Swordfish.....	26,042	\$14,992
Spiny lobster.....	8,437	9,905
White seabass.....	9,752	3,412
Albacore.....	4,232	1,166
All other species.....	10,413	1,260
Port totals.....	58,876	\$30,735
Avalon		
Landings:		
Swordfish.....	39,217	\$22,577
Abalone.....	4,328	1,429
All other species.....	3,190	532
Port totals.....	46,735	\$24,538
Redondo Beach		
Landings:		
Rock crab.....	63,143	\$8,269
Swordfish.....	7,187	4,138
Spiny lobster.....	2,060	2,418
All other species.....	7,923	1,582
Port totals.....	80,313	\$16,407
All other ports		
Landings:		
Spiny lobster.....	3,316	\$3,892
All other species.....	4,425	741
Totals.....	7,741	\$4,633
LOS ANGELES AREA TOTALS.....	584,086,116	\$76,582,168

* Beginning in 1965 only tuna shipments are recorded.

TABLE 20 [continued]

TABLE 21
Value of Landings and Shipments by Port, San Diego Area, 1970

	Pounds	Value
San Diego		
Landings:		
Yellowfin tuna.....	43,274,120	\$7,736,795
Skipjack tuna.....	20,496,509	3,289,329
Albacore.....	3,147,146	840,509
Bluefin tuna.....	2,236,921	395,762
Abalone.....	477,403	133,452
Swordfish.....	152,585	84,266
White seabass.....	212,479	73,697
Spiny lobster.....	51,370	60,010
Sculpin.....	153,058	45,699
Rockfish.....	231,191	44,825
Sardine.....	174,395	43,596
Pacific bonito.....	287,732	20,633
Shark.....	80,927	13,199
Giant sea bass.....	30,429	7,272
California halibut.....	13,028	5,347
Halfmoon.....	19,733	4,413
California yellowtail.....	36,700	4,002
California barracuda.....	6,028	1,741
Perch.....	9,754	1,676
All other species.....	25,151	3,574
Total landings.....	71,116,659	\$12,809,597
Shipments*:		
Albacore.....	4,360,753	\$1,398,669
Yellowfin tuna.....	2,051,204	474,757
Skipjack tuna.....	1,955,162	389,280
Total shipments.....	8,367,119	\$2,252,706
Port totals.....	79,483,778	\$15,062,303
Oceanside		
Landings:		
Shark.....	52,750	\$8,648
Rockfish.....	20,848	4,066
Spiny lobster.....	3,039	3,550
White seabass.....	5,359	1,859
California halibut.....	3,975	1,631
All other species.....	35,528	4,970
Port totals.....	121,499	\$24,724
Cardiff		
Landings:		
Spiny lobster.....	4,520	\$5,280
All other species.....	3,051	391
Port totals.....	7,551	\$5,671
All other ports		
Landings:		
Spiny lobster.....	928	\$1,084
Totals.....	928	\$1,084
SAN DIEGO AREA TOTALS.....	79,613,756	\$15,083,782

* Beginning in 1965 only tuna shipments are recorded.

TABLE 21
Value of Landings and Shipments by Port, San Diego Area, 1970

TABLE 22
Statewide Commercial Partyboat Catch by Species
(Not including anchored barges)
1961-1970 *

Species	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
Barracuda, California.....	391,884	335,597	483,699	303,070	443,204	892,697	470,480	372,246	358,518	373,801
Blue, kelp and sand.....	612,604	786,149	1,219,244	1,103,394	1,220,313	1,278,039	1,000,914	1,217,963	1,246,175	922,360
Bouto, Pacific.....	849,426	798,725	775,719	1,298,804	896,232	644,415	349,952	1,102,036	1,130,241	651,898
Cabazon.....	2,659	4,538	9,736	6,491	7,255	10,293	3,419	4,349	4,583	6,372
Halibut, California.....	108,011	118,966	125,669	141,465	118,213	88,729	63,882	84,663	27,634	29,968
Lingcod.....	23,466	25,399	27,513	25,263	33,200	44,676	43,559	42,449	32,663	61,833
Mackerel, jack.....	28,891	9,029	9,342	6,577	25,619	19,027	16,236	13,888	11,272	15,725
Mackerel, Pacific.....	113,988	116,738	146,660	101,319	151,898	208,069	105,296	78,933	120,036	129,770
Rockfish.....	898,641	956,435	962,659	956,801	1,347,430	1,688,718	1,894,087	2,102,849	1,878,981	2,683,382
Salmon.....	42,965	57,612	72,457	92,021	51,677	70,151	84,946	127,594	111,269	96,301
Sculpin.....	26,672	33,314	43,886	73,844	71,888	69,851	63,380	50,663	63,011	82,429
Seahans, white.....	14,082	14,564	19,800	14,001	9,778	3,972	3,385	4,138	4,056	4,369
Sheepshead, California.....	15,210	15,488	18,443	26,872	41,681	32,987	42,676	33,076	49,626	39,494
Tuna, albacore.....	184,891	229,314	158,372	112,358	99,771	74,680	96,467	129,710	48,887	112,106
Tuna, bluefin.....	2,268	2,453	737	693	92	1,998	3,166	1,231	1,470	1,833
Whitefish, ocean.....	6,647	6,157	6,231	6,949	12,810	15,587	18,184	22,155	36,474	40,990
Yellowtail, California.....	42,267	21,828	45,705	36,194	18,267	39,163	21,262	38,949	75,292	97,576
All others.....	87,981	92,776	142,630	114,400	163,595	186,470	145,073	206,410	421,327	298,376
Total number of fish.....	3,453,633	3,855,993	4,278,502	4,434,178	4,634,558	5,406,420	4,444,164	5,731,201	6,728,575	5,630,836
Number of angler days†.....	495,805	505,866	643,155	605,445	688,103	887,000	780,102	849,654	802,811	873,327
Number of anglers.....	593,916	595,866	643,155	605,445	688,103	887,000	780,102	849,654	802,811	873,327

* See Fish Bulletin No. 121 for historical records 1936-1961.
† Not available after 1961.

TABLE 22
Statewide Commercial Partyboat Catch by Species (Not including anchored barges) 1961-1970

TABLE 23
Inshore Bait Landings by Area
Pounds and Value
1970

Species	Sacramento	San Francisco and Monterey	Los Angeles	San Diego	Statewide*
Clam					
Freshwater.....	756,100	----	----	----	756,100
Gaper.....	\$67,855	685	----	----	\$67,855
Jackknife.....	----	\$166	41,622	17,104	685
Pencil.....	----	----	\$25,604	\$9,397	\$166
Purple.....	----	----	2,622	11,893	58,726
Unclassified.....	----	----	\$1,269	\$5,873	\$35,001
					582
					\$1,746
					14,515
					\$7,142
					11
					\$25
Crab					
Sand.....	----	----	8,904	----	8,904
Shore.....	----	----	\$22,614	----	\$22,614
					30
					\$445
Crayfish	----	----	----	----	336
Mudsucker, longjaw	----	----	----	----	\$1,719
					13,483
					\$14,877
Mussel (bay and rock)	----	----	91,615	5,773	97,388
			\$11,877	\$718	\$12,595
Perch, shiner	----	----	----	----	5
					\$10
Sculpin, staghorn	658	747	----	----	1,405
	\$2,127	\$2,782	----	----	\$4,909
Shrimp					
Bay.....	46,743	16,742	----	----	63,485
	\$50,713	\$23,065	----	----	\$73,778
Brine.....	----	----	----	----	172,383
					\$171,447
Ghost.....	----	10	7,229	1,982	9,221
		\$210	\$29,635	\$7,550	\$37,395
Red.....	----	----	4,215	----	4,215
			\$7,630	----	\$7,630
Total	803,501	18,164	156,207	36,752	1,201,434
	\$120,695	\$26,223	\$98,629	\$23,538	\$459,354

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

TABLE 23
Inshore Bait Landings by Area Pounds and Value 1970

TABLE 24
Recorded Catch of Live Bait for Saltwater Sportfishing 1966-1970

Species	Thousands of pounds*				
	1966	1967	1968	1969	1970
Anchovy.....	13,382	10,774	14,353	10,627	12,210
Mackerel, jack.....	25	----	158	103	----
Mackerel, Pacific.....	----	----	----	8	----
Sardine, adult.....	54	1	57	34	----
Sardine, juvenile.....	T	T	----	----	6
Squid.....	T	----	23	9	----
Miscellaneous†.....	84	22	57	----	4
Total pounds	13,545	10,797	14,648	10,781	12,220
Number of vessels†	18	16	19	10	11

* Weights are estimated from voluntary records. They should be regarded as minimal because some fishermen do not supply catch information.

T Less than 500 pounds.

† Consists primarily of queenfish and white croaker.

‡ The number of live bait fishing vessels for which landings were reported. These numbers differ slightly from those in previous catch bulletins, since the earlier landing records, as submitted, sometimes included the catch of more than one boat.

TABLE 24
Recorded Catch of Live Bait for Saltwater Sportfishing 1966-1970

APPENDIX A

48

APPENDIX A

TABLE I
California Commercial Troll Salmon Landings by Port-Area, Month and Species, in Pounds¹ and Numbers—1970

	April		May		June		July		August		September		Season	
	Pounds	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds	Numbers
Crescent City														
King.....	5,288	684	17,235	2,171	245,341	31,909	49,151	4,519	89,018	5,219	7,050	818	393,051	46,180
Silver.....	0	0	1,773	295	279,346	42,812	126,601	16,387	97,108	5,034	1,080	127	455,938	64,655
Pink.....	0	0	0	0	0	0	0	0	12	3	0	0	12	3
Eureka														
King.....	79,676	10,876	440,331	56,788	280,716	28,249	269,837	28,607	246,418	24,757	48,283	5,221	1,365,061	154,496
Silver.....	146	24	13,883	2,314	153,958	23,501	176,382	21,247	88,908	9,186	2,755	324	435,982	56,596
Pink.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fort Bragg														
King.....	15,398	2,020	95,687	11,922	319,286	28,059	273,122	21,348	280,024	21,842	57,541	4,152	1,041,958	89,143
Silver.....	0	0	5,885	931	93,886	14,234	136,294	16,685	16,458	1,726	3,554	424	256,479	34,000
Pink.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Francisco														
King.....	85,398	10,102	397,306	39,768	483,747	44,930	341,982	30,079	214,985	19,683	221,260	18,555	1,744,778	163,997
Silver.....	149	25	4,917	779	107,798	16,331	44,767	5,545	9,124	991	1,155	136	167,618	23,696
Pink.....	0	0	0	0	66	17	0	0	0	0	0	0	99	17
Monterey														
King.....	43,812	4,782	193,258	17,819	130,333	11,321	183,498	14,034	137,199	10,726	36,656	5,081	734,648	63,732
Silver.....	22	4	2,113	382	19,807	32	442	442	1,265	140	181	19	26,923	3,947
Pink.....	0	0	0	0	130	0	0	0	0	0	0	0	130	32
Statewide														
King.....	229,572	28,424	1,143,817	128,468	1,459,423	144,928	1,117,390	98,687	948,452	83,006	370,840	33,627	5,299,494	516,648
Silver.....	317	53	27,971	4,662	654,465	96,368	487,499	60,306	182,883	16,977	8,705	1,080	1,341,830	152,896
Pink.....	0	0	0	0	196	49	0	0	12	3	0	0	298	82

¹ Dressed, head on.

FISH BULLETIN 154

TABLE I
California Commercial Troll Salmon Landings by Port-Area, Month and Species, in Pounds and Numbers—1970

APPENDIX A

TABLE II
California Ocean Recreational Salmon Landings and Success¹ by Fishery, Port, Month and Species, in Numbers of Fish—1970

	February			March			April			May			June			July		
	King	Silver	Fish /Day	King	Silver	Fish /Day	King	Silver	Fish /Day	King	Silver	Fish /Day	King	Silver	Fish /Day	King	Silver	Fish /Day
Crescent City																		
Partyboat.....	0	0	--	0	0	--	0	0	--	0	0	--	0	0	--	0	0	--
Skiff.....	0	0	*	0	0	*	0	0	*	0	0	*	52	191	0.5	165	149	0.2
Eureka																		
Partyboat.....	0	0	--	0	0	--	64	0	*	166	0	*	401	140	1.2	814	556	0.9
Skiff.....	0	0	*	0	0	*	0	0	*	0	0	*	4,968	528	0.5	11,288	3,506	1.0
Fort Bragg																		
Partyboat.....	0	0	--	0	0	--	0	0	--	246	0	*	287	317	0.8	617	427	0.5
Skiff.....	0	0	*	0	0	*	0	0	*	0	0	*	125	42	0.2	656	978	0.3
San Francisco																		
Partyboat.....	5,401	0	1.3	7,036	0	1.0	6,066	24	1.0	8,020	895	1.2	10,283	1,978	1.6	14,753	300	1.1
Skiff.....	616	0	1.4	1,002	0	1.1	709	0	0.4	1,044	116	0.5	1,500	161	0.5	1,846	38	0.5
Monterey																		
Partyboat.....	74	0	^b	60	0	^b	199	1	^b	188	21	^b	358	69	^b	290	4	^b
Skiff.....	160	0	0.3	725	0	0.3	899	0	0.4	1,061	20	0.5	2,338	518	0.3	2,422	172	0.3
Statewide																		
Partyboat.....	5,475	0	1.3	7,096	0	1.0	6,265	25	1.0	8,208	916	1.2	11,329	2,004	1.6	16,284	1,287	1.0
Skiff.....	776	0	0.8	1,727	0	0.5	1,578	9	0.4	2,105	142	0.5	3,803	1,440	0.4	4,547	424	0.6

MARINE FISH CATCH FOR 1970

49

TABLE II
California Ocean Recreational Salmon Landings and Success by Fishery, Port, Month and Species, in Numbers of Fish—1970

	August			September			October			November			December			Season		
	King	Silver	Fish /Day	King	Silver	Fish /Day	King	Silver	Fish /Day	King	Silver	Fish /Day	King	Silver	Fish /Day	King	Silver	Fish /Day
Crescent City																		
Partyboat.....	8	3	*	0	0	--	0	0	--	0	0	--	0	0	--	8	3	*
Skiff.....	622	884	0.7	0	0	*	0	0	*	0	0	*	0	0	*	839	1,224	0.5
Eureka																		
Partyboat.....	1,324	474	1.2	213	0	0.2	52	0	*	0	0	--	0	0	--	3,034	1,170	0.9
Skiff.....	11,924	1,667	1.0	1,310	137	0.7	0	0	*	0	0	*	0	0	*	29,490	5,837	0.9
Fort Bragg																		
Partyboat.....	476	35	0.4	242	22	0.2	2	0	*	0	0	--	0	0	--	2,070	801	0.4
Skiff.....	470	105	0.2	0	8	0.0	0	0	*	0	0	*	0	0	*	1,221	1,133	0.2
San Francisco																		
Partyboat.....	16,795	73	1.5	12,198	4	0.0	5,151	0	0.6	797	0	0.3	0	0	--	86,468	3,274	1.1
Skiff.....	1,900	6	1.0	1,475	0	0.5	758	0	0.6	152	0	0.3	0	0	--	10,802	321	0.6
Monterey																		
Partyboat.....	214	1	b	29	0	b	22	0	b	2	0	b	1	0	b	1,347	96	b
Skiff.....	2,900	26	0.4	938	5	0.2	1,128	0	b	216	0	0.2	0	0	--	12,461	756	0.3
Statewide																		
Partyboat.....	19,017	886	1.3	12,680	26	0.8	5,227	0	0.6	799	0	0.3	1	0	b	92,957	5,244	1.0
Skiff.....	17,516	2,888	0.7	3,743	150	0.4	1,886	0	0.6	352	0	0.2	0	0	--	54,963	9,271	0.5

¹ Salmon per angler-day, species combined. * No sampling. ^b Data not comparable to that of other ports or months.

FISH BULLETIN 154

Δ82615—800 11-71 3,500

50

TABLE II—Cont'd.