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California Marine Fish Landings For 1972 and Designated Common Names of Certain Marine Organisms of California



By
Leo Pinkas
Marine Resources Region
and
By
Doyle E. Gates and Herbert W. Frey

Marine Resources Region 1974

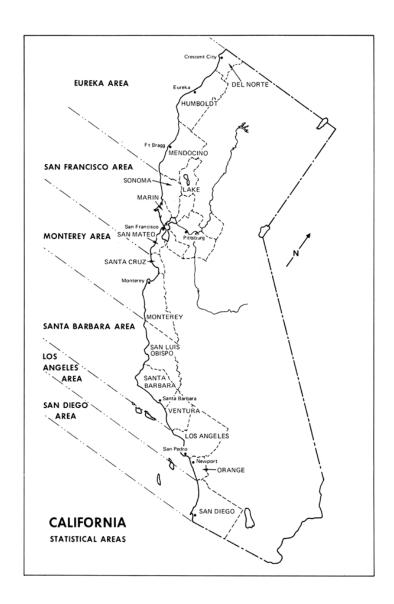


Figure 1. Geographical areas used to summarize California Fisheries statistics.

(2)

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

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1. CALIFORNIA MARINE FISH LANDINGS FOR 1972

LEO PINKAS Marine Resources Region

1.1. INTRODUCTION

The protection, propagation, and wise utilization of California's living marine resources (established as common property by statute, Section 1600, Fish and Game Code) is dependent upon the welding of biological, environmental, economic, and sociological factors. Fundamental to each of these factors, as well as the entire management process, are harvest records. The California Department of Fish and Game began gathering commercial fisheries landing data in 1916. Commercial fish catches were first published in 1929 for the years 1926 and 1927. This report, the 32nd in the landing series, is for the calendar year 1972. It summarizes commercial fishing activities in marine as well as fresh waters and includes the catches of the sportfishing partyboat fleet.

Preliminary landing data are published annually in the circular series which also enumerates certain fishery products produced from the catch. The 1972 figures are contained in Circular No. 47, "Statistical Report of Fresh, Canned, Cured and Manufactured Fishery Products for 1972" (Bell, 1973).

California's fishery statistics are based on a system whereby fish dealers, processors, and operators of sportfishing partyboats send duplicate copies of their landing records to the Department. The system and methods used to collect commercial fishing 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 remain unchanged. Parke Young (1969) described the partyboat fishing log system in Fish Bulletin 145.

Statistical compilations are normally the result of the combined efforts of many people, this report is no exception. Credit for this publication truly belongs to the cooperating units of the fishing industry (fishermen, wholesale fish dealers, canners, and processors) and Department personnel responsible for the market receipt system which is designed to gather fishery landing data (namely, Fish and Game wardens, field office clerks, marine and anadromous fisheries biologists, and all members of the Marine Fisheries Statistical unit at Long Beach). My appreciation and thanks are extended to one and all.

Portions of the salmon statistics were collected under the Anadromous Fish Act Project: California A F C-12, Ocean Salmon Study and supported by the National Marine Fisheries Service, Department of Commerce, Washington, D.C.

1.2. EXPLANATION OF TABLES

Tables in this bulletin summarize statistics of various fishery operations in California during 1972. 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 inshore species used for bait; and catches of boats supplying live bait for sportfishing. In addition, the species composition of the 1972 ocean salmon landings is reported.

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. Some facets of the sportfishing industry, other than the partyboat fleet are sampled by Department biologists but since these are specific studies the results are not reported here.

The landing bulletin series has, for over 20 years, been relatively stable in its format and presentations.

New fisheries (sea urchin), evolving fishery practices (aerial scouting for swordfish), and changing sociological needs (environmental impact statements) all create demands for additional and/or new statistical presentations. To satisfy these needs some table formats have been altered (Table 5, fishing boat lengths), new tables have been added (speciation and percent composition of the salmon catch), and additional detail has been included in existing tables (speciation of abalone landings, various tables).

Principal changes this year encompass nomenclature, new abalone conversion factors, commercial fish landings from inland waters separated from marine landings, and inclusion of landing data of marine plants.

1.3. SOURCE OF DATA

Data concerning 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, type of gear used and the specific area where the fish were caught usually are reported.

Partyboat catch data are obtained from logs completed by the boat operator. The log for each trip indicates 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, Menlo Park, Long Beach, and San Diego maintain contact with fish dealers, local Fish and Game Wardens, and field biologists 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 information then is punched into cards and summarized with electric tabulating machines.

1.4. 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 landings were, for many years, incorporated with San Francisco totals and other general summary tables. This procedure resulted in the co-mingling of marine, fresh, and brackish water species in the reports. In a departure from this tradition the 1972 data are presented with all inland water fish landings removed from the usual tables and grouped into two separate tables, Appendix I and II. Should this format prove useful, these tabulations will be elevated to table status in future presentations.

1.5. SPECIES

The common and scientific names of species reported here have been revised to conform with the list prepared by Gates and Frey (1974). Some species are reported only collectively when, for economic or other reasons, their separation is not practical (Table 1).

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 1972 animal food landings are as follows:

Species	Percent	Pounds
Pacific hake	41,2 32,9 10,2 6,6 5,6 3,5	152,462 121,747 37,745 24,424 20,723 12,952 370,053

TABLE

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 through 1965 were detailed by Jensen and Swartzell (1967); since 1966, results have been presented annually in the landing bulletins.

The miscellaneous fish category, as reported in the 1972 landings tables, consists of small volume deliveries of the following species: lamprey, California moray, striped mullet, Pacific halibut, sargo, shad, spotted cabrilla, and wolf-eel. Speciation of skates and rays, on the market receipts was poor; the reported species consisted of skates, rays, stingrays and shovelnose guitarfish. Miscellaneous mollusks consisted of mussels, quahogs, sea snails, soft shell clams, and Washington clams.

Marine plant harvest data have not been routinely published by the Department. Frey (1971) presented a table of Giant Kelp, Macrocystis *spp.*, landings by open and leased beds dating back to 1916. Requests for kelp harvesting information are increasing: partially in response to the need to evaluate numerous proposed nearshore developments, and in response to the need to evaluate animal resources in relation to their total environment. An updated version of kelp landings is presented (Appendix III).

1.6. CONDITION

Most fish and shellfish are landed in a round condition; however, some species, such as barracuda, salmon, and swordfish usually are eviscerated or cleaned before being brought ashore. The condition of fish landed or shipped into the state cannot always be determined so the tables represent summarized 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.

Abalone number to weight conversion factors were reexamined during the 1970–71 abalone season by a Department biological team. From December 1970 through July 1971, over 4,866 individual abalone (of all species) were measured and weighed, and new conversion factors were calculated. These conversion factors, rounded off to whole numbers, were used to convert the 1972 abalone landings in this bulletin.

Factors used in 1972 were:

Abalone, red 45 pounds per dozen Abalone, pink 25 pounds per dozen Abalone, green 25 pounds per dozen Abalone, black 25 pounds per dozen Abalone, white 20 pounds per dozen Clam, Washington 7 pounds per dozen Crab, Dungeness 2 pounds each Live bait 12.5 pounds per scoop

1.7. 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.

1.8. INSHORE BAIT

The inshore bait fishery takes several kinds of fish and invertebrates from bays, rivers, and intertidal regions. Records of this fishery have been published as a separate summary in landing bulletins since 1963. Conversion factors used for inshore bait for 1972 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 0.465 pound per dozen
Shrimp, ghost 0.082 pound per dozen

1.9. REFERENCES

Bell, Robert R. 1973. Statistical report of fresh, canned, cured and manufactured fishery products for 1972. Calif. Dept. Fish and Game, Circular, (47): 1–19.

Frey, Herbert W. (Ed) 1971. California's living marine resources and their utilization. Calif. Dept. Fish and Game, Sacramento, 148 p.

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Jensen, Paul T., and Phillip G. Swartzell. 1967. California salmon landings 1952 through 1965. Calif. Dept. Fish and Game, Fish Bull., (135): 43–57.

Young, Parke H. 1969. The California partyboat fishery 1947-1967. Calif. Dept. Fish and Game, Fish Bull., (145): 91 p.

TABLE 1 Common and Scientific Names of Fishes, Crustaceans, and Mollusks in the 1972 Catch

Common name	Scientific name	Common name	Scientific name
	FISI	HES	
Anchovy, northern Barracuda, California	Engraulis mordax	Salmon	
Barracuda, California	Sphyraena argentea	King	Oncorhynchus tshawytscha
		Pink	Oncorhynchus gorbuscha
Kelp bass	Paralabraz clathratus Paralabraz nebulifer Paralabraz maculatofasciatus Chromis punctipinnis	Silver	Oncorhynchus kisutch
Sand bass, barred	Paralabraz nebulifer	Sanddab	Citharichthys sordidus
Spotted sand bass	Parataorax macutatojasciatus	Sardine, Pacine	Sarainops sagax caeruieus
Diacksmith	Chromis punctipinnis	Sargo	Anisotremus davidschii
Cabazan	Sarda chiliensis Scorpaenichthys marmoratus Epinephelus analogus	Sculpin Posific stockers	Lontocottus armatus
Cabrilla enetted	Eninophelus analogus	Sculpin, Facine stagnorn	Stereologie gioga
Crosker		Seabass, white	Oncorhynchus tshawytscha Oncorhynchus gorbuscha Oncorhynchus kisutch Citharichthys sordidus Sardinops sagar caeruleus Anisotremus davidsonii Scorpena guttata Leptocottus armatus Stersolepis gigas Cynoscion nobilis
White	Genyonemus lineatus		
Queenfish	Seriphus politus	Members of family Alo	piidae, Carcharhinidae, Lamnid
Dolphinfish	Coryphaena hippurus	and Squalidae.	
Lei, wolf	Anarrhichthys ccellatus	Sheephead, California	Pimelometopon pulchrum
Flounder		Skates and Rays	
Arrowtooth Starry Flyingfish	Atheresthes stomias	Members of family Rh	inobatidae, Rajidae, and Myli
Starry	Platichthys stellatus	batididae	
Flyingfish	Cypselurus spp.	Smelt	
		Jacksmelt	Atherinopsis californiensis
Carp	Cyprinus carpio	Night	Spirinchus starksii
Sacramento blackhsh.	Cyprinus carpio Orthodon microlepidotus Hezagrammos decagrammus	Surt	Hypomesus pretiosus
Greenling, kelp Grenadiers	Hexagrammos decagrammus	Whitebait	Atherinopsis californiensis Spirinchus starksii Hypomesus pretiosus Allosmerus etongatus and Spirinchus starksii
California	Nesumia stelaidolenie	Sole	is pir inchus starksti
Pasifia	Nezumia stelgidolepis Coryphaenoides acrolepis Merluccius productus Medialuna californiensis	Postton	Isomeetta isolonia
Haka Pacific	Merlycoine productic	Dover	Microstomus nacificus
Halfmoon	Medialuna californiensis	Butter Dover English	Paranhrus setulus
Halibut	mediatana carijorniensis	Petrale	Fonsetta iordani
California	Paralichthus californicus	Rex	Farophrys vetuus Eopsetta jordani Glyptocephalus zachirus Lepidopsetta bilineata Psettichthys melanostictus Xiphias gladius
Pacific	Hippoglassus stenalenis	Rock	Lepidonsetta bilineata
Herring, Pacific	Clunea harenous pallasii	Sand	Psettichthus melanostictus
Killifish, California	Fundulus parvininnis	Swordfish	Xiphias gladius
Lamprey	Lampetra spp.	Tuna	11 spirite gradua
Lingcod	Ophiodon elonoatus	Albacore	Thunnus alalunga
Mackerel	o pintousin crongutus	Bigeve	Thunnus obesus
Jack	Trachurus symmetricus	Bluefin	Thunnus thynnus
Pacific	Scomber japonicus	Skipjack, tuna	Euthynnus pelamis
Moray, California	Gymnothorax mordax	Albacore Bigeye. Bluefin. Skipjack, tuna Skipjack, black Yellowfin	Euthynnus lineatus
Mudsucker, longiaw	Gillichthys mirabilis	Yellowfin	Thunnus albacares
Mullet, striped	Mugil cephalus	Turbot	
Opaleye	Girella nigricans	Curlfin	Pleuronichthys decurrens
Perch, ocean	Members of family Embiotocidae	Diamond	Hypsopsetta guttulata
Pompano (Butterfish,		Hornyhead	Pleuronichthys verticalis
Pacific)	Peprilus simillimus	Wahoo	Acanthocybium solanderi
Rockfish	Members of family Scorpaenidae	Whitefish, ocean	Caulolatilus princeps
Sablefish	Paralichthy californicus Hippoplossus stendepis Clupea haranyas pallasii Fundulus partipinnis Lampetra spp. Ophiodon elongalus Trachurus symmetricus Scomber japonicus Gymnothorax mordax Gillichthys mirobilis Mugil cephalus Girella nigrainy Embiotocidae Peprilus simillimus Members of family Embiotocidae Anoplopoma fimbria	Yellowtail	Pleuronichthys decurrens Hypsopsetta guttulata Pleuronichthys verticalis Acanthocybium solanderi Caulolatius princeps Seriola dorsalis
	AMP	HIRIA	
Bullfrog	Rana catesbeiana		
	CRUSTA	CEANS	
rab		Drawn	
Dungeness Rock Sand Shore Sheep	Cancer magister	Ridgeback	Eusicyonia ingentus
Rock	Cancer spp.	Spot	Pandaius platyceros
Sand	Emerita analoga	Shrimn	
Shore	Hemigrapsus spp.	Bay	Crago spp.
Sheep	Loxorhynchus spp.	Ghost, Bay	Crago spp. Callianassa californiensis Pandalus jordani Hippolysmata californica
Crayfish Lobster, spiny	Astacus trowbridgei	Ocean, Pacific	Pandalus jordani
Lobster, spiny	Panulirus interruptus	Red	Hippolysmata californica
	ECHINOD	FRMS	
Starfish, common		Sea urchin	Strongylocentrolus spp.
	MOLL	USKS	
Abalone		1	
Black	Haliotis cracherodii	Softshell	Mya arenaria
Green	Haliotie fulgene	Washington, common.	Saxidomus nuttalli
Pink	Haliotis corrugata	Mussel	
	Haliotis rufescens	Bay	Mytilus edulis
Red	Haliotis assimilis	Rock	Mytilus californianus
Red Threaded		Bay Rock Octopi	Pelypus spp.
Red Threaded White	Haliotis sorenseni		
Pink Red Threaded White Clam		Oyster	
		Oyster Eastern	Crassostrea virginica
		Eastern	Crassostrea virginica Crassostrea gigas
		Oyster Eastern Giant Pacific Snail, sea	Crassostrea virginica Crassostrea gigas Liparis atlanticus
	Haliotis sorenseni Corbicula fluminea Tagelus californianus Protothaca staminea Sanguinolaria nuttalli Mercenaria mercenaria	Oyster Eastern	Crassostrea virginica Crassostrea gigas Liparis atlanticus Loligo opalescens

TABLE 1

Common and Scientific Names of Fishes, Crustaceans, and Mollusks in the 1972 Catch

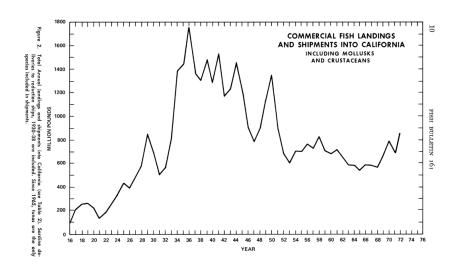


Figure 2. Total Annual landings and shipments into California (see Table 2). Sardine deliveries to reduction ships, 1930–38 are included. Since 1965, tunas are the only species included in shipments.

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
916	95.003	1946	919,822
917	209.877	1947	795,499
110	261,134	1948	900,467
918	266,270	1949	
919			1,135,339
920	222,004	1950	1,366,676
21	135,348	1951	904,114
22	182,343	1952	694,996
23	253,875	1953	618,919
24	340,446	1954	713,410
25	437,502	1955	710,713
926	394,964	1956	772,551
27	487,166	1957	738,550
28	583,527	1958	832,919
29	856,854	1959	713,423
30	702.189	1960	694,663
100	702,189	1900	094,003
31	502,390	1961	725,253
32	556,139	1962	663,107
33	821,805	1963	592,899
34	1,390,798	1964	591,131
35	1,448,017	*1965	544,480
36	1.764.900	1966	591.533
37	1,362,984	1967	589,028
38	1,310,596	1968	567,214
39	1,486,535	1969	672,793
40	1,297,518	1970	798,415
40	1,291,010	1970	,
41	1,528,892	1971	687,995
42	1,173,414	1972	845,699
943	1,234,049		210,000
44	1,459,456	II . I	
945	1,216,501	II I	
/10	1,210,001		

^{*} 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 *

1	971			1972							
Species	Rank	Thousands of pounds	Thousands of dollars	Species	Rank	Thousands of pounds	Thousands of dollars				
Yellowfin tuna	2 3	168,365 154,942 89,705 68,131 59,883	\$36,211 30,570 1,093 22,675 2,416	Yellowfin tuna	1 2 3 4 5	278,487 138,202 123,768 97,132 51,118	\$65,377 1,678 28,851 38,882 2,153				
SquidPacific bonitoBluefin tunaDover soleRockfish	8	31,517 20,269 19,828 14,249 11,169	760 1,841 4,207 1,178 942	Bluefin tuna Pacific bonito Dover sole Squid Rockfish	6 7 8 9	30,974 22,313 22,082 20,159 16,421	7,033 2,055 1,808 534 1,490				
Dungeness crab	12 13 14	9,662 8,117 4,424 3,704 3,081	2,821 4,757 290 611 400	Sablefish Salmon Petrale sole Lingcod Abalone	11 12 13 14 15	8,396 6,423 3,575 3,246 3,093	649 4,830 599 339 1,248				
English sole	17 18	2,964 2,945 2,098 1,871 1,468 9,603	316 953 201 394 169 2,658	English sole Ocean shrimp Rex sole Dungeness crab Black skipjack All others	16 17 18 19 10	3,002 2,490 1,662 1,563 1,543 10,050	342 374 201 889 123 3,064				
Totals		687,995	\$115,463	Totals		845,699	\$162,519				

[•] 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**

	License year*				
Area of residence	1971-72	1972-73			
Eureka	1,846 455 1,711 686 871 2,028 1,652 848 26 58	1,870 488 2,035 800 941 2,070 1,688 524 39 58			
Totals	10,181	10,513			

^{*} April 1 to March 31.

TABLE 4 Number of Licensed Commercial Fishermen

TABLE 5 Number of Registered Fishing Boats by Length

	License	e year*		License year*			
Length group in feet	1971-72	1972-73	Length group in feet	1971-72	1972-73		
0- 10	5 128 807 553 645 600 787 446 349 147	3 128 954 679 707 628 820 429 311 136 113	101-105 106-110 111-115 116-120 121-125 126-130 131-135 136-140 141-145 146-150 151-155	8 7 5 11 6 9 8 11 1 0	8 6 4 8 5 7 6 9 1 0		
61- 65. 66- 70. 71- 75. 76- 80. 81- 85. 86- 90. 91- 95. 96-100.	120 34 37 28 21 8 7	110 35 32 29 19 10 8	156-160 161-165 166-170 171-175 176-180 181 and over	4 4 5 4 0 9	3 3 4 4 4 0 19 5,261‡		

TABLE 5 Number of Registered Fishing Boats by Length

April 1 to March 31.
 † The owners of 482 boats were issued fishing party licenses in 1971-72.
 ‡ The owners of 465 boats were issued fishing party licenses in 1972-73.

 ${\bf TABLE~6}$ Origin of Shipments Received for Processing in California During 1972 *

	Pounds shippe			
Shipped from: Species	Los Angeles	San Diego	Total pounds	
Continental United States: Tuna, bluefin	576,088 37,500		576,088 37,500	
Oregon, Washington, Canada and Alaska: Tuna, albacore Tuna, yellowfin	16,735,782 449,320	1,403,092	18,138,874 449,320	
Mexico and Central America: Tuna, albacore. Tuna, bluefin. Tuna, skipjack. Tuna, skipjack. black. Tuna, yellowfin.	82,033 543,120 1,512,323 420,279 4,862,812	51,404 365,776 1,973,117	82,033 594,524 1,878,099 420,279 6,835,929	
South America: Tuna, albacore Tuna, bigeye. Tuna, skipjack Tuna, yellowfin.	2,708,013 8,495 1,610,108 1,875,376		2,708,013 8,495 1,610,108 1,875,376	
Japan: Tuna, albacore. Tuna, bigeye. Tuna, bluefin Tuna, skipjack Tuna, skipjack, black Tuna, yellowfin	35,598,299 100,645 89,160 65,387,247 2,860 7,925,216	3,281,417 7,991 7,609,352 1,704,405	38,879,716 108,636 89,160 72,996,599 2,860 9,629,621	
Australia and New Zealand: Tuna, albacore Tuna, bluefin. Tuna, skipjack	436,598 4,836,935 255,870		436,598 4,836,935 255,870	
China (Formosa): Tuna, albacore. Tuna, skipjack. Tuna, yellowfin.	313,790 614,352 5,386,433	8,060 21,666 303,074	321,850 636,018 5,689,507	
Malaya: Tuna, albacore Tuna, skipjack Tuna, yellowfin	322,392 224,105 1,804,205		322,392 224,105 1,804,205	
South Pacific Islands: Tuna, albacore Tuna, skipjack. Tuns, yellowfin.	9,939,401 48,756 5,345,167	588,729 1,727,552	10,528,130 48,756 7,072,719	
Africa: Tuna, albacore. Tuna, bişeye. Tuna, skipjack. Tuna, skipjack, black. Tuna, yellowfin.	4,712,891 1,978 9,118,931 1,001,361	11,265	4,712,891 1,978 9,118,931 11,265 1,001,361	
Philippines: Tuna, bigeye Tuna, skipjack. Tuna, yellowfin.	72,102 218,610 2,423,529		72,102 218,610 2,423,529	
Spain: Tuna, skipjack	798,958		798,958	
Total pounds	188,401,040	19,056,900	207,457,940	

 $[\]bullet$ Beginning in 1965 only tuna shipments are recorded.

TABLE 6
Origin of Shipments Received for Processing in California During 1972

						•		
Species	California waters	Waters north of State	Waters south of State	Central Pacific waters	Total pounds	Tuna shipments*	Grand total	
Fish:								
Anchovy, northern Barracuda, California Blacksmith Bonito, Pacific Cabezon	138,201,522 13,915 75,880 15,600,361 5,853		6,712,266		138,201,573 13,915 75,880 22,312,627 5,853		138,201,573 13,915 75,880 22,312,627 5,853	
Croaker, white. Dolphinfah. Flounder, Flounder, arrowtooth. Flyingfah.	373,410 1,567 657,070 147,226 128,889	2,640 16,721	6,217		373,410 7,784 659,710 163,947 128,889	===	373,410 7,784 659,710 163,947 128,889	FISH
Grenadiers. Hake, Pacific. Halfmon. Halibut, California. Halibut, Carefic.	56,647 10,525 27,122 309,003 235	7,376	242		64,023 10,525 27,122 309,245 235		64,023 10,525 27,122 309,245 235	BULLETIN
Herring, Pacific Lingcod Mackerel, jack Mackerel, Pacific Mackerel, Ongiaw	125,448 3,129,455 51,116,891 108,035 1,289	116,731	682 43		125,448 3,246,186 51,117,573 108,078 1,289		125,448 3,246,186 51,117,573 108,078 1,289	N 161
Opaleye. Perch. Pompano, Pacific. Queenfish. Rockfish.	15,390 272,470 154,842 46,473 15,868,230	510,848	443 90 42,174		15,390 272,913 154,932 46,473 16,421,252	===	15,390 272,913 154,932 46,473 16,421,252	
Sablefish. Salmon Sanddab, Sardine, Pacific. Sargo.	7,983,299 6,422,171 916,680 372,230 637	412,415 1,118 4,142	229		8,395,714 6,423,289 920,822 372,230 866		8,395,714 6,423,289 920,822 372,230 866	
Sculpin Sea bass, giant Seabass, white Shark	61,896 12,329 550,891 364,062	31	70,120 82,984 226,497 36,676		132,016 95,313 777,388 400,769		132,016 95,313 777,388 400,769	

TABLE 7
Origin of Commercial Fish Landings and Volume of Shipments Into California During 1972

Total pounds	320,889,756	5,517,831	311,825,454	8,174	638,241,215	207,457,940	845,699,155	
Miscellaneous mollusk.	582				582		582	-
Oyster, eastern Oyster, giant Pacific Squid	9,028 876,127 20,159,312				9,028 876,127 20,159,312		9,028 876,127 20,159,312	
Abalone, white Octopus.	143,819 10,323	259			143,819 10,582		143,819 10,582	
Abalone, threaded	1,868				1,868		1,868	
Abalone, red	1,104,462				1,104,462		1,104,462	
Abalone, black Abalone, green Abalone, pink	1,014,892 424,828 403,709		::::		1,014,892 424,828 403,709	::::	1,014,892 424,828 403,709	
Mollusk:								
Echinoderm: Sea urchin. Miscellaneous echinoderm.	76,457 1,260				76,457 1,260		76,457 1,260	,
Shrimp, ocean	2,443,027	46,843			2,489,870		2,489,870	
Lobster, spiny Prawn, spot	398,217 20,970				398,217 20,970		398,217 20,970	
Crustacean: Crab, Dungeness Crab, rock	1,563,006 843,503		27		1,563,006 843,530		1,563,006 843,530	
Miscellaneous (animal food)	370,053				370,053		370,053	
Yellowtail Miscellaneous	95,102 1,147		162,969 26		258,071 1,173		258,071 1,173	
Wahoo	1.469		1,807 1,100		1,807 2,569		1,807 2,569	
Tuna, yellowfin	71,522 17,463	660	241,633,460		241,704,982 18,123	36,781,567	278,486,549 18,123	
Tuna, skipjack. Tuna, skipjack, black.	41,418 27,000		35,903,466 1,082,110		35,944,884 1,109,110	87,823,554 434,404	123,768,438 1,543,514	
Tuna, bigeye Tuna, bluefin	1,525,962		191,476 23,351,759		191,476 24,877,721	191,211 6,096,707	382,687 30,974,428	
Tuna, albacore	17,573,831	1,105,210	2,313,999	8,174	21,001,214	76,130,497	97,131,711	
Swordfish.	261,624	370	18 4,358		30,057 265,982		30,057 265,982	
Sole, rex Sole, sand Sole, miscellaneous	384,097 29,669	5,055			1,661,610 389,152		1,661,610 389,152	
Sole, petraleSole, rex	3,493,522 1,569,369	81,723 92,241			3,575,245		3,575,245	
Sole, English	2,915,830	86,135			3,001,965		3,001,965	
Smelt, whitebait	189,358 19,054,384	3.027.313			189,358 22,081,697		189,358 22,081,697	
SkateSmelt.	118,386 514,298				118,386 514,298		118,386 514,298	

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

TABLE 7—Cont'd.

TABLE 8
Monthly Landings and Shipments Into California During 1972

Ty March April May June July August September October November December Company (Control of the Control of the Control

											THE R. P. LEWIS CO., LANSING, MICH.			=
Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds	0,
LANDINGS:											,			
Anchovy, northern Barracuda, California	25,337,993 41	20,029,208 31	5,758,467 3,797	7,840,988 1,051	6,746,236 1,871	887,807 1,300	729,017 730	2,115,868 177	4,001,562 3,527	25,590,784 569	25,934,015 644	13,229,628 177	138,201,573 13.915	
BlacksmithBonito, PacificCabezon.	552,087 750	252,518 8	121,721 268	351,343 670	29,440 775,904 393	46,440 1,530,984	342,145 92	2,252,809 214	7,118,096 428	5,500,760 426	2,062,290 2,469	1,451,970 135	75,880 22,312,627 5,853	
Croaker, white	75,539 1,664 21,788 4,941	37,512 3,372 45,983 1,467	37,522 85,546 9,131	67,390 1,804 24,734 9,165	40,845 85 28,642 15,047 24,543	24,529 14,745 3,980 40,088	13,143 31,311 8,934 51,463	20,505 69 30,327 26,123 12,795	7,514 288 138,218 29,021	12,817 258 116,335 27,837	14,481 244 70,351 13,508	21,613 51,730 14,793	373,410 7,784 659,710 163,947 128,889	_
Grenadiers	1,985 18,916	714 56,026	50 1,299 18,496	4,190 3,551 9,143	2,390 3,919 19,231 28	150 6,922 30,972 86	4,152 210 1,149 47,886 34	39,680 3,000 2,126 49,510 87	7,230 980 17,819	8,264 535 1,567 19,503	4,259 1,833 15,049	438 1,077 6,694	64,023 10,52 9 27,122 309,245 235	FISH BUI
Herring, Pacific Lingcod Mackerel, Jack Mackerel, Pacific Mudsucker, longjaw	12,000 69,123 5,692,755 2,390 71	9,700 89,662 3,530,389 27,486 45	125,061 4,805,018 6,670 85	13,900 142,014 651,165 11,565 122	81,332 357,288 542,656 1,254 175	8,000 439,171 1,724,182 937 72	500,753 7,000,259 260 135	538,549 9,915,802 140 150	427,439 13,429,289 448 105	309,177 648,127 16,222 160	195 111,791 2,182,506 32,134 90	108 136,158 995,425 8,572 79	125,448 3,246,186 51,117,573 108,078 1,289	BULLETIN I
Opaleye Perch Pompano, Pacific Queenfish Rockfish	121 10,984 83,560 7,300 936,022	11,517 4,738 10,000 1,361,640	187 27,340 9,649 17,970 1,491,181	285 27,801 19,642 4,200 1,044,917	2,495 11,517 6,698 3,500 1,265,067	3,649 110,165 2,197 1,369,004	2,260 11,928 735 253 1,285,645	2,320 26,788 1,511 1,445,419	715 15,068 2,523 1,207,810	900 8,336 4,166 250 1,843,431	510 3,530 3,929 3,000 1,608,773	1,948 7,939 15,584 1,562,343	15,390 272,913 154,932 46,473 16,421,252	61
Sablefish Salmon Sanddab Sardine, Pacific Sargo	809,946 50,268	1,036,248 81,716 17,657	743,883 79,885 6,795 100	400,796 3,044 52,207 9,385 229	566,441 1,811,359 78,196 10,681	523,893 1,902,685 118,539 42,935 207	638,581 1,645,556 123,211 135,791 220	695,795 841,603 148,997 9,430 110	684,001 218,166 82,271 35,808	1,002,457 876 62,998 18,959	628,474 21,479 32,306	665,199 21,055 52,483	8,395,714 6,423,289 920,822 372,230 866	
Sculpin Sea bass, giant Seabass, white Shark Shark Sheephead, California	1,424 4,281 58,648 35,021 1,136	1,726 22,805 96,784 25,123 1,038	739 9,205 88,692 10,454 461	2,192 2,175 29,920 10,392 483	2,817 2,302 25,752 23,243 686	41,001 2,347 26,066 37,566 1,900	33,395 2,091 19,767 44,789 110	28,561 725 191,132 43,663 29	3,297 18,830 95,723 36,855 188	4,568 22,086 51,450 51,840 663	6,306 1,305 38,218 48,792 89	5,990 7,161 55,236 33,031 301	132,016 95,313 777,388 400,769 7,084	
Skate Smelt. Smelt, whitebait Sole, Dover Sole, English	4,184 44,731 624 576,534 258,721	14,234 2,016 3,114 1,539,593 313,693	11,115 4,676 16,916 1,765,840 237,105	12,809 9,153 19,827 1,626,690 158,087	22,384 25,166 45,898 2,534,123 214,617	9,225 44,675 51,713 2,355,441 195.874	10,781 143,393 42,215 2,622,923 218,784	13,767 167,553 8,728 2,601,776 375,875	8,395 25,893 323 2,501,117 410,087	3,310 30,161 2,058,125 312,483	2,520 6,940 1,026,042 141,669	5,662 9,941 873,493 164,970	118,386 514,298 189,358 22,081,697 3,001,965	

TABLE 8
Monthly Landings and Shipments Into California During 1972

to to	Sole, petrale Sole, rex Sole, sand Sole, miscellaneous Swordfish	711,555 166,660 26,255 2,484	325,244 185,923 35,588 7,309	233,865 163,698 52,713 6,363 120	275,463 128,633 8,857 867 2,256	368,044 190,234 54,684 1,633 3,162	245,179 116,302 19,907 573 2,857	215,739 132,711 21,687 1,350 52,331	307,759 156,971 23,132 2,712 104,018	274,032 158,162 55,407 270 69,232	285,127 111,283 57,200 764 31,602	137,956 58,863 22,298 459 164	195,282 92,170 11,424 5,273 240	389,152 30,057	
-86283	Tuna, albacore	168,003	1,970 158,215 7,420 1,698,199	2,571,608 35,900	2,256,237	29,010 5,839,753 611,498	51,307 3,722,760 4,224,860 426,722	4,475,119 2,442,663 6,580,795 7,630	3,667,340 8,577,205 3,372,072	6,372,491 4,663,403 666,494 27,000	5,767,000 4,251 4,473,885 438,398	662,723 990,385 2,123,698 360	3,249 6,004,767	191,476 24,877,721	
	Tuna, yellowfin. Turbot. Wahoo Whitefish, ocean. Yellowtail Miscellaneous. Miscellaneous (animal food)	3,573,131 342 	29,491,401 3,913 278 24,730 185 62,160	32,941,205 3,527 465 172 11,100 26 20,820	39,003,659 311 475 240 5,101 170 20,140	37,490,662 125 6,875 28 50,113	25,165,560 2,792 450 268 12,983 244 20,025	19,569,892 734 485 4,420 16 36,380	14,059,039 2,060 188 1,933 361 30,080	11,610,489 2,188 171 40,232 52 15,975	907 246 320 23,986 81	8,976,222 620 80 55,850 20,150	2,780,109 604 468 63,759 10 21,335	1,807 2,569 258,071 1,173	
(Crustacean: Crab, Dungeness Crab, rock Lobster, spiny Prawn, spot Shrimp, ocean	286,653 62,601 45,400 2,143	138,388 78,719 50,899 1,936	105,108 63,629 31,891 1,638	47,267 60,435 90,675	107,223 52,323 320,561	72,038 64,378 256,846	21,548 83,191 531,547	23,060 85,043 627,880	70,949 307,987	91,113 116,411 4,598 354,374	152,876 60,416 99,894 5,449	608,845 70,733 53,722 5,206	843,530 398,217	MARINE
	Echinoderm: Sea urchin Miscellaneous echinoderm	1,728	4,868 376	::::	4,700 228	43,242 217		::::	439	- ::::	382	1,881	19,656	76,457 1,260	
	Vollusk: Abalone, black Abalone, green Abalone, pink Abalone, pink Abalone, threaded	13,934 74,365 34,333 137,573 6	1,325 375 162 5,560	16,049 17,243 54,687 100,159	109,473 32,562 70,215 108,409 54	179,820 71,731 29,347 90,888 46	346,216 51,977 22,570 67,284 4	69,171 51,585 31,425 121,649 410	787 689 1,037 1,668	64,695 35,994 42,670 136,605 316	21,341 21,529 38,685 142,260 402	26,566 24,413 51,876 73,986 471	165,515 42,365 26,702 118,421 159		LANDINGS 19
	Abalone, white. Octopus. Oyster, eastern. Oyster, giant Pacific. Squid. Miscellaneous mollusk.	25,470 245 1,065 95,610 123,750 120	609 1,189 92,827 1,996,785 145	10,883 749 463 97,196 814,712 250	9,832 362 1,135 71,993 2,308,775 20	7,129 563 826 72,650 4,359,015 20	7,728 317 1,150 57,437 7,507,660	8,590 788 559 58,109 1,986,875	991 1,274 235 14,281 592,925	7,731 1,452 1,344 75,045 107,125	23,691 2,231 864 85,957 61,450 27	27,156 633 110 82,841 92,760	14,618 1,359 88 72,181 207,480	143,819 10,582 9,028 876,127 20,159,312 582	1972
	Total pounds	40,274,971	63,004,461	52,851,563	57,185,573	65,305,658	54,067,841	52,221,500	53,267,105	55,336,545	66,968,428	47,770,897	29,986,673	638,241,215	
	IPMENTS: Fish: Tuna, albacore. Tuna, biçeye. Tuna, biudin. Tuna, skipjack. Tuna, skipjack, black. Tuna, skipjack, black.	2,531,589 8,495 6,937,520 2,351,618	1,255,169 3,130,792 1,008,212	5,341,488 1,978 13,453,244 4,150,161	4,119,566 4,114,139 9,757,889 3,895,669	7,991 69,985	2,830,942 101,062 7,171,753 120,240 2,760,392	15,042,416 62,252 562,029 6,179,135 25,008 3,391,841	18,266,211 4,924 898,305 9,013,308 1,410 1,816,516	7,647,392 4,926 351,187 4,877,324 1,450 3,719,371	4,243,408 23,620 7,355,553 170,846 1,983,812	8,024,452 4,054,887 41,830 2,657,223	3,455,114 77,025 5,877,770 11,265 4,155,503	191,211 6,096,707 87,823,554 434,404	
	Total pounds	11,829,222	5,394,173	22,946,871	21,887,263	18,418,709	12,984,389	25,262,681	30,000,674	16,601,650	13,777,239	14,778,392	13,576,677	207,457,940	17
	Grand total	52,104,193	68,398,634	75,798,434	79,072,836	83,724,367	67,052,230	77,484,181	83,267,779	71.938.195	80,745,667	62,549,289	43,563,350	845,699,155	

TABLE 8—Cont'd.

		Monthly L	andings of	Commerc	TABL ial Fishing		the Eureka	a Area Dur	ing 1972				
Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds
ANDINGS FROM: California waters: Fish:									-				
Bonito, Pacific		3,494 1,467	23,774 8,276	289 11,597 9,165	147 23,092 13,220	10,128 3,980	28 6,822 8,084 4,152	12,378 26,123 39,680	29,635 29,021 1,914	58,202 22,468 7,844	12 61,317 12,748 3,057	2,238	650 476 286,551 139,396 56,647
Halibut, California		27,712 3,385	59,143 11,987	75,445 10,551	28 158,916 75	86 304,548	40 12 369,123 7,984	87 399,016 385 17,936	324,666 1,522 9,346	150,531 835 2,784	26,671 218	23,842	40 213 1,945,622 2,742 69,004
Rockfish. Sablefish Salmon Sanddab Shark	386,595 488,767 32,220 850	507,842 594,262 50,719 612	594,162 391,838 41,753 451	301,720 253,658 114 18,053 476	459,709 406,807 972,342 48,162 1,540	490,146 375,199 1,029,951 61,770 483	646,332 488,103 1,098,551 79,719 144	656,408 510,630 236,481 87,667 95	496,032 441,780 30,587 55,039 184	619,136 514,089 12 30,140 5,958	576,652 222,961 10,381 3,265	291,594 303,133 5,348 1,988	6,026,328 4,991,227 3,368,038 520,971 16,046
Skate Smelt. Smelt, whitebait. Sole, Dover. Sole, English.	296 402,919 64,863	2,600 108 2,646 541,186 129,512	2,600 50 14,513 996,024 130,038	5,940 242 14,688 1,233,119 97,764	14,849 9,781 35,481 2,051,524 147,550	5,370 26,353 47,763 2,061,494 112,651	6,550 108,457 41,207 2,122,408 105,771	1,288 144,798 8,242 1,741,850 170,028	5,700 16,741 323 1,590,923 230,070	400 216 1,427,810 133,210	673,030 23,900	2,705 515,176 22,966	48,002 306,746 165,159 15,357,463 1,368,323
Sole, petrale Sole, rex Sole, sand Sole, miscellaneous Tuna, albacore Turbot Miscellaneous	427,468 117,403 11,735 516	130,302 121,844 17,761 2,207	91,701 119,722 27,109 1,545	42,012 95,682 5,499 177 303 170	111,417 154,133 49,532 836	107,581 99,813 7,342 100 77	91,351 114,812 2,536 285,633	96,543 133,424 5,166 25 419,168 270	94,287 126,970 20,271 202,779 173 16	116,786 84,027 18,222 25,469 302	44,008 34,418 11,963 975 180	111,321 39,696 10,024 4,333 1,908 43	1,464,777 1,241,944 187,160 7,432 936,032 5,749 186
Crustacean: Crab, Dungeness Crab, rock Shrimp, ocean	251,413	99,727	79,507	36,664 20 56,782	96,357 220,324	54,472 290 249,126	21,548 550 531,547	23,060 180 528,674	285,456	350,796		543,761	1,206,509 1,040 2,222,705

TABLE 9
Monthly Landings of Commercial Fishing Boats in the Eureka Area During 1972

Mollusk: Octopus Oyster, giant Pacific. Miscellaneous mollusk	86,192 120	153 84,906 65	157 92,119	124 67,938	221 68,295	136 54,090	483 47,037	829	929 64,098	1,332 70,867	150 61,932	394 54,358	4,974 751,832 185	
Total pounds	2,306,630	2,322,510	2,688,306	2,338,192	5,044,353	5,102,971	6,188,984	5,260,431	4,058,462	3,641,980	1,767,838	1,979,512	42,700,169	
Waters north of State: Fish:														
Flounder		119	502 525	531	367 1,827		392	425	292 5,316	5,369 420	1,202	9,000	2,640 16,721 7,376	
Lingcod Rockfish	120 13,597	1,907 8,317	2,264 23,289	11,707 36,306	20,819 26,259	12,842 16,833	19,168 37,194	23,421 93,846	21,922 137,595	1,993 70,042	407 25,835	161 21,735	116,731 510,848	
Sablefish	7,551	1,113	14,606	30,346	32,166 65 514	14,811 81	38,462 859 115	72,335 36 1,809	88,960 77 478	65,577	27,242	19,246	412,415 1,118 4,142	×
Sanddab Shark Sole, Dover	40,092	742	32,012	183,026	174,440	101,231	300,380	619,207	709,670	31 494,678	239,051	132,784	31 3,027,313	MARIN
Sole, English Sole, petrale Sole, rex Sole, sand Sole, miscellaneous Turbot	3,346 2,459	22,763 7,400 2,521 1,567	1,845 5,115 6,942 1,109 238	4,073 4,008 6,881 223	6,113 9,136 15,050 745 132	1,537 1,543 4,865	8,661 7,032 8,399 181	8,178 7,521 11,728 627	30,320 22,665 14,107	2,645 3,527 10,076 603	1,306 4,866	9,124 4,347	86,135 81,723 92,241 5,055 370 660	E LANDIN
Crustacean: Shrimp, ocean				3,614	9,440			7,680	22,531	3,578			46,843	GS 1
Mollusk: Octopus								88	123	48			259	1972
Total pounds	67,165	47,468	88,620	281,195	297,073	153,743	421,057	846,901	1,054,056	658,599	299,909	196,835	4,412,621	
Grand total	2,373,795	2,369,978	2,776,926	2,619,387	5,341,426	5,256,714	6,610,041	6,107,332	5,112,518	4,300,579	2,067,747	2,176,347	47,112,790	

TABLE 9—Cont'd.

	Mon	thly Landir	ngs of Com	mercial F	TABLI		San Franci	sco Area I	During 197	2			
Species	January	February	March	April	May	June	July-	August	September		November	December	Total pounds
ANDINGS FROM: California waters: Fish:										-			
Anchovy, northern Bonito, Pacific Cabezon Croaker, white Flounder	255 445	4,790 140 36,968	85 130 50,691	36,880 359 50 8,845	61,810 -246 1,093 4,110	45,750 3,747 3,165	33,220 3,087 20,983	58,117 22 3,611 12,033	78,790 1,036 12 2,186 97,313	35,570 4,442 3,489 56,364	1,274 6,906	974 800	360,727 5,478 979 20,226 311,238
Flounder, arrowtooth Hake, Pacific Halibut, California Halibut, Pacific Herring, Pacific	12,320	35,760 9,700	330 6,179	4,190 483	2,100 159	379	850 14,110 22	3,000 9,100	6,595	12,346	760 8,370	3,555 1,361 108	7,830 9,290 107,162 22 21,808
Lingeod Mackerel, jack Mudsucker, longjaw Perch Pompano, Pacific	71 5.960	18,078 45 3,641	18,574 85 7,580	19,563 122 8,037	110,467 175	21,521 5 72 148	56,125 1,005 135 911 484	64,387 265 150 1,934	12,926 115 103 2,027	22,766 160 1,238 70	13,269 90 1,470	22,025 79 2,555	393,695 1,390 1,287 35,353 702
Rockfish. Sablefish. Salmon. Sanddab. Seabass, white.	84,077	204,739 182,555 12,065 35	173,293 138,771 27,300	91,091 83,563 125 14,875	113,426 70,137 564,911 17,055	69,627 57,545 707,209 37,500	58,384 57,205 503,015 22,180	104,191 64,890 580,001 31,452	82,684 70,888 148,129 18,290 53	141,477 170,859 14 25,030 318	154,865 76,815 8,531 43	338,712 137,599 4,529 42	1,621,710 1,194,904 2,503,404 227,470 491
Shark Skate Smelt Smelt, whitebait Sole, Dover	7,434 1,405 475 328 132,568	4,390 1,800 816 468 988,990	280 1,400 3,146 2,403 726,541	50 300 2,633 5,139 185,115	250 5,155 10,417 269,839	8,314 3,950 168,546	14,203 3,618 1,008 185,655	6,567 697 486 226,759	8,610 2,281 196,519	21,613 400 300 133,372	10,297 240 113,136	4,957 389 224,653	78,811 5,934 27,435 24,199 3,551,693
Sole, English Sole, petrale Sole, rex Sole, sand	125,935 254,521 32,898 8,420	87,639 141,584 36,264 5,960	51,817 52,230 22,752 18,130	18,898 122,824 9,300 2,645	32,915 166,485 3,114 825	53,937 65,924 7,590 8,880	81,054 83,686 7,695 16,830	120,748 103,395 8,794 16,599	103,585 59,912 11,870 33,766	120,558 25,575 12,095 38,165	55,643 42,685 12,634 9,440	76,393 39,615 37,135 1,355	929,122 1,158,436 202,141 161,015

TABLE 10 Monthly Landings of Commercial Fishing Boats in the San Francisco Area During 1972

Swordfish	===	1,260	1,690	===			195,519 450	393,785 1,790 165	1,720,068 2,015 2	886,964 605	11,364 440	561	3,207,700 8,811 167	
Crustacean: Crab, Dungeness Shrimp, ocean	35,035	38,158	24,085	4,296 30,279	6,239 90,797	16,429 7,720		91,526	::::	::::	151,829	59,324	335,395 220,322	
Echinoderm: Sea urchin Miscellaneous echinoderm		20 376		228	217		::::	439	::::				20 1,260	
Mollusk: Abalone, red. Octopus. Oyster, eastern. Oyster, giant Pacific. Miscellaneous mollusk.	2,148 35 1,065 3,669	1,189 3,767 20	2,418 85 463 3,881	1,683 103 1,135 4,029 20	3,397 220 826 4,343 20	3,265 125 1,150 3,341	6,511 280 559 11,069	195 235 14,272	4,776 400 1,344 10,941	1,991 628 864 12,207	4,342 433 110 12,340	2,567 593 88 11,696	33,098 3,097 9,028 95,555 60	MAKIN
Total pounds	854,137	1,821,217	1,334,339	657,150	1,540,748	1,296,007	1,379,857	1,919,690	2,677,481	1,729,480	697,326	972,191	16,879,623	b
Waters north of state: Fish: Tuna, albacore									191,086				191,086	LANDI
Total pounds									191,086				191,086	NG
Grand total	854,137	1,821,217	1,334,339	657,150	1,540,748	1,296,007	1,379,857	1,919,690	2,868,567	1,729,480	697,326	972,191	17,070,709	20
			-							-				972

TABLE 10—Cont'd.

TABLE 11
Monthly Landings of Commercial Fishing Boats in the Monterey Area During 1972

Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds	
LANDINGS FROM: California waters: Fish:													ı	
Anchovy, northern Bonito, Pacific Cabezon Croaker, white Flounder	495	2,218 4,845	158 1,739 5,746	48,660 1,126	32,189 873	8,375 1,422	64 7,603 2,944	61,905 12 88 11,046 5,447	123,800 28,981 366 4,138 10,940	295,310 17,739 6,682 1,751	643,033 1,089 1,025 11,197 2,123	64,000 33 10,304 7,123	1,188,098 47,821 2,251 146,147 50,569	FISH BU
Halibut, California Herring, Pacific Lingcod Mackerel, jack Perch	13,099	4,715 14,323 343	740 16,286 2,550 1,829	2,596 13,900 4,717 5,005 2,342	822 81,332 16,022 10,221	2,014 8,000 17,349	12,943 12,936 11,850 12	21,659 213 6,829 27,470 265	2,122 18,526 11,130 5	39,116 5,030	423 195 45,162 36,720	1,059 68,834 14,270 404	49,556 103,640 273,199 124,246 5,228	JLLETIN
Pompano, Pacific Rockfish Sablefish Salmon Sanddab	223,848 229,551 9,229	226,319 258,036 18,013	268,303 198,359 10,492	194,459 31,855 1,730 18,752	240,825 53,446 231,631 12,465	874 362,723 73,300 114,386 19,269	76 200,150 53,174 16,841 21,097	1,250 224,668 46,845 23,866 27,973	2,105 220,139 82,373 31,360 8,244	147 563,485 251,789 850 7,828	447,264 300,784 2,567	334 505,399 205,221 11,162	4,830 3,677,582 1,784,733 420,664 167,091	161
Seabass, white	2,492	1,633 9,785 922 8,675	528 7,115 1,078 5,605	16 153 6,569 4,230 3,850	310 7,535 5,370 7,585	1,642 3,700 1,388 6,960	85 5,550 3,911 269 4,460	1,320 4,750 12,479 1,673 6,875	1,620 2,167 2,510 581 3,855	4,670 10,104 2,510 235 1,205	214 6,637 2,280 115 540	124 3,563 2,568 880	8,049 39,873 63,454 18,367 51,415	
Sole, English Sole, petrale Sole, rex Sole, sand Sole, miscellaneous Tuna, albacore Miscellaneous	9,360	35,800 22,705 20,480 1,435 198	29,014 24,460 6,415 1,725 130	24,666 20,694 1,055 170 15	16,864 20,753 800 485 361 15	14,275 14,150 1,585 40 163	17,155 13,085 375 905 1,199 658,289	53,068 37,504 1,940 740 2,093 1,173,340	25,295 39,910 1,790 1,370 63 2,051,606	31,932 71,135 1,565 210 728 522,148	25,766 34,620 1,780 60 83 47,275	26,755 27,240 4,970 45 225	310,025 338,011 52,115 7,185 5,258 4,452,673 106	

TABLE 11 Monthly Landings of Commercial Fishing Boats in the Monterey Area During 1972

Crustacean: Crab, Dungeness Crab, rock Prawn, spot	113 130 2,143	128 69 1,936	1,638				===			4,598	5,449	46 5,206	287 199 20,970
Mollusk: Abalone, red	144	433 60	507 9,925 250	106,875	3,706,763	6,327,100	150 1,768,775	121,025	107,125	68 61,450	50 45,660	329 3,580	150 1,531 12,258,278 310
Grand total	526,485	633,071	594,596	493,507	4,446,707	6,978,811	2,813,898	1,876,343	2,782,121	1,902,577	1,662,111	963,684	25,673,911

MARINE HANDINGS 19/2

TABLE 11—Cont'd.

	Mor	nthly Landi	ngs of Cor	nmercial F	TABLI		Santa Bar	bara Area	During 19	72				24
Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds	
LANDINGS FROM: California waters:										-		-		
Fish: Anchovy, northern Barracuda, California Bonito, Pacific		4,077,250 3 41	1,170,900 30	127,200	1,143,500 18 34	36,400 241 21	47,200 628	1,703,000	3,528,500 1,108,993	5,040,300 683,657	539,737	2,338,600 177 275,457	880 2,636,149	
Cabezon Croaker, white	1,925	20	25					104 500		426		102	2,089 2,445	
Flounder Hake, Pacific. Halibut, California. Lingcod. Mackerel, jack.	4,490 15.832	557 9,328 27,547 366,900	4,833 50 8,194 28,778 266,600	2,635 2,009 30,527	200 290 3,389 51,064	16,240 82,826	13,338 43,388 25,420	12,295 44,781 33,008	5,034 49,399 24,888	5,343 5,343 94,665	5,595 26,141	20,651	8,442 875 89,054 515,599 771,916	FISH
Perch Pompano, Pacific Rockfish Sablefish Salmon	97.254	1,184 216,844	1,008 215 301,331 225	3,055 296,382 1,215 1,075	35 301,682 3,737 42,410	20 331,981 2,725 51,058	1,074 299,464 1,425 26,271	1,420 305,021 965 1,197	1,005 211,531 8,013	2,271 354,379 25	315,972 630	2,000 259,382	14,599 2,345 3,291,223 10,947 130,024	BULLETIN
Sanddab Sea bass, giant Seabass, white Shark Sheephead, California	96 49 4,423 6,153 97	280 517 3,008	127 2,159 3,655 16	1,266 4,082	2,945 9,047	166 4,119 11,606 10	14 295 4,510 9,535	284 10,056 6,701 12	21,483 2,584	9,834 5,318 16	9,862	2,610 3,122	517 808 77,195 74,673 164	N 161
Skate Smelt. Sole, Dover Sole, English Sole, petrale	287 41,750 30 58,488 14,465	37,979 23,205	5,658 24,391 60,065	21,580 12,686 85,835	30,735 11,175 60,100	16,525 12,249 55,631	9,685 6,015 20,525	7,085 23,853 62,796	125 150 20,817 57,140	1,060 24,138 68,100	285 36,360	38,856 7,982	452 41,750 92,793 307,007 531,181	
Sole, rex	4,540 6,100 1,918	4,800 8,865 6,979	7,867 4,640 4,328	15,715 320 326	17,137 3,097 187	2,449 3,645 1,119	1,395 1,235 59 10,248 1,890,489	1,085 12 17,788 701,068	3,425 60 6,284 542,638	3,520 12 746,260	835 172	171	73,120 28,737 14,224 34,320 3,928,400	
Turbot	38 825	185 62.160	20.820	20.140	50.113	2,465	70 2 36.380	30.080	267 15.975	34.050	20,150	21.335	2,543 267 187 370,053	

TABLE 12 Monthly Landings of Commercial Fishing Boats in the Santa Barbara Area During 1972

Total pounds	5,800,585	5,420,975	2,296,456	2,622,698	2,351,301	1,447,247	2,631,936	3,344,757	5,809,047	7,264,733	4,222,702	3,304,528	46,516,965
Oyster, giant Pacific Squid.	5,736	4,128 516,835	1,170 225,150	1,767,750	338,940	434,360		361,400		2,880	8,557	6,115	28,586 3,644,435
Abalone, white Octopus				12	122	56	25	162		128 153	15		155 518
Mollusk: Abalone, black	13,544 12 10,708 119,785 6	5,560	15,850 22,114 84,405	95,620 12,320 96,806 54	145,548 7,743 71,005 46	284,228 587 6,909 56,582	56,506 15,902 94,830 351	450 458 1,668	54,496 1,066 18,292 113,995 287	18,569 213 11,080 129,063 257	23,092 680 24,149 61,549 187	144,712 670 8,925 108,871	852,615 3,228 138,600 944,119 1,188
Echinoderm: Sea urchin		2,490		4,700	43,242					382	1,881	19,656	72,351
Crustacean: Crab, Dungeness Crab, rock Lobster, spiny	92 16,695 14,533	375 30,536 13,359	1,516 22,247 8,089	6,307 12,528	4,627 9,133	1,137 11,867	15,657	17,288	12,562	11,606 16,487	1,047 13,831 23,946	5,714 17,144 10,894	20,815 191,094 87,308

TABLE 12—Cont'd.

	Month	ly Landing	s and Ship	ments of	TABLI Commercia		the Los	Angeles Ar	ea During	1972			
Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds
ANDINGS FROM: California waters: Fish:													
Anchovy, northern	20,037,518 240,444 71,173	15,947,168 38,790 34,508	4,587,538 3,475 127 35,611	7,676,738 793 3,345 18.680	5,539,932 916 29,440 77 7,378	805,657 629 46,440 201 12,362	648,569 6 46,875 2,453	292,682 80 47,385 5,210	270,472 3,454 5,820,151 1,190	20,219,604 18 4,064,754 2,116	22,321,532 30 1,386,531 2.010	10,827,028 1,131,265 10,335	109,174,438 9,401 75,880 12,779,945 203,026
Dolphinfish		34,000			24,543	40,088 150	35 51,463 210	12,795	150			10,000	150 35 128,889 360
Halfmoon Halibut, California Lingcod Mackerel, jack Mackerel, Pacific Mudsucker, longiaw	5,692,755 2,000	3,130 13 3,163,457 27,486	1,876 1,876 16 4,535,840 6,670	395 2,833 646,160 10,670	1,096 10,822 532,435 984	2,737 10,190 85 1,724,177 787	4,955 13 6,961,984	1,000 5,909 95 9,854,614	43 13,391,527 190 2	641,687 16,005	490 6 141 2,090,410 32,134	73 645 981,155 8,540	1,083 50,216,201
Opaleye Perch Pompano, Pacific Queenfish Rockfish			2,191 9,430 17,970 62,774	285 2,551 19,642 4,200 50,291	2,495 7,677 6,658 3,500 39,185	3,649 109,546 1,155 57,026	2,260 93 95 253 10,508	2,320 385 261 26,648	715 395 418 30,770	900 435 3,859 250 56,603	510 180 3,929 3,000 59,784	1,948 1,163 13,250 109,071	124,930
Sablefish Sanddab Sardine, Pacific Sargo. Seulpin	60	14,757	3,245 100	159 8,868 987	3,060 235	313 42,935 207 843	212 135,791 220 1,023	130 79 9,430 110 89	220 20,075 431	118 12,759 388	22,906 613	52,483 574	359 326,309 637
Sca bass, giant	182 2,353 907	194 1,949 972	242 299 4,122 445	662 3,963 3,921 392	889 11,244 6,927 194	1,156 10,878 9,461 1,768	1,509 7,299 3,608 40	36 131,201 15,033	52,579 6,844	43 9,833 4,283 14	4,564 5,175 20	3,938 11,235 11,071 125	243,471 74,747

TABLE 13
Monthly Landings and Shipments of Commercial Fish Into the Los Angeles Area During 1972

Smelt		170	4021	2,048	4,860	8,620	31,030	20,355	6,290	29.410	6.825	9.791	119,801	
Sole, Dover				2,020	.,	685	335	,	.,		.,	.,	1,020	
Sole, English						1,225	128						1,353	
Sole, petrale					153	350	60						563	
Sole, rex		14					35						49	
Sole, miscellaneous						41	49	479	33	o i			611	
Swordfish					1.067	1.980	14,856	33,665	39,802	30,785	164	240	122,559	
Tuna, albacore					2,000	535	545,095	257,126	677,009	1,484,540	294,650		3,258,955	
Tuna, bluefin						3,016	123,101	522,462	564,429	312,700			1,525,708	
Tuna, skipjack									41,200				41,200	
									27,000				27,000	
Tuna, skipjack, black									59,895		315		60,210	
Tuna, yellowfin Turbot					110	250			35,053		313		360	
Whitefish, ocean						57							57	
Yellowtail					544	371	734	165	29,573	2,546	3,102	21,849	58,884	\simeq
Miscellaneous						16	2	196	1	61			276	>
														MARIN
Crustacean:		*****	44.074	40.000	40 707	40.000	50.000	66,126	58,247	76,429	44,107	51,033	625,645	z
Crab, rock	42,436 19,570	46,133 27,179	41,271 15,598	47,773	42,737	49,363	59,990			43,083	43,475	24.808	173,713	Ħ
Lobster, spiny	19,570	21,119	10,090							10,000	10,110	21,000	110,110	LΑ
Mollusk:														F-
Abalone, black	300	1,325	187	12,449	24,052	47,044	9,791	337	8,449	2,551	3,124	20,399	130,008	NDIN
Abalone, green	39,718	375	7,347	5,894	42,113	35,100	38,733	431	32,471	17,335	16,474	23,823	259,814	Ξ.
Abalone, pink	5.173	162	20,131	44,385	6,887	8,686	11,400		18,963	15,277	13,902	12,014	156,980	×
Abalone, red	2,703			127	2,070	2,475	2,426		750	5,670	1,260	2,264	19,745	G.
Abalone, white						4,312	4,868		5,561	19,627	13,338	9,835	57,541	32
0.4		10		135						9		43	190	-
OctopusSquid	123,600	1,479,950	579,350	434,150	313,250	746,200	218,100	110,500			47,100	203,900	4,256,100	97
Miscellaneous mollusk	123,000	1,415,550	010,000	404,100	010,200	140,200	210,100	110,000		27	11,100	200,000	27	72
Total pounds	26,434,625	20,901,193	9,936,537	9,002,496	6,667,678	3,792,921	8,940,527	11,417,334	21,169,359	27,073,727	26,421,843	13,543,898	185,302,138	
Waters north of State:														
Waters north or State:														
Tuna, albacore									196,858	694,192			891,050	
Tuna, aroacore														
Total pounds									196,858	694,192			891,050	
Waters south of State:	1													
Fish:	226,152	113,389	22,930	218,865	594,243	1,218,258	235.810	1.788,131	101,670	347.485	4,758		4,871,691	
Bonito, Pacific	1.060	113,389			594,243 85		235,810	1,788,131	101,670	317,185	4,730		2,221	
Halibut, California	1,000	80											80	
Mackerel, jack									45	575			620	
Perch	1 ::::	134	100	177									411	
														15
														~1

TABLE 13—Cont'd.

Mo	nthly Land	ings and S	Shipments	of Comme	rcial Fish	Into the I	Los Angele	s Area Du	ring 1972-	—Continu	ed		
Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds
/aters south of State—Continued													
Pompano, Pacific Rockfish		480	470	203	5,888		68		855	90 38		160	90 8,162 229
Sargo Sea bass, giant Seabass, white	1,947 13,932	21,404 65,848	7,976 53,767	1,030 21,078	1,387 5,497		78 480		18,830 2,001	21,673 3,304	1,108 1,362	3,223 1,651	78,656 168,920
Shark	===	1,970 158,215 7,420		===	600 145 29,010	17,694 2,772,520	20 47,226 1,087,267	187,093 5,285,386	294,358	58,088 2,349,075	4,072		600 165 610,501 187,225 14,014,693
Tuna, bluehn	4,558	1,053,186	1,524,813	1,479,732	4,156,093	1,910,591	4,339,238	2,306,101	374,708	2,349,075	1.724,902	5,117,364	
Tuna, skipjack, black Tuna, vellowfin	3,390,114	20,713,370	35,900 25,854,666	28,889,755	611,498 29,992,729	311,346 20,591,798	6,640 18,190,426	12,546,521	8,479,748	16,577,878	7,368,646		965,744 194,703,896
Wahoo	70 4,748	23,503	10,587	197 240 4,274	1,968	450 8,140	2,680			246 320 10,032	80 24,016	95 24,071	893 805 114,019
Total pounds	3,642,581	22,159,990	27,511,209	30,615,780	35,399,143	26,830,797	23,909,933	22,113,232	11,595,917	19,631,178	9,318,627	7,254,809	239,983,196
intral Pacific Islands: Fish:	1.0												
Tuna, albacore						8,174							8,174
Total pounds						8,174							8,174
PMENTS:* Fish:									-				
Tuna, albacore Tuna, bigeye	2,362,408 8,495	976,488	5,300,738 1,978	3,696,738	3,021,836	2,830,942	62,252	4,924	7,569,861 4,926	3,835,256 23,620	8,024,452	3,447,054 77,025	70,849,199 183,220
Tuna, bluefin Tuna, skipjack Tuna, skipjack, black	4,875,974	2,880,161	12,424,885	4,114,139 8,803,417	69,985 8,147,295 62,355	101,062 7,171,753 120,240	562,029 5,954,376 25,008	846,901 8,353,095 1,410	351,187 4,873,846 1,450	7,270,589 170,846	4,054,887 41,830	5,016,482	6,045,303 79,826,760 423,139
Tuna, yellowfin	2,351,618	327,664	3,219,710	3,803,360	3,270,189	2,539,068	2,980,182	1,584,393	3,628,323	1,856,999	2,498,880	3,013,033	
Total pounds	9,598,495	4,184,313	20,947,311	20,417,654	14,571,660	12,763,065	22,426,623	27,731,373	16,429,593	13,157,310	14,620,049	11,553,594	188,401,040
Grand total	39,675,701	47,245,496	58,395,057	60,035,930	56,638,481	43,394,957	55,277,083	61,261,939	49,391,727	60,556,407	50,360,519	32,352,301	614,585,598

TABLE 13
Monthly Landings and Shipments of Commercial Fish Into the Los Angeles Area During 1972

TABLE 14
Monthly Landings and Shipments of Commercial Fish Into the San Diego Area During 1972

		.,						21080 1111	u During				
Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds
LANDINGS FROM: California waters: Fish:													
Anchovy, northern	41 39	28 48 8 626	29 292 135 	120 258 13	994 937 97	430 170	28 724 47,765	113 97 1,944	73 31,037 50	551 28,019 530		20,286	1,284 3,634 130,318 58 1,566
DolphinfishFlounder		940				30	135		10	173		26	1,417 235
HalfmoonHalibut, CaliforniaLingcod.	1,985 1,608	714 2,964 82	1,103 1,465	3,156 1,201 55	2,823 4,039	4,185 2,149	1,149 2,500	1,126 547 20	980 4,025	1,567 1,522 100		1,077 396	21,208 23,027 257
Mackerel, jack	390 121 4	32 2,606	28 187 2,645	895 1,056	270 3,730	150 597	260 1,854 80	60 140 4,848	215 2,290	217 1,608	659	32 1,459	396 2,569 308 23,356 80
Rockfish Sablefish Salmon Sanddab Sardine, Pacific	54,002	86,400 282 66 2,900	65,824 40 3,550	69,828 47 517	76,310 7,621	40,668	32,376 19 86	34,249 22 17	26,261 15,733	38,071 6,200	28,024 9,400	35,749 16	587,762 282 41 272 45,921
Seulpin Sea bass, giant Seabass, white Shark Sheephead, California	1,412 844 25,001 6,814 132	1,726 132 19,681 1,283 66	739 463 25,747 854	1,205 3,283 1,186 91	488 26 6,066 4,569 347	12,609 1,025 11,069 14,214 122	12,934 209 7,393 11,749 50	7,719 277 48,555 8,292 17	2,580 14,098 13,591 188	4,180 8,995 2,873 633	70 13,091 6,231	5,416 38,706 8,256 176	56,701 3,046 221,685 79,912 1,878
Smelt	50	48 132	294 122	90 59	117 2,095	361 877 21,089	21 25,245 273,398	30 18 52,565 157,380	118 114 22,901 192,844	4 15 817 1,064,321		150 18 658	199 554 1,231 104,500 1,790,071
Tuna, bluefin Tuna, skipjack Tuna, skipjack Tuna, yellowfin Whitefish, ocean Yellowtail Miscellaneous		278	172 411	11,272	2,457 28	211 3,928 132	90 26 485 970 12	106 14 188 1,491	58 12 7,860 33	206 2,773 20	6,995	78 8,692	254 218 11,312 1,412 35,951 225

TABLE 14 Monthly Landings and Shipments of Commercial Fish Into the San Diego Area During 1972

						-Continued								30
M	onthly Lan	dings and	Shipments	of Comm	ercial Fish	Into the	San Diego	Area Duri	ng 1972—	-Continue	i			
Species	January	February	March	April	May	June	July	August	September	October	November	December	Total pounds	
Crustacean: Crab, rock Lobster, spiny	3,340 11,297	1,981 10,361	111 8,204	114	453	2,858	6,994	1,449	140	3,051 56,841	2,478 32,473	2,556 18,020	25,525 137,196	
Echinoderm: Sea urchin	1,728	2,358											4,086	
Mollusk: Abalone, black Abalone, green Abalone, pink Abalone, red Abalone, threaded	90 34,635 18,452 12,937	===	9,896 12,442 13,336	1,404 26,668 13,510 9,793	10,220 29,618 14,717 14,416	14,944 16,290 6,975 4,962	2,874 12,852 4,123 17,732 59	258 579	1,750 2,457 5,415 17,084 29	221 3,981 12,328 5,536 145	350 7,259 13,825 6,835 284	404 17,872 5,763 4,719 159	32,269 161,786 108,129 107,350 680	FISH 1
Abalone, white Octopus Oyster, giant Pacific Squid	13	13 26	10,883 26 287	9,820 	7,129 12 62	3,416 6	3,722	991	2,170 6	3,936 3	13,803	4,783 12	86,123 13 154 499	BULLETIN
Total pounds	200,889	135,781	159,339	156,001	189,826	163,516	467,936	323,303	364,122	1,249,437	231,321	175,479	3,816,950	2
Waters north of State: Fish: Tuna, albacore									23,074				23,074	161
Total pounds									23,074				23,074	
Waters south of State: Fish: Anchovy, northern Bonito, Pacific Dolphinish Halibut, California Mackred, Jack	58,636 310	99,250 1,102 49	98,529 42	128,575 1,804 21	181,453	312,334	11,067	51 415,117 69	26,228 128 62	354,120	129,410 244 44	24,856	51 1,839,575 3,657 162 62	
Mackerel, Pacific	9,020	12,219	1,735	32 4,637 483	1,783 2,094	27,549	1,169 19,438	388 20,753 128	43 1,943 286	200	377 113	541	43 32 34,012 70,120 4,328	

TABLE 14 Monthly Landings and Shipments of Commercial Fish Into the San Diego Area During 1972

Seabass, white	15,110 8,581	12,248	6,720 564	314 524				2,225	3,889 2,875	14,496 1,660	5,671 7,325	868 74	57,577 36,076
Sole, miscellaneous Swordfish Tuna, albacore			120	2,256		2,596	1,982 579,470	378,380	280,171	285,018	177,180	683	4,358 1,703,498
Tuna, bigeye	163,445 183,017	645,013 8,778,031	1,046,795 7,086,539	776,505 10,102,632	1,683,660 7,497,933	947,224 2,314,269 115,376 4,573,762	1,232,205 2,241,557 990 1,379,440	2,769,251 1,065,971 1,512,504	1,775,214 250,574 3,070,846	4,251 1,812,110 175,903 465,735	801,062 398,796 1,607,261	887,403 671,864	4,251 9,337,066 11,649,891 116,366 46,929,564
Wahoo Whitefish, ocean Yellowtail Miscellaneous	2,314	1,227	465 102 26	278 493	1,906	544	36	277	171 2,532	8,635	21,737	295 9,147	914 295 48,950 26
Crustacean: Crab, rock										27			27
Total pounds	441,874	9,560,917	8,242,161	11,018,554	9,368,829	8,293,654	5,467,372	6,165,114	5,414,962	3,122,525	3,149,220	1,595,737	71,840,919
SHIPMENTS:*			-										
Tuna, albacore Tuna, bigeye	169,181	278,681	40,750	422,828	350,914 7,991	::::	2,199,640	1,325,561	77,531	408,152	::::	8,060	5,281,298 7,991
Tuna, bluefin Tuna, skipjack Tuna, skipjack, black	2,061,546	250,631	1,028,359	954,472	1,867,084		224,759	51,404 660,213	3,478	84,964	::::	861,288 11,265	51,404 7,996,794 11,265
Tuna, yellowfin		680,548	930,451	92,309	1,621,060	221,324	411,659	232,123	91,048	126,813	158,343	1,142,470	5,708,148
Total pounds	2,230,727	1,209,860	1,999,560	1,469,609	3,847,049	221,324	2,836,058	2,269,301	172,057	619,929	158,343	2,023,083	19,056,900
Grand total	2,873,490	10,906,558	10,401,060	12,644,164	13,405,704	8,678,494	8,771,366	8,757,718	5,974,215	4,991,891	3,538,884	3,794,299	94,737,843

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

TABLE 14—Cont'd.

TABLE 15
Value of Landings and Shipments of Commercial Fish Into California by Area, 1972

Species	Eureka	San Francisco	Monterey	Santa Barbara	Los Angeles	San Diego	Total
LANDINGS:							
Fish:							
Anchovy, northern		360,727 \$28,767	1,188,098 \$24,263	27,476,975 \$364,475	109,174,438 \$1,260,196	1,335 \$213	138,201,57 \$1,677,91
Barracuda, California				880 \$320	9,401	3,634 \$1,180	13,919 \$4,870
Blacksmith					\$3,370 75,880		75.88
Bonito, Pacific	650	5,478	47,821	2,637,149	\$2,655 17,651,636	1,969,893	\$2,65 22,312,62
Cabezon	\$85 476	\$535 979	\$3,442 2,251	\$224,286 2,089	\$1,628,816	\$198,353 58	\$2,055,51 5,85
Croaker, white	\$24	\$104 20,226	\$164 146,147	\$83 2,445	203,026	\$7 1,566	\$38 373,41
Dolphinfish		\$3,867	\$12,342	\$49 339	\$16,196 2,371	\$277 5,074	373,410 \$32,73 7,78
Flounder	289,191	311,238	50,569	\$136 8,442	\$464 35	\$1,761 235	\$2,36 659,71
	\$21,143	\$23,092	\$6,095	\$810	\$5	\$47	\$51,19
Flounder, arrowtooth	156,117 \$7,830	7,830 \$426					163,94 \$8,25
Flyingfish					128,889 \$19,903		128,88 \$19,90
Grenadiers	64,023 \$3,204						64,02 \$3,20
Hake, Pacific		9,290		875	360		10.52
Halfmoon		\$228		\$18	\$18 5,914	21,208	\$26 27,12
Halibut, California		107,162	49,556	89,054	\$1,453 40,244	\$5,683 23,189	\$7,13 309,24
Halibut, Pacific	\$23 213	\$36,281 22	\$20,885	\$45,613	\$19,718	\$13,069	\$135,58 23
Herring, Pacific	\$86	\$7 21,808	103,640				\$9 125,44
		\$13,826	\$13,588				\$27,41
Lingcod	\$215,980	393,695 \$36,007	273,199 \$34,115	515,599 \$52,348	1,083 \$211	\$33	\$27,41 3,246,18 \$338,69
Mackerel, jack	2,742 \$139	1,390 \$70	124,246 \$10,503	771,916 \$32,282	50,216,821 \$2,109,810	458 \$53	\$1,117,57 \$2,152,85
Mackerel, Pacific					\$2,109,810 105,466 \$6,006	2,612 \$507	\$2,152,85 108,07 \$6,51
Mudsucker, longjaw		1,287			2 \$2		1,28
Opaleye		\$3,860			15.082	308	\$3,86 15,39
Perch	69,004	35,353	5,228	14,599	\$3,905 125,341	\$68 23,388	\$3,9° 272,9°
Pompano, Pacific	\$13,335	\$12,217 702	\$1,072 4,830	\$4,544 2,345	\$6,967 146,975	\$6,163 80	\$44,29 154,93
•		\$766	\$4,620	\$112	\$36,492	\$20	\$42,01 46,47
Queenfish					46,473 \$955		\$95
Rockfish	6,537,176 \$455,700	1,621,710 \$132,657	3,677,582 \$330,693	3,291,223 \$291,015	671,787 \$140,789	621,774 \$139,435	16,421,2 \$1,490,2 8,395,7
Sablefish	\$455,700 5,403,642 \$430,938	1,194,904 \$84,983	1,784,733 \$132,501	10,947 \$738	1,206 \$281	282 \$23	8,395,7 \$649.4
Salmon	3,369,156 \$2,338,463 525,113	2.503.404	420,664 \$357,108	130,024 \$106,861		41 \$31	\$649,4 6,423,2 \$4,829,7
Sanddab	525,113	\$2,027,319 227,470	167,091	517	359	272 \$68	920,8
Sardine, Pacific	\$63,147	\$26,528	\$16,636	\$81	\$54 326,309	45,921	\$106,5 372,2
Sargo					\$48,941 866	\$11,334	\$60,2
Sculpin	l				\$151 5,195	126,821	132,0
				808	\$2,136 87,131	\$45,258 7,374	\$47,31 95,3
Sea bass, giant				\$199	\$26,526	\$1,991	\$28,7 777,3
Seabass, white		491 \$279	8,049 \$4,055	77,195 \$41,053	412,391 \$199,672	279,262 \$148,096	\$393,1
Shark	16,077 \$1,134	78,811 \$4,085	39,873 \$2,375	74,673 \$10,107	75,347 \$12,993	115,988 \$26,081	\$56,7
Sheephead, California	\$1,101			164 \$20	5,042 \$648	1,878 \$280	7,0
Skate	48,002	5,934	63,454	452	544		118,3
Smelt	\$1,178 306,746	\$153 27,435	\$1,470 18,367	\$35 41,750	\$80 119,801	199	\$2,9 514,2
Smelt whitehait	\$23,201 165,159	\$3,651 24,199	\$2,989	\$835	\$5,710	\$42	\$36,4 189,3
Sole, Dover	\$18,659	\$3,420	51,415	92,793			\$22,0° 22,081,6°
	\$1,504,302	3,551,693 \$291,894	\$3,284	\$8,116	\$92		\$1,807,68
Sole, English	1,454,458 \$168,849	929,122 \$106,353	310,025 \$33,940	307,007 \$33,023	1,353 \$205		3,001,96 \$342,3

TABLE 15 Value of Landings and Shipments of Commercial Fish Into California by Area, 1972

TABLE 15—Continued

Value of Landings and Shipments of Commercial Fish Into California by Area, 1972—Continued

Species	Eureka	San Francisco	Monterey	Santa Barbara	Los Angeles	San Diego	Total
Sole, petrale		1,158,436 \$189,433 202,141 \$25,164 161,015 \$20,712 913 \$130 245 \$147 3,398,786 \$1,089,891	338,011 \$58,543 52,115 \$5,413 7,185 \$675 \$675 4,452,673 \$1,424,923	531,181 \$90,917 73,120 \$9,074 28,737 24,024 \$1,479 34,320 \$19,132 3,928,400 \$1,258,159	563 \$106 49 \$8 	554 \$200 	3,575,245 \$599,367 1,661,610 \$200,961 389,152 \$50,252 30,057 \$3,381 265,882 \$159,637 \$1,001,214 \$5,884,054 191,476 \$41,751 24,877,721 \$5,311,655 35,944,884 \$7,215,892 1,09,110 \$44,884
Tuna, yellowfin Turbot	6,409	8,811		2,543	194,764,106 \$42,970,725 360	46,940,876 \$10,376,097	241,704,982 \$53,346,822 18,123
Wahoo Whitefish, ocean Yellowtail Miscellaneous	\$765 186	\$551	106	\$204 267 \$103 187	\$54 893 \$186 862 \$105 172,903 \$23,887 276	914 \$185 1,707 \$218 84,901 \$14,982 251	\$1,574 1,807 \$371 2,569 \$323 258,071 \$38,972 1,173
Miscellaneous (animal food)	\$13	\$1	\$10	\$4 370,053	\$89	\$89	\$206 370,053
Crustacean: Crab, dungeness Crab, rock Lobster, spiny Prawn, spot Shrimp, ocean	\$644,808 1,040	335,395 \$228,865 	287 \$161 199 \$10 20,970 \$22,707	\$7,401 20,815 \$14,702 191,094 \$20,349 87,308 \$131,109	625,645 \$91,877 173,713 \$273,289	25,552 \$4,033 137,196 \$217,621	\$7,401 1,563,006 \$888,536 843,530 \$116,269 398,217 \$622,019 20,970 \$22,707 2,489,870 \$373,530
Echinoderm: Sea urchin	,	20 \$2		72,351 \$3,945		4,086 \$504	76,457 \$4,451
Miscellaneous echinoderm	::::	1,260 \$381	::::				1,260 \$381
Mollusk: Abalone, black Abalone, green Abalone, pink Abalone, red Abalone, threaded Abalone, white Octopus Oyster, eastern Oyster, giant Pacific Squid Miscellaneous mollusk.	5,233 \$519 751,832 \$054,094	33,098 \$15,420 3,097 \$204 9,028 \$26,543 95,555 \$83,132 60 \$150	150 \$90 1,531 \$381 12,288,278 \$389,178 \$389,178 \$4 25,673,911	852,615 \$145,116 \$145,116 \$138,600 \$76,702 \$444,179 \$155 \$107 \$18 \$622 28,566 \$24,870 3,644,435 \$52,644,435	130,008 \$21,382 259,814 \$125,889 156,989 \$77,050 19,745 \$9,923 57,541 \$33,154 \$135,55 4,286,100 \$91,951 27 \$44	32,269 \$7,444 161,766 \$88,215 108,129 \$56,041 107,230 \$205 86,123 \$52,483 \$52,483 \$52,483 \$52,483 \$53,485 \$53,485 \$53,485 \$53,485 \$53,485 \$54,485 \$54,485 \$55,	1,014,892 \$173,942 424,628 \$215,559 403,709 \$209,793 1,104,45 \$552,405 1,868 \$552,405 1,868 \$552,405 1,868 \$552,405 1,868 \$552,405 9,028 \$25,643 876,127 \$762,006 20,159,312 \$582 \$1,886
Total pounds Total value	\$7,652,700	\$4,555,255	\$2,919,125	\$3,563,929	\$59,296,245	\$17,057,730	\$95,044,984

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TABLE 15 Value of Landings and Shipments of Commercial Fish Into California by Area, 1972

FISH BULLETIN 161

TABLE 15—Continued

Value of Landings and Shipments of Commercial Fish Into California by Area, 1972—Continued

Species	Eureka	San Francisco	Monterey	Santa Barbara	Los Angeles	San Diego	Total
SHIPMENTS:* Fish:							
Tuna, albacore					70,849,199	5,281,298	76,130,497
					\$29,860,981	\$2,137,082	\$31,998,063
Tuna, bigeye					183,220	7,991 \$1,798	191,211
Tuna, bluefin					\$49,907 6,045,303	51,798	\$51,705 6,096,707
runa, ordennizzzzzzzz					\$1,710,836	\$10,846	\$1,721,682
Tuna, skipjack					79,826,760	7,996,794	87,823,554
					\$19,666,057	\$1,969,227	\$21,635,284
Tuna, skipjack, black					423,139	11,265	434,404
T					\$37,060 31,073,419	\$845 5,708,148	\$37,905 36,781,567
Tuna, yellowfin					\$10,229,403	\$1,800,635	\$12,030,038
					\$10,220,100	\$1,000,000	\$12,000,000
Total pounds Total value					188,401,040 \$61,554,244	19,056,900 \$5,920,433	207,457,940 \$67,474,677
Total value					\$01,001,211	\$0,020,100	\$01,111,011
GRAND TOTAL POUNDS GRAND TOTAL VALUE	47,112,790 \$7,652,700	17,070,709 \$4,555,255	25,673,911 \$2,919,125	46,518,304 \$3,563,929	614,585,598 \$120,850,489	94,737,843 \$22,978,163	845,699,155 \$162,519,661
		I		1			1

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

TABLE 15

Value of Landings and Shipments of Commercial Fish Into California by Area, 1972

TABLE 16 Value of Landings by Port, Eureka Area, 1972

_	Pounds	Value
Eureka Dover sole	12,200,654	\$998,297
Salmon	1,136,028	801,096
Giant Pacific oyster	751,832	654,094
Dungeness crab Rockfish	462,009 2,959,965	246,917 198,890
Sablefish	2,102,161	
Albacore	512,255	167,646 163,065
Petrale sole	769,160	129,396 96,297
Rex sole	796,511	96,297
English sole	728,427	84,561
Lingcod	605,097	63,369 46,625
Sanddab	387,721	46,625
Ocean shrimp	129,112	19,367
Smelt Whitebait smelt	259,046 92,258	19,026 10,423
Perch	42,990	8,311
Flounder	78,763	5.758
Sand sole	38,131	4,885
Arrowtooth flounder	87,681	4,885 4,398
Grenadiers	64,023	3,204
All other species	25,916	1,307
Port totals	24,229,740	\$3,726,935
Fort Bragg Salmon	1,580,623	\$1,103,742
Dover sole	2,865,904	\$1,103,742 234,498
Sablefish	2,382,721	190.021
Rockfish	1,758,480	125,438 80,574
Lingcod	769,388	80,574
Petrale sole	401,867	67,606
Dungeness crab	96,453	51,548
Albacore Rex sole	127,083 217,700	40,454 26,320
English sole	182,033	21,132
Ocean shrimp	95,852	14,378
Whitebait smelt	36,744	4,151
Smelt	31,107	2,743
Arrowtooth flounder	50,284 8,821	2,522 1,061
SanddabAll other species	27,273	1,890
Port totals	10,632,333	\$1,968,078
Crescent City		
Salmon	503,128	\$338,155 306,691
Ocean shrimp	2,049,004	271.507
Dover sole	2,044,584 3,318,218 473,767	253,201
Rockfish	1,807,593	253,201 130,528
Albacore	294,184	93,647
Sablefish	918,248	73,230
Lingcod	683,128	71,540
Petrale sole English sole	375,473 543,998	63,166 63,153
Rex soleSand sole	319,974 153,984	38,685 19,728
Sanddab	128,571	19,728 15,461
Flounder	208,273	15,227
Perch	25,417	4,949
Whitebait smeltAll other species	36,157 68,989	4,085 3,383
Port totals	11,903,686	\$1,766,336
Trinidad		
Dungeness crab	174,280	\$93,142
Salmon	76,231 2,534	46,452 802
All other species	2,334	

TABLE 16 Value of Landings by Port, Eureka Area, 1972

FISH BULLETIN 161

TABLE 16—Continued Value of Landings by Port, Eureka Area, 1972—Continued

	Pounds	Value
Albion Salmon All other species	43,997 16,351	\$30,496 1,377
Port totals	60,348	\$31,873
All other ports SalmonAll other species	29,149 4,489	\$18,522 560
Totals	33,638	\$19,082
EUREKA AREA TOTALS	47,112,790	\$7,652,700

TABLE 16 Value of Landings by Port, Eureka Area, 1972

MARINE LANDINGS 1972

TABLE 17 Value of Landings by Port, San Francisco Area, 1972

	Pounds	Value
Sodega Bay Salmon Albacore Dungeness crab Dover sole Society S	1,308,355 207,399 86,964 665,864 489,393	\$1,051,798 66,507 59,342 54,724 43,244
English sole. Ocean shrimp. Petrale sole. Sablefish. Rex sole.	360,263 213,452 145,693 305,878 89,075	41,238 32,062 23,824 21,754 11,089
Lingcod. Flounder Sanddab. Smelt. Whitebait smelt. Sand sole.	78,571 77,140 31,165 24,098 14,929 10,356	7,186 5,723 3,635 3,094 2,110 1,332
All other species	21,368 4,129,963	2,450 \$1,431,112
San Francisco Albacore Dover sole. Petrale sole Salmon Dungeness crab.	1,335,296 2,081,512 982,308 142,285 149,206	\$428,190 171,068 160,632 116,208 101,814
Rockfish. English sole. Sablefish Lingeod. Sanddab.	1,009,963 566,066 780,000 299,966 195,325	81,338 64,795 55,474 27,434 22,779
Sand sole. California halibut. Flounder. Rex sole. Perch.	149,714 51,202 215,082 110,208 6,987	19,258 17,335 15,958 13,720 2,415
Shark	32,673 6,870 31,126	1,662 1,032 2,731
Port totals	8,145,789	\$1,303,843
Sausalito Albacore Salmon Dover sole Northern anchovy Pacific herring	1,082,822 270,210 364,656 360,727 9,700	\$347,229 218,612 29,969 28,767 6,150
Dungeness crab	8,148 30,088 63,266 42,431 9,822	5,560 4,920 4,500 2,453 993
Port totals	2,241,870	\$649,153
Princeton Salmon Albacore Dungeness crab California halibut Red abalone	458,820 199,427 55,805 53,296 33,098	\$377,512 63,950 38,080 18,044 15,420
Rockfish. Shark Whitebait smelt. Flounder All other species.	28,133 42,359 9,270 17,411 12,543	2,538 2,218 1,310 1,292 1,408
Port totals	910,162	\$521,772

TABLE 17 Value of Landings by Port, San Francisco Area, 1972

TABLE 17—Continued

Value of Landings by Port, San Francisco Area, 1972—Continued

	Pounds	Value
Dakland		
Albacore	572,430	\$183,562
Salmon	86,301	69,148
Dover sole	439,661	36,133
Sablefish	45,610	3,244
Rockfish	47,098	2,632
Dungeness crab.	2,063	1,408
All other species	7,181	1,098
Port totals	1,200,344	\$297,225
oint Reyes		
Salmon	182,493	\$148,325
Giant Pacific oyster	74,014	64,392
Dungeness crab All other species	17,723	12,094
All other species	3,220	595
Port totals	277,450	\$225,406
erkelev		
Salmon	52,589	\$43,766
Dungeness crab.	14,870	10,147
All other species	5,725	1,505
Port totals	73,184	\$55,418
omales Bay		
Eastern oyster	9,028	\$26,543
Giant Pacific oyster	21,541	18,740
Pacific herring	12,000	7,608
All other species	4,478	1,094
Port totals	47,047	\$53,985
ichmond		
Perch	16,373	\$5,684
White croaker	16,193	3,095
Salmon	2,106	1,748
All other species	1,613	153
Port totals	36,285	\$10,680
II other ports		
Longiaw mudsucker	1,287	\$3,860
Perch	5,577	1,927
All other species	1,751	874
Totals	8,615	\$6,661
AN FRANCISCO AREA TOTALS	17,070,709	\$4,555,255

TABLE 17 Value of Landings by Port, San Francisco Area, 1972

TABLE 18 Value of Landings by Port, Monterey Area, 1972

	Pounds	Value
Monterey		
Albacore	2,041,166	\$653,204
Rockfish	3,572,445	218 865
Squid	9,724,090	318,865 308,722
oquiu	3,724,030	300,722
Sablefish	1,672,717	124,185
Petrale sole	302,083	52,320
Lingcod	236,341	29,513
English sole	222,225	24,328
Spot prawn	20,970	22,707
Salmon	16,443	14,027
White croaker	129,787	10,960
To A month and	110 740	0.000
Jack mackerel	116,746	9,869
Sanddab	91,423	9,102
California halibut	17,936	7,559
Rex sole	46,300	4,809
Northern anchovy	112,890	2,305
Dover sole	35,945	2,296
Shark	25,636	1,461
Pacific bonito	18,715	1,347
Skate	43,405	1,006
All other annies	22,123	1,000
All other species	22,123	4,095
Port totals	18,469,386	\$1,602,680
Moss Landing		
Albacore	2,379,734	\$761,551
Salmon	380,417	322,604
Squid	2,534,188	80,456
Northern anchovy.	1,075,208	21,958
Pacific herring	102,332	13,416
English sole	87,736	9,605
Rockfish	76,506	8,787
	70,300	
Sablefish	112,016	8,316
Sanddab	75,331	7,500
Petrale sole	35,928	6,223
Lingcod	27,350	3,415 2,294
Smelt	14,007	2,294
Pacific bonito.	26,917	1,937
Flounder	10,713	1,291
All other species.	62,859	4,892
Port totals.	7,001,242	\$1,254,245
Salmon	23,804	\$20,477
California halibut	30,296	12,768
Camorina namout	31,773	10,168
Albacore		
White seabass	7,937	3,999
Flounder	33,075	3,987
Pacific pompano	4,052	3,876
Rockfish	28,631	3,041
Lingcod	9,508	1,187
All other species	34,207	2,697
Port totals	203,283	\$62,200

TABLE 18 Value of Landings by Port, Monterey Area, 1972

TABLE 19 Value of Landings by Port, Santa Barbara Area, 1972

	Pounds	Value
Иогго Вау		
Albacore	3,214,077 1,848,351	\$1,029,381
Rockfish	1,848,351	163,061 112,799
Red abalone	219,687	112,799
Petrale sole	287,245	49,165
Salmon	219,687 287,245 51,264	42,690
Lingcod	385,699	39,159
Lingcod Giant Pacific oyster	28,586	24,870
Dungeness crab	16,225	11,460 6,869
English sole	63,860	6,869
Dungeness crab. English sole. California halibut.	28,586 16,225 63,860 10,751	5,507
White seabass	10,084 69,861 26,655 31,708	5,363 3,809 2,838 2,773
Sea urchin	69,861	3,809
Rock crab	26,655	2,838
Rock crab	31,708	2,773
Perch	8,813	2,733
Rex sole	21,126	2,622
All other species	39,609	4,723
Port totals	6,333,601	\$1,509,822
Santa Barbara Red abalone	640,543	\$328,890
Black abalone	823 505	140.162
Bookfish	1.145,397	98,951
Spiny lobster	52,852	79,367
Spiny lobster Pink abalone	1,145,397 52,852 135,509	98,951 79,367 74,991
White seabass	58,881	31,313
Pacific honito	322,332	27.414
Petrale sole	107,725	18,438
Petrale sole California halibut	34,270	17,553
Swordfish	322,332 107,725 34,270 30,081	18,438 17,553 16,769
English sole	130,749	14,064
Rock crab.	122,272	13.021
Rev sole	46,879	5,817
Salmon	6,165	5,817 5,299
Salmon	6,165 248,370	4,967
Lingcod	48,451	4,919
Shark	35,243	4,777
Dover sole	44,905	3,928 2,175
Albacore	6,791 3,228	2,175
Green abalone	3,228	1,505
All other species	4,622	1,132
Port totals	4,048,770	\$895,452
Post Hussama		-
Port Hueneme Northern anchovy	27,476,975	\$364,475
Desife besite	2,258,295	192.066
Squid	3,644,435	52,625 32,227 10,743
Jack mackerel	770,600	32,227
Spiny lobster	7,154	10,743
California halibut	9,017	4,618
Shark	16.065	2,249
Black abalone	11,600	1.974
Red abalone	3,491	1,792 1,738
Swordfish	3,118	1,738
Pink abalone	2,347	1,299
White seahass	2,409	1,281
All other species	55,850	2,180
Port totals	34,261,356	\$669,267
I Ut v Widis	01,201,000	
Avila	608 387	\$223,674
AlbacoreSalmon	698,387 72,595	58.872
Ped abalana	78,793	40,457 26,788 23,301
	10,100	20,101
Rockfish Petrale sole	277,169 136,134	26,788

TABLE 19 Value of Landings by Port, Santa Barbara Area, 1972

TABLE 19—Continued Value of Landings by Port, Santa Barbara Area, 1972—Continued

	Pounds	Value
Avila—Continued		
English sole	109.280	11,755
Lingcod	81,397	8,264
California halibut	10,039	5,142
Sand sole	28,697	4,018
		3,765
Rock crab	35,359	3,765
Dungeness crab	4,590	3,242
Miscellaneous (animal food)	120,298	2,406
Pacific bonito	25,250	2,147
White seabass	4.002	2,128
Perch	5,505	1,723
	-,	
Dover sole	16,180	1,415
Miscellaneous sole	12,878	1,339
All other species	23.075	2,597
Port totals	1,739,628	\$423,033
Dxnard		1
Spiny lobster	25,892	\$38,882
California halibut	24.965	12,787
Albacore	8,183	2,621
Rockfish	17,374	1,905
Pacific bonito	20,275	1,724
		1,682
Black abalone	9,885	
All other species	18,732	4,064
Port totals	125,306	\$63,665
/entura		
Spiny lobster	804	\$1,207
All other species	7,101	1,285
•		
Port totals	7,905	\$2,492
All other ports		
All species	1,738	\$198
Totals	1,738	\$198
	40 510 004	£2 E62 020
SANTA BARBARA AREA TOTALS	46,518,304	\$3,563,929

TABLE 19 Value of Landings by Port, Santa Barbara Area, 1972

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TABLE 20 Value of Landings and Shipments by Port, Los Angeles Area, 1972

	Pounds	Value
erminal Island		
Landings		
Yellowfin tuna	194,545,756 24,289,458	\$42,922,551
Skipjack tuna	24,289,458	4,859,479 3,221,888
Bluefin tuna	14,971,867	3,221,888
Jack mackerelAlbacore	44,562,634 4,682,619	1,872,255
Albacore	4,082,019	1,597,007
Pacific bonito	14,565,776	1,344,065
Northern anchovy	105,291,561	1,215,376
Black skipjack tuna	900,681	69,096
Bigeye tuna Sardine	187,225	40,812
Sardine	35,648	5,347
Perch	107,825	4,363
Pacific mackerel	71,795	4,089
All other species	1,100	24
Total landings	404,213,945	\$57,156,352
Shipments*		
Albacore	70,849,199	\$29,860,981
Skipjack tuna	79,789,260	19,656,819
Yellowfin tuna Bluefin tuna	31,073,419	19,656,819 10,229,403 1,710,836 49,907
Bigeye tuna	6,045,303 183,220	40 007
Black skipjack tuna.	423,139	37,060
Total shipments	188,363,540	\$61,545,006
Port totals	592,577,485	\$118,701,358
	002,011,100	\$110,101,00 0
n Pedro Landings		
Pacific honito	2.656.247	\$245,107
White seabass	2,656,247 389,220	188,453
Jack mackerel	3,821,160	188,453 160,542
Sniny lobster	99,378	156,343
Rockfish	618,535	129,303
Green abalone	256,806	124,412
Bluefin tuna	568,534	122,346
Squid	4,255,000	91,927
Pink abalone	155,284	76,217
Rock crab	503,827	73,989
Swordfish	106.468	63,413
Vellowfin tuna	106,468 218,350	48,174
Pacific sardine	290,661	43,594
Pacific nompano	146,975	36,492
White abalone	57,541	33,154
Giant sea bass	87,131	26,526
Vellowtail	172,087	23,775 20,272
Albacore	59,440	20,272
Black abalone	121,433 128,106	19,972
Flyingfish	128,106	19,782
California halibut	40,069	19,632
White croaker	202,588	16 161
Northern anchovy	1.174.579	13,558 12,316
Shark	71,957 19,745	12,316
Red abalone	19,745	9,823
Black skipjack tuna	92,063	7,063
Smalt	96,521	4,916
Opaleye	15,082	3,905 3,278
Opaleye. California barracuda. Seulpin	9,144 4,871	3,278 2,002
осшри	4,071	,
Pacific mackerel	33,471	1,906
Perch	13,172	1,877
Halfmoon	5,914 5,317	1,453 1,064
Skipjack tuna	5,317	1,064
All other species	71,061	3,845
Port totals	16,567,737	\$1,806,592
I UL & Middle	10,001,101	4.10001000

TABLE 20 Value of Landings and Shipments by Port, Los Angeles Area, 1972

TABLE 20—Continued
Value of Landings and Shipments by Port, Los Angeles Area, 1972—Continued

	Pounds	Value
Vilmington		
Landings		
Jack mackerel	1,832,938 423,662 2,515,914	\$77,009
Pacific bonito	423,662	39,094
Northern anchovy	2,515,914	29,041
Blacksmith	67,880 930	2,375
Spiny lobster Black abalone	8,575	1,463 1,410
All other species	27,008	1,650
Total landings	4,876,907	\$152,042
Shipments*		
Skipjack tuna	37,500	\$9,238
Total shipments	37,500	\$9,238
Port totals	4,914,407	\$161,280
Dana Point		
Landings Spiny Johnton	35,541	\$55,914
Spiny lobsterRockfish	6 553	1 544
All other species	6,553 2,787	1,544 736
Port totals	44,881	\$58,194
Redondo Beach		
Landings	1	
Spiny lobster	23,133	\$36,393
Rock crab	119,404	17,535
White seabass	3,618	1,752
Rockfish All other species	8,474 2,767	1,750
All other species	2,767	665
Port totals	157,396	\$58,095
Newport Beach		
Landings Spiny lobster	7 550	\$11,878
White seabass	7,550 18,042	8 736
Albacore	24.519	8,736 8,362
Swordfish	24,519 13,702	8,161
Rockfish	25,337	6,045
All other species	11,066	1,873
Port totals	100,216	\$45,055
ong Beach		
Landings		***
Spiny lobster Northern anchovy	2,455	\$3,862
Northern anchovy	192,384 585	2,221 329
All other species		
Port totals	195,424	\$6,412
falibu Landings		
Spiny lobster	1,457	\$2,292
All other species.	5,845	1,005
Port totals	7,302	\$3,297
Avalon		
Landings		
All species.	4,780	\$2,688
Port totals	4,780	\$2,688
Santa Monica		
Landings		
Rockfish	7,598	\$1,257
All other species	2,983	1,163
Post totals	10,581	\$2,420
Port totals	10,001	₹4,14 0

TABLE 20 Value of Landings and Shipments by Port, Los Angeles Area, 1972

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TABLE 20—Continued Value of Landings and Shipments by Port, Los Angeles Area, 1972—Continued

	Pounds	Value
Playa Del Rey Landings		
Landings All species	2,996	\$1,333
Port totals	2,996	\$1,333
All other ports Spiny lobster	2,393	\$3,765
Totals	2,393	\$3,765
LOS ANGELES AREA TOTALS	614,585,598	\$120,850,489

[•] Beginning in 1965 only tuna shipments are recorded.

TABLE 20

Value of Landings and Shipments by Port, Los Angeles Area, 1972

TABLE 21

Value of Landings and Shipments by Port, San Diego Area, 1972

	Pounds	Value
San Diego		
Landings		
Yellowfin tuna	46,940,841	\$10,376,089
Skipjack tuna	11,650,109	2,355,349
Bluefin tuna	9,337,320	1,967,421
Albacore	3,511,585	1,185,051
Pacific bonito	1,940,906	195,434
Spiny lobster	114 602	181.925
White seabass	114,692 265,103 522,844 161,224	181,925 140,587 117,188
Rockfish	522 844	117 188
Green abalone	161 224	87,909
Swordfish	108,131	66,911
Pink abalone	108,121	56,037
White abalone	86,123	52,483
Red abalone	107,103	52,189
Sculpin	126,667	45,203
Shark	87,100	19,315
YellowtailCalifornia halibut	81,350 20,821	14,355 11,734 11,279 8,727
Pacific sardine	45,700	11.279
Black skipjack tuna	116.366	8,727
Black abalone	116,366 32,269	7,444
Perch	22,467	5,922
Rock crab	19,053	3,007
Halfmoon	8,740	2,342
Giant sea bass	7,198	1,943
Dolphinfish	4,823	1,674
California barracuda	3,126	1,015
All other species	21,953	4,095
Total landings.	75,451,735	\$16,972,628
Shipments*		
Albacore	5,281,298 7,996,794 5,708,148	\$2,137,082
Skipjack tuna	7,996,794	1,969,227
Yellowfin tuna	5.708.148	1,969,227 1,800,635
Bluefin tuna	51,404	10,846
Bigeve tuna	7,991	1,798
Black skipjack	11,265	845
Total shipments	19,056,900	\$5,920,433
Port totals	94,508,635	\$22,893,061
		1,,
Oceanside Landings		
Spiny lobster	17,666	\$28,022
Rockfish	95,139	21,395
White seabass	13,963	7,405 6,751
Shark	28,819	6,751
Halfmoon	12,468	3,341
Pacific bonito	28,987	2,919
Albacore	5,058	1,707
California halibut	2,345	1,322
All other species	15,027	3,419
Port totals	219,472	\$76,281
	219,472	0,201
Il other ports		
Landings	4 929	\$7,674
Spiny lobsterAll other species	4,838 4,898	1,147
-	9,736	\$8,821
Totals		
BAN DIEGO AREA TOTALS	94,737,843	\$22,978,163

[•] Beginning in 1965 only tuna shipments are recorded.

TABLE 21

Value of Landings and Shipments by Port, San Diego Area, 1972

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

1303-1317											
Species	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	
Barracuda, California. Bass, kelp and sand. Bouito, Paeific. Cabezon. Halibut, California.	1,219,344 775,719 9,726	303,070 1,103,394 1,298,804 6,491 141,465	443,304 1,230,313 806,322 7,575 118,213	892,697 1,278,939 644,415 10,293 88,726	470,480 1,003,914 349,952 5,419 63,582	372,246 1,317,963 1,102,936 4,349 54,663	358,518 1,246,175 1,130,241 4,583 27,634	373,801 922,260 651,898 6,372 29,968	50,474 948,121 152,795 4,611 10,598	38,243 842,681 418,984 11,452 8,140	FISH
Lingcod. Mackerel, jack. Mackerel, Pacific. Rockfish. Salmon.	0.342	25,263 6,577 101,219 966,801 92,021	33,260 25,619 151,896 1,347,430 51,677	44,676 19,027 205,090 1,688,718 70,151	43,559 16,236 108,366 1,894,057 84,946	42,449 13,588 78,933 2,102,859 127,584	32,693 11,272 120,036 1,978,981 111,389	61,833 15,725 129,770 2,663,882 98,301	63,239 10,611 224,223 2,222,943 130,812	103,965 5,913 245,882 3,054,959 151,595	BULLETIN
Sculpin. Scabass, white Scabass, white Sheephead, California. Tuna, albacore. Tuna, bluefin.		73,844 14,901 26,822 112,358 693	71,888 9,775 41,651 99,771 92	69,851 3,972 52,967 74,680 1,998	63,280 3,385 42,676 96,497 3,166	59,863 4,138 33,075 129,710 1,231	63,011 4,056 49,626 48,887 1,470	82,522 4,359 39,464 112,106 1,833	84,913 5,265 38,300 160,361 749	65,886 3,858 33,541 86,890 1,470	и 161
Whitefish, ocean Yellowtail All others	6,231 45,705 142,630	6,949 39,104 114,400	13,810 18,367 163,595	15,587 80,163 166,470	18,184 31,392 145,073	22,155 58,049 205,410	36,474 79,202 421,327	40,990 97,376 298,375	29,800 44,608 421,729	24,632 59,031 305,283	
Total number of fish	4,278,502	4,434,176	4,634,558	5,408,420	4,444,164	5,731,201	5,725,575	5,630,835	4,604,152	5,462,405	
Number of anglers	643,155	695,445	688,103	857,000	780,102	849,654	802,811	873,327	728,126	792,618	

See Fish Bulletin 121 for historical records 1936-1961.

TABLE 22

Statewide Commercial Partyboat Catch by Species (Not including anchored barges) 1963–1972

TABLE 23 Inshore Bait Landings by Area Pounds and Value 1972

Species	Sacramento	San Francisco and Monterey	Los Angeles	San Diego	Statewide*
Clam Freshwater	640.527				640.527
r resnwater	\$67,430				\$67,430
Gaper	\$01,100				471
Caper					\$118
Jacknife			45,551	12,653	58,204
Vacamic			\$30,580	\$7,612	\$38,192
Purple			1.423	14,316	15,739
- u.p.o			\$810	\$6,919	\$7,729
Unclassified					90
Choladoliio					\$52
Crab					
Sand		-	6,786	28	6,814
			\$20,770	\$175	\$20,945
Shore			25		26
			\$5		\$7
Crayfish					3,979
					\$1,544
Killifish					11
					\$32
Mudsucker, longjaw				223	6,511
				\$88	\$5,830
Mussel (bay and rock)			101,114	14,428	115,799
	-===		\$17,121	\$2,024	\$19,171
Sculpin, staghorn	702	185			887
	\$2,297	\$695			\$2,992
Shrimp	74 400	4 005			70.007
Bay	71,402	1,665			73,067
. T	\$113,433	\$2,423			\$115,856
Brine					300,065
CI .			15.070	F 000	\$174,934
Ghost			15,672 \$35,718	5,882 \$11,222	21,554 \$46,940
n. I			1.103	,	1,103
Red			\$1,103		\$1,103
			\$1,103		\$1,103
Total	712,631	1.850	171,674	47.530	1,244,847
10tai	\$183,160	\$3,118	\$106,107	\$28,040	\$502,875

ullet 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 1972

TABLE 24

Recorded Catch of Live Bait for Saltwater Sportfishing 1968-1972

	Thousands of pounds*								
Species	1968	1969	1970	1971	1972				
Anchovy. Mackerel, jack. Mackerel, Pacific. Sardine, adult Sardine, juvenile Squid. Miscellaneous†	14,353 158 	10,627 103 8 34 9	12,210 6 4	12,774 9 1 T 10	11,700 5 				
Total pounds	14,648	10,781	12,220	12,794	11,721				
Number of Vessels‡	19	10	11	14	12				

TABLE 24

Recorded Catch of Live Bait for Saltwater Sportfishing 1968–1972

^{*} 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 25
California Ocean Recreational Salmon Landings and Success¹ by Fishery, Port,
Month and Species, in Numbers of Fish—1972

month and openes, in running of Fish—1572																		
		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	2	:	6 185	11 541	0.4	55 318	116 2,928	0.4 0.6
Eureka Partyboat Skiff	0	0	:	2	3	:	2	3	٠:	119	150	:	303 966	379 3,258	0.5	620 3,083	774 11,418	1.1
Fort Bragg Partyboat Skiff	0	0	:	4	4	:	26	27	:	260	260	:	437 597	437 585	0.4	1,113 2,082	1,659 4,202	1.2 0.7
ian Francisco Partyboat Skiff	21,312 10,425	0	2.1 1.5	21,086 8,525	123 0	1.5 1.4	8,258 6,065	956 435	0.9 1.0	5,800 1,813	5,228* 812	1.8 1.2	15,340 2,394	469 181	1.5 0.6	19,274 2,917	61 33	1.5 1.1
Monterey PartyboatSkiff	221 1,225	0	0.2	108 1,200	8 0	0.2	152 1,367	11 8	ь 0.6	241 866	17 809	0.3	190 1,107	13 768	ь 0.5	98 1,755	7 95	0.9
tatewide Partyboat Skiff	21,533 11,650	0	2.1 0.9	21,200 9,725	138	1.5 0.8	8,438 7,432	997 443	0.9	6,420 2,679	5,657* 1,621	1.8 0.6	16,276 5,249	1,309 5,333	1.5 0.5	21,160 10,155	2,617 18,676	1.4

TABLE 25 California Ocean Recreational Salmon Landings and Success by Fishery, Port, Month and Species, in Numbers of Fish—1972

	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	33 568	74 799	0.4 0.3	3 6	1 26	0.2 0.1	0	0	:	0	0	:	0	0	:	97 1,077	204 4,294	0.4
Eureka PartyboatSkiff	142 1,437	627 4,701	0.8 0.6	26 179	116 220	0.4	3	14		0	1	:	0	0	:	1,217 5,665	2,067 19,597	1.0 0.7
Fort Bragg Partyboat Skiff	168 169	221 736	0.4 0.3	8 10	11 10	0.1	0	0	:	0	0	:	0	0	:	2,016 2,858	2,619 5,533	1.0 0.6
San Francisco Partyboat Skiff	19,100 3,929	28 21	1.7 1.0	17,361 2,838	0 12	1.6 1.1	7,439 1,600	18 0	0.9 1.2	515 512	0 13	0.4 1.0	8	0	:	135,485 41,018	6,883* 1,507	1.5
Monterey Partyboat Skiff	6 998	1 27	ь 0.6	11 1,043	2 57	ь 0.8	1 400	1 25	0.2	0 100	0	0.2	0	0	:	1,028 10,061	60 1,789	0.4
Statewide Partyboat Skiff	19,449 7,101	951 6,284	1.5	17,409 4,076	130 325	1.6 0.8	7,443 2,000	33 25	0.9	515 612	1 13	0.4 0.6	0	0	:	139,843 60,679	11,833* 32,720	1.5

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

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TABLE 25—Cont'd.

TABLE 26	
California Commercial Troll Salmon Landings by Port-Area, Month and Species,	

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in Pounds 1 and Numbers—1972														
	April		May		June		July		August		September		Season	
	Pounds	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds	Numbers	Pounds	Numbers
Crescent City King Silver Pink	0 0	0 0	159,816 14,816 0	18,777 2,969 0	132,050 60,682 0	14,994 10,752 0	35,285 75,262 0	3,775 11,461 0	13,037 10,887 0	1,266 1,315 0	1,293 0 0	259 0 0	341,481 161,647 0	39,071 26,497 0
Eureka King Silver Pink	114 0 0	20 0 0	487,970 12,647 22	54,398 2,568 7	303,145 130,759 34	36,135 23,106 9	150,587 64,993 0	15,407 8,966 0	17,109 36,588 0	2,123 4,585 0	3,431 2,672 0	281 330 0	962,356 247,659 56	108,364 39,555 16
Fort Bragg King Silver Pink	0 0	0 0	274,036 23,100 0	30,145 4,394 0	316,077 87,271 14	28,839 14,483 4	510,277 263,006 0	43,572 34,901 0	121,524 37,372 0	10,808 4,563 0	20,119 3,161 0	1,608 424 0	1,242,033 413,910 14	114,972 58,765 4
San Francisco King Silver Pink	125 0 0	20 0 0	545,459 19,452 0	49,156 3,545 0	595,413 111,711 85	46,994 17,154 23	446,139 56,876 0	36,026 7,342 0	555,227 24,774 0	46,236 2,927 0	146,824 1,124 0	11,126 142 0	2,289,187 213,937 85	189,558 31,110 23
Monterey King Silver Pink	2,805 0 0	281 0 0	270,091 3,950 0	19,722 767 0	160,346 5,098 0	12,440 801 0	39,312 3,819 0	2,956 465 0	24,799 286 0	1,844 29 0	40,369 49 0	2,995 5 0	537,722 13,202 0	40,238 2,067 0
Statewide King Silver	3,044 0	321 0	1,737,372 73,965	172,198 14,243	1,507,031 395,521	139,402 66,296	1,181,600 463,956	101,736 63,135	731,696 109,907	62,277 13,419	212,036 7,006	16,269 901	5,372,779 1,050,355	492,203 157,994

 ${\it TABLE~26} \\ {\it California~Commercial~Troll~Salmon~Landings~by~Port-Area,~Month~and~Species,~in~Pounds}^{\it I}~and~Numbers—1972}$

APPENDIX I
Monthly Landings From Inland Waters During 1972

Species	January	February	March	April	May	June	July	August	September	October	November	December	Totals
LANDINGS Fish Blackfish, Sacramento	25,783 33,015	29,070 21,104	74,210 20,955	46,800 17,500 1,500	58,700 12,700	2,091 167	::::	:::	:::	22,800 4,700	41,133 46,390	36,825 40,175	337,412 196,706 1,500
Crustacean Crayfish	106	58	101	110	42,646	12,186	590	6,330	7,975	553	669	1,484	72,808
Mollusk Snail, freshwater											85	327	412
Amphibla Frog	625	1,802	2,182	690	1,219	1,025	1,690	128	598	1,228	213	50	11,450
Total pounds	59,529	52,034	97,448	66,600	115,265	15,469	2,280	6,458	8,573	29,281	88,490	78,861	620,288

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APPENDIX I Monthly Landings From Inland Waters During 1972

APPENDIX II Value of Landings From Inland Waters by County During 1972

County and species	Pounds	Value	County and species	Pounds	Value
Alameda			San Diego		
Crayfish	2,417	\$1,984	Carp	475	\$71
Lamprey	1,500	450			
Frog	6,410	4,048	County totals	475	\$71
County totals	10,327	\$6,482	San Joaquin		
			Carp Crayfish	60	\$5
Contra Costa	000 005	****	Crayhsh	1,339	413
Blackfish, Sacramento	330,095	\$66,019	Frog Snail, freshwater	224 327	144 53
Carp	190,415	15,449	Snail, ireshwater	321	
County totals	520,510	\$81,468	County totals	1,950	\$615
_ake			Solano		
Blackfish, Sacramento	3,181	\$636	Crayfish	3.113	\$959
Carp	3,949	320			
			County totals	3,113	\$959
County totals	7,130	\$956	Stanislaus		
Madera		1		1.807	\$147
Crayfish	20	\$9	Carp Blackfish, Sacramento	4,136	827
Frog		963	Diackiisii, Gacramento	4,100	021
rrog	1,202	300	County totals	5,943	\$974
County totals	1.302	\$972	County towns	0,070	4011
county total	1,002	40.12	Yuba		
Merced			Frog	813	\$524
Crayfish		\$309	-		
Frog		298	County totals	813	\$524
Snail, freshwater	85	17	Grand total	620,288	****
County totals	1,143	\$624	Grand total	620,288	\$115,255
County totals	1,110	4021	Recap		
Sacramento			Blackfish, Sacramento	337,412	\$67,482
Crayfish	65,258	\$20,111	Carp	196,706	15,992
Frog	2,324	1,499	Lamprey	1,500	450
	,		Frog	11,450	7,476
County totals	67,582	\$21,610	Crayfish	72,808	23,785
			Snail, freshwater	412	70
			Grand total	620,288	\$115,255

APPENDIX II Value of Landings From Inland Waters by County During 1972

APPENDIX III KELP HARVEST IN TONS

Year	Open Beds	Leased Beds	Total Tons
1916	134,537,00		134,537.00
1917	394.974.00		394,974.00
1918	395,098,00		395.098.00
1919	16,673.00		16,673.00
1920	25,464.00		25,464.00
•	20,101.00		20,101.00
1931		260.00	260.00
1932	301.61	10,013,08	10,314.69
1933	52.75	21,568.65	21,621,40
1934	1.827.21	14,052.57	15,879.78
1935	-,	30,601.83	30,601.83
1936	14,336.70	34,980.34	49,317.04
1937	9,612.70	34,340.65	43,953.35
1938	18.284.06	29,413,25	47,697.31
1939	25,546.30	31,189,70	56,736.00
1940	33,322.20	25,682,20	59,004.40
	00,044.40		39,004.40
1941	36,103.00	19,614.00	55,717.00
1942	44.880.11	17,017.65	61.897.76
1943	19,547.44	28,410,86	47,958.30
1944	22,710.50	30,319.40	53,029.90
1945	37,541.30	21,639.90	59,181.20
1946	60,384.90	30,683,60	91,068.50
1947	46,028.80	28,207.80	74.236.60
1948	50,966.10	27,675.00	78,641.10
1949	56,076,00	27,270,00	83,346.00
1950	49,955.00	50,647.00	100,602.00
1951	30,318.00	84,442,00	114,760.00
1952	37,906.00	72,252,50	110,158.50
1953	37,172.50	89,476.50	126,649.00
1954	40,269,00	65,946.50	106,215.50
1955	38.992.00	85.071.00	124,063.00
1070	05 450 50	00.000.00	117.015.50
1956	35,476.50	82,339.00 61,396.50	117,815.50 94,207.25
1957	32,810.75 41,105.75	61,396.50 72,955.75	94,207.25 114,061.50
1959	42,289.65	47,309.45	89,599,10
1960	61.914.95	58,384,85	120,299.80
		00,004.00	
1961	71,952.70	57,303.30	129,256.00
1962	86,227.70	54,005.10	140,232.80
1963	57,517.00	63,514.80	121,031.80
1964	35,592.90	91,660.85	127,253.75
1965	33,464.10	101,664.90	135,129.00
1966	11,100,70	108,363.20 122,164.00	119,463.90
1967	9,331.00	122,164.00	131,495.00
1968	20.388.20	114,465,15	134.853.35
1969	10,028.70	121,210.50	131,239.20 127,039.00
1970	8,058.00	118,981.00	127,039.00
1971	19,476.00	136,083,00	155,559,00
1972	12.332.00	150,179,00	162,511.00
	12,002.00	100,110.00	100,01110

^{*} No data available 1921-1930.

APPENDIX III KELP HARVEST IN TONS

4. DESIGNATED COMMON NAMES OF CERTAIN MARINE ORGAN-ISMS OF CALIFORNIA

DOYLE E. GATES and HERBERT W. FREY Marine Resources Region

4.1. INTRODUCTION

Common names of the more important fishes have been designated by the California Department of Fish and Game for many years. The original purpose was to assist in collecting accurate catch statistics. For the Department to understand the State's many fisheries it is essential that the catch of each species be known. A consistent terminology on the part of both the commercial fishing industry and the sportsman is of great importance in the collection of catch records since confusion and inaccuracy result when a particular species is listed by different names in different parts of California or if a certain common name refers to any of several species.

In California as elsewhere in the world, common nomenclature of marine organisms did not grow up with the language as in Europe or Asia. The people who settled here naturally named things because of similarities—either real or apparent, superficial or significant—to familiar species in their homeland. As a result when California initiated its recording system for commercial landings in 1916, the need for more uniform terminology with respect to common names became readily evident. A chaotic situation existed with a given species being identified by different names in different parts of the state, in different fisheries, or even in adjacent fish markets, and a number of species being referred to by a single name.

The State Legislature enacted a law in 1919 to help bring some order to collecting records concerning California fisheries. This regulation stated: ""The names used in the record for designating the variety of species of fish handled must be the name which is in common usage, and the Fish and Game Commission shall have the power to decide what is the common usage name of any variety."" In 1933, the law was amended to substantially its present form and its application limited to commercial varieties in connection with fish receipts. It now forms Section 8013 of Part 3 (Commercial Fishing), Article 6 (Commercial Fishing Reports), California Fish and Game Code, and reads: ""The names used in the receipt for designating the species of fish dealt with shall be those in common usage, and may be designated by the Department."" Section 45 of General Provisions and Definitions in the Fish and Game Code states: ""Fish means wild fish, mollusks, or crustaceans, invertebrates, or amphibians, including any part, spawn, or ova thereof.""

While the present law specifically applies to commercial landings, the Department has designated common names to species taken by other than commercial fishermen in an effort to insure uniformity in State publications and records, and in an attempt to attain common usage on the part of all fishermen.

4.2. PRIOR LISTS

Walford (1931) prepared the first comprehensive list to establish official common names of California fishes which were handled commercially, or which were of particular interest to fishermen or dealers. The more important freshwater fishes, marine bony fishes, sharks and rays, marine mollusks, and marine and freshwater crustaceans were covered. Several of the names on this list were coined and not accepted by the public, others proved detrimental to marketing, and with the passage of time some of the scientific nomenclature changed. A revised official list was prepared by Roedel (1948), and reasons for name changes were set forth by the smae author in 1949. Roedel prepared a revised and expanded official list of common names in 1953, and 9 years later authored a revised and enlarged version (Roedel 1962).

In 1950 Shapovalov and Dill assigned common names to all freshwater fishes of California. This list was revised and expanded in 1959 (Shapovalov, Dill, and Cordone).

Committees of the American Fisheries Society on Names of Fishes have prepared three lists of common and scientific names of fishes from the United States and Canada (Amer. Fish. Soc. 1948, 1960, 1970). These lists have been widely used and have contributed to eliminating confusion in fish nomenclature. As far as the common names of California's marine fishes are concerned, the great majority are in agreement with the 1970 list; however, a few names, both common and scientific, are in variance with those used in this state.

Other than the few invertebrate species covered by Walford (1931) in his list of official common names, there has been no previous attempt by the Department to designate common names for some of the more common California marine invertebrates.

4.3. PRESENT LIST

This list includes the names of quite a few species that have not appeared on previous lists of official names of California marine fishes. In fact an attempt is made to list all known shallow water marine and anadromous finfishes occurring within California waters. These include fishes found in an area between the Mexican and Oregon borders and offshore at least 50 miles. Miller and Lea (1972) provided the basic background as far as the species covered and the scientific nomenclature used for identifying these species. Selected species in representative invertebrate groups have been designated only for animals likely to be taken by sport and commercial fishermen, most apt to be seen by a casual visitor to the seashore, or that are representative of a particular group.

With respect to common names, several rules have governed their designation. These rules were directed toward the guiding principle that the purpose of the names is to assist in compiling accurate records as well as preparing comparable reports.

An ideal common name would be one that is in exclusive usage throughout the entire range of the species; however, relatively few names have such universal and select usage in the vernacular. It then becomes necessary to evaluate such common names as are applied to a species with regard to the following criteria:

Usage in California by both sportsmen and commercial fishermen, and the fishing industry:
 Usage in other areas, particularly adjacent states.
 Susage on other common name lists.
 Connotations that may have an undesirable effect upon market ability.
 The name should be brief and descriptive.
 The name should indicate rather than confuse relationships.
 Is generally accepted by most California workers in the field of taxonomy.

While most of the designated names meet the majority of the above criteria, there are some exceptions. In these cases, the overriding criterion was the firm implantation of the name in the vernacular. Some of these names are misleading, are not accepted on other lists, are not necessarily descriptive, but in general are acceptable to California taxonomists.

When a common name on the present list deviates from either Roedel (1962) or the American Fisheries Society (1970), an annotated explanation is given. Not all changes in scientific nomenclature are annotated; however, Miller and Lea (1972) present detailed reasons for certain taxonomic positions.

Unlike previous lists which list the official common name and the scientific designation, this list presents a third column which details other common names by which the species is or has been known. This listing should facilitate the identification of species referred to in the literature and records.

The order in which the jawless fish (agnaths) and the sharks and rays (cartilaginous fishes) are presented generally follows that of the American Fisheries Society (1970).

The list of bony fish (teleosts) families is arranged in the sequence of Greenwood et al (1966), with the species in each family alphabetized to generic and specific names. The class, order, and family sequence for mollusks follows the arrangement of Keen (1963), while the family arrangement of the arthropod order Decapoda follows Schmitt (1921).

Designated common name

Black hagfish Pacific hagfish

Pacific lamprey

Frilled shark

Sixgill shark

Horn shark

Sevengill shark

Whiteface hagfish Western river lamprey Scientific name

Eptatretus deani (Evermann and Goldsborough)

Eptatretus stoutii (Lockington) Myxine circifrons Garman

Lampetra ayresii (Gunther)

California hagfish, lamperina

Other common names

Western brook lamprey, river lamprey, western

Eel, river eel, three-toothed lamprey, western lamprey

Shovelnosed shark, cow shark, mud shark, sixgill

lamprey

Frill shark

This species appears as western brook lamprey in AFS (1970); however, we apply the term river since it

seems more descriptive of the animals' habitat.

Lampetra tridentata (Gairdner) Chlamydoselachus anguineus Garman

Hexanchus griseus (Bonnaterre)

cowshark, griset, caffa bota

Notorynchus maculatus Ayres Cowshark, mud shark, spotted cowshark, sevengill

cowshark, Pacific sevengill cowshark

Port Jackson shark, bullhead shark, horned shark, Heterodontus francisci (Girard)

California horn shark

AFS (1970) changed the common family name from horn sharks since family is widely known as bullhead

sharks; we concur.

Whale shark Rhincodon typus Smith Bigeye thresher * Alopias superciliosus (Lowe) Common thresher Alopias vulpinus (Bonnaterre) Mhor, chagrin, tiburon ballenas, tint reva

Thresher, longtail shark, thresher shark, fish shark, sea ope, pez zorro, pesca pavone, swiveltail, fox shark,

swingtail, sea fox

With the addition of the bigeye thresher to California, we follow Bigelow and Schroeder (1948) and add the attributive "common" to the name for A. vulpinus.

^{*} Not listed in Roedel, 1962.

Ragged-tooth shark Odontaspis ferox (Risso)

White shark Carcharodon carcharias (Linnaeus) Maneater shark, great white shark

Bonito shark Isurus oxyrinchus Rafinesque Mackerel shark, spriglio, paloma, shortfin mako,

Shortfin make in AFS (1970). We follow Miller and Lea (1972) and retain the name bonito shark.

Salmon shark Lamna ditropis Hubbs and Follett Porbeagle, mackerel shark, tiger shark Basking shark Cetorhinius maximus (Gunnerus)

Elephant shark, bone shark, sailfish, sunfish, pelerin, hoe-mother, capidoli, oilfish, oil shark, ground shark

> We follow Bigelow and Schroeder (1948) in placing this species in the family Cetorhinidae. Roedel (1962) and AFS (1970) include the basking shark in the fam-

ily Lamnidae.

Brown cat shark Apristurus brunneus (Gilbert) Brown shark

Longnose cat shark Apristurus kampae

Swell shark Cephaloscyllium ventriosum (Garman) California swell shark

We follow Kato, Springer, and Wagner (1967) and regard C. uter a synonym of C. ventriosum.

Filetail cat shark Parmaturus xaniurus (Gilbert) Filetail shark

Bull shark Carcharhinus leucas (Valenciennes) Roundnose shark, pigeye shark

Referred to as the roundnose shark, Carcharhinus azureus, by Roedel (1962); we follow Kato, Springer,

and Wagner (1967).

Pelagic whitetipped shark Oceanic whitetip shark Carcharhinus longimanus (Poey) Dusky shark Carcharhinus obscurus (Lesueur) Bay shark, bay grayshark, injerto

> Referred to as the bay shark, Carcharhinus lamiella, by Roedel (1962); we follow Kato, Springer, and

Wagner (1967).

Narrowtooth shark Carcharhinus remotus (Dumeril) Tiger shark Galeocerdo cuvier (Peron and Lesueur) Spotted shark, tigrone Soupfin shark Galeorhinus zyopterus Jordan and Gilbert Oil shark, soupfin, tope

Grav smoothhound Mustelus californicus Gill Mud shark, dogfish, paloma, sand shark, gray shark Brown smoothhound Mustelus henlei (Gill) Mud shark, dogfish, paloma, sand shark, Henle's

Sicklefin smoothhound Mustelus lunulatus Jordan and Gilbert Dog shark, gato, smoothhound

Great blue shark Blue shark Prionace glauca (Linnaeus)

Pacific sharpnose shark Rhizoprionodon longurio (Jordan and Gilbert) Sharpnose shark Leopard shark Triakis semifasciata Girard Cat shark Scalloped hammerhead Sphyrna lewini (Griffith)

Bonnethead Sphyrna tiburo (Linnaeus)

Pacific bonnethead, shovelhead shark

Hammerhead shark, common hammerhead, axhead Smooth hammerhead Sphyrna zygaena (Linnaeus) shark, shovelnose shark

Pygmy shark* Euprotomicrus bispinatus Slim shark Prickly shark Echinorhinus cookei Pietschmann Bramble shark

Pacific sleeper shark Somniosus pacificus Bigelow and Schroeder Sleeper shark, nurse shark

Spiny dogfish Squalus acanthias Linnaeus

Dog shark, dogfish, grayfish, Pacific grayfish, spinarola, Pacific dogfish, California dogfish Pacific angel shark Squatina california Ayres California angel shark, angel shark, monkfish, north-

ern angel shark, squat, squato

Designated common name Scientific name

Platyrhinoidis triseriata (Jordan and Gilbert) Thornback

Shovelnose guitarfish Rhinobatos productus (Ayres) Shovelnosed shark, pointed nosed guitarfish, guitar-

back shovelnose

Stingaree, stingray

Other common names

Round skate, thornback, guitarfish, California thorn-

Banded guitarfish Zapteryx exasperata (Jordan and Gilbert) Striped guitarfish, mottled guitarfish Pacific electric ray

California electric ray, electric ray, torpedo fish, California torpedo, crampfish, torpedo Torpedo california Ayres

Deepsea skate* Raja abyssicola Gilbert Abyssal skate Big skate Raja binoculata Girard Big skate of California California skate Raja inornata Jordan and Gilbert Common skate Sandpaper skate Raja kincaidii Garman Black skate

Black skate in AFS (1970). We follow Miller and Lea (1972) in using the common name sandpaper skate for Raja kincaidii since this species is never black and has a uniformly rough denticulated dorsal surface. Black skate is designated for Raja trachura because this is the only black colored California skate.

Raja rhina Jordan and Gilbert Longnose skate Longnosed skate, California longnose skate

Starry skate Raja stellulata Jordan and Gilbert Prickly skate, cheap skate Black skate Raja trachura Gilbert Monterey skate, rock skate, roughtail skate

Roughtail skate in AFS (1970). See comment under

sandpaper skate.

White skate Bathyraja spinosissima (Beebe and Tee-Van) Diamond stingray Dasyatis dipterura (Jordan and Gilbert) Pacific stingray, rat-tailed stingray, stingaree

Pelagic stingray Dasyatis violacea (Bonaparte)

Round stingray Urolophus halleri Cooper California butterfly ray Gymnura marmorata (Cooper)

Butterfly stingray, stingaree, butterfly ray, angel shark, bay ray, eagle sting ray

Bat ray Myliobatis californica Gill Eagle ray, California sting ray, stingaree, bat sting

ray, batfish

Pacific manta Manta, devilfish, sea devil, blanketfish Manta hamiltoni (Newmann)

Spinetail mobula Mobula japanica (Muller and Henle)

Smoothtail mobula Mobula lucasana Beebe and Tee-Van Mobula, Pacific mobula Chimaera, elephantfish, rattail, rabbitfish, goatfish, Ratfish Hydrolagus colliei (Lay and Bennett)

king-of-the-herrings, water hare

Green sturgeon Acipenser medirostris Ayres White sturgeon Acipenser transmontanus Richardson

Yellow snake eel Slender snipe eel

Bonefish Albula vulpes (Linnaeus)

Ladyfish, bananafish, sanducha, macabi, mullet, silver

Pacific snake eel

Shad, common shad

Pacific thread herring

Herring, California herring

Sacramento sturgeon, Oregon sturgeon

Moray, moray eel, eel, conger eel, marina, muraena

California moray Gymnothorax mordax (Ayres) Catalina conger Gnathophis catalinensis (Wade) Pacific worm eel Myrophis vafer Jordan and Gilbert Spotted snake eel

Ophichthus triserialis (Kaup)

Ophichthus zophochir (Jordan and Gilbert) Nemichthys scolopaceus Richardson

American shad Alosa sapidissima (Wilson) Pacific herring Clupea harengus pallasii Linnaeus Threadfin shad Dorosoma petenense (Gunther)

Round herring Etrumeus teres (DeKay)

California round herring, Pacific round herring, Ja-

Roedel (1962) listed Etrumeus acumintus as Pacific round herring; however, E. acumintus is now considered synonymous with Etrumeus teres, a species with a worldwide distribution in warmer seas. We drop the attributive "Pacific" since it now is inappro-

priate.

Flatiron herring Harengula thrissina (Jordan and Gilbert)

Opisthonema medirastre Berry and Barrett Middling thread herring

Roedel (1962) listed Pacific thread herring, Opisthonema libertate; however, this species has been subsequently divided into three species, only one of which, the middling thread herring, Opisthonema

mediraste, occurs in California waters.

Pacific sardine Sardinops sagax caeruleus (Jenyns) California sardine, pilchard, sardina, young called firecrackers

AFS list this species as Sardinops sagax, but we fol-

low Miller and Lea (1972) and retain the subspecies designation of caeruleus.

Deepbody anchovy Deep-bodied anchovy, sprat, sardinus, California Anchoa compressa (Girard)

deepbody anchovy Anchoa delicatissima (Girard) Southern anchovy

Slough anchovy Anchoviella miarcha (Jordan and Gilbert) Slim anchovy Anchoveta Cetengraulis mysticetus (Gunther) Northern anchovy Engraulis mordax Girard

California anchovy, anchovy, plain anchovy, young

called pinheads

Designated common name

Pink salmon

Scientific name

Other common names

Oncorhynchus gorbuscha (Walbaum)

Humpback salmon, lost salmon, dog salmon, haddo,

holia, gorbuscha

Chum salmon Silver salmon Oncorhynchus keta (Walbaum) Oncorhynchus kisutch (Walbaum) Calico salmon, dog salmon, keta, lekai salmon, hayho Silversides, coho salmon, dog salmon, hookbill, medi-

um red salmon, tschaviche, jack salmon, hooped, kisutch, showitz, quisutsch, bielaya ryba

Coho salmon in AFS (1970). We follow Roedel (1962) since the term "silver salmon" is so deeply ingrained in the laws of California and in the vernacular

of the fishermen.

Sockeye salmon

Oncorhynchus nerka (Walbaum)

Kokanee, Fraser River salmon, nerka, sukkegh salmon, blueback salmon, red salmon, redfish, sawqui

salmon, Krasnaya ryba, benimasu

King salmon Oncorhynchus tshawytscha (Walbaum) Chinook salmon, Sacramento River salmon, quinnat salmon, spring salmon, tyree salmon, black salmon, Columbia River salmon, tchaviche, tshawytscha

AFS (1970) lists "chinook"; however, we retain "king" as the designated name since it is so deeply ingrained in the laws of California. Both names are widespread in the vernacular of the fishermen.

Cutthroat trout Salmo clarkii Richardson Blackspotted trout, coastal cutthroat trout, blueback,

sea trout

Rainbow trout (Steelhead)

Robust blacksmelt*

Popeye blacksmelt

Pacific blacksmelt

Pacific barreleye

Snubnose blacksmelt

California smoothtongue

Salmo gairdnerii Richardson

Steelhead (a sea-run rainbow trout), steelhead trout, salmon trout, half-pounder, hardhead, summer salmon

Whitebait smelt Surf smelt

Allosmerus elongatus (Ayres) Hypomesus pretiosus (Girard) Hypomesus transpacificus McAllister Frittura, small fry, perlin Surf fish, nightfish, perlin, silver smelt, dayfish

Delta smelt Night smelt Spirinchus starksi (Fisk) Longfin smelt

Spirinchus thaleichthys (Ayres) Roedel (1962) listed this species as Sacramento smelt.

Whitebait, sand smelt, nightfish Sacramento smelt, delta smelt

We follow AFS (1970) and use longfin smelt. Thaleichthys pacificus (Richardson) Eulachon Pacific argentine

Argentina sialis Gilbert

Bathylagus milleri Jordan and Gilbert Bathylagus ochotensis Schmidt Bathylagus pacificus Gilbert Bathylagus wesethi Bolin Leuroglossus stilbius Gilbert

Smoothtongue, northern smoothtongue

Macropinna microstoma Chapman

Barreleye in AFS (1970). We follow Miller and Lea

(1972) and add the attributive "Pacific".

Benttooth bristlemouth Cyclothone acclinidens Garman Bigeye lightfish Danaphos oculatus (Garman)

Eared blacksmelt Slender blacksmelt Southern blacksmelt

Candlefish, ulchen

Stout blacksmelt

Barreleye

Slender hatchetfish Spurred hatchetfish Silver hatchetfish *
Silvery hatchetfish * Highfin dragonfish _ Longfin dragonfish

Pacific viperfish California lizardfish Slender barracudina Longnose lancetfish

Daggertooth Northern pearleye California headlightfish*

Broadfin lampfish* California flashlightfish* Northern lampfish

California lanternfish*

Blue lanternfish* Mexican lampfish*

Chihuil^{*}

Specklefin midshipman Plainfin midshipman

Argyropelecus affinis Garman Argyropelecus hemigymnus Cocco Argyropelecus lychnus Garman

Argyropelecus sladeni Regan

Bathophilus flemingi Aron and McCrery Tactostoma macropus Bolin Chauliodus macouni Bean Synodus lucioceps (Ayres)

Lestidium ringens (Jordan and Gilbert)

Alepisaurus ferox Lowe Handsaw fish, Pacific lancetfish, wolffish, subotka

Pacific lancetfish, Alepisaurus richardsoni, listed by Roedel (1962) is now considered synonymous with A.

Anotopterus pharao Zugmayer Benthalbella dentata (Chapman)

Diaphus theta Eigenmann and Eigenmann

fish Broadfin lanternfish Lampanyctus ritteri Gilbert Protomyctophum crockeri (Bolin)

Stenobrachius leucopsarus (Eigenmann and Eigen-

Symbolophorus californiensis (Eigenmann and Eigen-

mann)

Tarltonbeania crenularis (Jordan and Gilbert)

Triphoturus mexicanus (Gilbert) Bagre panamensis (Gill)

Porichthys myriaster Hubbs and Schultz

Porichthys notatus Girard

We designate these more descriptive names as pro-

posed by Roedel (1962).

Silvery hatchfish

Arrow dragonfish Fanged viperfish

Candlefish, lizardfish

Theta lanternfish, whitespotted lanternfish, headlight-

Flashlightfish Smallfin lanternfish

Slim midshipman, bullhead, singing fish, toad fish Northern midshipman, bullhead, singing fish, toad

fish, grunter

Designated common name

Lined clingfish
Northern clingfish
Bearded clingfish
California clingfish
Southern clingfish
Slender clingfish
Kelp clingfish
Roughiaw froefish

Roughjaw frogfish *
Spotted batfish *
Warted seadevil *
Finescale codling

Hundred-fathom codling*

Pacific cod
Pacific tomcod
*
Walleye pollock

Pacific hake

Spotted cusk-eel*
Basketweave cusk-eel*
Red brotula
Bigfin eelpout
Twoline eelpout

Scientific name

Gobiesox eugrammus Briggs Gobiesox maeandricus (Girard) Gobiesox papillifer Gilbert Gobiesox rhessodon Smith Rimicola dimorpha Briggs

Rimicola eigenmanni (Gilbert)

Rimicola muscarum (Meek and Pierson) Antennarius avalonis Jordan and Starks Zalieutes elator (Jordan and Gilbert)

Cryptopsaras couesii Gill

Antimora microlepis Bean

Physiculus rastrelliger Gilbert Gadus macrocephalus Tilesius Microgadus proximus (Girard) Theragra chalcogramma (Pallas)

Merluccius products (Ayres)

Chilara taylori (Girard) Otophidium scrippsi Hubbs Brosmophycis marginata (Ayres) Aprodon corteziamus Gilbert Bothrocara brunneum (Bean) Other common names

Common clingfish, flathead clingfish, suckfish

Frogfish, California frogfish

Batfish

Triplewart seadevil

Finescale flatnose codling, Pacific flatnose, longfin

cod

Plain cod, gray cod, true cod, Alaska cod, cod

Tomcod, piciata, California tomcod

Whiting, bigeye, Alaska pollock, southern walleye

pollock

Hake, white fish, haddock, butterfish, mellusa, meluzette, California hake, ocean whitefish, popeye, silver

nake

California cusk-eel *Purple brotula Smoothgum eelpout

Oligopus diagrammus (He

Soft eelpout* Bothrocara molle Bean Pighead eelpout Flatcheek eelpout* Embryx crotalina (Gilbert) Snakehead eelpout Blackmouth eelpout Lycodapus fierasfer Gilbert Pearly eelpout Pallid eelpout Lycodapus mandibularis Gilbert Pale eelpout Black eelpout Lycodes diapterus Gilbert Blackfinned eelpout Blackbelly eelpout Lycodopsis pacifica (Collett)

Blackbelly eelpout Lycodopsis pacifica (Collett)
Bearded eelpout Lyconema barbatum Gilbert
Midwater eelpout Melanostigma pammelas Gilbert Pacific softpout, black eelpout

Pacific grenadier * Coryphaenoides acrolepis (Bean) Pacific rattail, roughscale rattail, rhoughscale grenadier adier

California grenadier Nezumia stelgidolepis (Gilbert) California rattail

We apply the AFS (1970) common family designation to the common name of the species. The term rattail was used by Miller and Lea (1972).

California flyingfish
Blotchwing flyingfish
* Cypselurus californicus (Cooper)

Cypselurus (Rafinesque)

Single-bearded flyingfish
Sharpchin flyingfish
Fodiator acutus (Valenciennes)

Sharpnose flyingfish

Sharpchin flyingfish
Blackwing flyingfish*
Blackwing flyingfish*
Ribbon halfbeak*
Longfin halfbeak*
California halfbeak
Hemiramphus rosae (Jordan and Gilbert)
Hyporhamphus rosae (Jordan and Gilbert)

Silverstripe halfbeak * Hyporhamphus unifasciatus (Ranzani) Halfbeak, common halfbeak, escribano, pajarito

Halfbeak

Halfbeak in AFS (1970). We follow Miller and Lea (1972) and add the attributive "silverstripe" since three other halfbeaks occur in California waters.

California needlefishStrongylura exilis (Girard)Garfish, billfish, needlefish, California garfishPacific sauryCololabis saira (Brevoort)Skipper, garfish, sourbelly, sourfish, sauryCalifornia killifishFundulus parvipinnis GirardKillifish

Topsmelt Atherinops affinis (Ayres) Bay smelt, rainbow smelt, panzarotto, little smelt,

least smelt, silverside, capron, jack, pescadillo

Jacksmelt Atherinopsis californiensis Girard Silverside, California smelt, horse smelt, blue smelt,

Pescado del rey, Peixe rey Pesce rey
California grunion
Leuresthes tenuis (Ayres)
Smelt, little smelt, least smelt, grunion

Designated common name Scientific name Other common names

Poromitra crassiceps (Gunther) Crested bigscale Twospine bigscale Scopelogadus mizolepis (Gilbert)

Zenopsis nebulosa (Temminck and Schlegel) Mirror dory*

Oxeye oreo Allocyttus verrucosus (Gilchrist) Coster dory, oreo Opah Lampris regius (Bonnaterre) Poisson lune, moonfish Highbrow crestfish* Lophotus cristatus Johnson Crestfish, oarfish, sea serpent

Polkadot ribbonfish Desmodema polysticta (Ogilby) Trachipterus altivelis Kner

King-of-the-salmon Tapertail ribbonfish Trachipterus fukuzakii Fitch Scalloped ribbonfish Zu cristatus (Bonelli)

Oarfish Regalecus glesne (Ascanius) King-of-the-herrings

Tubesnout Aulorhynchus flavidus Gill Threespine stickleback Gasterosteus aculeatus Linnaeus Common stickleback Slender snipefish Macrorhamphosus gracilis (Lowe)

Snipefish Pacific seahorse* Hippocampus ingens Girard Caballito del mar

Snubnose pipefish* Syngnathus arctus (Jenkins and Evermann)

Barred pipefish* Syngnathus auliscus (Swain) Kelp pipefish Syngnathus californiensis Storer

Great pipefish

Bay pipefish Syngnathus leptorhynchus Girard

This species is conspecific with Syngnathus griseolineatus listed by Roedel (1962).

California ribbonfish

Sculpin Scorpaena guttata Girard California scorpionfish, spotted scorpionfish, scorpionfish, scorpion, bullhead, scorpene

> AFS (1970) uses "California scorpionfish." We follow Roedel (1962) and designate the name "sculpin" since it is so firmly implanted in the vernacular of both

sport and commercial fishermen.

Rainbow scorpionfish Scorpaenodes xyris (Jordan and Gilbert)

> Members of the genus Sebastes have been referred to as rockfish or rockcod since the mid-1800's. We feel rockfish is the more appropriate name so we follow AFS (1970) and Roedel (1962). We do not list the term rockcod as another common name; however all the species in this genus have been referrence to as

rockcod.

Rougheye rockfish Sebastes aleutianus (Jordan and Evermann) Blackthroated rockfish, blacktip rockfish

Pacific ocean perch Sebastes alutus (Gilbert) Longjaw rockfish, rose fish

Kelp rockfish Sebastes atrovirens (Jordan and Gilbert) Gopher rockfish, garrupa, green garrupa

Brown rockfish Sebastes auriculatus Girard Aurora rockfish Sebastes aurora (Gilbert) Redbanded rockfish Sebastes babcocki (Thompson) Shortraker rockfish Sebastes borealis Barsukov

Silvergray rockfish Sebastes brevispinis (Bean) Shortspine rockfish Gopher rockfish Sebastes carnatus (Jordan and Gilbert) Flesh-colored rockfish, flesh-colored garrupa, butter-

ball, butter bass Copper rockfish

Sebastes caurinus Richardson Whitebelly rockfish, white gopher, barriga, gopher,

blanca, palermotano, northern rockfish Greenspotted rockfish

Chucklehead, Santa Maria, red rock cod, bolina, Sebastes chlorostictus (Jordan and Gilbert) cernie, pesce vermiglia, chinafish

Black-and-yellow rockfish Sebastes chrysomelas (Jordan and Gilbert) Gopher rockfish, black and yellow garrupa, cifu-

latano, sand bass

Spotted corsair, spotted rockfish, chinafish, red rock Starry rockfish Sebastes constellatus (Jordan and Gilbert)

cod, scacciatale

Blina, sand bass

Darkblotched rockfish Sebastes crameri (Jordan) Blackmouth rockfish, blackblotched rockfish

Calico rockfish Sebastes dalli (Eigenmann and Beeson) Pretty rock cod, brown rockfish Splitnose rockfish Sebastes diploproa (Gilbert) Rosefish, lobe-jawed rockfish

Greenstriped rockfish Sebastes elongatus Ayres Red rock cod, strawberry rockfish, serena, reina, poin-

setta, striped rockfish

Swordspine rockfish Sebastes ensifer Chen Flyfish

This species was listed as Sebastodes rhodochloris by Roedel (1962). Chen (1971) synonymized S. rhodochloris with S. helvomaculatus and described S. en-

Red snapper, † viuva, widowfish, beccafico Widow rockfish Sebastes entomelas (Jordan and Gilbert) Pink rockfish Chucklehead, dawn rockfish, Santa Maria Sebastes eos (Eigenmann and Eigenmann)

Red snapper, rock cod, yellowtail, gialota, giola, Yellowtail rockfish Sebastes flavidus (Ayres)

cherne, green snapper

Bronzespotted rockfish Sebastes gilli (Eigenmann) Catalina, Catalina bass, Catalina salmon Chilipepper Red snapper, † red rock cod, johnnies, johnny cod Sebastes goodei (Eigenmann and Eigenmann)

Rosethorn rockfish Sebastes helvomaculatus Ayres Deep-water scacciatale, deep-water scratch-tail, or-

ange-red rockfish

Squarespot rockfish Sebastes hopkinsi (Cramer) Smallmouth rockfish, widow rock cod Shortbelly rockfish Sebastes jordani (Gilbert) Slim rockfish, slender rockfish, steamer rockfish

Freckled rockfish Sebastes lentiginosus Chen

Red snapper, † cow rockfish, roosterfish, gallo, chefra, Cowcod Sebastes levis (Eigenmann and Eigenmann) cowfish, cow

Roedel (1962) and AFS assigned the common name cow rockfish to this species; however, we follow Miller and Lea (1972) since the term cowcod is so

firmly implanted in the vernacular of both sport and

commercial fishermen

Mexican rockfish Sebastes macdonaldi (Eigenmann and Beeson) Black-and-red rockfish, dark-chili, coral-red rockfish

† These species of rockfish have been marketed in the filleted condition as red snapper since the late 1800s. Since the true red snapper, Lutjanus campechanus (Poey), belongs to the family Lutjanidae which is not represented on the Pacific coast of the United States, and since the name "red snapper" is firmly implanted in the vernacular of the commercial fishermen, we suggest the term "Pacific red snapper" be used when marketing these species in a filleted condition. On March 8, 1974, the California Fish and Game Commission adopted Section 103, Title 14, California Administrative Code, which states the term Pacific red snapper may be used as an alternate common name for these species.

Designated common name

Ouillback rockfish

Black rockfish

Blackgill rockfish Vermilion rockfish

Blue rockfish China rockfish

Tiger rockfish

Speckled rockfish

Bocaccio

Chameleon rockfish Canary rockfish

Redstripe rockfish Grass rockfish

Yellowmouth rockfish Rosy rockfish

Greenblotched rockfish Yelloweye rockfish

Flag rockfish

Dwarf-red rockfish Bank rockfish Stripetail rockfish Halfbanded rockfish Olive rockfish

Treefish Pinkrose rockfish*

Honeycomb rockfish Whitebelly rockfish Pvgmv rockfish Sharpchin rockfish

Shortspine thornyhead

Longspine thornyhead

Scientific name

Sebastes maliger (Jordan and Gilbert)

Sebastes melanops (Girard)

Sebastes melanostomus (Eigenmann and Eigenmann) Sebastes miniatus (Jordan and Gilbert)

Sebastes mystinus (Jordan and Gilbert)

Sebastes nebulosus Ayres

Sebastes nigrocinctus Ayres

Sebastes ovalis (Ayres)

Sebastes paucispinis Ayres

Sebastes phillipsi (Fitch) Sebastes pinniger (Gill)

Sebastes proriger (Jordan and Gilbert) Sebastes rastrelliger (Jordan and Gilbert)

Sebastes reedi (Westrheim and Tsuyuki)

Sebastes rosaceus Girard Sebastes rosenblatti Chen Sebastes ruberrimus (Cramer)

Sebastes rubrivinctus (Jordan and Gilbert)

Sebastes rufinanus Lea and Fitch Sebastes rufus (Eigenmann and Eigenmann)

Sebastes saxicola (Gilbert) Sebastes semicinctus (Gilbert)

Sebastes serranoides (Eigenmann and Eigenmann)

Sebastes serriceps (Jordan and Gilbert)

Sebastes simulator Chen

Sebastes umbrosus (Jordan and Gilbert)

Sebastes vexillaris (Jordan and Gilbert) Sebastes wilsoni (Gilbert) Sebastes zacentrus (Gilbert) Sebastolobus alascanus Bean

Sebastolobus altivelis Gilbert

Other common names

Orange-spotted rockfish, yellow-backed rockfish,

brown rockfish, speckled rockfish

Red snapper, † black snapper, black bass, bass rockfish, nero, cherna, pesce pretre, gray rockfish, black

sea bass, sea bass, black rock

Blackmouth rockfish, deepsea rockfish

Red snapper, Tred rock cod, rasher, borracho, genuine red, salmon grouper, borrachon

Bluefish, blue perch, priestfish, black rockfish, black

bass, nervi, neri, black snapper

Cefalutano, black and yellow rockfish, yellow-spotted rockfish, cerod, yellow rockfish, gopher, pelican, yellowstripe rockfish, speckled garrupa, chinafish Banded rockfish, blackbanded rockfish, barred rock-

Red snapper, $\dot{\dagger}$ widow rockfish, zipola, brownfish,

beccafico, viuva

Red snapper , rock cod, grouper, salmon grouper,

tomcod (young), boccac, merou

Red snapper, † orange rockfish, codalarga, yellow snapper, filione, fantail, red rock cod, canary, bosco

Red rockfish of Alaska, little red rock cod

Kelp rockfish, scomoda, green garrupa, green rock-

fish, lingcod, schmo

Corsair, dude, scacciatale, scratch-tail

Red snapper, † turkey-red rockfish, potbelly, drum, tambor, vecchia, red rock cod, yellowbelly, rasphead,

golden eye, turkey rock Spanish flag, barberpole, Hollywood, convict fish,

shoflies, tiger, barberpole snapper

Red snapper †

Popeye rockfish, bigeye rockfish, oliveback rockfish

Inspector

Red snapper, kelp yellowtail, kelp salmon, bass

rockfish, sugar bass, sugarfish Convictfish, barberpole, garrupa

Shaded rockfish, dusky rockfish

Sailfin rockfish, barriga blanca, Palermotana Wilson's rockfish, slender rockfish, dwarf rockfish

Bigeyed rockfish

Shortspine channel rockfish, idiot, hooligan, thornhead, lobe-finned rockfish, spiney-cheeked rock-

fish, bonehead, scorpion, fagiano, slim thornhead,

gurnard, gurnet, channel cod

Longspine channel rockfish, idiot, hooligan, thornhead, lobe-finned rockfish, spiny-cheeked rockfish, bonehead, scorpion, anglefin rockfish, deep-wa-

ter rockfish, crimson thornhead

Thornyhead replaces channel rockfish since this name is more appropriate for a species that is not confined to channels. We follow AFS (1970) in this change.

Splitnose searobin* Bellator xenisma (Jordan and Bollman) Lumptail searobin Prionotus stephanophrys Lockington

Kelp greenling Hexagrammos decagrammus (Pallas)

California seatrout, greenling, seatrout, rock trout, kelp, kelp greenling, rockfish, bluefish, spotted rock trout, bodieron, boregat, greenling, kelp trout, kelp

Whitespotted greenling Hexagrammos stelleri Tilesius Boregata, starling, Tommy cod, atka mackerel, sea

trout, greenling

Rock greenling Hexagrammos superciliosus (Pallas) Fringed greenling, Pacific red rock trout, red green-

ling, sea trout, kelp cod

Convict fish, kelp fish

Atka greenling, atkafish, yellowfish

Smoothhead searobin

Lingcod Ophiodon elongatus Girard Pacific cultus, cultus cod, ling, greenling, cod, blue cod, bluefish, white cod, buffalo cod, leopard cod, codfish, green cod, bocalao, card, testoni, cultus, skil-

fish, buffalo

Painted greenling Oxylebius pictus Gill

Atka-mackerel

Sablefish

Skilfish

Pleurogrammus monopterygius (Pallas)

Anoplopoma fimbria (Pallas)

Butterfish, coalfish, candlefish, skilfish, blackcod, coal cod, blue-cod, bluefish, deepsea trout, black candlefish, skill

Erilepis zonifer (Lockington) Aburabozu, fat priest

Shortspine combfish Zaniolepis frenata Eigenmann and Eigenmann

Longspine combfish Zaniolepis latipinnis Girard Coralline sculpin* Artedius corallinus (Hubbs) Artedius creaseri (Hubbs)

Roughcheek sculpin* Padded sculpin Artedius fenestralis Jordan and Gilbert

Scalyhead sculpin Artedius harringtoni Starks Smoothhead sculpin Artedius lateralis (Girard)

Puget Sound sculpin* Artedius meanyi (Jordan and Starks) Bonyhead sculpin Artedius notospilotus Girard

Rosylip sculpin Ascelichthys rhodorus Jordan and Gilbert Silverspotted sculpin Blepsias cirrhosus (Pallas)

Roughback sculpin Chitonotus pugetensis (Steindachner) Sharpnose sculpin Clinocottus acuticeps (Gilbert) Wooly sculpin Clinocottus analis (Girard)

Calico sculpin Clinocottus embryum (Jordan and Starks) Mosshead sculpin* Clinocottus globiceps (Girard) Bald sculpin Clinocottus recalvus (Greeley)

Longspine greenling

Roundnosed sculpin

Plumose sculpin

Bonehead sculpin Rubber sculpin

Silverspot, nee-kaio-kaiung

Mossy sculpin Globeheaded sculpin Tide pool johnny

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[‡] Filleted sablefish have been marketed as "butterfish" in California for many years. On March 8, 1974, the California Fish and Game Commission adopted Section 103, Title 14, California Administrative Code, which states the term butterfish may be used as an alternate for the designated name, sablefish.

Designated common name Scientific name Other common names

Buffalo sculpin Enophrys bison (Girard) Bull sculpin Enophrys taurina Gilbert

Red Irish lord Hemilepidotus hemilepidotus (Tilesius) Spotted Irish lord, bullhead, red sculpin

Brown Irish lord Hemilepidotus spinosus (Ayres) Reef Irish lord

Dusky sculpin* Icelinus burchami Evermann and Goldsborough Pithead sculpin Icelinus cavifrons Gilbert

Threadfin sculpin Icelinus filamentosus Gilbert Fringed sculpin Icelinus fimbriatus Gilbert Frogmouth sculpin Icelinus oculatus Gilbert Icelinus quadriseriatus (Lockington) Yellowchin sculpin

Spotfin sculpin Icelinus tenuis Gilbert Lesser filamented sculpin Bandeye sculpin

Longfin sculpin Jordania zonope Starks Lavender sculpin Leiocottus hirundo Girard

Pacific staghorn sculpin Leptocottus armatus Girard Bullhead, staghorn sculpin, cabezon, buffalo sculpin, smooth cabezon

Sailfin sculpin * Nautichthys oculofasciatus (Girard) Johnny, sailorfish

Tidepool sculpin Sculpin, tidepool johnny, johnny Oligocottus maculosus Girard Prickly sculpin

Saddleback sculpin Oligocottus rimensis (Greeley) Rosy sculpin Oligocottus rubellio (Greeley) Fluffy sculpin Oligocottus snyderi Greeley Snubnose sculpin* Orthonopias triacis Starks and Mann

Thornback sculpin Paricelinus hopliticus Eigenmann and Eigenmann

Slim sculpin** Radulinus asprellus Gilbert Darter sculpin Darter sculpin Radulinus boleoides Gilbert

Smoothgum sculpin Radulinus vinculus Bolin

Grunt sculpin Rhamphocottus richardsonii Gunther Gruntfish Cabezon Scorpaenichthys marmoratus (Ayres) Bullhead, blue cod, sculpin, giant marbled sculpin, gi-

ant sculpin, marble sculpin, bull cod, salpa, scorpion,

Filamented sculpin

biggyhead, scaleless sculpin

Manacled sculpin Synchirus gilli Bean Flabby sculpin Zesticelus profundorum (Gilbert)

Northern spearnose* Agonopsis emmelane (Jordan and Starks) Northern spearnose poacher, windowtail poacher,

mottled poacher Northern spearnose poacher in AFS (1970). We fol-

low Miller and Lea (1972) and drop the term poacher since it only generates confusion. The term spearnose refers to the two spines on the rostral plate at the tip of

the snout which project forward.

Southern spearnose* Agonopsis sterletus (Gilbert) Southern spearnose poacher, snubnose poacher

Southern spearnose poacher in AFS (1970). See comments under northern spearnose.

Sturgeon poacher Agonus acipenserinus Tilesius Sturgeonlike seapoacher, common alligatorfish Smooth alligatorfish Anoplagonus inermis (Gunther) Smooth seapoacher, smooth poacher

Spinycheek starnose Asterotheca infraspinata (Gilbert) Bigeye starnose Asterotheca pentacantha (Gilbert)

Bigeye poacher

Bigeye poacher in AFS (1970). We follow Miller and Lea (1972) since starnose refers to the three upright rostral spines at the tip of the snout, and is a descript-

Blackfin starnose Bathyagonus nigripinnis Gilbert

Blackfin poacher Blackfin poacher in AFS (1970). See comments under

bigeye poacher.

Rockhead Bothragonus swanii (Steindachner)

Deep-pitted seapoacher Beardless spearnose Ganoideus vulsus (Jordan and Gilbert) Beardless poacher

Beardless poacher in AFS (1970). See comments under northern spearnose.

Warty poacher Occella verrucosa (Lockington) Warty seapoacher Pygmy poacher* Tubenose poacher Pricklebreast poacher* Blackedge poacher

Smootheye poacher

Flagfin poacher

Pallasina barbata (Steindachner) Stellerina xyosterna (Jordan and Gilbert) Xeneretmus latifrons (Gilbert)

Odontopyxis trispinosa Lockington

Blacktip poacher in AFS (1970). We follow Miller and Lea (1972) and use the more descriptive attributive "blackedge."

Xeneretmus leiops Gilbert

Xeneretmus ritteri Gilbert

Stripefin poacher in AFS (1970). We feel the attributive "flagfin" more appropriate and follow Miller

and Lea (1972).

Bluespotted poacher Xeneretmus triacanthus (Gilbert) Blacktail snailfish Careproctus melanurus Gilbert Tidepool snailfish Liparis florae (Jordan and Starks)

Slipskin snailfish Liparis fucensis Gilbert Slimy snailfish * Liparis mucosus Ayres Showy snailfish *
Ringtail snailfish Liparis pulchellus Ayres

Liparis rutteri (Gilbert and Snyder)

Spotted cabrilla Epinephelus analogus Gill

Snowy grouper Epinephelus niveatus (Valenciennes) Splittail bass Hemanthias peruanus (Steindachner)

Gulf grouper Mycteroperca jordani (Jenkins and Evermann)

Broomtail grouper Mycteroperca xenarcha Jordan

Kelp bass Paralabrax clathratus (Girard)

Spotted sand bass Paralabrax maculatofasciatus (Steindachner)

Barred sand bass Paralabrax nebulifer (Girard)

Striped bass Roccus saxatilis (Walbaum)

Giant sea bass

Popeve catalufa* Guadalupe cardinalfish

Ocean whitefish

Cutfin poacher

Pithead poacher

Tubesnout poacher

Blacktip poacher

Stripefin poacher, spiny poacher

Bluespotted starnose Blacktailed liparid Shore liparid

Shorttail snailfish

Ringtailed liparid, bandtail snailfish

Cabrilla pinto

Rose threadfin bass

Cabrilla de astillero, baja, baya, garuppe de baya

Spikedtailed grouper, garuppa, pinto broomtail, spot-

ted broomtail

Rock bass, sand bass, cabrilla, calico bass, bull bass, kelp salmon, lockee cod, California kelp bass Spotted bass, rock bass, cabrilla, red spotted rock bass, spotted, spotted cabrilla, pinta cabrilla

Rock bass, Johnny verde, kelp bass, sand bass, ground bass, sugar bass, cabrilla, California sand bass, Cali-

We follow AFS (1970) and add the modifier to con-

trast with spotted sand bass.

Striper, streaked bass, squidhound, rock, rock bass,

rock fish

Stereolepis gigas Ayres Black sea bass, jewfish, giant bass, California jewfish,

California black sea bass

Pseudopriacanthus serrula (Gilbert) Catalufa

Apogon guadalupensis (Osburn and Nichols)

Caulolatilus princeps (Jenyns) Blanquillo, whitefish, blanka Designated common name

Sharksucker

Slender suckerfish*
Whalesucker*

Gray marlinsucker

Remora
White suckerfish
*
Hardfin marlinsucker

Green jack
Crevalle jack
Pacific bumper
Mexican scad

Pilotfish Leatherjacket* Pacific amberjack Yellowtail

Palo pompano *
Gafftopsail pompano *
Jack mackerel

Cottonmouth jack*
Pacific moonfish

Roosterfish Dolphinfish

Pacific pomfret

Fanfish*
Bigscale pomfret*
Silver mojarra

Pacific flagfin mojarra*

Scientific name

Echeneis naucrates Linnaeus

Phtheirichthys lineatus (Menzies) Remilegia australis (Bennett) Remora brachyptera (Lowe)

Spearfish remora in AFS (1970). We follow Miller and Lea (1972) and reserve the term remora for the species Remora remora.

Remora remora (Linnaeus)

Remorina albescens (Temminck and Schlegel) Rhombochirus osteochir (Cuvier)

Marlinsucker in AFS (1970). We follow Miller and Lea (1972) and add the descriptive attributive "hard-

nia" as listed by Roedel (1962) since this species oc-

fin."

Caranx caballus Gunther Caranx hippos (Linnaeus) Chloroscombrus orqueta Jordan and Gilbert

Decapterus hypodus Gill

Decapterus hypodus Gill

Naucrates ductor (Linnaeus) Oligoplites saurus (Bloch and Schneider) Seriola colburni Evermann and Clark

Seriola dorsalis (Gill)

We follow AFS (1970) and drop attributive "Califor-

curs from Chile to southern Washington. Trachinotus paitensis Cuvier Trachinotus rhodopus (Gill)

Trachurus symmetricus (Ayres)

Uraspis secunda (Poey) Vomer declivifrons Meek and Hildebrand

Nematistius pectoralis Gill Coryphaena hippurus Linnaeus

We prefer "dolphinfish" to AFS's "dolphin" since

there is otherwise possible confusion as to whether one is speaking of the fish or the mammal.

Brama japonica Hilgendorf

Roedel (1962) listed Pomfret, Brama rayi; however, this species subsequently has been synonymized with Brama brama, an Atlantic species, and the Pacific pomfret has been recognized as a distinct species.

Pteraclis aesticola (Jordan and Synder) Taractichthys steindachneri (Doderlein) Eucinostomus argenteus Baird and Girard

Spotfin mojarra in AFS (1970). We follow Miller and Lea (1972) since the dorsal fin of the Pacific flagfin mojarra has a black tip above a silver spot on the dorsal fin while the silver mojarra has a clear fin with

fine speckling.

Eucinostomus gracilis (Gill)

Other common names

Pega, pegador, sucking fish, white tail remora, Indian

emora

Spearfish remora, swordfish sucker

Sucker, pega, common remora

White marlinsucker

Spearfish sucker, marlinsucker

Common green jack, cocinero, jurel, cocinero dorado Crevalle, toro, cavally, jiguagua, horse crevalle, jack

Orqueta, Xurel de Castilla, yellowtail jack

Mackerel scad, scad, round robin, cigarfish, antonino, quiaquia

Romero

Skipjack, jurel, monda, yellowtailed leatherjacket Bull yellowtail, turel, cohalla, toro, turel de Castilla California yellowtail, amberjack, amberfish, white

salmon, cavasina, jack

Pompanito

Horse mackerel, spanish mackerel, saurel, agii, jackfish, mackereljack, California horse mackerel, mack-

erel jack, Pacific jack mackerel

Horsefish, moonfish, jorobado, bluntnose shiner,

pugnosed shiner

Papagallo, gallo, pez de gallo

Common dolphinfish, mahi-mahi, dolphin, dorado,

dourade, common dolphin, small dolphin

Pomfret, smallscaled pomfret, castagnole, rondanin

Benten-uwo

Manzai-uwo, ebosh idai, hiredjiro-manzaiuo

Spotfin mojarra

Sargo Anisotremus davidsonii (Steindachner) Perch, blue bass, black croaker, china croaker, Cali-

fornia sargo, sargo raiado

Salema Xenistius californiensis (Steindachner) Bigeye bass, California salema, striped bass

Mojarra garabata, porgy Pacific porgy Calamus brachysomus (Lockington) Bairdiella

Bairdiella icistia (Jordan and Gilbert) Gulf croaker

This is a Gulf of California species introduced and es-

tablished in the Salton Sea.

Black croaker Cheilotrema saturnum (Girard) Chinese croaker, black perch, blue bass, black bass,

surf fish, red roncador, chinafin croaker

White seabass Cynoscion nobilis (Ayres) California white seabass, young sometimes called sea

trout, weakfish, king croaker, white croaker Cynoscion parvipinnis Ayres Caravina, corvina, shortfin seabass

Orangemouth corvina Cynoscion xanthulus Jordan and Gilbert Yellowmouth, corvina de las aletas amarillas

This is a Gulf of California species introduced and es-

tablished in the Salton Sea.

Menticirrhus undulatus (Girard)

White croaker Genyonemus lineatus (Ayres) Tomcod, kingfish, shiner, chenfish, herring, Pasadena

trout, carbinette, carbinette, roncador, tommy, cognard, little bass, little roncador, tommy croaker California whiting, corvina, surf fish, bagre, sucker,

corbina

Spotfin croaker Roncador stearnsii (Steindachner) Spot, golden croaker, surf fish, roncador

Medialuna californiensis (Steindachner)

Queenfish Seriphus politus Ayres Kingfish, tomcod, sea trout, shiner, herring, white

croaker, herring croaker

Yellowfin croaker Surf fish, yellowfinned roncador, Catalina croaker, Umbrina roncador Jordan and Gilbert

yellowtailed croaker, golden croaker

Goatfish

Mexican goatfish Mulloidichthys dentatus (Gill)

Shortfin corvina

California corbina

Opaleye

Halfmoon

Girella nigricans (Ayres) Green perch, black perch, blue-eyed perch, bluefish,

Catalina perch, button perch, greenfish, blue bass, blue-eye, blue perch, Jack Benny, California opaleye Blue perch, blue bass, medialuna, Catalina perch, California half-moon, Catalina blue perch, black

perch

Zebraperch Hermosilla azurea Jenkins and Evermann Convict fish, perch

Blue-bronze chub Kyphosus analogus (Gill) Salmena Pacific spadefish Chaetodipterus zonatus (Girard) Spadefish Designated common name

Scythemarked butterflyfish

Three-banded butterflyfish Pelagic armorhead Barred surfperch

Calico surfperch Redtail surfperch Kelp surfperch Shiner surfperch

Island surfperch Pile surfperch 7

Black surfperch Striped surfperch[†]

Spotfin surfperch Walleye surfperch

Silver surfperch Rainbow surfperch[†]

Reef surfperch Dwarf surfperch Sharpnose surfperch White surfperch

Rubberlip surfperch

Pink surfperch[†] Blacksmith Garibaldi Striped mullet California barracuda Scientific name

Chaetodon falcifer Hubbs and Rechnitzer

Scythe butterflyfish in AFS (1970). We follow Miller and Lea (1972) since scythemarked is more descript-

ive of the fish.

Chaetodon humeralis Gunther Pentaceros richardsoni Smith

Amphistichus argenteus Agassiz

Amphistichus koelzi (Hubbs) Amphistichus rhodoterus (Agassiz)

Brachyistius frenatus Gill

Cymatogaster aggregata Gibbons

Cymatogaster gracilis Tarp

Damalichthys vacca Girard

Embiotoca jacksoni Agassiz

Embiotoca lateralis Agassiz

Hyperprosopon anale Agassiz Hyperprosopon argenteum Gibbons

Hyperprosopon ellipticum (Gibbons)

Hypsurus caryi (Agassiz)

Micrometrus aurora (Jordan and Gilbert) Micrometrus minimus (Gibbons) Phanerodon atripes (Jordan and Gilbert)

Phanerodon furcatus Girard

Rhacochilus toxotes (Agassiz)

Zalembius rosaceus (Jordan and Gilbert) Chromis punctipinnis (Cooper) Hypsypops rubicundus (Girard) Mugil cephalus Linnaeus

Sphyraena argentea Girard

Scythe butterflyfish

Other common names

Doll fish, muñeca

Boarfish Barred perch, silver perch, surf perch, sand perch, sil-

ver surf fish

California porgie, humpback perch

Rosy surf fish, redtail seaperch, porgy, Oregon porgie

Kelp perch, kelp seaperch, brown seaperch

Shiner perch, shiner, sparada, minny, shiner seaperch, yellow shiner, bay perch, seven-eleven perch

Island seaperch

Pile perch, forktail perch, porgee, white perch, splittail perch, pile seaperch, dusky seaperch, porgee, silver

Black perch, common surf fish, bay perch, porgy, blue

perch, bay blackperch

Striped seaperch, striped perch, blue perch, rainbow perch, squawfish, crugnoli, blue surf fish, striped surf

fish, blue seaperch

Surf fish, silver perch, walleye surf fish, walleye seap-

erch, china pompano, white perch

Silver perch, shiner

Rainbow seaperch, rainbow perch, striped perch,

bugara, moharra

Reef perch Dwarf perch, shiner

Sharpnose seaperch White seaperch, Pacific white perch, split-tail perch, forktail perch, white surf fish, white perch, shiner

Rubberlip seaperch, rubberlip perch, porgee, alfione, pile perch, niggerlip, sprat, liverlip, buttermouth

Pink seaperch

Perch, blue perch, kelp perch, rock bass, black perch Ocean goldfish, garibaldi perch, golden perch

Mullet

Pacific barracuda, scoots, scooters, snake, barracuda,

log barracuda, barry

Listed as Pacific barracuda in AFS (1970). The occurrence of this species is primarily restricted to the Californias (Alta and Baja) north of Cape San Lucas, with another species occurring in the Gulf of California. We follow Roedel (1962) and use the attributive "California."

[†] A rule-of-thumb was applied in 1953 in naming embiotocids which called for using "surfperch" for those species which typically are surf dwellers, "seaperch" for those associated with the ocean but not primarily with the surf, and "perch" alone for those of varying habitat. This has led to some confusion at times, so we follow Miller and Lea (1972) and apply the term "surfperch" to all members of the family except the tuleperch, Hysterocarpus traskii, the only freshwater representative of the group. Those species names followed by a † were listed in Roedel (1962) and AFS (1970) following the above rule of thumb.

Blue bobo *
Yellow bobo Rock wrasse
Señorita

California sheephead

Pacific sandfish

Smooth ronquil

Northern ronquil

Smooth stargazer

Bay blenny
Rockpool blenny

Mussel blenny

Wolf-eel Island kelpfish Orangethroat pikeblenny

Deepwater blenny
Spotted kelpfish
Scarlet kelpfish
Striped kelpfish
Crevice kelpfish

Giant kelpfish
Sarcastic fringehead
Yellowfin fringehead
Onespot fringehead
Reef finspot
Giant wrymouth

Dwarf wrymouth*

Polydactylus approximans (Lay and Bennett) Polydactylus opercularis (Linnaeus)

Halichoeres semicinctus (Ayres) Oxyjulis californica (Gunther)

Pimelometopon pulchrum (Ayres)

Trichodon trichodon (Tilesius) Rathbunella hypoplecta (Gilbert)

Ronquilus jordani (Gilbert)

Kathetostoma averruncus Jordan and Bollman

Hypsoblennius gentilis (Girard) Hypsoblennius gilberti (Jordan)

Hypsoblennius jenkinsi Jordan and Evermann

Anarrhichthys ocellatus Ayres
Alloclinus holderi (Lauderbach)
Chaenopsis alepidota (Gilbert)
Cryptotrema corallinum Gilbert
Gibbonsia elegans (Cooper)
Gibbonsia erythra Hubbs
Gibbonsia metzi Hubbs
Gibbonsia montereyensis Hubbs

Heterostichus rostratus Girard Neoclinus blanchardi Girard Neoclinus stephensae Hubbs Neoclinus uninotatus Hubbs Paraclinus integripinnis (Smith)

Deloepis gigantea Kittlitz Lyconectes aleutensis Gilbert Blue threadfin, Pacific threadfin, threadfin

Yellow threadfin

California wrasse, parrot fish, wrasse Kelpfish, pescerey, kelp wrasse, butterfish

Sheephead, California redfish, fathead, humpy, redfish

Sandfish

Ronquil

Crevice blenny

Island klipfish

Pacific pikeblenny, pikeblenny

Deepwater klipfish Oscellated klipfish Scarlet klipfish

Seaweed kelpfish, weed klipfish Spotted kelpfish, crevice klipfish Kelpfish, eel, kelp blenny, butterfish

Kelp fish

Congo eel Red devil Designated common name Monkeyface-eel

Scientific name

Cebidichthys violaceus (Girard)

Other common names

Monkeyface prickleback, blenny eel, monkeyface blenny, eel, giant monkeyface-eel, California monkeyface-eel

Monkeyface prickleback in AFS (1970). The term "eel" is so ingrained in the vernacular of California fishermen with respect to this species, we must follow Roedel (1962) and apply the name, monkeyface-eel. This also helps reduce confusion in names of "blennylike" fishes in other families.

Anoplarchus insignis Gilbert and Burke

Anoplarchus purpurescens Gill

Central cockscomb, crested blenny, cockscomb

prickleback, cockscomb

Chirolophis nugator (Jordan and Williams) Ornamented blenny, mosshead prickleback Eel-blenny, Pacific snake prickleback

Belted blenny

Mosshead warbonnet Snake prickleback Lumpenus sagitta Wilimovsky Ribbon prickleback Phytichthys chirus (Jordan and Gilbert) Plagiogrammus hopkinsi Bean Plectobranchus evides Gilbert Poroclinus rothrocki Bean Xiphister atropurpureus (Kittlitz)

Black and white prickleback Whitebanded prickleback

Blenny-eel, rock blenny, rock-eel, black eel, eel, slick

Roedel (1962) lists this species as rock-eel; however, we follow AFS (1970) since this is not an eel even though fishermen commonly refer to it as one. The use of prickle-back also helps reduce confusion in names of "blenny-like" fishes in other families.

Apodichthys flavidus Girard Pholis clemensi Rosenblatt Pholis laeta (Cope)

Xiphister mucosus (Girard)

Pholis ornata (Girard) Pholis schultzi Hubbs

Ulvicola sanctaerosae Gilbert and Starks Xererpes fucorum (Jordan and Gilbert) Scytalina cerdale Jordan and Gilbert

Zaprora silenus Jordan

Icosteus aenigmaticus Lockington Ammodytes hexapterus Pallas Dormitator latifrons (Richardson) Penpoint blenny

Bracketed blenny Saddled blenny Slender gunnel

Fucus blenny Borrowing blenny

Brown ragfish, fantailed ragfish Inshore sandlance, sandlance

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Slender cockscomb High cockscomb

Crisscross prickleback Bluebarred prickleback Whitebarred prickleback* Black prickleback*

Rock prickleback

Penpoint gunnel Longfin gunnel Crescent gunnel* Saddleback gunnel* Red gunnel Kelp gunnel Rockweed gunnel Graveldiver

Pacific sandlance Pacific fat sleeper

Prowfish

Ragfish

Yellowfin goby

Arrow goby Blackeye goby

Tidewater goby Longjaw mudsucker Longtail goby

Cheekspot goby Bay goby * Kelp goby

Bluebanded goby Zebra goby * Shadow goby

Chameleon goby

Blind goby Snake mackerel

Oilfish Razorback scabbardfish*

Pacific scabbardfish

Pacific cutlassfish Slender tuna Bullet mackerel Frigate mackerel

Wavyback skipjack

Black skipjack Skipjack tuna

Escolar* Pacific bonito

Pacific mackerel

Acanthogobius flavimanus (Temminck and Schlegel)

Clevelandia ios (Jordan and Gilbert)

Coryphopterus nicholsii (Bean)

Listed as bluespot goby by Roedel (1962), but we follow AFS (1970) since blackeye goby is the more

commonly used name. Eucyclogobius newberryi (Girard)

Gillichthys mirabilis Cooper Gobionellus longicaudus (Jenkins and Evermann) Ilypnus gilberti (Eigenmann and Eigenmann)

Lepidogobius lepidus (Girard) Lethops connectens Hubbs

Halfblind goby in AFS (1970). Kelp goby seems much more appropriate so we follow Miller and Lea (1972) in designating this name.

Lythrypnus dalli (Gilbert) Lythrypnus zebra (Gilbert)

Quietula y-cauda (Jenkins and Evermann) Tridentiger trigonocephalus (Gill)

however, we follow Miller and Lea (1972) since this fish has the ability to change rapidly (within seconds)

its color pattern to either stripes or bars and the term "chameleon" is more appropriate.

This species is listed as trident goby by AFS (1970);

Typhlogobius californiensis Steindachner Gempylus serpens Cuvier Ruvettus pretiosus Cocco

Assurger anzac (Alexander) Lepidopus xantusi Goode and Bean

Scabbardfish in AFS (1970). We add the attributive "Pacific" to reduce confusion with razorback scabbardfish.

Trichiurus nitens Garman Allothunnus fallai Serventy

Auxis rochei (Risso) Auxis thazard (Lacepede)

Euthynnus affinis Cantor

Kawakawa in AFS (1970). We follow Roedel (1962) since the term "wavyback" is more descriptive of the

fish and more meaningful to California fishermen. Euthynnus lineatus Kishinouye

Euthynnus pelamis (Linnaeus)

Lepidocybium flavobrunneum (Smith)

Sarda chiliensis (Cuvier)

Scomber japonicus Houttuyn

Mud goby

Large scaled goby, crested goby, bluespot goby

Mudsucker, longjawed goby

Finescale goby Halfblind goby

Trident goby, specklefaced goby

Scabbardfish, black scabbardfish

Cutlassfish

Barred frigate mackerel, Pacific bullet mackerel Streaked frigate mackerel, wavyback frigate mackerel, Mexican skipjack, keokeo

Kawakawa, little tuna

Cross bred mackerel, Mexican little tunny

Skippy, striped tuna, oceanic bonito, skipjack, watermelon, victor fish, oceanic skipjack, artic bonito, tuna

Deepsea escolar

Bonito, California bonito, striped tuna, ocean bonito,

skipjack

Blue mackerel, chub mackerel, green mackerel, right mackerel, greenback mackerel, striped mackerel, green jack, American mackerel, zebra mackerel,

Chub mackerel in AFS (1970). We retain the name Pacific mackerel since it currently is so well established in the laws of California as well as in the ver-

nacular of the fishermen.

Monterey spanish mackerel

Sierra

Albacore

Yellowfin tuna Bigeye tuna Bluefin tuna

Swordfish

Louvar

Sailfish

Scomberomorus concolor (Lockington)

Scomberomorus sierra Jordan and Starks

Thunnus alalunga (Bonnaterre)

Thunnus albacares (Bonnaterre) Thunnus obesus Lowe

Thunnus thynnus (Linnaeus)

Monterey mackerel, spanish mackerel

Sierra mackerel, spanish mackerel, cero, spotted

mackerel

Bigeyed, patudo, tuna

Longfinned tuna, abrego, Pacific albacore, longfinned albacore, aliconghi, German, germo Yellowfinned albacore, Pacific yellowfin tuna, tuna

Tunny, great tunny, leaping tuna, California bluefin tuna, Pacific bluefin tuna, shortfin tuna, horse mackerel, ahi, great albacore, tuna

Pacific albacore, Thunnus germo; Pacific yellowtail, Neothunnus macr pterus; Pacific bigeye tuna, Parathunnus sibi; and California bluefin tuna. Thunnus saliens; in Roedel (1962). Subsequent to that time all these species have been placed in the genus Thunnus and synonymized with worldwide species; therefore, we have dropped the attributives Pacific and California as being inappropriate.

Xiphias gladius Linnaeus Luvarus imperialis Rafinesque

Istiophorus platypterus (Shaw and Nodder)

Roedel (1962) listed Pacific sailfish, Istiophorus greyi; however, subsequently all sailfish species from all oceans have been synonymized under a single cosmopolitan species

We therefore drop the attributive "Pacific" as being

inappropriative.

Black marlin Makaira indica (Cuvier) Blue marlin Makaira nigricans Lacepede Shortbill spearfish Tetrapturus angustirostris Tanaka Striped marlin Tetrapturus audax (Philippi)

Medusafish Icichthys lockingtoni Jordan and Gilbert Pacific butterfish Peprilus simillimus (Ayres)

Pacific pompano in Roedel (1962) and AFS (1970). This name is somewhat misleading since "pompano" is most frequently used in reference to certain fishes in the family Carangidae; therefore, we follow Miller

and Lea (1972) and designate the common name Pacific butterfish.

Tetragonurus cuvieri Risso

Pacific sanddah

Speckled sanddab Longfin sanddab Bigmouth sole

Smalleye squaretail

California halibut

Fantail sole

Broadbill, broadbill swordfish

Pacific sailfish

Spearfish, spikefish, sailfish Spearfish, spikefish, sailfish

Spearfish, spikefish, sailfish, Pacific marlin

Brown rubberfish

Pacific pompano, butterfish, California pompano,

California butterfish, pompano

Squaretail, escolar de natura, courpata, sea raven, Pa-

cific squaretail

Citharichthys sordidus (Girard) Sand dab, soft flounder, sole, mottled sanddab,

megrim Sand dab

Citharichthys stigmaeus Jordan and Gilbert Citharichthys xanthostigma Gillbert Sand dab, soft flounder, Catalina sanddab Hippoglossina stomata Eigenmann and Eigenmann Bigmouth flounder, bigmouth halibut

Paralichthys californicus (Ayres) Halibut, chicken halibut, bastard halibut, southern

halibut, alabato, Monterey halibut

Xystreurys liolepis Jordan and Gilbert Longfinned flounder, longfin sole, true petrale, fantail

halibut, fantail flounder

Arrowtooth flounder

Atheresthes stomias (Jordan and Gilbert)

Arrowtoothed sole, arrowtooth halibut, turbot, bastard

Deepsea sole

Flathead sole*

Pacific halibut

Rex sole

Rock sole

Embassichthys bathybius (Gilbert) Petrale sole Eopsetta jordani (Lockington)

> Glyptocephalus zachirus Lockington Hippoglossoides elassodon Jordan and Gilbert

Hippoglossus stenolepis Schmidt

Diamond turbot Hypsopsetta guttulata (Girard) Butter sole Isopsetta isolepis (Lockington)

> Scalyfin sole in Roedel (1962). We follow AFS (1970) since the name "butter sole" is so well estab-

lished in the vernacular.

Lepidopsetta bilineata (Ayres)

Slender sole Lyopsetta exilis (Jordan and Gilbert) Dover sole Microstomus pacificus (Lockington)

English sole Parophrys vetulus Girard

Starry flounder Platichthys stellatus (Pallas)

C-O turbot Pleuronichthys coenosus Girard

> C-O sole in AFS (1970). Members of this genus are generally called "turbot" and lumped under that name in reporting the California commercial catch. For that

reason we follow Roedel (1962).

Curlfin turbot Pleuronichthys decurrens Jordan and Gilbert

Spotted turbot Pleuronichthys ritteri Starks and Morris Hornyhead turbot Pleuronichthys verticalis Jordan and Gilbert Sand sole Psettichthys melanostictus Girard Greenland halibut* Reinhardtius hippoglossoides (Walbaum)

California tonguefish Symphurus atricauda (Jordan and Gilbert) Finescale triggerfish Balistes polylepis Steindachner Black triggerfish Melichthys niger (Bloch)

Black durgon in AFS (1970). We follow Miller and Lea (1972) since we feel the term "triggerfish" is more easily identified with the family.

Redtail triggerfish Xanthichthys mento (Jordan and Gilbert) Spiny boxfish Ostracion diaphanum Bloch and Schneider halibut, French sole, longjawed flounder, English

flounder

Speckled sole, blackmouth sole

Roundnosed sole, Jordan's flounder, California sole,

English sole, brill, soglia Longfinned sole, witch sole

Halibut, alabato, northern halibut, right halibut, genuine halibut, real halibut

Diamond flounder, turbot, halibut, sole

Scalyfin sole, scalyfinned flounder, Bellingham sole,

sole, rock sole

Broadfin sole, doublelined flounder, flounder, rock

sole, sole, gravel sole, roughback sole

Slender flounder, rough sole

Slippery sole, slime sole, shortfinned sole, rubber sole, smear dab, lemon sole, Chinese sole Pointednosed sole, common sole, California sole, lemon sole, sole, sharpnose sole

Rough jacket, great flounder, sole, English sole,

flounder, grindstone, California flounder, emery

flounder

C-O sole, mottled turbot

California turbot, curlfinned flounder, curlfin sole, and dab

Ritter's turbot

Sharpridged turbot, sharpridged flounder, sand dab

Fringe sole, spotted flounder, sand dab Halibut, right halibut, northern halibut, genuine halibut, real halibut, alabato, sole

Tongue sole, tonguefish

Pez puerco Black durgon

Scientific name Designated common name Other common names

Oceanic puffer* Lagocephalus (Linnaeus)

Bullseye puffer Sphoeroides annulatus (Jenyns) Globe fish, network puffer

Botete Sphoeroides lobatus (Steindachner) Gulf puffer Pacific burrfish* Chilomycterus affinis Gunther Burfish Spotted porcupine fish Diodon hystrix Linnaeus Porcupinefish

Porcupinefish in AFS (1970). We follow Miller and Lea (1972), since the attributive "spotted" helps

identify the species.

Common mola Mola mola (Linnaeus) Ocean sunfish, mola, sun fish, millstone, headfish

> We add the attributive common to name "mola" as listed by Roedel (1962) since it is by far the most common of the two molas in California waters. AFS (1970) list "ocean sunfish" which also is applied in the

vernacular.

Slender mola* Ranzania laevis (Pennant) Fingered limpet Acmaea digitalis Eschscholtz Finger limpet

Whitecap limpet Acmaea mitra Eschscholtz Whitecap, duncecap limpet Owl limpet Giant owl shell, owl shell Lottia gigantea Sowerby

Threaded abalone Haliotis assimilis Dall

Pink abalone Haliotis corrugata Gray Corrugated abalone, rough abalone

Black abalone Haliotis cracherodii Leach Green abalone Haliotis fulgens Philippi

Splendid abalone, splendid ear shell, blue abalone Pinto abalone Haliotis kamtschatkama Jonas Japanese abalone

Red abalone Haliotis rufescens Swainson

White abalone Haliotis sorenseni Bartsch

Flat abalone Haliotis walallensis Stearns Northern green abalone Volcano limpet Fissurella volcano Reeve Volcano keyhole limpet Giant keyhole limpet Megathura crenulata (Sowerby) Black keyhole limpet

Purple ringed top shell Calliostoma annulatum (Lightfoot) Calliostoma canaliculatum (Lightfoot) Channeled top shell

Ribbed top shell Calliostoma ligatum Gould Brown turban Tegula brunnea (Philippi) Brown tegula, brown top Black turban
Speckled turban
Monterey turban
Dusky turban
Red top
Wavy top
Eroded periwinkle

Checkered periwinkle Scaled worm shell (snail) California horn shell (snail)

Hoof shell (snail) Hooked slipper Onyx slipper Half slipper Spiny cup and saucer Lewis moon snail

Southern moon snail Chestnut cowry

California frog shell (snail)

Tegula funebralis (Adams)
Tegula gallina (Forbes)
Tegula montereyi Kiener
Tegula pulligo Gmelim
Astraea gibberosa (Dillwyn)
Astraea undosa (Wood)
Littorina planaxis Philippi

Littorina scutulata Gould

Serpulorbis squamigerus (Carpenter)
Cerithidea californica (Haldeman)
Hipponix antiquatus Linnaeus
Crepidula adunca Sowerby
Crepidula onyx Sowerby
Crepipatella lingulata (Gould)
Crucibulum spinosum (Sowerby)
Polinices lewisii (Gould)

Polinices reclusianus (Deshayes) Cypraea spadicea (Swainson) Bursa californica (Hinds) Black tegula, black top Speckled tegula, speckled top

Monterey tegula Dusky tegula Red turban

Wavy turban, wavy top turban, wavy turbine Flatbottomed periwinkle, flat periwinkle, gray littor-

ina

Scaly worm mollusk

Ancient hoof shell, horse hoof shell

Turban slipper shell

Pacific half slipper, wrinkled slipper shell Cup and saucer, cup and saucer limpet

Northern moon snail, western moon shell, Lewis's

bullseye

Recluz's moon snail, Recluz's bullseye

Nutbrown cowry California frog mollusk Designated common name Scientific name Other common names

Belcher's murex Forreria belcheri (Hinds) Giant forreria, Belcher's chorus shell
Lurid rock Ocenebra lurida (Middendorff) Lurid ocenebra, lurid murex
Poulson's rock Ocenebra poulsoni (Carpenter)

Festive murex Pteropurpura festiva (Hinds) Festive rock shell
Three winged murex Pteropurpura triolata (Sowerby) Three-winged rock shell
Kellet's whelk Kelletia kelletii (Forbes)

Beatic olive Olivella baetica Carpenter Beatic olivella, beatic dwarf olive, brown olive
Purple olive Olivella biplicata (Sowerby) Purple olivella, purple dwarf olive, California purple

California cone Conus californicus Hinds
California bubble Bulla gouldiana Pilsbry Gould's bubble, cloudy bubble
Gould's paper bubble Haminoea vesicula (Gould) White bubble shell, bubble shell, blister paper bubble

Green paper bubble Haminoea virescens (Sowerby) Green bubble shell
San Diego peapod Adula diegensis (Dall)
Peapod borer Adula falcata (Gould) Falcate date mussel, peapod shell, hooked peapod

Ribbed horsemussel Gukensia demissa (Dillwyn) Ribbed mussel

Date mussel Lithophaga plumula (Hanley) Rock boring mussel, rock eating mussel, rockdwelling mussel, rock borer

Fat horsemussel Modiolus capax (Conrad) Capax horsemussel, horsemussel Straight horsemussel Modiolus rectus (Conrad) Giant horsemussel, horsemussel, straight mussel California seamussel Mytilus californianus Conrad California mussel, mussel, sea mussel Bay mussel Mytilus edulis Linnaeus Edible mussel, black mussel, blue mussel Platform mussel Septifer bifurcatus (Conrad) Branch-ribbed mussel

 Platform mussel
 Septifer bifurcatus (Conrad)
 Branch-ribbed mu

 Giant Pacific oyster
 Crassostrea gigas (Thunberg)
 Japanese oyster

 Eastern oyster
 Crassostrea virginica (Gmelin)
 Virginia oyster

Native oyster Ostrea lurida Carpenter Lurid oyster, Olympia oyster, California oyster

Speckled scallop Aequipecten aequisculcatus (Carpenter)

Rock scallop Hinnites multirugosus Gale

Weathervane scallop Pecten caurinus (Gould) San Diego scallop Pecten diegensis Dall Pearly jingle Anomia peruviana d'Orbigny

Abalone jingle Pododesmus cepio (Gray) Agate chama Chama pellucida Sowerby

California reversed chama Pseudochama exogyra (Conrad)

Basket cockle Clinocardium nuttalli (Conrad) Smooth giant cockle Laevicardium elatum (Sowerby)

Spiny cockle Trachycardium quadragenarium (Conrad)

White amiantis Amiantis callosa (Conrad) Banded chione Chione californiensis (Broderip)

Smooth chione Chione fluctifraga (Sowerby)

Wavy chione Chione undatella (Sowerby)

Northern quahog Mercenaria mercenaria (Linnaeus) Roughsided littleneck Protothaca laciniata (Carpenter) Common littleneck Protothaca staminea (Conrad)

Thinshelled littleneck Protothaca tenerrima (Carpenter) Smooth Washington clam Saxidomus giganteus (Deshayes)

Saxidomus nuttalli Conrad Common Washington clam

Japanese littleneck Ruditapes semidecussata (Reeve) Pismo clam Tivela stultorum (Mawe) Ford's venus Ventricolaria fordii (Yates) California mactra Mactra californica Conrad

Narrow dish clam Spisula catilliformis (Conrad) Hemphill dish clam Spisula hemphilli (Dall) Tresus nuttalli (Conrad)

Gaper

Bay scallops, speckled pecten

Purplehinged pecten, giant rock scallop, rock pecten,

purplehinged scallop

San Diego pecten

Lawless shell, jingle shell, Peruvian jingle, rock

oyster, lamp anomia, common jingle

Blister oyster

Clear jewel box, jewel box, agate jewel box, agate

rock ovster

Reversed chama, reversed jewel box, reversed rock

oyster

Nuttall's cockle

Giant egg cockle, giant cockle

Forty ribbed cockle, giant Pacific cockle, forty ribbed

heart clam

White venus, sea cockle

California chione, banded cockle, California venus,

hardshell cockle

Smooth cockle, smooth Pacific venus, smooth Cali-

fornia venus, hardshell cockle

Wavy cockle, frilled California venus, hardshell

cockle

Quahog, round clam, hardshell clam Folded littleneck, netted carpet shell

Littleneck clam, ribbed carpet shell, common Pacific littleneck, native littleneck, rock cockle, hardshell,

Tomales Bay cockle, rock clam Finest carpet shell, thinshelled cockle

Giant saxidome, giant rockdweller, big neck clam,

butter clam, money shell

Washington clam, Nuttall's saxidome, bigneck clam,

butter clam, money shell

Great tivela, thickshell tivela

California surf clam

Dish clam

Hemphill's surf clam

Big neck, Pacific gaper, horse clam, gaper clam, sum-

mer clam, otter shell

Designated common name Scientific name

Yellow apolymetis Florimetis obesa (Deshayes)
Bentnose clam Macoma nasuta (Conrad)
White sandclam Macoma secta (Conrad)
Bodega tellen Tellina bodegensis Hinds
Wedge clam Donax californicus Conrad
Bean clam Donax gouldii Dall

Sunset clam Gari californica (Conrad)

Deepwater gari Gari edentula (Gobb)

Purple clam Sanguinolaria nuttalli Conrad

Clipped semele Semele decisa (Conrad)

California jackknife clam Tagelus californianus (Conrad)

Northern razor clam Siliqua patula (Dixon)

Rosy razor clam Solen rosaceus Carpenter Sickle razor clam Solen sicarius Gould Softshell clam Mya arenaria Linnaeus

Checked borer Platyodon cancellatus (Conrad)

Geoduck Panopea generosa (Gould)
Mud piddock Barnea subtruncata (Sowerby)
Scalesided piddock Parapholas californica (Conrad)
Flaptipped piddock Penitella penita (Conrad)
Wartnecked piddock Pholadidea ovoidea (Gould)

Rough piddock

Giant Pacific chiton Cryptochiton stelleri (Middendorff)

Zirfaea pilsbryi Lowe

Other common names

Bentnose macoma, tellens, mud clam

White macoma, white sand macoma, giant macoma

Tellen

California wedge clam, California bean clam Common Pacific wedge shell, little bean clam,

Gould's wedge shell California sunset shell Giant sunset shell, sunset clam

Flat clam, bark semele

Short razor clam, California short razor, jackknife

clam, razor clam

Flat razor shell, Pacific razor clam, California razor

fish, razor clam, sea clam Jackknife clam, razor clam

Blunt razor shell, jackknife clam, razor clam Common mya, long clam, nanninose, soft clam, east-

ern softshell clam, mud clam

Flat toothed clam, chubby mya, crossbarred

broadtooth clam

Giant panopaea, geoduc, gweduc

Pacific piddock

California piddock, borer, piddock Common piddock, rock piddock, borer

Oval piddock

Pilsbry's piddock, piddock, borer

Gumboot, giant chiton, gumboot chiton, giant sea

cradle

Conspicuous chiton
Lined chiton
Black chiton
Mossy chiton
Tosicella lineata (Wood)
Mossy chiton
Mopalia muscosa Gould
Twospot octopus
Common octopus
Octopus bimoculatus (Verrill)
Common octopus
Market squid
Loligo opalescens Berry

Sea batPatiria miniata (Brandt)Giant spined starfishPisaster giganteus (Stimpson)

Common starfish Pisaster ochraceus (Brandt)
Fragil sea urchin Allocentrotus fragilis (Jackson)

Giant red sea urchin Strongylocentrotus franciscanus (Agassiz)
Purple sea urchin Strongylocentrotus purpuratus (Stimpson)

Showy chiton, sea cradle Redlined chiton

Black Katy chiton, black Katy Moss chiton, mossy mopalia

Devilfish

Common squid, sea arrow, squid, opalescent squid,

inkfish, calamari

Webbed starfish, webbed seastar, batstar, bat starfish Giant starfish knobby starfish, southern two-colored starfish, spiny star, contrasting colored starfish

Purpole starfish, ochre starfish

Red sea urchin, giant red urchin

Purple urchin

Designated common name
Sand dollar
Dendraster excentricus (Eschscholtz)
Common sand dollar
Hoort urchin
Lovania cordifornia Lutton

 Heart urchin
 Lovenia cordiformis Lutken
 Sea porcupine

 Big acorn barnacle
 Balanus cariosus (Pallas)
 White buckshot barnacle

 Common acorn barnacle
 Balanus glandula Darwin
 White buckshot barnacle

Large barnacle
Red and white barnacle
Balanus nubilus Darwin
Red and white barnacle
Balanus tintinnabulum (Linnaeus)
Pink barnacle
Thatched barnacle
Tetraclita squamosa Darwin

Pacific goose barnacle Mitella polymerus (Sowerby) Goose barnacle, gooseneck barnacle
Driftwood goose barnacle Lepas anatifera Linnaeus Ship goose barnacle
Brine shrimp Artemia salina Leach

Ridgeback prawn Eusicyonia ingentus Burkenroad
Pacific ocean shrimp Pandalus jordani Rathbun Ocean shrimp
Spot prawn Pandalus platyceros Brandt

Red rock shrimp Hippolysmata californica Stimpson Red striped shrimp, large transparent shrimp, striped tidepool shrimp

Slender green shrimp Hippolyte californiensis Holmes

 Redbanded transparent shrimp
 Spirontocaris picta (Stimpson)
 Brokenback shrimp

 California pistol shrimp
 Crangon californiensis (Holmes)
 Pistol shrimp

 Pistol shrimp
 Crangon dentipes (Guerin)
 Snapping shrimp

 Franciscan bay shrimp
 Crago franciscorum (Stimpson)
 California shrimp

Franciscan bay shrimp Crago franciscorum (Stimpson) California shrimp
Blacktailed bay shrimp Crago nigricauda (Stimpson) Blacktailed shrimp
Spotted bay shrimp Crago nigromaculata (Lockington)
California spiny lobster Panulirus interruptus (Randall) Rock lobsters

Beach ghost shrimp Callianassa affinis Holmes
Bay ghost shrimp Callianassa californiensis Dana Red ghost shrimp, California ghost shrimp, rocky-

Shore ghost shrimp
Giant ghost shrimp
Callianassa gigas Dana
Blue mud shrimp
Upogebia pugettensis (Dana)

California giant hermit crab

California hermit crab

California hermit crab

Pagurus californiensis (Benedict)

Compressed wrist hermit crab

Pagurus hermpillii (Benedict)

Hairy hermit crab

Pagurus hirsutiusculus (Dana)

Blueclawed hermit crab

Pagurus samuelis (Stimpson)

Box crabLopholithodes foraminatus (Stimpson)Pelagic red crabPleuroncodes planipes StimpsonTuna crab, squat lobster, red crabSpiny mole crabBlepharipoda occidentalis RandallSpiny sand crab, giant sand crab

 Porcelain mole crab
 Lepidopa myops Stimpson
 Porcelain sand crab

 Sand crab
 Emerita analoga (Stimpson)
 Common sand crab

 Thickclawed porcelain crab
 Pachycheles rudis Stimpson
 Thickclawed crab

 Flat porcelain crab
 Petrolisthes cinctipes (Randall)
 Porcelain crab

Scientific name Designated common name Other common names

Purple crab Randallia ornata (Randall) Globe crab, purple globe crab Elbow crab Heterocrypta occidentalis (Dana) Shieldbacked kelp crab Pugettia producta (Randall) Northern kelp crab, kelp crab

Graceful kelp crab Pugettia gracilis Dana Loxorhynchus grandis Stimpson

Sheep crab Champion masking crab Loxorhynchus crispatus Stimpson Moss covered crab, masking crab, moss crab

Graceful decorator crab Oregonia gracilis Dana Rock crab Cancer antennarius Stimpson Spotbellied rock crab, common rock crab Yellow crab Cancer anthonyi Rathbun Slender crab

Cancer gracilis Dana Market crab, edible crab, big crab, common crab, Pacific edible crab, Pacific coast edible crab, commer-Dungeness crab Cancer magister Dana

cial crab This species is called Dungeness crab in most areas along the Pacific coast of the United States and

Canada. In California it has been called the market crab; however, to promote uniformity in the nomen-clature of common names, we designate Dungeness crab as the common name in California. Red crab Cancer productus Randall Red rock crab, rock crab

Portunus xantusii (Stimpson) Swimming crab Purple shore crab Hemigrapsus nudus (Dana) Yellow shore crab Hemigrapsus oregonensis (Dana) Mud crab, mudflat crab, green shore crab

Striped shore crab Pachygrapsus crassipes Randall Lined shore crab

Fiddler crab Uca crenulata (Lockington)

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