## Title

Fish Bulletin 149. The California Marine Fish Catch For 1968 and Historical Review 1916-68

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STATE OF CALIFORNIA
THE RESOURCES AGENCY

## DEPARTMENT OF FISH AND GAME

FISH BULLETIN 149
The California Marine Fish Catch For 1968
and
Historical Review 1916-68

by
RICHARD F. G. HEIMANN
and
JOHN G. CARLISLE, JR. 1970


FIGURE 1
(2)

FIGURE 1

## TABLE OF CONTENTS

CALIfORNIA MARINE EISH CATCH FOR 1968
Foreword
Page
Explanation of Tables ..... 6
Common and Scientific Names of Fishes, Crustaceans, and Mollusks in the 1968 Catch ..... 9
Annual Landings and Shipments (Figure 2) ..... 10
Annual Landings and Shipments, 1916 through 1968 ..... 11
Landings and Shipments of Leading Species Ranked by Pounds ..... 11
Number of Licensed Commercial Fishermen ..... 12
Number of Registered Fishing Boats by Length ..... 12
Origin of Shipments ..... 13
Origin of Commercial Fish Landings ..... 14
Monthly Landings and Shipments-Statewide ..... 16
Monthly Landings and Shipments-by Area ..... 18
Value and Poundage, Annual Landings and Shipments by Areas ..... 30
Value of Landings and Shipments by Ports and Areas ..... 33
Partyboat Sport Catch, 1959-1968 ..... 42
Inshore Bait Landings, 1968 ..... 43
Live Bait Catch, 1964-68 ..... 43
Appendix A-Species Composition of Salmon Landings ..... 44
HISTORICAL REVIEW 1916-1968 ..... 47

## FOREWORD

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

This report for 1968 is the 28th in the series of catch bulletins. The first, published in 1929, contained the records of the 1926 and 1927 commercial fish catches.

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

Credit for this publication belongs to the personnel of the Marine Fisheries Statistics Unit who process the many documents necessary for its publication. Special acknowledgment is given to the wardens along the coast and the clerks in the field offices whose efforts insure the completeness of the records. We appreciate as well the cooperation of the many wholesale fish dealers and canners.

## 1. EXPLANATION OF TABLES

The tables in this bulletin summarize the statistics of the various fishery operations in California during 1968. 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, Appendix A shows the species composition of the salmon catch for 1968.

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

The Department annually publishes a circular which enumerates some of the fishery products produced from the catch. The 1968 figures are contained in circular No. 43, "Statistical Report of Fresh, Canned, Cured, and Manufactured Fishery Products for 1968" (Heimann and Carlisle, 1969).

### 1.1. SOURCE OF DATA

Data on each commercial landing, inshore bait delivery, and import are recorded on receipts by fish dealers or processors at the time of delivery. Copies of these documents are transmitted to the Department twice each month. For each transaction, the dealer is required to provide the weight of each species and the 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.) are also required. In addition, the specific area where the fish were caught and the type of gear used are usually reported.

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

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

Clerical personnel at field offices at Eureka, Monterey, Terminal Island, and San Diego maintain contact with fish dealers and local Fish and Game Wardens to insure that the records are accurate and
transmitted promptly. All data received by the Department are carefully edited to insure correctness and coded to facilitate processing. The data are then punched into cards and summarized with electric tabulating machines.

### 1.2. STATISTICAL AREAS

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

### 1.3. SPECIES

The common and scientific names of the species reported in 1968 are listed in Table 1. Some varieties are reported only collectively when, for economic or other reasons a specific separation is not practical. A further combination of species is made in preparing the tables.

The "Miscellaneous (Animal Food)" category consists of a variety of low value species caught by trawling. Since it is impractical for the 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 the 1968 animal-food category are as follows:

| Species | Percent | Pounds |
| :--- | :--- | :--- |
| Sablefish | 30.5 | 789,838 |
| Arrowtooth flounder | 16.0 | 414,341 |
| Hake | 13.3 | 344,421 |
| Rex sole | 12.6 | 326,294 |
| Dover sole | 11.5 | 297,808 |
| Rockfish | 8.5 | 220,119 |
| English sole | 4.5 | 116,534 |
| Twenty-one other species | 3.1 | 80,279 |
|  | 100.0 | $2,589,634$ |

Salmon catches reported in the tables are for all species combined. However, biologists from the Department's Marine Resources Branch sample the commercial and sport salmon fisheries to determine the species composition of the catches and to obtain estimates of the unreported catch from skiffs. 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 catch bulletin. Appendix A details the salmon catch for 1968.

### 1.4. CONDITION

Most fish and shellfish are landed in a round condition; however, some species, such as salmon and swordfish, are usually eviscerated or cleaned before being brought ashore. The condition of fish landed or shipped into the State cannot always be determined, so the tables summarize the 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. The packed weight is estimated to be 15.5 percent of the live weight for Pacific oysters; 10.9 percent for eastern oysters.

Landings reported in measurements other than weight are equated to pounds using conversion factors determined by periodic sampling. The factors used in 1968 were:

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

### 1.5. VALUE

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

### 1.6. INSHORE BAIT

The inshore bait fishery takes several kinds of fish and invertebrates from bays, rivers, and intertidal regions for sale as bait. Records of this fishery have been published as a separate summary in the Catch Bulletin since 1963. Conversion factors used for inshore bait for 1968 were as follows:

| Crab, sand | .041 pound per dozen |
| :--- | :--- |
|  | 4.5 pounds per gallon |
| Crab, shore | .013 pound per dozen |
| Mudsucker | .465 pound per dozen |
| Mussel | 80 pounds per sack |
| Sculpin, staghorn | .465 pound per dozen |
| Shrimp, ghost | .082 pound per dozen |

### 1.7. REFERENCES

Heimann, Richard F. G., and John G. Carlisle, Jr. 1969. Statistical report of fresh, canned, cured and manufactured fishery products for 1968. Calif. Dept. Fish and Game, Circular, (43) : 1-15.

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

TABLE 1


TABLE 1
Common and Scientific Names of Fishes, Crustaceans, and Mollusks in the 1968 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 pound | Year | Thousands of pounds |
| :---: | :---: | :---: | :---: |
| 1916 | 95,003 | 1941 | 1,528,892 |
| 1917 | 209,877 | 1942 | 1,173,414 |
| ${ }_{1919} 1918$ | ${ }^{261,134}$ | ${ }_{1943}^{1943}$ | 1,234,049 |
|  | 222,004 | 1945 | 1,216,501 |
| 1921. | 135,348 | 1946 | 919,822 |
| ${ }_{1}^{1922}$ | ${ }^{182,343}$ | 1947 | 795,499 |
| 1923 | 253,875 | 1948 | 900,467 |
| 1924 | 340,446 | 1949 | 1,135,339 |
| 1925 | 437,502 | 1950 | 1,366,676 |
| 1926 | 394,964 | 1951 | 904,114 |
| 1927. | 487,166 | 1953 | 694,996 |
| 1928 | 583,527 | 1953 | ${ }^{618,919}$ |
| ${ }_{1930}^{1929}$ | 856,854 | 1954. | 713,410 710,713 |
|  | 702,189 | 1955 | 710,713 |
| 1931 | 502,390 | 1956 | 772,551 |
| ${ }_{1933}^{1932}$ | 556,139 | 1957. | 738,550 |
| 1933 | $\begin{array}{r}821,805 \\ 1390798 \\ \hline\end{array}$ |  | 832,919 713423 |
| 1935. | $1,3990,798$ $1,448,017$ | ${ }_{1960}^{1959}$ | \%94,663 |
| 1936 | 1,764,900 |  | 725,253 |
| 1937 | 1,362,984 |  | 663,107 |
| 1938 | 1,310,596 | 1963 | 592,899 |
| 1940-... | ${ }_{1}^{1,297,518}$ | ${ }_{19655^{*}}$ | 544,480 |
|  |  |  |  |
|  |  |  | 591,533 589.028 |
|  |  | 1968--- | 567,214 |

* 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

| 1967 |  |  |  | 1968 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Species | Rank | Thousands of pounds | Thousands of dollars | Species | Rank | Thousands of pounds | Thousands of dollars |
| Yellowfin tuna | 1 | 167,252 | \$25,387 | Yellowfin tuna | 1 | 212,238 | \$36,438 |
| Skipjack tuna | 2 | 114,959 | 11,767 | Albacore tuna | -. 2 | 76,100 | 18,237 |
| Albacore tuna. | 3 | 71,748 | 17,193 | Skipjack tuna- | 3 | 60,674 | 7,959 |
| Anchovy.- | 4 | 69,609 | 701 | Jack mackerel | 4 | 55,668 | 2,122 |
| Jack mackerel | 5 | 38,181 | 1,447 | Anchovy | 5 | 31,076 | 284 |
| Pacific bonito | 6 | 21,219 | 891 | Squid | 6 | 24,933 | 553 |
| Squid.---------------------- | 7 | 19,602 | 438 | Market crab | 7 | 16,016 | 3,535 |
| Bluefin tuna | 8 | 13,736 | 1,667 | Pacific bonito. | 8 | 14,922 | 620 |
| Market crab | 9 | 11,716 | 2,033 | Bluefin tuna | 9 | 13,016 | 1,968 |
| Rockfish.- | 10 | 9,799 | 680 | Rockfish.. | 10 | 9,444 | 668 |
| Salmon. | 11 | 7,402 | 3,945 | Dover sole | 11 | 8,536 | 578 |
| Dover sole. | 12 | 7,215 | 466 | Salmon. | 12 | 6,952 | 4,014 |
| English sole | 13 | 5,822 | 510 | English sole | 13 | 5,811 | 501 |
| Abalone.- | 14 | 4,422 | 860 | Abalone | 14 | 4,475 | 1,124 |
| Sablefish | 15 | 3,798 | 315 | Sablefish | 15 | 3,219 | 229 |
| Petrale sole | 16 | 2,769 | 355 | Pacific mackerel. | 16 | 3,133 | 168 |
| Miscellaneous (animal food). | 17 | 2,596 | 52 | Petrale sole.-- | 17 | 2,947 | 389 |
| Rex sole.. | 18 | 1,766 | 149 | Miscellanzous (an |  |  |  |
| Bigeye tuna | 19 | 1,481 | 207 | food) | 18 | 2,590 | 52 |
| Ocean shrimp. | 20 | 1,413 | 164 | Ocean shrimp | 19 | 2,275 | 250 |
| All others. |  | 12,523 | 2,221 | Rex sole---- | 20 | 1,931 | 163 |
|  |  |  |  | All others |  | 11,258 | 1,935 |
| Totals |  | 589,028 | \$71,448 | Total |  | 567,214 | \$81,787 |

[^0]TABLE 3
Landings and Shipments of Leading Species Ranked by Pounds

TABLE 4


* April 1 to March 31.

TABLE 4
Number of Licensed Commercial Fishermen
TABLE 5
Number of Registered Fishing Boats by Length

| License year* | $\begin{aligned} & \text { Up to } \\ & 24 \text { feet } \end{aligned}$ | $\begin{gathered} 25 \text { to } \\ 39 \text { feet } \end{gathered}$ | $\begin{aligned} & 40 \text { to } \\ & 64 \text { feet } \end{aligned}$ | 65 to 84 feet | $\begin{aligned} & 85 \text { to } \\ & 99 \text { feet } \end{aligned}$ | 100 feet and over | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1967-68. | 1,550 | 1,773 | 1,081 | 118 | 25 | 99 | 4,646 $\dagger$ |
| 1968-69.. | 1,677 | 1,829 | 1,080 | 137 | 25 | 106 | $4,854 \ddagger$ |

* April 1 to March 31.
$\dagger$ The owners of 485 boats were issued fishing party licenses in 1967-68.
$\ddagger$ The owners of 492 boats were issued fishing party licenses in 1968-69.
TABLE 5
Number of Registered Fishing Boats by Length


## TABLE 6

| Shipped from: Species | Pounds shipped to each area |  | Total pounds |
| :---: | :---: | :---: | :---: |
|  | Los Angeles | San Diego |  |
| Oregon, Washington, Canada and Alaska: Tuna, albacore. | 16,246,863 | 38,054 | 16,284,917 |
| Mexico and Central America: <br> Tuna, bluefin <br> Tuna, skipjack. | 80,098 310, 1,835 1,535 | --.. | 80,098 310, $1.835,583$ |
| Japan: <br> Tuna, albacore... Tuna, yellowfin... | ${ }_{44,978,436}^{22,998656}$ | (800,755 | ${ }_{46,136,367}^{23,39,41}$ |
| China (Formosa): Tuna, albacore Tuna, yellowfin. | 329,800 $1,043,465$ |  | ${ }_{1} 1,043,465$ |
| Malaya: <br> Tuna, albacore. . Tuna, bizeye. Tuna, yellowfin. | $\begin{aligned} & 9,224,6,688 \\ & 6,68,+25 \\ & 6,68,909 \end{aligned}$ | 484,854 339,493 | $\begin{aligned} & 9,709,4625 \\ & 7,0964,4025 \\ & 7,0925 \end{aligned}$ |
| Philippines: Tuna, yellowfin. | 540,358 | -..- | 540,358 |
| South Pacific Islands: <br> Tuna, albacore <br> Tuna, bigiye. <br> Tuna, yellowfin |  | 775,412 $\ldots$ $69, \overline{176}$ |  |
| Africa: <br> Tuna, albacore. Tuna, yellowfin. | $\begin{aligned} & 1,468,276 \\ & 1,261,548 \end{aligned}$ | 4,406,974 | $\begin{aligned} & 5,875,250,250 \\ & 1,2,21,54 \end{aligned}$ |
| Total pounds. | 113,211,298 | 8,684,889 | 121,906,187 |

- Beginning in 1965 only tuna shipments are recorded.

TABLE 6
table 7


TABLE 7
Origin of Commercial Fish Landings and Volume of Shipments Into California During 1968

TABLE 7-Continued
Origin of Commercial Fish Landings and Volume of Shipments Into California During 1968

| Species | Landings of catches from |  |  |  | Tuna shipments* | Grand total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | California waters | Waters north of State | Waters south of State | Total pounds |  |  |
| Crustacean: |  |  |  |  |  |  |
| Crab, market. | $16,015,581$ 351,657 | .-.. | -... | $16,015,581$ 351,657 | ---- | 16,015,581 |
| Crab, spider. | 187 | - |  | ${ }_{187}$ |  | ${ }_{187}$ |
| Lobster, spiny . | 312,483 | -...- |  | 312,483 | -*- | 312,483 |
| Prawn, ridgeback | 426 | .... | .... | 426 | .... | 426 |
| Prawn, spot.. | 7,239 | ---* | -..- | 7,239 | -..- | 7,239 |
| Shrimp, bay-... | 10,465 |  |  | 10,465 |  | 10,465 |
| Shrimp, ocean... | 2,269,920 | 4,850 | $\cdots$ | 2,274,770 | -... | 2,274,770 |
| Mollusk: |  |  |  |  |  |  |
| Abalone. | 4,474,842 |  | -... | 4,474,842 | ---* | 4,474,842 |
| Octopus... | 17,444 | 219 | -... | 17,663 | -..- | 17,663 |
| Oyster, eastern. | 16,166 |  |  | 16,166 |  | 16,166 |
| Oyster, giant Pacific- | 645,553 | -..- | -... | ${ }^{645,553}$ | -... | 645,553 |
| Squid -.......--ilus | $\begin{array}{r} 24,932,713 \\ 1,842 \end{array}$ |  | ----- | $24,932,713$ 1,842 |  | $24,932,713$ 1,842 |
| Total pounds. | 218,299,224 | 3,778,969 | 223,229,197 | 445,307,390 | 121,906,187 | 567,213,577 |

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

TABLE 7
Origin of Commercial Fish Landings and Volume of Shipments Into California During 1968

| Monthly Landings and Shipments Into California During 1968 |  |  |  |  |  |  |  |  |  |  |  |  |  | $\stackrel{\circ}{6}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Species | January | February | March | April | May | June | July | Ausu | September | Oetober | November | December | Total pounds |  |
| Noings: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Ashehovy. |  |  | $\begin{aligned} & 433,4,45 \\ & { }_{4}^{19} 9 \\ & 199,068 \end{aligned}$ |  |  |  |  |  | $\left.\begin{array}{c} 2,410,3,35 \\ 4,935 \\ 3,693,032 \end{array}\right)$ |  | 10,435,460 | ${ }_{\text {c, }}^{6,459,040}$ |  |  |
| Blackemith |  |  |  |  |  |  |  |  |  |  | , |  |  |  |  |
| Banito. Paifie........- |  |  |  | ${ }^{227,103}$ |  |  |  |  | $\begin{aligned} & 3,99,0,2322 \\ & 232 \end{aligned}$ |  |  |  | 14,92:.929 |  |
| Carp. | 119,325 |  |  | come |  |  |  | coi.92 |  |  | ${ }^{41,210}$ | cick |  |  |
| Flo |  |  |  |  |  |  |  |  | - $\begin{array}{r}4,3850 \\ 104,218\end{array}$ |  |  |  |  |  |  |
| Plounder arrowtoon | 1.870 |  |  |  |  |  | 11,666 | 1,300 | 432 | --.- | $\ldots$ | $\cdots{ }^{-\cdots}{ }^{773.501}$ |  |  |
| Grouper.- | 49,736 | 25 |  | ${ }_{180}^{170}$ |  |  |  | 17,690 | 10,150 | 18,350 | 38,040 | ${ }_{\text {3, }}^{3}$, 272 | ${ }^{230,913}$ | \% |
| Hatmonom. | 1.278 | 65 | $\begin{gathered} 750 \\ 91,017 \end{gathered}$ |  | (7,7.858 <br> 42.368 | 59,555 |  | \% $\begin{gathered}7,650 \\ 56,351 \\ 19\end{gathered}$ | ${ }_{25}^{5,583}$ | ${ }_{19,353}$ | ${ }^{23,883}$ | 22,433 | ${ }^{671,545}$ | 硡 |
| Halibut Ciliforia | 53,669 | 121,811 |  |  |  |  |  |  |  |  |  |  |  |  |
| Hardhead. ${ }_{\text {derain }}$ |  | 22.255 | 71 | ${ }_{10}^{40.23150}$ | (12,385 |  |  |  |  | 23,060 | ${ }^{22,386}$ | ${ }^{41,855}$ | ${ }_{\substack{243581}}^{2589}$ |  |
| Herring, Pacife. | 36,780 | 16,220 |  |  |  |  |  |  |  |  |  |  | 1, 1.95 |  |
| Lincoolorijor- |  |  | - 42.055 | 5,477,071 | ${ }_{5,747 \times 393}^{90.595}$ |  |  |  |  |  |  |  |  |  |
| Mackerel, Pacifio. | 179,634 | 93,140 |  |  |  |  |  |  |  |  | (re3,388 |  |  |  |
| ${ }^{\text {Preatye. }}$ | 18.900 | 15.8537 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ${ }_{\text {Pomem }}$ Pompano. P | ${ }^{765,419}$ | 1,013,520 |  |  |  |  |  |  |  |  |  | 396,615 | 9,444,396 |  |
| Sablefish. | 291,802 | 403,834 | 25,296 |  | $\begin{gathered} 241,199 \\ \hline \end{gathered}$ |  |  |  |  | ${ }^{429,503}$ | 457,64 | 299,823 |  |  |
| Salmon.: | 47,002 | 55,415 |  |  |  |  |  |  |  | ${ }_{6}^{67.337}$ | 47,065 | 25,702 |  |  |
| Sealipe S.... | ${ }^{12,408}$ | - ${ }_{\text {2, }}^{13,722}$ |  |  |  |  |  | ${ }^{+3}$ | 3,610 | 6,02 | 6,922 | 9,788 | ${ }_{125,175}^{12,058}$ |  |
| Sea base, gant. | [15.719 |  | -6.122 |  | ${ }^{9} 9.493$ |  |  |  |  |  |  |  |  |  |
| Shark, wi | 43.235 | ${ }_{18,342}$ | ${ }^{13,700}$ | ${ }_{\text {15,071 }}^{12}$ | 73.186 |  |  |  |  |  |  |  |  |  |  |  |
| Steephead, Cailiornia | (1.1.32 |  | (12, | - $\begin{aligned} & 1.258 \\ & 12.500\end{aligned}$ | ${ }_{1}^{1.934}$ |  |  |  |  |  |  | 11,323 | 12,360 18,350 |  |
|  |  |  |  |  |  |  |  |  |  | 38,711 |  | 22,021 |  |  |
| Smelt wite Sote | ${ }^{150,734}$ |  |  |  |  |  |  |  |  | $1.13,939$ <br> $\substack{458,529 \\ 236,199}$ |  |  |  |  |
| Sole, Engligh. | ${ }_{285,697}^{72937}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |

TABLE 8
Monthly Landings and Shipments Into California During 1968


TABLE 8-Cont'd.


TABLE 9
Monthly Landings of Commercial Fishing Boats in the Eureka Area During 1968

TABLE 9-Cont'd.

| TABLE 10Monthly Landings of Commercial Fishing Boats in the San Francisco Area During 1968 * |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| speciss | Janury | Fetrumy | Masch | April | May | June | ${ }^{\text {July }}$ | Augast | Sepember | October | November | December | ${ }_{\text {Total }}^{\substack{\text { Tounds } \\ \text { pound }}}$ |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | $\cdots$ |  | $\ldots$ | $\ldots$ | $\frac{1,000}{100}$ | 2.000 | $\stackrel{3}{3,480}$ | ${ }^{7} 7.023$ | ${ }^{2.900}$ | 7,900 | ${ }_{7}^{7.550}$ | ${ }^{13,40}$ |  |
| cisabers. |  |  |  |  |  |  |  | $\begin{aligned} & 1,031 \\ & 3,650 \\ & 3,0 \end{aligned}$ | ${ }^{2,294}$ | $\underset{\substack{1,7855 \\ 1,300}}{ }$ | ${ }_{\text {a }}^{4,6,63}$ | ${ }^{32.600} 6$ | $\substack{297,73 \times \\ 15,628}$ |
| Floter |  |  | ${ }^{36,718}$ | 5,994 | ( |  |  |  | 21,44 | 16,25 | 19,382 | 18,10 |  |
|  |  |  |  | ${ }_{\substack{\text { i, } \\ 10.351}}^{1.351}$ | ${ }_{\text {c, }}^{\text {c.35] }}$ | ${ }_{2}^{2,7 \mathrm{in5}}$ |  | ${ }_{\substack{16890}}^{1000}$ | 11.232 |  |  | ${ }^{\text {a }}$ |  |
| Heringe, Pacife | 36,80 | $\begin{aligned} & 16,200 \\ & 1,2820 \end{aligned}$ |  |  |  |  |  |  | 175 |  |  |  | ${ }_{3}^{33275}$ |
|  |  |  |  |  | 17 | ${ }^{29,9850} 3$ | ${ }_{20, i 102}^{2506}$ | $\begin{gathered} 3, i+68 \\ 1, i, 6 i \end{gathered}$ |  |  | cien |  |  |
| Peechere, |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Roctiab... | $\underbrace{2}_{\substack{87,611 \\ 12,250}}$ | coin |  |  |  |  |  |  |  |  | 5.192 | come | (ex |
|  | ${ }^{23,998}$ | 22i,iio | ${ }^{13,3,5000}$ |  |  |  |  |  | 2. | ${ }^{30.969} 5$ | $22.880^{3} 5$ | ${ }^{1.1 .290}$ |  |
| ${ }_{\text {Share }}^{\text {Shatara }}$ | $\underbrace{\substack{\text { and }}}_{\text {13, } 1.45}$ | cisk | $\underset{\substack{3.545 \\ \text { c, }, 50}}{ }$ |  |  |  | 3030 | 5550 |  |  | ${ }_{\text {l }}^{6,1165}$ | 1.904 |  |
|  | ${ }^{\text {3 }}$ | (eition | (eation |  | (18, |  |  |  | ¢, |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| petrale |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sole. mixecllaneus |  |  |  |  |  |  |  |  |  |  |  | ${ }_{1}^{1,3.350}$ |  |
|  | ${ }^{7} \mathrm{i}, 55$ | $\stackrel{\text { 11,5iol }}{\ldots}$ | ${ }_{5} 9.860$ | 3,6,60 | 1.8680 | $\stackrel{2080}{ }$ | $\begin{gathered} 12,980 \\ 1: 880 \\ \hline 80 \end{gathered}$ |  |  |  |  |  |  |

TABLE 10
Monthly Landings of Commercial Fishing Boats in the San Francisco Area During 1968


TABLE 10-Cont'd.

TABLE 11


TABLE 11
Monthly Landings of Commercial Fishing Boats in the Monterey Area During 1968


TABLE 11-Cont'd.


TABLE 12
Monthly Landings of Commercial Fishing Boats in the Santa Barbara Area During 1968


0

TABLE 12-Cont'd.


TABLE 13
Monthly Landings and Shipments of Commercial Fish Into the Los Angeles Area During 1968


TABLE 13-Cont'd.


TABLE 14
Monthly Landings and Shipments of Commercial Fish Into the San Diego Area During 1968


TABLE 14-Cont'd.

TABLE 15
Value ef Landings and Shipments of Commercial Fish Into California by Area, 1568

\begin{tabular}{|c|c|c|c|c|c|c|c|}
\hline Species \& Fureka \& \[
{\underset{\text { Francisco* }}{\text { San }}}^{\text {San }}
\] \& Monterey \& Santa
Barbara \& \[
\underset{\text { Angeles }}{\text { Los }}
\] \& \[
\begin{gathered}
\substack{\text { San } \\
\text { Diego }}
\end{gathered}
\] \& Total \\
\hline \multicolumn{8}{|l|}{\multirow[t]{2}{*}{\begin{tabular}{l|l|l|l|l|l|l|l}
\hline \begin{tabular}{l} 
LANDINGS: \\
Fish: \\
Achovy
\end{tabular} \& \& 51,463 \& \(8.501,799\) \& \(4.007,925\) \& \(18.514,929\) \& \& 31076,116
\end{tabular}}} \\
\hline \& \& \multirow[t]{2}{*}{\[
\begin{aligned}
\& 51,463 \\
\& 82.573
\end{aligned}
\]} \& \multirow[t]{2}{*}{\[
\begin{gathered}
8,501,799 \\
\$ 83,818
\end{gathered}
\]} \& 4,007,925 \& \[
\begin{aligned}
\& 18,514,929 \\
\& 8,6759
\end{aligned}
\] \& ---- \& \({ }_{\text {31 }}^{31,076,116}\) \\
\hline Barracuda, Califoruia - \& \multirow[t]{2}{*}{} \& \& \& \multirow[t]{2}{*}{8, \({ }_{\text {9,386 }}\)} \& \({ }^{97,119}\) \& \multirow[t]{2}{*}{33,995
86,049} \& 140.500
830200 \\
\hline Plackemith \& \& .... \& --.. \& \& \% \({ }^{523,013}\) \& \& \multirow[t]{2}{*}{(137,634} \\
\hline Blacksmith \& -. \& -..: \& -... \& \&  \& -... \& \\
\hline Bonito, Pacific \& \multirow[t]{2}{*}{} \& \multirow[t]{2}{*}{7809
887
810
970} \&  \& 254,770
810,015 \& \multirow[t]{2}{*}{\[
\begin{array}{r}
14,6,69.94 \\
860,880 \\
\hline
\end{array}
\]} \& \multirow[t]{2}{*}{4,770
81,989
81} \& \({ }_{\text {1 }}^{14,921,929}\) \\
\hline Caberon \& \& \& \multirow[t]{2}{*}{\% \(\begin{array}{r}12,736 \\ 8511\end{array}\)} \& \multirow[t]{2}{*}{6,333
8209} \& \& \& 20,106 \\
\hline \& \multirow[t]{2}{*}{} \& 297,993 \& \& \& \& 89 \& \multirow[t]{2}{*}{\({ }_{825102}^{297,793}\)} \\
\hline \& \& \& \& 8209 \& .-. \& \(\cdots\) \& \\
\hline Croaker, w \& -... \&  \& 195, 157 \&  \& \({ }^{708.583}\) \& \multirow[t]{2}{*}{8,415
8867} \& \({ }^{941,304}\) \\
\hline Flounder \& \multirow[t]{2}{*}{\({ }^{530,146}\)} \& \multirow[t]{2}{*}{248,693
\(\$ 16,725\)} \& \multirow[t]{2}{*}{59,764
84.763} \& \multirow[t]{2}{*}{17,469
81,381} \& \multirow[t]{2}{*}{842,72
85
812
812} \& \& 8856,157 \\
\hline \& \& \& \& \& \& \& \multirow[b]{2}{*}{13,400} \\
\hline Flounder, arrowtooth.. \& \[
\begin{array}{r}
826,788 \\
10,400 \\
\$ 520
\end{array}
\] \& \[
\begin{aligned}
\& 3,000 \\
\& \hline
\end{aligned}
\] \& \& \& \multirow[b]{2}{*}{73,080} \& ---- \& \\
\hline Flyingfish. \& \multirow[t]{2}{*}{} \& \multirow[t]{2}{*}{\%} \& \multirow[t]{2}{*}{....} \& -.... \& \& 531 \& \({ }^{73.591}\) \\
\hline Grouper \& \& \& \& \multirow[b]{2}{*}{\[
-\cdots
\]} \& \multirow[t]{2}{*}{\({ }_{847,812}^{207,632}\)} \& \multirow[t]{2}{*}{23,281
85,583} \& \multirow[t]{2}{*}{230.913
853,395} \\
\hline \& \& \multirow[t]{2}{*}{\[
\begin{gathered}
\begin{array}{c}
525 \\
8 \\
810
\end{array}
\end{gathered}
\]} \& \multirow[t]{2}{*}{\[
\begin{aligned}
\& 5,490 \\
\& 8150
\end{aligned}
\]} \& \& \& \& \\
\hline \& \& \& \& \multirow[t]{2}{*}{479
89} \& \& \(\cdots\) \& \(\underset{\substack{6,494 \\ 8171}}{ }\) \\
\hline Halfmoon \& --.- \& \multirow[t]{2}{*}{} \& \& \& \multirow[t]{2}{*}{\[
\begin{array}{r}
19,422 \\
\$ 4,481 \\
130,680
\end{array}
\]} \& \multirow[t]{2}{*}{\begin{tabular}{l}
30,195 \\
\(\begin{array}{l}8,053 \\
38,763\end{array}\) \\
\hline 8.85
\end{tabular}} \& \multirow[t]{2}{*}{\begin{tabular}{l} 
49,617 \\
810,534 \\
\hline
\end{tabular}} \\
\hline Halibut, Californ \& 150 \& \& \multirow[t]{2}{*}{79,340
820,029} \& \({ }^{231,718}\) \& \& \& \\
\hline Halibut Paife \& \& \multirow[t]{2}{*}{191,003
\(\$ 45,192\)} \& \& \multirow[t]{2}{*}{} \& \multirow[t]{2}{*}{\$38,903} \& \$12,685 \& ¢77,654
\(\mathbf{8 1 5 5 , 8 2 2}\) \\
\hline \& \begin{tabular}{|l}
127 \\
833
\end{tabular} \& \& \& \& \& --- \& \({ }^{123}\) \\
\hline Hardhead \& \multirow[t]{2}{*}{--.--} \& 243,5 \& \& \& --.- \& \& 243,581 \\
\hline Herring, Pacific \& \& \[
\begin{aligned}
\& \$ 23,369 \\
\& 53,235 \\
\& \hline
\end{aligned}
\] \& \multirow[t]{2}{*}{\[
\begin{gathered}
304, \overline{6} 34 \\
\$ 22,777
\end{gathered}
\]} \& --.- \& -.. \& -... \&  \\
\hline Hitch. \& \& \multirow[t]{2}{*}{} \& \& -... \& -...: \& .-... \& 839.57\% \\
\hline Lingeod \& \multirow[t]{2}{*}{} \& \& \multirow[t]{2}{*}{\% 71.318} \& \multirow[t]{2}{*}{} \& \multirow[t]{2}{*}{\[
\begin{array}{r}
595 \\
8105
\end{array}
\]} \& \multirow[t]{2}{*}{\({ }_{837}^{427}\)} \& \\
\hline \& \& \[
\begin{aligned}
\& 188,337 \\
\& 814,858 \\
\& 80
\end{aligned}
\] \& \& \& \& \& 1,094,054 \\
\hline Mackerel, jack \& 245
812 \& 30 \& 960,612
\(\$ 40,711\) \& \multirow[t]{2}{*}{\[
\begin{gathered}
4,251,015 \\
\$ 159,414
\end{gathered}
\]} \& cis, \(50.455,700\) \& \multirow[t]{2}{*}{} \& \multirow[b]{2}{*}{\({ }_{\text {\$ }}^{3,122,43,46}\)} \\
\hline Mackerel, Pacif \& \multirow[t]{2}{*}{} \& \multirow[t]{2}{*}{--...} \& \multirow[t]{2}{*}{\(\cdots\)} \& \& ci, \(\begin{aligned} \& 3,128,499 \\ \& 8167271 \\ \& 18,29\end{aligned}\) \& \& \\
\hline Opaleye. \& \& \& \& \[
\cdots
\] \& \& \[
\begin{aligned}
\& 4.997 \\
\& \hline 476 \\
\& 375
\end{aligned}
\] \& \multirow[t]{2}{*}{\[
\begin{gathered}
167.757 \\
107173 \\
10,173 \\
\hline
\end{gathered}
\]} \\
\hline Perch. \& \multirow[t]{2}{*}{} \& \multirow[t]{2}{*}{\[
\begin{aligned}
\& 22,608 \\
\& 56,142 \\
\& \hline
\end{aligned}
\]} \& 13.727 \& \multirow[t]{2}{*}{18.990} \& \begin{tabular}{l} 
82,103 \\
41,277 \\
\hline
\end{tabular} \& \multirow[t]{2}{*}{\[
\begin{gathered}
10,151 \\
8.151 \\
8.1549
\end{gathered}
\]} \& \\
\hline \& \& \& \multirow[t]{2}{*}{\[
\begin{array}{r}
82,291 \\
\begin{array}{c}
71,748 \\
818,220
\end{array} \\
\hline
\end{array}
\]} \& \& \multirow[t]{2}{*}{\[
\begin{array}{r}
89,000 \\
195,439
\end{array}
\]} \& \& \multirow[t]{2}{*}{} \\
\hline Pompano, \& \% \& \(\cdots\) \& \& \[
\begin{gathered}
8,627 \\
2,185 \\
6
\end{gathered}
\] \& \& 81,949 \& \\
\hline Rookfish \& 2.904,119 \& \(54,1,131\)
851,832 \& \multirow[t]{2}{*}{\[
\begin{aligned}
\& 2,394,265 \\
\& \$ 162,221 \\
\& \hline
\end{aligned}
\]} \& \multirow[t]{2}{*}{\[
\begin{array}{r}
8431 \\
2,618,00 \\
8155,315 \\
\hline 005
\end{array}
\]} \& \({ }_{\text {cke }}^{656.547}\) \& \multirow[t]{2}{*}{\({ }_{\substack{286.964 \\ 841,462}}\)} \& 9,444,396 \\
\hline Sablefish \& \multirow[t]{2}{*}{} \& \multirow[t]{2}{*}{\[
\begin{array}{r}
137,280 \\
2,55,528 \\
2,198,806
\end{array}
\]} \& \& \& \multirow[t]{2}{*}{} \& \& \multirow[t]{2}{*}{(} \\
\hline Salmon. \& \& \& \[
\begin{array}{r}
1,329,969 \\
873,260 \\
572,605 \\
\hline
\end{array}
\] \& \[
\begin{array}{r}
995 \\
897 \\
116,142 \\
885820
\end{array}
\] \& \& ---- \& \\
\hline \& \multirow[t]{2}{*}{\(\$ 2,187,714\)
275.438
8} \& \multirow[t]{2}{*}{\(81,370,543\)
265,903} \& \begin{tabular}{|c}
\(\$ 379,941\) \\
\(\mathbf{1 7 2}\) \\
\hline
\end{tabular} \& \& \begin{tabular}{|c}
35 \\
819
\end{tabular} \& \&  \\
\hline Sanddab \& \& \& \({ }_{812,546}\) \& \({ }_{841}\) \& \begin{tabular}{l}
148 \\
828 \\
\hline
\end{tabular} \& 78 \& 784,622

85879 <br>
\hline Sardins. \& \& \& ${ }^{1,280}$ \& 19.980 \& 100,821 \& 2,007 \& 124,088 <br>
\hline Sculpin. \& \& \& \& 83,996
187 \& \$10,568 \& -117,304 \& ¢15,293

125,175 <br>
\hline Sea bass, giant. \& \& \& 66 \& 837 \& 82,737 \& ${ }^{\text {83, }} 1.836$ \& \$34,610 <br>
\hline iant \& \& \& \& \$163 \& ${ }_{824 \times \times 21}$ \& ${ }_{83}^{20,713}$ \& 158,421
$\$ 28,720$ <br>
\hline Seabas, white. \& \& 409 \& 14,999 \& 43,657 \& 703,399 \& 99,416 \& 861,880 <br>
\hline Shark.. \& 1.683 \& 59,689 \& 86,620 \& $\underset{\substack{\text { ¢16,128 }}}{ }$ \& - $820.6 .352{ }^{86,107}$ \& 年 \& \$259,242
499947 <br>
\hline \& \$105 \& \$2,568 \& \$2,250 \& \$16,499 \& \$11,113 \& 817,127 \& 849.662 <br>

\hline Sheephead, Californi \& \& \& \& | 881 |
| :--- |
| 85 |
| 85 | \& \& \$8,923 \&  <br>

\hline Skate \& 51,711 \& 62.725 \& ${ }^{68,690}$ \& ${ }^{3.155}$ \& 69 \& \& 186,350 <br>
\hline \& \& 8785 \& 81,139 \& 8232 \& 87 \& \& \$2,632 <br>
\hline
\end{tabular}

TABLE 15
Value of Landings and Shipments of Commercial Fish Into California by Area, 1968

TABLE 15-Continued Value of Landings and Shipments of Commercial Fish Into California by Area, 1968

| Species | Eureka | San <br> Francisco* | Monterey | Santa Barbara | $\begin{aligned} & \text { Los } \\ & \text { Angeles } \end{aligned}$ | San <br> Diego | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Smelt. | 177,281 | 82,419 | 49,317 | -..- | 133,470 | 575 | 443,062 |
|  | \$ 811.507 | 88,855 | \$5,118 | .... | 85,881 | \$65 | \$31,426 |
| Smelt, whitebait. | 232,117 819692 | 5,944 8926 | --. |  | ---- | ---- | ${ }^{238,061}$ |
| Sole, Dover. | 8,191,524 | 255,692 | 56,615 | 31,690 |  | ----- | 8,535,521 |
|  | 8557,315 | \$15,020 | \$3,278 | \$1,901 |  |  | \$577.514 |
| Sole, English. | 3,358,803 | 1,697.246 | 439,844 | 315,300 | 245 |  | 5,811,438 |
|  | \$298,040 | 8141,607 | 836,504 | \$24,656 | \$24 |  | \$500,831 |
| Sole, petrale. | 1,975,782 | 490,375 | 248.362 | 231,900 | 166 | 20 | 2,946,605 |
| Sole, rex. | 1,519,939 | - | 836,528 124 | 830,169 81,412 | 825 | 5 | 3389,044 $1,930,583$ |
|  | \$129,492 | \$17,551 | \$9,248 | \$6,659 | --*- |  | 8162,950 |
| Sole, sand. | 2.847 | 179,161 | 22,052 | 7,316 | -- |  | 211,376 |
| Sole, miscellaneous | 8307 600 | \$21,375 | \$2,649 | 8879 |  |  | \$25.210 |
|  | 850 | \$ 862 | \$1,186 | $\begin{array}{r}7,886 \\ \$ 858 \\ \hline\end{array}$ | 891 | 2,026 $\$ 518$ | 29,614 $\$ 3.165$ |
| Swordfish. |  |  |  | 37,582 | 116,948 | 44,868 | 199,398 |
|  |  |  |  | \$24,743 | 879,223 | \$29,963 | \$133,929 |
| Tuna, albacore. | 3,441,113 | 963,26 | 1,421,311 | 2.131,415 | 5,703,788 | 1,416,272 | 15,077,159 |
| Tuna, bigeye. | \$645,445 | \$180,60 |  | \$399,641 | $\$ 1,212,505$ 31,109 | $\$ 284,341$ 78,449 | $82.989,060$ 109,558 |
|  |  | ---- | -.--- | ...- | 84,859 | 812,407 | \$17,266 |
| Tuna, bluefin. | ...- | -... | -..- | .... | 10,050,936 | 2,885,339 | 12,936,275 |
| Tuna, skipjack. | --- | ...- | --- | 354 | 45,176,235 | 14,058,052 | 59.234,641 |
|  |  |  | -... | $\$ 47$ | 85,912,085 | \$1,858,288 | \$7,770,420 |
| Tuna, yellowfin. |  |  | .... |  | 112,123,459 | 40,903,050 | 153,026,509 |
| Turbot. | 1,956 | 50,270 | 85 | 17,193 | 817,44,740 | 86,368,029 | \$23,812,769 |
|  | \$162 | \$2,476 | 84 | \$1,041 | - | -...- | 69,504 $\$ 363$ |
| Wahoo-. | ...- | -..-- | -... | -...- | 6,190 | 120 | 6,310 |
|  |  |  | ..... |  | \$1,426 | 818 | \$1.444 |
| Whitefich, ocean | ---- | -...- |  | 86 | \$958 | $\begin{array}{r}1.856 \\ \$ 148 \\ \hline\end{array}$ | 1,647 $\$ 212$ |
| Yellowtail, California.- | --.- | --..- | ---- | 7 | 132,752 | 30,418 | 163,177 |
|  |  |  |  | \$1 | \$15,090 | \$3,000 | 818,091 |
| Miscellaneous. | 12 | 349 | 943 | 12 | 255 | 98 | 1,669 |
|  | 84 | \$29 | \$57 | \$1 | \$49 | 816 | \$156 |
| food)... | $\begin{array}{r} 1,911,543 \\ 838,231 \end{array}$ | -..-- | -...- | $\begin{aligned} & 678.091 \\ & \$ 13,562 \end{aligned}$ | -...- |  | $\begin{array}{r} 2,589,634 \\ 851,793 \end{array}$ |
| Crustacean: |  |  |  |  |  |  |  |
| Crab, market. | 15,175,854 | 836,677 | 1,021 | 2,029 | ---- | --.- | 16,015,581 |
| Crab, rock | $83,250,980$ 815 | \$283,157 | $\$ 401$ 194 | (\%9,031 | 234,585 | 7,032 | \$3,535,376 |
|  |  |  | 89 | 86,999 | 829,777 | 8429 | \$37,214 |
| Crab, spider |  |  |  | 187 |  | .... | 187 89 |
| Lobster, spiny . | -...- | -...- | -..-- | 112,272 | 108,805 | 91,406 | 312,483 |
|  | … |  | $\cdots$ | \$96.125 | \$104,435 | \$92,605 | \$293.165 |
| Prawn, ridgebae |  |  | --.- | 426 |  |  | 426 |
| Prawn, spot. |  |  | 7,239 | Sti |  |  | 7,239 |
|  |  |  | 86,515 | --.- |  |  | \$0.515 |
| Shrimp, bay |  | 10,465 $\$ 2,491$ | -... | -... |  |  | 10.465 |
| Shrimp, ocean_ | 2,083,960 | 190,810 | .-. |  |  |  | \$2,491 $\mathbf{2}, 274,770$ |
|  | \$229,222 | \$20.999 |  | --* |  |  | \$250,221 |
| Mollusk: |  |  |  |  |  |  |  |
| Abalone. | -..- | 15,191 | ---- | 2,155,133 | 1,563,540 | 740,978 | 4,474,842 |
|  | 2,492 | 84,184 14.589 | 381 | 8572,314 | \$372,314 | \$174,763 | 81,123.575 |
| Octop | \$91 | \$614 | 849 | \$2 | 849 | \$3 | 17,663 8808 |
| Oyster, eastern... | ...- | 16.166 | -. | ...- | .-.- | ...- | 16,166 |
| Oyster, giant Pacific... | 365,180 | ${ }_{139,643}$ |  | 140,730 |  |  | $\$ 47.928$ 645.553 |
|  | \$84,904 | \$32,467 |  | 832.720 |  |  | \$150.091 |
| Squid.-. |  | 190 | 14,578,091 | 2,660,395 | 7,693,532 | 505 | 24,932.713 |
| Miscellaneous mollusk. |  |  | \$398,550 | \$37,318 | 8117,389 | \$15 | 53.21 |
| Miscellaneous molusk. | \$259 | \$1,702 | -.. | $\cdots$ | --- |  | 1,842 $\$ 1,961$ |
| Total pounds. | 48,876,622 | 9,788,224 | 31,863,143 | 20,552,278 | 273,103,965 | 61,123,158 | 445,307,390 |
| Total value....... | 88,143,764 | \$2,451,387 | \$1,623,832 | \$1,802,317 | \$30,258,554 | \$9,415,653 | 853,695,507 |

TABLE 15
Value of Landings and Shipments of Commercial Fish Into California by Area, 1968

FISH BULLETIN 149
TABLE 15-Continued
Value of Landings and Shipments of Commercial Fish Into California by Area, 1968

| Species | Eureka |  | Monterey | Santa Barbara | $\underset{\text { Angeles }}{\text { Los }}$ | $\underset{\text { Diego }}{\mathrm{San}_{\text {Din }}}$ | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| SHIPMENTS:Fish: |  |  |  |  |  |  |  |
| Tuna, albacore. |  |  |  |  | ${ }^{54,516,523}$ | ${ }_{\text {81, }}^{6,538,876}$ | ${ }_{\text {c }}^{6151,022,572}$ |
| Tuna, bigeye. |  |  | -..-- | -- | 152,390 |  | 152,390 |
| Tuna, bluefin. | -... | … | $\ldots$ | --.. | 817,408 <br> 80,098 | .-.- | $\begin{array}{r}\text { \$17,408 } \\ 80,098 \\ \hline\end{array}$ |
|  |  |  |  |  | 811,895 |  | 811,895 |
| Tuna, skipjack. |  |  |  | -..- |  | ---- | 1,439,186 |
| Tuna, yellowfin. |  |  |  |  | 57,023,101 | 2,188,840 | 59.211,941 |
|  | .-.- | ....- | .-. | .-.. | \$12,154,321 | \$470,746 | \$12,625,067 |
| Total pounds. Total value |  |  |  |  | $113,211,298$ <br> $825,996,144$ | $\begin{array}{\|c} 8,694,889 \\ \$ 2,094,622 \end{array}$ | $121,906,187$ $\$ 28,090,766$ |
| GRAND TOTALPOUNDS. |  | 9,788,224 |  |  |  |  |  |
| grand total value. | 88,143,764 | \$2,451,387 | 81,623,832 | 81,802,317 | 856,254,698 | 811,510,275 | 881,786,273 |

TABLE 15
Value of Landings and Shipments of Commercial Fish Into California by Area, 1968
TABLE 16


TABLE 16
Value of Landings by Port, Eureka Area, 1968

Value of Landings by Port, Eureka Area, 1968

|  | Value | Pounds |
| :---: | :---: | :---: |
| Trinidad |  |  |
| Market crab.- | \$127.871 | 596.915 136979 |
| All other species. | ${ }^{60} 290$ | 1,544 |
| Port totals.. | \$193,618 | 735,438 |
| Albion |  |  |
| Salmon........... | 886.631 <br> 1,199 | $\underset{\substack{154,990 \\ 5,603}}{ }$ |
| Port totals. | \$87,830 | 160,593 |
| Point Arena |  |  |
| Salmon-.- | 856,766 | 103.582 |
| All other species. | 83 | 455 |
| Port totals.- | 856,849 | 104037 |
| EUREKA AREA TOTALS. | \$8,143,764 | 48,876,622 |

TABLE 16
Value of Landings by Port, Eureka Area, 1968

TABLE 17
Value of Landings by Port, San Francisco Area, 1963*

|  | Value | Pounds |
| :---: | :---: | :---: |
| Bodega Bay |  |  |
| Salmon.. | 8597.989 | 971.563 |
| Albacore.... | 76,986 62.509 | 410,616 184.701 |
| English sole. | 36,394 | 436,208 |
| Ocean shrimp | 19,597 | 178,075 |
| Rockfish. | 15,771 | 141,968 |
| Petrale sole. | 14,436 | 103,099 |
| Smelt... | 8,563 | 80,332 |
| All other species. | 20,225 | 279,353 |
| Port totals. | \$852,470 | 2,785,915 |
| San Francisco |  |  |
| Salmon....- | 8167,243 128,997 | ${ }_{381,162}^{265,340}$ |
| English sole | 86,765 | 1,039,930 |
| Petrale sole | 45,675 | 326,190 |
| Rockfish.. | 30,883 | 380.545 |
| California halibut | 23,908 | 101,047 |
| Sand sole. | 19,216 | 161.066 |
| Flounder. | 16,079 10,963 | 193,174 163,010 |
| Rex sole. | 10,087 | 117,795 |
| Lingeod. | 8,541 | 108,264 |
| Dover sole. | 8.040 | 136,874 |
| Albacore. | 5,389 | 28,741 |
| Sablefish. | 4,828 | 119,884 |
| All other species. | 8,169 | 159,682 |
| Port totals. | 8574,783 | 3,682,704 |
| Point Reyes |  |  |
| Salmon.... | \$204,095 | 324,295 |
| Market crab..... | 35,287 27 | 104,265 |
| English sole....-- | 18,195 | 218,080 |
| Petrale sole.- | 8,554 | ${ }^{61.086}$ |
| All other species | 24,122 | 289,894 |
| Port totals. | \$317,751 | 1,115,892 |
| Sausalito |  |  |
| Salmon... | \$179,418 | ${ }_{336,277}^{2857}$ |
| Market crab. | 16,228 | 47,952 |
| Pacific herring. | 6,553 | 32.300 |
| All other species. | 3.232 | 58,180 |
| Port totals. | \$268,550 | 760,366 |
| Princeton |  |  |
| Salmon. | \$154,036 | 243.861 |
| Market crab | 38,970 | 115.149 |
| California halibut. | 18.511 | 78.235 |
| All other species. | 6,853 | 57,592 |
| Port totals. | \$218,370 | 494,837 |
| Oakland |  |  |
| Salmon... | \$61,476 | 98,514 |
| All other species | 35,088 2,303 | $\begin{array}{r} 187,150 \\ 7,974 \end{array}$ |
| Port totals. | \$98,867 | 293,638 |
| Tomales Bay |  |  |
| Eastern oyster....- | \$47,928 | 16,166 |
| Giant Pacific oyster | 4,861 9,693 | $\begin{aligned} & 20,9006 \\ & 51,226 \end{aligned}$ |
| Port totals... | \$62,482 | 88,298 |

TABLE 17
Value of Landings by Port, San Francisco Area, 1963

TABLE 17-Continued
Value of Landings by Port, San Francisco Area, 1968*


* Includes Sacramento area landings.

TABLE 17
Value of Landings by Port, San Francisco Area, 1963


TABLE 18
Value of Landings by Port, Monterey Area, 1968

TABLE 19
Value of Landings by Port, Santa Barbara Area, 1968

|  | Value | Pounds |
| :---: | :---: | :---: |
| Morro Bay |  |  |
| Albacore. | \$300,070 | 1,600,372 |
| Abalona. | ${ }^{178,690}$ | 663.828 |
| Rockfish-ri-.-...... | 80.102 32 | $1,350,149$ 140,730 |
| Salmon.-......-- | 17,620 | 126,669 |
| Petrale sole. | 15,196 | 116,808 |
| Jack mackerel | 10,482 | 279,520 |
| California halibut. | 8,744 | 29,376 |
| Lingeod. | 4,523 | 47,881 |
| All other species. | 25,950 | 407,797 |
| Port totals. | 8674,097 | 4,663.130 |
| Santa Barbara |  |  |
| Abalone. | \$292,211 | 1,109,032 |
| Spiny lobster | 79,111 | 92,400 |
| Californis halibut. | 33,136 | 111,322 |
| Swordfish.. | 22,773 | 34,590 |
| English sole.. | 15,652 | 200,143 |
| White seabass. | 10,733 | 28.114 |
| Miscellaneous (animal food). | 9,005 | 450,236 |
| Petrala sole. | 8.783 | 67,513 |
| Shark.. | 7,910 | 76.890 |
| Rock crab. | 6,588 | 102,623 |
| All other species. | 9,317 | 97,000 |
| Port totals. | \$564,200 | 3,549,422 |
| Port Hueneme |  |  |
| Jack mackerel. | \$148,932 | 3,971,495 |
| Anuid....- | 37,318 30,494 | $2,660,395$ $4,007,925$ |
| California halibut. | 16,318 | 54,820 |
| Abalone. | 13,129 | 50,947 |
| Pacific bonito. | 8,578 | 218,233 |
| Spiny lobster- | 8.377 | 9,784 |
| All other species. | 4,822 | 39,237 |
| Port totals. | \$267,968 | 11,012,836 |
| Avila |  |  |
| Albacore | \$99,370 | 529,971 |
| Abalone. | 72,709 | 269,905 |
| Salmon.. | 56,335 | 86,619 |
| Shark | 6,070 | 60,380 |
| Petrale sole. | 5,745 | 44,158 |
| Rockfish. | 5,119 | 76,746 |
| English sole.... | 4,506 10,817 | 57,624 76,019 |
| All other species. | 10,847 | 76,019 |
| Port totals. | \$260,701 | 1,201,422 |
| Oxnard |  |  |
| Abalone. | \$12,250 | 48,322 |
| California halibut. | 5.319 | 17,870 |
| Spiny lobster... | $\begin{array}{r}4,939 \\ \hline\end{array}$ | 5,769 18,401 |
| All other species.. | 2,025 | 18.404 |
| Port totals.. | \$24,533 | 90,365 |
| All other ports All species.. | \$10,818 | 35,103 |
| Totals. | \$10,818 | 35,103 |
| SANTA BARBARA AREA TOTALS. | \$1,802,317 | 20,552,278 |

TABLE 19
Value of Landings by Port, Santa Barbara Area, 1968

TABLE 20

|  | Value | Pounds |
| :---: | :---: | :---: |
| Terminal Island |  |  |
| Landings: ${ }_{\text {Yellowfin }}$ | \$17.366,115 | 111,618,109 |
| Skipjack tuna. | 5,909.222 | 45,154,355 |
| Jack mackerel. | ${ }_{1}^{1,428,399}$ | ${ }_{\substack{\text { a } \\ 9.391,801}}^{43,257,270}$ |
| Albacore..... | 1,181,322 | 5 5,55,100 |
| Pacific bonito. | ${ }^{393,499}$ | $9.473,036$ |
| Anchovy-a-..erel | 110,478 | ${ }_{2}^{10,066,265}$ |
| Squid.-.---.- | 96,758 | 6,341,397 |
| Sill other species.... | ${ }_{9,637}^{6,228}$ | 59,637 124,199 |
| Total landings. | \$28,303,301 | 250,009,319 |
| Shipments:* |  |  |
| Albacore... | \$13,619,210 | 54,496,523 |
| Yelowfin tuna | $12,154,321$ 188,312 | ${ }_{\substack{5 \\ 1,43,02,181 \\ 1}}$ |
| Bireye tuna.. | 17,408 | ${ }^{152,390}$ |
| Bluefin tuna. | 11,895 | 80,098 |
| Total shipments. | 825,991,146 | 113,191,298 |
| Port totals. | 854.294,447 | 363,200,617 |
| San Pedro |  |  |
| Abalone. | \$352,230 | 1,479.801 |
| White seabas | 202,035 |  |
| Preiufin tuna. | +100,246 | ${ }_{6}+2159,124$ |
| Rockfish..... | ${ }_{93,022}$ | 638,447 |
| Jack mackerel.. | ${ }^{91,788}$ | 2.409,174 |
| Yellowfin tuna- | 78,620 48,507 | ${ }_{907218}^{505,316}$ |
| Grouper........ | 47,812 | ${ }_{207,632}$ |
| White croaker.. | 42,213 | 698,562 |
| Swordfish. | 38,587 | 56,.962 |
| Spiny lobster-ibu | 38,283 | 40,010 108,444 |
| Pacific pompano.. | ${ }_{32,027}^{32,128}$ | 194,941 |
| Albacore....... | 25,166 | 118,382 |
| Giant sea bass. | 24,643 | 135,673 |
| California barracuda. | ${ }^{220,674}$ | - ${ }^{95,2627}$ |
| California yellowtail. | 15,010 | ${ }_{132,056}$ |
| Anchovy....... | 11,550 | 1,276,045 |
| Rock crab. | 10,397 | 81,912 |
| Flyingish. | ${ }_{\substack{10.171 \\ 9804}}$ | 70,845 75,965 |
| Perch. | 5.983 | ${ }_{27,481}$ |
| Smelt--.-.------ | 5.120 | 115,759 |
| Sardine other species... | 4,301 13,254 | 41,184 93,148 |
| Port totals. | \$1,551,312 | 16,424,901 |
| Wilmington |  |  |
|  |  | 4,785,077 |
| Pacific bonito.- | ${ }^{36.926}$ |  |
| Pacific mackerel. | 8,217 7,880 |  |
| All other species. | 3,802 |  |
| Port totals.................... | 39, | 6,057,774 |

TABLE 20
Value of Landings and Shipments by Port, Los Angeles Area, 1968

## Value of Landings and Shipments by Port, Los Angeles Area, 1968

|  | Value | Pounds |
| :---: | :---: | :---: |
| Newport Beach Landings: |  |  |
| Landings: | \$38,372 | 56,644 |
| Spiny lobster. | 15,823 | 16.485 |
| Abalone....- | 8,835 | 37,763 |
| Albacore. | 5,513 | 25,932 |
| All other species. | 8,225 | 119,719 |
| Port totals. | \$76,768 | 256,543 |
| Long Beach Landings: |  |  |
| Spiny lobster . | \$31,681 | 33,007 |
| All other species. | 9,070 | 104,410 |
| Port totals. | \$40,751 | 137,417 |
| Redondo Beach Landings: |  |  |
| Rock crab. | \$18,875 | 148,699 |
| Spiny lobster. | 8,872 | 9,243 |
| All other species. | 1,203 | 8,851 |
| Port totals. | \$28,950 | 166,793 |
| Santa Monica Landings: |  |  |
| Spiny lobster-.. | $\$ 6.345$ 5.028 | 6,610 28,025 |
| All other species. | 5,028 |  |
| Port totals. | \$11,373 | 34,635 |
| All other ports |  |  |
| Landings: | \$6,966 | 16,583 |
| Total landings. | \$6,966 | 16,583 |
| Shipments: All species. | \$4,998 | 20,000 |
| Total shipments.. | \$4,998 | 20,000 |
| Totals. | \$11,964 | 36,583 |
| LOS ANGELES AREA TOTALS. | \$56,254,698 | 386,315,263 |

* Beginning in 1965 only tuna shipments are recorded.

TABLE 20
Value of Landings and Shipments by Port, Los Angeles Area, 1968

TABLE 21

|  | Value | Pounds |
| :---: | :---: | :---: |
| San Diego |  |  |
| Landings: Yellowin tuna. | \$6,368,029 | 40,903,050 |
|  | 1,858,288 | 14,058,052 |
|  | 2827,202 <br> 28 |  |
|  | 174,273 | 1,738,957 |
| Spiny lobster.. | ${ }^{82} 82,89$ | 817.76 |
|  | ${ }_{3}^{37,184}$ | ${ }_{98.097}^{255.970}$ |
|  | ${ }^{31,693}$ | 116,775 |
| Swordish....-. | 29,749 | 44,547 |
| Shark........ | 15,485 | 118,234 |
| Bizeye tuna--... | ${ }_{12,025}^{12,407}$ | 78,49 36,746 |
| Halfmoon - | 6,053 | 30,195 3 3 |
| California barracuda.-.................... | ${ }_{5}^{5,583}$ |  |
|  | 13,268 | 23,281 130,628 |
| Total landings. | \$9,395,151 | 61,043,410 |
| Shipments:* |  |  |
| Albacore-..... | $\$ 1,623,876$ 470,746 | $\begin{aligned} & 6,506,049 \\ & 2,188,840 \end{aligned}$ |
| Total shipments. | \$2,094,622 | 8,694,889 |
| Port totals.. | \$11,489,773 | 69,738,299 |
| Oceanside |  |  |
| All species. | \$14,424 | 73,717 |
| Port totals.. | \$14,424 | 73.717 |
| Cardiff |  |  |
| Landings: Spiny lobster-....................................------ | \$5,122 | 5,056 |
|  | 11 | 42 |
| Port totals.. | 85,133 | 5.098 |
| All other ports Landings: | 5945 | 933 |
| Totals.. | \$945 | 933 |
| SAN diego area totals. | \$11,510,275 | 69,818,047 |

- Beginning in 1965 only tuna shipments are recorded.

TABLE 21
Value of Landings and Shipments by Port, San Diego Area, 1968


TABLE 22
Statewide Commercial Partyboat Catch by Species (Not including anchored barges) 1959-1968

TABLE 23
Inshore Bait Landings by Area
Pounds and Value
1968

| Species | Sacramento | San Francisco and Monterey | Los Angeles | San Diego | Statewide |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Clam |  |  |  |  |  |
| Freshwater | 406,996 | ---- | ---- | ---- | 406,996 |
| Jackknife.. | 841,749 | ----- | 31,028 | 24,557 | $\$ 41,749$ 55,585 |
|  | -- | --- | \$18,700 | \$13,822 | \$32,522 |
| Purple.. | - | ---- | 4,521 | 19,487 | 24,008 |
|  | --.- |  | \$2,286 | \$8,626 | \$10,912 |
| Unclassified | -. | 429 $\$ 104$ | 78 $\$ 22$ | 266 $\$ 532$ | 773 $\$ 658$ |
| Crab |  |  |  |  |  |
| Sand.- | ---- | --- | 7,738 $\$ 22,835$ | ----- | 7,738 822,835 |
| Shore. | ---- | 1 | - 5 | ----- | - 6 |
|  | ---- | \$1 | $\$ 68$ | ---- | \$69 |
| Mudsucker, longjaw. | ---- | ---- | 282 | --.- | 282 |
|  | ---- | ---- |  | ---- |  |
| Mussel (bay and rock) | ---- | 81 | 79,125 $\$ 9,484$ | 12,341 81,284 | 91,472 $\$ 10,769$ |
|  | ---- | 81 |  |  |  |
| Perch, shiner | 188 | ---- | ---- | ---- | 188 |
|  | \$303 | ---- | ---- | ---- | \$303 |
| Sculpin, staghorn. | 1,468 | 361 | ---- | ---- | 1,829 |
|  | \$5,075 | \$1,337 | ---- | ---- | 86,412 |
| Shrimp |  |  |  |  |  |
| Bay-- | $\begin{array}{r} 46,542 \\ \$ 46,400 \end{array}$ | 659 $\$ 746$ | ---- | ---- | 47,201 $\mathbf{8 4 7 , 1 4 6}$ |
| Ghost. | \$1,40 | ) | 3,717 | 4,031 | 7,748 |
|  | ---- | ---- | \$15,839 | \$15,540 | \$31,379 |
| Red | --.- | ---- | 5,113 $\mathbf{\$ 7 , 1 4 9}$ | ---- | 5,113 $\mathbf{8 7 , 1 4 9}$ |
| TOTAL. |  |  |  |  |  |
|  | \$93,527 | \$2,189 | \$76,651 | \$39,804 | \$212,171 |

TABLE 23
Inshore Bait Landings by Area Pounds and Value 1968
TABLE 24
Recorded Catch of Live Bait for Saltwater Sportfishing 1964-1968

| Species | Thousands of pounds* |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1964 | 1965 | 1966 | 1967 | 1968 |
| Anchovy | 10,382 | 12,296 | 13,382 | 10,774 | 14,353 |
| Herring, Pacific. | 18 | ---- |  | ---- |  |
| Mackerel, jack |  | 66 | 25 | - | 158 |
| Sardine, adult | 283 1 | 66 2 | $\stackrel{54}{T}$ | ${ }_{\text {T }}$ | 57 |
| Miscellaneous $\dagger$. | 26 | 82 | 84 | 22 | 80 |
| Total pounds.- | 10,710 | 12,446 | 13,545 | 10,797 | 14,648 |
| Number of vessels $\ddagger$.-. | 22 | 24 | 18 | 16 | 19 |

* 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.
$\dagger$ Consists primarily of queenfish and white croaker.
$\ddagger$ The number of live bait fishing vessels for which landings were reported. These numbers differ slightly from those in previous catch bulletins, since the earlier landing records, as submitted, sometimes included the catch of more than one boat.

TABLE 24
Recorded Catch of Live Bait for Saltwater Sportfishing 1964-1968

APPENDIX A
table I


## APPENDIX A

TABLE I
California Commercial Troll Salmon Landings by Port-Area, Month and Species, in Pounds and Numbers-1968

> APPENDIX A
> table II

APPENDIX A
TABLE II
California Ocean Recreational Salmon Landings and Success by Fishery, Port, Month and Species, in Numbers of Fish—1968

> APPENDIX A
> table II

APPENDIX A
TABLE II
California Ocean Recreational Salmon Landings and Success by Fishery, Port, Month and Species, in Numbers of Fish—1968

## HISTORICAL REVIEW 1916-1968

From time to time it is desirable to present a historical review of the California commercial fish catch. The first review was published in 1937 in Fish Bulletin 49, and presented the catch for the years 1916 through 1935. A second review appeared in 1949, in Fish Bulletin 74, which gave figures for the years 1916 through 1947. This third historical review presents the catch record for the years 1916 through 1968, thereby giving the entire statistical history of the fisheries of California since the beginning of its recorded history.

The purposes of this type of review are to present the published record for all past years and to provide ready access to the statistics which show the complete fisheries picture and the long-period trends. In the past, such a record has proved of great value to fisheries biologists, administrators, wildlife conservation officers, educators, and people in the fishing industry.

Prior to 1960, the yearly published catch statistics were not considered final, and late landing data were added to our source data files as they were received. In addition, our files were corrected if occasional errors were found in the published record. As a result, the landing figure for a particular species in a year depended on the source of the data-the original catch bulletin, a slightly later tabulation of our source records, a later historical review, or finally, a figure obtained from our current tabulations. The practice of updating or correcting the published record was abolished with the publication of the 1960 catch figures; data published for 1960 and years since then will never be changed.

In the course of this review all the catch figures were reexamined. Our present records were compared to the original publication and subsequent historical reviews. All differences were carefully examined and checked against notations in the source files. Almost all of the differences were documented through this procedure, although a few could not be and had to be considered as human errors. The figures in this historical review are now in balance with our source data files, and represent a final determination of the actual landings. No further changes in the basic records or the figures published in this review will be allowed.

Our records of landings between 1916 and 1947 include some fish that were actually landed outside the State and later shipped to California dealers. The 1949 historical review (Fish Bulletin 74) attempted to separate landings and shipments for some species. The present review demonstrated, however, that this separation was very subjective for species other than tuna. As a consequence, only tuna shipments and the very small portion of other species that could be definitely identified as shipments have been separated from the total record for the 1916-1947 period (Table 1).

From 1948 through 1964, landings and shipments were separated in our files and publications; the record of shipments, however, was
acknowledged as being quite incomplete for species other than tuna. Starting in 1965, only shipment data involving the tunas have been collected and published.

Table 1 summarizes our information on statewide landings and shipments for the period 1916 through 1968. Tables 2 through 20 present the significant aspects of the historical record. The species shown are the more important ones in the landings; species nomenclature follows that used with the 1968 marine fish catch statistics presented as the first part of this Fish Bulletin.

Separate summaries are given for landings caught north or south of the state boundaries, or for shipments, when these aspects of a fishery are particularly noteworthy. However, origin information is not completely dependable prior to 1931 when a formal origin of catch was added to the statistical system. Other types of summaries are used where some special feature is of historical significance.

The final table shows landings of animal food from 1961 through 1968. Prior to 1961, landings of mixed fish to be ground for animal food were reported haphazardly as a species making up a good part of that particular load. With the rapid growth of this industry between 1953 and 1960 this situation became intolerable and produced major inaccuracies in the records. As a consequence, a new system where the dealer records the delivery as animal food and our biologists sample the catch to determine its species composition was inaugurated in 1961. Table 21 summarizes the landings reported as animal food; preliminary estimates of the catch composition were presented with the original publication of each year's data. Final detailed catch compositions of the animal food landings are compiled and published separately; Nitsos and Reed (1965) presented these data for 1961 and 1962.

Landings during the period covered by this review exhibited an almost steady rise from 1916 to 1936 when a peak of 1.76 billion pounds of fish was landed. Sardines dominated the landings during the 1930's and 1940's, but after the failure of this fishery in the early 1950's the tunas became dominant. Since 1958 the total landings have exhibited a slow but almost steady decline.

The origin of the landings has also changed during the past 20 years. In 1947 landings from California waters amounted to $69 \%$ of the total California landings, while landings from south of the State totaled 30\%. In 1968 landings from California waters made up only $49 \%$ of the total. Tuna shipments have become very important to the overall operation of the California fishing industry amounting to 122 million pounds in 1968, compared to California landings of 445 million pounds.

The tables which follow represent the work of many individuals during the past 10 years. The original instigation for this historical review and the direction of its progress came from Edward C. Greenhood. The late Annine Phillips Stevens planned and supervised much of the actual work. The accurate interpretation of original records and updating and compiling the tables, a long and arduous task, was carried out by Ellen L. Gramm, Dorothy K. Bailey, Jeanne P. Cowger, and the entire staff of the Biostatistical section. The many persons
who served in the information unit during this time deserve special credit for their efforts.

## REFERENCES

California Bureau of Commercial Fisheries. 1936. The Commercial Fish Catch of California for the Year 1935. Calif. Div. Fish and Game, Fish Bull., (49) : 1-170.
California Bureau of Marine Fisheries. 1949. The Commercial Fish Catch of California for the year 1947 With an Historical Review 1916-1947. Calif. Div. Fish and Game, Fish Bull., (74) : 1-267.
Nitsos, R. J., and Paul H. Reed. 1965 . The Animal Food Fishery in California, 1961-1962. Calif Fish and Game, 51(1) : 16-27.
TABLES

TABLE 1
total yearly landings and shipments in pounds

| Year | California landings* | Shipments other than tuna $\dagger$ han tuna $\dagger$ | Total landings and shipments other than tuna | Tuna shipments $\ddagger$ | Grand total |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1916. | 95,002,695 | ---- | 95,002,695 | -..- | 95,002,695 |
| 1917. | 209,876,670 | ---* | 209,876,670 |  | 209,876,670 |
| 1918. | 261,134,265 |  | 261,134,265 | .... | 261,134,265 |
| 1919. | 266,270,133 | 107 | 266,270,240 |  | 266,270,240 |
| 1920. | 222,003,425 | 951 | 222,004,376 | .... | 222,004,376 |
| 1921. | 135,346,435 | 1,391 | 135,347,826 |  | 135,347,826 |
| 1922 | 182,343,333 | --.- | 182,343 333 |  | 182,343,333 |
| 1923 | 253,874,581 | ...- | 253,874,581 |  | 253,874,581 |
| 1924 | 340,445,919 |  | 340,445,919 |  | 340,445,919 |
| 1925 | 437,502,232 | .... | 437,502,232 | -... | 437,502,232 |
| 1926. | 394,964,393 | ...- | 394,964,393 |  | 394,964,393 |
| 1927. | 487,088,551 |  | 487,088,551 | 77,592 | 487,166,143 |
| 1928 | 578,887,037 | 857,306 | 579,744,343 | 3,782,408 | 583,526,751 |
| 1929 | $850,953,251$ $695,147,535$ | 32,105 | $850,953,251$ $695,179,640$ | 5,900,804 $7,009,155$ | $856,854,055$ $702,188,795$ |
| 1930 | 695,147,535 | 32,10 | 695,179,640 |  |  |
| 1931. | 495,448,900 | ---- | 495,448,900 | 6,940,975 | 502,389,875 |
| 1932. | 552,617,747 | -..- | 552,617,747 | 3,521,316 | 556,139,063 |
| 1934 | 17, 159750 |  | 881, 807.500 |  |  |
| 1935 | 1,442,032,007 | .-.- | 1,442,032,007 | 5,984,564 | $1,448,016,571$ |
| 1936. | 1,760,370,876 | .... | 1,760,370,876 | 4,529,014 | 1,764,899,890 |
| 1937 | 1,351,256,911 | -... | 1,351,256,911 | 11,726,806 | 1,362,983,717 |
| 1938. | 1,300,257,401 | .... | 1,300,257,401 | 10,338,267 | 1,310,595,668 |
| 1939 | 1,479,045,931 | ..... | 1,479,045,931 | 7,488,975 | 1,486,534,906 |
| 1940 | 1,293,981,291 | ...- | 1,293,981,291 | 3,536,372 | 1,297,517,663 |
| 1941. | 1,527,760,007 |  | 1,527,760,007 | 1,132,184 | 1,528,892,191 |
| 1942 | 1,172,943,617 | ...- | 1,172,943,617 | 470,506 | 1,173,414,123 |
| 1943 | 1,234,049,119 | .... | 1,234,049,119 |  | 1,234,049,119 |
| 1944. | 1,456,919,970 | -...- | 1,456,919,970 | 2,535,547 | 1,459,455,517 |
| 1945 | 1,216,391,831 |  | 1,216,391,831 | 108,758 | 1,216,500,589 |
| 1946. | 919,822,188 | ---- | 919,822,188 |  | 919,822,188 |
| 1947. | 795,172,919 |  | 795,172,919 | 326,160 | 795,499,079 |
| 1948. | 899,070,526 | 73,467 | 899,143,993 | 1,322,926 | 900,466,919 |
| 1949 | 1,132,620,348 | 1,293,855 | 1,133,914,203 | 1,424,487 | 1,135,338,690 |
| 1950 | 1,344,358,573 | 6,395,233 | 1,350,757,806 | 15,918,589 | 1,366,676,395 |
| 1951. | 865,749,226 | 4,638,919 | 870,388,145 | 33,726,242 | 904,114,387 |
| 1952. | $655,838,075$ | 5,192,573 | $661,030.648$ | 33,965,725 | 694,996,373 |
| 1953. | 547,802,957 | 8,040,854 | 555,843,811 | 63,075,605 | 618,919,416 |
| 1954. | 625,835,447 | 1,677,816 | $627,513,263$ | 85,897,121 | 713,410,384 |
| 1955. | 603,117,051 | 2,735,682 | 605,852,733 | 104,860,721 | 710,713,454 |
| 1956 | 678,552,376 | 2,398,474 | 680,950,850 | 91,600,457 | 772,551,307 |
| 1957 | 628,003,175 | 3,855,296 | 631,861,471 | 106,688,913 | 738,550,384 |
| 1958 | 676.170,923 | 3,071,482 | 679,242,405 | 153,676,658 | 832,919,063 |
| 1959 | $529,242,200$ | 1,321,722 | 530,563,922 | 182,859,114 | 713,423,036 |
| 1960. | 543,402,951 | 1,535,272 | 544,938,223 | 149,724,849 | 694,663,072 |
| 1961. | 599,263,509 | 2,164,041 | 601,427,550 | 123,825,921 | 725,253,471 |
| 1962 | 521,439,230 | 1,077,215 | 522,516,445 | 140,590,162 | 663,106,607 |
| 1963 | 509,718,393 | 744,927 | $510,463,320$ | 82,435,547 | 592,898,867 |
| 1964 | 493,140,709 | 1,250,354 | 494,391,063 | 96,739,561 | $591,130,624$ |
| 1965. | 453,268,232 | -..-- | 453,268,232 | 91,211,669 | 544,479,901 |
| 1966 | 458,440,080 | *-* | $458,440,080$ 503893,182 | $133,093,337$ $85,134,479$ |  |
| 1967. | ${ }_{4}^{503,893,182}$ | -...- | $503,893,182$ $445,307,390$ | $85,134,479$ $121,906,187$ | $\begin{aligned} & 589,027,661 \\ & 567,213,577 \end{aligned}$ |
| 1968. | 445,307,390 | --.. | 445,307,390 | 121,906,187 | 567,213,577 |
| * California landings include some shipments of species other than tuna for the period 1916 through 1947. <br> $\dagger$ Shipments other than tuna are incomplete prior to 1948, minimal from 1948 through 1964, and unavailable from 1965 through 1968. <br> $\ddagger$ Tuna shipments do not balance to figures given in the tuna tables because shipments of bigeye and unclassified tuna are included here. |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

TABLE 1
TOTAL YEARLY LANDINGS AND SHIPMENTS IN POUNDS

TABLE 2
YEarLy LaNdings and Shipments in pounds Albacore tuna

| Year | California | North of state | South of state | $\underset{\text { Tatal }}{\text { landings }}$ | Shipments | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1916 | 22,899,309 |  | ---- | 22,899,309 |  | 22,899,309 |
| 1917 | (0,.556.242 |  | 1.527 | ${ }^{3} \mathbf{3}, 5056,242$ |  | $\underset{\substack{30,556,242 \\ 7,265,422}}{ }$ |
| 1919 | 13,553,025 |  | 77,874 | 13,630,899 |  | ${ }^{13,630,899}$ |
|  | 18,876,647 |  |  | 18,876,647 |  | 18,876,647 |
| 1921 | 15.274,528 |  | 2.199 | 15,276,727 |  | 15,276,727 |
|  |  |  | 26,634 | $13,231.823$ <br> 12.514833 |  | $13,231,823$ $12,514,833$ |
|  | ${ }^{17,280,346}$ |  | ${ }_{415,016}^{20,03}$ | 17,695.362 |  | 17,695,362 |
| 1925 | 21,684,942 |  | 521,981 | 22,206,923 |  | 22,206,923 |
| 1926 | 2,469,861 |  | 60 | 2,469,921 |  | 2,469,921 |
| 1927 | 4,455,372 |  | 123,995 | 4,5799,367 | 77,592 | 4,656,959 |
| 1928 | ${ }^{283,321}$ |  | 45 | 283,321 | 3,782,408 | $4,065,729$ $6,110,330$ |
| ${ }_{1930}{ }^{1929}$. | - 283,117 |  | 5 | ${ }_{283,117}$ | $7,005,568$ | $7,288,685$ |
| 1931. | 37,322 |  |  | 37,322 | 6,939,079 | 6,976,401 |
| 1932 | 619,694 |  |  | 619,694 | ${ }_{2}^{2,467.521}$ | ${ }_{2}^{3,087,215}$ |
| 193 | 487 |  |  | ${ }^{1188889}$ | ${ }_{\text {cher }}^{2,793,965}$ | ¢,794,452 $4,287,296$ |
| 1935 | 2,386,249 |  | 61,279 | 2,447,528 | $3,231,265$ | $5,688,793$ |
| 1936. | 945,595 |  |  | 945,595 | 1,510,409 | 2,456.004 |
| 1937 | 2,020,0 |  | 209 | ${ }^{2} \mathbf{2 , 0 2 0 , 0 1 6}$ | 号,723,693 | 4,743,709 |
| 1938 | 4,789,880 | ${ }^{1,995.101} 1$ | ${ }_{4,187}^{29,99}$ | ${ }^{6,814,900}$ | 6,792,735 | +18, ${ }_{16,423,234}$ |
| 1940 | ${ }_{2,387,254}^{8,204}$ | 1,552,504 | ${ }_{80}$ | ${ }_{3,940,638}$ | ${ }_{3,137,696}^{6,422,}$ | 7,078,34 |
| 1941. | 3,016,065 | 325,144 |  | 3,341,209 | 973,299 | 4,314,508 |
| 1942 | 7,998,144 |  | ${ }_{\text {2,623,216 }}$ | - |  | ${ }^{11,091,866}$ |
| 194 | ${ }_{1}^{11,888,148}$ |  | 9,498,716 | ${ }^{21,385+867}$ | 57 | ${ }^{21,384,864}$ |
| 1945 | $\stackrel{8}{8,777,991}$ | 232,850 | 12,214,180 | ${ }_{21,225,021}$ | 108.758 | ${ }_{21,333,779}^{2,30}$ |
| 1946 | 9,116,647 |  | 8,958,818 | 18,077,899 |  | 18,077,899 |
| 1947 | 7.395.765 | ${ }_{\text {13,867 }} 18.18$ |  | ${ }_{\substack{13,171,751 \\ 36,456,46 \\ \hline}}$ | ${ }^{255.530}$ | ${ }^{13,427,281}$ |
| 1948 | 10,499,390 | 55,167 | ${ }^{25,901.589}$ | $36,456,146$ 4.0068 4 4 | 1,153,643 | 3, ${ }^{3}$, |
| 1950 | ${ }_{38,139,296}^{20,417}$ | - ${ }_{30,396}^{48,030}$ | ${ }_{23,575,512}^{23,51,12}$ | ${ }_{6} 6,745,204$ | $4,378,420$ | 66,123,624 |
| 1951 | 13,284,606 | 9.150 | 17,621,586 | 30,915,342 | 17,520,891 | 48,436,233 |
| 1952 | ${ }^{23,103,074}$ | 3,389 | 26,697,061 | - ${ }^{49,8083.524}$ |  | 72,328,772 |
| 1933 | 13,297,627 | 47,468 | 20,490,810 | ${ }_{3} 3,835,905$ | 43,186,816 | 80,022,721 |
| 195 | $\xrightarrow[9,312,029]{14,289,095}$ |  | 11,818,195 $19,690,269$ | ${ }_{29}^{26,002,298}$ |  | ${ }_{7}^{64,846,973}$ |
| 1956. | 15,874,652 | 115,985 | 21,064,574 | 37,055,211 |  |  |
| 1957. | 22,613,429 |  | 20,911,816 | 43,525,245 | 39,564,027 | 83,089,272 |
| 1958. | 25,387,036 | 1,075.988 | 724,753 | 2, $2,177,777$ | 27,485,321 | 54,673,998 |
| 1959. | ${ }_{32,056,980}^{32,22,31}$ | $\begin{array}{r}218,133 \\ 69,104 \\ \hline\end{array}$ | 2,986,543 | ${ }_{35,112,627}^{32,70,464}$ |  | ${ }_{71,452,175}^{62,42,46}$ |
| 1961. | 20,594.360 | 143,709 |  | 29,123,244 |  |  |
| 1962 | 32,046,366 |  | 4,576,009 | 36,622,375 | 36,731,754 | 73,354,129 |
| 1963. | ${ }^{41,925,739}$ |  | 6,933,839 | 48,859,578 | 16,945,225 | 65,804,803 |
|  | 16,141,399 |  | 1,374,959 | 18,189,212 | 55,719,626 |  |
| 1967 | 15,184,473 | 2,387,979 | 285,471 | 17,857,923 | 53,889,762 | 71,747,685 |
| 1968 | 11,617,055 | 2,779,875 | 680,229 | 15,077,159 | 61,022,572 | 76,099,731 |

TABLE 2
YEARLY LANDINGS AND SHIPMENTS IN POUNDS Albacore tuna

TABLE 3
yearly landings and shipments in pounds

| Bluefin tuna |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year | California waters | North of state | South of state | $\begin{aligned} & \text { Total } \\ & \text { landings } \end{aligned}$ | Shipments | Total pounds |
| 1919 | 14,990,860 |  |  | 14,990,860 |  | 14,990,860 |
| 1920 | ${ }^{10.5330 .272}$ |  |  | 10,530,272 |  | 10,530,272 |
| ${ }_{1922}^{1922}$ |  |  |  | ${ }^{1,971,813}$ |  | $1,971,813$ 2,81283 |
| 1923 | 3,218,090 |  |  | 3,218,090 |  | 3,218,090 |
| 1924. | 3,241,110 |  |  | 3,241,110 |  | 3,241,110 |
|  | 3.803, 677 |  |  | 3,803,677 |  | 3,803,677 |
| ${ }_{1927}^{1926}$ | ${ }^{6,526,533} 4$ |  | 79 |  |  | ${ }_{\substack{6 \\ 4.58268 .465}}$ |
| 1928. | 13,700,870 |  |  | 13,700,870 |  | 13,700,870 |
| 1929 | 7,476,370 |  | 50,487 | 7,526,857 |  | 7,526,857 |
| 1930 | 15,598,892 |  | ${ }^{6,322,390}$ | ${ }^{21,921,282}$ |  | 21,921,2\%2 |
| 1931 | 2,356.775 |  | 1,177,255 | 3,534,030 |  | 3,534,030 |
| 1932 | + 424.216 |  | ${ }_{236,776}^{611,12}$ | ${ }_{\text {1,07i, }}^{1,492}$ | ${ }_{889,336}^{1,053,95}$ | ${ }^{2,1,499,828}$ |
| 1933 |  |  |  |  |  |  |
| 1934. | 18,291,721 |  | ${ }_{66,107}$ | 18,357,828 |  | 18,357,828 |
| 1935 | 18,495,813 |  | ${ }^{6,677,270}$ | ${ }_{\text {2 }}^{25,173,083}$ | 146.531 | 25,319,614 |
| 1936 | 13,800,.578 |  | ${ }^{5,116,305}$ | 18,924,883 | ${ }^{745,052}$ | - $19.669,935$ |
| ${ }_{1938}^{1937 .}$ | ${ }_{16,512,262}^{10,82,271}$ |  | ${ }_{1,215,769}$ | ${ }_{17}^{17,728,031}$ | ${ }_{\substack{5 \\ 4,328}}$ | ${ }_{17,732,359}^{13,27,98}$ |
| 1939 | 9,318,934 |  | 2,516,737 | 11,835,671 | 44 | 11,835,715 |
| 1940 | 18,849,968 |  | 1,120,300 | 19,970,288 |  | 19,970,268 |
| 1941 | 8,848,147 |  | 650,805 | 9,519.012 |  | ,9,519,012 |
| 1942 | ${ }_{7,633,887}$ |  | ${ }_{2,514,881}^{2,513}$ | ${ }_{10,178,768}$ |  | - |
| 1943 | 7,603,887 |  |  |  |  |  |
| 1944 | 16,083,584 |  | 4,259,966 | 20,343,550 |  | 20,343,550 |
| 1945 | 14,100,476 |  | 6,493,833 | 20,594,309 |  | 20,594,309 |
| 1946 | 15,518,212 |  |  | ${ }^{22,0031,802}$ |  | ${ }_{2}^{22,0311.802}$ |
| 1948 | 1.63376 |  | 4,835,047 | 6,528,807 | 168,180 | ${ }_{6,696,987}$ |
| 1949 | 2,266,236 |  | 2,123.235 | 4,389,471 |  | 4,389,371 |
| 1950 |  |  | ${ }_{3}^{2,729,624}$ | ${ }_{\text {che }}^{2,7389.963}$ | 107.818 | ${ }^{2,846,841}$ |
| 1951 | ${ }^{837,299}$ |  | 3 ${ }_{3}^{3,02592,299}$ | ${ }^{3,862,418}$ | 2,112 | 3,864,.530 |
| 1953. | 3,903,642 |  | 5,868,973 | $9,772,615$ | 62,447 | 9,835,062 |
| 1954 | ${ }^{5,647.572}$ |  | 15,377,248 | ${ }^{21,024,820}$ | 771.147 | 21,795,967 |
| 1955 | 2,477,735 |  | 11,131,442 | ${ }^{13,609,177}$ | ${ }^{343,346}$ | 13,952.523 |
| 1956 | ${ }^{2}, 61212046$ |  | 10,013,922 | ${ }^{12,623,998}$ | ${ }^{162,875}$ | ${ }^{12,7888,83}$ |
| ${ }_{1958}^{1957}$ | 15,609,801 |  | 15,109,431 | ${ }_{30,719,32}$ | ${ }_{757,976}$ | ${ }_{3}^{20,477,208}$ |
|  |  |  |  |  |  |  |
| 1959 | 13,073,729 |  | ${ }^{2,169,236}$ | ${ }^{15,242,965}$ | 554,738 <br> 463500 | 15,797,703 |
| 1961 | 13,762,432 |  | $7,120,218$ | 20,882,650 | $1,272,540$ | ${ }_{22,155,190}$ |
| 1962 | 17,039,651 |  | 14,160,300 | ${ }^{31,1999,951}$ | - | 33,119,729 |
| 1963 | 7,130,960 |  | 23,222,449 | 30,353,409 | 2,348,392 | 32,701,801 |
|  |  |  | 18,515,928 |  |  |  |
| 1985 | ${ }_{2}^{2,274,674}$ |  | ${ }_{\text {13, }}^{13,653,486}$ | ${ }_{\substack{15,928.160 \\ 34820,406}}$ | ${ }^{806.346}$ | 16,734,506 |
| 196 | ${ }^{2}, 7202,585$ |  | - | ${ }^{3,4,820,406}$ | 3,118,804 | 37,939,210 |
| 1968. | ${ }_{3,737,291}^{1,791,634}$ | ${ }_{1} 1125$ | - | $12,936,275$ 13 | 80,098 |  |
|  |  |  |  |  |  |  |

TABLE 3
YEARLY LANDINGS AND SHIPMENTS IN POUNDS Bluefin tuna

TABLE 4
yearly landings and shipments in pounds

| Skipjack tuna |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Year | California waters | South of state | Total | Shipments | $\underset{\text { pounds }}{\text { Total }}$ |
| 1918. | 3,022,964 |  | 3,022,964 |  | 3,022,964 |
| 1919 | ${ }^{6,880,312}$ | ${ }_{15,089}^{12,115}$ |  |  | ${ }_{\text {c }}^{6,892,427}$ |
| 1921 | $1,134,853$ | ${ }_{140}$ | ${ }_{1}, 1,134,993$ |  | i,134,993 |
| 1922 | 10,104,563 | 1,753,270 | 11,857,833 |  | 11,857,833 |
| 1923. | 4,579,077 | 6,883,445 | 11,462,522 |  | 11,462,522 |
| ${ }_{1922}$ | ${ }_{\text {l }} 1,349,513$ | - ${ }_{\text {2,424,545 }}$ | - $3,774,0588$ |  | 3,774.058 |
| 1926 | 14,217, ${ }^{\text {2 }}$ | ${ }_{6,734,330}$ | 20,951,348 |  | ${ }_{20}{ }^{14,2251,348}$ |
| 1927. | 5,802,598 | 28,003,362 | 33,805,960 |  | 33,805,960 |
| 1928. | 4.394,938 | 11,551,972 | 15,946,910 |  | 15,946,910 |
| ${ }_{1929}$ |  | 18,974,936 | ${ }^{270,48,5857}$ | 59,575 | 27,066,588 |
| 1931 | ${ }^{3} 11.955 .616$ | $\xrightarrow{17,470,312} 4$ | ${ }_{16,506,761}^{21}$ | $\ldots$ | 20,485,587 |
| 1132. | 1375,012 | 21,261,535 | 21,636,577 |  | 21,636,577 |
| 1933. | 10 | 16,687,298 | 16,687,308 | 405,733 | 17,093,041 |
| ${ }_{1935}^{1934 .}$ | 1.007916 | ${ }_{1}^{14,830,194}$ | 14,830,194 | 1,579.245 | ${ }_{\text {1 }}^{16,409,439}$ |
| 1936 | ${ }_{8}^{1.45657 .751}$ | ${ }_{\text {13, }}^{15,5939,270}$ | ${ }^{\text {che }}$ | - 2 , 606,7688 | ${ }_{29271.030}$ |
| 1937. | 1,884,148 | 45,210,944 | 47,104,092 | $7,594,003$ | 54,688,995 |
| 1938. | 2,816 | 22,650,815 | 22,653,631 | 3,499,343 | 26,152.974 |
| ${ }_{194}^{1939}$ | ${ }_{2}^{2,718,641}$ | $27,402.250$ 53,665044 |  | 1,066,059 | 31, |
| 194 | 2,985, | - | ${ }_{\text {chen }}$ | ${ }_{121506}^{200.367}$ | - |
| 1942. | 217,838 | 38,517,390 | 38,735,228 | 12,300 | ${ }_{38,735,228}^{20}$ |
| 1943 | 17,904 | 28,875,880 | 28,893,784 |  | 28,893,784 |
| 1944. | ${ }^{43,676}$ | 29,993,560 | ${ }^{30,037.236}$ |  | ${ }^{30.037,236}$ |
| 195 | 93,078 | 33,24,818 | 33,3778,896 |  | 33,3+7,796 |
| 1947 | ${ }_{893,046}$ | ( |  |  |  |
| 1948. | 319,194 | 58,451,409 | 58,770,603 | 1,103 | 58,771,706 |
| 1999. | 26,677 | 78,495,241 | 78,521,918 | 52,739 | 78,574,657 |
| 1951 | 12,421 | 124,766998 | 124,779,49 | 3,261,659 | 128,041,078 |
| ${ }_{1952}$ | 534 | ${ }_{84,528,763}$ | ${ }_{84,529,297}^{115,86.878}$ | ${ }_{4,362,370}^{2,750,824}$ | ${ }_{\text {8 }} 118,691,667$ |
| 1953. | 1,307 | 122,304,876 | 122,306,183 | 8,347,736 | 130,653,919 |
| 1954. | 14,399 | 153,741,791 | 153,756,190 | 15,707,756 | 169,463,946 |
| 1955 | 1,246 | 101,8899,720 | 101,990,966 | 18,634,023 | $120.524,989$ |
| ${ }_{1057}$ | 875 | ${ }_{1}^{120,152,347}$ | ${ }_{\text {120, }}^{120,153,222}$ | 15,842,212 | ${ }^{135,995,434}$ |
| 1957 | 353,455 | 90,194,258 | 90,547,713 | 20,888,590 | 111,436,303 |
| 1955. | 2,488.907 | 120,278,637 | 122,767.544 | 25,390,712 | 148,158,256 |
| ${ }_{1}^{1959}$ | 1,365,.207 | 97,100,450 | 98,465,667 | ${ }^{47,728,534}$ | 146,194, 1919 |
| 1960 | 24,199 | 46, 679.495 | 46,.303,694 | -28,94,941 | 74,798.635 |
| 1962.-. | 578 | - ${ }_{92,721,036}^{65,42,282}$ | ${ }_{92,721,036}^{65,402,80}$ | $\underset{\substack{21,344,727 \\ 6,338,43 \\ \hline}}{\text { a }}$ | ¢9,059,469 |
|  | 2,224,116 |  |  |  |  |
| 1964. | 3,988 | 66,054,966 | 66,058,954 | ${ }_{6} 6.495 .326$ | 72,554,280 |
| ${ }_{1966}^{1965}$ |  | ( | ${ }_{\text {cke }}^{81,241,695}$ | 5.677 .518 14.136271 | ${ }_{8}^{89,919,213}$ |
| 1967-.... | ${ }_{116,902}^{173,781}$ | $50,915,480$ $110,839,399$ | $51,089,261$ $110,956,301$ | $\underset{\substack{14,136,271 \\ 4,022,499}}{1,4}$ | $65,225.532$ $114,958,800$ |
| 1968. | 410,713 | 58,823,928 | 59,234,641 | 1,439,186 | 60,673,827 |

TABLE 4
YEARLY LANDINGS AND SHIPMENTS IN POUNDS Skipjack tuna

TABLE 5
YEARLY LANDINGS AND SHIPMENTS IN POUNDS Yellowfin tuna

| Year | California waters | South of state | Total landings | Shipments | Total pounds |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1919 | 348,081 |  | 348,081 | -... | 348,081 |
| 1920. | 1,477,905 | 487,119 | 1,965,024 |  | 1,965,024 |
| 1921. | 1,200,600 | 96,851 | 1,297,451 | ---- | 1,297,451 |
| 1922 | 1,205,023 | 6,200,256 | 7,405,279 |  | 7,405,279 |
| 1923 | 428,896 | 10,408,029 | 10,836,925 | -... | 10,836,925 |
| 1924. | 680,759 | 2,382,639 | 3,063,398 | --.- | 3,063,398 |
| 1925 | 2,963,620 | 10,274,278 | 13,237,898 |  | 13,237,898 |
| 1926 | 2,695,502 | 9,869,484 | 12,564,986 | ---- | ${ }^{12,564,986}$ |
| 1927 | 595,247 | 25,338,719 | 25,933,966 |  | 25,933,966 |
| 1928. | 84,626 | 32,168,580 | 32,253,206 | --.- | 32,253,206 |
| 1929 | 199,444 | 37,245,480 | 37,444,924 |  | 37,444,924 |
| 1930 | 35,553 | 56,618,628 | 56,654,181 | 3,587 | 56,657,768 |
| 1931 | 154,024 | 36,425,456 | 36,579,480 | 1,896 | 36,581.376 |
| 1932 | 165,323 | 36,758,087 | 36,923,410 |  | 36,923,410 |
| 1933. | 6,867 | 51,068,763 | 51,075,630 | ...- | 51,075,630 |
| 1934. | 19,514 | 60,893,646 | 60,913,160 | 223,942 | 61,137,102 |
| 1935 | 529.001 | 71,765,126 | 72,294,127 |  | 72,294,127 |
| 1936 | 767,231 | 77,585,413 | 78,352,644 | 8,628 | $78,361,272$ |
| 1937 | 187,732 | 91,334,726 | 91,522,458 | 884,148 | 92,406,606 |
| 1938. | 10,566 | 78,277,578 | 78,288,144 | 74,861 | 78,363,005 |
| 1939. | 457,405 | 109,960,396 | 110,417,801 |  | 110,417,801 |
| 1940 | 237,527 | 113,522,373 | 113,759,900 | 138,309 | 113,898,209 |
| 1941. | 1,799 | 76,662,732 | 76,664,531 | 37,289 | 76,701,820 |
| 1942 | 1,315 | 41,465,299 | 41,466,614 | --.- | 41,466,614 |
| 1943. | 2,058 | 49,259,270 | 49,261,328 | -- | 49,261,328 |
| 1944. | 45,373 | 63,098,518 | 63,143,891 | --.- | $63,143,891$ |
| 1945. | 4,959 | 87,326,481 | 87,331,440 | .... | 87,331,440 |
| 1946 | 32,653 | 127,214,022 | 127,246,675 |  | 127,246,675 |
| 1947 | 3.234 | 150,385,520 | 150,388,754 | 70,630 | 150,459,384 |
| 1948. | 593 | 191,723,388 | 191,723,981 | ...- | 191,723,981 |
| 1949. | 9.884 | 184,514,502 | 184,524,386 | 1,087,708 | 185,612,094 |
| 1950 | 1,461 | 182,314,373 | 182,315,834 | 8,130,632 | 190,446,466 |
| 1951. | 63 | 160,246,175 | 160,246,238 | 13,422,415 | 173,668,653 |
| 1952. |  | 178,439,583 | 178,439,583 | 7,078,107 | 185,517,690 |
| 1953. | 102 | 132,086,244 | 132,086,346 | 8,458,606 | 140,544,952 |
| 1954. | --.- | 119,401,795 | 119,401,795 | 29,701,898 | 149,103,693 |
| 1955. |  | 122,291,864 | 122,291,864 | 40,526,143 | ${ }^{162,818,007}$ |
| 1956 | 120 | 149,280,874 | 149,280,994 | 54,604,513 | 203,885,507 |
| 1957 | 70,853 | 136,884,984 | 136,955,837 | 45,085,798 | 182,041,635 |
| 1958 | 417,710 | 123,001,684 | 123,419,394 | 94,655,755 | 218,075,149 |
| 1959. | 81,676 | 108,288,171 | 108,369,847 | 102,622,211 | 210,992,058 |
| 1960 | 10,482 | 189,296,372 | 189,306,854 | $83,341,244$ | 272,648,098 |
| 1961 |  | 191,854,056 | 191,854,056 | 70,450,206 | 262,310,262 |
| 1962. | 40 | 124,020,715 | 124,020,755 | $94,128,155$ | 218,148,910 |
| 1963. | 60,220 | 109,522,946 | 109,583,166 | 52,743,056 | 162,326,222 |
| 1964. | 84 | 149,020,029 | 149,020,113 | 53,835,616 | 202,855,729 |
| 1965. |  | 156,553,451 | 156,553,451 | 39,881,904 | 196,435,355 |
| 1966 | 2,385 | 132,592,138 | 132,594,523 | 57,250,249 | 189,844,772 |
| 1967. |  | 140,356,053 | $140,356,053$ $153,026,509$ | $26,895,482$ $59,211,941$ | ${ }^{167,251,535}$ |
| 1968. | 98,492 | 152,928,017 | 153,026,509 | 59,211,941 | 212,238,450 |

TABLE 5
YEARLY LANDINGS AND SHIPMENTS IN POUNDS Yellowfin tuna

TABLE 6

| Yearly landings in pounds and tons Anchovy, Pacific Herring and Sardine |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year | Anchovy |  | Pacific herring |  | Sardine* |  |
|  | Pounds | Tons | Pounds | Tons | Pounds | ns |
| 1916 | 531,209 | 266 | 2,928,591 | 1,464 | 15,648,839 | 7,824 |
| 1917 | ${ }_{58,8153}^{528,75}$ | 264 | 7,435,997 | 3,718 | 104,103,331 | 52,052 |
| 1918 | 868,161 <br> 609518 | 434 805 | 7,938,280 | -3,969 | $157,652,811$ <br> 15387717 <br> 1 | 78.826 76,939 |
| 1920 | ${ }_{\text {cher }}^{1,699,774}$ | 885 285 | ${ }^{4} 2747364$ | ${ }^{2,145}$ | $118,520,914$ 15387 | - 59,260 |
| 1921. | 1,946,881 | 973 | 542,124 | 271 | 59,332,305 | 29,666 |
|  |  |  | 341,621 38250 380 | ${ }^{171}$ | 93,399,900 | ${ }^{46,700}$ |
| 1923 | 307,074 | 154 | 383,950 | 192 | ${ }_{1}^{158,1,159,356}$ | 79,080 |
| 1925. | ${ }_{93,071}$ | 174 46 | 865,674 <br> 80 | ${ }_{433}^{218}$ | ${ }_{315,294,986}^{242,68958}$ | ${ }^{157,648}$ |
| 1926 | 60,157 | 30 | 453,607 | 227 | 286,741,250 | ${ }^{143,371}$ |
| 1927. | ${ }^{368,201}$ | 184 | 1,168,321 | 554 | 342,275,289 | ${ }_{7}^{171,138}$ |
| 1928. | 357,470 | ${ }_{179}^{179}$ | 1,139,682 | 570 | 420,269,665 | ${ }_{2}^{210,135}$ |
| ${ }_{1930}^{1929}$ | 382,45 <br> 319,561 | 191 160 | ${ }_{717,634}^{957,563}$ | 479 359 | 651,71,904 $502,062,747$ | ${ }_{251,031}^{325,886}$ |
| 193 |  |  |  |  |  |  |
| 1931 | 307,494 | 154 | 685,759 | 343 | 364,351,801 | 182,176 |
| 1933 | ${ }_{317292}^{299,217}$ | 150 159 159 | 765,724 <br> 60145 | 383 301 | ${ }^{422,609,716}$ | 211,305 313,199 |
| 1934 | - | 159 129 | 601,601 801 | ${ }_{401}^{301}$ | - $1.119,931,099$ | 559,966 |
| 1935. | 178,970 | 90 | 928,880 | 464 | 1,095,758,548 | 547,879 |
| 1936 | 195,122 | 98 | 840.530 | 420 | 1,463,543,700 | 731,772 |
| 1937 | ${ }_{23}^{226.229}$ | 113 | ${ }^{631,380}$ | 316 | 1,071,490,525 | ${ }_{5}^{5351,745}$ |
| 1938 | 735144 | 368 | 504,884 | ${ }_{51}^{252}$ | ${ }^{1,023,389,489}$ | ${ }_{5}^{511,695}$ |
| ${ }_{1940}^{1939}$ | ${ }_{6,317797}^{2,174901}$ | ${ }_{3,159}^{1,074}$ | 302,24 453,193 | ${ }_{227}^{151}$ |  | ${ }_{452,987}^{580,397}$ |
| 1941. | 4,105,382 | 2,053 | 789,753 | 395 | 1,262,480,393 | 631,240 |
| 1942 | 1,694,290 |  | 190,815 | 95 | 969,747,099 | 481,874 |
| 1943 | 1,5770,803 | 785 | 630,358 | 315 | 972,269,915 | ${ }^{4886,135}$ |
| 1944 | 3,891,029 | 1,946 | 422,290 | 211 | 1,147,207, 882 | 573,604 |
| 1945. | 1,616,880 | 808 | 460,465 | 230 | 845,062,774 | 422,531 |
| 1946 | 1,921,627 | 961 | 481,776 | 241 | 510,759,173 | 255,380 |
| 1947 | 18,940,521 | 9,470 | 1,654,850 | 827 | ${ }^{255,513,948}$ | ${ }^{127,757}$ |
| 1948 | 10,835,930 | 5.418 | 8,000,492 | 4,000 | 362,037,087 | 181,018 |
| ${ }_{1950}^{1949}$ | $3,322,273$ $4,878,687$ | ${ }_{2,439}^{1,661}$ | - | ${ }_{713}^{190}$ | $633,379,791$ $714,522,761$ | 316,690 357,261 |
|  |  |  |  |  |  |  |
| ${ }_{1952}$ | ${ }_{55,782,870}^{6,951,82}$ | 3,477 27,991 | ${ }_{9}^{4,9495,386}$ | - 4,7468 | $328,900,731$ $14,330,420$ | 164,450 7,165 |
| 1953. | 85,835,478 | ${ }^{42,918}$ | 7,801,928 | 3,901 | 9,968,892 | 4.734 |
| 1954. | 42,410,364 | 21,205 | 911,906 | 456 | 136,504,017 | 68,252 |
| 1955. | 44,691,552 | 22,346 | 1,996,521 | 973 | 145,607,749 | 72,804 |
| 1956. | 56,920,585 | 28,460 | 1,735,776 | ${ }^{668}$ | 69,554,345 | 34,777 |
| ${ }_{1058}^{195}$ | ${ }^{40,577,526}$ | ${ }^{20,274}$ | 1,188,080 | 594 | 45,882,106 | ${ }^{22,931}$ |
| ${ }_{1959}^{1958}$ | 11,602,724 | 5, 5 | - | 1,200 | ${ }^{2074,455,837}$ | ${ }_{\substack{\text { che }}}^{103,723}$ |
| $1960 .-$ | 5,058,603 | 3,529 2,587 | +1,80,672 | ${ }_{900}^{804}$ | $74,366,866$ $57,532,719$ |  |
| 1961 | 7,711,573 | 3,856 | 1,401,248 |  |  | 21.584 |
| 1962. | 2,764,003 | 1,382 | 1,305,569 | 653 | 15,362,952 | 7,682 |
| 1963.- | 4,570,380 | 2,285 | ${ }^{630,087}$ | 315 | 7,131,221 | ${ }^{3.566}$ |
| 1964 | 4,975,089 | ${ }_{2}^{2,488}$ | 349,270 | ${ }^{175}$ | 13,137,483 | 8,569 |
| 1965. | 5,733,024 | 2,866 | 516,319 | 258 | 1,924,219 | 962 |
|  | 62,280,236 | 31,140 | ${ }^{241,973}$ |  |  |  |
| 1967...................... | 69,609,377 $31,076,116$ | 34,805 15,538 | 271,902 357,869 | 136 179 | 148,766 124,088 | 74 62 |
| 196 | 31,076,116 |  |  |  |  |  |

- Includes Reduction Ships.

TABLE 6
YEARLY LANDINGS IN POUNDS AND TONS Anchovy, Pacific Herring and Sardine

| FISII BULLETIN I 49 |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |
| YEARLY LANDINGS IN POUNDS AND TONS Mackerel |  |  |  |  |  |  |  |  |
| Year | Jack mackerel |  | Pacific mackeral |  | Unclassified mackerel |  | Total |  |
|  | Pounds | Tons | Pounds | Tons | Pounds | Tons | Pounds | Tons |
| 1916 | -...- |  |  |  | $1,113,998$$3,345,563$ | $\begin{array}{r} 557 \\ 1,673 \end{array}$ | $1,113,998$$3,345,563$ | 5571,673 |
| 1917. |  | -- |  | -- |  |  |  |  |
| ${ }_{1919} 1918$. |  | -- | ----- | -- | 4,005,906 $2,654,596$ | $\begin{aligned} & 2,003 \\ & 1,327 \end{aligned}$ | $4,005,906$ $2,654,596$ | 2,003 |
| 1920 |  | -- | -...- | -- | 2,997,308 | $\begin{aligned} & 1,327 \\ & 1,499 \end{aligned}$ | 2,997,308 | 1,499 |
| 1921. | ...- | -- | ----- | -- | $\begin{aligned} & 2,914,613 \\ & 2,46,762 \\ & 3,55,954 \\ & 3,232,900 \\ & 3,506,103 \end{aligned}$ | $\begin{aligned} & 1,457 \\ & 1,233 \\ & 1,777 \\ & 1,614 \\ & 1,753 \end{aligned}$ | $\begin{aligned} & 2,914,613 \\ & 2,46,762 \\ & 3,553,954 \\ & 3,227,300 \\ & 3,506,103 \end{aligned}$ | 1,4571,233 |
| 1922 |  |  |  | -- |  |  |  |  |
| 1923. |  | -- | -.-.- |  |  |  |  | 1,7771,6141,75 |
| 1924. |  | -- |  | -- |  |  |  |  |
| 1925. |  | -- | -...- |  |  |  |  | 1,753 |
| 1926. | 235,151 | 118 | 3,610,098 | 1,805 | --.-- | -- | $3,845,249$$5,191,442$ | 1,9232,596 |
| 1927. | 462,539538,446 | 231 | +45.251.298 | 17,626 |  | -- |  |  |
| 1928. |  | 269 |  |  | ..-- |  | $\begin{array}{r} 0,191,442 \\ 35,789,744 \\ 58,672,242 \end{array}$ | ${ }^{17,895}$ |
| 1929. | 698,290368,828 | 184 |  | - ${ }_{\text {28,987 }} \times 17$ | -...- | -- |  |  |
| 1930. |  |  | 16,531,364 |  |  |  | $58,672,242$ $16,900,192$ | 29,336 8,450 |
| 1931. | 563,108536,409 | 282268 | $14,254,081$$12,473,746$ | 7,1276,237 | ---- | $\cdots$ | $14,817,189$$13,010,155$ | 7,4096,505 |
| 1932 |  |  |  |  |  |  |  |  |
| 1933 | $1,010.850$ | 268 505 701 | $\begin{array}{r} 12,71,, 70 \\ 69,613,680 \\ 113,848,585 \end{array}$ | $\begin{array}{r} 3,25,07 \\ 56,924 \end{array}$ | -...- | -- | $\begin{array}{r} 70,624,530 \\ 115,429,859 \end{array}$ | $\begin{aligned} & 35,312 \\ & 57,715 \end{aligned}$ |
| 1934.-. | 9, ${ }_{9}^{1,583,924}$ | 4,992 |  |  |  |  |  |  |
| 1935. |  |  | $\begin{aligned} & 113,848,585 \\ & 146,427,202 \end{aligned}$ | $\begin{aligned} & 56,924 \\ & 73,214 \end{aligned}$ |  | -- | $\begin{aligned} & 115,429,859 \\ & 156,411,126 \end{aligned}$ |  |
| 1936. | 4,599,382 | 2,300 | 100,542,214 | 50,271 | .... | -- | $\begin{array}{r} 105,141,596 \\ 67,47,727 \\ 83,981,933 \\ 84,669,529 \\ 121,937,049 \end{array}$ | $\begin{aligned} & 52,571 \\ & 33,739 \\ & 41,991 \\ & 42,335 \\ & 60,968 \end{aligned}$ |
| 1937. | 6,541,026 | 3,270 | 60,936,701 | 30,468 |  |  |  |  |
| 1938. | 4,133,918 | 2,067 | 79,848,015 | 39,924 | --.- | -. |  |  |
| ${ }_{1940} 1939$ | $3,760,155$ $1,432,637$ | 1,880 716 | $80,909,374$ $120,504,412$ | 40,455 60,252 |  | -- |  |  |
| 1940 | 1,432,637 | 716 | 120,504,412 | 60,252 |  | -- |  |  |
| 1941. | $2,068,685$$5,348,501$ | 1,0342,674 | 78,167,200$52,553,663$ | 39,084 <br> 26,277 | -...- | -- | $80,235,885$ $57,902,164$ | 40,11828,951 |
| 1942 |  |  |  |  |  |  | $\begin{aligned} & 87,913,777 \\ & 96,43,977 \end{aligned}$ |  |
| 1943 | $12,698,974$$12,777,077$ | 6,3506,388 | $75,214,799$$83,656,90$ | 37,60741,828 | --..- | --- |  | 43,95748,217 |
| 1944. |  |  |  |  |  |  |  |  |
|  | 9,032,987 |  |  |  | ..... |  |  | 34,484 |
| 1946. | $15,033,321$$129,088,507$$77,888.335$$51,250,088$$133,255,752$ | 7,547 | $\begin{aligned} & 53,875,327 \\ & 46,478,362 \end{aligned}$ | 26,938 |  | -- | 68,968,648 |  |
| 1947. |  | 64,524 |  | 23.239 | ----- |  | 175,526,869 | 87,763 |
| 1948. |  | 36,449 | 39,385,801 | 19,693 |  | .. | 112,284,136 | 56,142 |
| 1949. |  | 25,625 | 49,771,273 | 24,886 |  |  | 101,021,361 | 50,511 |
| 1950. |  | 66,628 | 32,649,969 | 16,325 | --.- | -- | 165,905,721 | 82,953 |
| 1951. | 89,838,095 | 44,919 | $\begin{aligned} & 33,518,520 \\ & 20,604,761 \end{aligned}$ | $\begin{aligned} & 16,759 \\ & 10,302 \end{aligned}$ | ..... | --- | 123,356,615 | 61.678 |
| 1952. | 146,521,673 | 73,261 |  |  |  |  |  | ${ }^{83,563}$ |
| 1953. | $55,750,855$$17,333,581$ | 27,8758,667 | $\begin{array}{r} 7,502,181 \\ 25,392,604 \end{array}$ | $\begin{aligned} & 3,751 \\ & 12,696 \end{aligned}$ |  |  |  |  |
| 1954. |  |  |  |  | -.... | -- | $\begin{aligned} & 42,726,185 \\ & 59,065,009 \end{aligned}$ | $\begin{aligned} & 1,0 z 0 \\ & 21,363 \\ & 29,533 \end{aligned}$ |
| 1955. | 35,754,707 | 17,877 | 23,310,302 | 11,655 | - |  |  |  |
| 1956. | $\begin{aligned} & \begin{array}{l} 7,762,110,765 \\ 82,011,785 \\ 22,065,801 \\ 37,507,227 \\ 74,945,453 \end{array} \end{aligned}$ | 37,881 | $50,013,009$$62,043,775$ | 25,006 | .... | -- | 125,775,119 | 62,888 |
| 1957. |  | 41,006 |  | 31,022 | …- | -. | 144,055,560 | 72,028 |
| 1958. |  | ${ }^{11,033}$ | 27,648,485 | 13,824 |  | -- | 49,714,286 | ${ }^{24,857}$ |
| 1959. |  | 18,754 | $37,602,134$ 36808,690 | 18,801 18,404 |  | - | $75,109,361$ $111,754,143$ | 37,555 55,877 |
| 1960 |  | 37,473 | 36,808,690 | 18,404 |  | .- | 111,754,143 | 55,877 |
| 1961. | $\begin{aligned} & 97,606,304 \\ & 89,978,933 \\ & 95,442,284 \\ & 89,692,911 \\ & 66,666,380 \end{aligned}$ | $\begin{aligned} & 48,803 \\ & 44,990 \\ & 47,721 \\ & 44,846 \\ & 33,333 \end{aligned}$ | $\begin{array}{r} 44,110,194 \\ 48,578,820 \\ 40,242,676 \\ 26,827,881 \\ 7,050,059 \end{array}$ | 22,055 | - | -- | $141,716,498$$138,557,753$$135,684,960$ | 70,85869,279 |
| 1962. |  |  |  | 24,289 | ...- |  |  |  |
| 1963 |  |  |  | 20,121 |  | -- |  | ${ }_{58,842}$ |
| 1965. |  |  |  | 3,525 |  | -- | 73,716,439 | 36,858 |
|  | $40,862,409$$38,180,547$$55,667,682$ | $\begin{aligned} & 20,431 \\ & 19,090 \\ & 27,834 \end{aligned}$ | $\begin{aligned} & 4,629,504 \\ & 1,166,607 \\ & 3,133,446 \end{aligned}$ | $\begin{aligned} & 2,315 \\ & 583 \\ & 1,567 \end{aligned}$ | … | -- <br> - | 45,491,913 <br> 39,347,154 <br> 58,801,128 | 22,74619.67429,400 |
| 1967 |  |  |  |  |  |  |  |  |
| 1968 |  |  |  |  |  |  |  |  |

TABLE 7
YEARLY LANDINGS IN POUNDS AND TONS Mackerel

| HISTORICAL REVIEW I916-1968 |  |  |  |  |  | 57 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | TABLE 8 <br> SEASONAL LANDINGS IN TONS <br> Sardines |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Season* | Reduction ships | $\underset{\text { Sarea }}{\text { San Francisco }}$ | Monterey area | Los Angeles area | San Diego area | Total tons |
| 1916-17. | --.- |  | 7,710 | 17,380 | 2,440 | 27,530 |
| 1917-18.... |  | 70 | 23,810 | 41,340 | 7,360 | 72,580 |
| 1918-19.. |  | 450 | 35,750 | 32,530 | 6,810 | 75,540 |
| ${ }_{1920-219}^{1919}$ | - | 1,000 230 | 43,040 24,960 | 16,580 11,740 | 6,410 1,520 | 67,030 38,450 |
| 1920-21... |  |  |  |  |  |  |
| 1921-22...... | -..- | 80 | 16,290 | 19,220 | 910 | 36,500 |
| 1922-23...... | -... | 110 190 | ${ }_{45,920}$ | 33,170 | 2,620 | ${ }^{65,110}$ |
| 1923-24..... | -- | 190 560 | 45,920 67,310 | 35,040 96,330 | 2,780 8,820 | 83,930 173,020 |
| 1925-26....... | - | 560 | 69,010 | 61,990 | 5,710 | 137,270 |
| 1926-27.... | -..- | 3,520 | 81,860 | 64,720 | 2,110 | 152,210 |
| 1927-28... |  | 16,690 | 98,020 | 67,900 | 4,650 | 187,260 |
| 1928-29... |  | 13,520 | 120,290 160050 | 119,250 140,540 | 1,420 2,620 | 254,480 |
| 1929-30_... | 10,960 | 21,960 25,970 | 160,050 109,620 | 140,540 38,490 | 2,620 80 | 325,170 185,120 |
| 1931-32... | 31,040 | 21,607 | 69,078 | 42,656 | 264 | 164,645 |
| 1932-33... | 58.790 | 18,634 | 89,599 | 83,605 | 62 | 250,690 |
| 1933-34.. | 67.820 | 36,336 | 152,480 | 125,047 | 1,746 | 383,429 |
| 1934-35.. | 112,040 | 68,477 | 230,854 | 178,818 | 4,865 | 595,054 |
| 1935-36.. | 150,830 | 76,147 | 184,470 | 138,400 | 10,651 | 560,498 |
| 1936-37.. | 235,610 | 141,099 | 206,706 | 138,115 | 4,594 | 726,124 |
| 1937-38 | 67,580 | ${ }^{133,718}$ | 104,936 | ${ }_{1}^{1096947}$ | ${ }_{2} 383$ | ${ }_{575}^{416.564}$ |
| ${ }_{1939-40} 193$ | 43,890 | 201,200 212,453 | 180,994 227,874 | 146,403 96.827 | 2.800 112 | 575,287 537266 |
| 1940-41.. | --.- | 118,092 | 165,698 | 175,592 | 1,202 | 5370268 460,584 |
| 1941-42.. | --.. | 186,589 | 250,287 | 148,912 | 1,585 | 587,373 |
| 1942-43... | -..-- | 115.884 126,512 | 184,399 213,616 | 201,510 135,311 | 2,868 2,690 | 504,661 478,129 |
| 1944-45. | $\ldots$ | 136.598 | 237,246 | 178,294 | 2,767 | 554,905 |
| 1945-46. | --.- | 84,103 | 145,519 | 173,110 | 951 | 403,683 |
| 1946-47. | -... | 2,869 | 31,391 | 194,774 | 4,768 | 233.802 |
| 1947-48 | ..... | 94 | 17,630 | 101,154 131,830 | 2,463 3,922 | 121,341 183728 |
| 1948-49.. | ---* | ${ }_{1742}$ | 47,862 131769 | ${ }_{186,433}^{131,830}$ | ${ }_{3}^{3,922}$ | 183,728 |
| 1949-50... | -...- | 17,442 12,727 | 131,769 33,699 | 186,433 303,752 | 3,281 2,910 | 338.925 353,088 |
| 1951-52. |  | 82 | 15,897 | 111,774 | 1,351 | 129,104 |
| 1952-53... |  | -.-- | 49 | 5.635 | 27 | 5,711 |
| 1953-54... |  |  | 58 | 4,111 | 323 | 4,492 |
| 1954-55. |  | -...- | 856 | ${ }^{67,099}$ | 510 | 68.465 |
| 1955-56... | --.- | ---- | 518 | 73,943 | -...- | 74,461 |
| 1956-57. |  |  | 63 | 33,564 | 16 | ${ }^{33,643}$ |
| 1957-58.. |  |  | 17 | 22.255 | . | 22.272 |
| 1958-59. |  | .... | 24,701 16,109 | 79,264 21146 | ${ }_{1}^{6}$ | 103,971 37.256 |
| 1959-60... |  |  | 16,109 2,340 | ${ }_{26,436}^{21,146}$ | 1 102 | 37,256 28,878 |
| 1960-61... |  | -..- | 2,340 | 26,436 | 102 | 28,878 |
| 1961-62. |  | .... | 2,231 | 23,295 | 2 | 25.528 |
| 1962-63. |  | .... | 1,211 | 2,961 |  | 4.172 |
| ${ }_{1}^{1963-64 .}$ |  |  | 1,015 308 | 1,895 5,717 | 78 | 2,942 |
| 1964-65... |  | -...- | 308 151 | 5,717 | 78 38 | 6.103 719 |
| 1965-66... | ---- | ---- | 151 | 535 | 33 | 719 |
| 1966-67. |  | -... | ${ }_{10}^{23}$ | 311 | 10 | 344 |
| -60.6- |  |  | 10 | 6 | ---- |  |

* Season June through the following May.

TABLE 8
SEASONAL LANDINGS IN TONS Sardines


TABLE 9
YEARLY LANDINGS IN POUNDS Salmon
table 10
yearly landings in pounds California barracuda

| Year | California waters | South of state | Total pounds |
| :---: | :---: | :---: | :---: |
| 1916... | 2,226.993 | 460,369 | 2,687,362 |
| 1917. | 2,965,368 | 94,955 | 3,060,323 |
| 1918 | 3,885,691 | ${ }^{951,593}$ | 4,837,284 |
|  | 4,038,852 | 1,786,105 | 5,824,957 |
| 1920 | 4.585,388 | 3,615,947 | 8,201,335 |
| 1921. | 4,588,900 | 3,036,262 | 7,625,162 |
| 1922 | 4,721,448 | 1,528,770 | 6,250,218 |
| 1923. | 5,135.821 | 2,064,751 | 7,200,575 |
| 1924. | 4.733,779 | 2,394,744 | 7,128,523 |
| 1925.. | 5,976,453 | 2,059,996 | 8,036,449 |
| 1926. | 2,945,169 | 2,077,295 | 5,022,464 |
| 1927. | 4,355,583 | 1,844,156 | 6,199,739 |
| 1928. | 4,385,214 | 2,067,242 | 6.452,456 |
| 1929. | 3,925,899 | 1,302,711 | 5,228,610 |
| 1930 | 3,513,608 | 1,250,158 | 4,763,766 |
| 1931. | 3,336,065 | 841,473 | 4,177,538 |
| 1932 | 2,505,101 | 421,674 | 2,926,775 |
| 1933. | 2,912,152 | 160,810 | 3,072,962 |
| 1934. | 1,801,264 | 381,558 | 2,182,822 |
| 1935.... | 2,003,947 | 613.877 | 2,617,824 |
| 1936. | 2,247,858 | 729,984 | 2,977,842 |
| 1937. | 1,799,045 | 1,139,445 | 2,938,490 |
| 1938. | 1,260,790 | 1,269,022 | 2,529,812 |
| 1939. | 2,967,780 | 1,124,274 | 4,092,054 |
| 1940 | 2,545,661 | 1,169,171 | 3,714,832 |
| 1941. | 2,971,349 | 1,230,579 | 4,201,928 |
| 1942 | 2,243,163 | 1,211,374 | 3,454,537 |
| 1943 | 2,382,884 | 1,392,454 | 3,775,338 |
| 1945. | 2,3174,560 | $1,330,878$ $2,128,697$ | $3,648.308$ $3.873,257$ |
| 1946. | 1,637,346 | 1,469,678 | 3,107,024 |
| 1947. | 1,695,867 | 969,878 | 2,665,745 |
| 1948 | 1,100,081 | 1,025,656 | 2,125,737 |
| 1949 | 903,574 | 1,554,110 | 2,457,684 |
| 1950. | 890,435 | 1.367,980 | 2,258,415 |
| 1951.. | 670,015 | 1,436,913 | 2,106,928 |
| 1952.. | 747,667 | 1,346,539 | 2,094,206 |
| 1953.. | 565,942 | 872,904 | 1,438,846 |
| 1954 | 485,946 | 1,076,793 | 1,562,739 |
| 1955 | 322,831 | 818,128 | 1,140,959 |
| 1956. | 50,153 | 702.374 | 752,527 |
| 1957. | 387,143 | 295,523 | ${ }^{682,666}$ |
| 1960 | 1,147,831 | 81,837 | 1,229,668 |
| 1961. | 478.362 | 231,017 | 709,379 |
| 1962. | 521,769 | 224,707 | 746,476 |
| 1963. | 347,354 | ${ }^{31,360}$ | 378.714 |
| 1964. | 251,025 | 83,115 | 334.140 3 |
| 1965. | 273,003 | 89,055 | 362,058 |
| 1966. | 233,319 | 85,797 | 319,116 |
| 1967. | 281,224 | 31,960 | 313,184 |
| 1968. | 114,534 | 25,966 | 140,500 |

TABLE 10
YEARLY LANDINGS IN POUNDS California barracuda

| 60 | FISH BULLETIN I49 <br> TABLE 11 <br> YEARLY LANDINGS IN POUNDS Pacific bonito |  |  |
| :---: | :---: | :---: | :---: |
| Year | California waters | South of state | Total pounds |
| $\begin{aligned} & 1916 \ldots \ldots \\ & 1917 \ldots \\ & 1918 \ldots \\ & 1919 \ldots \\ & 1920 \ldots \end{aligned}$ | 465,691 8859376 $2,265,047$ $2,988,745$ 672,393 | 14,715 176,667 600.353 601,255 | $\begin{array}{r} 480,406 \\ 898.376 \\ 2,441,714 \\ 3,509.098 \\ 873,648 \end{array}$ |
| $\begin{aligned} & 1921 \ldots \ldots . . . \\ & 1922 \ldots \\ & 1923 \\ & 1924 \\ & 1925 \end{aligned}$ | 241,859 894,292 478,771 843,095 782,868 | 82,878 63.650 636,476 202,187 96,298 | $\begin{array}{r} 324,737 \\ 97,742 \\ 1,115,247 \\ 1,045,282 \\ 879,166 \end{array}$ |
|  | $2,942,906$ $1,121,476$ 1,336719 5933886 $3,866,496$ | 178,698 5986,532 770,370 $2,324,658$ $1,297,764$ | $3,121,604$ 1,718008 $2,187,089$ 2,97854 $5,164,250$ |
| $\begin{aligned} & 1931 \ldots \ldots . . \\ & 1932 \ldots \ldots . . \\ & 1933 \ldots \ldots \ldots \\ & 1935 \ldots \\ & 1935 \end{aligned}$ | $3,014,135$ $1,676,487$ 1,967244 $3,003,048$ $2,263,740$ | 65,538 $1,185.799$ 249959 199,646 $5,632,744$ | $\begin{aligned} & 3,079,673 \\ & 2,662,286 \\ & 2,252,199 \\ & 3,202,694 \\ & 7,896,484 \end{aligned}$ |
| $\begin{aligned} & 1936 \ldots \\ & 1937 \ldots \\ & 1938 \\ & 1939 . \\ & 1940 . \end{aligned}$ |  | $4,999,237$ 2,100858 $3,155,423$ $3,211,626$ $1,738,019$ | $7,215,916$ $7,888,070$ $7,839,993$ 9,998885 $5,291,140$ |
| $\begin{aligned} & 1941 \ldots \ldots \\ & \text { 1942...... } \\ & \text { 1943 } \\ & \text { 1944....... } \\ & 1945 \ldots \ldots \end{aligned}$ | $7,850,496$ 880,833 801,535 326.175 339,664 | $3,057,106$ 789885 1,489764 492696 $2,374,517$ | $10,907,602$ $1,650,689$ $2,282,299$ 8188871 $2,714,181$ |
| $\begin{aligned} & 1946 \ldots \ldots \\ & 1947 \ldots \\ & 1948 . \ldots \\ & 1999 \ldots \\ & 1950 . \end{aligned}$ | 582,948 384,387 214,992 99.244 33,456 | $5,042,700$ $13.312,856$ $8,920,134$ $1,730,97$ 662,158 | $\begin{array}{r} 5,625,648 \\ 13,69,183 \\ 9,135,126 \\ 1,829,541 \\ 695,614 \end{array}$ |
| $\begin{aligned} & 1951 \ldots . . . \\ & 1952 \ldots \\ & 1953 . \\ & 1954 . \\ & 1955 \ldots \end{aligned}$ | 54,047 7,504 19,069 21801 40,751 | 722,756 $2,1250,013$ $3,083,578$ $2,100,359$ 96,636 | $\begin{array}{r} 776,803 \\ 2,162,517 \\ 3,102,647 \\ 2,319,060 \\ 136,990 \end{array}$ |
| $\begin{aligned} & 1956 \ldots \ldots \\ & 1957 \ldots \\ & 1958 \\ & 199 . \ldots \\ & 1960 . \end{aligned}$ | $\begin{array}{r} 22,491 \\ 110,174 \\ 4,804,784 \\ 3,003,058 \\ 1,219,682 \end{array}$ | 105,123 108.975 742,922 8,558 30,862 | $\begin{array}{r} 127,614 \\ 219,149 \\ 5,546,806 \\ 3,011,616 \\ 1,250,544 \end{array}$ |
|  | $\begin{aligned} & 8,439,400 \\ & 2,077,998 \\ & 4,013,505 \\ & 2,66,411 \\ & 5,632,399 \end{aligned}$ | $\begin{array}{r} 73,572 \\ 62,94 \\ 9,017 \\ 5,885 \\ 5,941 \end{array}$ | $\begin{aligned} & 8,512,972 \\ & 2,134,902 \\ & 4,022,522 \\ & 2,612,269 \\ & 5,638,340 \end{aligned}$ |
|  | $\begin{aligned} & 18,308,175 \\ & 17,841,537 \\ & 14,903,357 \end{aligned}$ | $\begin{array}{r} 840,319 \\ 3,377,894 \\ 18,572 \end{array}$ | $\begin{aligned} & 19,148,494 \\ & 21,21,41 \\ & 14,921,929 \end{aligned}$ |

TABLE 11
YEARLY LANDINGS IN POUNDS Pacific bonito
table 12

| YEarLy LaNDings in pounds Giant sea bass |  |  |  |
| :---: | :---: | :---: | :---: |
| Year | California waters | South of state | Total pounds |
| 1916.. | 129.414 | 24,026 | 153,440 |
| 1918. | ${ }_{210,43}$ | ${ }_{3}^{58,363}$ | ${ }_{248}$ |
| 1919....- | 126,997 | 58,273 | 185,270 |
| 1920..... | 89,869 | 58,168 | 148,037 |
| 1921. | 87,196 | ${ }^{40,235}$ | 127,431 |
| ${ }_{1923}^{192 .} \ldots$ | ${ }_{75,740}^{83,692}$ | 13,662 151,255 | ${ }^{926,995}$ |
| 1924. | 88,677 | 142,727 | 231,404 |
| 1925. | 102,904 | 86,168 | 189,072 |
| 1926 | ${ }_{1}^{120,070}$ | 257,864 | 377,934 |
| 1928... | (182,726 | 284,869 177,253 | ${ }^{4682,115}$ |
| 1929 | 164,093 | 240,293 | 404,386 |
| 1930 | 187,473 | 206,536 | 39,009 |
| 1931. | ${ }^{254,017}$ | 248,047 | 502,064 |
| 1933.... | ${ }_{119,882}^{231,203}$ | ${ }^{2433,441}$ | 473,866 453,023 |
| 1934. | ${ }^{53,752}$ | ${ }^{807,746}$ | 861.498 |
| 1935. | 17,223 | 614,536 | 631,759 |
| 1936.... | 19,854 | 378,741 | 398,595 |
| 1937........ | (20,412 | 695,172 372978 | 715,554 407,826 |
| 1939 | ${ }_{32,964}$ | ${ }_{427,979}$ | 460,943 |
| 1940. | 42,784 | 323,899 | 366,683 |
| 1911. | 37,801 | 371,736 | ${ }^{409.537}$ |
| $1942 \ldots$ | 13,717 19,271 | ${ }^{3651,063}$ | 378,780 700,855 |
| 1944 | 18,478 | ${ }^{416,402}$ | 434,880 |
| 1945 | 10,481 | 319,687 | 330,168 |
| 1948. | 16,637 | 171,374 | 188,011 |
| 1949... | 17,221 | - 977.180 | 114,401 |
| 1950..... | 11,903 | 138,893 | 150,796 |
| ${ }_{1952}^{1951}$. | 8.590 5.272 |  |  |
| ${ }_{1953}^{1950} \ldots$ | ${ }_{7,883}^{5.272}$ | 308,222 $40+, 156$ | 313,494 411,979 |
| 1954.- | ${ }_{5}^{5.835}$ | 344,411 | 350,276 30,487 |
| 1955... | 7,663 | 357,824 | 365,487 |
| 1956.... | ${ }_{99,302}^{39,610}$ | ${ }_{2}^{293,7051}$ | ${ }^{3421,318}$ |
| 1957.: | 9,302 9,962 | ${ }_{206,065}^{233,051}$ | ${ }_{216,027}^{242,353}$ |
|  | 10,085 | ${ }^{239,824}$ | ${ }^{249,999}$ |
| 1960.. | 20,565 | 221,125 | 241,690 |
| ${ }_{1962}^{196}$ - | 12,509 8,188 | ${ }^{327,854}$ |  |
| 1962... | 8,188 13,960 | 438,021 289,619 | 446,209 303.59 |
|  | 14,018 | 208,697 | ${ }_{222} 2.715$ |
| 1965......- | 13,053 | 338,697 | 351,750 |
| ${ }_{1}^{1966}$. | 7,486 11,893 | ${ }_{218,711}^{333,481}$ | 340,967 230604 230, |
| 1968. | 14,919 | ${ }_{143,502}^{218,711}$ | 158,421 |

TABLE 12
YEARLY LANDINGS IN POUNDS Giant sea bass


TABLE 13
YEARLY LANDINGS IN POUNDS White seabass

HISTORICAL REVIEW 1916-1968
TABLE 14
yearly landings in pounds California yellowtail

| Year | California waters | South of state | Total pounds |
| :---: | :---: | :---: | :---: |
| 1916. | 1,1737,253 | 16,141 | 1,153,394 |
| ${ }_{1918}^{1917 .}$ | - ${ }_{11,375,426}$ | 139,946 | $2,745,995$ $11,515.372$ |
|  | ${ }_{4}^{4.871,763}$ | ${ }^{133,502}$ | 5,005,265 |
| 192 | 2,486,537 | 218,400 | 2,704,937 |
| 1921....- | 2,139,626 | 351.170 | 2,490,796 |
| ${ }_{1923} 19$. | ${ }_{2,968,596}^{3,11131}$ | - ${ }_{\text {r }}$ 303,2922 | 3,414,423 |
| 1924. | ${ }_{\text {2,883,012 }}$ | 1,851,137 | $4,714,199$ |
| 1925. | 2,588,621 | 593,270 | 3,179,891 |
| 1926.. | 3,173,424 | 1,899,690 | 5,023,114 |
| 1927-..-- | 1,435,456 | 2,789,397 | 4,224,853 |
| ${ }_{1929}^{1928 .}$ | ${ }^{1,2979,037}$ | - ${ }_{2,225,319}^{1,386,477}$ | $\underset{\substack{2,683.514 \\ 3,075,264}}{ }$ |
| 1930..... | 1,214,959 | 3,555,797 | 4,770,756 |
| 1931. | 1,690,880 | 835.173 | 2,525,853 |
| ${ }_{1932}^{193}$ | 1,024,086 | ${ }_{2665} 77.2,678$ | li, |
| 1934. | ${ }_{\text {1, }}^{1,233,5280}$ | ${ }_{2,136,571}^{2,66502}$ | ${ }_{2,347,161}^{3,898888}$ |
| 1935.. | 582,589 | 7,566,129 | $8,148,718$ |
| 1936 | 253,723 | 9,838,747 | 10,092,470 |
| ${ }_{1938}^{1937}$ | ${ }_{246,238}^{223.938}$ |  | $5,371,475$ $6,812,318$ |
| 1939 | 262,524 | 2,603,764 | 2.866,288 |
| 1940 | 329,036 | 5,627,768 | 5,956,804 |
| 1941. | 95,924 | 9,734,766 | 9,830,690 |
| ${ }_{1943}^{1942}$ | ${ }_{33,359}^{55,017}$ | ${ }_{4}^{2,671,1,520}$ | ${ }_{4,934,879}^{2,726269}$ |
| 1944 | ${ }_{28,464}$ | 2,928,707 | 2,957,171 |
| 1945 | 23,415 | 3,510,637 | 3,534,052 |
| 1946. | 31,285 | 4,530,298 | 4,561,583 |
| ${ }^{19478 .}$ | 103,706 24653 | -9,89,148 | - $0,3.354,694$ |
| 1949 | 15.907 | 7,301,833 | 7,317,740 |
| 1950.. | 5,727 | 3,524,174 | 3,529,901 |
| 1951. | 14,454 | 4,655,282 | 4,669,736 |
| ${ }_{1}^{19525}$ | 51,116 14,379 |  | - ${ }^{9,446,9729} 5$ |
| 1954. | 11,846 | 1,644,932 | 1,666,778 |
| 1955. | 5,570 | 158,752 | 164,322 |
| 1956. | 18.598 | 352,289 | 370,887 |
| ${ }_{1958}^{1957}$ | 150,898 105,486 | ${ }_{664,144}$ | ${ }_{\text {che }}^{50,9631}$ |
| 1959 | 207,187 | 24,097 | 231,284 |
| 1960... | 156,518 | 92,115 | 248,633 |
| 1961 | 80,689 | 300,080 | 380,769 |
| ${ }_{1963}^{196}$ | 37,066 25.43 | ${ }_{4}^{151,285}$ | ${ }_{69,726}^{188,42}$ |
|  | 25,878 | 84.221 | 110,099 |
| 1965 | 12,522 | 115,283 | 127,805 |
| ${ }_{1}^{1966 .}$ | ${ }^{35,880}$ | 209,327 |  |
| ${ }_{1968 .} 196$ | 13,179 22,460 | (130,789 | (10, ${ }_{1}^{150,68}$ |

TABLE 14
YEARLY LANDINGS IN POUNDS California yellowtail

| TABLE 15 <br> Yearly landings in pounds <br> Flatfish other than sole |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year | California halibut | Pacific halibut | Arrowtooth flounder* | Starry <br> flounder | Sanddab | Turbot |
| $\begin{aligned} & 1916 . \\ & 1917 . \\ & 1918 . \\ & 1919 . \\ & 1920_{\ldots} \end{aligned}$ | $\begin{aligned} & 4,052,173 \\ & 4,379312 \\ & 4,624,218 \\ & 4,699,123 \\ & 4,279,582 \end{aligned}$ | $\begin{array}{r} 70,344 \\ 131,545 \\ 129,473 \\ 161,375 \\ 165,308 \end{array}$ | -... $\cdots$ $\cdots$ | 453,916 1,151876 818,835 435,731 481,587 | $2,228,734$ $2,631,882$ $1,751,69$ 709738 721,810 | 2,608 1,327 3,664 2,115 855 |
| $\begin{aligned} & 1921 \ldots \\ & 1922 \ldots \\ & 1923 . \\ & 1924 . \\ & 1925 \ldots \end{aligned}$ | $3,653,861$ $3,234,505$ 2,229381 2,7688882 $2,452,551$ | 141,896 148999 197,456 132,016 161,310 | ---*) | 293,656 539260 508,961 379770 594,420 | 784,011 1,170979 $1,363,911$ 1,699838 $1,952,847$ | 219 1.534 1,011 1,868 3,926 |
| $\begin{aligned} & 1926 \ldots \\ & 1927 . \\ & 1928 \\ & 199 . \ldots \\ & 1930 \ldots \end{aligned}$ | $1,349,031$ 1,303559 $1,187,651$ 1,102573 $1,097,760$ | 338,689 568867 375,840 750.64 413,958 | \#-. $\cdots$ $\cdots$ $\cdots$ | 667,711 590,064 399,880 580,752 391,096 | $1,143,935$ 89,718 $1,108,764$ $1,051,868$ 616,349 | 1,365 3,950 9,234 1,323 7,345 |
| $\begin{aligned} & 1931 \ldots \\ & 1932 \ldots \\ & 1933 \\ & 193 . \ldots \\ & 1935 \ldots \end{aligned}$ | $\begin{array}{r} 969,773 \\ 94,772 \\ 989,649 \\ 1,037,7008 \\ 1,575,863 \end{array}$ | 790,384 665,828 321,664 $1,022,965$ 872,971 | -.... | 169,806 543,806 457998 537,164 656,113 | 472,805 665,35 562,994 767,025 675,597 | 18,284 23,422 49.615 72.548 72,287 |
| $\begin{aligned} & 1936 . \\ & 1937 . \\ & 1938 \\ & 1939 \\ & 1940 \end{aligned}$ | $\begin{array}{r} 1,582,907 \\ 1,207,255 \\ 1,078,229 \\ 991,61 \\ 948,457 \end{array}$ | $\begin{aligned} & 530,457 \\ & 316,641 \\ & 421,910 \\ & 402,250 \\ & 309,491 \end{aligned}$ | --.. | 621,186 974,770 542,812 793,311 804,089 | 621,675 516,195 639,328 821,204 779,078 | 116,275 75,990 85,896 104,585 62,124 |
| $\begin{aligned} & 1941 \ldots \\ & 1942 \ldots \\ & 1943 \ldots \\ & 1944 \ldots \\ & 1945 \ldots \end{aligned}$ | $\begin{array}{r} 706,650 \\ 750,59 \\ 1,111,998 \\ 1,485,43 \\ 1,748,821 \end{array}$ | 234,762 238,988 281.12 2501 25096 290,138 | \#.-. $\cdots$ $\cdots$ $\cdots$ | 601,577 370,125 505.39 366,520 337,543 | 442,487 358,540 505,338 551,269 592,062 | 26,940 6,571 38,047 78.285 159,870 |
| $\begin{aligned} & 1946 \ldots \\ & 1947 \ldots \\ & 1948 \ldots \\ & 1949 \ldots \\ & 1950 \ldots \end{aligned}$ | $\begin{aligned} & 2,457,187 \\ & 1,787,901 \\ & 1,306,029 \\ & 1,256,45 \\ & 1,092,748 \end{aligned}$ | 403,070 282,100 130,589 167,37 201,900 | -.- $\cdots$ $\cdots+\cdots$ 74,309 | 509,448 527,782 405,251 350,374 913,765 | 679,072 701,413 804,695 72,183 690,621 | 49,847 101784 114,701 95,605 128,080 |
| $\begin{aligned} & 1951 \ldots \\ & 1952 \ldots \\ & 1953 \ldots \\ & 1954 . \\ & 1955 \ldots \end{aligned}$ | $\begin{aligned} & 868,201 \\ & 525,402 \\ & 530,315 \\ & 661,331 \\ & 509,742 \end{aligned}$ | 86,749 24.2581 98,219 90,682 51,942 | 59,801 112.913 88,367 550,457 748,249 | $1,128,892$ 597,477 502,526 500.550 650,180 | $\begin{aligned} & 543,821 \\ & 659,874 \\ & 690,443 \\ & 7531,471 \\ & 781,564 \end{aligned}$ | $\begin{array}{r} 110,164 \\ 81,895 \\ 69,158 \\ 175,918 \\ 100,498 \end{array}$ |
| $\begin{aligned} & 1956 \ldots \\ & 1957 \ldots \\ & 1958 \\ & 1959 \ldots \\ & 1960 \end{aligned}$ | $\begin{aligned} & 455,659 \\ & 376,815 \\ & 267,446 \\ & 35+, 242 \\ & 376,263 \end{aligned}$ | 39,158 26,206 8,271 8,345 4,916 | $\begin{array}{r} 1,070,597 \\ 933,715 \\ 648880 \\ 787,254 \\ 1,007,679 \end{array}$ | 375,400 504,461 471,202 $1,046,926$ 259,038 | $\begin{aligned} & 789,280 \\ & 692,083 \\ & 406,438 \\ & 466,684 \\ & 348,373 \end{aligned}$ | $\begin{array}{r} 83,294 \\ 96,055 \\ 72,533 \\ 1292,225 \\ 62,438 \end{array}$ |
| $1961 \ldots \ldots .$. $1962 \ldots . .$. $1963 . \ldots .$. $1965 \ldots .$. | 654,554 863,086 $1,120,369$ $1,27,105$ $1,243,718$ | $\begin{aligned} & 3,961 \\ & 3,516 \\ & 4,508 \\ & 3,040 \\ & 5,019 \end{aligned}$ | $\begin{array}{r} +60,659 \\ 53,326 \\ 17,345 \\ 9,735 \\ 11,595 \end{array}$ | $\begin{aligned} & 315,337 \\ & 338,192 \\ & 521,310 \\ & 420,986 \\ & 378,389 \end{aligned}$ | 562,964 679,911 555,783 589.526 479,041 | $\begin{aligned} & 71,367 \\ & 80,383 \\ & 96819 \\ & 93.280 \\ & 78,531 \end{aligned}$ |
| $\begin{aligned} & 1966 \ldots . . . . \\ & 1967 \ldots \\ & 1968 \end{aligned}$ | $\begin{array}{r} 1,011,412 \\ 838,058 \\ 671,654 \end{array}$ | $\begin{aligned} & 671 \\ & 498 \\ & 127 \end{aligned}$ | $\begin{array}{r} 3,503 \\ 6,041 \\ 13,400 \end{array}$ | $\begin{aligned} & 380,628 \\ & 870,707 \\ & 856,157 \end{aligned}$ | $\begin{aligned} & 720,101 \\ & 687,168 \\ & 714,622 \end{aligned}$ | $\begin{aligned} & 83,327 \\ & 72,853 \\ & 69,504 \end{aligned}$ |

TABLE 15
YEARLY LANDINGS IN POUNDS Flatfish other than sole

TABLE 16
yearly landings in pounds Sole *

| Year | Dover | English | Petrale | Rex | Sand | Unclassified | Total pounds |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1916 | -. | -.-- | .... | -... | -..- | 6,407,186 | 6,407,186 |
| 1917. |  |  |  |  |  | 8,728,429 | 8,728,429 |
| 1918 |  | -...- | .-... | $\cdots$ | -..- | $7,027,767$ 5,5288 | 7,027,767 |
| 1920 |  | --..- |  | --.-- |  | 3, ${ }^{8} 821,748$ | ${ }_{3,821,748}$ |
| 1921. |  |  |  | --- | ...- | 4,870,870 | 4,870,870 |
| 1922 |  |  |  | .... |  | 7,043,336 | 7,043,336 |
| 1923 |  |  |  |  |  | 7,086,035 | 7,086,035 |
| 1924. |  |  |  |  |  | 8,835,351 | 8,835,351 |
| 1925. |  |  |  |  | -..- | 8,762,535 | 8,762,535 |
| 1926 |  |  |  |  | .... | 8,649,870 | 8,649,870 |
| 1927. |  |  |  |  | .... | 10,479,765 | 10,479,765 |
| 1928. |  | ..... | .... | .... |  | 10,281,719 | 10,281,719 |
| 1929. |  |  |  |  |  | 11,706,761 | 11,706,761 |
| 1930 |  | -... | -... | .... | ...- | 10,924,085 | 10,924,085 |
| 1931. | --.- | $\cdots$ | 1,375,535 | 831,240 |  | 7,206,107 | 9,412,882 |
| 1932. | .... |  | 1,227,223 | 555,558 | ...- | 7,108,059 | 8,890,840 |
| 1933 |  |  | 953,424 | 559,743 | .-.- | 6,797,928 | 8,311,095 |
| 1934. |  | 5,280,154 | 2,456,989 | 715,498 | -.-- | 514,962 | 8,967,603 |
| 1935 |  | 6,035,966 | 1,988,325 | 631,432 | .-.- | 508,540 | 9,164,263 |
| 1936. | --.* | 6,286,867 | 1,126,527 | 515,648 | --.- | 395,966 | 8,325,008 |
| 1937 |  | 5,750,060 | 1,802,721 | 451,497 | ...- | 297,944 | 8,302,222 |
| 1938 | .-.. | 4,953,934 | 2,026,166 | 515,254 | .... | 242,293 | 7,737,647 |
| 1939 |  | 6,270,424 | 2,558,461 | 667,496 | .... | 248,411 | 9,744,792 |
| 1940. |  | 5,056,535 | 1,575,489 | 593,359 | --.- | 162,622 | 7,388,005 |
| 1941 | --.* | 3,278,638 | 893,426 | 371,130 | --.- | 82,661 | 4,625,855 |
| 1942 |  | 2,020,562 | 611,580 | 387,545 | ...- | 136,070 | 3,155,757 |
| 1943 | -...- | 3,092,170 | 918,925 | 495,672 | ...- | 275,612 | 4,782,379 |
| 1944 |  | 3,066,865 | 1,123,986 | 413,286 |  | 96,237 | 4,700,374 |
|  | --.-- | 5,857,240 | 1,232,801 | 442,179 | ---- | 250,482 | 7,782,702 |
| 1946. | .-.. | 7,176,727 | 2,666,285 | 570,418 | -.-- | 151,263 | 10,564,693 |
| 1947 |  | 8,379,502 | 2,947,177 | 842,968 |  | 163,947 | 12,333,594 |
| 1948 | 7,234,438 | $8,71,645$ | 5,089,684 | 893,248 | -..- | 265,924 | 21,654,939 |
| 1950 | $7,890,073$ $9,548,379$ | $5,713,258$ $8,080,693$ | $4,952,156$ 4,366598 | 982,307 $1,068,456$ |  | 191,691 812,382 | 19,729,485 $23,876,508$ |
| 1951. | 8,621,238 | 5,631,659 | 2,726,304 | 1,013,890 |  | 179,369 | 18,172,460 |
| 1952 | 11,748,215 | 4,911,468 | 2,893,619 | 1,185,451 |  | 70,563 | 20,809,316 |
| 1953 | 8,904,367 | 4,099,106 | 3,350,163 | 1,020,877 | 34,542 | 36,958 | 17,446,013 |
| 1954 | 9,930,438 | 3,748,245 | 4,171,901 | 1,183,538 | 75,544 | 72,056 | 19,181,722 |
|  | 8,185,501 | 4,134,779 | 3,619,530 | 1,094,437 | 92,572 | 19,425 | 17,146,244 |
| 1956 | 8,268,424 | 3,826,297 | 2,830,158 | 1,147,523 | 77,357 | 22,852 | 16,172,611 |
| 1957 | 7,932,137 | 4,819,872 | 3,456,819 | 1,234,494 | 56,061 | 28,252 | 17,527,635 |
| 1958 | 8,053,040 | 5,150,234 | 3,157,678 | 1,422,891 | 24,435 | 15,214 | 17,823,492 |
| 1959. | 7,327,420 | 4,617,491 | 2,632,451 | 1,443,005 | 95,765 | 21,197 | 16,137,329 |
| 1960. | 9,184,814 | 2,375,383 | 2,475,661 | 1,107,372 | 73,464 | 228,066 | 15,444,760 |
| 1961. | 7,826,617 | 3,645,918 | 3,390,739 | 1,208,829 | 77.130 | 34,484 | 16,183,717 |
| 1962 | 8,581,091 | 4,206,048 | 3,041,164 | 1,408,245 | 196,565 | 68,444 | 17,501,557 |
| 1963 | 9,781,732 | 4,254,545 | 3,317,948 | 1,565,672 | 331,208 | 43,415 | 19,294,520 |
| 1964 | 9,265,238 | 4,592,752 | 2,697,670 | 1,410,647 | 336,197 | 47,265 | 18,349,769 |
| 1965 | 10,759,963 | 4,892,391 | 2,662,257 | 1,490,475 | 310,444 | 43,016 | 20,158,546 |
| 1966 | 10,311,633 | 4,844,868 | 2,927,190 | 1,635,399 | 235,691 | 25,957 | 19,980,738 |
| 1967 | 7,215,037 | 5,821,909 | 2,768,537 | 1,766,038 | 305,897 | 31,712 | 17,909,130 |
| 1968. | 8,535,521 | 5,811,438 | 2,946,605 | 1,930,583 | 211,376 | 29,614 | 19,465,137 |

* Prior to 1931, all soles were combined as one group; individual species were tabulated separately when they became
sufficiently important.

TABLE 16
YEARLY LANDINGS IN POUNDS Sole

| 66 | FISH BULLETIN I49 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | TABLE 17 |  |  |  |  |  |
|  | YEARLY LANDINGS IN POUNDS Perch and perch-like fishes |  |  |  |  |  |
| Year | Opaleye | Halfmoon | Blacksmith | Sargo | Perch | Total pounds |
| 1916. | ---- | ---* | -...- | ---- | 221,186 | 221,186 |
| 1917. | .... | ... | .... | .... | 252,503 | 252,503 |
| 1918... | -... | --.. | -..- | ---- | 203,420 | 203,420 |
| 1919. |  |  | --.- | -..- | 192,481 | 192,481 |
| 1920. | -..- | ---- | --. | ---- | 186,381 | 186,381 |
| 1921...... | ---- | - | .... | --." | 253,199 | 253,199 |
| ${ }_{1923} 192$. | --..- | ----- | -..-. | --.-. | 243,776 359,682 | 243,776 359,682 |
| 1924... | -... | ----- | --.-- | -.... | 305,726 | 305,726 |
| 1925... | -...- | ---- | ---- | -...- | 272,351 | 272,351 |
| 1926.- | -..- | --.- | -... | --.- | 208,910 | 208,910 |
| 1927.. | , | 30.104 | .-... | .-... | ${ }_{236,974}^{262,93}$ | ${ }_{267,078}^{262,893}$ |
| 1928... | - | 30,104 16,308 | -...- | -..- | 236,974 311,194 | 267,078 327,502 |
| 1930... | -.-. | 36,765 | .... | ---- | 267,972 | 304,737 |
| 1931. | 17,913 | 24,692 | ---- | 260 | 223,092 | 265,957 |
| 1932 | 15,279 | 21,547 | ---- |  | 207,222 | 244,048 |
| 1933. | 4,272 <br> 3 <br> 896 | 8,880 28,394 | ---- | 503 334 | ${ }_{\substack{214,511 \\ 19256}}$ | 228,166 225 |
| ${ }_{1935 .}^{1934 .}$ | 3,896 1,424 | 28,394 33,432 | .-... | 334 5,226 | 192,596 241,525 | 225,220 281,607 |
| 1935. | 1,424 | 33,432 | -... | 5,226 | 241,525 | 281,607 |
| 1936 | 1,781 | 42,166 |  | ${ }_{3}^{515}$ | ${ }^{207,280}$ | ${ }_{2}^{251,742}$ |
| ${ }_{1938}^{1937}$ | 1,778 100 | 34,333 27,501 | 100 | 3,069 5 | 210,309 155,815 | 249,589 183,421 |
| 1938. | 100 20 | 27,501 | -.... | 773 | 155,815 139,394 | 183,421 140,187 |
| 1940... | 39 | 192 | -.-- | 435 | 57,977 | 58,643 |
| 1941 |  | --.* | ---- | 220 | 25,832 58 | ${ }^{26,052}$ |
| $1942 .$. | 66 17 | ----- | --.-- | ---- | 58,018 113,018 | 58,084 113,035 |
| 1944 - | 7 | --.-. | ---- | 2.305 | ${ }_{146,546}$ | 148,858 |
| 1945... | 7 | ----- | -...- | 1,384 | 217,486 | 218,870 |
| 1946.. |  | --.- | ---- | 196 | 192,430 | 192,626 |
| 1947. | 1,519 | -614 | --* | ${ }^{44}$ | 289,182 | ${ }^{2900,745}$ |
| 1948 | ${ }_{954}^{564}$ | 614 | ---- | 1,899 | 302,087 32636 | ${ }^{305,164}$ |
| 1950-- | 6,278 | 1,604 | -- | 27 | 242,354 | 250,263 |
| 1951.. | 1,006 | 254 |  | 1,580 | 237,331 | 240,171 |
| 1952.. | 525 | ...- | 83,811 14,200 | ---- | ${ }_{2}^{213,357}$ | ${ }^{297693}$ |
| 1954. | 9,164 | 50,007 | 14,200 | 2,040 | 281,998 118,499 | 296,590 179,710 |
| 1955.. | 6,117 | 34,410 | -..-- | 695 | 136,554 | 177,776 |
| 1956.. | 3,433 | 15,108 | ---- | -.-- | 187,681 | 206,222 |
| 1957.- | 5,198 | 12,872 | \% |  | 245,699 18969 | 263,769 |
| ${ }_{1959}^{1958}$ | 2,351 4,866 | 4,455 3.639 | 3 | 1,740 35 | 189,679 212853 | 198,228 221393 |
| 1960 | 1,208 | 2,904 | $\cdots$ | 222 | 164,273 | 168,607 |
| 1961. | 2,337 | 5,907 |  | 44 | 118,245 | 126,533 |
| 1962.. | 1,674 | 88.536 | ${ }_{20}^{20}$ | ${ }_{59}^{59}$ | 165, 115 | 175,404 |
| 1963 | 4,378 2,001 | $\begin{array}{r}8,683 \\ 10,043 \\ \hline 10,58\end{array}$ | 2,900 145,143 | 171 11 | 172,884 133,115 | ${ }_{290,313}^{189,016}$ |
| 1965-. | 2,001 3,149 | 10,043 10,518 | 117,785 | 128 | 187,736 | 319,316 |
| 1966. | 19,432 | 9,530 | 6,920 | 1,120 | 160,381 | 197,383 |
| ${ }_{1968}^{196 . . . . . . . ~}$ | 17,298 11,173 | ${ }^{25,431}$ | 7,620 137,634 | 46 46 | 202,513 168,040 | 252,903 366,510 |
|  |  |  |  |  |  |  |

TABLE 17
YEARLY LANDINGS IN POUNDS Perch and perch-like fishes

TABLE 18 Yearly landings in pounds Fishts


- White croaker includes queenfish.
$\dagger$ The drop in landings after 1960 reflects a change in reporting animal food landings (see text).

TABLE 18
YEARLY LANDINGS IN POUNDS Fishes


TABLE 18
YEARLY LANDINGS IN POUNDS Fishes

TABLE 19
Yearly landings in pounds Crustaceans

| Year | $\begin{aligned} & \text { Market } \\ & \text { crab } \end{aligned}$ | $\begin{aligned} & \text { Rock } \\ & \text { crab } \end{aligned}$ | Spiny lobster | $\underset{\text { shrimp }}{\substack{\text { say }}}$ | Ocean shrimp | Spot praun |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1916. | 1,296,912 |  | 250.632 | 411,847 | -..- |  |
| ${ }_{1918}^{1917}$ | $2,580,840$ $1,619,280$ |  | 355,259 195,750 | ${ }^{6052,004}$ |  |  |
| 1919 | 1,301,904 |  | 256,894 | 747,023 |  |  |
| 1920 | 1,220,568 |  | 247,156 | 817,091 |  |  |
| 1921. | 800,952 | ...- | ${ }^{334,271}$ | 907,167 | .... | 1,006 |
| ${ }_{1923}$ | 1,075,800 |  | ${ }_{381,381}$ | 1,113,358 |  |  |
| 1924 | 1,506,816 |  | 294,356 | 1,551.096 |  |  |
|  | 3,23,312 |  | 432,059 | 1,460,234 | .- |  |
| 1926. | 3,296,280 | --.- | ${ }^{452,198}$ | 1,431.511 | --- |  |
| 1928. | ${ }^{2,574,464}$ | 270 | ${ }^{355,800}$ | ${ }_{2,280,871}$ |  |  |
|  | 1,792,776 |  | 396,764 | 3,055,748 |  |  |
| 1930 | 1,992,384 | 12 | 374,450 | 2,687,831 | -..- | 8,736 |
| 1931. | 2.231,384 | ${ }^{56}$ | 383,697 | 1,684,763 | .. | 4,114 |
| 1933. | $3,208,494$ | 14,818 | 3880,014 | ${ }_{2}, 087,952$ | . | 798 |
| 1934 | 3,768,081 | ${ }^{2+5.570}$ | ${ }^{366,651}$ | 1,783,663 |  | 910 |
| 1935 | 3,680,188 | 12,817 | 371,661 | 3,45,091 | .... | 2,351 |
| 1936 | 2,311,802 | 16,202 | 414,183 | 2,240,849 | -... | 1,861 |
| 1938. | ${ }_{3,873,600}$ | ${ }_{3,817}$ | ${ }_{308,378}$ | 1,847,926 | .-.. | 3,285 |
|  | 5,953,361 | 3.984 | 376,928 | 1,175,979 |  | 4,271 |
| 1940 | 5,151.014 | 3,460 | 281,102 | 1,080,190 |  | 2,361 |
| 1941. | +,260.340 | 2,645 | ${ }^{357,334}$ | ${ }_{9}^{952,152}$ | --. | 5,57 |
| 1943 | ${ }_{2,315,338}$ |  | 298,377 | 253,215 | -.... | 43 |
| 194 | 2,934,776 | 510 | 512,490 | 291.974 |  |  |
| 1945 | 4,334,383 | 12,188 | 478,619 | 382,147 |  | 1,452 |
| 1946. | ${ }^{9.624 .368}$ | 11.600 | ${ }^{690} 27272$ | 432,145 | - - | ${ }_{\text {5, }}^{5.175}$ |
| 1948 | 11,892,891 | 20,938 | ${ }_{563,520}$ | ${ }_{926,707}$ | .... | 2,771 |
| 1949 | 11,115,476 | 18,636 | 834,658 | 800,41 |  |  |
| 1950 | 11,704,648 | 20,007 | 933.449 | 913,181 | -... | 5,790 |
| 1951 | 11,569.353 | 22.592 | 824,611 | ${ }^{931,323}$ |  | 2,694 |
| 1953 | 8,278,519 | 49,300 | 749,245 | 732,308 | 287, 110 | ${ }_{2,723}$ |
| 1954 | 7,829,651 | 39,058 | 901,293 | 74,768 | 296,797 |  |
| 1955 | 6,119.320 | 54,051 | 855,416 | 682,731 | 838,656 | 1,182 |
| 1956 | 14,320,519 | 59,171 | ${ }^{735,859}$ | 718,968 | 1,168,519 | 1,233 |
| ${ }_{195}$ | ${ }_{17,282,766}$ | 166,962 | ${ }_{632,618}$ | 45,955 | 1,728,680 | 911 |
| 1959 | 17,262,261 | 129,534 | 505,947 | 35,011 | 1,785,228 |  |
| 1960 | 14,876,148 | 120,903 | 351,032 | 1,580 | 2,026,787 | 147 |
| 1961. | 11,711,327 | 151,782 | ${ }^{412,453}$ | ${ }^{2,050}$ | 2,002,709 |  |
| 1963. | 1,951,461 | 240,611 | ${ }_{581,192}$ | 1,225 | 2,093,063 | 8,445 |
| 1964 | 1,815,363 | 263.885 | 446,655 |  | 1,100.147 | 5,775 |
| 1965 | 4,803,906 | 328,686 | 480,325 | 10.765 | 1,422,364 | 697 |
| 1966 | 12,376.390 | ${ }^{330.843}$ | 489,088 | ${ }^{4.165}$ | 1,190.197 | ${ }^{3.575}$ |
| ${ }_{1968}$ | 16,015,581 | 351,657 | 312,483 | 10.465 | 2,274,770 | 7.239 |

TABLE 19
YEARLY LANDINGS IN POUNDS Crustaceans

TABLE 20
yeariy landings in pounds
Mollusks

| Year | Abalone | Eastern oyster | Pacific oyster | Squid |
| :---: | :---: | :---: | :---: | :---: |
| 1916. | 762,001 | 1,969,519 | ---- | 275,620 |
| 1917 | 637,780 | 816,276 | ---- | 439,438 |
| 1918 | 602,919 | 1,360,685 | -.-- | 361,714 |
| 1919 | 759,203 | 1,515,425 | ---- | 3,698,242 |
| 1920 | 806,716 | 1,121,160 | ---- | 508,199 |
| 1921 | 1,481,170 | 767,124 | ---- | 432,559 |
| 1922 | 1,523,394 | 743,252 | -... | 209,641 |
| 1923 | 1,555,134 | 688,103 | ---- | 1,180,446 |
| 1924 | 2,241,812 | 526,775 | -.-- | 6,831,029 |
| 1925. | 2,352,861 | 569,003 | ---- | 1,891,220 |
| 1926. | 2,060,770 | 610,422 | ---- | 3,135,561 |
| 1927 | 2,816,530 | 554,921 | -.-- | 6,014,113 |
| 1928 | 2,066,243 | 726,298 | ---- | 1,351,992 |
| 1929 | 3,438,858 | 437,245 | ---- | 4,660,572 |
| 1930 | 3,176,513 | 582,367 | ---- | 10,969,462 |
| 1931. | 3,262,166 | 456,255 | ---- | 1,738,621 |
| 1932 | 2,817,345 | 290,571 |  | 4,229,743 |
| 1933 | 2,756,188 | 340,003 | 68,762 | 824,543 |
| 1934 | 3,223,492 | 518,600 | 50,240 | 1,530,450 |
| 1935 | 3,870,921 | 346,682 | 299,375 | 815,944 |
| 1936 | 3,302,195 | 318,912 | 310,683 | 945,439 |
| 1937 | 2,863,175 | 364,649 | 680,081 | 501,662 |
| 1938 | 2,121,468 | 280,742 | 1,207,421 | 1,599,319 |
| 1939 | 1,804,440 | 130,684 | 1,659,355 | 1,162,056 |
| 1940 | 1,724,084 | 113,360 | 1,292,505 | 1,800,632 |
| 1941 | 1,002,330 | 102,040 | 1,717,781 | 1,431,136 |
| 1942 | 164,462 | 92,426 | 609,233 | 943,783 |
| 1943 | 680,274 | 79,878 | 741,105 | 9,164,361 |
| 1944 | 1,630,402 | 106,896 | 636,686 | 10,936,595 |
| 1945 | 2,429,312 | 65,581 | 309,738 | 15,225,664 |
| 1946 | 2,095,762 | 84,603 133,779 | 88,006 46,035 | 38,024,528 |
| 1947 | 2,669,285 | 133,779 | 46,035 | 14,542,649 |
| 1948 | 3,195,852 | 331,238 | 166,524 | 19,255,687 |
| 1949. | 3,599,998 | 46,535 | 235,134 | 6,859,129 |
| 1950 | 3,954,791 | 117,079 | 143,612 | 5,996,335 |
| 1951 | 4,084,190 | 178,716 | 133,700 | 12,382,869 |
| 1952 | 4,784,033 | 163,485 | 190,638 | 3,670,923 |
| 1953 | 4,720,350 | 129,733 | 161,520 | 8,917,114 |
| 1954 | 4,099,525 | 124,928 | 460,520 | 8,155,105 |
| 1955 | 4,185,875 | 140,918 | 1,635,067 | 14,271,968 |
| 1956 | 4,284,063 | 142,181 | 6,101,220 | 19,483,984 |
| 1957 | 5,421,914 | 119,834 | 11,067,646 | 12,449,121 |
| 1958 | 4,224,018 | 32,087 | 9,599,062 | 7,457,418 |
| 1959 | 4,561,827 | 8,733 | 13,759,192 | 19,653,013 |
| 1960 | 4,266,408 | 2,072 | 10,686,856 | 2,561,520 |
| 1961. | 4,553,766 | 105,726 | 10,047,550 | 10,285,791 |
| 1962 | 4,183,181 | 95,100 | 11,043,732 | 9,368,149 |
| 1963 | 4,333,879 | *13,502 | *1,255,515 | 11,560,854 |
| 1964 | 4,079,223 | 4,910 | 1,354,737 | 16,433,624 |
| 1965 | 4,576,084 | 7,982 | 1,054,810 | 18,619,893 |
| 1966 | 4,963,556 | 12,925 | 787,502 | 19,025,879 |
| 1967 | 4,421,581 | 12,710 | 729,431 | 19,601,922 |
| 1968. | 4,474,842 | 16,166 | 645,553 | 24,932,713 |

* Beginning in 1963 oyster landings have been reported as the weight of the packed meats rather than as weight in the shell.

TABLE 20
YEARLY LANDINGS IN POUNDS Mollusks
TABLE 21
YEARLY LANDINGS IN POUNDS
Animal food *

| 1961. | 3,777,133 | 1965. | 2,873,650 |
| :---: | :---: | :---: | :---: |
| 1962 | 1,879,811 | 1966 | 2,380,223 |
| 1963 | 1,033,961 | 1967. | 2,596.118 |
| 1964. | 1,738,441 | 1968. | 2,589,634 |

* Unmarketable whole fish destined to be ground and frozen for use by fur breeders.

TABLE 21
YEARLY LANDINGS IN POUNDS Animal food


[^0]:    * Only the tunas are included in the shipments.

