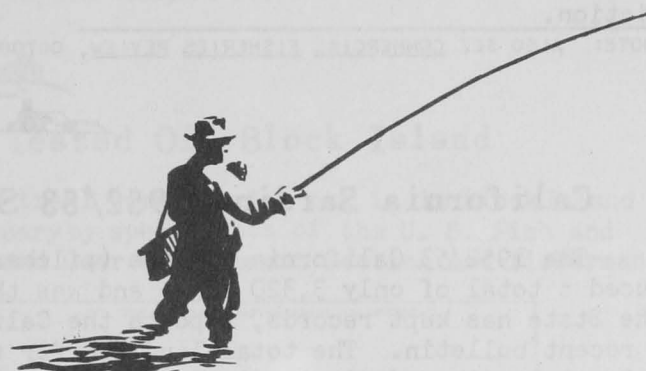


# TRENDS AND DEVELOPMENTS

## Anglers' Fishing-License Sales Reach New High

The popularity of fresh-water fishing in the United States reached a new high during the year ended June 30, 1952, with the record sale of 17,127,896 anglers' licenses, the Secretary of the Interior was advised by the Director of the Fish and Wildlife Service on February 3, 1953. The gross

FISHING LICENSES SOLD IN THE UNITED STATES -- July 1, 1951, to June 30, 1952				ANGLERS' FEES
STATE	RESIDENT	NON-RESIDENT	TOTAL	
Alabama	168,589	13,099	181,688	\$ 206,839
Arizona	67,817	17,020	84,837	255,185
Arkansas	257,759	90,308	348,067	630,137
California	1,047,759	11,628	1,059,387	3,217,004
Colorado	273,249	71,653	344,902	1,080,399
Connecticut	89,375	4,643	94,018	326,824
Delaware	6,624	1,760	8,384	21,480
Florida	191,219	90,709	281,928	770,266
Georgia	348,336	6,115	354,451	233,421
Idaho	168,578	53,205	221,783	577,598
Illinois	720,154	30,814	750,968	794,706
Indiana	511,729	34,353	546,082	611,333
Iowa	380,071	12,518	392,589	560,168
Kansas	265,032	4,753	269,785	413,447
Kentucky	318,060	76,523	394,583	650,658
Louisiana	76,516	12,821	89,337	121,589
Louisiana	123,226	63,738	186,964	569,000
Maryland	84,613	16,999	101,312	161,261
Massachusetts	207,779	7,436	215,215	563,275
Michigan	841,913	282,425	1,124,338	2,153,445
Minnesota	644,046	286,510	930,556	2,062,805
Mississippi	113,122	50,110	163,232	246,633
Missouri	613,223	41,045	654,268	1,114,888
Montana	176,238	29,592	205,830	372,912
Nbraska	195,267	8,234	203,501	309,686
Nevada	21,637	21,459	43,096	167,291
New Hampshire	93,873	44,306	138,179	399,460
New Jersey	133,056	11,788	144,844	483,960
New Mexico	69,959	36,512	106,471	353,953
New York	758,651	35,785	794,436	1,783,149
North Carolina	277,564	45,696	323,260	533,174
North Dakota	68,887	707	69,594	36,564
Ohio	834,463	40,447	874,910	1,279,137
Oklahoma	378,290	53,099	431,389	907,335
Oregon	295,433	2,346	297,779	1,102,311
Pennsylvania	642,491	21,595	664,086	1,363,405
Rhode Island	23,140	450	23,590	42,194
South Carolina	275,582	3,688	279,270	351,201
South Dakota	110,060	23,873	133,933	312,561
Tennessee	537,825	224,230	762,055	728,562
Texas	384,686	7,526	392,214	650,306
Utah	110,341	4,980	115,321	295,643
Vermont	71,760	30,516	102,276	208,928
Virginia	332,971	3,034	336,005	474,888
Washington	423,940	20,583	444,523	1,029,736
West Virginia	236,930	10,676	247,606	456,104
Wisconsin	738,944	299,768	1,038,712	2,067,692
Wyoming	109,912	49,450	159,362	557,025
TOTALS	14,819,671	2,308,225	17,127,896	\$33,609,539



revenue derived by the 48 States from these license sales amounted to \$33,609,539.

Compared with the previous year when 16,026,699 anglers' fishing licenses were sold by the various States for \$35,554,285, the 1951/52 season totals show an increase of 1,101,197 licenses and a decrease of \$1,944,746.

Nonresident fishermen purchased 2,308,225 licenses in fiscal year 1952, an increase of 152,804 over the 2,155,421 of the previous year. States which attracted the greatest number of out-of-State anglers were Wisconsin (299,768 nonresident license sales), Minnesota (286,510), Michigan (282,425), and Tennessee (224,230).

In the number of licenses issued, Michigan with 1,124,338 continued to head the list. California rated second place with 1,059,367, while third place went to Wisconsin with 1,038,712. Minnesota held fourth place with 930,556; Ohio was fifth with 874,910; New York was sixth with 794,436; Tennessee, seventh with 762,055; Illinois, eighth with 750,968; Pennsylvania, ninth with 664,286; and Missouri, tenth with 654,268.

In Alaska the sale of 43,495 fishing licenses brought \$74,938. Resident licenses numbered 29,826; nonresident, 13,669. One-half of the revenue from hunting and fishing license sales in Alaska is required by law to go into "miscellaneous receipts" of the United States Treasury, and the remainder goes into the Territorial school fund.

INCLUDES GROSS COST TO ANGLERS OF LICENSES, SPECIAL PERMITS, SEALS, AND ONE-HALF THE COST OF COMBINATION LICENSES. COMBINATION LICENSES HAVE BEEN INCLUDED IN BOTH HUNTING AND FISHING TABULATIONS.

In the Territory of Hawaii, according to the Board of Commissioners of Agriculture and Forestry, only 627 fresh-water game-fishing licenses were purchased at a cost of \$1,517. Fishing licenses in Hawaii, however, are required for the taking of introduced fresh-water game species only. As the bulk of their sport fishermen fish in salt water, the number of licenses sold gives a most incorrect measurement of the degree of sport-fishing activity in the Territory.

NOTE: ALSO SEE COMMERCIAL FISHERIES REVIEW, MARCH 1952, P. 28; APRIL 1951, P. 30.



## Bids Received for Lease of Fish Cannery in American Samoa

Two bids were received on the proposal for the lease of the fish cannery at Tutuila, American Samoa, according to officials of the Pacific Branch of the Department of Interior's Office of Territories. Although neither of the bids was completely in accord with specifications, it is hoped that some satisfactory arrangement can be worked out with one or the other of the bidders by direct negotiation.

NOTE: ALSO SEE COMMERCIAL FISHERIES REVIEW, OCTOBER 1952, PP. 46-8.



## California Sardine 1952/53 Season Worst in History

The 1952/53 California sardine (pilchard) season (that ended February 1) produced a total of only 3,320 tons, and was the worst season in the 37 years that the State has kept records, reports the California Department of Fish and Game in a recent bulletin. The total landings for the season only equalled "one fair--not outstanding--day's landings during past seasons," according to the Department. Commercial sardine fishermen landed more than 700,000 tons in 1936/37 (the record season). As the season ended on February 1 the fleet was fishing for anchovies as a substitute for sardines.

The present catastrophe, predicted by Department biologists more than a decade ago, underscores the Department's plea for strict regulation and management of the fishery until it can recover. The Departmental recommendation asks that the California Fish and Game Commission be given the necessary regulatory power by the State Legislature. Meanwhile, the Sardine Industry Advisory Committee has urged the Legislature that future sardine fishing laws be set by the State's Marine Research Committee.

The Pacific mackerel fishery in California is also at a low ebb. Low spawn survival of Pacific mackerel plus overfishing "has reduced this fishery to the same status as the sardine--meaning that for commercial purposes neither fishery exists at present," stated the supervisor of the State Marine Fisheries Laboratory. The Pacific mackerel fishermen are fishing for the less-popular jack mackerel due to the scarcity of Pacific mackerel.



## Chesapeake Bay Oyster Photography Project Abandoned by Maryland

The project of learning more about oysters through underwater photography has been abandoned by the Maryland Tidewater Fisheries Commission, according to the January Maryland Tidewater News issued by the Department of Research and Education. "There is nothing yet to take the place of the dredge," said a member of the Commission. "The camera has some value in determining the relative productivity of any bar, but this preliminary work indicates that it is only of real value when used with the older tong-and-dredge sampling methods," a Commission statement said.

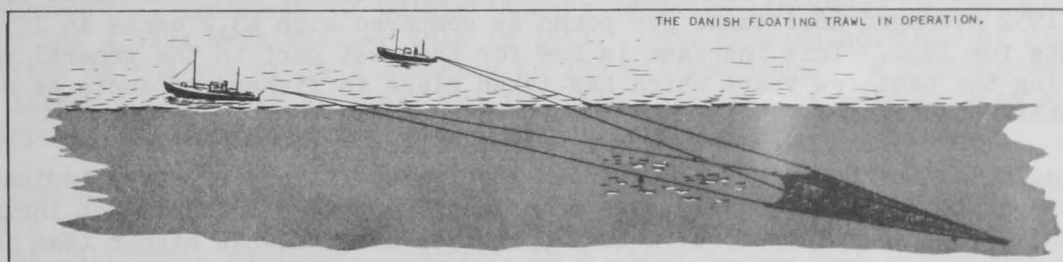
The camera, rigged with a special filter to offset cloudy water, was tested for four days in October 1952. It was estimated at the time it would cost from \$3,000 to \$4,000 a month to operate in late fall when the Chesapeake Bay waters are clearest.

NOTE: ALSO SEE COMMERCIAL FISHERIES REVIEW, JANUARY 1953, P. 31.



## Danish Floating Trawl Tested Off Block Island

Experiments with a Danish floating trawl were carried out in the Block Island Sound winter herring fishery during January by specialists of the U. S. Fish and Wildlife Service's Exploratory Fishing and Gear Development Section and fishermen



of the Point Judith Fishermen's Cooperative Association. Unfortunately, these tests had to be temporarily suspended in late January due to an unusual scarcity of herring which in past years have been present in Block Island Sound in large numbers. Only scattered fish have appeared thus far this season and the total catch by the commercial otter-trawl fleet has been very small. The experiments were to be continued immediately when the schools of herring show up again in greater concentrations.

Although no herring schools were found for testing the floating trawl, results of the experiments were satisfactory from an operational standpoint. Several blind sets were made, and on each occasion the operation proceeded smoothly. The two vessels, furnished by the Point Judith Fishermen's Cooperative Association, were local draggers 48 feet and 57 feet in length, with 110- and 100-hp. Diesel engines, respectively. On one set, an accompanying vessel made echo recordings of the trawl, which showed the float line 5 fathoms below the surface and the lead line 10 fathoms below the surface, thus giving a vertical opening of 5 fathoms. This was a 36-foot trawl (3/4 normal size) towed at 2½ to 3 knots in 19 fathoms of water with 50 fathoms of towing cable.

Point Judith fishermen who took part in the trials quickly learned the method of setting and hauling the floating trawl. They were optimistic concerning its possibilities.

## Federal Purchases of Fishery Products

FRESH AND FROZEN FISH PURCHASES BY DEPARTMENT OF THE ARMY, DECEMBER 1952:  
For the military feeding of the U. S. Army, Navy, Marine Corps, and Air Force, the Army Quartermaster Corps in December 1952 purchased a total of 1,109,663 pounds (valued at \$630,940) of fresh and frozen fishery products (see table). This was a decrease of 45.9 percent in quantity and 42.8 percent in value as compared with the previous month, and 51.5 percent in quantity and 45.6 percent in value less than in December 1951. December 1952 purchases were the lowest by the Quartermaster Corps since April 1950 (pre-Korea)--an indication that buying practices may have been altered to the extent that heavy purchases are made when fishery products are plentiful.

Purchases of fresh and frozen fish by the Army Quartermaster Corps in 1952 amounted to 32,275,567 pounds (valued at \$15,049,599), an increase of 1.4 percent in quantity and 9.3 percent in value as compared with 1951, and 80.0 percent in quantity and 103.4 percent in value more than in 1950.

Purchases of Fresh and Frozen Fishery Products by Department of the Army (December and Twelve Months of 1952 and 1951)							
Q U A N T I T Y				V A L U E			
December		January-December		December		January-December	
1952	1951	1952	1951	1952	1951	1952	1951
Lbs.	Lbs.	Lbs.	Lbs.	\$	\$	\$	\$
1,109,663	2,225,362	32,275,567	31,843,701	630,940	1,160,779	15,049,599	13,771,350

Prices paid for fresh and frozen fishery products by the Department of the Army in 1952 averaged 46.6 cents per pound as compared with 43.2 cents in 1951 and 41.4 cents for 1950. This increase is due for the most part to the general price rise during the past few years which has taken place in fishery products as well as all other commodities.

In addition to the purchases of fresh and frozen fishery products indicated above, the Armed Forces generally make some local purchases which are not included in the above figures. Therefore, actual purchases are somewhat higher than indicated, but it is not possible to obtain data on the local purchases made by military installations throughout the country.



## Fishery Products Marketing Prospects for 1953 and Review for 1952

PROSPECTS FOR 1953: Current indications point to a somewhat weaker civilian demand for fishery products in 1953 than last year. Per-capita consumption of fresh and processed fish and shellfish may be about as large as in 1952, but retail prices this year may not average quite as high as last year. Fishery products are expected to encounter more competition from meats and poultry products for the consumers' food dollar than in 1952.

Domestic supplies are sufficiently large to maintain civilian per-capita consumption of fishery products during the next few months at about the same rate as in the comparable part of 1952. Cold-storage stocks of frozen fishery products on January 1, 1953, were at a record-high level for that time of year, and will be more than adequate to meet domestic needs until the 1953 commercial-fishing operations

begin to expand seasonally after mid-spring. Total canned fish stocks are estimated to be about as large as in early 1952 and sufficient for civilian needs until the new packs start moving to market after mid-year. Through most of 1953, less canned California sardines (pilchards) will be available for the domestic market and for export because of the unusually small pack last year. However, supplies of many of the other popular types of canned fishery products will be about as large or larger than in the comparable part of 1952:

The international trade of the United States in fishery products in 1953 is expected to follow the same pattern as last year. Imports of these commodities are expected to be larger than last year, although the increase may not be as large as that which occurred between 1951 and 1952. Some further decline in exports of fishery products is anticipated to result from the still smaller exportable supplies of those canned fishery products which are popular in our foreign markets.

REVIEW OF 1952: U. S. civilian per-capita consumption of fishery products in 1952 was slightly smaller than in the previous year. Some declines in consumption were indicated for many of the important fresh and processed products. The Bureau of Labor Statistics index of retail prices for all edible fishery products in urban areas for the year as a whole averaged slightly lower than for 1951, after declining in every month beginning with March.

The commercial catch of edible fish and shellfish in 1952 was somewhat smaller than a year earlier. Most of the decline resulted from the almost complete failure of the sardine (pilchard) fishery in California.

Commercial freezings of edible fishery products (in 1952) in the United States and Alaska were smaller than in 1951. Cold-storage holdings of fish and shellfish at the end of 1952 amounted to 193 million pounds, a little over 14 percent larger than a year earlier. An important part of the cold-storage stocks was imported frozen groundfish and other fillets.

Canned fish and shellfish production was somewhat smaller than in 1951. The decline in the total output resulted mainly from the significant reduction in the pack of California sardines. However, to a large extent this was offset by a near-record volume of tuna packed in the continental United States, and a sharp increase over 1951 in the output of canned anchovies, mackerel, and Maine sardines. The pack of salmon in 1952 was somewhat smaller than that of a year earlier. To some extent the decline in output of salmon was offset by increased imports from Canada and by a reduction both in purchases by U. S. military agencies and exports. Nevertheless, civilians had less canned salmon per person than in 1951, a continuation of the downward consumption trend of recent years.

Imports of edible fishery products were large in 1952. The quantity of frozen groundfish (cod, haddock, hake, pollock, cusk, and ocean perch) fillets received from abroad is estimated to have reached a record high of almost 108 million pounds, 24 percent larger than corresponding imports in 1951. Canned tuna and bonito imports in 1952 totaled 37 million pounds, approximately 60 percent larger than a year earlier. Doubling of shipments from Japan accounted for most of the increase.

Exports of edible fishery products from the United States, on the other hand, were smaller in volume than in 1951. The out movement of canned salmon, mackerel, and sardines--our principal export commodities among the edible fishery products--amounted to about 43 million pounds, almost 70 percent below 1951. The export decline resulted largely from the very small catch and pack of California sardines.

Military purchases of fresh and frozen fishery products in 1952 amounted to 32 million pounds, approximately equal to the preceding year's total. On the other hand, withdrawals from domestic market supplies of the major types of canned fish (i.e., salmon, sardines, and tuna) were 10 million pounds, about 38 percent smaller than the quantity taken by the military in 1951.

This analysis is based on a report prepared by the Bureau of Agricultural Economics, U. S. Department of Agriculture, in cooperation with the U. S. Fish and Wildlife Service, and published in the former agency's January-March 1953 issue of the National Food Situation.



## Imports of Groundfish Fillets Reach New High in 1952

United States 1952 imports of groundfish (including ocean perch) fillets amounted to 107,802,447 pounds--24 percent greater than the previous all-time high in 1951



(see table). Once again Canada led as the largest foreign supplier of groundfish fillets for the United States market, shipping 51 percent of the total; followed by Iceland who shipped 33 percent, and Norway 10 percent. While exports to the United States from most countries have been increasing almost steadily, Iceland and Norway are mainly responsible for the substantial increases in recent postwar years. Since 1948, shipments from Iceland jumped 749 percent, while shipments from Norway were 26 times greater.

Domestic groundfish fillet producers in New England have been seeking Government protection in the form of higher tariffs against what they term an "ever-increasing influx of foreign competition." Hearings on groundfish fillets were held by the U. S. Tariff

United States Imports of Groundfish (Including Ocean Perch) Fillets, 1948-52					
Country	TOTAL FOR YEAR				
	1952 <sup>1/</sup>	1951	1950	1949	1948
	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
Canada .....	54,807,347	57,695,407	51,067,779	42,459,033	49,141,992
Iceland .....	35,487,432	24,162,173	12,529,576	4,859,133	4,181,204
Norway .....	10,540,748	3,912,309	2,080,376	437,979	395,109
W. Germany .....	1,439,391	406,670	91	-	-
United Kingdom .....	1,658,307	279,049	93,858	-	-
Netherlands .....	1,355,264	263,719	11,475	20,845	-
Denmark .....	2,369,412	244,295	595,256	-	9,352
Greenland .....	132,800	133,550	239,100	-	-
Belgium .....	-	-	520	-	-
Sweden .....	2,400	-	122	-	40
South Africa .....	48	-	14	-	-
Brazil .....	348	-	-	-	-
Japan .....	40	-	-	-	-
New Zealand .....	60	-	-	-	-
St. Pierre .....	8,250	-	-	-	-
Total .....	107,802,447	87,097,172	66,618,167	47,776,990	53,727,697

<sup>1/</sup>PRELIMINARY.

Commission in Washington, D. C., in 1951 and a study of the industry was made. In a report issued at Washington, D. C., in September 1952, the Commission found "...that groundfish fillets are not being imported into the United States in such increased quantities as a result of a concession granted in the General Agreement on Tariffs and Trade so as to cause or threaten serious injury to the domestic industry producing like or directly competitive products. Accordingly, in the judgment of the Commission, no sufficient reason existed for a recommendation to the President for the withdrawal or modification of the concession."

NOTE: ALSO SEE P. 72 OF THIS ISSUE.



## Metal Cans--Shipments for Fishery Products, November 1952

Total shipments of metal cans for fish and sea food during November 1952 amounted to 7,062 short tons of steel (based on the amount of steel consumed in the manufacture of cans), a decrease of 17 percent when compared with shipments for October and 15 percent less than in November 1951. The pack of California sardines continued very light in November. Data on these shipments are from a January 16 report issued by the Bureau of the Census.



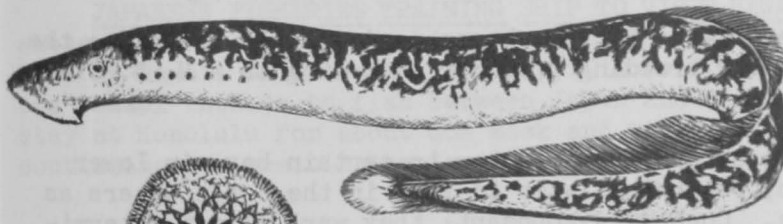
Total metal-can shipments for fishery products during the first 11 months of 1952 totaled 102,326 short tons of steel as compared with 102,270 short tons of steel for January-November 1951.

NOTE: STATISTICS COVER ALL COMMERCIAL AND CAPTIVE PLANTS KNOWN TO BE PRODUCING METAL CANS. REPORTED IN BASE BOXES OF STEEL CONSUMED IN THE MANUFACTURE OF CANS, THE DATA FOR FISHERY PRODUCTS ARE CONVERTED TO TONS OF STEEL BY USING THE FACTOR: 23.0 BASE BOXES OF STEEL EQUAL ONE SHORT TON OF STEEL.



## Michigan

STUDY OF SEA LAMPREY CONTINUED: Thousands of sea lampreys were captured or their habits observed during 1951-52 as Michigan's Conservation Department study of the fish-killing parasite was continued, reports a recent news bulletin from that State agency. In the last few years, lampreys have nearly wiped out the commercial lake trout fishery of the Great Lakes, and more recently have been reported in some inland lakes.



SEA LAMPREY  
(*PETROMYZON MARINUS*)



MOUTH OF SEA LAMPREY

THE SEA LAMPREY, WHICH FEEDS ON THE BLOOD AND FLESH OF FISH, IS PREYING ON THE LAKE TROUT OF THE GREAT LAKES AND IS THREATENING THAT FISHERY.

A barrier dam on the Black River near Naubinway, Michigan, was in operation during the spawning run of the sea lamprey as part of the experimental control program in 1952. Attempts were made to block the lamprey

from spawning grounds in such a way that trout and other spawning fish could pass through. Nearly 700 adult lampreys were captured here.

The Department also operated lamprey traps on the Carp Lake River in Emmett County in cooperation with the U. S. Fish and Wildlife Service. During the spawning season, 857 lampreys were taken moving upstream. Downstream movement on the river was checked by another trap that took nearly 5,500 adult and young lampreys during the fiscal year (July 1, 1951, to June 30, 1952).

Also, persistent reports led to a study of suspected inland lakes. Of the 19 checked, Burt, Mullet, Big Platte, Charlevoix, and Devoe lakes were found to have resident lamprey populations. However, none is badly troubled by this predator.

\* \* \* \* \*

PROGRESS IN LAKE TROUT BIOLOGICAL STUDIES: Biological studies of the lake trout during the last six years in Lake Michigan and Huron by Michigan's Department of Conservation have shown some success, but obstacles have been many and progress has been slow, states a recent bulletin from that Agency.

In order to learn more about the movements and growth rates of lake trout, fingerlings with clipped fins were planted some years ago in Lake Michigan and Huron. To date 1,599 have been recovered in Lake Michigan. Of the total recovered, only about 230 were of legal size, the remainder of sublegal size. During 1952, only 11 lake trout with deformed fins were turned in to the Department--10 sublegal and 1 legal-size fish. Research biologists doubt that any of these came from the original plantings.

Commercial fishermen are paid \$2.00 for each sublegal-size and \$4.00 for each legal-size lake trout believed to be from the fin-marked stock. Although many of the fish were "doubtful recoveries," others were almost certainly from the original group and have provided some knowledge to research men.

The study is continuing, but few additional recoveries are expected in the present program.



## Pacific Gray Whales in Winter Migration to Breeding Grounds

In January the gray whales of the Pacific began moving southward along the coast of California to their winter breeding grounds, according to a U. S. Fish and Wildlife Service news release.

These strange animals make an annual migration to certain bays in Lower California to bear their calves, returning later to feed in the ocean waters as far north as the Gulf of Alaska. Once very abundant, they were almost exterminated by whalers who operated in these confined bays. Now protected, their numbers have increased so that they are counted in the thousands.

Whales like other mammals breathe air and must hold their breathe when below the surface of the water. They must spend much time at the surface where they may be counted. The gray whale, during this migration, follows the beach closely and may be counted as he surfaces within sight of land. The slate-colored gray whale is one of the smaller of the whales, with an average length of 40 feet. The blue or sulphur-bottom whale reaches a maximum length of 106 feet and a weight of over 100 tons. But these 40-foot animals travel leisurely close inshore through the clear waters of southern California at six or seven miles an hour.



The Fish and Wildlife Service's expert on whales and whaling has taken up his post at the Scripps Institution of Oceanography at La Jolla in partial fulfillment of the United States' responsibilities as a member of the International Whaling Convention for the conservation of whales. He is making systematic observations to determine the size of the herd of gray whales, and will follow them later to the southern wintering grounds to complete his census. In order to insure that whaling treaty requirements are met, whaling permits are now required for United States nationals to take these animals, and to establish whaling stations. These requirements are designed to eliminate all wasteful practices.

The once great American whaling industry (100 years ago over 700 whaling ships, involving an investment of \$40 million, were engaged in the business) is temporarily dormant because of a lack of demand for the products. The business may be revived because the whale meat is similar to beef in flavor and texture, and is extensively used for food in Japan, as well as in several European countries, and has recently been introduced in the United States. It has been estimated that one whale could produce as much meat as a herd of 100 cattle.

The International Whaling Commission, made up of representatives of the 17 treaty Governments, meets annually. This year the meeting will be in June at London.



## Pacific Oceanic Fishery Investigations

ARTIFICIAL TUNA-BAIT TRIALS: The use of fish extracts in attracting surface tuna schools was tested in the first of a series of sea trials which commenced during the week of January 26, reports the Service's Pacific Oceanic Fishery Investigations.

The material used had been previously tested by Dr. A. L. Tester on tuna held in University of Hawaii ponds and found to be a strong attractant to the fish held in captivity. The initial sea trial by the research vessel Hugh M. Smith will stress methods of spreading the extract in the water and observing the reaction of the fish to the material.

JAPANESE FISHERIES TRAINING SHIP TO VISIT HAWAII: The Shunkotsu Maru, a Japanese fisheries training ship with 47 fisheries trainees on board, was expected to stop at Hawaii on or about February 9, according to a report from POFI. This 600-ton vessel intends to fish between Japan and Hawaii. It was learned she would stay at Honolulu for about one week and visit Hilo on the island of Hawaii before continuing its training cruise.

\* \* \* \* \*

TUNA SCOUTING METHODS STUDIED BY "CHARLES H. GILBERT" (Cruise 6 and POFI Flights 2 and 3): The study of methods for scouting surface schools of tuna in the Hawaiian area, and a survey of biological and oceanographic conditions in December were the objectives of the Service's Pacific Oceanic Fishery Investigations (POFI) research vessel Charles H. Gilbert. The vessel left Honolulu December 9 and returned December 19, 1952. After sailing due south from Honolulu, the vessel then headed due east to Hawaii. It worked around Hawaii five days before cruising along the windward side of the chain to Kauai and Niihau. Flights were made on December 12 and 18 from Barbers Pt., N.A.S., along the course of the vessel and north to 23° 40' N. latitude.

The watch for tuna, birds, and other organisms was favored by good weather throughout the cruise. Comparable numbers of fish schools were sighted in roughly the same waters by the vessel and plane observers. Schools of small skipjack were encountered by the vessel south of Oahu, around Hawaii, off Maui and Molokai, and near Niihau; fish being caught from the area south of Oahu and off Niihau. Bird sightings were scanty, shearwaters being notable by their comparative absence; the presence of jaegers and skuas (unrecorded in mid-Pacific waters prior to this year) suggests the possibility of marked irregularities in recent weather and/or hydrographic patterns. Schools of cetaceans were seen from time to time; motion pictures of three species were obtained and one porpoise was harpooned for study.

Difficulty in obtaining bait in sufficient quantities made efforts at fishing schools unsatisfactory. Incidental trolling with two nonstandard lures for 100 hours resulted in a catch of three yellowfin, three dolphin, and one little tuna. Morphometrics were taken on selected specimens, and a series of skipjack from a catch of 134 was saved for a study of food, sex and maturity, and length-weight relationships, and a comparative study of various length measurements versus post-mortem states of the fish.

Hydrophone measurements and recordings were made of vessel noise and the sounds produced by various organisms. Eighty-three BT. casts were made, at hourly intervals during the day. Continuous records of near-surface temperatures were obtained and the depth recorder was operated routinely when under way for indications of deep-swimming organisms. Notable temperature inversions were detected in Hilo Bay, where also the vitality of nehu has apparently dropped sharply in the course of the past month.



## United States and Alaska Fisheries

LEADING FISHERY PORTS IN 1952: San Pedro, California, once again led all other fishing ports in the United States in 1952, with estimated total landings of 385,000,000 pounds, valued at \$38,000,000. However, these landings were 29



SAN PEDRO PILCHARD FLEET.

percent less than in 1951, according to the U. S. Fish and Wildlife Service's Branch of Commercial Fisheries. The failure of the pilchard fishery in 1952 accounted for this large decrease. Gloucester, Massachusetts, was again second with estimated landings of 226,000,000 pounds--13 percent less than in 1951 due to lighter ocean perch landings. Because of record menhaden landings, Lewes, Delaware, was in third place, replacing Boston, Massachusetts, which dropped to fifth place in 1952. Fishery landings, together with landed values, at leading United States ports follow:

Landings of Fishery Products at Leading U. S. Ports in 1952  
(Quantity and Landed Values)<sup>1/</sup>

Port	Quantity	Landed Value
	Lbs.	\$
San Pedro, California .....	385,000,000	38,000,000
Gloucester, Massachusetts .....	222,000,000	9,600,000
Lewes, Delaware .....	210,000,000	2/
Cameron, Louisiana .....	195,000,000	2/
Boston, Massachusetts .....	173,000,000	14,300,000
Empire, Louisiana .....	140,000,000	2/
Pascagoula, Mississippi .....	130,000,000	2/
San Diego, California .....	110,000,000	17,000,000

<sup>1/</sup>PRELIMINARY DATA.

<sup>2/</sup>NOT AVAILABLE.

In 1952 other important fishery ports besides those listed in the table in approximate order of volume of landings were: Reedville, Va.; Amagansett, N. Y.; Fernandina, Fla.; Beaufort, N. C.; Tuckerton, N. J.; Port Monmouth, N. J.; and New Bedford, Mass. Except for New Bedford, landings at these ports consisted chiefly of menhaden, which is used for the production of fish meal, oil, and solubles.

Landings of Fishery Products at Leading U. S. Ports in 1951<sup>1/</sup>

Port	Quantity	Landed Value
	Lbs.	\$
San Pedro, California .....	540,000,000	40,000,000
Gloucester, Massachusetts .....	260,000,000	17,600,000
Boston, Massachusetts .....	172,000,000	14,000,000
San Diego, California .....	170,000,000	26,000,000
Lewes, Delaware .....	166,000,000	2/
Reedville, Virginia .....	126,000,000	2/
Pascagoula, Mississippi .....	118,000,000	2/
New Bedford, Massachusetts .....	79,300,000	11,800,000
Monterey, California .....	70,000,000	2,225,000

<sup>1/</sup>PRELIMINARY DATA.

<sup>2/</sup>NOT AVAILABLE.

\* \* \* \* \*

CATCH OF IMPORTANT FISH AND SHELLFISH, 1952: The estimated catch of edible and inedible fish and shellfish in the United States and Alaska during 1952 totaled about 4.3 billion pounds, a slight decline from the 4.4 billion pounds landed in 1951. The estimated total landed value during 1952 was \$335,000,000--\$10,000,000 less than in 1951. Menhaden once again was the leading species landed with a record total of 1.3 billion pounds. Salmon (all species) led all other food fish, although landings were 13 percent less than in 1951. The other leading species landed in order of importance were tuna, shrimp, ocean perch, and haddock (see table).

U. S. and Alaska Catch of Important Fish and Shellfish 1952 & 1951 <sup>1/</sup>		
Species	1952	1951
	Lbs.	Lbs.
Menhaden .....	1,300,000,000	1,100,000,000
Salmon (all species) .....	350,000,000	400,000,000
Tuna and tuna-like fish .....	340,000,000	322,000,000
Shrimp .....	200,000,000	205,000,000
Ocean perch .....	189,000,000	260,000,000
Haddock .....	165,000,000	156,000,000

<sup>1/</sup>PRELIMINARY DATA.

In 1951, pilchard was included among the leading species with landings of 325,000,000 pounds. However, the 1952 season was almost a complete failure with a catch of about 6,650,000 pounds, which relegates this species to an insignificant position. The bulk of the pilchard catch is canned.



## U. S. and Hawaii Canned Tuna and Tuna-Like Fish Pack, 1952

The United States and Hawaii canned tuna and tuna-like fish pack in 1952 amounted to 9,115,202 standard cases, valued at \$113,000,833 to the packers (table

Table 1 - Canned Tuna and Tuna-Like Fish Pack by Species and Area, 1952 (Quantity in Standard Cases and Value to Cannery)

Species	CALIFORNIA			WASHINGTON, OREGON, AND HAWAII			ATLANTIC COAST		
	Quantity Std. Cases <sup>1/</sup>	Total Value \$	Avg. Price Per Std. Case <sup>1/</sup> \$	Quantity Std. Cases <sup>1/</sup>	Total Value \$	Avg. Price Per Std. Case <sup>1/</sup> \$	Quantity Std. Cases <sup>1/</sup>	Total Value \$	Avg. Price Per Std. Case <sup>1/</sup> \$
Tuna:									
Albacore .....	1,847,669	24,032,879	13.01	740,657	10,097,021	13.63	-	-	-
Yellowfin .....	2/4,012,454	2/48,501,103	12.09	3/4,424	3/39,092	8.84	-	-	-
Bluefin .....	94,898	1,179,701	12.43	-	-	-	-	-	-
Skipjack .....	1,641,278	20,379,405	12.42	3/	3/	-	-	-	-
Tonno .....	146,567	1,990,523	13.58	-	-	-	-	-	-
Miscellaneous .....	-	-	-	3/195,743	3/2,487,071	12.71	4/204,512	4/2,355,904	11.52
Total tuna .....	7,742,866	96,083,611	12.41	940,824	12,623,184	13.42	204,512	2,355,904	11.52
Tuna-Like Fish:									
Bonito .....	47,213	415,165	8.79	-	-	-	-	-	-
Yellowtail .....	179,787	1,522,969	8.47	-	-	-	-	-	-
Total tuna-like fish .....	227,000	1,938,134	8.54	-	-	-	-	-	-
1952 Grand Total ..	7,969,866	98,021,745	12.30	940,824	12,623,184	13.42	204,512	2,355,904	11.52
1951 Grand Total ..	7,454,315	88,830,304	11.92	645,232	8,653,963	13.41	137,178	1,561,939	11.39
1950 Grand Total ..	7,971,897	98,404,253	12.34	957,585	13,458,922	14.06	87,059	966,919	11.11

<sup>1/</sup>CASES OF VARIOUS SIZES CONVERTED TO THE EQUIVALENT OF 48 NO. 1 TUNA CANS TO THE CASE, EACH CAN 7 OUNCES NET WEIGHT FOR SOLID MEAT OR 5 OUNCES NET WEIGHT FOR FLAKES, CHUNKS, OR GRATED.  
<sup>2/</sup>SMALL PRODUCTION OF LIGHT MEAT AND DARK MEAT PACKED FROM MIXED TUNA SPECIES INCLUDED WITH YELLOWFIN PRODUCTION.  
<sup>3/</sup>MISCELLANEOUS TUNA INCLUDES ALL SKIPJACK AND SOME YELLOWFIN PRODUCTION.  
<sup>4/</sup>INCLUDES ALBACORE, YELLOWFIN, BLUEFIN, SKIPJACK, AND LITTLE TUNA.

1). This is the first year's statistics in which the pack of tuna in Hawaii has been included and, therefore, comparison with previous years is difficult. However, from all indications it appears that the 1952 pack was below that reported for the record year of 1950 when United States canners packed 9,016,541 standard cases, valued at \$112,830,094 (table 2). As in the past, the bulk of the pack was produced from tuna caught by domestic vessels, but there was an increase in the percentage produced from imported frozen tuna, mainly from Japan, with some from Peru and Chile.

California continued as the leading State for canning tuna, packing 87.4 percent of the total. There was a small pack in the East Coast States of Maine, Massachusetts, Maryland, and South Carolina.

The average price per standard case in 1952 (\$12.40) was 3.2 percent higher than in 1951 (\$12.02), but 22.5 percent below the record high of \$16.00 per case in 1948 (table 3). There was a high inventory of canned tuna on hand at the beginning

Table 2 - Canned Tuna and Tuna-Like Fish Pack by Species, 1950-52 (Quantity in Standard Cases and Value to Cannery)

Species	1952 Total			1951 Total			1950 Total		
	Quantity Std. Cases <sup>1</sup>	Total Value	Avg. Price Per Std. Case <sup>2</sup>	Quantity Std. Cases <sup>1</sup>	Total Value	Avg. Price Per Std. Case <sup>2</sup>	Quantity Std. Cases <sup>1</sup>	Total Value	Avg. Price Per Std. Case <sup>2</sup>
<b>Tuna:</b>									
Albacore .....	2,588,326	34,129,900	13.19	1,563,753	19,958,605	12.76	2,053,842	28,877,954	14.06
Yellowfin .....	4,016,878	48,540,195	12.08	4,070,995	48,365,425	11.88	4,245,346	51,225,806	12.07
Bluefin .....	94,898	1,179,701	12.43	3,71,922	3,797,817	11.09	3,51,390	3,564,160	10.99
Skipjack .....	1,641,278	20,379,405	12.42	2,126,800	25,238,212	11.87	2,262,351	27,032,399	11.95
Tonno .....	146,567	1,990,523	13.58	160,626	2,180,231	13.57	244,610	3,469,125	14.18
Miscellaneous .....	5,400,255	4,842,975	12.10	5,137,178	5,156,939	11.39	5,87,059	5,966,919	11.11
<b>Total tuna .....</b>	<b>8,888,202</b>	<b>111,062,699</b>	<b>12.50</b>	<b>8,131,274</b>	<b>98,102,229</b>	<b>12.06</b>	<b>8,944,598</b>	<b>112,136,363</b>	<b>12.54</b>
<b>Tuna-Like Fish:</b>									
Bonito .....	47,213	415,165	8.79	14,469	134,364	9.29	12,951	122,411	9.45
Yellowtail .....	173,767	1,522,969	8.47	90,982	809,613	8.90	58,992	571,320	9.68
<b>Total tuna-like fish .....</b>	<b>227,000</b>	<b>1,938,134</b>	<b>8.54</b>	<b>105,451</b>	<b>943,977</b>	<b>8.95</b>	<b>71,943</b>	<b>693,731</b>	<b>9.64</b>
<b>Grand Total .....</b>	<b>9,115,202</b>	<b>113,000,833</b>	<b>12.40</b>	<b>8,236,725</b>	<b>99,046,206</b>	<b>12.02</b>	<b>9,016,541</b>	<b>112,830,094</b>	<b>12.51</b>

<sup>1</sup>CASES OF VARIOUS SIZES CONVERTED TO THE EQUIVALENT OF 48 NO. 1 TUNA CANS TO THE CASE, EACH CAN 7 OUNCES NET WEIGHT FOR SOLID MEAT OR 6 OUNCES NET WEIGHT FOR FLAKES, CHUNKS, OR GRATED.  
<sup>2</sup>SMALL PRODUCTION OF LIGHT MEAT AND DARK MEAT PACKED FROM MIXED TUNA SPECIES INCLUDED WITH YELLOWFIN PRODUCTION.  
<sup>3</sup>SMALL PRODUCTION OF SKIPJACK TUNA INCLUDED WITH BLUEFIN PRODUCTION.  
<sup>4</sup>SMALL PRODUCTION OF BLUEFIN TUNA INCLUDED WITH SKIPJACK PRODUCTION.  
<sup>5</sup>INCLUDES ALBACORE, BLUEFIN, SKIPJACK, YELLOWFIN, AND LITTLE TUNA.

of the year and the market was not in a healthy state. However, conditions improved steadily through 1952 and as the year closed the market was reasonably sound.

Table 3 - Canned Tuna and Tuna-Like Fish Pack, 1941-52<sup>1</sup>  
(Quantity in Standard Cases and Value to the Cannery)

Year	Quantity Std. Cases <sup>2</sup>	Total Value	Avg. Price Per Std. Case <sup>2</sup>	Year	Quantity Std. Cases <sup>2</sup>	Total Value	Avg. Price Per Std. Case <sup>2</sup>
1952	9,115,202	113,000,833	12.40	1946	4,784,484	59,135,823	12.36
1951	8,236,725	99,046,206	12.02	1945	4,531,565	47,407,451	10.46
1950	9,016,541	112,830,094	12.51	1944	3,560,020	40,836,117	11.80
1949	7,290,320	97,710,325	13.40	1943	2,696,073	31,430,189	11.66
1948	7,037,758	112,612,296	16.00	1942	2,484,749	30,742,493	12.37
1947	5,894,495	90,609,175	15.37	1941	2,931,581	19,397,887	6.62

<sup>1</sup>DATA FOR YEARS PRIOR TO 1952 DO NOT INCLUDE PACK IN HAWAII.  
<sup>2</sup>CASES OF VARIOUS SIZES CONVERTED TO THE EQUIVALENT OF 48 NO. 1 TUNA CANS TO THE CASE, EACH CAN 7 OUNCES NET WEIGHT OF SOLID-PACKED MEAT OR 6 OUNCES NET WEIGHT OF FLAKES, CHUNKS, OR GRATED.



### Wholesale and Retail Prices

**WHOLESALE PRICES, DECEMBER 1952:** December 1952 average prices for edible fishery products at wholesale were down considerably from the previous month and December 1951. Good production for this time of year and seasonally light demand caused prices to fall. The over-all edible fish and shellfish (fresh, frozen, and canned) wholesale index for December was 104.5 percent of the 1947-49 average (see table 1)-- 7.7 percent lower than in November and 7.8 percent below December 1951, the Bureau of Labor Statistics of the Department of Labor reports.

Nearly all quotations for the items in the drawn, dressed, or whole finfish subgroup in December 1952 were quoted considerably below the previous month and December 1951. The index for this subgroup dropped 21.8 percent from November to December and was 18.5 percent below a year earlier. A substantial drop in the price of fresh large offshore drawn haddock, and smaller declines for whitefish at Chicago and yellow pike at New York City were responsible for the general decline in this subgroup. But fresh whitefish at New York City and lake trout at Chicago went up slightly.

Fresh processed fish and shellfish prices rose 2.4 percent above November and 4.4 percent over December 1951. While the fresh haddock fillet price at Boston dropped commensurate with the ex-vessel price for drawn haddock, prices for large

shrimp rose considerably from November to December. Fresh and frozen shrimp were reported in very short supply. Compared with December 1951, prices for fresh haddock fillets and oysters were considerably lower but shrimp prices were substantially higher.

Group, Subgroup, and Item Specification	Point of Pricing	Unit	Avg. Prices (\$)		Indexes (1947-49 = 100)			
			Dec. 1952 <sup>1</sup>	Nov. 1952	Dec. 1952	Nov. 1952	Oct. 1952	Dec. 1951
ALL FISH AND SHELLFISH (Fresh, Frozen, and Canned).....					104.5	<sup>2</sup> /113.2	101.6	113.3
Fresh and Frozen Fishery Products: .....					111.2	125.3	108.1	122.7
Drawn, Dressed, or Whole Finfish: .....					108.4	<sup>2</sup> /138.6	111.9	133.2
Haddock, large, offshore, drawn, fresh .....	Boston	lb.	.11	.17	113.3	177.0	113.4	167.8
Halibut, Western, 20/80 lbs., dressed, fresh or frozen .....	N.Y.C.	"	.34	.44	104.5	137.0	130.0	101.4
Salmon, king, lge. & med., dressed, fresh or frozen .....	"	"	.49	.49	109.1	109.7	101.8	121.0
Whitefish, mostly Lake Superior, drawn (dressed), fresh .....	Chicago	"	.34	.44	83.0	109.1	112.8	112.0
Whitefish, mostly Lake Erie pound or gill net, round, fresh .....	N.Y.C.	"	.48	<sup>2</sup> /47	96.1	94.0	106.2	113.2
Lake trout, domestic, mostly No. 1, drawn (dressed), fresh .....	Chicago	"	.61	.59	124.0	120.9	99.4	129.1
Yellow pike, mostly Michigan (Lakes Michigan & Huron), round, fresh .....	N.Y.C.	"	.39	.41	91.4	96.1	99.7	101.3
Processed, Fresh (Fish and Shellfish): .....					116.5	113.8	103.7	111.6
Fillets, haddock, sml., skins on, 20-lb. tins	Boston	lb.	.27	.38	91.9	129.3	91.9	149.4
Shrimp, lge. (26-30 count), headless, fresh or frozen .....	N.Y.C.	"	.70	.61	110.7	96.4	89.3	81.3
Oysters, shucked, standards .....	Norfolk area	gal.	5.25	5.25	129.9	129.9	123.7	136.9
Processed, Frozen (Fish and Shellfish): .....					110.9	102.8	103.6	106.2
Fillets: Flounder (yellowtail), skinless, 10-lb. pkg. ....	Boston	lb.	.34	.34	119.2	119.2	124.4	145.8
Haddock, sml., skins on, 10-lb. cello-pack .....	"	"	.27	.25	98.5	93.9	93.0	114.2
Ocean perch, skins on, 10-lb. cello-pack .....	Gloucester	"	.24	.24	114.4	114.4	119.2	125.2
Shrimp, lge. (26-30 count), 5-lb. pkg. ....	Chicago	"	.73	.62	111.9	94.9	92.6	78.0
Canned Fishery Products: .....					94.6	<sup>2</sup> /94.7	92.0	99.5
Salmon, pink, No. 1 tall (16 oz.), 48 cans per case .....	Seattle	case	18.93	<sup>2</sup> /18.93	99.1	<sup>2</sup> /99.1	93.9	109.6
Tuna, light meat, solid pack, No. $\frac{1}{2}$ tuna (7 oz.), 48 cans per case .....	Los Angeles	"	14.50	14.50	90.5	90.5	90.5	81.2
Sardines (pilchards), Calif., tomato pack, No. 1 oval (15 oz.), 48 cans per case .....	"	"	9.25	9.38	108.0	109.4	109.4	100.2
Sardines, Maine, keyless oil, No. $\frac{1}{4}$ drawn (3 $\frac{1}{4}$ oz.), 100 cans per case .....	N.Y.C.	"	7.20	7.20	76.6	76.6	76.6	110.5

<sup>1</sup> REPRESENT AVERAGE PRICES FOR ONE DAY (MONDAY OR TUESDAY, IF AVAILABLE) DURING WEEK BEGINNING DECEMBER 15.

<sup>2</sup> REVISED.

Higher prices for frozen haddock fillets and shrimp were entirely responsible for the increase of 7.9 percent in the processed frozen fish and shellfish index from November to December 1952. Prices for frozen fillets of flounder and ocean perch remained steady at November levels. Compared with December 1951, processed frozen fish and shellfish prices in December were 4.4 percent higher entirely due to considerably higher prices for frozen shrimp, which more than offset lower prices for frozen fillets of flounder, haddock, and ocean perch.

Canned fishery products prices in December were 0.1 percent below November and 4.9 percent less than in December 1951. The only change from November was for California sardines (pilchard) which declined slightly; all other canned items remained unchanged. However, while December quotations for canned salmon and Maine sardines were substantially below the same month in 1951, those for canned tuna and California sardines were somewhat higher.

RETAIL PRICES, DECEMBER 1952: Downward was the trend for retail prices of all foods purchased from November 15 to December 15, 1952, by moderate-income urban families. The drop was 1.0 percent and these prices also were 1.0 percent lower than during the same period in 1951. Although this is a season when normal price rises can be expected, these prices have declined steadily for four straight months.

Prices of all finfish (fresh, frozen, and canned) in mid-December also declined (0.6 percent), but at a much slower rate than other foods. Finfish prices were considerably lower (4.9 percent) than a year earlier.

Table 2 - Adjusted Retail Price Indexes for Foods and Finfish, December 15, 1952, with Comparisons

Item	Base	INDEXES		
		Dec. 15, 1952	Nov. 15, 1952	Dec. 15, 1951
All foods .....	1935-39 = 100	229.9	232.3	232.2
All finfish (fresh, frozen, and canned) .....	do.	333.9	335.9	351.2
Fresh and frozen finfish .....	1938-39 = 100	288.7	290.8	296.7
Canned salmon: pink .....	do.	431.6	433.1	475.1

Fresh and frozen finfish retail prices decreased 0.7 percent from November 15 to December 15 and were 2.7 percent lower than in mid-December 1951. Canned pink salmon prices dropped 0.3 percent--the nineteenth straight month these prices have dropped--and were 9.2 percent below mid-December 1951.

Table 3 - Average Retail Prices and Price Ranges of Individual Finfish Products, December 15, 1952

Product	Unit	UNITED STATES		
		Range of Prices Dec. 15, 1952	Average Prices	
			Dec. 15, 1952	Nov. 15, 1952
Frozen Finfish Fillets:		¢	¢	¢
Ocean perch .....	lb.	29-69	45.1	45.6
Haddock <sup>2/</sup> .....	lb.	29-75	50.4	50.5
Canned Finfish:				
Salmon, pink .....	16-oz. can	39-89	53.4	53.6

<sup>1/</sup>PRICED IN 46 CITIES OUT OF 56.  
<sup>2/</sup>PRICED IN 47 CITIES OUT OF 56.

Frozen ocean perch fillets retailed at an average price of 45.1 cents per pound in mid-December and frozen haddock fillets at an average of 50.4 cents per pound; a year earlier frozen ocean perch fillets averaged 46.4 and frozen haddock fillets 50.9 cents per pound. Canned pink salmon retailed at an average price of 53.4 cents per 16-oz. can in mid-December, compared with 58.8 cents per can in mid-December 1951.