TRENDS AND DEVELOPMENTS

Additions to the Fleet of U. S. Fishing Vessels

During May 1950, a total of 102 vessels of 5 net tons and over received their first documents as fishing craft--39 less than in May 1949. Washington led with 21 vessels, followed by Alaska with 14, and California with 9 vessels, the Treasury Department's Bureau of the Customs reports.

During the first five months of 1950, a total of 351 vessels were documented, compared with 401 during the same period in 1949.

Vessels Obtaining Their First Documents as Fishing Craft, May 1950					
Section	May		Five mos. ending with May		Total
	1950	1949	1950	1949	1949
	Number	Number	Number	Number	Number
New England	3	8	15	11	35
Middle Atlantic	12	4	24	25	44
Chesapeake Bay	9	10	31	27	87
South Atlantic and Gulf	33	34	126	142	369
Pacific Coast	31	56	97	108	327
Great Lakes	-	4	4	25	38
Alaska	14	24	54	60	96
Hawaii	-	1	-	3	5
Unknown	-	-	-	-	1
Total	102	141	351	401	1,002

Note: Vessels have been assigned to the various sections on the basis of their home port.

ECA Procurement Authorizations for Fishery Products

July 1950

No procurement and reimbursement authorizations for fishery products (edible and inedible) were announced by the Economic Cooperation Administration during July 1950. In addition, no cancellations or decreases affecting previous authorizations for fishery products were reported.

Total ECA procurement authorizations for fishery products from April 1, 1948, through July 31, 1950, amounted to $28,286,000 ($16,296,000 for edible fishery products, $10,450,000 for fish and whale oils, and $1,540,000 for fish meal).

European Recovery Program Notes

EUROPEAN PAYMENTS UNION: Commenting on the Paris action of the Organization for European Economic Cooperation (OEEC), the Acting Administrator of ECA stated that the establishment of the European Payments Union with all Marshall Plan countries as full and active members is one of the most significant and far-reaching developments of the European Recovery Program. He further stated that "the Payments Union is the first step towards the goal of a unified European economy. Currency convertibility, made possible by the payments plan, will lead to greatly increased intra-European trade which in turn will lessen European dependence on extraordinary dollar aid."

FOOD INDUSTRY STUDY: Two groups of specialists from 15 Marshall Plan countries left France during the month to make studies of American techniques in timber production; and in the handling of perishable foodstuffs, including transport, storage, and use of refrigeration. The perishable foods team, set up as a 54-man group, will make an eight-week study. The members are from Austria, Belgium, Denmark, France, the Federal Republic of Germany, Italy, the Netherlands, Norway, Sweden, Switzerland, and the United Kingdom. The food industry study is designed to help Europeans eliminate present-day waste in the movement of perishable foods. In requesting this study, OEEC pointed out that the use of refrigerated depots and vehicles in the movement of perishable foods is much more highly developed in the United States than in Europe. The study will also aid food production techniques in Africa, as the British, French, and Belgian members of the team will pass on the information gained here to their countries' overseas territories.

Federal Purchases of Fishery Products

DEPARTMENT OF THE ARMY, May 1950: The Army Quartermaster Corps purchased 1,270,467 pounds (valued at $439,998) of fresh and frozen fishery products during May this year for the U. S. Army, Navy, Marine Corps, and Air Force for military feeding (see Table). Compared with the previous month, May purchases were up 28 percent in quantity, but only 1 percent in value; and compared with the corresponding month a year earlier, this May's purchases were 3 percent greater in quantity and 12 percent in value.

Purchases of Fresh and Frozen Fishery Products by Department of the Army (May and the First Five Months, 1949 and 1950)

QUANTITY				VALUE			
May		January - May		May		January - May	
1950	1949	1950	1949	1950	1949	1950	1949
lbs.	lbs.	lbs.	lbs.	$	$	$	$
1,270,467	1,234,229	4,832,873	6,574,933	439,998	393,676	2,062,398	2,214,499

For the first five months this year total purchases were still below the corresponding period a year ago by 26 percent in quantity and 7 percent in value.

Great Lakes Fishery Investigations

POSSIBLE CONTROL OF GREAT LAKES SEA LAMPREYS BY ELECTRONIC DEVICES: For the development of lamprey-control devices, a contract was awarded to the Cook Research Laboratories of Chicago, Ill., on June 25 by the U. S. Department of the Interior. The Fish and Wildlife Service is seeking to develop radar-type instruments, antisubmarine sound generators, and other electronic devices to electrocute the sea lampreys which have virtually destroyed the lake-trout fishery in most of the Great Lakes.

Preliminary research by the Cook laboratories gives hope of finding methods of controlling the sea lamprey. The Cook Research Laboratories will have in operation by October 15 an experimental device on Carp Lake River in Michigan for electrocuting downstream-migrating lampreys. The electrical device on Carp Lake River is designed for killing the young sea lampreys that are moving downstream from their rearing areas in the headwaters of the river.

The goal of the Cook laboratories is to develop a device--electromagnetic, sonic or light--which is selective in operation, killing only sea lampreys. Such a device, or combination of devices and techniques, may be developed by next year. Experiments have already progressed to the point that it seems possible that a method of killing the upstream-migrating (or spawning) lampreys without harming spawning game fish can be discovered. This is considered to be the most promising development in sea lamprey control work.

According to Fish and Wildlife Service scientists, who are working with the Cook Research Laboratories in the control program, the sea lamprey has peculiarities which may spell its own destruction. For example, the lamprey migrates at night to spawn in the upper reaches of rivers and streams. Bright underwater lights may confuse the lamprey, making his electrocution easier. Sound waves, produced by sonic generators tuned to the heartbeat of lampreys, may also kill them. A combination of these factors may be developed into a positive lamprey-control program.

Desirable game fish may be protected from electrocution devices by their ability to detect and stay away from electric fields. Sea lampreys, on the other hand, will swim right into charged areas and be killed or so severely injured that they will die within a few hours. Sonic or light devices, on the other hand, may repel lampreys but not fishes, enabling game fish to proceed upstream during certain periods when the electrical devices are shut off.

Gulf Fishery Investigations

The Gulf of Mexico, despite its importance to the economy of the South and the Nation, is one of the least understood of the world's major bodies of water. This applies not only to the mass water movements within the Gulf, and to the nutrient salts which are available to support marine life, but also to the abundance, ranges, distributions, and life histories of the many species of fish occurring in that body of water. The Fish and Wildlife Service, the primary research agency of the newly-formed Gulf States Marine Fisheries Compact, has the responsibility for solving these unknowns through the Service's Gulf Fishery Investigations. (The Gulf Fishery Investigations under the Branch of Fishery

Biology with its vessel *Alaska* will deal with the biological and oceanographic phases of the Gulf of Mexico's problems, while the Service's Gulf Exploratory Fishery Program under the Branch of Commercial Fisheries with its vessel *Oregon* will concentrate on the exploration of the Gulf's fishery resources and their commercial possibilities.)

The first step of the Investigations is to survey the physical oceanography of the Gulf as a whole. The recently-organized Oceanographic Department of Texas A. and M. is authorized to design and execute a program to define the pattern of currents and temperatures, surface and subsurface, for the entire Gulf, and how these vary throughout the year.

Complementing this, analyses of the quantities and distribution of nutrient salts available in these waters will be carried on in order to gain an understanding of the fertility of these waters. Except for that portion which is influenced by the major rivers (each of which contributes nutrients leached out of the land), the Gulf is assumed to be far less productive than the waters of more northern latitudes.

Along with these studies, the microscopic life of the seas, known as plankton, will be studied quantitatively, not only for the microscopic plant and animal life, but especially for the eggs and larvae of fish. Adequate sampling of a body of water as extensive as the Gulf presents a major problem. Advantage will be taken of recent developments in high speed nets - possibly of the Hardy plankton sampler. The relative sterility of the waters should reduce the problem of sorting, identifying, and measuring, to something within limits.

Here lie the best clues (for those fish with pelagic eggs) to the areas and to the time of spawning, to the species, and even to their relative numbers. In this study lies also the clue to the variations in survival, which becomes increasingly apparent as the biggest contributing factor to the fluctuations in abundance of all of our fisheries, of which the sardine study on the Pacific Coast is an example.

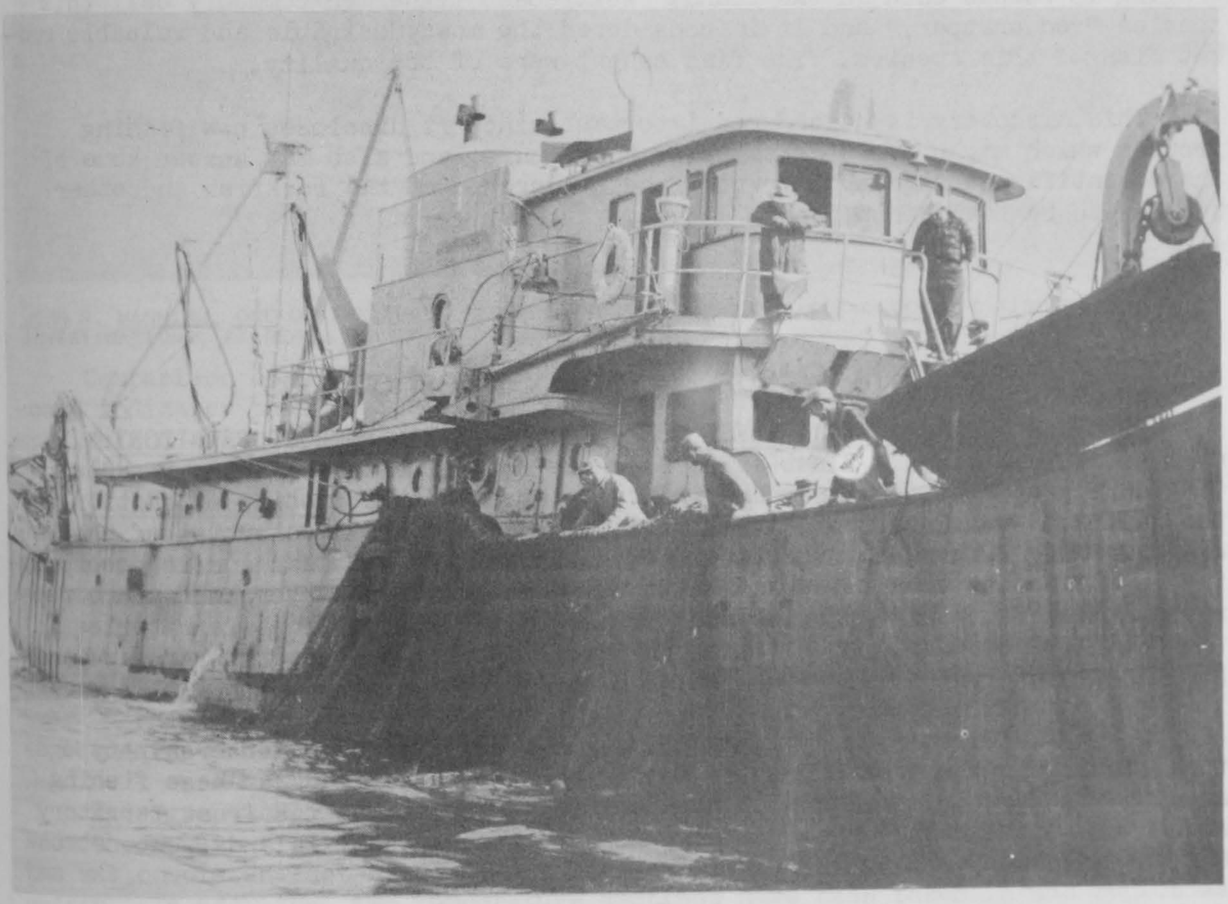
Along with these basic studies there will be investigations into the life history of some of the species of greatest commercial importance. For one, the menhaden, which is now the greatest contributor (in tonnage) to the fisheries production of the United States, and whose life history is virtually a blank.

The solution of all these problems, and more, will be sought under the Gulf Fishery Investigations, with headquarters at Galveston, Texas. The *Alaska*, the Service's Gulf Fishery Investigations vessel, is now being outfitted for this work in the Gulf. Obviously, the scope of the Investigations exceeds the capacity of any one agency. Therefore, the Service is seeking cooperation with the many State and private institutions in the States making up the Compact. Besides Texas A. and M., the University of Miami and Louisiana State University have already agreed to work on a part of the program; others will join so that the whole can be subdivided into segments small enough to be mastered.

North Atlantic Fishery Investigations

"ALBATROSS III" LOCATES LARGE NUMBERS OF TWO-YEAR OLD SCROD HADDOCK: Large numbers of two-year old scrod haddock were caught at numerous places on Georges Bank by the Albatross III on its Cruise 37 (July 6 to July 17, 1950). After completing about half of a census of the fish on this Bank, the vessel returned to Woods Hole before the cruise was completed because of trouble with the trawl-winch motor.

During the cruise, a series of 31 shoal-water stations in the central part of Georges Bank was completed. Data on the size and numbers of all species of fish, bottom temperatures, bottom samples, and bottom water samples were obtained at each station.



HAULING UP THE BELLY OF THE ALBATROSS III'S OTTER TRAWL NET ON A RECENT CRUISE.

North Pacific Exploratory Fishery Program

RED ROCKFISH FISHING GROUNDS DISCOVERED ON UNCHARTED SEAMOUNT: What is apparently an unknown seamount at 46°44' N. latitude, 130°47' W. longitude, was located by the *John N. Cobb*, the Service's North Pacific exploratory fishing vessel, on August 3. This seamount, which is not shown on navigation charts for the area, is about 280 miles west of Willapa Bay on the Washington coast. The discovery was made from routine readings of electronic devices while the vessel was conducting albacore tuna explorations in the North Pacific.

Soundings taken of this seamount show that the shallowest portion is 22 fathoms deep, and there is an extensive level area at 70 fathoms. Surrounding ocean waters are 1,400 to 1,600 fathoms deep.

The vessel set long-line fishing gear on the seamount grounds. When the gear was hauled up, it was heavy with red rockfish (*Sebastodes ruberrimus*), averaging 15 pounds each in the round. West Coast fishermen commonly call this species "red snapper," and it is considered the most desirable and valuable market fish of this species. The fish caught were of top quality.

This discovery is considered important since it discloses new fishing grounds which might prove of value in the future, and also may answer some of the scientific questions concerning the occurrence of the rockfish and other species to be found in offshore waters.

Pacific Oceanic Fishery Investigations

OBSERVER ACCOMPANIES JAPANESE TUNA FISHING FLEET IN TRUST TERRITORY: In early June this year, a fleet of 25 Japanese long-line tuna fishing vessels in the company of a 10,000-ton mothership set out on a tuna fishing expedition in the waters of the Caroline and Marshall Islands region. A scientist of the Pacific Oceanic Fisheries Investigations met this fleet off Guam and is accompanying it during the voyage as a scientific and technical observer and as the representative of the High Commissioner of the United States Trust Territories in the Pacific. Two Japanese research ships will join the fleet later for oceanographic and biological studies.

In May 1950, SCAP authorized Japanese operation of only mothership-type tuna fishing in the area extending south from the authorized Japanese fishing area to the Equator, including the waters in the United States Trust Territory around the Caroline Islands, the Marianas and the Marshall Islands, but not the Gilbert Islands.

PROGRESS REPORT FOR FISCAL YEAR 1950: This is a short summary of the work of the Pacific Oceanic Fishery Investigations during the fiscal year ending June 30, 1950.

Morphometric Studies: Efforts during the year were concentrated on the morphometric approach to racial divisions and migrations of Pacific tunas. Extensive series of measurement data have been gathered on tunas for the Hawaiian area and have been summarized statistically to serve as a basis of comparison with other areas. Data are being gathered on tunas of the Phoenix and Line Islands by the Investigations' research vessels.

JOHN R. MANNING, ONE OF THE THREE RESEARCH VESSELS OF THE PACIFIC OCEANIC FISHERY INVESTIGATIONS, AT PEARL HARBOR.

Comparison of data from Hawaii with similar data from the American west coast indicates that the two populations are distinct. Comparisons of other species and other areas are in progress.

Tagging of Tunas: Preliminary experiments indicate that both a hook-type external tag (or a modification thereof) and an internal tag may be practical for use on skipjack tuna. The latter-type tag would be recovered by means of an electronic detector, the design of which is under consideration.

Preliminary trials have shown that tuna may be transported alive in the bait well of the research vessel Hugh M. Smith for periods of at least a day or two. Perhaps live tunas may be successfully held in ponds for testing types of tags and for other purposes.

Hydrographic Observations: A series of aerial hydrographic observations from the Hawaiian Islands across the equatorial counter-equatorial current system was completed last winter and a similar series has been begun for the summer season. In addition, two temperature sections have been taken in the region as far as the equator. The object is to determine fluctuations occurring in the equatorial current system, and to furnish information concerning the effect of hydrographic conditions on local and seasonal productivity and on abundance of tunas.

Distribution and Abundance of Tunas: Work on distribution and abundance of tunas in relation to their environment and productivity of various areas of the sea has been started. Fifty baskets of specially designed tuna long lines have been built to study vertical distribution of tunas and a Japanese line hauler, installed on the Hugh M. Smith, has been found to be practical.

Food and Feeding Habits of Tunas: The study of food and feeding habits of tuna, which involved assembly and identification of a reference collection of central Pacific fish and larger invertebrates, is largely completed. Stomach contents have been identified from a series of 60 Hawaiian big-eyed tuna and identification has begun upon a sizable collection of tuna stomachs brought back from Cruise 2 of the *John R. Manning* and Cruise 4 of the *Hugh M. Smith*.

Fish Eggs and Larvae: Examination of plankton samples from all cruises for fish eggs and larvae has been nearly completed. The Philippine Fisheries Program has furnished partial series of identified juveniles of several species of tunas. Cruise 4 of the *Hugh M. Smith* was especially designed to provide information concerning vertical distribution of tuna eggs and larvae. A series of stations was occupied and nets were fished at different levels from the surface to 200 meters (109 fathoms). Further progress of these studies awaits identification of series of tuna eggs and larvae after sorting of hauls is completed.

Bait Fish: Studies of bait fish have progressed to the point of making determinations of minimum oxygen levels for the iaô (a silverside smelt, *H. insularum*) and the mosquito fish (*Mollienesia* sp.). It has not been possible with present facilities to hold the local bait anchovy (nehu, *Anchoviella purpureus*) for such work. Since the University of Hawaii's field station at Coconut Island is now usable, it will be possible to experiment with this important species.

Japanese Fisheries Literature Study: Compilation and analyses of information and literature from Japanese and other sources are about 50 percent complete--53 of about 60 translated papers have been reproduced and distributed. These papers in the future will be released in the "Special Scientific Report: Fisheries" series. Three reports have been written on material gathered in Japan. Some fishing methods used by the Japanese are being adapted for use by POFI. Information on fishing methods has been sent to other activities of the Fish and Wildlife Service and interested private groups. A film depicting Japanese long-line fishing methods was exhibited to the Hawaiian fishing industry during the year.

LONG-LINE TUNA FISHING NEAR CANTON ISLAND FOUND EXCELLENT BY "*HUGH M. SMITH*:" Long-line tuna fishing in waters adjacent to Canton Island produced excellent catches in a preliminary trial of this gear by the Pacific Oceanic Fishery Investigations research vessel *Hugh M. Smith* during the week of July 16. Fishing 30 baskets of flag-line gear comparable to that employed in the Hawaiian fisheries, catches were made consisting of 73 yellowfin tuna, 4 albacore tuna, and 6 marlin. The yellowfin were of 60- to 100-pound size. The catch rate of about 7.5 fish per hundred hooks is more than double the average take in the Hawaiian flag-line fishery.

The week's flag-line fishing was undertaken before starting a series of oceanographic stations running from 5° S. latitude to Oahu along 158° W. longitude, since it offered an excellent opportunity for preliminary tests of the theory advanced by POFI scientists that good flag-line fishing should be found in subsurface waters near Canton Island. This was the first flag-lining ever done in this vicinity and appears to bear out the theory.

The vicinity of Canton Island is expected to contain a sizable population of tuna because of the upwelling of deep water along the equator which enriches this region, providing nutrients for the small organisms at the bottom of the food chain which ultimately supports the tunas and other large, predacious fish.

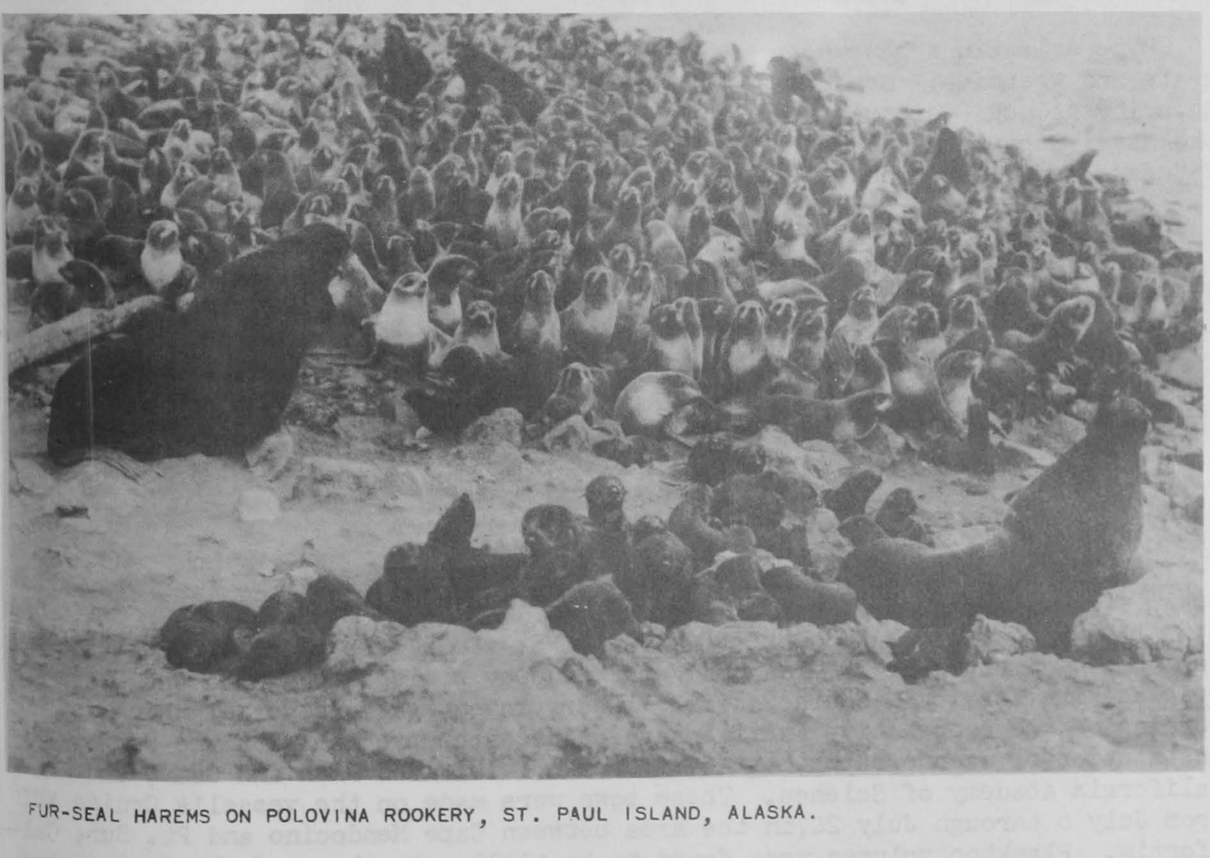
The vessel reported also that sharks were very abundant and that many were taken on the flaglines. About 25 percent of the tunas caught were partly eaten by sharks before being landed.

Surface schools of both yellowfin and shipjack tuna were observed to be very numerous at Canton Island and elsewhere in the Phoenix group. Two other POFI research vessels, the John R. Manning and the Henry O'Malley, were due to arrive at Canton Island during the week of July 24 and plan to spend the next month measuring the abundance of these surface schools of tuna and determining what quantities can be caught by live-bait and purse-seine fishing. The Henry O'Malley was to bring bait from Midway and also use bait fish from the lagoons at Canton and Hull Islands.

Pribilof Islands Fur-Seal Take For 1950

A total of 60,090 fur-seal skins were taken this year in the Government-administered sealing operations on Alaska's Pribilof Islands, the Secretary of the Interior announced August 7. The annual sealskin harvest began on June 10 and continued through July 27.

Last year's total was 70,891 skins, while the average annual yield over the past ten years has been 66,920. Fewer seals were killed this year as a result of normal fluctuations--such as occur in all wildlife populations. Variations



FUR-SEAL HAREMS ON POLOVINA ROOKERY, ST. PAUL ISLAND, ALASKA.

in food supply, the abundance of predators, and other natural mortality factors determine the number of seals available. Stabilization of the yearly kill at about 67,000 seals indicated that the seal herd may have reached its maximum size.

The fur-seal industry on the Pribilofs is a responsibility of the United States Government, but 20 percent of the annual take of skins becomes the property of the Canadian Government under the provision of the Fur Seal Act of 1944 between the two countries. The U. S. seal skins are dressed and dyed by a St. Louis fur company (Government agents for the processing and selling of the skins) and are sold at public auction. The net proceeds go to the U. S. Treasury.

Approximately 80 percent of the world's fur seals come to the Pribilof Islands to breed. During the winter they range southward as far as southern California and then return in the spring to the barren, volcanic Pribilofs. The pelts are obtained chiefly from three-year-old males. Pelagic sealing--the killing of seals while they are at sea--is prohibited under the agreement between Canada and the U. S.

Service Film Selected For Showing At Edinburgh Film Festival

Among the 17 United States Government films selected for showing at the Edinburgh Film Festival to be held at Edinburgh, Scotland, August 20-September 10, 1950, is the Fish and Wildlife Service film Food for Thought, the Department of State reported on August 8.

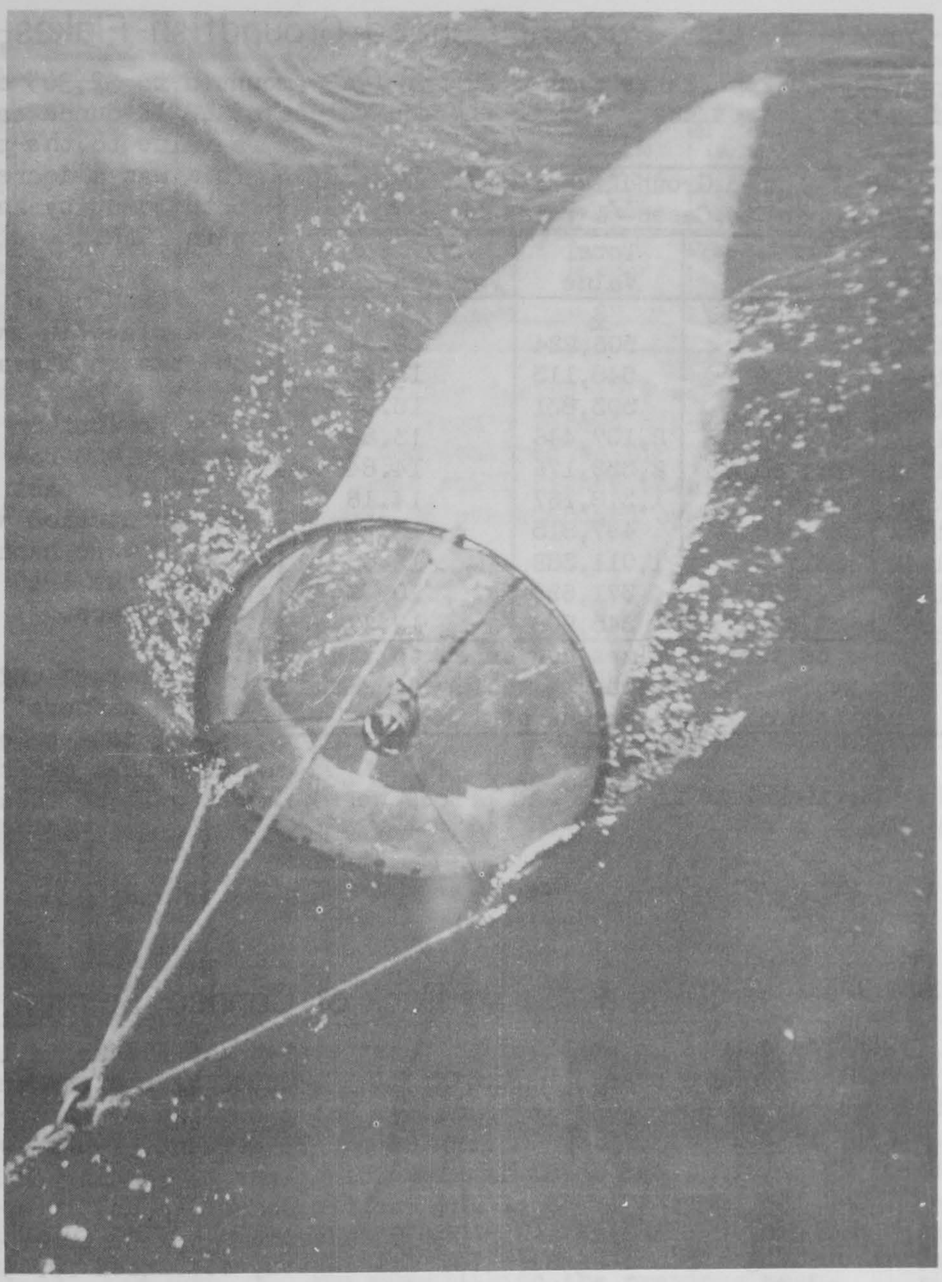
The selections have been made from films produced by the following Departments and Agencies: Department of Agriculture; Department of the Army; Federal Security Agency (Children's Bureau); Department of the Interior; Department of the Navy; Department of State; Department of the Treasury (Coast Guard); and Veterans Administration.

The Edinburgh Film Festival was organized in 1947 under the sponsorship of a committee widely representative of the film interests in Great Britain and in close collaboration with the British Government for the purpose of showing realist, documentary, and experimental films on a noncompetitive basis. Every film selected by the British Committee for showing at the Festival is awarded a certificate. The United States participated informally in the 1948 and 1949 Festivals through the American Embassy at London.

South Pacific Fishery Investigations

"BLACK DOUGLAS" MAKES DEEP PLANKTON TOWS: Four deep plankton tows (to a depth of 425 meters or 297 fathoms) were made by biologists aboard the *Black Douglas*, the Service's South Pacific Fishery Investigations vessel which is working on the cooperative Pacific sardine research program with the Scripps Institution of Oceanography, the California Division of Fish and Game, and the California Academy of Science. These tows were made on the vessel's Cruise XVI from July 6 through July 24, in the area between Cape Mendocino and Pt. Sur, California. Plankton volumes were found to be similar to those of the June cruise and generally less abundant than in collections made the early part of this season. Various fish eggs and larvae were present in almost every haul made during the July cruise.

No schools of sardines were seen. One school of what was most likely jack mackerel was seen offshore to the southwest of Monterey. Lines were trolled to locate albacore, but none was seen or caught. Night dip-net fishing results were good--sauries and lanternfish were the most common fish caught. Very large numbers of adult sauries were seen on most all inshore stations that were occupied at night, and although some were observed over the whole pattern, they were fewer offshore.



ONE-METER PLANKTON NET USED IN THE COOPERATIVE PACIFIC SARDINE RESEARCH PROGRAM BY THE BLACK DOUGLAS, RESEARCH VESSEL OF THE SERVICE'S SOUTH PACIFIC FISHERY INVESTIGATIONS. DEVICE SUSPENDED IN MOUTH OF NET IS A CURRENT METER WHICH MEASURES THE AMOUNT OF WATER STRAINED DURING EACH HAUL.

Four fur seals were observed off Cape Mendocino and one off San Francisco. Black-footed albatross appeared fewer than on previous cruises of this year.

U.S. Pack of Canned Groundfish Flakes, 1949

Groundfish flakes canned during 1949 amounted to 32,365 standard cases (cases of various sizes converted to the equivalent of 48 14-ounce cans to the case) with a value to the packers of $506,224. This was a decrease of 8 percent in both quantity and value as compared with 1948.

Pack of Canned Groundfish Flakes, 1940-49 (Quantity in Std. Cases 1/ & Value to the Canners)

Year	Quantity	Total Value	Avg. Price Per Std. Case 1/
	Std. Cases 1/	$	$
1949	32,365	506,224	15.64
1948	35,014	548,113	15.65
1947	18,560	303,831	16.37
1946	151,886	2,107,446	13.88
1945	157,135	2,332,176	14.84
1944	92,950	1,318,167	14.18
1943	33,318	497,815	14.94
1942	83,729	1,011,382	12.08
1941	34,661	371,699	10.72
1940	32,477	345,938	10.65

1/Cases of various sizes converted to the equivalent of 48 cans to the case, each can containing 14 ounces of fish.

Canning of groundfish flakes took place in two plants in Maine and two in Massachusetts.

Production of this product during 1949 was the second lowest during the past ten years; the lowest production was in 1947 when 18,560 were canned (see table). In value, the 1949 production was in fifth place.

Average price per standard case at the canners' level in 1949 was only 1 cent below 1948, which indicated that demand continued along the same level as in 1949 and prices were almost equal to those which prevailed in 1948.

U. S.1/ and Alaska Pack of Canned Salmon, 1949

Salmon canned in the Pacific Coast states and Alaska in 1949 amounted to 5,524,916 standard cases, valued at $103,430,980 to the canners (see table 1)—an increase of 15 percent in quantity, but a decline of 14 percent in value, compared with 1948. Alaska accounted for 79 percent of the 1949 pack; Puget Sound, 17 percent; the Columbia River Districts of Washington and Oregon, 3 percent; and the coastal areas of the Pacific Coast States, 1 percent. Pink salmon, which are canned principally in the Southeastern and Central Districts of Alaska, and in the Puget Sound District of Washington, accounted for 59 percent of the volume and 50 percent of the value of the 1949 salmon pack.

Salmon were canned at 34 plants in Washington, 11 in Oregon, 3 in California, and 117 in Alaska.

Table 1 - U. S. and Alaska Pack of Canned Salmon by Species and Area (Quantity in Standard Cases1/ and Value to Canners)

Species	Alaska			Pacific Coast States			Total U. S. & Alaska		
	Std. Cases 1/	Total Value	Avg. Price Per Std. Case 1/	Std. Cases 1/	Total Value	Avg. Price Per Std. Case 1/	Std. Cases 1/	Total Value	Avg. Price Per Std. Case 1/
Chinook or king	50,007	$1,258,463	$25.17	157,861	$4,537,802	$28.75	207,868	$5,796,265	$27.88
Chum or keta	499,226	7,572,386	15.17	219,652	3,191,446	14.53	718,878	10,763,832	14.97
Pink	2,682,330	42,921,708	16.00	553,987	8,832,216	15.94	3,236,317	51,753,924	15.99
Red or sockeye	967,626	25,504,967	26.36	107,801	3,419,301	31.72	1,075,427	28,924,268	26.90
Silver or coho	192,352	4,004,944	20.82	85,143	1,943,472	22.83	277,495	5,948,416	21.44
Steelhead	50	700	14.00	8,881	243,575	27.43	8,931	244,275	27.35
Total	4,391,591	81,263,168	18.50	1,133,325	22,167,812	19.56	5,524,916	103,430,980	18.72

1/Cases of various sizes converted to the equivalent of 48 1-pound cans per case, each can containing 16 ounces.

1/SEE COMMERCIAL FISHERIES REVIEW, JUNE 1950, PP. 27-8.

Table 2 - U. S. and Alaska Pack of Canned Salmon, 1940-49 (Quantity in Standard Cases 1/ and Value to Canners)

Year	Alaska			Pacific Coast States			Total U. S. & Alaska		
	Std. Cases 1/	Total Value	Avg. Price Per Std. Case 1/	Std. Cases 1/	Total Value	Avg. Price Per Std. Case 1/	Std. Cases 1/	Total Value	Avg. Price Per Std. Case 1/
1949	4,391,591	$81,263,168	$18.50	1,133,325	$22,167,812	$19.56	5,524,916	$103,430,980	$18.72
1948	4,014,891	96,528,730	24.04	810,075	24,008,466	29.64	4,824,966	120,537,196	24.98
1947	4,312,172	88,666,301	20.56	1,329,226	31,969,134	24.05	5,641,398	120,635,435	21.38
1946	3,949,878	53,157,194	13.46	560,289	17,003,459	30.35	4,510,167	70,160,653	15.56
1945	4,350,471	44,644,303	10.26	557,769	7,942,102	14.24	4,908,240	52,586,405	10.71
1944	4,893,059	51,196,140	10.46	245,588	5,187,136	21.12	5,138,647	56,383,276	10.97
1943	5,428,318	57,824,267	10.65	275,889	5,110,847	18.53	5,704,207	62,935,114	11.03
1942	5,075,974	48,300,209	9.52	759,032	13,673,968	18.02	5,835,006	61,974,177	10.62
1941	6,932,040	56,217,601	8.11	899,589	11,199,317	12.45	7,831,629	67,416,918	8.61
1940	5,069,343	31,474,492	6.21	535,663	6,575,176	12.27	5,605,006	38,049,668	6.79

1/ Cases of various sizes converted to 48 1-pound cans per case.

Prices of canned salmon dropped considerably during 1949 as compared with the prevailing prices in 1948 (see table 2). From a record high of $24.98 per standard case in 1948, prices of canned salmon declined to $18.72 per standard case in 1949. This latter price, however, was still higher than for any year previous to 1947. The price in 1947 was $21.38 per standard case.

U.S. Pack of Canned Oysters, 1949

Table 1 - Pack of Canned Oysters by States, and by Size of Can and Case, 1949 (Quantity in Standard 1/ and Actual Cases, and Value to the Canners)

State	Quantity Std. Cases 1/	Total Value $	Avg. Price Per Std. Case 1/ $
North Carolina, Georgia, and Alabama	23,094	361,339	15.65
South Carolina	66,336	862,641	13.00
Mississippi	72,142	1,042,959	14.46
Louisiana	177,357	2,491,455	14.05
Washington and Oregon ..	113,989	1,766,813	15.50
Total	452,918	6,525,207	14.41

Size of Can and Case	Quantity Actual Cases	Total Value $	Avg. Price Per Actual Case $
4-2/3 ounces net (48 cans)	283,981	4,175,746	14.70
5 ounces net (48 cans)	43,840	788,140	17.98
6-1/2 ounces net (48 cans)	61,410	996,829	16.23
Other sizes (standard cases)	36,430	564,492	15.50
Total	425,661	6,525,207	-

1/ "Standard cases" represent cases of various sizes converted to the equivalent of 48 cans to the case, each can containing 4-2/3 ounces (drained weight) of oyster meats.

Table 2 - Pack of Canned Oysters, 1940-49 (Quantity in Std. Cases 1/ & Value to the Canners)

Year	Atlantic Coast and Gulf States Std. Cases 1/	Pacific Coast States Std. Cases 1/	Total Std. Cases 1/
1949	338,929	113,989	452,918
1948	273,591	83,489	357,080
1947	318,550	91,937	410,487
1946	261,622	129,213	390,835
1945	220,847	5,117	225,964
1944	273,556	-	273,556
1943	344,931	937	345,868
1942	445,782	77,480	523,262
1941	465,854	191,191	657,045
1940	533,486	157,099	690,585

1/ Cases of various sizes converted to the equivalent of 48 4-2/3-ounce cans per case (14 pounds net).

In 1949, a total of 452,918 standard cases (48 4-2/3-ounce cans) of canned oysters were packed in the United States with a value of $6,525,207 to the processors--an increase of 95,838 cases (27 percent) as compared with the previous year.

Over half of the 1949 pack of oysters was canned in Louisiana (39 percent) and Mississippi (16 percent). The Atlantic and Gulf States accounted for 75 percent of the pack, and the States of Washington and Oregon for the remaining 25 percent.

Oysters were canned in 24 plants in Louisiana; 19 in Mississippi; 8 in Washington; 4 in

South Carolina; 2 plants each in North Carolina, Alabama, and Oregon; and 1 plant in Georgia.

The average price per standard case increased from $13.38 in 1948 to $14.41 in 1949.

Pack of California Sardines, 1949

Table 1 - Pack of California Sardines by Style of Pack, and by Size of Can and Case, 1949
(Quantity in Standard1/ and Actual Cases, and Value to the Canners)

Style of Pack	Quantity Std. Cases1/	Total Value $	Avg. Price Per Std. Case1/ $
Natural, without sauce or oil	1,525,280	7,003,531	4.59
In tomato sauce	1,986,444	12,743,787	6.42
In mustard sauce	217,915	1,156,589	5.31
Other2/	38,573	430,918	11.17
Total	3,768,212	21,334,825	5.66

Size of Can and Case	Quantity Actual Cases	Total Value $	Avg. Price Per Actual Case $
1 pound cans:			
15 ounces net, tall (48 cans)	1,517,609	6,263,540	4.13
15 " " , oval (48 cans)	1,653,346	9,908,371	5.99
½ pound cans:			
8 ounces net, tall (48 cans)	294,866	1,088,997	3.69
8 " " , oblong (48 cans)	267,105	1,361,152	5.10
5 ounces net, (100 cans)	420,258	2,477,216	5.89
Other sizes converted to 15 ounces net (48 cans)	24,426	235,549	9.64
Total	4,177,610	21,334,825	-

1/"Standard cases" represent cases of various sizes converted to 48 No. 1 tall cans (15 ounces net) to the case.
2/Includes special packs of sardines (pilchards) in soybean oil; in olive oil, and in olive oil and tomato sauce; fillets without sauce or oil and fillets in soybean oil.

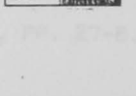
Table 2 - Pack of California Sardines (Pilchards) 1940-49
(Quantity in Standard Cases1/ and Value to the Canners)

Year	Quantity Std. Cases1/	Total Value $	Avg. Price Per Std.1/ Case $
1949	3,768,212	21,334,825	5.66
1948	2,654,149	21,892,893	8.25
1947	1,652,592	16,538,375	10.01
1946	2,977,170	19,895,649	6.68
1945	3,765,981	15,346,472	4.08
1944	3,650,919	15,225,919	4.17
1943	3,354,697	14,352,359	4.28
1942	3,744,624	15,509,964	4.14
1941	5,007,154	18,091,873	3.61
1940	2,945,882	8,975,257	3.05

1/Cases of various sizes converted to 48 No. 1 tall cans (15 ounces net) to the case.

California's sardine (pilchard) pack in 1949 was 3,768,212 standard cases, valued at $21,334,825 to the canners—an increase of 42 percent in quantity, but a decline of 3 percent in value as compared with 1948 (see table 1). While the 1949 pack was the second largest in history, it was 1,238,942 cases less than the record 1941 production; but the value of the 1949 pack was only 3 percent below the record $21,892,893 received the previous year. Sardines (pilchards) were canned in 49 plants in California.

The average price per standard case continued to decline. The record price per standard case was received by the canners in 1947 ($10.01 per case). In 1948, the price declined to $8.25 per standard case; and in 1949, the price dropped to $5.66 per standard case. This was even below the 1946 price of $6.68 (see table 2).



U.S. Pack of Canned Shad, 1949

Canned shad produced in 1949 amounted to 13,835 standard cases, valued at $106,194 to the canners (see table 1)--a decline of 6 percent in quantity and 22 percent in value as compared with the previous year. This does not include a small production of canned smoked shad, which since 1946 has been canned only by a single firm.

Table 1 - Pack of Canned Shad1/ by States in Standard Cases2/ and by Size of Can & Case in Actual Cases, 1949 (Quantity and Value to the Canners)

State	Quantity	Total Value	Avg. Price Per Std. Case	Size of Can and Case	Quantity	Total Value	Avg. Price Per Case
	Std. Cases2/	$	$		Actual Cases	$	$
Maryland3/	851	10,000	11.75	15 ounces net (48 cans)	13,331	98,090	7.36
Washington, Oregon and California .	12,984	96,194	7.41	Other sizes converted to standard cases2/ ..	504	8,104	16.08
Total	13,835	106,194	7.68	Total	13,835	106,194	-

1/Does not include production of canned smoked shad.
2/Cases of various sizes converted to the equivalent of 48 No. 1 tall cans per case, each can containing 15 ounces of fish.
3/The production in Maryland was principally fillets.

Nearly 94 percent of the pack was canned on the Pacific Coast, principally in the Columbia River District of Oregon. While the Pacific Coast pack of 12,984 cases was slightly larger than in the previous year, the Atlantic Coast pack of 851 cases was the smallest since 1940. Shad were canned in 5 plants in Oregon, 2 in Maryland, and 1 each in Washington and California.

Table 2 - Pack of Canned Shad1/, 1940-49 (Quantity in Standard Cases2/ and Value to Canners)

Year	Pacific Coast Quantity	Pacific Coast Total Value	Pacific Coast Avg. Price Per Std. Case2/	Atlantic Coast Quantity	Atlantic Coast Total Value	Atlantic Coast Avg. Price Per Std. Case2/	Total Quantity	Total Value	Total Avg. Price Per Std. Case2/
	Std. Cases2/	$	$	Std. Cases2/	$	$	Std. Cases2/	$	$
1949	12,984	96,194	7.41	851	10,000	11.75	13,835	106,194	7.68
1948	11,908	110,196	9.25	2,865	26,655	9.30	14,773	136,851	9.26
1947	18,808	169,777	9.03	3,910	29,496	7.54	22,718	199,273	8.77
1946	3/	3/	-	3/24,403	3/224,387	9.20	24,403	224,387	9.20
1945	4,983	110,210	22.11	17,345	182,554	10.52	22,328	292,764	13.11
1944	17,820	103,003	5.78	23,548	243,239	10.33	41,368	346,242	8.37
1943	14,171	78,762	5.56	3,860	48,618	12.60	18,031	127,380	7.06
1942	28,693	156,077	5.44	7,764	80,123	10.32	36,457	236,200	6.48
1941	3,637	16,221	4.46	926	14,226	15.36	4,563	30,447	6.67
1940	18,421	54,108	2.94	234	2,999	12.82	18,655	57,107	3.06

1/Does not include the production of smoked shad.
2/Cases of various sizes converted to the equivalent of 48 No. 1 tall cans per case, each can containing 15 ounces of fish.
3/A small pack of shad on the Pacific Coast has been included with the Atlantic Coast production.

The canners' average price per standard case in 1949 was $7.68, compared with $9.26 in 1948. During the past ten years, the highest average price was $13.11 in 1945 as compared with the lowest of $3.06 in 1940 (see table 2).

Wholesale and Retail Prices

WHOLESALE PRICES, JUNE 1950: The fish and shellfish (fresh, frozen, and canned) wholesale index for June was 95.0 percent of the 1947 average--0.5 percent higher than the previous month, but almost the same as for June 1949 (see table 1), according to the Bureau of Labor Statistics of the Department of Labor.

Of the various subgroup indexes for June, the frozen processed fish and shellfish subgroup was the only one that declined (by 1.9 percent) as compared with May; however, it was still 12.2 percent higher than for June 1949. June frozen fillet prices included in this subgroup were all lower than in May; on the other hand, frozen shrimp prices remained at the same level. However, prices of each item included in this subgroup were higher than the corresponding month a year ago.

Table 1 - Wholesale Average Prices and Indexes of Fish and Shellfish, June 1950, with Comparative Data

GROUP, SUBGROUP, AND ITEM SPECIFICATION	POINT OF PRICING	UNIT	AVERAGE PRICES ($)			INDEXES (1947 = 100)		
			June 1950	May 1950	June 1949	June 1950	May 1950	June 1949
ALL FISH AND SHELLFISH (Fresh, Frozen, and Canned)						95.0	94.5	94.9
Fresh and Frozen Fishery Products:						99.7	99.1	88.7
Drawn, Dressed, or Whole Finfish:						106.0	104.8	91.7
Haddock, large, offshore, drawn, fresh	Boston	lb.	.10	.09	.07	103.8	97.2	72.5
Halibut, Western, 20/80 lbs., dressed, fresh or frozen	New York City	"	.36	.33	.32	104.9	97.2	91.9
Salmon, king, lge. & med., dressed, fresh or frozen	" " "	"	.47	.52	.46	114.9	126.3	113.9
Lake trout, domestic, mostly No. 1, drawn (dressed), fresh	Chicago	"	.39	.46	.48	86.2	101.5	106.0
Whitefish, mostly Lake Superior, drawn (dressed), fresh	"	"	.39	.41	.34	112.7	119.1	97.5
Whitefish, mostly Lake Erie pound net, round, fresh	New York City	"	.55	.50	.48	123.5	113.9	109.4
Yellow pike, mostly Michigan (Lakes Michigan & Huron), round, fresh	" " "	"	.32	.29	.38	74.1	67.7	89.0
Processed, Fresh (Fish and Shellfish):						90.1	89.4	84.0
Fillets, haddock, small, skins on, 20-lb. tins	Boston	lb.	.27	.29	.22	96.6	104.7	80.4
Shrimp, lge. (26-30 count), headless, fresh or frozen	New York City	"	.62	.62	.58	88.7	88.9	83.3
Oysters, shucked, standards	Norfolk area	gal.	3.69	3.50	3.50	90.8	86.2	86.2
Processed, Frozen (Fish and Shellfish):						101.4	103.4	90.4
Fillets: Flounder (yellowtail), skinless, 10-lb. boxes	Boston	lb.	.34	.35	.24	109.7	113.0	75.9
Haddock, small, 10-lb. cello-pack	"	"	.25	.26	.20	114.8	118.8	88.2
Rosefish, 10-lb. cello-pack	Gloucester	"	.19	.20	.19	94.0	98.2	92.5
Shrimp, lge. (26-30 count), 5- to 10-lb. bxs.	Chicago	"	.68	.68	.65	98.4	98.4	93.3
Canned Fishery Products:						87.9	87.6	104.2
Salmon, pink, No. 1 tall (16 oz.), 48 cans per case	Seattle	case	15.08	14.58	17.73	98.3	95.0	115.6
Tuna, light meat, solid pack, No. ½ tuna (7 oz.), 48 cans per case	Los Angeles	"	14.24	14.25	15.75	92.7	92.7	102.5
Sardines (pilchards), California, tomato pack, No. 1 oval (15 oz.), 48 cans per case	" "	"	5.50	5.50	7.50	61.5	61.5	83.9
Sardines, Maine, keyless oil, No. ¼ drawn (3¼ oz.), 100 cans per case	New York City	"	6.20	7.00	8.75	60.8	68.6	85.8

The largest increase occurred in the drawn, dressed, or whole finfish subgroup (June prices in this subgroup were 1.1 percent higher than for the previous month). Prices of fresh drawn haddock, halibut, whitefish at New York City, and yellow pike rose during June, while prices of fresh salmon, whitefish at Chicago, and lake trout dropped substantially. Compared with June 1949, prices for all the items in this subgroup were still 15.6 percent higher this June.

From May to June, fresh processed fish and shellfish prices rose 0.8 percent and they were 7.3 percent above those which prevailed in June 1949. There was a drop in fresh haddock fillet prices which was compensated by an increase in the prices of shucked oysters during June. Prices quoted for each item in this subgroup during June this year were still higher than those that were quoted in June a year earlier.

The canned fish index for June was 87.9 percent of the 1947 average--0.3 percent above May this year, but still 15.6 percent below June 1949. A drop in the prices for canned Maine sardines during June was compensated by an increase in the prices of canned pink salmon. Canned tuna and California sardines were quoted at the same prices as prevailed in May. However, prices of each item in this subgroup continued to be lower than those quoted in June 1949.

RETAIL PRICES, JUNE 1950: Retail food prices rose substantially for the second consecutive month, and on June 15 the retail food index was 204.6 percent of the 1935-39 average (see table 2). This was slightly higher than a year earlier and 41 percent above June 1946. Between mid-May and mid-June, food prices advanced in all of the 56 cities surveyed, with increases of 3.5 percent or greater reported in Philadelphia, Boston, Baltimore, Cleveland, and Buffalo.

For all fish and shellfish (fresh, frozen, and canned), the June 15 retail index was 295.3 percent of the 1935-39 average--0.7 percent higher than on May 15, but 5.5 percent lower than on June 15, 1949. The increase in retail prices of all fish and shellfish which occurred from mid-May to mid-June this year was only slightly greater than that which occurred in the wholesale prices for this same group.

Table 2 - Retail Price Indexes for Foods and Fishery Products, June 15, 1950, with Comparative Data

Item	Base	INDEXES		
		June 15,1950	May 15,1950	June 15,1949
All foods	1935-39 = 100	204.6	200.3	204.3
All fish and shellfish (fresh, frozen, and canned)	do	295.3	293.2	312.6
Fresh and frozen fish	1938-39 = 100	274.1	270.6	252.2
Canned salmon: pink	do	325.3	327.8	454.4

Fresh and frozen fishery products prices at retail rose 1.3 percent from mid-May to mid-June this year, and on June 15 were 8.7 percent higher than on the same date a year earlier.

Canned pink salmon retailed at 0.8 percent less in mid-June than in mid-May, and prices on June 15 were 28.4 percent below June 15, 1949.

"S.S. PACIFIC EXPLORER"

Part IV-Personnel and the Movement of Materials

The operators of tuna-receiving ships should plan to develop ultimately a truly high seas fishery. The receiving ship and its allied fishing fleet should be capable of long-range operations, be able to effectively transfer tuna and supplies on the high seas, and be developed with the idea of having eventual freedom from the regulations of foreign governments. Since there is reason to believe that the tunas are distributed over much of the tropical waters of the Pacific Ocean, thought should be given to the development of methods for eventually utilizing these areas in addition to the more efficient utilization of the tuna fishery off the Americas.

--Fishery Leaflet 326