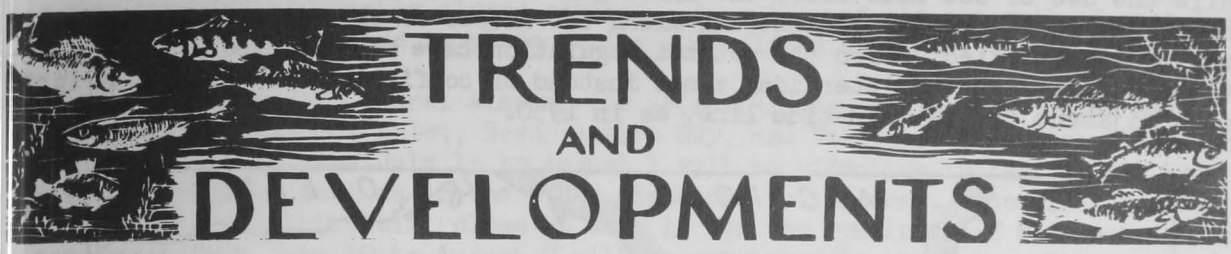


Additions to the Fleet of U. S. Fishing Vessels

First documents as fishing craft were issued for 50 vessels of 5 net tons and over during January 1951--15 more than in January 1950. California led with 7 vessels, followed by Texas with 6, and Louisiana with 5, the Treasury Department's Bureau of Customs reports.

To provide a more detailed breakdown of the documentation of vessels in the South Atlantic and Gulf States, the number of vessels documented in each of these areas will be shown separately in the future. Of the 26 vessels documented in the South Atlantic and Gulf States this January, 18 had their home port in the Gulf States and 8 in the South Atlantic States.

Vessels Obtaining Their First Documents as Fishing Craft, January 1951

Section	January 1951	January 1950	Total 1950
	Number	Number	Number
New England	2	4	36
Middle Atlantic	3	2	45
Chesapeake Bay	2	2	81
South Atlantic	8	11	153
Gulf	18	5	167
Pacific Coast	13	9	231
Great Lakes	1	-	12
Alaska	3	2	83
Hawaii	-	-	4
Total	50	35	812

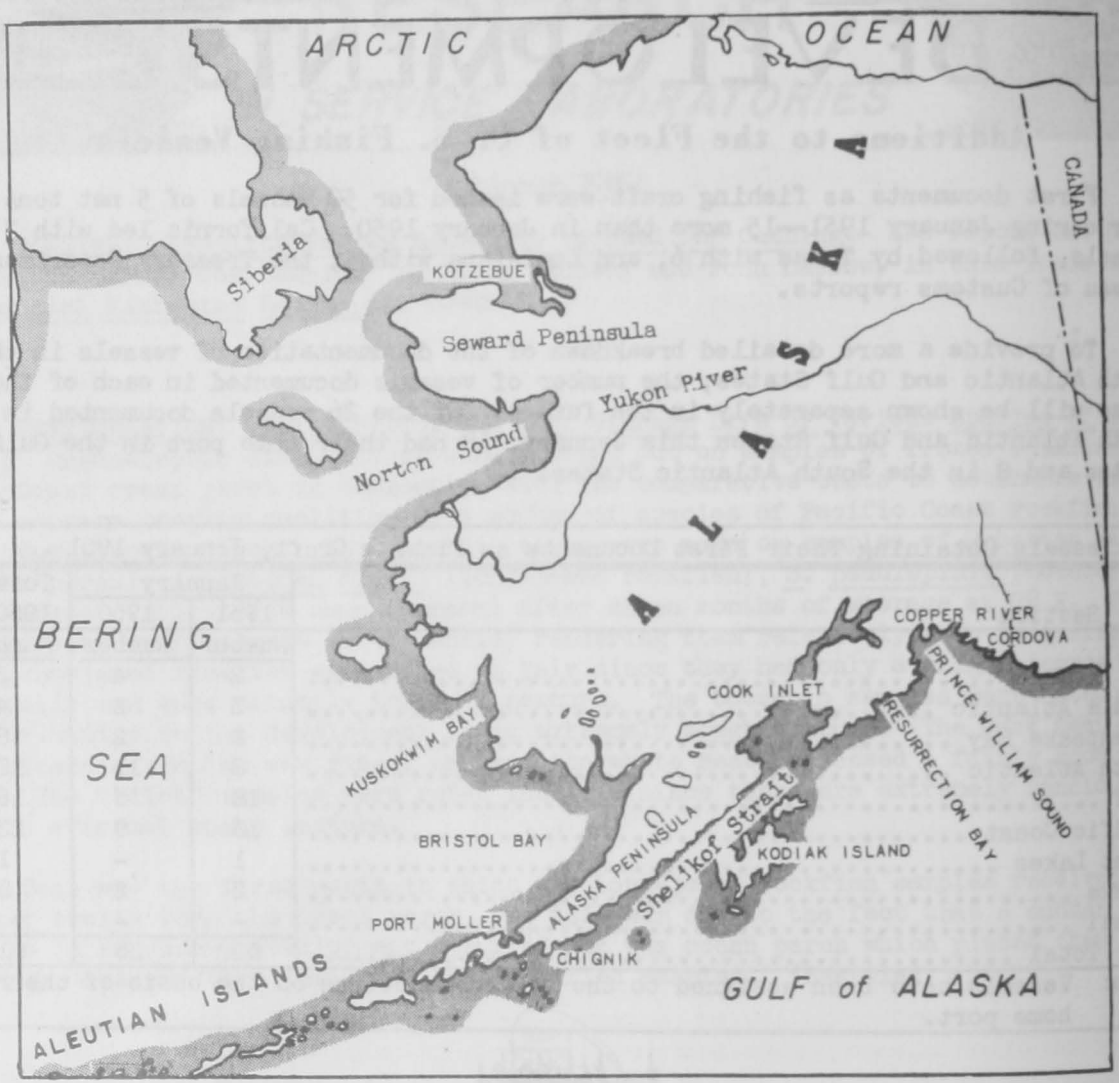
Note: Vessels have been assigned to the various sections on the basis of their home port.

Alaska Fishing Regulations for 1951 Issued

In announcing the 1951 regulations for the protection of the commercial fisheries of Alaska, the Secretary of the Interior declared on March 6 that the new regulations contain several changes to meet shifting conditions in the fisheries.

The principal change will occur in the Bristol Bay area with power boats permitted for the first time this year. The Department has been aware of the fact that the use of power boats in Bristol Bay will undoubtedly make some changes in the economic status of the area. As an aid to the local residents, the Department has opened to set-net fishing all intertidal waters outside of the drift gill-net markers,

while the use of set nets above the drift gill-net markers has been prohibited. This, in effect, permits set-netting along the shores of the bay wherever drift-netting is permitted. Also the set-net regulations have been relaxed to allow operations anywhere in the intertidal zones instead of confinement to a narrow strip of beach adjacent to the high-tide line, as in 1950.



ALASKA (SEE OTHER CUT FOR SOUTHEASTERN ALASKA)

For the first time this year, the Department of the Interior finds it necessary to place control on fishing for personal use. In the Cook Inlet area in the vicinity of Anchorage, and in the upper Copper River, certain streams have been closed entirely to salmon fishing, including that for local use. Only five out of the hundreds of streams in Alaska, however, have been closed. Salmon runs in those streams, already greatly reduced, would be completely destroyed without such protection.

Commercial fishermen in Alaska have been expressing widespread opposition to the use of the so-called "mothership," particularly in gill-net fishing, because of the danger of overfishing. The prohibition against "mothership" operation, which was previously applied only to purse seining, therefore has now been extended to include all forms of mobile gear.

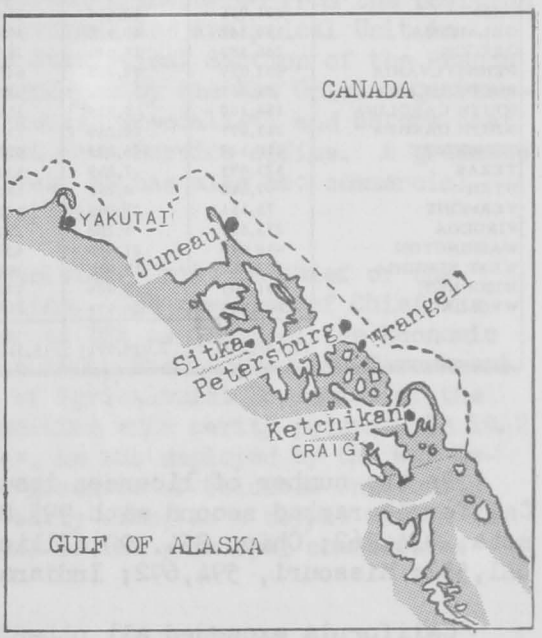
The 1951 regulations require a new method of rendering salmon traps inoperative during seasonal and weekly closed periods. A section of the pot wall of each trap must be opened and sealed in place during such closed seasons.

In the areas of Central Alaska, the principal changes include longer weekly closed periods in Cook Inlet, Resurrection Bay, and Yakutat. On Kodiak Island the midseason closure from July 15 to August 1 will be effective in 1951 in the Red River district as well as in the other districts in the area. The fishing season in the Karluk district will close on July 15 for the remainder of the year. A summer season from July 10 to August 7 will be permitted in the Copper River area for red salmon because of the opinion that there is a small run in that area not now being utilized.

In the Yakutat area the king salmon season has been curtailed in Dry Bay but fishing for red salmon has been liberalized and will commence on June 18 instead of July 1.

Throughout Southeastern Alaska the maximum length of purse seines has been standardized at 250 fathoms, with which a lead of 75 fathoms may be used. The taking of coho salmon by any means is prohibited in the area from September 20 to July 1 of the following year. The prohibition against taking or possessing undersized king salmon, which applied throughout Alaska in 1950, will apply only in Southeastern Alaska in 1951.

The Fish and Wildlife Service, which makes and enforces the commercial fishing regulations for Alaska, reports that there was a good escapement of pink salmon in Southeastern Alaska in 1949 and evidence indicates a high survival ratio from that escapement. The run this year is expected to be good and fishing will be permitted from August 6 to September 1, as compared with August 15 to September 3 last year. Fall fishing for chums from October 1 to October 6 will be experimental in nature and close watch will be maintained to see that no undue numbers of late pink salmon are taken. In addition, the new regulations will permit a limited purse-seine fishery from July 16 to July 28 in the outside waters from Cape Muzon to Cape Ulitka.



To protect the herring resources, the commercial quota for 1951 has been reduced from 150,000 to 100,000 barrels. The Service reports that this reduction was necessary because the stocks of herring in Southeastern Alaska suffered a further decline in 1950 because so few young fish, which are the basis of the future fishery, appeared.

The 1951 regulations are based upon investigations and recommendations made by Fish and Wildlife Service, testimony presented at public hearings in the major fishing communities in Alaska and in Seattle, Wash., and information submitted in briefs by persons interested in protecting the resource.

Anglers' Fishing License Sales Drop But Revenue Increases

In spite of a small decline in the number of anglers' licenses sold during the year ended June 30, 1950, fresh-water fishing continued to rank high on the list of America's favorite outdoor sports, the Director of the Fish and Wildlife Service reported on March 18.

FISHING LICENSE SALES—JULY 1, 1949 to JUNE 30, 1950

STATE	RESIDENT	NON-RESIDENT	TOTAL	FEES PAID BY ANGLERS
ALABAMA	141,625	8,940	150,565	$ 166,861
ARIZONA	60,988	10,014	71,002	222,598
ARKANSAS	190,034	65,566	255,600	437,905
CALIFORNIA	984,084	11,746	995,830	3,033,755
COLORADO	230,050	60,973	291,023	913,998
CONNECTICUT	74,695	3,356	78,051	337,018
DELAWARE	5,084	1,688	6,772	16,796
FLORIDA	186,265	89,486	275,751	654,403
GEORGIA	104,567	3,388	107,955	270,194
IDAHO	157,780	40,253	198,033	682,734
ILLINOIS	663,573	29,779	693,352	722,683
INDIANA	541,204	38,084	579,288	736,993
IOWA	339,975	12,263	352,238	680,470
KANSAS	244,409	7,326	251,735	380,560
KENTUCKY	280,829	42,191	323,020	530,448
LOUISIANA	72,121	10,529	82,650	111,083
MAINE	109,128	52,769	161,897	513,269
MARYLAND	58,328	13,973	72,301	119,932
MASSACHUSETTS	205,606	5,684	211,290	473,850
MICHIGAN	771,088	279,668	1,050,756	2,008,307
MINNESOTA	671,071	243,791	914,862	2,198,092
MISSISSIPPI	105,943	52,075	158,018	413,275
MISSOURI	550,523	44,169	594,692	1,293,808
MONTANA	156,298	27,059	183,357	566,009
NEBRASKA	205,202	11,743	216,945	302,024
NEVADA	20,998	13,236	34,234	120,039
NEW HAMPSHIRE	83,126	41,052	124,178	415,544
NEW JERSEY	104,831	8,121	112,952	355,098
NEW MEXICO	64,057	37,013	101,070	391,165
NEW YORK	639,953	27,984	667,937	1,787,061
NORTH CAROLINA	216,037	36,786	252,823	617,022
NORTH DAKOTA	61,271	443	61,714	25,367
OHIO	821,936	32,454	854,390	962,570
OKLAHOMA	358,142	40,926	399,068	942,968
OREGON	246,480	19,641	266,121	1,165,066
PENNSYLVANIA	622,059	19,493	641,552	1,343,290
RHODE ISLAND	21,365	279	21,644	39,360
SOUTH CAROLINA	154,159	5,535	159,694	209,320
SOUTH DAKOTA	111,097	28,239	139,336	214,912
TENNESSEE	410,329	146,892	557,221	909,323
TEXAS	323,893	7,239	331,132	488,566
UTAH	97,640	4,731	102,371	379,155
VERMONT	73,151	27,205	100,356	255,399
VIRGINIA	273,821	3,208	277,029	532,722
WASHINGTON	418,018	21,415	439,433	1,914,823
WEST VIRGINIA	282,362	15,019	297,381	736,182
WISCONSIN	691,703	279,089	970,792	1,754,593
WYOMING	101,769	46,578	148,347	671,399
	13,308,667	2,029,091	15,337,758	$34,018,009

Based on sales records supplied by the States, the Service has completed compilations which show that the total fishing licenses sold in the 1949-50 period numbered 15,337,758. This represents a drop of 140,812 from the all-time high figure of 15,478,570 recorded for the preceding year.

The gross revenue derived by the 48 States from these license sales, $34,018,009, broke all previous records. The previous high was $32,657,940 for the fiscal year ended June 30, 1949.

In the number of licenses issued, Michigan again headed the list with 1,050,756. California ranked second with 995,830, followed by Wisconsin with 970,792; Minnesota, 914,862; Ohio, 854,390; Illinois, 693,352; New York, 667,937; Pennsylvania, 641,552; Missouri, 594,692; Indiana, 579,288; and Tennessee, 557,221.

California exceeded all other States in revenue received with $3,033,755. Minnesota was in second place with $2,198,092, followed by Michigan with $2,008,307; Washington, $1,914,823; New York, $1,787,061; Wisconsin, $1,754,593; Pennsylvania, $1,343,290; Missouri, $1,293,808; Oregon, $1,165,066; and Ohio, $962,570.

Branch of Commercial Fisheries Personnel Changes

The transfer of several employees from the Service's Branch of Commercial Fisheries to the Defense Fisheries Administration has resulted in a number of personnel changes and new assignments within the Branch.

Wm. H. Dumont, formerly Chief of the Branch's Fishery Market News Section, has been reassigned as Chief of the Educational and Market Development Section to fill the vacancy left by the transfer of the former Chief, Don Aska, to DFA Area Representative in New Orleans. Dumont has been with the Service for about 22 years. Prior to his assignment as Chief of the Market News Section, he organized and was placed in charge of the Section's New York office, and before this he had conducted a number of statistical fishery surveys. Before entering Government service, he had his own oyster planting and shucking business in New Jersey. Dumont is a graduate of Rutgers University.

Joseph Pileggi has been promoted from Assistant Chief to Chief of the Market News Section. For the past three years, Pileggi has been responsible for the editing and preparation of the Service's monthly publication, Commercial Fisheries Review. Prior to his assignment to Washington, he served in various capacities in the Section's New York, Boston, and Jacksonville offices. A World War II veteran, he has been with the Section for almost 14 years. He received his education at Boston University, Washington University, and New York University.

C. Eldred Peterson has been appointed Chief of the Branch's Statistical Section to fill the vacancy left by the transfer of the former Chief, E. A. Power, to DFA as Chief of the Material Facilities Branch. Peterson transferred from the position of Chief of the Branch of Alaska Fisheries' Statistical and Analytical Unit in Seattle. Formerly he was Assistant Chief of the Statistical Section of the Branch of Commercial Fisheries. Prior to this he was employed by the New Orleans Quartermaster Marketing Center in the capacity of a marketing specialist, and before that he was in charge of the New Orleans Fishery Market News Service office. A graduate of the University of Washington School of Fisheries, he has also had commercial fishing experience in Alaska, Louisiana, and Mississippi.

Walter H. Stolting has been promoted from Assistant Chief to Chief of the Branch's Economics and Cooperative Marketing Section. The position of Chief was held by Dr. Richard A. Kahn prior to his transfer to DFA as Chief of the Economic Facilities Branch. Employed by the Service since 1944, Stolting entered Government service in 1936 when he was hired by the Bureau of Agricultural Economics of the Department of Agriculture to gather data in connection with parity prices. In 1942 and until he joined the Fish and Wildlife Service, he was employed by the War Department on a wartime statistical assignment. A graduate of Columbia University, his acquaintance with the fishing industry came early when, as a boy, he worked in his family's retail food market where fish was one of the principal commodities handled.

Georgia, South Carolina, and Massachusetts School-Lunch Programs Use More Fish

Introduction: One method currently being used by the U. S. Fish and Wildlife Service to increase the use of fishery products in the school-lunch program consists of demonstrations for school lunchroom managers and officials in various states.1/ The Educational and Market Development Section of the Service's Branch of Commercial Fisheries during the past two years has been engaged in developing markets for fishery products through the school-lunch program by encouraging the use of these products in school-lunch menus. Schools, as volume users of food in their lunch programs represent a large potential market for fishery products. In addition, educating children to eat fish and shellfish will make them better potential adult consumers in the future. Many school lunchrooms are not accustomed to using fish and shellfish because school lunchroom managers and officials claim that fishery products are too difficult to prepare, create strong cooking odors, are too expensive, are not eaten by most children, or that these products are not readily available in their particular area.

The following is a report of the work done in Georgia, South Carolina, and Massachusetts.

Georgia and South Carolina: School-lunch programs are now using 55 percent more fish in South Carolina, and approximately 73 percent more in Georgia. These facts were brought out in a recent survey made by the Educational and Market Development Section to determine the results of the 46 fish-cookery demonstrations it sponsored for the schools of these states during 1949 and 1950. The figures were based on data from 1,811 schools represented at the demonstrations. An analysis of the Georgia school-lunch menus for September, October, and November 1948 indicated the need for an educational program on fishery products for school lunchrooms. This preliminary survey revealed that the average school in Georgia used fishery products only once a month. Of even greater concern was the fact that 38 percent of the schools failed to serve fish in any form. Officials connected with the school-lunch program in Georgia advanced several reasons for this lack of fish in the school diet but generally they hinged on the lack of supplies on local markets and the belief that the students did not like fish. Other reasons given included preparation difficulties, odor, and price.

A survey of the availability of fish to Georgia schools showed that ample supplies were available in almost all localities. Since fish is low in cost, nutritious, and a good food for children when properly prepared, it was felt that a general lack of knowledge about fish and fish cookery was the main reason for the school using little or no fish.

To remedy this situation the Fish and Wildlife Service, in cooperation with the Georgia Department of Education and the U. S. Department of Agriculture conducted a series of fish-cookery demonstrations for groups of school-lunch managers in Georgia in April, October, and November 1949. Altogether 26 school-lunch demonstrations were presented in various localities throughout the State. The places where these were held are listed on the following page.

1/ ALSO SEE COMMERCIAL FISHERIES REVIEW, SEPTEMBER 1950, PP. 23-26; JULY 1950, P. 17; APRIL 1950, PP. 49-51.

NOTE: C. B. LOWDEN, SAVANNAH, GA., AND B. E. LINDGREN, BOSTON, MASS., FISHERY MARKETING SPECIALISTS OF THE EDUCATIONAL AND MARKET DEVELOPMENT SECTION, BRANCH OF COMMERCIAL FISHERIES, U. S. FISH AND WILDLIFE SERVICE, DID THE FIELD WORK ON WHICH THIS REPORT IS BASED.

Augusta	Americus	Moultrie	Brunswick	Dublin
Macon	Douglas	Valdosta	Reidsville	Statesboro
Thomaston	Nashville	Waycross	Sandersville	Sylvania
Columbus	Thomasville	Atlanta	Swainsboro	Savannah
Cordele	Cairo			

At each demonstration six fishery recipes were prepared in full view of the audience by a home economist of the Fish and Wildlife Service. In addition, information on the purchasing, storing, thawing, and serving of the different fishery products was presented. The Service's Fishery Marketing Specialist assigned to the State also added information on the seasonal availability of fish in each locality. Evidence of the interest in the project was shown by the fact that 1,122 persons attended these demonstrations, representing schools with an aggregate of over 233,000 students. More impressive was the fact that the data collected following the demonstrations indicated that the use of fish by Georgia's schools had nearly doubled.

AT A FISH-COOKERY DEMONSTRATION FOR SCHOOL-LUNCH SUPERVISORS, HOME ECONOMIST JEAN BURTIS OF THE EDUCATIONAL AND MARKET DEVELOPMENT SECTION OF THE BRANCH OF COMMERCIAL FISHERIES IS SHOWING HOW TO PREPARE AND BAKE FROZEN HADDOCK FILLETS.

With this experience, plans were made to do similar work in South Carolina. The work in South Carolina began in January 1950, when plans were made (in cooperation with the School Lunch Program of the State Board of Education) for 20 fish-cookery demonstrations for school-lunch personnel throughout the State in February, March, and April 1950 at the following locations:

Greenville	Florence	Spartenburg	Orangeburg	Warnville
Pickens	Lancaster	Greenwood	Walterboro	Columbia
Kingstree	York	North Augusta	Camden	Aiken
Conway				

The attendance at the South Carolina demonstrations exceeded normal expectations. An average of more than 100 people attended each demonstration. Nearly 80 percent of the South Carolina schools were represented at these demonstrations. Such coverage was possible because of the many localities at which demonstrations were scheduled, and the close and complete cooperation of the State school-lunch program officials.

According to the school-lunch officials of both Georgia and South Carolina, there was no question that the use of fish in the schools increased after the demonstrations. To determine more accurately how effective the demonstrations had been, a menu study was made of the school menus in both States before and after the demonstrations. In Georgia, a 3-month period before (September-November 1948) and a 3-month period after the demonstrations was used as an index of what could be expected on a yearly basis. Almost half of the schools represented at the Georgia demonstrations were used as a sample. The survey in Georgia showed that schools not serving fish at all had decreased from 38 percent before the demonstration, to 7 percent after the demonstrations. It also showed that the average school was buying about 77 pounds of fish monthly, 33 pounds (or 73 percent) more than had been used previous to the demonstrations.

In South Carolina a similar survey covering a 2-month period before (April and May 1949) and after the demonstration of 25 percent of the schools represented showed that the average school prior to the demonstrations had been buying about 79 pounds of fish per month. After the demonstrations this increased to about 122 pounds per month or an average increase of 53 pounds per school.

In contrast, studies of school menus of 89 South Carolina schools which did not have a representative at any of the fish-cookery demonstrations revealed that less fish was used in 1950 than by these schools in 1949. The actual decrease in poundage was about 1 percent, while the number of meals including fish decreased 4 percent.

Table 1 - Results of Georgia and South Carolina School-Lunch Program Fish-Cookery Demonstrations

	Times Fish Were Used Per Month Per School			Average Amount of Fish Used Per Month Per School		
	Demonstration		Percentage Change	Demonstration		Percentage Change
	Before	After		Before	After	
	No.	No.	%	Lbs.	Lbs.	%
Georgia:						
Schools Represented	1.14	1.97	+ 73	44.7	77.2	+ 73
South Carolina:						
Schools Represented	2.1	3.0	+ 43	79.0	122.3	+ 55
Schools Not Represented ...	2.6	2.5	-4	77.6	77.0	-1

From the data in table 1 and other data developed from the survey, it has been estimated that the schools of Georgia and South Carolina will use an additional $227,000 worth of fish annually[2/] as a result of the demonstrations in those States.

Massachusetts: The Service during 1950 completed a program in Massachusetts designed to stimulate the consumption of fishery products through the school-lunch program of that State. Upon the conclusion of a short preliminary survey early in 1949 to determine the supply and distribution facilities of the State, a comprehensive demonstration program was arranged in cooperation with the authorities responsible for the administration of the school-lunch program in both public and private institutions.

A series of 20 fish-cookery demonstrations were conducted by the school-lunch program staff of the Educational and Market Development Section. There was considerable interest in the demonstrations, which were attended by 1,002 persons. The

2/BASED ON AN AVERAGE PRICE OF 35 CENTS PER POUND.

individuals who attended represented 142 school-lunch cafeterias, plus many industrial and public institutions. Seven supplemental demonstrations for college and public groups drew 346 home economics teachers, college students, and homemakers.

Both the Federal and State agencies connected with the school-lunch program in Massachusetts assisted the Service's fishery marketing specialists in mapping out the schedule of 20 school-lunch demonstrations so that adequate coverage in the State would be obtained. Final arrangements for each demonstration were then completed through individual contacts with the local school officials where demonstrations had been scheduled. The demonstrations were held in:

Boston	Brockton	Hyannis	Newburyport	Springfield
Brookline	Franklin	Lowell	Gloucester	Amherst
Framingham	New Bedford	Lawrence	Fitchburg	Greenfield
Quincy	Taunton	Danvers	Worcester	Pittsfield

Each demonstration was conducted by a home economist detailed from the Fish and Wildlife Service Laboratory Kitchen in College Park, Maryland. The recipes used, developed, and tested at this test kitchen, fully meet the minimum nutritional requirements[3/] established under the standards of the National School Lunch Program. The fish used included plain baked fillets, fillets baked in Spanish or creole sauce, oven-fried fillets, fish shortcake, flaked fish salad, and creamed flaked fish. Because school-lunch cafeterias must serve low-cost meals, some of the less expensive fish were used in the demonstrations. Thus, either fresh or frozen pollock, whiting, or ocean perch (rosefish) fillets were used in the recipes calling for fillets. In the other recipes, canned flaked cod, haddock, hake, or pollock were used.

AT ONE OF THE FISH-COOKERY DEMONSTRATIONS FOR SCHOOL-LUNCH PERSONNEL, HOME ECONOMIST NANCY SHIPLEY OF THE EDUCATIONAL AND MARKET DEVELOPMENT SECTION OF THE BRANCH OF COMMERCIAL FISHERIES GIVES SOME MENU POINTERS FOR USING FISH IN SCHOOL LUNCHES.

During the course of each demonstration, the home economist explained, step by step, the preparation of each recipe. Special emphasis was placed on the nutritive value, mineral and vitamin content, and the comparative low cost of fish. In addition, suggestions on the purchasing, storing, and serving of fish were given, along with information on the seasonal abundance of the various varieties of fish. Special explanations also were given on how to handle the frozen fish so widely marketed today. School-lunch fish-recipe flyers and other informational publications were distributed to those attending the demonstrations. After each demonstration, question forums were held.

3/EACH HOT PLATE LUNCH MUST HAVE NOT LESS THAN A 2-OUNCE SERVING OF PROTEIN-RICH FOOD (CHEESE, EGGS, MEAT, OR FISH).

Comments on the demonstration programs from those attending were very favorable. But the best indication of their value is shown by the increase in the use of fish in Massachusetts' schools following the demonstrations. Although Massachusetts has long been a large consumer of fishery products, the program proved that even in this major fish-producing State there still exist untapped markets for fishery products.

Table 2 shows the results of these demonstrations. It is based on a follow-up survey in 92 of the 142 schools represented at these meetings. The data were taken from actual records kept by the school-lunch managers and illustrate the amounts of fish served during a four-week period before and after the demonstrations.

An over-all increase in the use of the fish of 7.2 percent in the 92 schools checked was indicated by the follow-up survey. It is interesting to note that the inland school showed a much greater increase in the utilization of fish in school lunches, while many of the schools located nearer the coast indicate no change in their fish consumption following the demonstrations. The reason for this variance is found, of course, in the fact that previous to the demonstration many inland schools had used very little fish.

Table 2 - Results of Massachusetts' School-Lunch Program Fish-Cookery Demonstrations

	No. of Schools	4-Week Period Demonstration		Percent Gain
		Before	After	
		Pounds of Fish Served		%
Inland Schools.	35	5,369	6,078	13.2
Coastal "	57	8,922	9,247	3.6
Total	92	14,291	15,325	7.2

Some of the problems which must be met before the full possibilities of this market can be fully realized were brought out during these demonstrations. Lunchroom managers often indicated that they knew little about cooking fish, or that they objected to its odor while cooking. Many also felt their facilities were inadequate for cooking fish. The demonstrations contributed much toward overcoming these objections for using fish. But their other problems, such as their inability to obtain inexpensive fish, fish of uniform quality from week to week, and delivery schedules and difficulties, are a challenge to the fish dealers. These problems multiply as the distance of the schools increases from the coast. The Massachusetts survey indicates that the greatest potential market for fishery products lies in the inland areas.

Great Lakes Fishery Investigations

SEA LAMPREYS FOUND RESISTANT TO ELECTRICAL CURRENTS: Results of field and laboratory tests directed at developing a lethal electrical device for killing young downstream migrating sea lampreys indicated they were extraordinarily resistant to electrical currents, even at very high voltage. No economical method of electrocuti these young migrants now appears possible, according to an announcement by the Servic's Great Lakes Fishery Investigations which is conducting the sea lamprey investigations. An electro-mechanical device for trapping spawning migrants will be installed and tested in the Ocqueoc River.

PROGRESS REPORT ON OTHER SEA LAMPREY INVESTIGATIONS ACTIVITIES: Fishing operations through ice in Lake Huron this winter yielded data on abundance and degree of

scarring of fish stocks. Personnel conducted experiments also in aquaria and tanks on feeding habits of sea lampreys and studies on specific effects of lamprey attacks on prey species.

Arrangements have been completed with the Indiana and Wisconsin Conservation Departments for operation of weirs and traps in those States during the coming spawning-run season. Indiana will operate one sea-lamprey weir and trap and Wisconsin will operate six devices in cooperation with the Fish and Wildlife Service.

At Marquette, a Service representative periodically inspected the Burkey electric screen and removed the capacitator to the laboratory for winter storage.

The staff have prepared reports on the 1950 sea lamprey control operations and tagging experiments, and on the 1950 survey of spawning streams in the Lake Superior basin. Having examined the 1949 and 1950 samples of migrant sea lampreys for disease and parasites, they are preparing a report on their findings. They are analyzing data on two downstream runs (1949-1950 and 1950-1951) of recently transformed sea lampreys taken in the Carp Lake River.

Gulf Exploratory Fishery Program

"OREGON" TO CONTINUE GROOVED-SHRIMP EXPLORATIONS: In order to continue explorations for commercial concentrations of grooved shrimp, the Service's Gulf exploratory fishing vessel Oregon left Pascagoula February 14 on Cruise No. 7.

On this cruise the vessel will be concerned with the area between Pascagoula and Tampa Bay. Four trawls at 10-fathom intervals will be made off the Mississippi coast through the area now being fished by the commercial fleet. However, emphasis will be placed on the area between Panama City and Tampa in depths between 10 and 250 fathoms.

If suitable bottom can be found, a series of fish-trawl drags will be made in depths over 100 fathoms, and additional work will be carried out on the concentrations of deep-water shrimp. Continued testing of the two types of bottomless trawls will be carried out in areas not suitable for conventional trawling.

The vessel is scheduled to complete this cruise on March 2.

Gulf States Marine Fisheries Commission Meets

A regular meeting of the Gulf States Marine Fisheries Commission was held on January 11-12, 1951, at Brownsville, Texas. The meeting was mainly devoted to discussions of the plans of the Defense Fisheries Administration of the Department of the Interior; defense fisheries programs; the application of technology to a furtherance of the defense effort; shrimp regulations and uniform interstate regulations for the Gulf States; reciprocal fishing agreements; and shrimp imports.

Several resolutions were adopted at the meeting. These were the most important ones:

".....BE IT RESOLVED, That the Gulf States Marine Fisheries Commission go on record as favoring quotas being placed on shrimp importations from all foreign countries, in order to encourage the prosecution of the mentioned offshore shrimp fisheries of the Gulf of Mexico by the American fishing industry, and that copies of this resolution be directed to each of the Congressional Delegates of the five Gulf States.

"RESOLVED, That the Gulf States Marine Fisheries Commission hereby recommends to the Governors and to the Legislatures of the States of Alabama, Florida, Louisiana, Mississippi, and Texas the enactment of laws permitting the several States, members of this compact, to enter into reciprocal fisheries agreements with one another.

".....BE IT RESOLVED, That the Gulf States Marine Fisheries Commission recommends to the Governors and Legislatures of the signatory States that appropriate and adequate funds be made available by enactment of legislation, if necessary, for the purpose of facilitating the research program involving the above designated species (including sea trout, redfish, flounder, mullet, and others) and that such program be administered by the agency of the state charged with conservation of the fishery resources to which the compact pertains and through the research medium representing such agency on the Gulf States Marine Fisheries Commission."

North Atlantic Fishery Investigations

"ALBATROSS III" MADE AVAILABLE TO THE OFFICE OF NAVAL RESEARCH: Because the U. S. Fish and Wildlife Service has been unable to operate the Albatross III, the research vessel for the Service's North Atlantic Fishery Investigations, it has been made available to the Office of Naval Research for a period not to exceed one year, commencing February 1, 1951. The vessel will be used in oceanographic research.

The Service has retained the option of using the vessel half time subsequent to July 1951 for continuing fisheries work in the Northwest Atlantic area, subject to availability of funds and mutual agreement with the Office of Naval Research.

North Pacific Fishery Investigations

NEW FISHERIES RESEARCH PROGRAM FOR COLUMBIA RIVER: A new fisheries research program for the Columbia River has been developed by the Service's Branch of Fishery Biology in response to a request for research plans to match a heavy construction schedule of five new high dams proposed for that river. The new program is being made part of the Interior Department program for development of the resources of the Columbia Basin.

National Defense needs require that this power increase be made now. Fishery interests, however, do not have the knowledge necessary to provide safe passage for anadromous fish past high dams because heretofore the concern has been with low dams (less than 100 feet high) and irrigation diversions.

If funds are appropriated, the expanded research program for maintaining runs of salmon and trout in the Columbia River will attempt to develop general principles which might apply to future dams. Chief among these is the necessity for direction control of fish utilizing both natural and artificial factors, such as current velocity and chemicals. Models to test the most effective design of fishways for up-and-downstream migrants are planned.

Pacific Oceanic Fishery Investigations

"HUGH M. SMITH" COMPLETES HYDROGRAPHIC AND BIOLOGICAL STUDY CRUISE (Cruise No. VIII): In order to continue a hydrographic and biological study of that portion of the Pacific Ocean lying between the Hawaiian and Samoan Islands, the Hugh M. Smith completed a 9,000-mile, 60-day cruise on March 14. This research vessel of the Service's Pacific Oceanic Fishery Investigations on this cruise placed particular emphasis on the region lying between 1° and 7° N. latitude. The temperature, amount of salt, oxygen, chemical nutrients, and the abundance of plankton life were measured at regular intervals, or stations, at thirteen different levels, ranging from the surface to about a depth of 3,700 feet--104 such stations were successfully completed.

From information obtained on previous cruises, this particular area (1° to 7° N. latitude) has been found to be a peculiarly rich area in respect to fish life, plankton, and nutrients required to support such life. One purpose of the cruise was to determine whether this zone shifts north or south with the seasons and how this may affect the abundance of tuna which is associated with the rich area.

In cooperation with the U. S. Weather Bureau, weather observations were made by the ship's staff four times daily. Surface trolling and scouting for tuna were conducted along the route. Fish collections for scientific purpose were made on chosen localities.

Observations of Tuna Schools at Sea: A continuous watch was kept for schools of tuna and associated flocks of birds when running during daylight hours. The position and time sighted, behavior of the school, and its identification, when possible, were recorded for 54 schools seen en route. Of these, 22 were definitely identified as skipjack schools and one as yellowfin. Such observations, combined with those of other cruises, are of value as an index to areas of greater or lesser fish abundance.

Two or three surface lures were trolled almost continuously during daylight hours that the ship was under way. A total of 460 trolling hours yielded relatively few fish (only 25 tuna) and almost all of these were taken close to islands rather than in the open sea.

* * * * *

"JOHN R. MANNING" INVESTIGATES TUNA SEINING IN PHOENIX-LINE ISLANDS AREA (Cruise No. V): An experimental six-week tuna-fishing cruise was completed on March 2 by the John R. Manning, one of the Service's Pacific Oceanic Fishery Investigations vessels. The vessel, outfitted for purse seining tunas, left Honolulu on January 11, 1951. The primary purpose of the cruise was to conduct experimental purse-seining operations around the Phoenix or Line Islands, whichever appeared more promising of results.

Fishing Activities - Phoenix Islands: No purse-seine fish were encountered from January 23 to February 4 in the Phoenix Islands or intervening waters (Canton, Enderbury, Sydney, Hull, and Birnie Islands).

Biological specimens of yellowfin tuna (Neothunnus macropterus) were taken by trolling in the Phoenix Islands, but not as readily as was the experience of the John R. Manning on Cruise III in July and August 1950. The weather was generally good, there being but three days when operations offshore could be termed unworkabl

The gear used was a modified seine (2,000 feet long and 150 feet deep) hung in Honolulu just prior to Cruise V. Two strips of linen webbing were added and the number of 4-oz. leads per fathom of lead line was increased from 32 per fathom to 42 per fathom in the body of the seine (44 leads per fathom were on the first 50 fathoms of the seine). The seine, which was not performing up to expectations, was re-hung on Canton Island by stripping out both strips of linen, placed in the net just above the heavy mesh, and re-lacing and adding 32 fathoms, tapered.

The natives and local inhabitants of long standing say the "season" for tuna in these waters is March, April, May, and June. A brief but active run of tuna was reported near the Phoenix Islands in November and December 1950, however.

The passage to Jarvis from Enderbury took five days. Seas were moderately rough and except for occasional terns and albatrosses, no signs of life were seen. Arriving on Jarvis on February 10, seven yellowfin tuna were taken easily on trolling gear in the lee of the Island. A chumming operation was attempted in the N.W. lee of the island using chopped papio (jack). Wind and seas were too rough to see or stay on chum, and the effort was discontinued.

Night-light fishing under similar difficulties brought small crustacea to the surface, and numbers of opelu (scad mackerel) were seen at not less than 3 fathoms.

Fishing Activities - Line Islands: On February 14 one school of skipjack tuna (Katsuwonus pelamis) was sighted off the S.W. tip of Christmas Island. These fish appeared to be working on feed, were tightly schooled and conservatively estimated in excess of 30 tons. They appeared for a matter of seconds, sounded, and were gone. Intensive scouting resulted in no further signs. In the absence of tuna, two sets were made on awa (milkfish) near the reef on the S.W. tip of Christmas Island. Due to shoal water, the schools had to be cut in setting, and on both occasions the entire school led out.

An excellent school of mixed yellowfin and skipjack tuna, breezing and moving slowly, were encountered off Fanning Island on February 19. The fish were ¼ mile offshore, 2 miles east of N. Cape. These tuna were leading shoreward and wind and sea both set to reef. The John R. Manning was unable to make a set. No tuna were seen on Palmyra or Kingman Reef.

Two test hauls were made on February 22 and data were gathered on the time involved for the lead line of the seine to reach a given depth, and the stresses involved in setting and hauling the net. Inspection of the linen webbing used in the seine for this Cruise is encouraging on all counts; handling and use characteristics, lasting qualities, and appearance and strength after preservative treatment. However, based on the experience of the past year, the net will be rebuilt to make it more effective. By making it longer and deeper it is believed that it may be possible to surround the fast-swimming tuna schools of the central Pacific Ocean.

Other Activities: On the southbound and northbound portions of the trip, oceanographic data were taken to establish the strengths and positions of the major ocean currents, as well as other biological data.

* * * * *

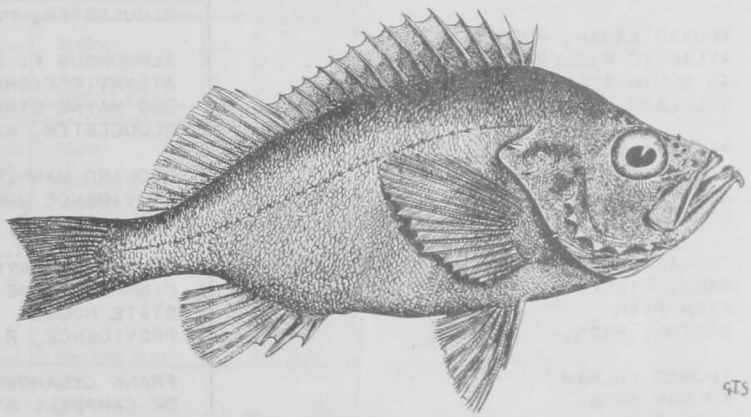
"JOHN R. MANNING" TO CONTINUE INVESTIGATIONS ON TUNA PURSE SEINING (Cruise No. VI): In order to continue investigations on the occurrence of tunas in certain areas in the Central Pacific Ocean and to determine the feasibility of using a standard West Coast tuna purse seine to catch them, the John R. Manning left Honolulu the latter part of March. This vessel of the Service's Pacific Oceanic Fishery Investigations will cruise the waters surrounding the Line Islands from Kingman Reef to Jarvis Island, and is expected to return on or about May 12.

Gear development studies are to be made during the operation of this standard tuna purse seine. Minor variations are to be effected whenever possible on the fishing grounds. Major changes will be recorded for future planning of a purse seine that is better adapted to conditions encountered in the Central Pacific Ocean.

Secondary objectives of the cruise will be to record and collect hydrographical, biological, and meteorological data related to the occurrence of fish.

"Ocean Perch (Rosefish)" Designated by Service as Name for Rosefish

Hereafter the Fish and Wildlife Service will use the term ocean perch (rosefish) to designate that species of fish (Sebastes marinus) which has been listed as rosefish (ocean perch). Ocean perch is taken in large quantities in North Atlantic waters, usually being landed as "redfish." It is marketed in filleted form throughout the United States, almost universally, as ocean perch. It is the principal species landed at Gloucester, Massachusetts, and also at several ports in Maine.



The Service proposed the name rosefish for Sebastes marinus during World War I, when it was practically unknown. It was not taken in quantity until about 1935.

Recently the National Fisheries Institute, at the request of two fishery associations in New England, asked the Service to reconsider the name used for Sebastes marinus in Service publications. The Service recognized several years ago that the name ocean perch was in wide commercial use and at that time changed the official name from rosefish to rosefish (ocean perch). To bring the common name in line with

the prevailing trade practice of the fishing industry, the Service has concurred in the request of National Fisheries Institute and, for the next two years, will use ocean perch (rosefish) in all its publications. At the end of this period, (rosefish) will be omitted and ocean perch alone will be used in its official publication. It is believed that this will allow sufficient time for all interested parties to become familiar with the change-over of names.

U. S. Commissioners of the International Commission for the Northwest Atlantic Fisheries Name Advisors

At their initial meeting held in Boston, Mass., on March 6 and 7, the U. S. Commissioners of the International Commission for the Northwest Atlantic Fisheries named 14 advisors, representing all phases of the North Atlantic fishing industry. Two additional advisors from Maine were appointed at a later date.

The advisory committee was chosen in accordance with Federal law to guide the recently-appointed commissioners in their later discussions with representatives of the other ten nations that signed the treaty that established the commission.

The three U. S. Commissioners, recently appointed by President Truman, attending the session were: Dr. Hilary J. Deason, Chief, Office of Foreign Activities, Fish and Wildlife Service, U. S. Dept. of the Interior, Washington, D. C.; Francis W. Sargent, Director of Marine Fisheries, Massachusetts Department of Conservation, Boston; and Bernhard Knollenberg, author and lawyer of Chester, Conn.

The 14 advisors appointed at the meeting were:

RICHARD E. REED, COMMISSIONER
DEPT. OF SEA AND SHORE FISHERIES
AUGUSTA, MAINE

THOMAS EAGAN, PORT AGENT
ATLANTIC FISHERMEN'S UNION
46 SOUTH STREET
ROCKLAND, MAINE

PATRICK MCHUGH, SEC.-TREAS.
ATLANTIC FISHERMEN'S UNION
206 ESSEX STREET
BOSTON, MASS.

THOMAS D. RICE, EXECUTIVE SECRETARY
MASS. FISHERIES ASSOCIATION
FISH PIER
BOSTON, MASS.

THOMAS FULHAM
FULHAM BROS.
FISH PIER
BOSTON, MASS.

EDMUND O'NEIL, BUSINESS AGENT
SEAFOOD PRODUCERS' ASSOCIATION
12 WILLIAM STREET
NEW BEDFORD, MASS.

GEORGE E. FEENER, PORT AGENT
ATLANTIC FISHERMEN'S UNION
NEW BEDFORD, MASS.

JOHN DEL TORCHIO, DIRECTOR
CAPE ANN FISHERIES
FORT SQUARE
GLOUCESTER, MASS.

ALPHONSUS F. HAYES
ATLANTIC FISHERMEN'S UNION
209 MAINE STREET
GLOUCESTER, MASS.

LEONARD WARNER
PROVIDENCE JOURNAL
PROVIDENCE 2, R. I.

EDWARD C. HAYES, ADMINISTRATOR
FISH AND GAME DIVISION
STATE HOUSE
PROVIDENCE, R. I.

FRANK CYGANOWSKI
52 CAMPBELL STREET
WARREN, R. I.

JOHN B. BINDLOSS
72 WATER STREET
STONINGTON, CONN.

FRANK W. WILKISSON
FRANK W. WILKISSON INC.
16 FULTON FISH MARKET
NEW YORK CITY, N. Y.

The commissioners met with the new group in Boston on March 20 and 21 at which time they discussed questions that may arise at the first meeting of the International Commission to convene in Washington during April.

Wholesale and Retail Prices

WHOLESALE PRICES, FEBRUARY 1951: Although Lent began in February, the demand at wholesale for fresh and fresh-processed fishery products did not come up to expectations, but demand for frozen-processed and canned fishery products was substantially good. From January to February, prices for fresh and processed fishery products dropped, while a substantial rise occurred in the frozen-processed and canned fishery products prices.

The wholesale index for edible fish and shellfish (fresh, frozen, and canned) for February was 111.6 percent of the 1947 average (see table)--1.8 percent lower than the previous month, but still 15.3 percent above February 1950, the Bureau of Labor Statistics of the Department of Labor reports.

Table 1 - Wholesale Average Prices and Indexes of Fish and Shellfish, February 1951, with Comparative Data

GROUP, SUBGROUP, AND ITEM SPECIFICATION	POINT OF PRICING	UNIT	AVERAGE PRICES ($)			INDEXES (1947 = 100)		
			Feb. 1951	Jan. 1951	Feb. 1950	Feb. 1951	Jan. 1951	Feb. 1950
ALL FISH AND SHELLFISH (Fresh, Frozen, and Canned)						111.6	113.7	96.8
Fresh and Frozen Fishery Products:						107.4	112.4	102.5
Drawn, Dressed, or Whole Finfish:						116.8	126.6	109.4
Haddock, large, offshore, drawn, fresh	Boston	lb.	.10	.13	.11	105.7	133.7	110.3
Halibut, Western, 20/80 lbs., dressed, fresh or frozen	New York City	"	.39	.39	.33	113.1	114.1	97.0
Salmon, king, lge. & med., dressed, fresh or frozen	" " "	"	.53	.54	.47	129.9	138.5	115.1
Lake trout, domestic, mostly No. 1, drawn (dressed), fresh	Chicago	"	.57	.57	.49	125.2	125.2	140.2
Whitefish, mostly Lake Superior, drawn (dressed), fresh	"	"	.57	.48	.53	164.0	139.6	180.1
Whitefish, mostly Lake Erie pound net, round, fresh	New York City	"	.51	.46	.57	114.4	104.0	138.2
Yellow pike, mostly Michigan (Lakes Michigan & Huron), round, fresh	" " "	"	.53	.47	.47	122.9	111.2	108.9
Processed, Fresh (Fish and Shellfish):						96.2	98.1	93.0
Fillets, haddock, small, skins on, 20-lb. tins	Boston	lb.	.32	.34	.33	115.9	122.3	117.9
Shrimp, lge. (26-30 count), headless, fresh or frozen	New York City	"	.59	.57	.64	84.4	82.4	93.2
Oysters, shucked, standards	Norfolk area	gal.	4.50	4.80	3.56	110.8	118.2	87.7
Processed, Frozen (Fish and Shellfish):						102.8	99.1	105.4
Fillets: Flounder (yellowtail), skinless, 10-lb. boxes	Boston	lb.	.35	.35	.30	113.0	113.0	96.8
Haddock, small, 10-lb.cello-pack	"	"	.24	.22	.30	108.1	99.8	133.5
Rosefish, 10-lb. cello-pack	Gloucester	"	.29	.28	.21	145.0	137.8	106.0
Shrimp, lge. (26-30 count), 5- to 10-lb.bxs.	Chicago	"	.54	.53	.63	78.1	77.0	91.1
Canned Fishery Products:						118.1	115.7	98.2
Salmon, pink, No. 1 tall (16 oz.), 48 cans per case	Seattle	case	24.62	24.03	14.53	160.5	156.7	94.7
Tuna, light meat, solid pack, No. ½ tuna (7 oz.), 48 cans per case	Los Angeles	"	15.00	14.90	14.25	97.6	96.9	92.7
Sardines (pilchards), California, tomato pack, No. 1 oval (15 oz.), 48 cans per case	" "	"	6.75	6.62	5.50	75.5	74.1	61.5
Sardines, Maine, keyless oil, No. ¼ drawn (3¼ oz.), 100 cans per case	New York City	"	6.47	6.20	7.50	63.4	60.8	73.6

Continued heavy landings of haddock in New England resulted in a decline of 7.7 percent in the drawn, dressed, or whole fin fish subgroup from January to February, but this index was still 6.8 percent higher than in February 1950. From January to February this year, average wholesale prices for large drawn offshore haddock dropped 21.0 percent and they were 4.2 percent lower than in February a year earlier. However, the decline in salt-water prices was offset to some degree by substantial increases in the prices quoted for whitefish and yellow pike. Fresh-water fish production during the month was at a low level due to severe weather conditions which prevailed the early part of February in the Great Lakes area.

The fresh-processed fishery products subgroup index this February declined 1.9 percent as compared to January, but it was still 3.4 percent higher than in February 1950. Prices quoted for fresh haddock fillets during the month were considerably lower than in January and 1.7 percent lower than in February a year earlier. Shucked oysters also were quoted at lower prices during the month. Fresh headless shrimp prices rose, but they were still 8.5 percent below February 1950.

Although cold storage stocks were ample, the February index for processed frozen fish and shellfish increased 3.7 percent over January this year and was 0.4 percent above February 1950. In this subgroup, the increases occurred mainly in frozen ocean perch fillets (holdings of which are below a year earlier) and haddock fillets (in spite of heavy New England landings of haddock and large cold-storage holdings of these fillets). Shrimp prices also rose slightly in February this year. Compared with the corresponding month a year earlier, February prices for frozen haddock fillets and frozen shrimp continued substantially lower, while frozen ocean perch (rosefish) fillets and flounder fillets sold at substantially higher prices. The lack of demand during Lent for fresh and fresh-processed fishery products and the good demand reported for frozen-processed fishery products would seem to indicate a consumer preference for frozen-processed fishery products.

Canned fishery products prices continued their upward spiral in February. The month's index for this subgroup was 2.1 percent higher than January, and 33.9 percent greater than in February 1950. Higher prices were reported during February for each canned product under this subgroup. Compared with February 1950, quotations this February were 69.5 percent higher for pink salmon; 22.8 percent higher for California sardines; 5.3 percent higher for tuna; but 13.9 percent lower for Maine sardines.

RETAIL PRICES, FEBRUARY 1951: Retail prices of fishery purchases by moderate-income urban families continued their upward trend from mid-January to mid-February 1951 (table 2), according to the Bureau of Labor Statistics, U. S. Department of Labor. However, the increase for all foods was greater than that for fishery products.

Table 2 - Adjusted 1/ Retail Price Indexes for Foods and Fishery Products, February 15, 1951, with Comparative Data

Item	Base	INDEXES		
		Feb.15,1951	Jan.15,1951	Feb.15,1950
All foods	1935-39 = 100	226.0	221.9	194.9
All fish and shellfish (fresh, frozen, & canned) ..	do	347.8	345.3	294.1
Fresh and frozen fish	1938-39 = 100	283.7	283.0	259.1
Canned salmon: pink	do	501.1	493.7	365.4

1/ INCLUDES ADJUSTMENTS TO IMPROVE THE CONSUMERS' PRICE INDEX AND TO MAKE IT A MORE ACCURATE MEASURE OF PRICE CHANGES IN THE MOBILIZATION PERIOD (SEE COMMERCIAL FISHERIES REVIEW, MARCH 1951, P. 21).

Fish and shellfish (fresh, frozen, and canned) retail prices in mid-February were 0.7 percent above mid-January averages, or scarcely one-half of the percentage change for all foods. The adjusted fish and shellfish index was 347.8 percent of the 1935-39 average--16.0 percent above the mid-February 1950 index. This increase can be attributed mainly to the higher canned fish prices.

The mid-February index for fresh and frozen fishery products rose 0.2 percent above the mid-January quotations, and represents a gain of 9.5 percent above mid-February of the previous year.

Canned pink salmon continued its upward movement between January-February 1951 with a reported index of 501.1 percent of the 1938-39 base. This is an increase of 1.5 percent over the previous month and 37.1 percent higher than mid-February 1950.

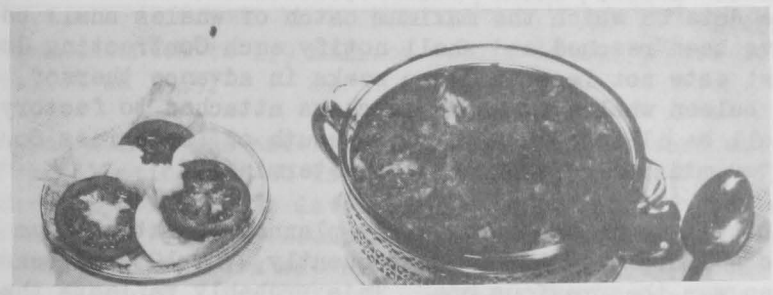
ECA Procurement Authorizations for Fishery Products

There were no procurement and reimbursement authorizations for fishery products and byproducts (edible and inedible) announced by the Economic Cooperation Administration during March this year.

ECA procurement authorizations for fishery products and byproducts for the period April 1, 1948, through March 31, 1951, totaled $29,783,000 ($17,094,000 for edible fishery products; $11,149,000 for fish and whale oils; and $1,540,000 for fish meal). Also, during the entire period $220,000 was authorized under the Far Eastern Aid Programs for use by Korea for the purchase of fish and whale oils from the United States and Possessions.

In addition to items generally classified and included in the above category, there was an authorization of $20,000 during March for the purchase of pearl essence by Austria from the United States and Possessions.

CALIFORNIA SARDINE AND NOODLE CASSEROLE



1 15-OUNCE CAN CALIFORNIA SARDINES
3 TABLESPOONS BUTTER OR OTHER FAT
3 TABLESPOONS GREEN PEPPER, CHOPPED
3 TABLESPOONS ONION, CHOPPED
1/4 CUP SIFTED FLOUR
1/8 TEASPOON PEPPER
1/2 TEASPOON SALT
1-1/2 CUPS MILK
1/2 CUP GRATED CHEESE
1-1/2 CUPS COOKED NOODLES
1/2 CUP DRY BREAD CRUMBS
2 TABLESPOONS BUTTER OR OTHER FAT, MELTED

Drain and flake sardines. In top of double boiler melt the fat, add green pepper and onion, cook until tender. Blend in flour and seasonings, gradually add milk, and cook until thick, stirring constantly. Add cheese and continue cooking until cheese melts. Combine sardines, noodles, and sauce. Pour in a greased casserole and top with buttered crumbs. Bake in a moderate oven 350° F. for 30 minutes or until crumbs brown. Serves 6.

A Fish and Wildlife Service tested recipe. This is one in the series of recipes using fishery products tested and developed in the Service's test kitchens.