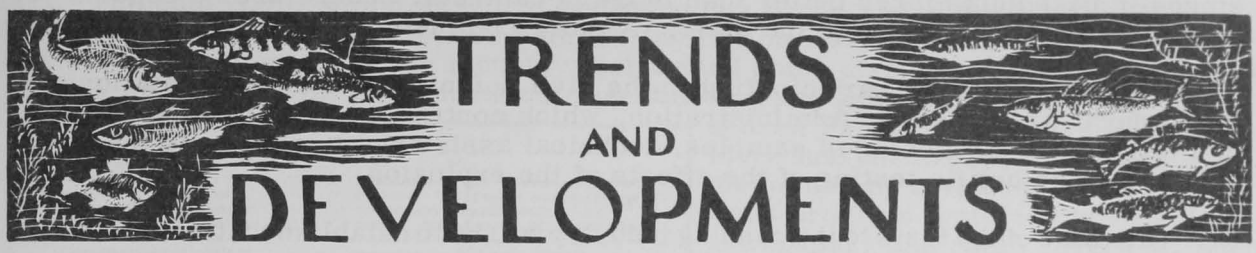

Additions to the U. S. Fleet of Fishing Vessels

A total of 36 vessels of 5 net tons and over received first documents as fishing craft during April 1955. This was 47 vessels less than the 83 reported for the same month of last year, a decrease of 57 percent, according to the U. S. Bureau of Customs.

In the Gulf section, only 10 vessels were documented for the first time as fishing craft, compared with 45 during the same month of 1954. The Pacific section had 9 additions, the South Atlantic section had 6, the Alaska section had 4, Hawaii and the Middle Atlantic and Chesapeake Bay sections each had 2, and the New England section had one.

During the first four months of the current year, 109 vessels were documented for the first time as fishing craft, compared with 272 for the corresponding period of last year.

U. S. Vessels Issued First Documents as Fishing Craft, April 1955 and Comparisons

Section	April		Jan.-Apr.		Total
	1955	1954	1955	1954	1954
	(Number)				
New England	1	5	7	8	23
Middle Atlantic	2	2	5	2	15
Chesapeake Bay	2	5	11	28	93
South Atlantic	6	9	15	32	119
Gulf	10	45	29	153	313
Pacific	9	15	26	37	117
Great Lakes	-	-	2	3	6
Alaska	4	1	12	8	27
Hawaii	2	1	2	1	1
Puerto Rico	-	-	-	-	2
Unknown	-	-	-	-	1
Total	36	83	109	272	717

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

Canned Foods Value to Civil Defense Tested in Nuclear Explosion

Approximately 25,000 samples of about 60 different canned foods in various-sized tin and glass containers were exposed to the effects of a nuclear explosion at the Nevada proving grounds May 5 in the first scientific test of the effects of such a nuclear explosion on various kinds of foods.

The canned foods test is part of an over-all civil defense test of foods and other items essential to the every day existence of a civilian population. A National Canners Association technical group will examine post-blast effects on the canned food samples.

From observations made within six hours after the atomic blast of May 5, it can be stated with considerable assurance that the test foodstuffs would be suitable for emergency feeding. In residential structures, 4,700 feet from ground zero, commercially-packaged foods came through the test relatively better than the houses in which they were stored, and were found substantially free of radioactivity. Food products in physically intact packages were found acceptable for use. Failure of packages was due largely to gross dislodgement from cupboards or from flying missiles. There was no bursting by blast over-pressures. Generally, the containers

stored in basements fared better than those in cabinets. There are no reports yet on results obtained closer to the blast. A more complete report will be issued later.

The Association is participating in the civil defense tests at the invitation of the Federal Civil Defense Administration, which contracted with the Association last fall for the furnishing of samples, technical assistance in setting up the tests, and further scientific testing of the effects of the explosion.

The value of the tests to the canning industry will be to establish that canned foods in tin and glass may be used safely under such extreme emergency.

Canned and glass packed foods were exposed to the explosion at about 18 different locations ranging from 1,050 to 15,000 feet from ground zero, and in various exposure conditions (both cased and uncased in most of them); on the surface of the desert floor to test fall-out effects; on shelves, in cupboards, and on the floors of kitchens and basements of test structures; in emergency shelters; in industrial-type structures for testing of the foods under conditions of retail storage and handling; and in shallow trenches near enough to the explosion to test radioactivity in the absence of blast effects. Some of the test samples will be used in long-range animal-feeding experiments to check for possible toxicity.

In a press statement issued jointly by the Federal Civil Defense Administration, the Department of Defense, and the Atomic Energy Commission, the tests are explained as follows:

"Test effects to be examined include those of neutron and gamma irradiation of foods; the problems resulting from fall-out on foods and packaging, including decontamination feasibility; and the effects of blast and thermal radiation on food packaging.

"Food test stations will be placed just below the level of the ground at two positions along the main FCDA test line. In addition, food will be placed in a number of test structures, including residences and commercial buildings. Some samples will be exposed in locations where maximum fall-out is expected. Others will be exposed primarily to blast. The purpose of the below-ground food stations is to expose the various kinds of food to neutron and gamma radiation without causing the food packages to be disrupted by blast. The stations are actually just below ground level with a very light covering of earth sufficient to attenuate the neutrons or gamma rays to an appreciable degree.

"The project will determine which foods subjected to neutron or gamma irradiation may tend to become radio-active or toxic."

Including the 60 different canned foods, a wide range of food products was exposed. In addition to the heat-sterilized foods, staples such as flour and sugar, semiperishables such as potatoes and processed meats, and perishables such as fresh meats, butter, and frozen foods were included.

Canned Tuna Promotion Program Well Under Way

The buying attention of housewives throughout the entire United States was directed toward canned tuna during the period June 2-11, as a result of the joint industry-Government special canned tuna sales program. Although record stocks of canned tuna were available, it was felt that the intensive sales promotion program would be instrumental in moving a record volume of these stocks.

The campaign, which was first announced by Secretary of the Interior McKay on April 11, is directed towards both the institutional and the home-consumer markets. In this connection the industry distributed point-of-sales and other merchandising material, both through its representative trade association, the Tuna Research Foundation, and through the individual members. This was supplemented by a vigorous public relations program featuring television, newspaper, and radio coverage. Such name stars as Dave Garroway, Steve Allen, Arlene Francis, and Liberace were among the television and radio personalities publicizing canned tuna during the summertime drive. The slogan, Summertime is Tuna Time, was a familiar one in these media during this period.

TOASTED TUNA FRENCH LOAF

1 can tuna (6½ or 7 oz.)
¼ cup butter or margarine
1 teaspoon prepared mustard
1 small loaf French bread
1 tablespoon grated onion
1 teaspoon prepared mustard
1 cup grated cheese
2 tablespoons chopped sweet pickle or pickle relish

Drain tuna. Flake. Cream butter and mustard. Cut bread in half lengthwise and remove a small amount of the center. Spread center with mustard-butter mixture. Combine remaining ingredients. Fill loaf. Wrap in aluminum foil. Bake in a moderate oven, 350° F., for 20 minutes or until cheese melts. Serves 6.

TUNA A LA STROGANOFF

2 cans tuna (6½ or 7 oz. each)
1 can (4 ounces) mushroom stems and pieces
½ cup chopped onion
1 clove garlic, minced
¼ cup butter or other fat, melted
1 can (10½ ounces) condensed cream of mushroom soup
1 tablespoon Worcestershire sauce
¾ teaspoon salt
Dash pepper
2 tablespoons catsup
½ teaspoon paprika
1 cup sour cream
3 cups steamed rice

Drain tuna. Flake. Drain mushrooms and save liquid. Cook onion, garlic and mushrooms in butter until tender. Add mushroom liquid, mushroom soup, seasonings and sour cream. Stir until well blended. Add tuna; heat. Serve over mounds of fluffy steamed rice. Serves 6.

TUNA PIZZA PIE

2 cans tuna (6½ or 7 oz. each)
½ cup chopped onion
3 tablespoons butter or other fat, melted
1 can (8 ounces) tomato sauce
1 can (6 ounces) tomato paste
1 teaspoon crushed aregano
½ teaspoon salt
Dash pepper
1 package hot roll mix
½ cup sliced stuffed green olives
½ pound sliced cheese

Drain tuna. Flake. Cook onion in butter until tender. Add tomato sauce, tomato paste and seasonings; bring to a boil and simmer 10 minutes. Prepare hot roll mix as directed. Divide in half; roll in 2 circles about 9 inches in diameter. Place each circle on a well-greased baking sheet and fold over ¼ inch of the outside edge to form a rim. Cover each circle with ½ the sauce, tuna and olives. Arrange slices of cheese on top. Bake in a hot oven, 425° F., for 20 minutes or until crust is brown. Serves 6.

TUNA AND APPLE SALAD

2 cans tuna (6½ or 7 oz. each)
1 cup diced apples
½ cup chopped celery
¼ cup chopped nutmeats
½ cup mayonnaise or salad dressing
Lettuce

Drain tuna. Flake. Combine all ingredients and mix lightly. Chill. Serve on lettuce. Serves 6.

As its contribution in the program, the Service's field fishery marketing specialists of the Educational and Market Development Section contacted each state School Lunch Department in the United States and arrangements were made whereby the schools in the country, featuring a hot school lunch, were supplied special Service-prepared canned tuna bulletins. Similar contacts were made with the state institutions and restaurant associations throughout the country, and special canned tuna bulletins were made available to the more than 30,000 members and guests of the recent National Restaurant Association convention in Chicago.

In addition, the Service's marketing specialists personally contacted the television, newspaper, and radio food program directors in each of the cities with a population of 100,000 or more. Supplementing these calls were mailings to many food program directors in smaller cities. Considerable assistance was made available by the U. S. Department of Agriculture, which cooperated by distributing canned tuna recipes and information through its many informational outlets.

Following closely the Boston haddock industry-Government promotion program to move the burdensome inventories of scrod haddock fillets, the current canned tuna program has every prospect of being equally as successful.

Cans--Shipments for Fishery Products, January-March 1955

Total shipments of metal cans for fish and sea food during January-March 1955 amounted to 15,237 short tons of steel (based on the amount of steel consumed in the manufacture of cans), compared to 13,118 short tons in the same period a year earlier.

Can shipments in the first quarter of 1955 by area are: East Coast 2,932 tons, Central States 1,435 tons, and West Coast 10,870 tons, as compared

with 5,531, 1,091, and 20,929 tons, respectively, in the last quarter of 1954. The decreases in January-March 1955 were due mainly to the off-season for canning Maine sardines and California sardines, and a lighter pack of canned tuna.

Note: Statistics cover all commercial and captive plants known to be producing metal cans. Reported in base boxes of steel consumed in the manufacture of cans, the data for fishery products are converted to tons of steel by using the factor: 23.0 base boxes of steel equal one short ton of steel.

Federal Purchases of Fishery Products

FRESH AND FROZEN FISHERY PRODUCTS PURCHASED BY DEPARTMENT OF DEFENSE, APRIL 1955: The Army Quartermaster Corps in April 1955 purchased fresh and frozen fishery products for the military feeding of the U. S. Army, Navy, Marine Corps, and Air Force in the amount of 2.2 million pounds, valued at $1.0 million (see table). This was a decrease of 14.0 percent in quantity and 18.2 percent in value as compared with March purchases, but greater by 22.9 and 26.3 percent, respectively, than purchases in April 1954.

Purchases of Fresh and Frozen Fishery Products by Department of Defense (April and the First Four Months of 1955 and 1954)

QUANTITY				VALUE			
April		Jan.-Apr.		April		Jan.-Apr.	
1955	1954	1955	1954	1955	1954	1955	1954
. . . (Million Pounds) . . .				. . . (Million Dollars) . .			
2.2	1.8	8.7	6.9	1.0	.8	3.7	3.0

Purchases of fresh and frozen fish by the Army Quartermaster Corps during the first four months in 1955 totaled 8.7 million pounds (valued at $3.7), higher by 25.0 percent in quantity and 23.9 percent in value as compared with the similar period a year earlier.

An average price of 42.5 cents per pound was paid by the Army Quartermaster Corps for fresh and frozen fishery products purchased in April 1955, compared with 44.2 cents in March and 41.3 cents in April 1954.

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

Florida

SHRIMP INDUSTRY AIDED BY MARITIME ADMINISTRATION LOAN GUARANTEES: In January the Florida shrimp industry felt a relaxation of the pressure which has been building up for the last year or more, when the Maritime Administration of the U. S. Department of Commerce agreed to extend loan guarantees for the purchase or rebuilding of shrimp vessels. An immediate result in Florida will be increased exploration by the industry, reports the February Commercial Fisheries Newsletter (#2) of the University of Miami Marine Laboratory.

A Tampa shrimp firm is seriously considering deep-water explorations, stating that they are made possible because boat alterations and the other costs can now be financed conveniently. This means that (1) shrimp vessel owners can obtain better interest rates than formerly since the loans are guaranteed by the Federal Government; (2) they can obtain loans on more favorable installment terms, over a period of 5 to 6 years instead of the present maximum of 3 years; (3) shipbuilding firms relieved of the necessity of being guarantors of loans, can give the industry better service.

All this has lifted pressure from the shrimp industry. They need not be under the necessity of paying such heavy mortgage payments on new construction or reconstruction as formerly, and can show a profit with the decreased catches prevalent today, rather than having all the money go to buying their vessels.

To arrange gaurantee of a loan obtained to build or repair a shrimp boat on a five-year basis, application forms can be obtained from the Assistant Chief, Division of Contracts, Maritime Administration, U. S. Department of Commerce, Washington 25, D. C., by asking for "Application for Ship Mortgage and for Loan Insurance under Title XI, Merchant Marine Act 1936. Interim Form 11/22/54." Applicants should remember that the Maritime Administration does not lend the money, but insures loans up to 90 percent of their value for a moderate fee.

Note: See Commercial Fisheries Review, January 1955, p. 73.

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SOFT-SHELL CRAB INDUSTRY BEING DEVELOPED: Methods of producing soft-shell crabs in Florida on a commercial scale have been developed by the University of Miami Marine Laboratory in cooperation with a Florida west coast crab dealer. For some years soft-shell crabs have been produced in small quantities by one or two dealers in Florida, but there has been no large-scale industry. Following preliminary work by the Marine Laboratory, the crab dealer requested the Laboratory to supervise the installation of equipment for holding shedding crabs.

Preliminary work on this problem by The Marine Laboratory included tests of a gear called the crab scrape, used successfully in Chesapeake Bay in collecting "pre-peelers." The success of this gear is limited during some periods of the year since rolling "grass" (Gracillaria) is picked up in such abundance that it prevented the capture of crabs. The scrape can be used during March with more success since the grass is at a minimum.

A crab fyke net, another type of gear used to collect "pre-peelers" in Chesapeake Bay, is now being tested in the Peace River. This gear consists of a wire fence running from the high-water mark on shore to a funnel opening in a trap 4 x 4 feet, made of wire on a wooden frame. The lead, or fence, is 500 feet long in this particular trap. This type of gear is effective in early spring.

The floats for the shedding crabs consist of 3 wooden bins arranged in tiers, each 4 x 10 feet, with a water depth of 9 inches. The water depth is regulated by an opening which drains the water from one bin to the next. The water is supplied by a Jaeger self-priming pump powered by a one hp. motor. A pump of this size will serve another set of bins which will be installed later. This system holds approximately 1,000 gallons of water which can be changed in 18 minutes, and is capable of holding several hundred crabs per bin without danger of overcrowding.

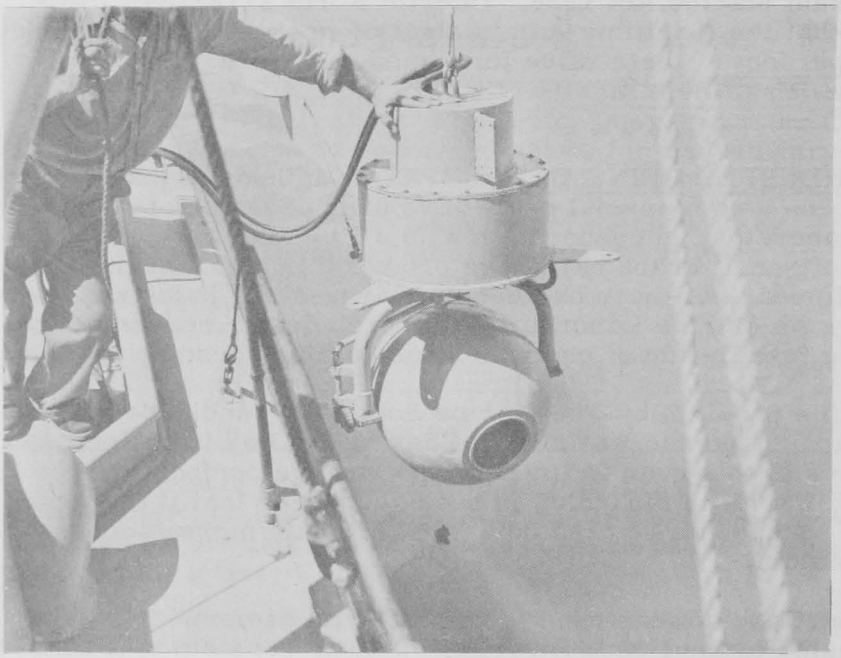
Since it is important that the system contain no copper which is poisonous to the crabs, a cast-iron pump was used rather than bronze, and plastic pipe rather than copper. Similarly copper paint cannot be used on the bins.

Drawings for the system, estimates of the approximate cost of materials, and all necessary advice will be given by The Marine Laboratory to anyone who is interested in installing such a system. Address inquiries to: The Marine Laboratory, University of Miami, Coral Gables, Fla.

Gear Research and Development

BEHAVIOR OF SHRIMP TRAWL VIEWED WITH UNDERWATER TELEVISION: The utility of underwater television as a practical gear-research tool was further demonstrated by the Service's Exploratory and Gear Development Section at Key West, Fla., during March 11-16, 1955.

These experiments took place on the shrimp grounds northwest of Key West with the assistance of the chartered shrimp trawler Miss Ethel W. engaged to handle the trawls. Observers aboard the Service research vessel Pompano were able to view the behavior of a 40-foot flat trawl and a 70-foot balloon trawl under normal dragging conditions at depths to 50 feet.



UW-TV scanning vehicle used in shrimp-trawl viewing. The unit is remote controlled with 360° horizontal and 90° vertical scanning ability.

The UW-TV unit was submerged (see figure), trained on one of the trawling cables, and lowered down to the doors and the trawl. With the 360° remote-control scanning facility and by careful positioning of the Pompano it was possible to view the trawl nets from the front, top, rear, and several lateral angles. Good close-up views were afforded of twine, doors, floats, and lead lines. At times, for more accurate positioning for observations it was advantageous to tow the Pompano from the chartered trawler. While it was shown during the continued observations that these two nets were apparently performing as designed and rigged, it was possible by means of the direct observation afforded to make adjustments and corrections which improved the apparent fishing ability of the trawls.

The tests were carried out during daylight hours to facilitate the visual observations with the UW-TV unit and increase the possibility of successful photographic recordings from the monitor screen.

Results showed that an important consideration in performance of trawl nets is towing speed. An excessive rate of speed caused leap-frogging of lead lines over the bottom, with resulting loss of probable catches. Too slow a rate of speed resulted in a smaller angle of doors and decreased spread of the net opening. An excessive amount of trawl cable played out also resulted in a smaller angle of doors and reduced spread of net.

By increasing the length of the towing legs between trawl wings and doors by 8 feet on the 40-foot trawl, the angle of sheer of the trawl doors was increased, the opening of the net was enlarged, and individual meshes were opened more fully. At the same calculated speed (2 knots) the sheer increased 5 to 7 degrees. This greater sheer enlarged the horizontal opening of the trawl by a calculated 6 feet and did not cause any decrease in vertical height of the net (calculated to be 4 feet). The mesh shape appeared to be more square than diamond shape.

Determination of the maximum and optimum spread are dependent upon further observations, as is the application of this same principle to other types of shrimp trawls.

Great Lakes

"BLOATERS" A NUISANCE IN LAKE MICHIGAN: Since the invasion of the sea lamprey and the subsequent destruction of the lake trout, the problem of the "bloater" (Leucichthys hoyi) has arisen in Lake Michigan. A small cisco (chub) of almost no commercial value, the bloater was formerly a major item in the diet of the lake trout. As the inroads of the sea lamprey upon the lake trout population have decreased the predation of that species on the bloater, however, the bloater has multiplied so rapidly that it is now competing with the more valuable chubs for space and food, as well as creating a nuisance by becoming entangled in large numbers in fishermen's nets.

Gulf of Mexico

OYSTER CANNERS SET NET-WEIGHT STANDARDS: Standards for the net weight of canned oysters packed in the Gulf of Mexico area were set (effective April 21) at a meeting of oyster canners of Louisiana, Mississippi, and Alabama in New Orleans on April 21. Eighteen canners were represented at the meeting.

The meeting was called for the purpose of discussing and formally adopting standards of net weight of canned oysters. In order to ascertain the actual net weight of the canned oysters packed by the different canners of the Gulf area a thorough check was made. Based on these findings, resolutions for adoption of net-weight standards by the Gulf packers and future labeling of oysters on the basis of net weight were unanimously adopted as follows:

(1) That in accordance with the interpretation issued by Mr. Geo. P. Larrick, Commissioner of Food & Drugs and dated April 4, 1955, and published in Federal Register, April 9, 1955; 20 F. R. 2304, the weight declaration on canned oysters packed in the Gulf area including Louisiana, Mississippi, and Alabama be made on the basis of the entire contents of the can in place of the drained weight declaration heretofore used.

(2) That as based on an investigation of the oysters canned in the Gulf area, the industry standard for the net fill (net contents) of canned oysters be and hereby is established as follows:

Can Size	Existing Standard of Drained Weight Per Can	New Standard of Net Contents
	Ounces	Ounces
211 x 300	4.66	8
211 x 400	6.43	11
307 x 113	4.17	7
202 x 204	2.84	5

Also that the specific drained weight of oysters as promulgated as standard under the Federal Food, Drug and Cosmetic Act and listed in above table shall continue to be observed by all Gulf oyster packers even though the drained weight declaration is not shown on the label.

(3) That all Gulf oysters shall henceforth show the net weight on the labels either as "net weight . . . ounces" or "net contents . . . ozs.," or in a similar manner; That optionally the applicable drained weight may be shown on the label in addition to the net-weight declaration; That in order to provide an orderly transition period even though all labels printed in the future shall show the net contents, all existing labels showing the drained weight only, may be used up until the stocks of such labels are exhausted.

(4) That this day of April 21, 1955, be set as the date for adoption of these standards:

(5) That a copy of these resolutions be sent to the U. S. Department of Health, Education & Welfare, Food & Drug Administration, Washington, D. C., New Orleans, La., and Atlanta, Ga.

(6) That wide and thorough publicity be given to these new standards.

Maine

SHORT CANNED MAINE SARDINE PACK TO MID-JUNE: With a total pack of only about 125,000 actual cases of canned Maine sardines as of mid-June, the Maine sardine industry is witnessing one of its smallest early season packs on record, reports a June 17 news release. A shortage of fish is the cause of the small pack to date, says the Executive Secretary of the Maine Sardine Industry. He said that the industry's output was approximately 500,000 actual cases less than the last 20-year average for the same period.

Only 16 or 18 of the States 44 plants had been in operation to mid-June and no substantial runs of fish showed up anywhere along the coast. Records show that so far this year most of the canning has been in the Portland and mid-coast areas with no plants open east of Jonesport.

"It is anybody's guess what may happen from now on, but at present the season has many of the earmarks of 1951 and 1953 when the total pack was 1,600,000 and 1,800,000 cases, respectively," the Executive Secretary reports.

The annual pack for the past 20 years has averaged about 2,750,000 cases and 2,900,000 standard cases were packed in 1954.

In June, packers inventories which appeared burdensome in April were on a level with or less than in mid-June 1954 and were expected to grow smaller by comparison until fish showed up in quantity.

Missouri

COMMERCIAL FISHERIES CATCH, 1954: Missouri waters yielded 379,000 pounds of fish to commercial fishermen in 1954 with a retail value estimated at $97,000, according to the Missouri Conservation Commission's fisheries section.

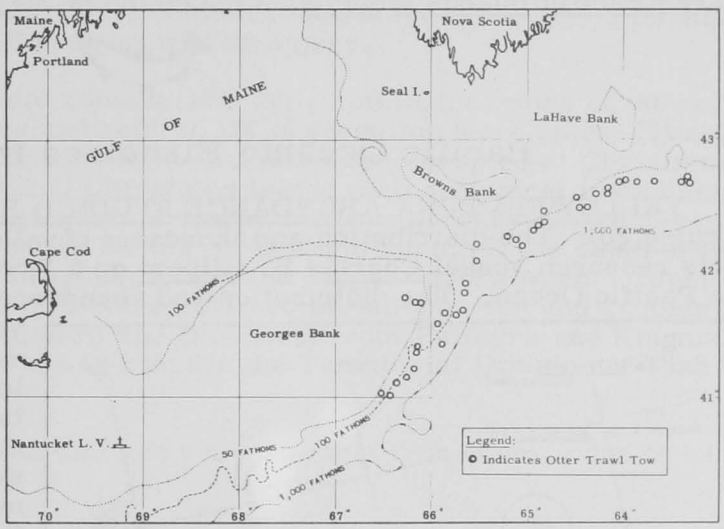
A total of 1,023 Missourians purchased commercial fishing permits and 532 of these operated on the Missouri River, 476 fished the Mississippi, and only 15 the St. Francis River. Permits purchased were for 3,200 yards of seines, 30,500 yards of trammel nets, 2,426 hoop nets, and 64,500 hooks.

The Mississippi River led in total quantity of commercial fish taken with 211,573 pounds. Missouri River fishermen netted 165,342 pounds, and the St. Francis River produced 2,219 pounds of fish.

Carp made up 43.6 percent of the total commercial fish harvest, followed by buffalofish, drum, and flathead catfish, in that order.

New England Exploratory Fishery Program

LARGE OCEAN PERCH CAUGHT IN DEEP WATER ON EDGE OF CONTINENTAL SHELF BY "DELAWARE" (Cruise 5): Good catches of large-size ocean perch were made in 200-300 fathom depths on the edge of the Continental Shelf by the Service's exploratory fishing vessel Delaware on a 12-day cruise (which ended May 20) in offshore New England waters. Ocean perch were taken in depths to 400 fathoms, but the best catches (up to 3,000 pounds) were made in the 200- to 300-fathom range. These fish averaged about 2 pounds in weight. This was the third in a series of cruises designed to explore the availability of bottom species on the edge of the continental shelf in waters deeper than ordinarily fished by commercial vessels.



Delaware Exploratory Cruise 5, May 9-20, 1955.

A total of 40 tows of one-hour duration was made. Thirty-nine of these were made with a No. 41 "balloon" trawl. The net apparently fished very effectively, but no tows were made to effect a performance comparison with the standard No. 41 trawl.

In general, tows were made in successive depths to 400 fathoms. Two species were widely distributed in the depth range covered--whiting (Merluccius bilinearis) and white hake (Urophycis tenuis). Commercial quantities of these species were taken in depths up to 350 fathoms.

Of surprising abundance was the Argentine (Argentina silus), a smelt-like species. Catches up to 1,000 pounds were made, and samples were frozen for examination by Service technologists at the East Boston Fishery Technological Laboratory.

Lobsters (Homarus americanus) were widely distributed on the edge of the continental shelf in the area east of Georges Bank, but few were taken south of Browns and La Have Banks. The average weight of lobsters taken was $5\frac{1}{2}$ pounds. Forty large egg-bearing female lobsters were turned over to the Massachusetts Division of Marine Fisheries for use in the lobster propagation hatchery at Martha's Vineyard.

The Delaware is scheduled to depart on Tuesday, May 31, for an 11-day trip to continue exploration for northern shrimp in waters of the Gulf of Maine and northward.

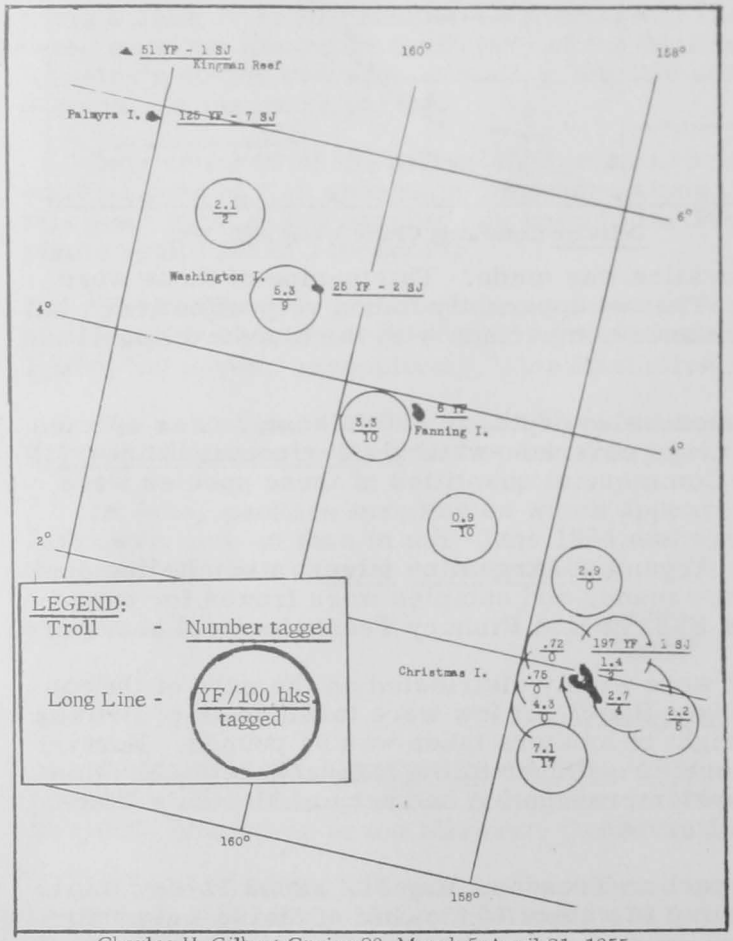
Oregon Canner Might Buy Tuna in South Pacific from Japanese Vessels

A representative of an Astoria, Ore., fish canner said his organization was investigating the possibility of purchasing tuna from Japanese vessels operating in the New Caledonia-New Hebrides-Loyalties area in the South Pacific. The plan envisages a United States refrigeration vessel stationed at Noumea, New Caledonia. Fish landed aboard that vessel would technically be United States-produced, according to the representative of the Astoria firm. The intention appears to be either to can the fish aboard this vessel, or to ship it frozen to the United States.

The representative emphasized that the whole scheme is at present merely under investigation. Even if the necessary arrangements can be made in Noumea it probably would be some time before operations could be commenced, reports the March Pacific Islands Monthly, a magazine of the South Seas Islands.

Pacific Oceanic Fisheries Investigations

YELLOWFIN TUNA ABUNDANCE STUDIED BY "CHARLES H. GILBERT" (Cruise 20): The distribution and abundance of yellowfin tuna was studied by the Service's research vessel Charles H. Gilbert on a 7-week cruise in various areas of the Pacific Ocean. The distribution and abundance of deep-swimming and surface yellowfin tuna were tested by live-bait fishing, scouting, trolling, and long lining; while the feasibility of a tagging program was tested to discover (1) the relation between deep-swimming and surface tuna, and (2) migration as a possible cause for fluctuations in the abundance of yellowfin.



Charles H. Gilbert Cruise 20, March 5-April 21, 1955.

In 142 hours of scouting 60 bird flocks and/or fish schools were noted. They were wild and tended to disperse when approached. Added to this, only a few of the 20 buckets of live bait taken in Hawaii survived to Palmyra Island so it was impossible to try to work the schools.

Almost all direct trolling was done from 100 yards to 3 miles off the various islands. There were about 142 hours of trolling which netted 438 yellowfin or 3.1 per hour. As high as 7.8 per hour were taken at Palmyra and as few as 1.3 per hour near Christmas Island. About two wahoo per hour were also taken during the trolling. These may represent an additional source of income to fishermen.

Thirteen long-line stations were occupied in the Line Islands area. Catches fluctuated considerably and the average of 3.0 yellowfin per 100 hooks was surprisingly low. A high of 7.1 yellowfin per 100 hooks was obtained within a few miles of Christmas Island. While fishing with-

in a few miles of each other the Charles H. Gilbert had catches of the same size as the John R. Manning which was testing gear, indicating that a few miles' difference in location makes little difference in the catch rate.

It is interesting to note that despite the low long-line catch rate the catch per 10-hour day was 1,650 pounds, comparing very favorably with a catch of 940 pounds per 10-hour day of trolling.

About 18 percent of the long line-caught yellowfin were shark eaten.

By trolling and long lining 461 yellowfin, 11 skipjack, and 1 little tunny were tagged. Trolling was by far the best method for obtaining yellowfin suitable for tagging. Of the 438 yellowfin caught, 406 averaging 33 pounds were tagged, or about 93 percent of the total. On the other hand, of the 238 yellowfin caught on long-line gear only 53 were tagged. This low figure in part reflects the difficulty in landing these larger fish (mean weight 110 pounds) without injury.

The Charles H. Gilbert also did considerable other biological work on the cruise: (1) continuous surface temperature and routine BT observation were taken; (2) skipjack stomachs were preserved; (3) night light stations were occupied at Christmas Island and Kingman Reef; (4) serviced Christmas Island meteorological instruments; (5) yellowfin and big-eyed tuna loins were prepared for treatment by the Pauley process; (6) indirect trolling was conducted during all daylight runs; (7) the depth of the main line was determined by sounding tubes, and the deepest hooks were between 40 and 60 fathoms; (8) morphometric data were obtained on istiophorids and uncommon sharks; (9) reef fishes (mostly snappers and groupers) from Palmyra and Kingman Reef were brought back both alive and frozen for the Territorial Division of Fish and Game.

The weather during the trip was fair; no time was lost from fishing due to bad weather.

Palmyra Island Commercial Tuna Fishery Abandoned for Present

Hopes for a successful tuna fishery based on Palmyra Island have failed--at least for the present, reports the February Pacific Islands Monthly.

Original fishing surveys carried out under the sponsorship of the U. S. Fish and Wildlife Service were very successful, and on those results a Seattle firm commenced operations in mid-1954. They employed the 150-ton converted schooner Commonwealth, with 40 tons of refrigeration space as the mothership and two smaller fishing vessels.

Catches were poor and the Commonwealth is now lying idle in Honolulu. One of the fishing vessels, Brothers, was missing at sea off Kaual, Hawaii, in December 1954, while returning from French Frigate Shoals where it had been operating more profitably. An occasional boat has gone down from Honolulu to Palmyra in recent months, but with little success.

Saltonstall-Kennedy Act Fisheries Projects

FOREIGN FISH OIL MARKET SURVEY UNDER WAY: The U. S. Fish and Wildlife Service has arranged with the Foreign Agricultural Service of the U. S. Department of Agriculture to conduct preliminary surveys of the production and market outlets for domestically-produced fish oils in Western Europe and South America, in connection with the foreign market development project made possible by Saltonstall-Kennedy Act funds. Following an outline developed by the Service, the Agriculture representatives will investigate the present market trends and consumer preference for domestic oils in these foreign countries, and make preliminary surveys into the foreign production potentials insofar as they constitute competition for United States products. It is expected that the Agriculture representatives will have completed their assignment by July 1 and an informal report of their findings will be released shortly thereafter.

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SERVICE OPENS FISHERY STATISTICAL OFFICE IN ARANSAS PASS, TEXAS: A statistical office for the collection of fishery data was opened at Aransas Pass, Tex., in July by the Service's Branch of Commercial Fisheries. Activities of the Aransas Pass office will include the collection of detailed data on employment in the fisheries, number of craft and quantity of gear operated, the catch of fishery products, and related activities in the vicinity of Aransas Pass. Detailed statistics on the shrimp fishery will be obtained for that area in connection with the Service's expanded program for the collection of shrimp statistics.

Gordon R. Luce, Jr., who has been engaged in the collection and tabulation of Florida fishery statistics by the University of Miami, will be in charge of the office.

This project is being financed by funds provided by the Saltonstall-Kennedy Act (68th Stat. 376).

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SERVICE SIGNS CONTRACTS TO EXPAND ALASKA SALMON RESEARCH: As a further step in the U. S. Fish and Wildlife Service's vigorous program for the restoration of depleted salmon runs in Alaskan waters, a second contract has been signed with the University of Washington for salmon research in the Territory, Acting Secretary of the Interior Davis announced June 16.

The new $55,400 contract provides for expanded research under the Saltonstall-Kennedy Act on problems affecting the survival of salmon. It supplements an earlier $64,000 contract as well as the extensive Government program.

Salmon is Alaska's economic mainstay. The catch declined disastrously in 1953 as the result of an unknown disaster at sea. Secretary McKay promptly ordered the institution of unprecedented conservation measures designed to maintain a healthy fishing industry for the Territory.

The salmon run improved in 1954 and is expected to increase further this year but more needs to be known about salmon before ultimate recovery of the fishery is assured. The two contracts, totaling $119,400, with the University of Washington provide for much of the needed research.

The work will be conducted at the University's Fisheries Research Institute under the supervision of its Director, Dr. W. F. Thompson. For the past several years the Institute has been making limited studies of the Alaska salmon resources. The signing of the contracts permits activity in Alaska during the 1955 salmon runs.

The first contract provides for a tagging program to ascertain where Alaska salmon go when at sea and the rate at which they are caught. Work on the marine life of salmon has been largely neglected in the past because of the high cost of sea-going research.

Certain phases of the salmon's life in fresh water are likewise not too well known. This is particularly true of the numbers of young salmon passing downstream each year, and of the physical and chemical conditions which affect their survival in lakes and streams. The second contract covers the investigation of these problems. In addition it provides for the further development of relatively cheap photographic counting methods to replace the costly weirs and their attendants now employed to enumerate spawning escapements.

The tagging contract will be administered by Clinton E. Atkinson, Chief of the Service's Pacific Salmon Investigations, headquartered at Seattle, Wash. The fresh-water research program will be headed by Donald L. McKernan, newly appointed Administrator of Alaska Commercial Fisheries at Juneau.

Thompson, who will exercise university supervision over both programs, is a noted authority on the life history and conservation of salmon, halibut, tuna, and sardines. He was the Director of the initial research work of the International Halibut Commission and the International Pacific Salmon Fisheries Commission. The rehabilitation of the halibut of the north Pacific and the sockeye salmon of the Fraser River are widely considered as outstanding examples of conservation.

Service Contracts for National Survey of Fishermen and Hunters

Data on the amount of time and money that United States sportsmen spend annually on hunting and fishing will be collected for the first time on a national basis, Acting Secretary of the Interior Davis announced June 7. The U. S. Fish and Wildlife Service will supervise the project and publish the final results.

This nationwide personal interview survey, scheduled to start next January after preliminary field-testing, will provide information on the number of persons (12 years of age or older) who participated in recreational hunting and fishing during calendar year 1955; the days spent by them in these pursuits; and the amount of money they spent which can be directly attributed to these sports.

No national survey of this scope has ever been conducted previously although a number of states have carried out similar surveys within their own borders. Methods employed in these state surveys, however, varied to such an extent that it has been impossible to correlate the data for use on a national basis.

To obtain accurate data at the national level, the International Association of Game, Fish, and Conservation Commissioners, representing all of the 48 state fish and game departments, adopted a resolution at its meeting in September 1954 at Seattle, Wash., which requested the U. S. Fish and Wildlife Service to contract with a survey organization for a nationwide economic survey of hunting and sport fishing activities.

In implementing this resolution, the Service submitted a plan for a personal interview survey to 21 fact-finding organizations and invited specific proposals for conducting the study. Nine definite proposals were received. These were carefully reviewed by a committee composed of Service representatives and statistical experts from several Federal agencies. Crossley, S-D Surveys, Inc., of New York

City, was the successful bidder and a contract was signed between that firm and the Fish and Wildlife Service on June 1.

A number of the state fish and game departments have indicated their interest in expanding the national survey for their particular state so as to obtain state estimates. These states will be able to conduct such surveys through individual contracts with Crossley, S-D Surveys.

Also, at the request of the International Game, Fish, and Conservation Commissioners, the cost of the survey--$134,000--will be financed from funds available to the Fish and Wildlife Service for administering the Federal Aid in Fish and Wildlife Restoration programs. These funds, under the terms of the Pittman-Robertson and Dingell-Johnson acts, are derived from the Federal excise tax on sporting arms and ammunition, and on fishing rods, reels, creels, and artificial lures, baits, and flies.

State wildlife administrators have long recognized the need for data on the economic status of hunting and fishing which they can use in planning their programs for the management of these natural resources. The Fish and Wildlife Service and other Federal agencies dealing with wildlife, as well as numerous private conservation organizations, will also benefit from the results of such a survey which will provide an authentic measurement of the National interest in hunting and fishing.

Under the terms of the contract, the final statistical report on survey results must be submitted to the Fish and Wildlife Service by June 15, 1956. The results will be published as soon as possible by the Service and made available to all Federal, state, and private agencies interested in learning the impact of hunting and sport fishing on the National economy.

Service Dedicates New Marine Laboratory in North Carolina

A new U. S. Fish & Wildlife Service laboratory for fisheries research on the Atlantic Coast was formally dedicated at Beaufort, N. C., on May 13. This marine biological laboratory will serve as headquarters for the shad, striped bass, and menhaden investigations conducted by the Service along the Atlantic Coast. It replaces the old wooden structure built in 1902 which had long been a landmark in the Beaufort-Morehead City area.

Construction of the new Beaufort laboratory began in 1952 and was completed in 1954. It was designed by the Service's Branch of Engineering. By using simplified construction methods, the cost was among the lowest of any buildings recently constructed by the Service. It consists of a laboratory building and a service building. The laboratory building has fully-equipped office space and a research area with circulating sea water. The service building contains a heating plant, garage, and shops. The laboratory unit is fully air-conditioned. Both units are of one-story modern design.

The Beaufort laboratory is situated on Pivers Island which lies within Beaufort Harbor about one mile from Beaufort Inlet. It is separated from the mainland and the town of Beaufort by a channel about 150 yards wide.

Beaufort, N. C., was early found to be a place especially well suited for the study of the marine fauna and flora. It was visited in 1860 by such eminent zoologists as Gill and Stimpson, by Coues and Yarrow in 1871-72, and by Professor Spencer Fullerton Baird, first head of the U. S. Fish Commission established in 1871. Beaufort soon became a resort for persons interested in biology and for a

period of 10 years or so prior to the establishment of a Federal station, professors and students of John Hopkins University maintained a laboratory there. In 1899 the first Federal fisheries laboratory at Beaufort was set up in a rented building. In 1900 Congress authorized the erection of a biological station which was completed and opened to investigators for the first time in 1902.

Extensive life history studies and practical fishery experimental work on a variety of species of fish found along the Atlantic coast have been made at Beaufort since establishment of the station. This information, aside from its scientific value, is essential when it becomes necessary to enact regulatory measures to protect the commercial species from overfishing.

For nearly 40 years the old Beaufort station was headquarters for one of the most unusual farming operations ever conducted by the Fish and Wildlife Service--that of hatching and rearing diamond-back terrapins. During the period when the farm was in operation, as many as 12,000 young terrapins were released each year in suitable brackish water areas along the coast from Maryland to Louisiana, with the result that they have now become well reestablished over much of their former range. This activity was discontinued in 1948 when the objective of the Service in demonstrating hatchery and farming procedures and in restocking depleted areas was considered accomplished.

During World War II the Beaufort laboratory was inactive in fishery research. In 1949, however, it was reopened when the Service concluded an agreement with the Atomic Energy Commission whereby cooperative research on shellfish and other marine organisms, using radioactive tracer methods, was begun at the laboratory. One main objective of the study was to learn more about the accumulation in marine life of radioactive material and its possible effects on shellfish. This work is still going on at Beaufort but in a building separate from the new laboratory.

Limited facilities for visiting investigators will be available in the new laboratory.

Tuna Industry Group Presents Problems to State Department

A delegation representing the California Commission on Interstate Cooperation, composed of California State officials, accompanied by representatives of the canning and fishing segments of the tuna industry and of the Council of State Governments, called on Under Secretary of State Herbert C. Hoover, Jr., and other officials of the United States Government on June 20 to discuss the situation which has arisen in the industry in California. Maurice C. Sparling, Chairman of the Commission, and Assemblyman Vincent Thomas, Vice Chairman of the Commission, headed the delegation. The delegation was accompanied by Representative Robert C. Wilson of the Thirtieth Congressional District of California and Merrell F. Small, Administrative Assistant to Senator Thomas Kuchel.

In addition to representatives of the Department of State, representatives of the Departments of Interior, Commerce, and Treasury were also present to meet with members of the delegation. Jack Martin, Administrative Assistant to the President, also attended the meeting.

Various related aspects of the tuna situation in California were discussed. The delegation presented information bearing on the matter and advanced a number of suggestions to deal with the situation. The Government representatives indicated that this matter is now under immediate and active study by the Executive Branch. It is expected that this study will be completed in the very near future.

The Delegation is planning to meet further with other agencies of the Government to consider the situation in the tuna industry in California.

U.S. Consumption of Fishery Products, 1954

Apparent United States civilian per-capita consumption of fishery products in 1954 totaled 11.1 pounds (edible weight)--comprised of fresh fish 6.1 pounds, canned fish 4.4 pounds, and cured fish .6 pounds (see table), according to the May 2 issue of The National Food Situation, a U. S. Department of Agriculture publication. This is an increase of 2.7 percent for all fishery products as compared with 10.8 pounds consumed in 1953, and 0.9 percent more than the 11.0 pounds consumed in 1952.

U. S. Apparent Civilian Per-Capita Consumption of Fishery Products, 1954 with Comparisons

Type	1954	1953	1952	1947-49 Average
	(Pounds)			
Fresh and frozen fish	6.1	5.9	6.3	5.9
Canned fish 1/	4.4	4.3	4.1	3.8
Cured fish	.6	.6	.6	.6
Total	11.1	10.8	11.0	10.3

1/ Excludes canned food products containing small quantities of fish, such as clam chowder, etc.

The per-capita consumption of fishery products in 1955 from preliminary indications is estimated at 11.1 pounds.

U. S. Foreign Trade

EDIBLE FISHERY PRODUCTS, MARCH 1955: United States imports of fresh, frozen, and processed edible fish and shellfish in March 1955 totaled 76.7 million pounds (valued at $18.5 million), according to a Department of Commerce summary tabulation (see table). This was an increase of 38 percent in quantity and 36 percent in value as compared with February imports of 55.4 million pounds (valued at $13.6 million). Compared with a year earlier, March imports were also up considerably--19 percent in quantity and 16 percent in value.

United States Foreign Trade in Edible Fishery Products, March 1955 with Comparisons

Item	Mar. 1955		Mar. 1954		Year 1954	
	Quantity	Value	Quantity	Value	Quantity	Value
	(In Millions of Lbs. & $)					
Imports:						
Fish & shellfish: fresh, frozen & processed 1/	76.7	18.5	64.7	15.9	801.7	202.8
Exports:						
Fish & shellfish: processed 1/ only (excluding fresh and frozen)	7.1	1.6	4.1	1.4	50.8	13.2

1/ Includes pastes, sauces, clam chowder and juice, and other specialties.

Exports of processed edible fish and shellfish (excluding fresh and frozen) in March 1955 amounted to 7.1 million pounds (valued at $1.6 million). This was an increase of 6 percent in quantity and 7 percent in value as compared with February exports of 6.7 million pounds (valued at $1.5 million). March 1955 exports were up 73 percent in quantity and 14 percent in value as compared with a year earlier.

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SELECTED FISHERY PRODUCTS, JANUARY-MARCH 1955: A comparison of imports and exports of certain fishery products during the first three months of 1955 with the same period a year ago shows large gains in imports of frozen tuna,

U. S. Foreign Trade in Selected Fishery Products, January-March 1954 and 1955

Product	Jan.-March 1955	Jan.-March 1954	Percentage Increase or Decrease
	(1,000 Pounds)		%
IMPORTS:			
Tuna, fresh or frozen	35,455	21,739	+ 63
Tuna, canned in oil	366	407	- 10
Tuna, canned in brine	6,970	7,612	- 8
Bonito, canned in oil	5,496	6,754	- 19
Salmon, fresh or frozen	2,920	3,803	- 23
Salmon, canned	803	6,668	- 88
Sardines, canned in oil	5,223	5,554	- 6
Sardines, canned not in oil	223	4,253	- 95
Shrimp	9,329	10,636	- 12
Lobsters, fresh or frozen	9,775	7,228	+ 35
Fillets (including blocks), groundfish and ocean perch	35,704	27,580	+ 29
Swordfish	5,164	3,361	+ 54
Fish Meal	27,294 tons	36,275 tons	- 25
EXPORTS:			
Salmon, canned	966	2,154	- 55
Sardines, canned, not in oil	14,665	2,355	+523
Fish oils, inedible	37,578	44,158	- 15

swordfish, and groundfish fillets (see table). Substantial declines are noted in imports of salmon (fresh or frozen and canned), canned sardines not in oil, and fish meal. The principal change shown in exports was a decline in canned salmon and an increase in canned sardines.

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MANY COUNTRIES EXPORT FISHERY PRODUCTS TO UNITED STATES IN 1954: An increasing number of foreign countries are supplying fishery products to United States markets, according to a preliminary review made by the U. S. Fish and Wildlife Service of certain of the principal fishery product imports.

Shrimp, for example, was imported from 23 countries during 1954, compared with 10 countries supplying that product in 1949. Imports of groundfish fillets now come from 13 countries located on three continents. In 1940 such imports were supplied by two neighboring countries.

Tuna in its various forms came to the United States from 18 different countries in 1954. In 1940, 12 countries supplied tuna to the United States. During 1954, 12 countries were shown as the source of fresh or frozen tuna, 8 countries for tuna canned in oil, and 12 countries for tuna canned in brine.

Swordfish came principally from 4 countries in 1954, compared with 2 countries in 1940. Crab-meat imports originated in 6 countries, about the same as in 1940.

About 38 different countries in all contributed to the imports of these commodities during 1954. Imports of these products during 1954 totaled about 350 million pounds and had a foreign value of US$87 million. In 1940 these same products totaled 47 million pounds at a value US$7 million.

U.S. Production of Fishery Byproducts, 1954

MARINE-ANIMAL SCRAP AND MEAL: The production of marine-animal scrap and meal in the United States (including Alaska and Samoa) during 1954 totaled 257,000 short tons, valued at $32.7 million (table 1), according to the data collected by the U. S. Fish and Wildlife Service. This is an increase of 7.5 percent in quantity and

Table 1 - U. S. Production of Marine-Animal Scrap and Meal, 1954 and 1953

Product	1954		1953	
	Quantity	Value	Quantity	Value
	1,000 Short Tons	$1,000	1,000 Short Tons	$1,000
Anchovy	.2	25.4	.7	88.5
Crab, blue	10.1	598.1	8.4	502.2
Crab, Dungeness	.2	10.3	.3	16.2
Fur seal	.3	33.5	.4	27.7
Groundfish (including ocean perch)	7.2	934.6	16.4	2,298.5
Herring	7.0	928.9	5.2	717.5
Menhaden	183.1	23,783.4	174.8	21,767.2
Sardine (pilchard)	6.5	842.6	.1	19.0
Salmon	1.2	137.5	1.5	185.3
Shrimp	.9	50.3	1.0	80.0
Tuna and mackerel	21.5	2,845.2	20.0	2,622.6
Unclassified	18.7	2,558.0	10.1	1,234.9
Total	256.9	32,747.8	238.9	29,559.6

10 percent in value as compared with the 1953 production of 239,000 tons, valued at $29.6 million. Menhaden meal comprised the bulk of the production, accounting for 71 percent of the total in 1954 and 73 percent in 1953.

MARINE-ANIMAL OIL: Production of marine-animal oils in the United States and Alaska during 1954 totaled 21.9 million gallons, valued at $12.8 million, as com-

Table 2 - U. S. Production of Marine-Animal Oil, 1954 and 1953

Product	1954		1953	
	Quantity	Value	Quantity	Value
	1,000 Gallons	$1,000	1,000 Gallons	$1,000
Body Oil:				
Anchovy	9.3	5.0	81.9	35.1
Fur seal	40.2	19.9	46.8	23.3
Herring	760.9	434.3	718.6	360.5
Menhaden	18,641.4	9,755.3	17,824.5	8,806.3
Sardine (pilchard)	755.9	420.5	13.1	6.4
Salmon	183.0	141.9	217.2	165.5
Tuna and mackerel	584.9	243.5	659.2	314.6
Unclassified	652.4	393.1	528.5	333.6
Total	21,628.0	11,413.5	20,089.8	10,045.3
Liver and Viscera Oil:				
Cod	161.5	133.8	113.7	102.0
Shark	26.3	298.4	26.5	402.4
Tuna	-	-	3.0	57.5
Miscellaneous	48.9	959.7	61.1	874.7
Total	236.7	1,391.9	204.3	1,436.6
Grand Total	21,864.7	12,805.4	20,294.1	11,481.9

pared with 20.3 million gallons, valued at $11.5 million in 1953 (table 2). The bulk of this was body oil, with menhaden oil comprising 86 percent of the body oil in 1954 and 89 percent in 1953.

CONDENSED FISH SOLUBLES AND HOMOGENIZED CONDENSED FISH: The United States production of fish solubles in 1954 totaled 172.2 million pounds, valued at $8.3 million, and homogenized condensed fish production amounted to 57.9 million pounds valued at $2.3 million (table 3). Production of fish solubles and homogenized condensed fish combined in 1953 totaled 163 million pounds, valued at $7.3 million.

Table 3 - U. S. Production of Fish Solubles and Homogenized Condensed Fish, 1954 and 1953

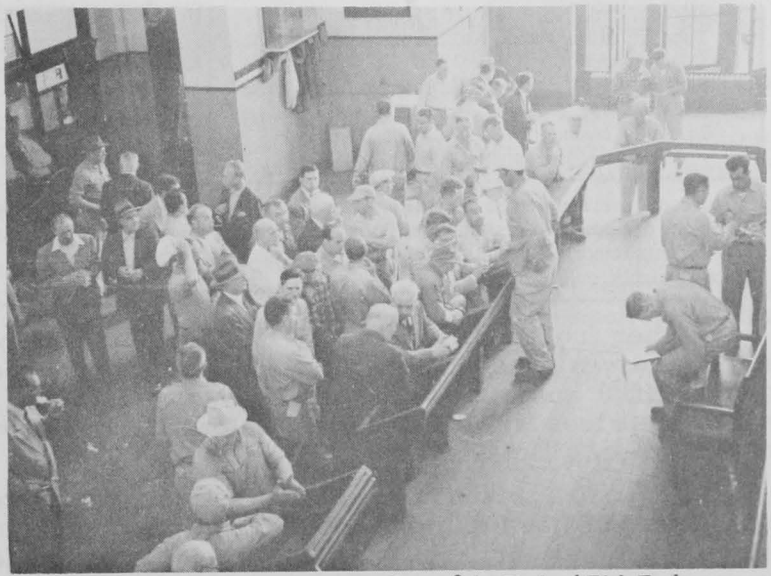
Product and State	1954		1953	
	Quantity	Value	Quantity	Value
	1 Million Pounds	$1 Million	1 Million Pounds	$1 Million
Fish Solubles:				
Maine	1.4	.1	1.1	.1
Massachusetts and Rhode Island	8.5	.4	49.3	2.0
New York, New Jersey, and Delaware	64.7	3.1	44.2	1.9
Virginia	20.7	1.1	13.2	.7
North Carolina and Florida	7.3	.4	6.0	.3
Mississippi	5.5	.3	3.0	.1
Louisiana	13.1	.6	4.7	.2
California and Oregon	51.0	2.3	41.5	2.0
Total	172.2	8.3	163.0	7.3
Homogenized Condensed Fish:				
Massachusetts and Rhode Island	57.9	2.3	1/	1/
Grand Total	230.1	10.6	163.0	7.3

1/ Included with fish solubles.

Wholesale Prices, May 1955

Increased production of fishery products and improved demand held wholesale prices to only a slight drop from April to May. The over-all index of edible fish and shellfish (fresh, frozen, and canned) in May 1955 was 98.1 percent of the 1947-49 average (see table)--0.6 percent less than in April and 5.4 percent below May 1954.

Lower ex-vessel prices for large dressed haddock at Boston were mainly responsible for a 3.9-percent decline in the drawn, dressed, or whole finfish subgroup index from April to May. Western salmon prices at New York were down slightly, while Western halibut prices remained unchanged. All fresh-water prices were down substantially from April to May, except yellow pike prices at New York which rose significantly. Compared with May 1954, haddock, halibut, and



A moderately busy morning on the floor of the England Fish Exchange with buyers bidding for the offshore trips which are listed on a board facing the buyers.

salmon prices in May 1955 were all considerably lower, and the index for the subgroup was down 10.1 percent. All fresh-water fish prices in May 1955 were higher than a year earlier.

There was a mixed trend from April to May in the fresh processed fish and shellfish subgroup. Increased production of fresh haddock fillets resulted in lower prices while lighter production caused higher shrimp prices from April to May--the over-all May index for the subgroup increased 3.1 percent. Oyster prices were unchanged. The May 1955 index for the fresh processed fish and shellfish subgroup was 0.6 percent higher than a year earlier, with shrimp and oyster prices up and haddock fillet prices down.

Table 1 - Wholesale Average Prices and Indexes for Edible Fish and Shellfish, May 1955 With Comparisons

Group, Subgroup, and Item Specification	Point of Pricing	Unit	Avg. Prices1/ ($)		Indexes (1947-49=100)			
			May 1955	Apr. 1955	May 1955	Apr. 1955	Mar. 1955	May 1954
ALL FISH & SHELLFISH(Fresh, Frozen, & Canned)					98.1	98.7	100.7	103.7
Fresh & Frozen Fishery Products:					97.9	98.1	100.1	106.9
Drawn, Dressed, or Whole Finfish:					85.6	89.1	96.3	107.1
Haddock, lge., offshore, drawn, fresh	Boston	lb.	.06	.06	57.6	64.2	60.3	102.1
Halibut, West., 20/80 lbs., drsd., fresh or froz.	New York	lb.	.22	.22	68.1	68.1	74.3	97.5
Salmon, king, lge. & med., drsd., fresh or froz.	New York	lb.	.50	.50	111.8	112.4	118.0	120.8
Whitefish, L. Superior, drawn, fresh	Chicago	lb.	.57	.73	141.3	179.7	167.3	114.0
Whitefish, L. Erie pound or gill net,rnd., fresh	New York	lb.	.73	.75	146.6	151.6	131.4	123.3
Lake trout, domestic, No. 1, drawn, fresh	Chicago	lb.	.47	.69	96.3	141.4	138.3	79.9
Yellow pike, L. Michigan & Huron, rnd., fresh	New York	lb.	.40	.28	93.8	64.5	161.8	84.4
Processed, Fresh (Fish & Shellfish):					108.5	105.2	104.2	107.8
Fillets, haddock, sml., skins on, 20-lb. tins	Boston	lb.	.25	.26	85.1	88.5	78.3	107.2
Shrimp, lge. (26-30 count), headless, fresh	New York	lb.	.69	.64	103.6	101.1	98.0	99.6
Oysters, shucked, standards	Norfolk	gal.	4.63	4.63	114.4	114.4	117.5	117.5
Processed, Frozen (Fish & Shellfish):					95.6	95.3	96.8	104.5
Fillets: Flounder (yellowtail), skinless, 1-lb. pkg.	Boston	lb.	.38	.42	99.5	110.0	106.0	96.9
Haddock, sml.,skins on, 1-lb. pkg.	Boston	lb.	.26	.28	80.0	86.3	89.4	105.1
Ocean perch, skins on, 1-lb. pkg.	Boston	lb.	.27	.28	106.7	111.8	111.8	117.8
Shrimp, lge. (26-30 count), 5-lb. pkg.	Chicago	lb.	.59	.55	91.0	84.1	85.6	99.5
Canned Fishery Products:					98.3	99.4	100.0	98.8
Salmon, pink, No. 1 tall (16 oz.), 48 can/cs.	Seattle	case	20.70	20.70	109.6	109.6	109.6	99.1
Tuna, lt. meat, chunk, No. 1/2 tuna (6-1/2 oz.), 48 cans cs.	Los Angeles	case	12.50	12.70	90.1	91.6	93.0	102.4
Sardines, Calif., tom. pack, No. 1 oval (15 oz.), 48 cans/cs.	Los Angeles	case	7.55	7.30	88.1	85.2	85.2	2/
Sardines, Maine, keyless oil, No. 1/4 drawn (3-1/4 oz.), 100 cans/cs.	New York	case	6.70	7.20	71.3	76.6	76.6	81.9

1/Represent average prices for one day (Monday or Tuesday) during the week in which the 15th of the month occurs. These prices are published as indicators of movement and not necessarily absolute level. Daily Market News Service "Fishery Products Reports" should be referred to for actual prices.
2/Not available.

Higher frozen shrimp prices more than offset lower prices for all other frozen items and were responsible for an 0.3-percent increase in the frozen processed fish and shellfish subgroup from April to May. However, the May 1955 frozen fish and shellfish prices were 8.5 percent below a year ago with all items priced lower except flounder fillets.

Canned fish prices in May indicated a mixed trend also, with prices lower for tuna and Maine sardines and higher for California sardines. Canned salmon prices were the same as a month earlier. The over-all index for canned fishery products dropped 1.1 percent from April to May. Compared with the same month a year earlier, this May's prices for tuna and Maine sardines were substantially lower and for salmon higher.