



TRENDS AND DEVELOPMENTS

Additions to the Fleet of U. S. Fishing Vessels

A total of 65 vessels of 5 net tons and over received their first documents as fishing craft during February 1954--31 more than in February 1953. Florida west coast led with 14 vessels, followed by the Florida east coast, Louisiana, and Virginia with 9 vessels each, reports the Bureau of the Customs.

Vessels Obtaining Their First Documents as Fishing Craft, February 1954

Section	February		Two months ending with February		Total 1953
	1954	1953	1954	1953	
	Number	Number	Number	Number	Number
New England	1	-	1	2	20
Middle Atlantic	-	-	-	-	19
Chesapeake	11	5	19	9	83
South Atlantic	12	4	17	12	116
Gulf	32	15	67	34	264
Pacific	7	5	11	9	164
Great Lakes	1	2	2	2	7
Alaska	1	3	4	5	53
Hawaii	-	-	-	-	3
Total	65	34	121	73	729

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



California

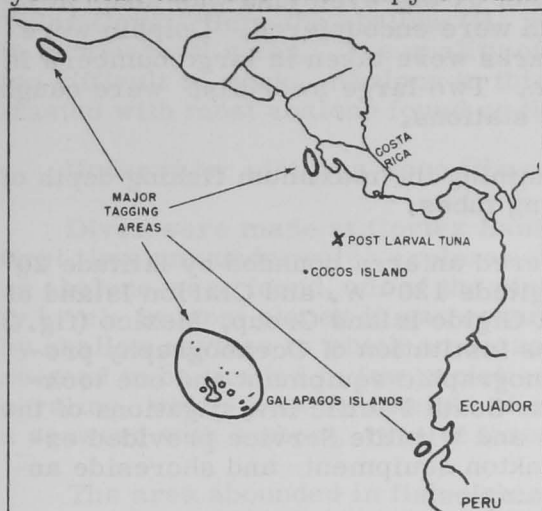
SARDINE CATCH AT ALL-TIME LOW IN 1953/54: The 1953/54 California sardine (pilchard) fishing season was the poorest on record, the final report of the Marine Fisheries Branch of the California Department of Fish and Game reveals. The six-months season ended February 1. Total cannery landings were just over 2,600 tons. This was even less than the 1952/53 landings, which totaled 3,600 tons.

In 1951/52, the last season in which the State's dwindling sardine supply yielded catches of any size, total landings were 127,000 tons. Peak catches in the 1930's and early 1940's once ran well over 500,000 tons.

About 17 tons of this year's catch was canned for pet food. The rest was processed for human consumption.

The reduction of whole sardines into fish meal and oil was completely banned by the Fish and Game Commission this year as a conservation measure. Reduction is the only phase of the sardine industry over which the Commission now has legal control, according to the April Outdoor California, a Department of Fish and Game publication.

TUNA TAGGED BY CLIPPER "SARATOGA" (Cruise C-1-54): A total of 695 yellowfin tuna and 439 skipjack tuna were tagged with type "F" and "G" tags by California Fish and Game biologists on the tuna clipper Saratoga during a 12-week cruise.



M/V Saratoga tuna tagging cruise (C-1-54), Jan. 18-Apr. 10, 1954.

The vessel operated in the Gulf of Guayaquil off the Galapagos Islands, Gulf of Papagayo and the coast of Southern Mexico, returning to San Diego, California, on April 10.

Several night-light collections were made, one of which yielded 8 postlarval yellowfin tuna ranging in size from 19 mm. to 27 mm. These small fish were taken the night of March 22, 1954, at latitude 6°56' N., longitude 84°29' W.

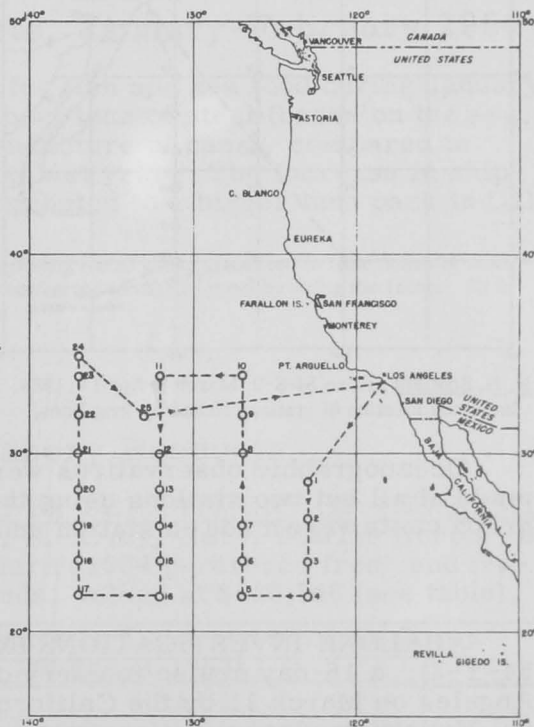
Other biological collections were made throughout the trip and are in the process of being identified.

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LONG-LINE ALBACORE TUNA FISHING IN EASTERN NORTH PACIFIC DISAPPOINTING (N. B. Scofield, "Cruise 54-S-1 and 2): Only one albacore tuna was caught by long lines in two recent cruises in the eastern north Pacific Ocean by the California Department of Fish and Game research vessel N. B. Scofield.

The first cruise lasted 33 days and was completed at Los Angeles on February 6 with four agencies cooperating: California Department of Fish and Game, Scripps Institution of Oceanography, Oregon Fish Commission, and the South Pacific Investigations of the U. S. Fish and Wildlife Service. The cruise was made to explore the winter distribution of albacore in the eastern part of the north Pacific Ocean and to study simultaneously the oceanography of the region as related to the occurrence of albacore.

A total of 25 stations were occupied (fig. 1). At most of the stations 50 baskets of Japanese-style long-line fishing gear were set, fishing to a maximum depth of 600 feet, stretched end to end for a distance of 7 miles. Also, at each station a water sample cast to a depth of 3,250 feet was made, in addition to a plankton tow to determine the amount of food present and a bathythermograph cast to determine the temperature to a depth of 900 feet.



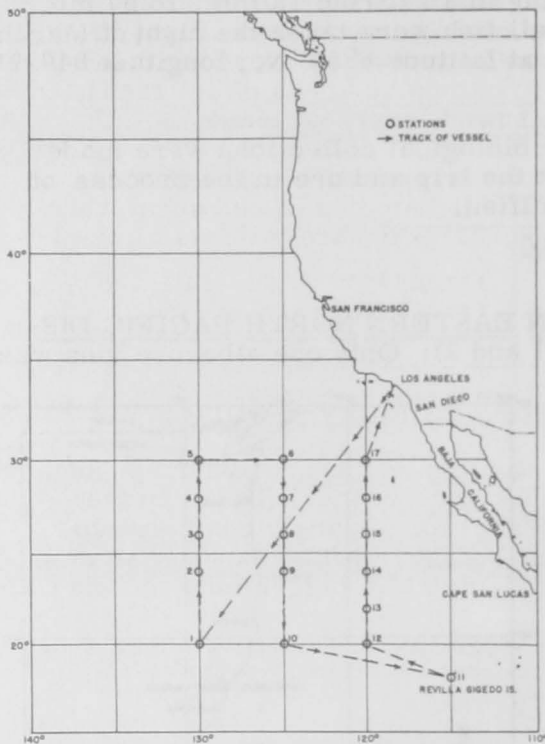
N. B. Scofield cruise 54-S-1, Jan. 4-Feb. 6, 1954. Indicates the location of the 25 stations occupied and fished with Japanese-type long lines.

While the vessel was running between stations, the direction and velocity of the surface currents were determined through use of the Geomagnetic Electrokinetograph (GEK).

One albacore was taken at station 15, latitude 24° N., longitude 132° W.--the only one taken during the entire cruise. A total of 31 big-eyed tuna was taken at 8 stations, but no real concentrations of these fish were encountered. Dolphin were taken in the southern part of the area. Blue sharks were taken in large numbers in the northern part of the area--132 at one station. Two large swordfish were caught. Lancetfish (Alepisaurus) were captured at most stations.

Satisfactory results were obtained in determining the maximum fishing depth of the long line through the use of chemical sounding tubes.

The second cruise, completed April 6, covered an area bounded by latitude 20° N., latitude 30° N., longitude 120° W., and longitude 130° W. and Clarion Island of the Revilla Gigido Island Group, Mexico (fig. 2). The Scripps Institution of Oceanography provided oceanographic equipment and one technician. The South Pacific Investigations of the U. S. Fish and Wildlife Service provided essential plankton equipment and shoreside analysis of samples.



N. B. Scofield cruise 54-S-2, March 8-April 6, 1954.
Indicates location of stations fished by long lines.

Since no albacore were caught or seen during the cruise it appears that either (1) they were not in the area, or (2) if present found in insignificant numbers.

The following is a brief description of the long-line fishing gear used on the cruise; 25 baskets with 5-fathom float lines, 25 baskets with 15-fathom float lines; dropper length 1 fathom; leader length 1 fathom; hooks per basket 11, anchor hooks 2. Fishing activities at each station were as follows: 50 baskets were set at daybreak; baiting pattern, alternate baskets of squid and sardines; allowed to soak for 6 hours and then retrieved.

A total of 756 baskets (8,328 hooks) was fished. The catch by species: big-eyed tuna 13, yellowfin tuna 5, spearfish 4, sharks 379, other fish 29, total 430 fish.

Oceanographic observations were made at each station and plankton tows were made at all but two stations using the standard 200-meter oblique tow. Bathythermograph casts were made on station and between stations as time permitted.

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ABALONE INVESTIGATIONS IN CHANNEL ISLANDS BY "YELLOWFIN" (Cruise 54-Y-3): a 16-day cruise to carry on research of the abalone was completed at Los Angeles on March 11 by the California Department of Fish and Game research vessel Yellowfin. Investigations were made in all of the Channel Islands--Santa Cruz, Santa Rosa, San Miguel, Santa Catalina, Santa Barbara, San Nicholas, and Cortes Bank. The goal of the cruise was to inspect the areas utilized by the commercial abalone divers; to explore for possible new abalone areas; to test new equipment and methods; to collect samples and carry on such other studies of the abalone as feasible.

Approximately 80 dives were made with over 40 hours' total time spent under water. As a general observation, there appeared to be much more sea life around the islands than were found during last year's abalone cruise. There was a greater

abundance of fish noted, especially the sheepshead, kelp bass (of all sizes), perch, and rockfish. The best territory for abalone was found at San Miguel Island at Tyler Cove. Here the abalone (*H. rufescens*) were found in fairly large quantities in commercial sizes. The quality of the meat appeared good, and the area was not too difficult to work. Abalone in this area appeared to be fast growing, which contrasted with most abalone found on the other islands.

Underwater pictures were filmed of a beach seine in operations.

Dives were made at Cortez Bank. As far as known, this would appear to be the first time any underwater exploration has been made of the area. Only a dozen or so abalone were found, all of the pink abalone (*H. corrugata*). The bottom was fairly level; in most places it was covered with small rocks (basketball size) and ridged by shallow ravines in which an occasional lobster could be observed. Plant life seemed to be limited to few varieties. Most of the bottom was covered with a red coraline, which grew to a height of about two feet; extensive areas of eel grass; and a seaweed with a short, two- to three-foot holdfast and long, flat leaves.

The area abounded in fish--sheepshead, perch (several species), seniorita, croakers (spotfin), cabezon, rockfish, and kelp bass. Samples of red coral were also found. In all, an area of approximately one-quarter square mile was investigated on Cortez Bank.



Cans--Shipments for Fishery Products, January-February 1954



Total shipments of metal cans for fish and sea food during January-February 1954 amounted to 8,434 short tons of steel (based on the amount of steel consumed in the manufacture of cans), compared to 7,910 short tons for the same period last year. The increase in shipments of metal cans this year is attributed to a bigger tuna pack in California.

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

PURCHASES OF FRESH AND FROZEN FISH BY DEPARTMENT OF THE ARMY, MARCH 1954: For the military feeding of the U. S. Army, Navy, Marine Corps, and Air Force, the Army Quartermaster Corps in March 1954 purchased fresh and frozen fishery products amounting to 1,370,904 pounds, valued at \$638,146 (see table).

Purchases of Fresh and Frozen Fishery Products by Department of the Army (March and the First Three Months of 1953)							
QUANTITY				VALUE			
March		January-March		March		January-March	
1954	1953	1954	1953	1954	1953	1954	1953
Lbs.	Lbs.	Lbs.	Lbs.	\$	\$	\$	\$
1,370,904	1,329,751	5,121,127	4,370,957	638,146	764,181	2,247,156	2,470,426

This was 3.1 percent greater in volume than February purchases, but 16.5 percent lower in value.

Army Quartermaster Corps purchases of fresh and frozen fish during the first three months in 1953 totaled 5,121,127 pounds (valued at \$2,247,156), 17.2 percent higher in quantity but 9.1 percent less in value as compared with the similar period a year earlier.

Prices paid for fresh and frozen fishery products by the Quartermaster Corps in March averaged 46.5 cents per pound as compared with 41.8 cents in February.

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



Fishery Products Marketing Prospects, April-June 1954

CONSUMPTION AND RETAIL PRICES: The per-capita civilian consumption of fishery products in the United States during the winter of 1954 was somewhat lower than a year earlier. Preliminary indications are that reductions occurred in both fresh and processed commodities. Supplies were not as large as in the winter of 1953, mainly because stocks of the processed products were lower at the beginning of the year. Retail prices of fishery products during the first quarter of 1954, judging from wholesale prices in the principal markets, averaged about equal to those of the same period last year. During the next few months total civilian per-capita consumption of fish and shellfish probably will continue a little below the rate of a year earlier. Retail prices of these products this spring are expected to average close to those of the spring of 1953.

CATCH: The volume of fish and shellfish landed at the major commercial fishing ports during January-March totaled about as much as in the same part of last year. Landings will be expanding seasonally during April-June, reaching the peak level for the year in late spring or early summer.

FREEZINGS AND HOLDINGS: Commercial freezings of fishery products in the Continental United States during the first quarter totaled 27.4 million pounds, more than 5 percent larger than a year earlier. Freezing operations will continue to increase seasonally during the next few months.

Cold-storage stocks of frozen fishery products in the Continental United States at the end of March totaled over 104 million pounds, about 7 percent less than a year earlier. Holdings of most frozen fish were smaller this year, but those of the shellfish group--particularly scallops and shrimp--were much larger. Total stocks are now approaching their seasonal low point.

CANNED FISH: Supplies of canned fishery products during the winter of 1954 were somewhat below those for the same months of last year. Because of the smaller packs in 1953 of most of the popular canned fish species other than tuna, indicated carryover stocks at the packer level this January 1 were well below those of a year earlier. Supplies are expected to continue less than the comparable 1953 level at least until the 1954 packs of canned fish start moving to market in late summer.

Current prospects point to another large pack of canned tuna this year, but the outlook for a large canned salmon pack is not favorable because of the probable smaller catch of salmon. Landings in the Puget Sound area of Washington State are not expected to reach last year's total because 1954 is considered an "off-cycle" year for the pink salmon run there. The catch in Alaska probably will fall below the

1953 level because conservation measures have been put into effect this year in an attempt to restore the seriously depleted salmon resources there. Under this conservation program, several areas in Alaska have been completely closed to commercial salmon-fishing activity; in other areas, the length of the commercial fishing season has been reduced or the quantity of fishing gear permitted to be used has been severely restricted.

FOREIGN TRADE: Imports of edible fishery products during January and February were somewhat larger than a year earlier as a result of the heavier receipts of both canned fish and frozen fish fillets. Prospects for the next few months are that receipts of fishery products from foreign countries will continue to run a little ahead of those of last spring. Exports of edible products, on the other hand, were somewhat below those of early 1953. Current indications point to a continued lower level of exports through midyear than a year earlier because of the relatively small domestic supply of the types of canned fish which are popular in our foreign markets.

This analysis appeared in a report prepared by the Bureau of Agricultural Economics, U. S. Department of Agriculture, in cooperation with the U. S. Fish and Wildlife Service, and published in the former agency's April 30, 1954, release of The National Food Situation (NFS-68).



Florida

FISHERIES TRENDS, 1953: Florida fisheries production in 1953 showed a decided decrease from 1952, the Service's Fishery Marketing Specialist in that State reports. The decrease was obviously due to lighter menhaden production which dropped about 60 million pounds. However, the total value was strongly enhanced by a 3-million pound increase in shrimp landings.

Catches of food fish decreased considerably in 1953 despite the general abundance of fish, due principally to unfavorable market conditions. This was especially true for mullet and Spanish mackerel.

Of major importance in Florida during 1953 was the firm establishment of Tampa as a shrimp port. The landings of shrimp at Tampa in 1953 were greater than at any other port in the State.

Landings of shrimp during 1953 were more than 46.8 million pounds, according to preliminary figures. Approximately 27.8 million pounds of the total were landed from the Campeche banks. Landings in 1952 totaled 43.8 million pounds. The important development in 1953 was the rapid increase of shrimp production from the Campeche banks. In 1951 landings from this area amounted to about 7 million pounds; in 1952 nearly 23 million pounds.

Ex-vessel shrimp prices had remained fairly stable through 1952 until December. By the end of December prices had risen from 56 cents a pound for headless shrimp ex-vessel to 70 cents a pound. During May 1953 the dock prices soared to \$1.00 a pound for a short period. The primary reason for the rise was the lack of production locally and the particularly low production in Texas because of bad weather.

Shrimp processing in 1953 increased substantially over 1952 and the number of plants doubled. This indicated that the demand for consumer-sized packages was very good and that advertising was effective.

The increased shrimp production spurred boat-building activities in all sections of the State. New boatyards were opened and old yards were renovated to fill the orders for shrimp trawlers. Boat building in Florida has been advancing at a fast pace since 1951.

Gear Research and Development

UNDERWATER LISTENING TESTS FOR SHRIMP: Preliminary tests to determine if commercial varieties of shrimp, such as the pink shrimp (Penaeus duorarum), produce any characteristic sounds were carried out recently aboard the Service's gear research vessel Pompano operating out of Key West, Florida.

Using a 20-foot flat shrimp trawl, the Pompano caught about 100 pink shrimp (25-35 count) on the Key West fishing grounds during the nights of March 17 and March 22, 1954. Immediately following capture, the shrimp were placed in a wooden tank set up on the stern of the vessel where they were kept alive in fresh circulating sea water.

During the period March 18-24, a hydrophone was inserted in the tank with the shrimp at various times of the day and night, but nothing particularly significant was heard on the earphones of the listening equipment. On the evening of March 24, some pieces of chicken liver, chopped up fine, were dropped in the tank with the shrimp, which until then had not been fed anything. When the listening equipment was turned on about two hours later, numerous clickings, gratings, and sharp rasping sounds were heard. Upon inspecting the tank, many of the shrimp were seen to be feeding on pieces of liver, and it was apparent that the sounds were caused by this feeding activity. Three tape recordings of the sound were made that night, and about six more were obtained during the next ten days.

Two weeks after capture, on March 30, about 40 of the shrimp remained alive in the tank in good condition despite a severe buffeting they had received while the Pompano made the 150-mile trip from Key West to Miami. After that, however, they began to die at an increasing rate until only one remained alive on April 4.

The sounds attributed to the shrimp are well above the level of background noise usually encountered in the sea, and most of the energy seems to be concentrated in a frequency band between 3,000 and 5,000 cycles per second. Although the observations to date have been only of a qualitative nature, these tests indicate that there are good possibilities of utilizing these sounds for locating beds of shrimp by means of passive listening devices.

A detailed frequency analysis of the shrimp sounds will be made in the near future at the Service's Coral Gables electronics laboratory in cooperation with the University of Miami Marine Laboratory at Coral Gables, the official research agency of the Florida State Board of Conservation.

Note: Also see Commercial Fisheries Review, November 1953, p. 32.



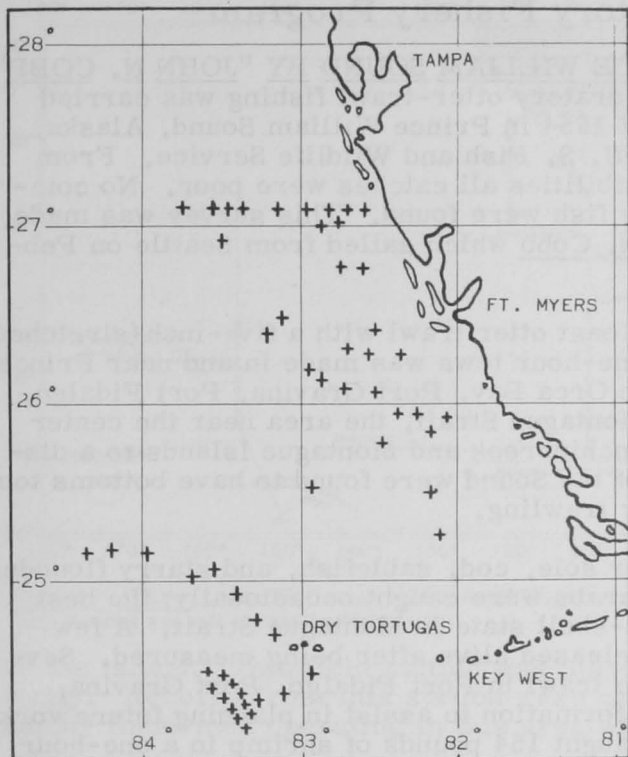
Gulf Exploratory Fishery Program

RED SHRIMP GROUNDS DISCOVERED IN GULF BY "OREGON" (Cruise 22): Catches of red shrimp at rates of over 100 pounds per one-hour tow were made in the depth range of 200 fathoms southwest of Dry Tortugas by the Service's exploratory fishing vessel Oregon. This was part of a bad-bottom trawling survey which included 62 trawling stations in depths of 3 to 375 fathoms between Tampa and the southeastern edge of the continental shelf. The Oregon departed Pascagoula, Miss., on March 31 and returned on April 23.

Additional exploratory drags in the immediate area of Dry Tortugas in depths of 170 to 250 fathoms yielded catches of approximately 180 pounds per two-hour drag. During one of these drags the trawl "hooked-up" on an undetected obstacle, buckling

the port trawling davit and puncturing a fuel tank. Temporary repairs were made in the lee of Loggerhead Key but it was not possible to try larger commercial-type trawls on these grounds.

The majority of the 62 trawling tows were made inside of 25 fathoms between Tampa and Cape Sable. No indications of commercially valuable concentrations of shrimp were found. Drags between 5 and 15 fathoms generally showed a few pink-grooved shrimp present, but catches all ran under 15 pounds per hour using a 40-foot trawl.



Approximate locations of shrimp-trawl drags.

port call at Brownsville, Texas, was planned for May 30. Major objectives of the cruise are: (1) cross the Gulf of Mexico on or near the 92nd meridian from the coast of Louisiana to the Gulf of Campeche and make long-line sets for tuna on this course across the Gulf; (2) to make a small number of exploratory drags with shrimp trawls near the northern edge of the Campeche Bank in areas of poor bottom for shrimp trawling; (3) drags in 200- to 250-fathoms for red shrimp in the southern Gulf of Campeche approximately 50 miles off the Mexican coast; (4) carry out off-shore long-line fishing for tuna on the route to Brownsville, Texas, from the Gulf of Campeche.



North Atlantic Fishery Investigations

INCREASE PREDICTED IN 1954 HADDOCK CATCH ON GEORGES BANK: A slight increase in haddock landings from Georges Bank is predicted for 1954 (based on the "haddock year" from February 1, 1954, to January 31, 1955) by the Woods Hole Laboratory of the U. S. Fish and Wildlife Service. Total landings of 74.4 million pounds will be caught if the amount of fishing is the same as in 1953. Large haddock will exceed scrod haddock for the first time since 1950.

The increase in landings will be caused in part by the savings effect of the large mesh used under the haddock regulation during the last few months of 1953 and the lower mortality from fishing during 1953 caused by a decrease in the amount of fishing that year.

Haddock landings of 70.9 million pounds from Georges Bank during 1953 were within 4 percent of the amount predicted by the U. S. Fish and Wildlife Service early last year.



North Pacific Exploratory Fishery Program

OTTER-TRAWLING TESTS IN PRINCE WILLIAM SOUND BY "JOHN N. COBB" SHOW POOR RESULTS (Cruise 18): Exploratory otter-trawl fishing was carried out during February, March, and April of 1954 in Prince William Sound, Alaska, by the Exploratory Fishing Section of the U. S. Fish and Wildlife Service. From the standpoint of commercial fishing possibilities all catches were poor. No commercially important populations of bottom fish were found. This survey was made with the exploratory fishing vessel John N. Cobb which sailed from Seattle on February 15 and returned there on April 16.

The gear used was a standard West Coast otter trawl with a five-inch (stretched mesh measure) cod end. A total of 102 one-hour tows was made in and near Prince William Sound. These tows were made in Orca Bay, Port Gravina, Port Fidalgo, Valdez Arm, Port Valdez, Port Wells, Montague Strait, the area near the center of the Sound, and outside the Sound off Hinchinbrook and Montague Islands to a distance of 30 miles offshore. Some parts of the Sound were found to have bottoms too hard and irregular to be suitable for otter trawling.

Small numbers of English sole, Dover sole, cod, sablefish, and starry flounder were caught in many of the drags. King crabs were caught occasionally; the best drag took 43 legal-sized males in the soft-shell state in Montague Strait. A few halibut caught in many of the tows were released alive after being measured. Several drags were made with a shrimp beam trawl in Port Fidalgo, Port Gravina, Orca Bay, and Simpson Bay, to secure information to assist in planning future work in the area. The best beam-trawl drag caught 154 pounds of shrimp in a one-hour tow. Although the beam-trawl drags produced indications of shrimp, extensive exploration will be required to determine if shrimp exist in commercial quantities in the area.



Pacific Oceanic Fisheries Investigations

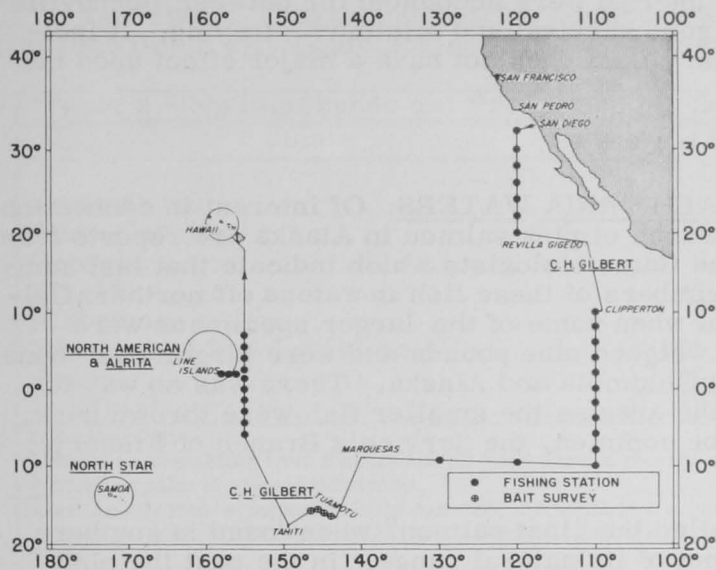
TUNA AND LIVE BAIT PLENTIFUL NEAR MARQUESAS ISLANDS -- "CHARLES H. GILBERT" (Cruise 15): A plentiful supply of live bait and tuna schools were sighted near the Marquesas Islands by the Service's research vessel Charles H. Gilbert on a 67-day cruise completed at Honolulu on April 26. Many other observations of practical and scientific significance were made on the 8,500-mile survey and fishing voyage.

The vessel fished long-line gear south across the equator about 1,200 miles off the Central American coast. Good catches of large fish were made between 5° N. latitude and the equator. Turning west the vessel then sailed for the islands of French Oceania, the Marquesas, Tuamotus, and Tahiti.

The Marquesas, which have been called the forgotten islands, are a seldom-visited group about 2,000 miles southeast of Hawaii. The rugged volcanic islands have numerous small bays where large quantities of a sardine-like fish of ideal size for live tuna bait were found. Not only was there plenty of the live bait, which is in almost continuous short supply in Hawaii, but the ocean around the Marquesas con-

tained numerous tuna schools. As many as 20 large schools were sighted within one hour and those which were close enough to be seen jumping were identified as 10- to 30-pound yellowfin.

The next islands which the Charles H. Gilbert visited were the Tuamotus between the Marquesas and Tahiti. These are all low coral atolls and an intensive search of the lagoons of four of the largest produced no live bait.



Charles H. Gilbert cruise 15, February 18 to April 26, showing fishing stations and bait survey locations.

on the island. This field station was inspected and found to be operating satisfactorily. Records from this station were collected and will be analyzed in order to supply fishermen operating in this area with current information on fishing conditions.

The best catch of yellowfin tuna along 110° W. longitude was taken at $3^{\circ}44'$ N. latitude. This was a catch of 4.7 tuna per hundred hooks averaging about 160 pounds each. Nearly as good catches were taken at other latitudes between 5° N. and 1° S. latitude. Also along this same longitude at $7^{\circ}8'$ S. a record catch of about 4 tons of big-eyed tuna was made. This consisted of 38 fish averaging well over 200 pounds each.

The yellowfin tuna fishing along 155° W. longitude was poor; the maximum catch being only 3.5 tuna per hundred hooks at $0^{\circ}25'$ N. latitude and again at $2^{\circ}55'$ N. latitude. The fishing at 155° was not nearly as good as that being found by the North American in the vicinity of Christmas Island at about 157° W. longitude.

In the vicinity of the equator at 110° W. longitude very strong easterly subsurface currents were evident from the drift of the long line and from the behavior of the plankton net. In addition, the catches of plankton consisted of much larger quantities of crustacean fish food than have ever been taken farther west along the equator. The role of these currents in the productivity of this area warrants more investigation.

Among the biological data collected were careful observations on the specific differences among five kinds of Pacific spearfishes. These observations show clear-cut differences among all of these species and it is hoped will bring about an end to the confusion in the naming of Pacific marlins. In addition, six specimens of a new species of pelagic sting ray were captured and preserved for further studies.



Long-line fishing for yellowfin tuna was resumed on a run across the equator south of Hawaii. Good fishing was found off Christmas Island and numerous skipjack schools were seen while long-line fishing for yellowfin. This is also the area located about 1,200 miles south of Hawaii where tuna have been found consistently by POFI research vessels and where more and more interest is being shown by Hawaiian and mainland fishing interests.

Christmas Island is the site of a weather and oceanographic station established last November in cooperation with the Weather Bureau and the British Government

Pacific Salmon Investigations

COLUMBIA RIVER 1953 SOCKEYE SALMON RUN LARGEST IN HISTORY: The Columbia River sockeye or red (blueback) 1953 salmon run of 374,900 fish is the largest recorded since counting began at Bonneville Dam in 1938, according to the Service's Branch of Fishery Biology. These runs have improved almost phenomenally. The fact that 83.1 percent of the fish were accounted for between Booneville Dam and Rock Island Dam indicates good survival and minimum straying. It indicates also that the reservoir at McNary Dam does not have a major effect upon the homing ability of sockeye salmon.

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PINK SALMON INCREASE IN CALIFORNIA WATERS: Of interest in connection with last summer's marine disappearance of pink salmon in Alaska are reports from the California Department of Fish and Game biologists which indicate that last summer trollers caught unprecedented numbers of these fish in waters off northern California. Attention was drawn to them when some of the larger specimens were brought in for identification. These weighed nine pounds and were larger than those in the commercial catches in British Columbia and Alaska. There was no way to approximate the number of pinks in the area as the smaller fish were thrown back. However, the fish were reported to be common, the Service's Branch of Fishery Biology reports.

Formerly, the pink has been called the "lost salmon" when found in southern waters where it is considered to be out of its natural range. In the past the pink salmon has been newsworthy as it reached points farther south in California: San Lorenzo in 1916, Santa Monica in 1928, and La Jolla in 1946. A considerable number of pinks was reported from California streams in 1937, particularly in the Ten Mile and Garcia Rivers where great numbers were said to be spawning; positive identification of these fish, however, was not possible.



Shrimp Production for South Atlantic and Gulf States, 1953

A preliminary tabulation of data collected by the various State conservation agencies indicates that the catch of shrimp in the South Atlantic and Gulf States set

Table 1 - Shrimp (heads on) Production for South Atlantic and Gulf States
By Months and States, 1953^{1/}

Month	North Carolina ^{2/}	South Carolina	Georgia ^{3/}	Florida	Alabama	Mississippi & Louisiana	Texas
	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
January	-	-	-	3,582,144	291,186	3,909,780	3,314,463
February	-	-	-	2,905,193	32,466	1,982,295	2,239,123
March	-	1,848	-	4,408,996	140,385	2,371,950	3,587,676
April	-	15,792	7,560	3,177,407	140,196	5,317,515	2,496,203
May	-	23,595	138,096	3,530,813	305,046	13,174,980	3,406,953
June	-	326,899	265,104	2,297,037	653,751	13,341,090	4,473,464
July	-	710,048	353,605	4,122,345	748,356	8,095,080	6,604,324
August	-	944,684	276,096	3,165,987	100,212	10,951,920	8,886,419
September	-	891,902	189,504	4,597,077	585,060	10,353,105	8,642,186
October	-	741,814	662,088	5,436,737	542,798	15,612,660	10,021,777
November	-	455,574	234,360	4,511,713	492,922	9,419,260	7,459,168
December	-	94,707	31,752	5,123,145	380,020	6,472,515	4,313,341
State Totals	^{4/} 11,750,000	4,206,863	2,158,165	46,858,594	4,412,398	101,002,150	65,445,097

^{1/}Preliminary.

^{2/}Data not available by months.

^{3/}Based on sales of prepaid tax stamps instead of actual landings.

^{4/}Based on an estimate derived from Fishery Market News Service records of daily landings.

Note: As reported by respective state agencies. Original data in barrels; converted to heads-on shrimp on basis of 210 pounds per barrel (equivalent to 125 pounds heads-off shrimp). To convert heads-on data to headless shrimp, multiply by .595.

a new record during 1953 (table 1). The totals reported by these agencies show landings of 235.8 million pounds, compared with the catch of 223.9 million pounds in 1952 (the previous record year). September again was the month of highest production, followed by October; February and March were the months of lowest production.

Louisiana, Texas, and Florida continued as the leading shrimp-producing states in 1953 (table 2). Louisiana showed the largest increase over 1952 production, and

Table 2 - Shrimp (heads on) Production for South Atlantic & Gulf States, 1951-53

State	1953 ^{1/}	1952 ^{1/}	1951
	Lbs.	Lbs.	Lbs.
North Carolina	<u>2/</u> 11,750,000	8,712,600	8,199,500
South Carolina	4,206,863	4,072,300	3,730,500
Georgia	<u>3/</u> 2,158,165	5,991,000	7,608,000
Florida	46,858,594	44,025,200	37,988,700
Alabama	4,412,398	6,208,500	6,356,200
Mississippi and Louisiana	101,002,150	89,903,900	93,192,900
Texas	65,445,097	65,025,600	64,346,300
Total	235,833,267	223,939,100	221,422,100

^{1/}Preliminary.

^{2/}Based on an estimate from Fishery Market News Service records of daily landings.

^{3/}Based on sales of prepaid tax stamps.

Note: As reported by respective state agencies. Original data in barrels; converted to heads-on shrimp on basis of 210 pounds per barrel (equivalent to 125 pounds heads-off shrimp). To convert heads-on data to headless shrimp, multiply by .595.

North Carolina and Florida recorded smaller increases. Shrimp landings in Texas during 1953 were about the same as the previous year.



South Atlantic Fisheries Trends, 1953

NORTH CAROLINA: Shrimp: The most important occurrence in North Carolina's fishing industry in 1953 was the very successful shrimp season. The Commercial Fisheries Division of North Carolina has reported the catch to have been over 14,000,000 pounds (heads on), compared to the 1952 estimate of 8,000,000 pounds. The phenomenal harvest began with an early open season. Beginning at 12:01 a.m. on May 11, fishermen were allowed to catch brown-spotted shrimp, a species which is taken by fishermen in large quantities only at night--mostly in Bogue, Core, and the lower part of Pamlico Sounds. During the first week of the season catches were only fair. The big strike started early on Monday May 18. From that time until late in June, when brown-spotted shrimp disappear from Carolina waters, over 3,000,000 pounds (heads on) were brought in by the trawlers, reports the Service's Fishery Marketing Specialist in the area.

Brown-spotted shrimp is one of three commercial species in North Carolina waters. The other two, commonly called the brown shrimp and the white shrimp, are taken in commercial quantities in North Carolina after the early brown-spotted shrimp season is over. In 1953 the heavy catches of the early season continued into the summer and fall harvests, especially in the Pamlico Sound region. With a mild autumn the shrimp season lasted longer than usual; even at year's end offshore trawlers were still bringing in profitable catches.

Ex-vessel shrimp prices also were higher than they had ever been. In 1952 Carteret County fishermen started the season with a price of 20 cents per pound, heads on; in 1953 the season's starting price was 30 cents, and remained consistently at a higher level than the previous year.

Hard Crabs: The hard-crab fishermen also benefited by high prices in 1953. Due to a scarcity of hard crabs in areas to the north for a short time in March, dealers were paying \$10.50 per 100-pound barrel (with some purchases even higher), compared with \$3 to \$4 a barrel a year earlier. With the high price as an incentive, production of hard crabs was spurred to a higher level than the year previous, according to State inspectors.

River Herring: Also outstanding in its abundant harvest was the herring or alewife fishery of the Albemarle region. In many instances there were more herring than the processing plants could use and the fishermen were restricted as to the amount they could bring in. The State Commercial Fisheries Division estimated the harvest at about 24,000,000 herring--twice their estimate for the year before.

Other Food Fish: The production of food fish in general, however, was far below that of 1952. This was a result of fishing effort being withdrawn from finfisheries and applied to shrimp, and not of a marked decline in the abundance of fish.

Menhaden: During November and December, especially during the latter month, tremendous schools of menhaden were reported off the North Carolina coast. However, unfavorable weather kept catches down close to that of an average successful season.

Oysters: The hurricane in August caused a high mortality rate in the oyster beds. The North Carolina Commercial Fisheries Division reported the 1953 production as 43,000 tubs (State) below that of 1952.

Clams: 1953 was a poor season for clams. As in the case of finfish, the fishermen were lured to shrimping by the heavy shrimp harvests and good prices. Clamming is hard work and men will not engage in it if other kinds of fishing are more profitable. In 1953 clams were imported from Long Island Sound to enable some clam dealers to meet their contracts with soup canning companies.

Scallops: This is a comparatively small fishery concentrated in Carteret County. Scallops were plentiful and production was greater than that in recent years.

Legislation: Legislative action directly affecting the fishing industry in North Carolina included a ban on night shrimping. Fishing for shrimp during open season is now allowed 24 hours a day except on Sunday. During the past three seasons the Conservation and Development Board has by a special act made it possible for shrimpers to trawl at night but now this special permission is no longer necessary.

In 1952 (due to a clerical error) the State tax on shrimp was abolished by the State legislature. In 1953 this tax was re-instated. Also re-instated are the taxes on scallops, clams, and crabs; and the tax on oysters was extended to include those taken from private grounds. These regulations became effective January 1, 1954.

SOUTH CAROLINA: Shrimp: More shrimp were produced in South Carolina waters in 1953 than during either of the two years previous. However, in the fall of 1953 the sounds and rivers in Beaufort County were opened to shrimp trawling for the first time since World War II. The South Carolina shrimp catch (heads off) by months for the past five years, as reported to the South Carolina Division of Commercial Fisheries, is given in the table on the following page.

Legislation: Legal action pertaining to South Carolina fisheries in 1953 affected the crabbing industry. By resolution of the Wildlife Resources Commission, crab trawling was allowed with a five-inch mesh tail bag in sounds and bays in January, February, and the first half of March (also in December 1952). This resolution came about primarily as a result of experimental trawling by the Bears Bluff Laboratories. The Director of the Laboratory made the following comments to the Commission on

the resolution allowing crab trawling with a 5-inch mesh bag: "As a direct result of the opening of this crab trawling, an average of 165,792 pounds of crabs were caught each month. This resulted in a monthly average of \$502.40 in direct severance tax to the State of South Carolina. Each month \$12,434.40 worth of crabs were

South Carolina Shrimp (heads off) Production By Months, 1949-53

Month	1953	1952	1951	1950	1949
	(Pounds)				
January	-	13,969	-	-	27,900
February	-	-	-	-	-
March	4,158	20,001	60,000	-	57,687
April	11,648	9,941	4,800	1,970	63,585
May	47,197	172,726	3,483	211,723	393,188
June	252,701	202,704	35,890	357,231	569,126
July	581,808	260,334	224,192	605,083	448,467
August	553,013	266,693	303,854	671,908	449,261
September	612,236	553,480	716,580	862,206	652,982
October	476,193	484,497	569,068	664,224	512,229
November	271,175	189,086	123,850	302,580	433,110
December	56,373	57,466	30,546	22,900	191,918
Total	2,866,502	2,230,897	2,072,263	3,699,825	3,799,453

sold across the docks in Beaufort County. Of this amount, \$9,947.52 a month went to the fishermen and \$2,486.88 a month went to the crab dealers. Apparently 25 boats operated more or less continuously during the crabbing season and 50 fishermen, three net men, and four dealers made their living from this crab business.... The use of the five-inch mesh trawl net has practically eliminated the catching of small fish and shrimp and, as near as we can gather, less than 1,000 pounds of marketable fish have been taken during the crab season in the crab trawl nets. Therefore, in our opinion, the opening of the crab-trawling season has not been in any way harmful to South Carolina, and certainly, if our economic calculations are correct, it has been of great advantage not only to the fishermen but to the State as a whole."

GEORGIA: Shrimp: The Georgia shrimp industry was cited by many of its members as having had an unusually good year in 1953. However, when the production figures are tallied it may be found that the good year was due primarily to high prices received for shrimp rather than to unusually high catches. In 1952 the total as tallied by the U. S. Army Engineers, Savannah, Ga., (not final production figures) was about 5,700,000 pounds, heads on. For 1953 the total reported was 5,659,000 pounds, with a few firms still to be heard from. Although not complete, these figures can be used as an indicator. Thus the 1953 shrimp landings may be only slightly above 1952. However, in 1952 the fishermen received an average of 28 cents a pound (heads on) for their catches and it is believed the 1953 average will be about 35 cents a pound heads on.

Although several firms reported handling more shrimp in 1953 than during the year previous, there were at least a half dozen fewer companies producing or handling shrimp.

Hard Crabs: Hard crabs, another major sea-food industry in Georgia, especially in the Brunswick area, had steady production but the total may fall below that of 1952. Although for a short time in the spring prices paid to fishermen were higher than usual, the average for the year was about the same or only slightly higher than in 1952. The method of catch, especially in Glynn County, changed considerably. Most of the Brunswick area crab fishermen turned from trot lines to crab pots, which has extended this type of fishing to a more year-round occupation.

New Products: Some new products appeared in Georgia sea-food plants. A St. Simons Island plant began producing breaded, uncooked fish sticks and fillets, and

a Brunswick freezer put out a 12-oz. package of frozen cooked crab meat au gratin (experimental only).

Legislation: The General Assembly enacted a law that states: "From and after July 1, 1953, it shall be unlawful for any person to operate any boat or vessel while fishing for shrimp or fish by use of nets upon any of the tidal or salt waters of the State without first obtaining a license." No provision was made for a license fee, but the license can be suspended or cancelled when the holder is convicted of violating any of the laws of the State pertaining to fishing with nets. Also, during 1953 State taxes on shrimp and crabs were repealed.



Wholesale Prices, April 1954

Due mainly to substantially lower prices for fresh haddock and fresh and frozen shrimp, wholesale prices of edible fish and shellfish declined from March to April. The trend for most salt-water fish and shellfish items included in the index was down as the Lenten season came to a close in mid-April. Major exceptions were the exceptionally high prices for certain fresh-water fish for the Hebraic holidays. The over-all edible fish and shellfish (fresh, frozen, and canned) wholesale index

Table 1 - Wholesale Average Prices and Indexes for Edible Fish and Shellfish, April 1954 and Comparisons

Group, Subgroup, and Item Specification	Point of Pricing	Unit	Avg. Prices ^{1/} (\$)		Indexes (1947-49=100)			
			Apr. 1954	Mar. 1954	Apr. 1954	Mar. 1954	Feb. 1954	Apr. 1953
ALL FISH & SHELLFISH (Fresh, Frozen, & Canned)								
Fresh & Frozen Fishery Products:					109.9	112.2	114.1	99.4
Drawn, Dressed, or Whole Finfish:					112.0	2/111.4	116.5	81.8
Haddock, lge., offshore, drawn, fresh	Boston	lb.	.08	.09	76.6	95.4	119.8	50.6
Halibut, West., 20/80 lbs., drsd., fresh or froz.	New York	lb.	.31	.31	94.9	97.0	94.9	94.4
Salmon, king, lge. & med., drsd., fresh or froz.	New York	lb.	.54	.56	120.2	125.8	115.2	107.9
Whitefish, L. Superior, drawn, fresh	Chicago	lb.	.98	.65	241.7	161.1	151.2	105.3
Whitefish, L. Erie pound or gill net, rnd., fresh	New York	lb.	1.58	.63	318.5	126.4	148.6	101.1
Lake trout, domestic, No. 1, drawn, fresh	Chicago	lb.	.81	.65	166.0	133.2	131.1	79.9
Yellow pike, L. Michigan, rnd., fresh	New York	lb.	.55	2/.63	129.0	2/146.6	140.7	51.0
Processed, Fresh (Fish & Shellfish):					111.1	114.9	112.6	123.3
Fillets, haddock, sml., skins on, 20-lb. tins	Boston	lb.	.28	.33	95.3	113.1	132.7	81.7
Shrimp, lge. (26-30 count), headless, fresh or frozen	New York	lb.	.69	.72	109.1	113.0	101.2	137.5
Oysters, shucked, standards	Norfolk	gal.	4.75	4.75	117.5	117.5	120.6	117.5
Processed, Frozen (Fish & Shellfish):					99.4	110.5	108.3	115.3
Fillets: Flounder (yellowtail), skinless, 1-lb. pkg.	Boston	lb.	.38	.38	98.2	98.2	103.4	115.7
Haddock, sml., skins on, 1-lb. pkg.	Boston	lb.	.33	.34	102.2	105.1	111.4	78.1
Ocean perch, skins on, 1-lb. pkg.	Boston	lb.	.29	.29	117.8	117.8	114.8	112.0
Shrimp, lge. (26-30 count), 5-lb. pkg.	Chicago	lb.	.57	.73	88.0	113.0	104.5	134.2
Canned Fishery Products:					99.6	100.4	96.9	98.2
Salmon, pink, No. 1 tall (16 oz.), 48 cans/cs.	Seattle	case	18.70	18.70	99.1	99.1	93.9	104.4
Tuna, lt. meat, chunk, No. 1/2 tuna (6-1/2 oz.), 48 cans/cs.	Los Angeles	case	14.20	14.20	102.4	102.4	102.4	92.4
Sardines, Maine, keyless oil, No. 1/4 drawn (3-1/4 oz.), 100 cans/cs.	New York	case	8.20	8.70	87.3	92.6	87.3	79.3

^{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/}Revised.

was 105.7 percent of the 1947-49 average (see table)--1.7 percent less than the March index, but 6.9 percent above a year earlier.

The seasonal increase in groundfish landings that takes place at this time of the year in the New England fishery was responsible for the 19.7 percent drop from March to April in the ex-vessel price at Boston for offshore drawn large haddock. Large price increases for most fresh-water fish caused the drawn, dressed, or whole finfish subgroup index for April to rise 0.5 percent over March and 36.9 percent above April last year.

Lower prices for fresh haddock fillets and shrimp in April accounted for the 3.3 percent drop from March in the fresh processed fish and shellfish index, and this subgroup index was 9.9 percent lower than in April 1953.

The large drop in frozen shrimp prices from March to April was to be expected in view of the large inventories reported in recent months and the outlook for increased production. Frozen haddock fillet prices were down also while other products included under the subgroup remained unchanged from March to April. This April's index for the frozen processed fish and shellfish subgroup was down 10.0 percent from the March level and down 13.8 percent under a year earlier.

Canned Maine sardines enjoyed a good market all through the winter and early spring because of the failure of the California sardine fishery this season. But in order to clean out stocks on hand before the new Maine sardine season got under way, dealers in April lowered their prices for this canned product. All other canned items in the canned fishery products subgroup were quoted in April at the same level as in March. Canned pink salmon stocks were cleaned up as far as volume sales were concerned. Demand for canned tuna continued good. Compared with a year earlier, the April index for the canned fishery products subgroup was up 1.4 percent--tuna and sardine prices were higher and salmon prices were lower.



U. S. Foreign Trade in Edible Fishery Products

FEBRUARY 1954: United States imports of fresh, frozen, and processed edible fish and shellfish in February 1954 amounted to over 55 million pounds (valued at \$14.7 million), according to the February United States Foreign Trade, a Department of Commerce publication (see table). This was less by 6.5 percent in quantity and 2.7 percent in value than January imports.

UNITED STATES FOREIGN TRADE IN EDIBLE FISHERY PRODUCTS, FEBRUARY 1954 WITH COMPARISONS						
Item	Feb. 1954		Feb. 1953		Year 1953	
	Quantity	Value	Quantity	Value	Quantity	Value
	1,000 Lbs.	Million \$	1,000 Lbs.	Million \$	1,000 Lbs.	Million \$
IMPORTS:						
Fish & shellfish; Fresh, frozen, & processed ^{1/}	55,432	14.7	45,542	12.8	724,656	193.2
EXPORTS:						
Fish & shellfish: Processed ^{1/} only (excluding fresh and frozen)	2,428	0.8	6,498	1.6	58,920	14.4

^{1/} Includes pastes, sauces, clam chowder and juice, and other specialties.
Source: United States Foreign Trade (Trade by Commodity), Summary Report FT 930, Feb. 1954, U. S. Department of Commerce.

U. S. exports of processed fish and shellfish (excluding fresh and frozen) in February amounted to 2.6 million pounds (valued at \$0.8 million), lower by 43 percent in quantity and 20 percent in value from January imports.