

TRENDS AND DEVELOPMENTS

Additions to the Fleet of U. S. Fishing Vessels

During February 1950, 49 vessels of 5 net tons and over received their first documents as fishing craft - 2 less than in February 1949, reports the Bureau of Customs, Treasury Department. California led with 11 vessels, followed by Alaska, Florida, and Virginia with 5 vessels each.

Vessels Obtaining Their First Documents as Fishing Craft, February 1950

Section	February		Two mos. ending with Feb.		Total
	1950	1949	1950	1949	1949
	Number	Number	Number	Number	Number
New England	1	-	5	2	35
Middle Atlantic	-	6	2	7	44
Chesapeake Bay	8	6	10	12	87
South Atlantic and Gulf	18	19	34	53	369
Pacific Coast	15	12	24	19	327
Great Lakes	2	3	2	8	38
Alaska	5	5	7	6	96
Hawaii	-	-	-	1	5
Unknown	-	-	-	-	1
Total	49	51	84	103	1,002

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



Astoria (Oregon) Curtails Fishing Activities

A NUMBER OF OTTER TRAWLERS WITHDRAW FROM BOTTOMFISH FISHERY: Out of a fleet of 48 vessels engaged in otter trawling at Astoria, 15 are reported to have withdrawn from the bottomfish fishery as a result of a decline in the demand for rockfish fillets, according to a March 15 report from the Service's Fishery Marketing Specialist stationed at Seattle. During the years 1943-1945, between 200 and 300 carloads of fillets were shipped from Astoria each year, compared with about 30 carloads per year in recent years, according to the Astoria railway agent.

SHARK FISHERY AT A STANDSTILL: All of the fleet of 15 vessels previously fishing for shark out of Astoria are reported to have tied up following the market collapse for soupfin shark livers. Prices for these livers have declined from 33 cents per million units (about \$11.50 per pound) to 11 cents per million units (about \$3.50 per pound).

TUNA-FREEZER SHIPS RESUME ACTIVITIES: The two large West Coast tuna-freezer ships, the Tinian and Saipan, which were tied up indefinitely last year when the tuna market outlook was not too bright, are scheduled to resume activities in Central American waters this year. The Tinian sailed from Astoria on February 14, and will be served by six fishing vessels (one from Astoria and the remainder from San Pedro). The Saipan was expected to leave Astoria in March.

ECA Procurement Authorizations for Fishery Products April 1950



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

Total ECA procurement authorizations for fishery products from April 1, 1948, through April 30, 1950, amounted to \$29,714,000 (\$17,719,000 for edible fishery products, \$10,455,000 for fish and whale oils, and \$1,540,000 for fish meal).

In summarizing progress during the first half of the Marshall Plan, which ends June 30, 1952, ECA on April 1 declared that Europe must intensify its export drive to hard currency areas, reduce European costs and prices, and develop non-dollar sources of supply in order to close the dollar gap. Further, ECA stated that the United States can assist not only by continuing Marshall Plan aid at adequate levels for the next two years, but also by maintaining high levels of economic activity and import demand in the United States; by following increasingly liberal import policies and commercial policies generally so that trade barriers do not prevent European countries from increasing dollar earnings in the United States; and by developing an effective program for stimulating the outflow of U. S. capital to other parts of the world. The ECA Administrator asserted that "this means that the United States must sell less to and buy more from Europe."

The establishment of an International Trade Promotion Division to aid Marshall Plan countries to earn more dollars through increasing their exports to the United States was announced by ECA on April 8. The Division will concern itself with the elimination of trade barriers and with the development of plans to bring together the European seller and the American buyer.

Later in April ECA appointed four trade development specialists. Specialists were assigned to Paris, France; Rome, Italy; London, England; and Frankfurt, Germany.

Under ECA's technical assistance program, the agency on April 8 reported that a United States fisheries expert will make a two-month study of Iceland's fisheries industry to recommend more efficient methods of salting, freezing, and otherwise processing fish, and better utilization of byproducts. ECA dollar costs for the project are estimated at \$5,600.

Federal Purchases of Fishery Products

DEPARTMENT OF THE ARMY, FEBRUARY 1950: The Army Quartermaster Corps during February 1950 purchased 573,730 pounds (valued at \$267,139) of fresh and frozen fishery products for the U. S. Army, Navy, Marine Corps, and Air Force for military feeding. February's purchases were 51 percent lower in quantity and 47 percent lower in value as compared with the previous month. Compared with the corresponding month a year earlier, this February's purchases were also lower in quantity by 60 percent and in value by 44 percent.

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

Q U A N T I T Y				V A L U E			
February		January-February		February		January-February	
1950	1949	1950	1949	1950	1949	1950	1949
lbs.	lbs.	lbs.	lbs.	\$	\$	\$	\$
573,730	1,434,866	1,743,503	2,366,063	267,139	478,040	767,111	822,772

Total purchases for the first two months this year were 26 percent less in quantity and 7 percent less in value, compared with the corresponding period in 1949.



Fishery Biology Notes

MEETING OF THE CHESAPEAKE BAY SHAD RESEARCH COMMITTEE: At a meeting of the Chesapeake Bay Shad Research Committee at Solomons Island, Maryland, on March 27, plans were made for cooperation between the Fish and Wildlife Service and State agencies for shad research. Members of the Service's Section of Anadromous Fisheries and the Middle and South Atlantic Fishery Investigations attended the meeting.

On the same day a meeting also was held at which croaker research, particularly by State agencies, was discussed.

SERVICE DOES NOT ADVISE INTRODUCTION OF JAPANESE OYSTER TO THE ATLANTIC COAST: The Fish and Wildlife Service advises against introducing the Japanese oyster (*Ostrea gigas*) to the Atlantic Coast, as has been suggested from time to time. There would be a serious danger of its replacing the superior Eastern oyster (*Ostrea virginica*), and it would probably introduce to the Atlantic Coast its own peculiar set of oyster parasites and predators, as was the case on our Pacific Coast when it was introduced there several years ago.

This policy of the Service dates back to 1932 (then the Bureau of Fisheries) and is being reiterated at this time because several inquiries have been received regarding the introduction of Japanese oysters on the East Coast. It is the Service's opinion that such a program would affect the East Coast oyster industry unfavorably.

At the present time a few of the Atlantic Coast States prohibit planting of the Japanese oyster in State waters.

GULF OYSTER INVESTIGATIONS: Observations on spat growth at Pensacola now cover nearly a year and show some interesting features, according to a report

from the Service's Gulf Oyster Investigations. In one sample of 75 spat collected on artificial cultch during a six-hour period in May 1949, there has been a survival of 50 oysters or 66 percent. These oysters were kept free of fouling organisms in suspended trays. They now have a very desirable shape, rounded and deeply cupped. It is of significance that although of identical age, they range from $1\frac{1}{4}$ " to $2\text{-}5/8$ " in size and on the average have twice the weight of similar aged but much longer oysters growing on the natural reef.

It has been suggested, in the past, from both experimental and field observations that oyster mortalities following exposure to fresh water are caused primarily from the shock of the returning salt water. Observations, both last year and this year, do not confirm this theory. Samples of oysters transplanted from essentially fresh water in Mississippi Sound to Pensacola, when salinities were approximately 20-25 parts per thousand, have shown negligible or no mortality in the 30-day periods following their transplantation. Many of these oysters were less than a year old and, from their environmental history, this survival cannot be ascribed to the possibility that they had been conditioned to radical changes in salinity levels.

Samples of oysters most recently examined in the west end of Mississippi Sound showed that while the meats looked reasonably normal and the adductor muscles were functioning, the mantles had lost most of their ability to contract. It is believed that these oysters are moribund and that death will occur in many regardless of whether or not salinity levels increase.

OYSTER DRILL STUDIES: Studies were continued during the first quarter this year at the Pensacola Laboratory on the ecology of the oyster drill, Thais, with particular emphasis on egg deposition, larval development and growth rates, states the Service's Gulf Oyster Investigations. Egg capsules were found on oyster shells on the natural reefs in the middle of last February simultaneously with the appearance of egg capsules in the trays of drills held experimentally in the laboratory. Temperature levels in early February had been over 21° C.

In 1949, egg deposition was not observed in the field until mid-April when water temperatures were approximately 21° C.; Thais eggs deposited on laboratory trays during June and July required 17 days for development of larvae to that point at which they escape from the egg capsule.

This year, immediately following deposition of eggs, there was a sharp decrease in water temperatures to a range between 13.5° C. and 18° C. and at these temperatures, larval development continued normally but required 39 days before escape of larvae from capsules.

Studies are in progress to determine length of the free-swimming period. This is important in determining factors governing distribution of the snail.

Over 600 snails have been numbered individually and transferred to one of the large cement tanks where it is planned to maintain them for the next year under as nearly normal conditions as possible and in the presence of an excess of food. Measurements on population are being made at 3-month intervals. During the past quarter of this year, drills have been growing rapidly and have experienced less than one percent mortality.

Small groups of snails have been sexed and are being maintained in separate tanks as a part of the studies on reproduction in the animal. In some of the ani-

mals in which the shells were partially broken open to examine their anatomy, there was a complete repair of the broken shell, up to four square centimeters, within 35 days. There is some hope that a biological control of this drill may be possible because of the natural infection with the trematode parasite Parorchis. Infection with this parasite is localized in the gonad with resulting sterility of the snail.

FOOD REQUIREMENTS OF OYSTER LARVAE: Experiments on quantitative and qualitative food requirements of the Eastern oyster larvae (O. virginica) were continued by the Service's Milford Shellfishery Laboratory, Milford, Connecticut.

In order to create optimum conditions for early oyster larvae cultures, experiments indicated that Chlorella (a foodorganism) should be given in definite numbers. These numbers were approximately 50,000 Chlorella cells per cc. of water in which oyster larvae were kept. When food organisms were present in considerably smaller numbers than 50,000 per cc., larvae grew slowly and showed a high mortality rate, due apparently to slow starvation.

RAISING OF LARVAE OF THE EUROPEAN OYSTER IN THE LABORATORY: Groups of the European oyster (O. edulis) were kept in the Milford Laboratory during the entire winter, and groups of these oysters were conditioned for winter spawning. Some of them discharged larvae. The larvae were cultured, and in several cultures setting occurred.

These larvae were raised on almost pure cultures of Chlorella and not on colorless flagellates, which European workers consider as almost the only food organisms on which larvae of the European oysters feed and grow. The culture of Chlorella fed to larvae of the European oysters was virtually mono-specific. An analysis made of Chlorella culture, when the larvae were setting, found that the Chlorella culture contained practically no colorless flagellates.

HARD CLAMS INDUCED TO SPAWN IN THE LABORATORY: Throughout the winter large numbers of hard clams (Venus mercenaria) were conditioned for spawning and, when needed, were induced to spawn in the Milford Laboratory. The eggs were used in experiments devised to learn food requirements of larvae. In these experiments, where duplicate cultures of larvae were used, and which were already repeated twice this winter, five concentrations of Chlorella were used as food. Control cultures were kept in sea water to which no Chlorella was added. Concentrations used were 50,000, 100,000, 250,000, 500,000 and 1,000,000 Chlorella cells per cc. of the water of the culture jars.

Best results were obtained when approximately 250,000 Chlorella cells per cc. of water were used. Nevertheless, clams also set in all other cultures except that containing 1,000,000 cells per cc. where larvae died.

These experiments were of a preliminary nature designed mostly to develop experimental technique. They will be continued on a much broader scale, and micro-organisms other than Chlorella will be used as larval food. These micro-organisms will be fed to clam larvae in relatively pure cultures and in various mixtures of two or more cultures. Some preliminary experiments of this nature already have shown that feeding clam larvae with a mixture of Chlorella and sulfur bacteria results in a more rapid growth, and higher survival rate than if larvae are fed with Chlorella culture alone.



Fishery For Trash Fish in New England

Trash fish are being landed in increasing quantities in New England and more meal plants are being constructed in that area. Capacity for reduction of trash fish this year is estimated at over 100 million pounds in that area, according to the Service's North Atlantic Fishery Investigations.

Trash fish landings are causing concern among conservationists who fear misuse of the young edible species. The Fish and Wildlife Service frequently samples catches. The most striking characteristic is the variety of species predominating in the catch. The principal ones this winter were sculpin, skates, eel pout, goosefish, and daylight flounder, while red hake and whiting predominated last summer and fall. Moderate quantities of yellowtail flounder were included at Provincetown and occasionally at New Bedford.



Gulf Exploratory Fishery Program

PLANS OUTLINED FOR THE VESSEL "OREGON:" A definite exploratory fishing program in the Gulf of Mexico for the Service's vessel Oregon has been established for the period April through June 1950. The program will concentrate on tuna, red snapper, and shark, but also will include work on menhaden and some over-all general exploratory fishing.

Tuna: Generally, the objective for tuna exploratory fishing will be to locate tuna schools by sight, locate thermoclines (areas of abrupt water temperature change) and carry on exploratory fishing in the immediate area; troll for tuna over a large general area, using all types of lures (on the surface and at various depths); set gill nets in promising tuna areas; set long-line gear in suitable areas; and locate bait concentrations by sight.

The vessel is to carry out a bait program which will include a search for bait by using motorboats for inshore work, by operating offshore from the Oregon, and setting up a shore operation to assist in the location of bait. In addition, it is planned to test various species of fish in the vessel's bait tank for viability.

If bait is located and caught, the Oregon's crew expects to test the pole-and-line method for catching tuna.

Red Snapper: The red snapper objectives are to improve the method of locating commercial concentrations of snapper by deep trolling and the use of depth recorders in order to decrease the total fishing time now required, and devise new gear or modify conventional snapper gear to increase the rate of catch. During all cruises, the vessel is to maintain a watch of the vessel's depth recorder for possible snapper grounds. Grounds located by the recorder will be tested and, if suitable, charted.

Shark: Exploratory fishing for sharks will be conducted with set long-line gear using both a bottom and surface type, with a variety of baits.

Menhaden: With reference to menhaden the vessel's objective is to report the location and estimated size of all schools of menhaden sighted.

General Research: In addition to the programs for the specific fisheries mentioned, the Oregon will check depth-recorder data, take bottom samples, and make try-trawl catches for indication of bottom conditions for use on future contemplated shrimp trawling operations.

SHAKEDOWN CRUISE COMPLETED BY THE "OREGON:" A shakedown cruise was made by the Service's Gulf exploratory fishing vessel Oregon between April 17-21. It operated between Mobile Bay and the mouth of the Mississippi River. The purpose of the cruise was to acquaint the crew with the vessel and its equipment before the regular exploratory cruises, and also to determine whether the vessel could be maneuvered for satisfactory results with light trawling rigs and for conventional snapper fishing.

In spite of rough weather encountered on the first, second, and fourth days of the trip, a 40-foot shrimp trawl was used successfully and bait was obtained for snapper fishing. Snapper fishing was difficult because of the relatively high freeboard and the considerable rolling action of the vessel at anchor. A total of 360 pounds of red snapper was taken from two spots in 32 and 48 fathoms. In addition, 54 pounds of black grouper, 55 pounds of scamp, and 270 pounds of shark were taken incidental to snapper fishing.

No indications of the presence of tuna or mackerel-like fish were observed. However, schools of menhaden were sighted, but weather conditions did not permit an estimate of the size of the schools. Trolling with artificial bait from the Oregon and from the launch tender brought no results.

After minor changes in deck gear and the addition of certain fishing gear, the Oregon will leave May 4 for an extended exploratory cruise.



National Fisheries Trends and Outlook, April-June 1950

A high level of economic activity in April, May, and June this year will be favorable to the marketing of fishery products, but diligent merchandising on the part of the fishing industry will be necessary to offset certain negative factors in the current situation.

The second quarter of the year ordinarily sees the production of about one-fifth of the annual total of the United States catch of fish and shellfish. About one-half of the fish destined for sale in fresh and frozen form is produced in this quarter and the catch for these purposes usually reaches its annual peak in June. The peak of production of fish and shellfish for canning and for use in the manufacture of byproducts comes later in the year.

Consumption and Distribution: Supplies of fishery products in the United States during the early months of 1950 were sufficient to maintain the civilian per capita consumption of these commodities at about the same rate as in the same period last year, but apparent disappearance was slightly lower, according to a report issued early in May by the Bureau of Agricultural Economics, Department of Agriculture, and prepared in cooperation with the Fish and Wildlife Service.

Less fresh fish was marketed but the net movement of frozen fishery products into distribution channels during the first quarter was approximately the same as

in the same period of 1949. Trade reports indicate that the movement of the major species of canned fish into consumer channels was more rapid than in January-March last year.

Fresh and Frozen Fishery Products: Weather conditions on the eastern seaboard of the United States during the first quarter of 1950 were not as favorable for commercial fishing operations as they were a year earlier, and preliminary reports indicate that landings were lower.

More fishery products were frozen and less sold to the fresh market. The quantity of fish frozen commercially for eventual food use in January-March totaled almost 27 million pounds, 18 percent larger than in the same period of 1949. The reduction in cold-storage holdings between January 1 and April 1, 1950, amounted to 55 million pounds, somewhat less than in the same period of 1949. Stocks are now near the low point of the year but will be built up again as the commercial catch and freezing of fishery products for food use increase seasonally in the next few months.

Even though the catch may be high in the second quarter, a probable carry-over lower than that of 1949 in certain frozen fishery products (halibut and fillets of haddock, flounder, cod, and pollock) will tend to maintain prices of some classes of fishery commodities.

Canned Fishery Products: Domestic supplies of the major species of canned fish (i.e., salmon, tuna, Maine sardines, and pilchards) thus far in 1950 appear to be about equal to those in the same period last year. Present supplies are expected to be sufficient to meet consumer demand at prevailing prices until the new pack starts moving into distribution channels in volume after the middle of the year.

Retail prices of the popular types of canned fishery products in the next few months probably will continue lower than a year earlier.

Cured Fishery Products: Cured fishery products supplies available during the first quarter of 1950 have been well above those available during the same period in 1949. This has been due primarily to larger holdings of salted herring.

Foreign Trade: Imports of frozen fillets of groundfish (cod, haddock, hake, pollock, and cusk) and rosefish (ocean perch) during the first four months of 1950 were more than 4 million pounds larger than those in the same months of 1949.

Prospects for 1950 are that imports of fishery products will total more than last year.

Exports may show some increase over 1949, but will remain low relative to those in the years 1946 and 1947 when large quantities of canned fishery products were shipped to Europe under relief-feeding programs.



North Atlantic Fishery Investigations

"ALBATROSS III" CONTINUES RESEARCH ON GEORGES AND WESTERN NOVA SCOTIA BANKS:

Gathering data on the abundance of groundfish on Georges Bank and the Western Nova Scotia Banks was the purpose of two recent cruises by the Investigations' research vessel Albatross III. Cruise No. 33 on Georges Bank was made from March 15 to March 30 this year, and Cruise No. 34 on the Western Nova Scotia Banks was made from April 24 to May 5. The information gathered on these cruises will be used in determining the size and distribution of groundfish populations occurring on these banks during the spring months.

During fishing operations, made with an 1-1/2 Iceland trawl equipped with rollers and aluminum floats of special design, 133 half-hour tows were made—81 on Georges Bank and 52 on the Nova Scotian Banks.

In addition, bathythermograph lowerings were made at each station to provide additional information on temperature versus fish distribution. Several vertical and horizontal plankton hauls were also made to ascertain the relative abundance of plankton and fish eggs and fry found on the banks.

Echo sounders were used in the census of groundfish populations. Numerous schools of sea herring were detected on Georges Bank and rosefish were recorded and subsequently caught southwest of Lurcher Lightship in 110-120 fathoms.

The distribution of haddock and other commercial species was noted and their occurrence reported to the fleet through daily broadcasts. This practice of reporting the daily activities of the Service's work at sea will be continued on the regular ship-to-ship channel.

Commercial species were found to be very scarce on Georges Bank. Small concentrations of large haddock were found west by south of the Cultivator and in the southern end of the Five-Fathom Rip. Small haddock, one and two-year olds, were abundant on the Southeast Part and on the Northern Edge. Small haddock were also abundant on Browns Bank. A small concentration of large haddock was found south-southwest of La Have in 65 to 67 fathoms.

Two hundred sea scallops were tagged on the Southeast Part of Georges Bank to determine if they migrate—fishermen say they do. A reward of \$1.00 will be paid for each tag returned.



Northwest Pacific Exploratory Fishery Program

"JOHN N. COBB" ON SHAKEDOWN AND SHRIMP SURVEY CRUISE IN ALASKAN WATERS: The Service's exploratory fishing vessel, John N. Cobb, left March 20 on a combination shakedown and shrimp survey cruise in the inland waters of southeastern Alaska. Actual fishing operations were begun on March 24 in Clarence Strait. The vessel returned to Seattle on April 14 to get ready for an albacore exploratory cruise.

Exploratory work was carried out in the waters of Behm Canal, Clarence Strait, Tolstoi and Kasaan Bays, and Cholmondeley Sound (all areas which are within operational distance of fishing boats working out of Ketchikan).

Three types of gear were employed in fishing operations on this cruise. A small trawl was used for searching out and locating shrimp. Areas which showed favorable catches were re-trawled with a 30-foot otter trawl. Traps were used in areas where trawls could not be used. Limited amounts of shrimp were found scattered throughout the areas investigated.

Bathythermograph readings, water samples (for salinity determination), temperatures, bottom samples, and other oceanographic data were collected in all areas investigated. A log was maintained of all marine life encountered on the trip and three new ranges were noted for three species.



Pacific Halibut Fishery Regulations for 1950

The 1950 Pacific Halibut Fishery Regulations are substantially the same as those for 1949 except for the addition of two paragraphs which are designed to direct attention to the illegality of fishing without a valid license and possessing halibut without a valid permit when such is required. The 1950 regulations became effective on April 20, 1950, after they were signed by the President of the United States and by the Governor General of Canada.

The halibut season opened on May 1 and the quota again is 54 million pounds. The catch limits are as follows: Area 2 (between Willapa Harbor and Cape Spencer, Alaska)--25,500,000 pounds; Area 3 (between Cape Spencer and a line running true west from Cape Sarichef on Unimak Island)--28,000,000 pounds; Area 4 (the Bering Sea north of the Cape Sarichef line)--500,000 pounds. As in the past, no catch limits have been placed upon Area 1A (south of Cape Blanco, Oregon) and Area 1B (between Cape Blanco and Willapa Harbor, Washington).

Areas 2, 3, and 4 will be closed to halibut fishing on dates announced by the Commission during the season. These dates are those by which the Commission estimates that the respective catch limits will be caught. Area 1A closes with Area 2 or Area 3, whichever is later. Area 1B closes with Area 2. Area 4 closes with Area 3 unless it was closed earlier by reason of the attainment of its own catch limit.

In the event that the catch limits are not already attained and the areas closed before December 1, the season in all areas automatically closes on that date.

Last year Areas 1B and 2 were closed on June 3, and Areas 1A, 3, and 4 on July 12. This latter closing date terminated all halibut fishing on the Pacific Coast of Canada and the United States, including Alaska, except for incidental halibut catches. The 1949 halibut season was 73 days long, compared with 72 days in 1948 and 109 days in 1947.

It is estimated that the season this year will probably be not much longer than last year. Market conditions for halibut this year are actually very strong with old stocks cleaned out and only enough left in the freezers to take care of local immediate needs. Prices to the fishermen are expected to be well up to last year's. However, prices fishermen will receive for the livers probably will be lower than last year since the outlook in liver oils is not very encouraging.

In addition to some minor changes, the following major changes appeared in the 1950 Pacific Halibut Fishery Regulations:

Under Section 4 (Issuance of Licenses and Conditions Limiting Their Validity), paragraph (k) is added:

No person on any vessel which is required to have a halibut license under paragraph (a) of this section shall fish for halibut or have halibut in his pos-

session, unless said vessel has a valid license issued and in force in conformity with the provisions of this section.

Under Section 6 (Issuance of Permits and Conditions Limiting Their Validity), paragraph (h) is added:

No person shall retain, land or sell any halibut caught incidentally to fishing for other species of fish in any area closed to halibut fishing under Section 2 of these regulations, or shall have halibut of any origin in his possession during such fishing, un-

less such person is a member of the crew of and is upon a vessel with a halibut license and with a valid permit issued and in force in conformity with the provisions of Sections 5 and 6 of these regulations.

In paragraph (a) of Section 7, the time allowed for vessels to make statistical return after unloading is increased from 48 to 96 hours on account of the closure of some government offices during week ends.

Under Section 9 (Closed Small Halibut Grounds), paragraph (a) is reworded in more specific terms as follows:

The following areas have been found to be populated by small, immature halibut and are closed to halibut fishing, and no person shall fish for halibut in either of such areas, or shall have halibut in his

possession while fishing for other species therein, or shall have halibut of any origin in his possession therein excepting in the course of a continuous transit across such area.

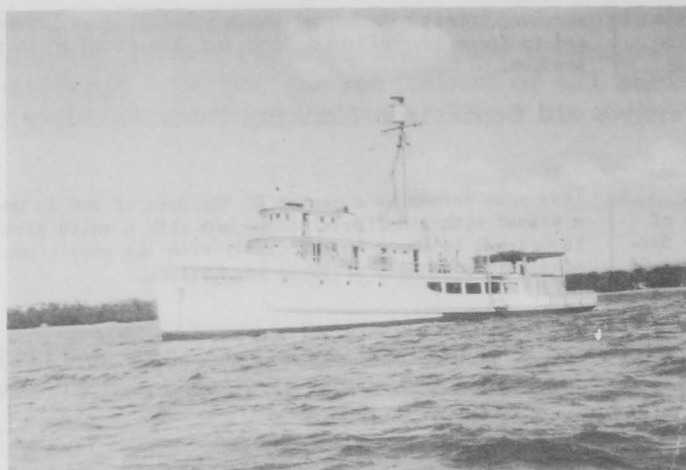


Pacific Oceanic Fishery Investigations

"HUGH M. SMITH" COMPLETES SECOND CRUISE: Itinerary of Cruise: The Hugh M. Smith departed from Pearl Harbor on January 16 and proceeded to French Frigate Shoals where a week was spent looking for bait. From French Frigate Shoals the vessel proceeded southward occupying hydrographic stations along a section running from the Shoals to 5° S. latitude, 172° W. longitude. This section was completed on February 7 and the ship proceeded to Hull Island and Canton Island, the contiguous waters of which were prospected for tuna. The vessel departed Canton Island February 13 and arrived at the initial point of the return hydrographic section (5° S. 158° W.) on February 18. This section, running from the point indicated to Oahu, was completed on February 28 and the ship returned to port on the morning of March 2.

Observations and Collection of Data: The primary mission of this cruise was to take two oceanographical sections across the equatorial counter-equatorial current system. This was successfully completed. From the oceanographical data gathered on this cruise will be computed the positions and speeds of the major ocean currents, and the areas of and amount of upwelling. Completion of the computations will require several months. A similar series of observations is to be taken during next June and July to compare summer and winter conditions.

At each station of the first section a tow was taken with a plankton net or a young-fish trawl, the tow being made obliquely from a depth of 100 fathoms to the surface. At stations of the second section, half hour surface tows were taken with plankton nets. These tows were made for two purposes: (1) To search for tuna eggs and larvae; and (2) to obtain estimates of the abundance of fish food (zooplankton) to correlate with the results of the physical and chemical oceanography.



THE HUGH M. SMITH, ONE OF THE THREE VESSELS OF THE PACIFIC OCEANIC FISHERY INVESTIGATIONS.

Night-light fishing was conducted when hove-to on stations. By this means were captured specimens of fishes and cephalopods (squids) valuable to our reference collection for identifying tuna stomach contents, as well as juveniles of a number of pelagic fishes. Cephalopods were found to be particularly abundant at night at a station near 158° W. 2° N., where the deep scattering layer appeared especially pronounced during the day at 250 fathoms and moved up to the surface during the early evening. Several specimens of squid were

collected, including one of about 30 pounds. It may well be that these squids are an important component of the deep scattering layer.

When running during daylight hours a continuous watch was kept for schools of tuna and flocks of sea birds which are often "working" over tuna schools. The time and position of observation of such phenomena were logged. Such data gathered over several cruises should yield a direct estimate of abundance of tunas at different latitudes and seasons. It is of immediate interest that several schools of skipjack (aku) were observed very far from any land; for example, a school a half-mile long was observed (and specimens captured from it by trolling lures) near 10° N. 172° W., several hundreds of miles from the nearest land.

Two or three surface lures were trolled continuously during daylight hours and catches on these were logged.

Some twenty-five specimens of tunas were captured by trolling and by live-bait fishing near Canton Island. Detailed morphometric measurements were taken from such specimens for study of the racial affinities of the stocks they represent. The gonads of females were removed for study of degree of sexual maturity. Stomachs were removed for food-habit study, and vertebral sections were preserved for study of means of determining age and growth.

The vessel spent the period from January 19 to January 25 at French Frigate Shoals in an attempt to obtain a supply of "Iao" (*Hepsetia insularum*) to employ as live bait for tuna fishing near Canton Island. The weather just prior to this period was characterized by strong southerly and easterly winds and heavy seas from southerly directions, and such weather continued until January 23 when the wind dropped off to light breezes. Although all the sandy islands of French Frigate Shoals were scouted several times for bait, none was seen except a small

school of about 20 or 30 buckets at Tern Island on January 19 and an even smaller aggregation of 5 buckets at East Island on January 25. The latter were captured and placed in the ship's bait tanks.

The almost total absence of bait at French Frigate Shoals during this period of southerly winds contrasts strongly with the rather abundant bait found by the Oregon in January 1948 following a period of strong NE. trades. The variations in surf or current conditions associated with variations in wind direction may be responsible for the marked differences in availability of the bait fish. This possibility needs to be thoroughly investigated if the full potentiality of French Frigate Shoals as a reliable baiting ground is to be developed.

The 5 buckets of "Iao" were carried from French Frigate Shoals to 5° S. latitude with no mortality, confirming previous observations of the ability of this species to be easily transported to the equatorial region.

February 8 was spent in a very preliminary reconnaissance of Hull Island. It was not possible, due to unfavorable seas, to negotiate with the power boat the passage into the large, deep lagoon. From the large number of sea birds "working" over parts of the lagoon it would appear likely that bait species may be available in quantity; however, this should be further investigated in the future.

In circling around Hull Island close inshore, 5 yellowfin tuna were captured on trolling lures. During this circumnavigation and subsequent scouting in the adjacent waters of the island, eight large flocks of birds "working" over fish schools were observed. All were moving rapidly and rather erratically but two of them were approached and chummed with no result other than some members of the schools coming near the boat and taking some of the live bait. Both of these schools were large skipjack (aku) and two other schools were identified as of the same species.

The lagoon at Canton Island was scouted for bait on February 9 and 10 and small mullet were observed in many places, as well as a few round herring (piha) and atherinids (similar to small "iao"). On the afternoon of February 10, 85 scoops of 5- to 8-inch mullet were captured with a surround net placed in the bait tank, and employed on February 11 in tuna fishing in offshore waters.

During fishing near Canton Island on the morning of February 11, one mixed school of skipjack and one- and two-pole yellowfin was chummed up with mullet, and a few hundred pounds of fish were caught, but the school sounded and could not be chummed up again. Another school, of two-pole yellowfin, was chummed up but dispersed when a fishing pole was pulled overboard by a large fish. On February 11, a total of 9 tuna schools were located near Canton Island by means of large flocks of terns and boobies "working" over them. Upon close investigation many of these were found to be schools of very small (1 or 2-pound) skipjack, and only the two schools spoken of above were induced to approach the vessel and bite. In general it appeared that there are numerous schools of tunas near Canton Island, and that there exist in the lagoon quantities of mullet which may be employed as bait for them, although mullet are not expected to survive for more than a few days in bait tanks. Commercial potentialities, however, cannot be evaluated without much more data.

"HUGH M. SMITH" RETURNS FROM A THREE-WEEK CRUISE (Cruise No. 3): An experimental form of flagline gear was tested and a new type of Japanese line-

hauling machine was used by the Hugh M. Smith of the Service's Pacific Oceanic Fishery Investigations fleet. The vessel returned on April 22 from a three-week cruise in Hawaiian waters.

The gear fished was similar to that used in the Hawaiian flagline fishery for tuna, except that the hooks were buoyed to float at specified levels so that the effect of subsurface temperatures up on the vertical distribution of tunas can be investigated. The importance of this lies in the fact that such information is essential in predicting where the best fishing will be and must be available if the conditions governing the occurrence and abundance of tuna are to be known.

The Japanese line hauler was tested as a means of improving the efficiency of handling such gear. It was found to operate quite satisfactorily. It automatically coils a large part of the line which is ordinarily coiled by hand, thus enabling the vessel to fish more lines.

In addition, routine temperature observations were made from the surface to a depth of 900 feet so that the conditions existing at the level at which the fish were caught are known.

CRUISE NO. 2 OF THE "HENRY O'MALLEY" INTERRUPTED: The exploratory fishing vessel Henry O'Malley twice departed on its Cruise 2 from Pearl Harbor, first on January 11, and again on January 24 for an intended two months' cruise to include French Frigate Shoals, Johnston Island, the Line Islands, and return to Honolulu. On both occasions, the vessel was forced to return to Pearl Harbor because of excessive wear on the timing gears of the main engine. On the second departure, the vessel spent 11 days at French Frigate Shoals attempting to take bait under adverse weather conditions and departed for Johnston Island. Shortly thereafter, the Henry O'Malley was forced to return to Honolulu, and the cruise was terminated on February 10, 1950.

Weather Encountered Off French Frigate Shoals: French Frigate Shoals consists of several low islands surrounded by shoals with numerous coral heads. The shoal areas around East Island and Tern Island are readily approachable during periods of moderate east to north winds but strong winds from other quarters render approaching to depths of less than 5 fathoms difficult, if not dangerous.

The Hugh M. Smith was at French Frigate Shoals for a period of 7 days starting January 20. On 4 days it was possible to scout for bait but practically none was found.

The Henry O'Malley was at the shoals for a period of 11 days starting January 27, but the weather on only two days was suitable for scouting for bait. The periods of unfavorable weather were characterized by gusts of wind of varying direction and intensities up to 45 knots. Even during periods of relatively calm weather, heavy swells and choppy seas, resulting from the previous blows, prevented the launching of the bait-catching equipment. During portions of the time, it was necessary to put to sea for the safety of the vessel since the anchor would not hold. The deep draft of the vessel was a distinct disadvantage in contrast to the shallow draft of the local sampans which could have approached from any side of the islands in the lee or navigated channels for shelter behind reefs for anchorage. Baiting operations were further hampered since a sudden shift or increase in the wind could isolate the bait fishermen and endanger the gear.

Fishermen who hand line for bottom fish near French Frigate Shoals state that during the past two years, the weather would frequently have been unfavorable for bait fishing during the period of November through February. The general pattern of the wind during these months was easterly or northeasterly with severe storms during December and January from north and northwesterly with winds estimated up to 60 miles per hour. The peak of these storms usually lasted for one to two days.

Baiting Operations at French Frigate Shoals: On January 27, Tern Island was scouted for bait and several scattered schools of iao (Hepsetia insularum) and one school of aholehole (Dules marginatus) were seen, all of which might have amounted to 30 buckets of bait. This scattered bait moved to deeper water when approached and none was caught. Shark Island was scouted in the afternoon but no bait was found. Channel markers were placed to permit the approach of the Henry O'Malley but unfavorable weather required the abandonment of baiting operations until February 5.

On February 5, the weather moderated to light northeast winds but a choppy sea resulted from the meeting of northwest and southwest swells. East Island was scouted but no bait was found. Several small scattered schools consisting of needlefish, aholehole, and one school of iao were found in the shoal waters around Tern Island and sets were made. Four buckets of aholehole were captured in 5 sets using two nets with 3/16-inch mesh, 12 fathoms and 20 fathoms in length, and 1 fathom in depth. Ten buckets of iao were captured in one set using the 20-fathom net. The bait was transported a distance of approximately 2½ miles in comparatively quiet water and was in good condition when transferred to a tank of the vessel with no observed mortality. Within an hour, the iao were tightly schooled and eating bread. The aholehole remained scattered and stayed near the bottom of the tank. All the bait fish survived and were in good condition upon arrival in Pearl Harbor. The bait was released in the water near the Fish and Wildlife pier and for five days thereafter, iao were seen near the pier.

All the hauls for bait were made at high tide and within 50 feet of the beach in clear water that varied from 1 foot to 1 fathom in depth. No bait was observed in deeper water. The bottom near the shore was littered with debris consisting of wire, snags, and large coral rocks, but the hauls were successfully made without tearing the net by carefully patrolling the lead line.

Heavy winds of varying directions and intensities up to 45 knots occurred on February 6, and it was decided to abandon baiting operations and proceed to the Line Islands via Johnston Island.

Other Activities: Each night when the vessel could anchor at French Frigate Shoals, bait lights consisting of four 100-watt yellow bulbs suspended above the water, and a submarine light of 1,000 watts submerged one fathom below the surface were used in attempts to attract bait. No fish suitable for bait were attracted. Surface trolling was conducted from sunrise until sunset for each day of travel. Two mahimahi (Coryphaena hippurus) and two cava cava (Euthynnus yaito)—closely related to the black skipjack of the Pacific coast, and little tuna of the Atlantic—were caught en route to French Frigate Shoals. On the return trip, one wahoo (Acanthocybium solandri) was caught on surface trolling lines. No attempts were made to test deep trolling gear.

While en route to French Frigate Shoals, a large number of circling birds along with several schools of porpoises were observed near Kaula Rock. A school

of fish accompanied by circling and diving birds was seen about a mile north of Tern Island, but it was too far away to be properly identified, and too hazardous to approach because of a projecting reef. On the return trip from French Frigate Shoals, scattered schools of fish were noted at too great a distance to determine the type or size of the schools.

Chemical sounding tubes of a type used on ocean-going ships were tested for accuracy in indicating the true depth of suspension. It was found that at depths of 10 fathoms, they were within $1\frac{1}{2}$ feet of the correct reading. This appears to solve the problem of obtaining some equipment which will indicate the depth at which trolling lures and flagline hooks are set when fishing.

"JOHN R. MANNING" RETURNS FROM SHAKEDOWN CRUISE: The John R. Manning, the last of the fleet of three Pacific Oceanic Fishery Investigation's vessels, left Honolulu April 5 on a shakedown cruise in local Hawaiian waters.

The main objective of the cruise was to make several sets with the purse seine to determine whether the net, deck equipment, and various fittings on the vessel were in proper working order and suitable for prolonged operations.

Other objectives were to test the day and night nets for catching bait, the suitability of the bait tank for holding bait alive, and the operation of the trolling gear and the bathythermograph. The cruise was also somewhat in the nature of a training period to familiarize the crew with the operation of special equipment and to break in several Hawaiian fishermen.

Upon completion of the shakedown cruise about April 12 the vessel returned to Pearl Harbor for correction of minor defects which turned up during this cruise.

"JOHN R. MANNING" DEPARTS ON SECOND CRUISE: The research vessel John R. Manning departed on April 17 for a two-months cruise to Washington, Fanning, and Palmyra Islands, and other islands in the vicinity, to conduct experimental purse-seining operations. This is the vessel's first regular research trip.

The cruise is being conducted for the primary purpose of testing the effectiveness of a standard West Coast tuna purse seine, in order to determine what modifications, if any, may be necessary for the efficient employment of this type of gear on the tuna schools of the mid-Pacific.

Concurrently with this experimental purse seine, fishing information will be gathered on the hydrography of the Line Islands region and on the biology of tunas encountered in the course of the work.

The vessel is expected to return to Honolulu about June 12.

HAWAIIAN LONG-LINE TUNA FISHERY: The Hawaiian long-line tuna fishery did quite well during March. Vessels interviewed reported two to eight fish per hundred hooks (average 3.4). The bulk of the catch consisted of big-eyed tuna and striped marlin; the latter predominated. Yellowfin tuna were scarce in the catches.



Sealskin Prices Advance at Annual Spring Auction

Prices of Government-owned fur-seal skins from the Pribilof Islands, sold at a spring auction in St. Louis in April, advanced an average of 12.6 percent over last fall's prices, the Fish and Wildlife Service announced. A total of 29,800 Alaska sealskins brought \$1,913,038.

The auction, held by the Fouke Fur Company on April 17, also included South African Government and privately-owned skins from the Cape of Good Hope.

Fur buyers paid an average of \$64.20 for United States Government Alaska seal-skins. Average price at the auction last fall was \$55.93; at last year's spring auction it was \$59.55.

Dyed "matara" (brown) skins sold for an average of \$70.38, an increase in price of 28.6 percent since the last auction of Government Alaska fur-seal skins in October 1949. Average price of "safari" (lighter-brown) skins was \$50.65, an increase of 5.9 percent. Black skins averaged \$60.41, a decline of 13.9 percent.

In addition to the United States-owned skins, 2,528 Cape of Good Hope fur-seal skins were sold for the Government of the Union of South Africa, and 5,059 Cape and miscellaneous skins for private shippers. The South African Government-owned skins averaged \$21.89, a decline of 3.7 percent.



South Pacific Fishery Investigations

PACIFIC SARDINE INVESTIGATION CONTINUES: Early in April, two Scripps Institution of Oceanography research vessels (Crest and Horizon) and one Fish and Wildlife Service research vessel (Black Douglas) were reported on their third cruise this year by the Service's South Pacific Fishery Investigations. They are working on the cooperative sardine research program being conducted by the above-mentioned agencies along with the California Academy of Science and California Division of Fish and Game.

Material collected on the March cruise is being sorted.

Examination of February collections showed that in that month sardine spawning was largely confined to the area off Pt. San Eugenio and Sebastian Viscaïno Bay, Lower California. No eggs or larvae were taken to the north of that region. Last year's observations indicate that spawning will move northward with the progression of favorable temperatures.

During February, anchovy spawning was found to be more widespread than sardine spawning; anchovy larvae were taken off southern California and off Lower California.



Proposed Revision of Federal Specifications for Canned Salmon

A revision of the Federal specification (PP-S-31a) for canned salmon was proposed by the Federal Specifications Board the last week in April. This specification is used for purchases made by Federal Government agencies.

The proposed specification still carried the provision that "no oil shall be added" to canned salmon and omits the fish steelhead from the species of fish canned in Section 1.1. Other minor changes have also been proposed.



United States and Alaska Commercial Fisheries, 1949

(REVISES CERTAIN SECTIONS OF THE PRELIMINARY REVIEW^{1/})

Production: During 1949, the United States and Alaska catch of fishery products amounted to about 4.9 billion pounds, with an estimated value of approximately \$325 million to the fishermen. The catch was about 300 million pounds greater than in the previous year. However, due to a general decline in the price of fishery products, the value of the catch was about 12 percent less than in 1948.

Production by Species: The 1949 catch of rosefish (landed principally at Gloucester, Massachusetts; and Portland and Rockland, Maine) amounted to 237 million pounds--one million pounds less than the record 1948 catch.

The Pacific Coast catch of tuna last year amounted to 332 million pounds--6 million pounds above the former record landings in the previous year.

Menhaden production, (utilized entirely for reduction on the Atlantic and Gulf Coasts) totaled about 1,050 million pounds, making the 1949 production the largest in the history of the fishery. In 1948, 1,008 million pounds were produced, and in 1947, 973,000,000 pounds.

Due to an unexpected large run of pink salmon in southeastern Alaska, the estimated catch of salmon in Alaska and the Pacific Coast States during 1949 was about 15 percent above the 1948 production of approximately 400 million pounds. The 1949 domestic pack of canned salmon amounted to about 5,460,000 cases, compared with 4,825,000 cases in 1948.

Pilchards were found in considerably greater abundance off the California Coast in 1949 than in the previous two years, and the catch amounted to 640 million pounds, compared with 373 million pounds in 1948, and a low of 272 million pounds in 1947.

New England Production: Landings of fishery products in Maine and Massachusetts in 1949 amounted to 857 million pounds (valued at \$50 million to the fishermen), compared with 878.2 million pounds (valued at \$59 million) the previous ^{1/}A preliminary review of the commercial fisheries of the United States and Alaska for 1949 appeared in Commercial Fisheries Review, February 1950, pp. 37-43. Since the publication of that review, additional data, recently made available, have changed some of the figures. In the article here presented, only those sections of the review in which changes occurred are given. Therefore, this article should be read in conjunction with the one that appeared in the February 1950 issue.

year. Scrap fish landings in these two States amounted to 57 million pounds (valued at about \$600,000 to the fishermen). An additional 14 million pounds of scrap fish were landed at Stonington, Connecticut; and Point Judith, Rhode Island. Remarkable developments are revealed by comparing 1949 New England fishery products landings with those of a decade ago (see table).

Item	Quantity Landed	
	1949	1939
	(in millions of lbs.)	
Boston	172	300
Gloucester ...	251	76
New Bedford ..	106	23
Maine	292	116

Canned Fishery Products: Preliminary data indicate that the 1949 pack of canned fish was somewhat larger than in the previous year. It is probable that the pack amounted to about 850 million pounds, compared with 782 million pounds in the previous year.

Production of canned salmon (5,460,000 cases) was about 635,000 cases greater than in 1948. California's pilchard pack of about 4,000,000 cases was 1,350,000 cases above the previous year's production. The 1949 pack of tuna (7,200,000 cases) was the largest in history.

Fish Meal and Oil: Fish meal production in 1949 was estimated at about 225,000 tons—an increase of about 25,000 tons compared with the previous year.

Fish and fish-liver oil production was estimated about 18 million gallons—somewhat above the 1948 production of 17.1 million gallons.

Principal Fishing Ports: San Pedro, California, continued as the nation's leading fishing port with landings of about 540 million pounds, valued at \$26.5 million to the fishermen. Monterey, California, was in second place, with 285 million pounds; followed by Gloucester, Massachusetts, with 251 million pounds. While San Diego, California, (with landings of 210 million pounds) occupied fourth place with respect to the quantity landed, it was first in importance as far as value was concerned (\$31 million).

Fishermen and Fishing Craft: Current information is not available on the number of fishermen and fishing craft employed in taking fishery products; however, in 1949 an estimated 9,000 vessels of five net tons and over were operated; and about 165,000 persons were employed as fishermen. Construction of fishing vessels continued at a high level; however, only 1,002 vessels were documented as fishing craft during 1949, compared with 1,184 vessels in 1948.

Foreign Trade: Exports of edible fishery products during 1949 amounted to 149.7 million pounds, compared with 99.8 million pounds during 1948. The increase in exports resulted from large shipments of canned salmon and pilchards to the United Kingdom, and pilchards to the Philippine Islands.

Imports of edible fishery products into the United States during 1949 totaled 465.0 million pounds, compared with 472.3 million pounds during 1948. Imports of cod, haddock, hake, pollock, cusk, and rosefish fillets during 1949 amounted to 47.2 million pounds, compared with 53.7 million pounds the previous year.



United States Fish Oil Exports Largest on Record

United States inedible fish oil exports in 1949 were the largest on record, according to the April 10 Foreign Crops and Markets of the U. S. Department of Agriculture.

Normally a net importer by a sizeable margin, the U. S. exports of 19,300 short tons of fish oil were almost double the quantity imported. European countries took well over two-thirds and North American countries more than one-fifth of the total shipments.

United States Inedible Fish Oil Exports, ^{1/} 1949 with Comparisons					
Country of Destination	1949 ^{2/}	1948 ^{2/}	1947	1946	Average 1935-39
..... (in short tons)					
North America:					
British West Indies	54	102	54	2	12
Canada (Incl. Newfoundland & Labrador)	4,161	5,471	1,463	1,746	458
Cuba	88	75	119	82	155
Mexico	30	8	14	91	45
Other	9	23	34	30	59
Total	4,342	5,679	1,684	1,951	729
South America	8	6	171	19	96
Europe:					
Belgium-Luxembourg	2,100	-	2	-	8
France	57	-	17	3	19
Germany	5,646	-	-	-	126
Italy	20	21	3	2	15
Netherlands	5,354	-	3,426	-	15
Norway	-	-	-	-	10
Switzerland	110	-	1	-	15
United Kingdom	2	-	-	-	77
Other	-	1	11	186	15
Total	13,289	22	3,460	191	300
Asia:					
Korea	1,323	-	-	-	-
Philippines, Republic of	308	150	25	-	66
Other	38	1	5	1	24
Total	1,669	151	30	1	90
Africa	-	-	-	6	2
Oceania	-	20	120	3	17
Grand Total	19,308	5,878	5,465	2,171	1,234
^{1/} Sperm and whale oils and edible or medicinal fish oils not included.					
^{2/} Preliminary.					



Wholesale and Retail Prices

WHOLESALE PRICES: Prices of edible fishery products at the wholesale level in March this year were almost 1 percent above February, but 11 percent lower than March 1949. The March 1950 wholesale index for all fish and shellfish was 97.7 percent of the 1947 average, compared to 96.8 for February and 109.7 percent for March 1949 (see tables 1 through 7).

Compared with February this year, March wholesale prices for fresh and frozen drawn, dressed, or whole fin fish increased mainly due to higher prices for fresh-water fish during the Jewish holidays, which occurred during the month. Prices of processed frozen and canned fishery products were only slightly higher, while those for processed fresh fish were slightly lower. The increases in frozen processed fish prices were due mainly to higher prices for flounder fillets; and in canned fish, to slightly higher prices for Maine sardines. Among the fresh processed fish, prices of haddock fillets increased while fresh shrimp and shucked oysters declined.

EXPLANATION OF REVISION OF WHOLESALE PRICE INDEX FOR FISH: The U. S. Department of Labor's Bureau of Labor Statistics has completed a revision of the Meats, Poultry and Fish subgroups of its Wholesale Price Index with the revision of the Dressed Poultry and Fish^{1/} components. The results of the revision were first reflected in the final index for December 1949.^{2/}

A detailed explanation of the construction of the new index of wholesale prices of edible fishery products, together with tables of prices and indexes for individual items from January 1948 through March 1950, is given here in order to clarify any questions which may arise in the monthly publication of these data in this publication.

Indexes of Wholesale Fish Prices (1926 = 100): The Bureau of Labor Statistics' revision of the fish price series included in the Meats, Poultry and Fish subgroup of its Wholesale Price Index has resulted in a number of changes that are equivalent to the introduction of a wholly new list of items. Three series which have become obsolete have been dropped from the Fish index and 17 new series have been added in order to represent current market conditions. Many significant marketing developments over the past decade have been considered during the course of this revision--changes in production, in methods of handling, and in consumption habits, which are indicated in part by the growth in production of frozen fish and by the development of inland markets for salt-water species. The principal changes from the former index are as follows:

1. Price series for canned red salmon, cured pickled cod, and salt mackerel have been dropped.
2. Price series for drawn, dressed, or whole fin fish; fresh processed fish and shellfish; and frozen processed fish and shellfish have been included for the first time.
3. The number of series for canned fish has been expanded to include additional species, making the price series more representative of all canned fishery products.

^{1/} The revision of the Fish component has been made with the assistance and advice of specialists in the Fish and Wildlife Service.

^{2/} The wholesale average prices and index of fish and shellfish for February 1950, together with comparative data (published in Commercial Fisheries Review, April 1950, pp. 52-4) was the first complete release of monthly data based on the new revised index.

Code No. 1/		Group, Subgroup, and Item Specification	November 1949	
			Relative Importance In Sub-group	Relative Importance In Item Group
			Percent	Percent
			100	100
		Foods		
		Meats, Poultry, and Fish:		
		Fish:	2	100
		Drawn, dressed, or whole fin fish:		33
164-1		Haddock, drawn, large offshore, fresh, per 100-lb. lots, per lb. average price Boston Fish Exchange		12
164-2		Halibut, Western, dressed, medium and large, 20-80 lbs., fresh or frozen, per lb., f.o.b. New York City		7
164-3		King salmon, dressed, large and medium, fresh or frozen, per lb., f.o.b. New York City		10
164-4		Whitefish, drawn (dressed), mostly Lake Superior, 50-60 lb. box lots, per lb., f.o.b. Chicago		1
164-5		" , round, mostly Lake Erie pound net, 50-60 lb. box lots, per lb., f.o.b. New York City		1
164-6		Lake trout, native, drawn (dressed), No. 1, 50-60 lb. box lots, per lb., f.o.b. Chicago		1
164-7		Yellow pike, round, Michigan State (Lake Michigan and Lake Huron), 50-60 lb. box lots, per lb., f.o.b. New York City		1
		Fresh processed fish:		20
165-1		Haddock fillets, small, skins on, 20-lb. tins, primary shipper, per lb., f.o.b. Boston		2
165-2		Shrimp, headless, large (26-30 count), 100-lb. boxes, per lb., f.o.b. New York City		10
165-3		Oysters, shucked, standards, gallon cans, per gallon, f.o.b. Norfolk area		8
		Frozen processed fish:		5
166-1		Flounder fillets, yellowtail, skinless, 10-lb. boxes, primary shipper, per lb., f.o.b. Boston		1
166-2		Haddock fillets, small, cello-pack, 10-lb. package, primary shipper, per lb., f.o.b. Boston		2
166-3		Rosefish fillets, cello-pack, 10-lb. cartons, primary shipper, per lb., f.o.b. Gloucester, Mass.		2
166-4		Shrimp, headless, large (26-30 count), 5-10-lb. boxes, frozen, per lb., f.o.b. Chicago		4
		Canned fish:		38
162-1		Salmon, pink, No. 1 tall can (16 oz.), 48 to case, broker to wholesaler, priced per dozen, published per case, f.o.b. Seattle		18
162-2		Tuna, light meat, solid pack, No. 1/2 tuna can (7 oz.), 48 to case, broker to wholesaler, per case, f.o.b. Los Angeles		14
162-3		Sardines, California, tomato pack, No. 1 oval can (15 oz.), 48 to case, broker to wholesaler, per case, f.o.b. Los Angeles		2
162-4		Sardines, Maine, oil pack, keyless, No. 1/2 drawn can (3 1/2 oz.), 100 to case, broker's price, per case, f.o.b. New York		4
1/ Bureau of Labor Statistics code number.				

4. Wider geographical representation has been obtained for all segments of fisheries products.
5. New price series not heretofore systematically collected have been established to provide additional information on price movements of fisheries products.
6. All important segments of the American fisheries industry are currently represented in the index.
7. Weighting factors used for combining individual price series for fish into indexes for all fish are based on 1947 values of production for all fisheries products, including imports but excluding exports, whereas, formerly weights represented the average of 1929 and 1931 quantities produced for sale plus imports for consumption of the particular fisheries products included in the Wholesale Price Index. Values of production of species and products not included in the list of products priced for the index have been assigned, for weighting purposes, to the priced items.

Many of the price series included in the new index of wholesale fish prices are obtained from the Fishery Products Reports of the Fish and Wildlife Service. Many are collected by the Service especially for use in this index. The index is calculated from a monthly average of one-day-a-week prices.

Careful consideration has been given to obtaining proper geographical coverage through the selection of fish species and products for pricing which are produced in the major-producing areas of the country--New England, South Atlantic, Gulf, Great Lakes, and Pacific Coast areas.

Table 2 - Fish Included in Former Wholesale Price Indexes for Meats, Poultry, and Fish and Relative Importance in Subgroup and Item Group

Code No. 1/	Group, Subgroup, and Item Specification	November 1949	
		Relative Importance	
		In Subgroup	In Item Group
	<u>Foods</u>	<u>Percent</u>	<u>Percent</u>
	Meats, Poultry, and Fish	100	
	Fish:	2	100
162-1	Canned salmon, pink, No. 1 tall, f.o.b. Seattle		47
163-1	" " , red, " " " , " "		39
164	Cod, cured, pickled, bulk, f.o.b. Gloucester, Mass.		11
166-1	Mackerel, salt, pickled, 200-lb. bbl., f.o.b. New York		3

1/ Bureau of Labor Statistics code number.

The new index of wholesale fish prices has been introduced into the comprehensive wholesale price index at the November 1949 level of the former fish series. No combined wholesale price index for fish has been available in the past and no combined fish index on the base year 1926 = 100 will be available as part of the Wholesale Price Index.

Special Indexes of Wholesale Fish Prices (1947 = 100): Regular monthly publication of a special index for fish based on the average for 1947 as 100 was begun with the release of the February 1950 index. Subindexes for drawn, dressed or whole fin fish; fresh processed fish and shellfish; frozen processed fish and shellfish; and canned fishery products; and separate indexes for each of the 18 individual items used in the index also are published.

Table 3 - Monthly Average Wholesale Prices and Indexes for Fishery Products, January-March 1950

Code No.	Group and Item 1/	Jan.	Feb.	Mar.	Unit	Jan.	Feb.	Mar.
		Index Nos. (1947 = 100)			Prices in \$.....		
	All Fish and Shellfish	103.4	96.8	97.7	-	-	-	-
	Drawn, dressed, or whole fin fish: ...	123.9	109.4	112.4	-	-	-	-
164-1	Haddock, drawn, lge. offshore	152.5	110.3	108.6	Pound	.146	.106	.104
164-2	Halibut, Western, dressed	95.4	97.0	99.2	"	.327	.332	.340
164-3	King salmon, dressed	115.1	115.1	117.1	"	.470	.469	.478
164-4	Whitefish, drawn (dressed)	143.4	140.2	172.7	"	.496	.485	.598
164-5	" , round	117.1	120.1	142.4	"	.518	.531	.630
164-6	Lake trout, native, drawn (dressed).	123.2	125.2	136.4	"	.561	.570	.621
164-7	Yellow pike, round	105.8	108.9	135.8	"	.452	.465	.580
	Fresh processed fish:	97.5	93.0	92.1	-	-	-	-
165-1	Haddock fillets	137.8	117.9	119.5	Pound	.384	.328	.332
165-2	Shrimp, fresh or frozen	91.2	92.2	91.2	"	.632	.639	.632
165-3	Oysters, shucked, standards	97.2	87.7	86.2	Gallon	3.950	3.562	3.500
	Frozen processed fish:	102.0	102.4	103.0	-	-	-	-
166-1	Flounder fillets	96.8	96.8	119.4	Pound	.300	.300	.370
166-2	Haddock "	131.2	133.5	126.7	"	.290	.295	.280
166-3	Rosefish "	106.0	106.0	103.1	"	.212	.212	.206
166-4	Shrimp, headless	91.1	91.1	91.1	"	.630	.630	.630
	Canned fish:	91.6	88.2	88.6	-	-	-	-
162-1	Salmon, pink	102.7	94.7	94.7	Case	15.760	14.528	14.528
162-2	Tuna, light meat	92.7	92.7	92.7	"	14.250	14.250	14.250
162-3	Sardines, California, tomato	64.3	61.5	61.5	"	5.750	5.500	5.500
162-4	Sardines, Maine, oil	71.1	73.6	76.0	"	7.250	7.500	7.750

1/ See Table 1 for detailed item specifications.

These special indexes were prepared in response to increasing demands from the fisheries industry, Government agencies, and other groups and persons having need for primary market prices and price indexes for all fish and shellfish and

for particular types of fisheries products. They provide, for the first time, a comprehensive coverage of price movements of all the major groups of edible fisheries products.

Table 4 - Monthly and Yearly Average Wholesale Price Indexes for Fishery Products, 1949

Code No.	Group and Item	Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
		Index Numbers (1947 = 100.0)												
	Fish:	101.7	112.3	106.8	109.7	104.6	100.9	94.9	95.8	98.9	98.2	96.9	100.6	100.6
	Drawn, dressed, or whole fin fish:	102.1	114.1	98.9	105.1	95.3	92.8	91.7	94.7	98.5	105.4	105.6	106.9	111.7
164-1	Haddock, drawn, lge. offshore	97.1	128.7	88.0	109.4	76.6	70.2	72.5	83.8	82.6	97.2	117.1	109.6	126.7
164-2	Halibut, Western, dressed	91.6	88.6	85.7	87.5	95.6	92.5	91.9	91.2	94.5	98.5	92.3	91.0	90.3
164-3	King salmon, dressed	115.0	113.7	111.3	108.4	115.2	123.2	113.9	108.3	118.5	119.2	117.8	115.8	112.8
164-4	Whitefish, drawn (dressed)	129.8	149.7	159.0	151.7	146.0	110.4	97.5	92.5	125.4	135.8	115.3	143.1	136.2
164-5	" " round	118.9	147.4	135.1	108.8	127.7	117.1	103.4	99.7	110.1	117.3	99.8	123.5	130.8
164-6	Lake trout, native, drawn (dressed)	113.1	123.7	129.6	129.6	104.1	91.1	106.0	109.8	109.8	111.5	103.2	117.5	125.2
164-7	Yellow pike, round	96.7	109.1	127.3	115.6	74.9	72.5	89.0	112.1	114.3	103.6	81.5	90.1	72.9
	Fresh processed fish:	90.1	95.0	91.4	94.6	91.7	81.7	84.0	89.5	87.0	89.4	90.2	90.3	99.4
165-1	Haddock fillets	102.1	116.8	97.7	113.4	88.5	89.1	80.4	91.2	88.9	100.2	118.4	113.6	126.0
165-2	Shrimp, fresh or frozen	86.7	91.2	93.4	96.5	95.6	77.9	83.3	91.2	82.9	78.8	77.6	81.3	95.6
165-3	Oysters, shucked, standards	92.5	95.4	86.2	86.2	86.2	86.2	86.2	86.2	93.5	104.6	103.8	99.1	98.5
	Frozen processed fish:	95.2	101.4	98.0	98.2	97.2	99.8	90.4	90.7	93.6	94.8	99.0	98.2	97.3
166-1	Flounder fillets	89.3	100.1	91.2	90.1	77.1	75.9	75.5	75.9	96.8	98.5	103.9	92.8	90.4
166-2	Haddock "	101.5	119.6	108.1	101.8	98.4	91.9	88.2	86.5	90.0	98.4	109.7	112.3	116.5
166-3	Rosefish "	103.7	110.6	105.3	110.8	115.0	106.5	92.5	90.6	92.0	97.5	108.0	109.4	105.6
166-4	Shrimp, headless	91.7	90.8	92.6	92.6	92.6	92.6	93.3	95.5	95.5	91.5	89.7	85.0	88.2
	Canned fish:	108.9	122.7	123.1	123.8	120.3	119.0	104.2	103.6	106.7	100.0	94.5	93.1	93.6
162-1	Salmon, pink	128.1	152.5	152.5	154.1	147.7	147.7	115.6	118.8	125.2	110.8	102.7	102.7	102.7
162-2	Tuna, light meat	103.7	109.0	109.0	109.0	109.0	105.1	102.5	102.5	101.8	99.2	99.2	99.2	99.2
162-3	Sardines, California, tomato	77.4	83.9	83.9	83.9	83.9	83.9	83.9	83.9	81.6	74.1	65.4	55.9	62.9
162-4	Sardines, Maine, oil	81.6	88.3	90.7	90.7	85.8	85.8	85.8	72.3	77.0	84.6	75.5	71.1	71.1

The five series for drawn, dressed, or whole fin fish (haddock, halibut, king salmon, two series for whitefish, lake trout, and yellow pike) reflect price movements of fin fish in landed condition. The price series for fresh processed fish (fresh haddock fillets, shucked oysters, and fresh shrimp) reflect price movements of fresh fishery products which have undergone some processing plus landed values of unprocessed shellfish. The price series for frozen processed fish (flounder fillets, frozen haddock fillets, rosefish fillets, and frozen shrimp) reflect price movements of all frozen fish fillets and shellfish which have been frozen or otherwise processed, but not canned. The price series for canned fish (pink salmon, tuna, California sardines, and Maine sardines) reflect price movements of all canned and cured fish and shellfish.

Table 5 - Monthly and Yearly Average Wholesale Price Indexes for Fishery Products, 1948

Code No.	Group and Item	Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
		Index Numbers (1947 = 100.0)												
	Fish:	110.0	119.8	116.1	108.9	102.9	104.8	105.4	107.0	109.1	113.9	112.1	110.6	111.2
	Drawn, dressed, or whole fin fish:	106.6	125.7	112.0	98.2	91.0	96.3	96.7	100.6	107.3	115.1	112.4	110.3	116.6
164-1	Haddock, drawn, lge. offshore	111.1	153.7	129.1	89.0	86.3	93.5	87.7	91.8	105.5	124.1	113.7	118.6	138.8
164-2	Halibut, Western, dressed	91.3	97.0	90.1	84.3	78.4	83.9	100.7	91.6	95.4	93.7	93.7	93.7	90.1
164-3	King salmon, dressed	114.0	115.4	109.9	106.2	99.0	108.9	110.1	119.5	119.9	123.0	123.0	119.4	114.6
164-4	Whitefish, drawn (dressed)	120.0	137.6	117.1	163.6	145.6	91.4	73.7	100.1	126.0	117.8	119.6	120.2	126.4
164-5	" " round	116.6	187.9	107.9	145.6	135.9	91.0	67.1	104.8	109.2	135.8	116.4	96.3	108.8
164-6	Lake trout, native, drawn (dressed)	108.6	108.7	114.2	124.3	105.4	77.7	97.1	107.6	115.3	117.8	103.5	110.7	117.8
164-7	Yellow pike, round	103.4	105.4	117.1	142.4	97.2	87.5	88.2	106.3	101.1	107.0	100.2	85.0	103.0
	Fresh processed fish:	96.6	112.5	113.1	102.0	87.9	94.4	94.4	92.4	89.6	96.4	92.1	94.2	92.2
165-1	Haddock fillets	113.9	141.0	130.0	103.7	97.0	106.2	98.1	94.3	113.9	123.5	123.3	114.6	126.0
165-2	Shrimp, headless, fresh or frozen	88.2	105.3	108.2	101.6	80.2	90.2	91.5	88.5	77.6	83.5	72.5	77.5	82.8
165-3	Oysters, shucked, standards	1/	116.9	116.9	102.2	98.5	1/	1/	1/	1/	110.8	116.9	116.9	98.5
	Frozen processed fish:	103.0	114.0	114.9	106.9	101.9	93.5	95.4	98.1	104.5	108.1	105.4	100.7	98.3
166-1	Flounder fillets	115.8	121.4	125.9	129.1	128.3	120.2	113.0	111.4	113.9	114.6	113.0	102.0	97.6
166-2	Haddock "	120.8	130.7	138.6	119.4	108.6	107.7	115.4	113.1	121.5	133.5	139.4	128.7	122.2
166-3	Rosefish "	111.2	142.5	138.7	117.0	105.0	95.6	92.0	92.5	104.0	118.1	117.5	109.5	108.1
166-4	Shrimp, headless	89.9	92.6	92.6	92.6	92.0	81.6	86.1	92.6	96.9	92.9	86.1	86.5	86.3
	Canned fish:	121.3	120.7	121.1	121.1	120.1	119.2	120.1	121.5	122.0	123.8	124.0	122.0	120.3
162-1	Salmon, pink	142.0	134.1	134.9	134.9	134.9	137.4	141.3	145.1	152.5	154.1	151.6	147.7	147.7
162-2	Tuna, light meat	109.0	109.0	109.0	109.0	109.0	109.0	109.0	109.0	109.0	109.0	109.0	109.0	109.0
162-3	Sardines, California, tomato	110.2	134.2	134.2	123.0	111.8	111.8	111.8	100.6	100.6	95.1	83.9	83.9	83.9
162-4	Sardines, Maine, oil	95.0	100.5	100.5	100.5	100.5	100.5	99.3	98.1	95.6	85.8	85.8	85.8	85.8

1/Insufficient data.

Table 6 - Monthly and Yearly Average Wholesale (Primary Market) Prices for Fishery Products, 1949

Code No.	Group and Item	Unit	Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
			\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Fish															
Drawn, dressed, or whole fin fish:															
164-1	Haddock, drawn, lge. offshore	Pound	.093	.124	.084	.105	.074	.067	.070	.080	.079	.093	.112	.105	.122
164-2	Halibut, Western, dressed	"	.314	.304	.294	.300	.328	.317	.315	.312	.324	.338	.316	.312	.309
164-3	King salmon, dressed	"	.469	.464	.454	.442	.470	.502	.464	.442	.484	.486	.481	.472	.460
164-4	Whitefish, drawn (dressed)	"	.449	.518	.550	.525	.505	.382	.338	.320	.434	.470	.399	.495	.471
164-5	" , round	"	.526	.652	.598	.481	.565	.518	.484	.441	.487	.519	.442	.546	.579
164-6	Lake trout, native, drawn (dressed)	"	.515	.563	.590	.590	.474	.415	.482	.500	.500	.508	.479	.535	.570
164-7	Yellow pike, round	"	.413	.466	.544	.494	.320	.310	.380	.479	.488	.442	.348	.385	.311
Fresh processed fish:															
165-1	Haddock fillets	"	.284	.325	.272	.316	.246	.248	.224	.254	.248	.279	.330	.316	.351
165-2	Shrimp, fresh or frozen	"	.601	.632	.648	.669	.662	.540	.578	.632	.575	.546	.538	.564	.662
165-3	Oysters, shucked, standards	Gal.	3.760	3.875	3.500	3.500	3.500	3.500	3.500	3.500	3.800	4.250	4.219	4.025	4.000
Frozen processed fish:															
166-1	Flounder fillets	Pound	.277	.310	.282	.280	.299	.235	.235	.235	.300	.305	.322	.288	.280
166-2	Haddock	"	.224	.264	.239	.225	.218	.203	.195	.191	.159	.218	.242	.248	.258
166-3	Rosefish	"	.207	.221	.211	.222	.230	.213	.185	.181	.184	.195	.216	.219	.211
166-4	Shrimp, headless	"	.634	.628	.640	.640	.640	.645	.660	.660	.660	.660	.660	.660	.610
Canned fish:															
162-1	Salmon, pink	Case	19.652	23.392	23.392	23.640	22.556	22.656	17.728	18.224	19.208	16.992	15.760	15.760	15.760
162-2	Tuna, light meat	"	15.942	15.750	16.750	16.750	16.750	16.150	15.750	15.750	15.650	15.250	15.250	15.250	15.250
162-3	Sardines, California, tomato	"	6.918	7.500	7.500	7.500	7.500	7.500	7.500	7.500	7.300	6.625	5.850	5.000	5.625
162-4	" , Maine, oil	"	8.317	9.000	9.250	9.250	8.750	8.750	8.750	7.375	7.850	8.625	7.700	7.250	7.250

Monthly and yearly special indexes with 1947 as 100 have been computed and are available only for the period from January 1948 to date. Indexes and monthly average prices for each of the 18 series are presented in tables 3 and 4.

Table 7 - Monthly and Yearly Average Wholesale (Primary Market) Prices for Fishery Products, 1948

Code No.	Group and Item	Unit	Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
			\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Fish															
Drawn, dressed, or whole fin fish:															
164-1	Haddock, drawn, lge. offshore	Lb.	.107	.184	.124	.086	.083	.096	.084	.088	.101	.119	.115	.114	.133
164-2	Halibut, Western, dressed	"	.313	.332	.309	.289	.269	.288	.345	.314	.327	.321	.321	.321	.309
164-3	King salmon, dressed	"	.465	.471	.448	.433	.404	.444	.449	.488	.489	.502	.502	.487	.468
164-4	Whitefish, drawn (dressed)	"	.415	.476	.405	.566	.504	.316	.255	.346	.486	.408	.414	.416	.438
164-5	" , round	"	.516	.831	.478	.644	.601	.402	.297	.464	.483	.601	.515	.426	.481
164-6	Lake trout, native, drawn (drsd.)	"	.495	.495	.520	.566	.480	.354	.442	.490	.525	.536	.471	.504	.536
164-7	Yellow pike, round	"	.442	.450	.500	.608	.415	.374	.377	.454	.432	.457	.428	.363	.440
Fresh processed fish:															
165-1	Haddock fillets	"	.317	.392	.362	.288	.270	.296	.273	.262	.317	.344	.343	.319	.356
165-2	Shrimp, fresh or frozen	"	.611	.730	.750	.704	.556	.625	.634	.614	.538	.579	.502	.537	.574
165-3	Oysters, shucked, standards	Gal.	1/	4.750	4.750	4.150	4.000	1/	1/	1/	1/	4.500	4.750	4.750	4.000
Frozen processed fish:															
166-1	Flounder fillets	Lb.	.359	.376	.390	.400	.398	.372	.350	.345	.353	.355	.350	.316	.302
166-2	Haddock	"	.267	.289	.306	.264	.240	.238	.255	.250	.268	.295	.308	.284	.270
166-3	Rosefish	"	.222	.285	.278	.234	.210	.191	.184	.185	.208	.236	.235	.215	.216
166-4	Shrimp, headless	"	.621	.640	.640	.640	.636	.564	.595	.640	.670	.642	.595	.598	.590
Canned fish:															
162-1	Salmon, pink	Case	21.776	20.560	20.684	20.684	20.684	20.684	21.080	21.672	22.260	23.392	23.640	23.248	22.656
162-2	Tuna, light meat	"	16.750	16.750	16.750	16.750	16.750	16.750	16.750	16.750	16.750	16.750	16.750	16.750	16.750
162-3	Sardines, California, tomato	"	9.856	12.000	12.000	12.000	11.000	10.000	10.000	10.000	9.000	9.000	8.500	7.500	7.500
162-4	" , Maine, oil	"	9.683	10.250	10.250	10.250	10.250	10.250	10.125	10.000	9.750	8.750	8.750	8.750	8.750

1/Insufficient data.

The base period (1947 = 100) for the special indexes of wholesale fish prices is subject to change at such time as the comprehensive Bureau of Labor Statistics Wholesale Price Index is revised and a new base period is adopted.

RETAIL PRICES: After declining for three consecutive months, the retail food price index on March 15 rose to 196.0 percent of the 1935-39 average. This was 2.8 percent above August 1939. Higher prices for meats, poultry, and fish; eggs; and coffee were mainly responsible for the over-all rise in the food index between mid-February and mid-March.

Prices of all fish and shellfish (fresh, frozen, and canned) at retail rose 3 percent from mid-February to mid-March this year (see table 8). The increase was attributed to increases in fresh and frozen fish.

Table 8 - Retail Price Indexes for Foods and Fishery Products, March 15, 1950,
with Comparative Data

Item	Base	I n d e x e s		
		Mar. 15, 1950	Feb. 15, 1950	Mar. 15, 1949
All foods	1935-39 = 100	196.0	194.8	201.5
All fish and shellfish (fresh, frozen, and canned)	do	302.5	293.7	325.9
Fresh and frozen fish	1938-39 = 100	281.2	265.1	266.8
Canned salmon: pink	do	332.1	345.6	462.7

Fresh frozen fish prices advanced on March 15 this year to 281.2 percent of the 1938-39 average and were 6 percent greater than on February 15 and 5 percent higher than on March 15, 1949. On the other hand, canned pink salmon prices fell to 332.1 percent of the 1938-39 average and were 4 percent below mid-February this year and 28 percent lower than mid-March a year earlier.

World Status of Tin

The International Tin Study Group met in Paris during the last week in March at the Ministry for French Overseas Territories, according to a March 30 Department of State news release.

The Group examined the future position of the tin industry and the likely trends in its production and consumption under assumed conditions. It estimated that world production, which had been 161,000 long tons in 1949, would be 172,000 tons in 1950, 191,000 tons in 1951 and 199,000 tons in 1952. In these estimates it was assumed that conditions conducive to full production and also political and social stability in the main producing countries would exist; it further assumed only production from plant and equipment already in operation, under rehabilitation and under commitment.

Unrestricted consumption of tin for commercial purposes under full industrial production was estimated at 127,000 long tons in 1950, 136,000 tons in 1951 and 140,000 tons in 1952. World consumption of tin in 1949 had been 118,000 tons.

The estimates showed, therefore, that there might be an excess of production over consumption for commercial purposes of about 45,000 tons in 1950 and higher figures later. On the other hand, it appeared very likely that for some time (although the Group could not indicate for how long ahead) substantial tonnages of tin would be absorbed by the United States for strategic stockpiling purposes over and above the demand for commercial purposes.

