Additions to the Fleet of U. S. Fishing Vessels

A total of 141 vessels of 5 net tons and over received their first documents as fishing craft during May 1949—7 more than in April 1948, according to the Bureau of Customs of the Treasury Department. Washington led with 31 vessels, followed by Alaska with 24, and California with 21. During the first five months of 1949, 401 vessels were documented compared with 427 during the same period in 1948.

Vessels Obtaining Their First Documents as Fishing Craft, May 1949

Section	May		Five mos. ending with May		Total
	1949	1948	1949	1948	1948
	Number	Number	Number	Number	Number
New England	8	10	11	20	52
Middle Atlantic	4	5	25	18	40
Chesapeake Bay	10	3	27	14	59
South Atlantic and Gulf	34	57	142	180	541
Pacific Coast	56	39	108	130	347
Great Lakes	4	4	25	18	51
Alaska	24	14	60	42	81
Hawaii	1	2	3	5	12
Total	141	134	401	427	1,183

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

ECA Procurement Authorizations for Fishery Products

The procurement authorizations for commodities and raw materials announced during July 1949 by the Economic Cooperation Administration included $550,000 for the purchase of fishery products (all from the United States and Possessions), compared with $300,000 during June 1949. Of the total amount authorized ($34,021,911) for purchases of fishery products under the ECA program for the 16-month period through July 31, 1949, $9,059,800 was for purchases in the United States and Possessions.

During the month, ECA announced a decrease of $62,000 in an authorization of $162,000 approved in April 1949 for the purchase of fish oil from the United States and Possessions for delivery to Korea; a decrease of $1,000 in an authorization of $391,000 approved in November 1948 for the purchase of fish meal from Canada for delivery to Denmark. These reductions do not represent a decrease in quantity, but rather an adjustment in value. In addition, a decrease of $75,000 was made in an original authorization of $300,000 (later reduced to $200,000) approved in March 1949 for the purchase of canned fish from the United States and Possessions for shipment to Belgium and Luxembourg.

A new type of procurement authorization is being issued to Marshall Plan countries since July 14 which lists a terminal date for the delivery of ECA-financed goods instead of the present calendar delivery quarter. Shipments may be made any time between the issuance of an authorization and the terminal date.

ECA Procurement Authorizations for Fishery Products, July 1949			
Product	Country of Origin	Recipient Country[1]	Amount Authorized
Fish, canned	U.S.& Possessions	Belgium-Luxembourg	$ 100,000
" , "	" " "	Ireland	400,000
Fish, mild-cured (salmon)	U.S.& Possessions	Belgium-Luxembourg	50,000
Total for July 1949			550,000
Total ECA Procurement Authorizations for Fishery Products, April 1, 1948 - July 31, 1949			
Fish, canned	U.S.& Possessions & Canada	United Kingdom, Ireland, Greece, Italy, Belgium-Luxembourg	14,382,800
Fish, salted or cured	Newf., Canada & U.S. & Possessions	Italy & Fr. West Indies	5,229,000
Fish meal	Canada, Iceland, Norway, & Angola	Denmark, Austria, & Bizone Germany	3,956,361
Oil, herring	Iceland	Bizone Germany	1,694,000
" , seal	Newfoundland	France	257,600
" , shark liver	Latin America except Argentine & Brazil	France	250,000
" , fish	U.S.& Possessions	Bizone & Fr. Zone of Germany & Korea	425,000
" , technical fish	U.S.	Bizone Germany	100,000
" , whale (includes sperm oil)	Netherlands, Belgium, Norway & U.S.	Austria, Bizone & Fr. Zone of Germany	7,160,150
Vit. A (Commercial grade, for stock feed)	U.S.	Netherlands	567,000
Grand Total Authorized			34,021,911

1/Unless otherwise indicated, the recipient country is the procuring agency, and the government of the participating country or its authorized agents or importers do the purchasing.

On July 7, ECA announced revised procedures for the submission of information by suppliers of Marshall Plan goods. The procedures, which became effective July 1, 1949, and contained in amendments to ECA Regulation 1 governing execution of suppliers' certificates and invoice-and-contract forms, were initiated after suppliers objected to having all details of their transactions, such as commissions paid, generally known.

The Council of the Organization for European Economic Cooperation, on July 2, reached unanimous agreement on the principles upon which the intra-European payments system for 1949-50 shall be based. The Council has directed the Joint Trade and Intra-European Payments Committee of the OEEC to submit to the Council a draft of an Agreement based on these principles. The Council has requested that safeguards be provided in the draft agreement for a healthy expansion of intra-European trade. It is the purpose of this provision to insure the abandonment of those restrictive trade practices which do not correspond to the increasing degree of freedom to be achieved in the payments system for 1949-50. It is the view of ECA that

the principles upon which agreement has been reached make possible an advance towards breaking down the bilateral trade and payments practices which have become so prevalent in the postwar economic relations of the participating countries.

Federal Purchases of Fishery Products

DEPARTMENT OF THE ARMY, May 1949: Purchases of fresh and frozen fish by the U. S. Army, Navy, Marine Corp, and Air Force for military feeding during May 1949 amounted to 1,234,229 pounds (valued at $393,676). This was slightly less than in April 1948 when 1,386,475 pounds ($487,851) were purchased, and a little below the May 1948 total of 1,261,261 pounds ($429,774). Purchases for the first five months in 1949 totaled 6,574,933 pounds ($2,214,499), compared with 6,514,321 pounds ($2,414,208) for the corresponding period the previous year.

Fishery Biology Notes

"ALBATROSS III": Haddock Tagged on Georges and Browns Banks (Cruise 23): Over 1,200 haddock were tagged on Georges and Browns Banks by the Service's scientists aboard the Albatross III during June 23-29. This is the first large-scale haddock tagging operation accomplished on any of the important offshore banks. The purpose of this work was twofold: first, to determine whether haddock which pass through the meshes of the recommended large-mesh cod end will actually survive to a more marketable size; second, to learn more about the migration of the fish on these banks.

The fish were tagged by attaching two celluloid discs, one red and one white, to the left gill cover. The white discs were numbered serially, so that each fish was measured and its physical condition noted. A reward of $1.00 will be paid to any person finding one of these tags and returning it to the Fish and Wildlife Service. Information on the exact location where the fish was caught and its length, returned with the tag, is desired. Fishermen have been advised to be on the lookout for these tagged fish, as the success of the experiment depends on the number returned.

Data from these tagging experiments will enable the scientists to determine the practicability of using nets with larger mesh to save many small fish and to study the movements of the haddock over the banks and between the banks.

Study of the Escapement of Fish Through Larger-Meshed Nets (Cruise 24): A series of experiments to study the escapement of fish through larger-meshed nets were started aboard the Service's research vessel during July 11-19. The purpose of this study was to find ways of saving the large number of small fish which are destroyed by commercial fishing. It has been estimated that over 13,000,000 haddock alone are destroyed. If these fish had been left another year, approximately 18,000,000 pounds of edible fish food would have been added to the nation's supply.

The studies were made to determine the number and size of all marketable kinds of fish that would escape through meshes 1 to 1½ inches larger than the mesh in present use. The Albatross III made alternate tows, first with a net of regular commercial mesh and then with a net of the larger mesh. The number of fish caught

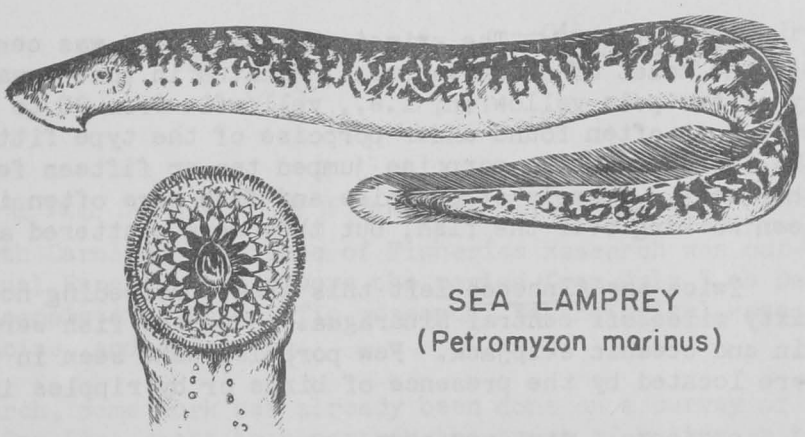
and the size of these fish were determined by the biologists. All the more important species of fish were caught, including haddock, cod, rosefish, yellowtail, and hake. Observations were made on various parts of Georges Bank and in the South Channel area. The data collected are now being analyzed to determine the precent of each size of fish that escape and to relate these to the commercially-acceptable sizes and weights.

Demonstration Cruise (Cruise 25): The Albatross III made a demonstration cruise from Boston, Mass., on July 21. The purpose of the cruise was to acquaint members of the fishing industry and other interested conservation officials with the vessel, its methods, and the program of research used by the North Atlantic Fishery Investigations.

GULF OYSTER INVESTIGATIONS: The Chief of the Service's Gulf Oyster Investigations, Pensacola, Florida, reported in July that the experiences of the past few months have helped to select certain broad objectives for the future program of the laboratory. These goals are:

1. Investigation of the ecology of the conch, Thais, in an effort to obtain more effective means of control;
2. Studies on certain parasites of oysters, such as clams, sponges, Polydora and protozoans, to determine their economic importance;
3. Determination of local setting and growing rates in conjunction with physical and hydrographic surveys in order to rehabilitate local oyster reefs which are now nearly barren;
4. Studies on the morphogenesis of oysters with the objective of creating selective strains;
5. Continued studies in the area affected by the Bonne Carre Spillway to localize the hydrographic factors responsible for mortalities and low growth rates;
6. Continued assistance to the Conservation Departments of the Gulf States in developing their oyster culture practices.

PERCENTAGE OF LAKE MICHIGAN LAKE TROUT SCARRED BY LAMPREYS: The Service's Fishery Research Biologist stationed at Ann Arbor, Michigan, has just completed his analysis of the 1948 data supplied by commercial fishermen of the State of Michigan waters of Lake Michigan on the percentage of scarred fish in their catches. His analysis reveals that the percentage by weight of lake trout of marketable size bearing sea lamprey scars increased from 31 in 1947 to 41 in 1948.



SEA LAMPREY
(Petromyzon marinus)

Mouth of Sea Lamprey

THE SEA LAMPREY, WHICH FEEDS ON THE BLOOD AND FLESH OF FISH, IS PREYING ON THE LAKE TROUT OF THE GREAT LAKES AND IS THREATENING THAT FISHERY.

PRELIMINARY REPORT ON TUNA FISHING TRIP OFF CENTRAL AMERICA

(APRIL 23-JUNE 9, 1949)

INTRODUCTION: In the spring of 1949, a trip was planned to provide more field data on Pacific tuna for life-history and population studies. Accordingly, a cruise was made on the tuna clipper M/V Alphecca through the courtesy of a West Coast tuna canner and the ship's master.

The Alphecca is a 128-foot wooden-hulled vessel (ex-Navy YP) capable of carrying 260 tons of fish, and on this trip carried nine fishermen, in addition to the skipper, the engineer, and the cook.

Although the cruise was from April 23 to June 9, the actual fishing was confined to the month of May, and nearly 250 tons of fish, primarily yellowfin, were brought aboard. The methods of fishing, catching and caring for bait, maintenance of the ship, and so on were essentially the same as those described by Godsil (Calif. Div. Fish & Game, Fish Bull. No. 51).

BAIT FISHING AND HANDLING: Since the Alphecca planned to fish south of the Gulf of California in waters warmer than 75° F., anchovettas were chosen for bait. Bait was taken at Macapule, Mexico, a sandy beach on the mainland side of the Gulf of California a hundred or so miles in from the mouth, (25° 20' N. Lat., 108° 39' W. Long.). Bait was plentiful and easily located near boils of mud and sand and an occasional jumping fish. In three days, 3,600 scoops of bait had been brought aboard. On the evening of the third day, the Alphecca set out for the fishing grounds further south. The bait began milling immediately in the tanks. The mortality throughout the trip was not excessive. The dead were siphoned off the bottom daily for a short period, and the floating dead were continually removed with a dip net. The fish were fed ground tuna or skipjack every few days from May 21, the first successful day of fishing, to May 28, three days before the last anchovetta was gone. As the brine wells were needed for tuna, the bait was transferred, scoop by scoop, to the bait tanks. On the morning of the last day of fishing, 150 scoops were transferred to another boat. That evening the remaining 150 to 200 scoops went over the side to provide space for the 25 tons of fish on deck.

TUNA FISHING: The principal area fished was centered approximately 140 miles off the coast of El Salvador. The catch in this area was composed almost exclusively of two-pole yellowfin, i.e., yellowfin from 30 to 100 pounds. These schools were most often found under porpoise of the type fittingly called "spinners" by the fishermen. The porpoise jumped ten or fifteen feet in the air, spinning as they went. Schools of porpoise and fish were often immense. Birds were usually seen working over the fish, but they were scattered and not numerous.

Twice the Alphecca left this area, proceeding northward to waters forty to sixty miles off central Nicaragua. Here the fish were smaller; one-pole yellowfin and oceanic skipjack. Few porpoise were seen in this area, and the schools were located by the presence of birds or by ripples in the water.

BIOLOGICAL DATA OBTAINED: Morphometric data were taken on 40 yellowfin ranging in total length from 399 mm. to 1568 mm. (15½-62 inches). The size of the six oceanic skipjack measured was from 507 mm. to 669 mm. (20-25 inches). One 545 mm. black skipjack was measured. Most of the fish taken for measurements had broken keels and frayed fins. Scale samples were taken from each yellowfin measured.

Owing to the speed with which fish were stowed in the wells, it was impossible to secure length measurements of 50 fish from each school.

A series of smaller yellowfin tuna and oceanic skipjack were preserved.

The gonads of at least ten fish per week were examined. Generally speaking, the males of both oceanic skipjack and yellowfin tuna were ripe. Testes were firm, usually with milt running in the central duct. During the last two weeks of May, several large male (over 1350 mm. total length) yellowfin were observed to be turning ripe. The gonads from three female oceanic skipjack taken in the middle of May were completely spawned out. The ovaries were enlarged, hollow, and flabby. Ovaries of the remaining female oceanic skipjack and yellowfin tuna were firm but not turgid, and hollow with no ova visible. Apparently they were about to enter or were just past the ripe or running-ripe condition. Surface plankton hauls were made whenever possible in areas where these fish were taken, but no eggs or juveniles were taken in the net.

COLLECTION OF SPECIMENS: Fourteen night-light fishing stations were occupied. Collecting began soon after dark and lasted from two to four hours. Large squid were usually present during these periods and often caused the collections to be rather meager. They formed a hemisphere around the light and fed on fish or the larger invertebrate material that collected around the light. From five of these stations in both fishing areas, series of fish were taken which are externally strikingly similar to the juvenile yellowfin tuna and juvenile oceanic skipjack described from specimens taken 200 miles further south on the Central American coast by Schaefer and Marr (U. S. Fish & Wildlife Service, Fishery Bulletin No. 44). Positive identification awaits a more critical examination. Also still in need of a more positive identification is a series resembling juvenile frigate mackerel as described by Schaefer and Marr, (Pacific Science, October 1948). These are present in most of the collections. The number of species in these collections will probably be between 15 and 20.

FEEDING OF TUNA: Material taken from stomachs or regurgitated on deck by tuna included squid, crustacea, and small fishes. The tuna were often seen feeding on flying fish, sometimes catching them in mid-air. At such times few fish could be held near the boat with anchovettas and the fishing was generally slow. Flying fish were recovered from the mouths and stomachs of the few taken. The deck hose was found to be a handy tool for washing out stomachs.

—Giles W. Mead, Jr.

PROGRAM OF THE N.C. INSTITUTE OF FISHERIES RESEARCH

The program of the North Carolina Institute of Fisheries Research was outlined in its Third Semi-Annual Report which covers the period from July 1 to December 31, 1948. The program consists of scientific research, technological research, cooperation with other agencies, and education.

Under scientific research, some work has already been done on a survey of the ocean bottom off the North Carolina coast to ascertain the types of bottom suitable for shrimp trawling and the areas where shrimp are found. As a result of this project, charts containing this data have been made for the fishermen in the Southport area. Offshore commercial fishing trawlers have been cooperating by reporting the absence or presence of shrimp on the offshore fishing grounds.

Besides the study of offshore shrimping grounds, an investigation of inshore waters for shrimp as well as fish has been started. Rate of growth, precentage of the different species of shrimp in the commercial catch, percentage of shrimp captured below the commercial size, the time of local appearance, and sex ratio are being studied. The Institute failed to develop any evidence pointing to the need of restructive measures so far as conservation is concerned. It has definite evidence that, at least as far as last season is concerned, there is no dependence upon the sound shrimp by the ocean shrimp.

Shellfish investigations have been outlined to cover the following:

1. Suitability of bottoms as oyster planting areas;
2. Studies of the spawning, setting and growth rates of oysters;
3. The natural enemies of oysters in North Carolina waters;
4. Utilization of the heavy set in the Beaufort-Morehead area to supply seed for localities in Pamlico Sound;
5. Studies on the spawning, setting and growth rates of clams;
6. Research on the digestive process of oysters and clams;
7. A survey to determine the presence and abundance of the the various molluscs which are of commercial importance to other areas.

The program on finfish has not yet been well defined. Data on sizes, species, seasons, water salinity and temperatures are being collected on the offshore fishing grounds. The destruction of small fish by trawlers is under investigation, and concurrently a census will be taken of immature fish of commercial significance which are found in the sounds. The fishing of sturgeon, which has been banned in the Cape Fear River for several years, was under study in 1948 and further observations are planned for 1949.

The technological investigations are divided between a study of marketing methods used in North Carolina, net deterioration, and experimental gear work. The study on marketing includes the methods of handling fish and shellfish in local wholesale and retail markets, channels of distribution, sales methods, types of packages used, and consumer demand.

The Institute has been cooperating with other State agencies as well as with the Federal Government on shad migration investigations, study of offshore oceanographic conditions, and the compilation of a list of all published references on North Carolina's commercial fish and shellfish.

Under education, the Institute expects to aid:

1. High schools, by furnishing information, pictures, and slides on the types of marine life found in the State;
2. Colleges, by loaning its facilities for research work and for collecting;
3. Fishermen, by demonstration of net or gear assembly and mending.

REPORT OF PACIFIC OCEANIC FISHERY INVESTIGATIONS, JUNE 1949

AKU ABUNDANT IN JUNE IN MARIANAS: Aku were abundant during June near Saipan and Tinian Islands in the Marianas, according to information released in Honolulu July 25 by POFI of the Service. Two small sampans now fishing at Saipan were able to land as much as 10,000 pounds per day during June. In July 1946, an average of approximately 3,000 pounds per boat per day were caught.

A biologist of the staff found on a recent trip to the Marianas that there is no fish processing industry in that area at the present time. Fishing is done to supply the fresh market only. Plans are being made by Saipan residents to initiate a small canning venture in the future so that a larger portion of the rich fisheries resources of the central Pacific may be utilized.

COLLECTION OF JAPANESE TUNA LITERATURE: The program of collecting Japanese scientific papers dealing with research into tuna fishing and the habits of tuna has been virtually completed.

Much of the material was obtained in Japan by a POFI reconnaissance team while working under the auspices of SCAP, and the remainder came from U. S. Navy projects and the U. S. Fish and Wildlife Service's library in Washington, D. C. The collection, which will remain in Honolulu, is believed to be the most complete outside of Japan. Such material as will be of value to research and industry will be translated by the POFI staff.

SERVICE FILM CHOSEN FOR INTERNATIONAL CINEMATOGRAPHIC ART EXHIBITION

The newest Fish and Wildlife Service film, It's the Maine Sardine (16 mm. sound color), has been entered in International competition at the 10th International Exhibition of Cinematographic Art, the Department of the Interior announced on June 28. This film, produced by the Service in cooperation with the Maine Department of Sea and Shore Fisheries and the Maine Sardine Packers Association, depicts the catching of sardines off the Maine coast and the packing processes used in local canneries.

The selection was among the 13 made by the Department of State's Motion Picture Review Committee from more than 500 Government educational films. Another Interior film, California and Its Natural Resources, also was chosen.

Sponsored by the Italian Government, the Exhibition will be held in Venice, August 11-September 1. About 20 countries besides the U. S. will be represented.

USE OF CALIFORNIA SARDINES FOR REDUCTION PURPOSES LIMITED

California sardine processors will not only operate during the 1949-50 season under the lowest reduction quota in State history, but may find the percentage allocation a further deterrent to reducing whole fish into oil, meal, and pet food, according to the June 29 Outdoor California of the California Division of Fish and Game.

At their June meeting in Los Angeles, fish and game commissioners allowed 80 percent of the stringent 50,000-ton reduction quota to straight reduction plants, and 20 percent, or 10,000 tons, to reduction plants operated in connection with food canneries.

The allocation for the coming season (the sardine season opens August 1) is now in effect.

Setting of sardine reduction rules is the Commission's only regulatory power over the sardine industry. A legislative law also requires that at least 13½ cases of sardines be packed for human food use from each ton of fish processed.

U.S. PACK OF CANNED ANCHOVIES, 1948

The 1948 pack of canned anchovies amounted to 66,994 standard cases valued at $755,458 to the packers. Compared with the previous year, this was a decline of 49 percent in volume and 45 percent in value. The entire 1948 pack was canned by 23 firms in the Monterey and San Pedro district of California. Canning of anchovies in California is of recent origin. The packing of these fish was undertaken in 1947 as a result of the pilchard fishery. In that year, the California pack, and that of one firm in Washington, amounted to 130,119 standard cases, valued at $1,377,275.

Table 1 - Pack of Canned Anchovies by Size of Can & Case, 1948
(Quantity & Value to Canners)

State & Can Size	Actual Cases	Value
California:		
8 ozs. net (48 cans) ...	59,897	$317,224
8 ozs. net (96 cans) ...	19,965	272,641
16 ozs. net (48 cans) ...	1/17,081	1/165,593
Total, actual cases ...	96,943	755,458
Total, std. cases	66,994	755,458

1/Includes a small pack of cans containing 4 ozs. each, packed 48 cans to the case.
Note: Standard cases represent the pack of 48 cans of 16 ozs. each.

Table 2 - Pack of Canned Anchovies by Style of Pack, 1948
(Quantity & Value to Canners)

Style of Pack	Std. Cases	Value
Natural	44,808	$529,683
In tomato sauce ..	22,186	225,775
Total	66,994	755,458

U.S. PACK OF CANNED ANIMAL FOOD FROM FISHERY PRODUCTS, 1948

The 1948 pack of fishery products for animal food amounted to 1,323,808 standard cases, valued at $6,971,003 to the canner. Compared with the previous year, this was an increase of 45 percent in volume and 77 percent in value. The 1948 pack was the largest and most valuable in histroy. Nearly 60 percent of the production was canned in California and all but 1 percent of the remainder in Maine and Massachusetts. Animal food was canned in 6 plants in Massachusetts, 2 plants each in Maine and Washington, 1 plant each in New York and Virginia, and 4 plants in California.

Table 1 - Pack of Canned Animal Food from Fishery Products, 1948
(Quantity & Value to Canners)

State	Std. Cases	Value
Me. & N. Y.	292,381	$1,728,401
Mass.	259,964	1,130,035
Va. & Wash.	9,903	30,700
Calif.	761,560	4,081,867
Total	1,323,808	6,971,003

Note: "Standard cases" represent the various-sized cases converted to the equivalent of 48 cans, each containing 16 ounces.

Table 2 - Pack of Canned Animal Food from Fishery Products, 1948 (By Size of Can & Case--Quantity & Value to Canners)

Size of Can and Case	Actual Cases	Value
8 ozs. net (48 cans) ...	1,510,769	$4,417,523
15½ ozs. net (48 cans) .	63,887	218,105
16 ozs. net (48 cans) ..	345,656	1,666,303
Other sizes (std. cases).	160,876	669,072
Total	2,081,188	6,971,003

Table 3 - Pack of Canned Animal Food from Fishery Products, 1939-1948 (Quantity & Value to Canners)

Year	Std. Cases	Price Per Std. Case	Total Value
1948	1,323,808	5.27	$6,971,003
1947	909,964	4.34	3,949,419
1946	-	-	-
1945	-	-	-
1944	-	-	-
1943	1,771	3.00	5,319
1942	104,954	3.57	374,718
1941	1,009,515	2.60	2,624,487
1940	721,732	2.58	1,861,638
1939	566,673	1.96	1,109,112

U.S. PACK OF CANNED FISH ROE AND CAVIAR, 1948

The domestic pack of canned fish roe and caviar in 1948 amounted to 50,629 standard cases (48 one-pound cans), valued at $1,473,320 to the packer. This was a decline of 3 percent in volume and 10 percent in value compared with the previous year. Alewife roe accounted for nearly half the total pack, and over one-fourth of the value. Although the volume of the New York pack was less than in many of the states, the value was much greater due to the high value of the whitefish, salmon, and sturgeon caviar canned in that State.

Table 1 - Pack of Canned Fish Roe and Caviar, 1948 (Quantity and Value to Canner)

Product	Standard Cases	Price Per Std. Case	Total Value	States In Which Produced and Number of Plants
Roe:				
Alewife	22,658	$17.72	$ 401,416	Md. 7, Va. 14, N. C. 9
Herring	3,478	10.32	35,883	Me. 2, Mass. 1
Mackerel	6,574	14.66	96,370	Mass. 4, Md. 3
Shad	3,075	67.67	208,079	Md. 1, Va. 1, Fla. 1, Wash. 1, Ore. 7, Calif. 2
Misc., incl. trout, pollock, yellowtail, and menhaden	2,606	17.45	45,466	Mass. 1, Va. 1, N. C. 1
Caviar:				
Whitefish	2,389	45.09	107,710	N. Y. 4, Wisc. 1
Misc., incl. salmon, sturgeon and carp	2,310	180.80	417,640	N. Y. 2, Va. 1
Total edible roe and caviar	43,090	30.46	1,312,564	
Salmon eggs (for bait) ...	7,539	21.32	160,756	Wash. 5, Ore. 1
Grand total	50,629	29.10	1,473,320	

Note: "Standard cases" represent the various-sized cases converted to the equivalent of 48 cans of 16 ozs. each.

Table 2 - Pack of Canned Fish Roe & Caviar, By States, 1948 (Quantity & Value to Canner)

State	No. of Plants Exclusive of Duplication	Standard Cases	Value
			$
Maine	2 }	11,430	159,772
Mass.	5 }		
N. Y.	4	3,541	463,534
Md.	7	7,572	175,307
Va.	14	14,371	259,638
N. C.	9	2,555	46,633
Fla.	1 }		
Wisc.	1 }	1,367	72,553
Calif.	2 }		
Wash.	6	7,501	159,166
Ore.	8	2,292	136,717
Total ..	59	50,629	1,473,320

Table 3 - Pack of Canned Fish Roe & Caviar, 1939-1948 (Quantity & Value to Canner)

Year	Std. Cases	Price Per Std. Case	Total Value
1948	50,629	$29.10	$1,473,320
1947	52,432	31.30	1,641,228
1946	58,192	32.75	1,905,638
1945	36,795	25.77	948,042
1944	55,677	14.80	824,197
1943	59,884	17.44	1,044,582
1942	53,190	17.13	910,890
1941	76,740	10.63	815,514
1940	61,852	14.42	891,814
1939	54,448	14.86	957,875

U.S. PRODUCTION OF MARINE ANIMAL OILS, 1948

The 1948 United States and Alaska production of marine-animal oils amounted to 17,045,390 gallons, valued at $30,861,522 to the producers. This was an in-

Table 1 - Production of Marine-Animal Oils, 1948 (Quantity & Value to Producers)

Item	Atlantic and Gulf Coasts 1/		Pacific Coast (including Alaska)		Total	
	Gallons	$ Value	Gallons	$ Value	Gallons	$ Value
From Body and Waste of:						
Anchovy	-	-	15,407	15,320	15,407	15,320
Fur seal	-	-	47,711	42,484	47,711	42,484
Herring	90,548	74,681	3,541,267	3,918,173	3,631,815	3,992,854
Menhaden	8,763,939	10,132,179	-	-	8,763,939	10,132,179
Pilchard	-	-	2,328,572	2,457,858	2,328,572	2,457,858
Salmon:						
Edible	-	-	22,065	77,228	22,065	77,228
Industrial	-	-	94,264	93,150	94,264	93,150
Tuna and mackerel .	-	-	660,515	622,110	660,515	622,110
Whale:						
Sperm	-	-	62,332	66,071	62,332	66,071
Other	2,650	2,427	55,107	61,719	57,757	64,146
Miscellaneous 2/....	2/ 508,869	742,374	2/ 129,815	144,096	638,684	886,470
Total	9,366,006	10,951,661	6,957,055	7,498,209	16,323,061	18,449,870
From Livers and Viscera of:						
Cod	196,685	529,426	-	-	196,685	529,426
Shark	3/	3/	3/ 434,010	3/ 6,315,232	434,010	6,315,232
Tuna	3/	3/	3/ 25,379	3/ 1,080,241	25,379	1,080,241
Miscellaneous	4/ 1,709	4/ 83,286	4/ 64,546	4/ 4,403,467	66,255	4,486,753
Total	198,394	612,712	523,935	11,798,940	722,329	12,411,652
Grand Total	9,564,400	11,564,373	7,480,990	19,297,149	17,045,390	30,861,522

1/Includes a small production of burbot liver and unclassified body oils in Minnesota.
2/Includes the production of alewife, rosefish and unclassified body oils on the East Coast; and unclassified body oils on the West Coast.
3/East and West Coast production combined.
4/Includes the production of burbot, halibut, rockfish and swordfish liver oils on the East Coast; and halibut, lingcod, sablefish, mixed liver oils and viscera oils on the West Coast.

Table 2 - Production of Marine-Animal Oils, 1939-48 (Quantity & Value to Producers)

Year	Body Oils			Liver Oils			Total		
	Gallons	Price Per Gallon	Value	Gallons	Price Per Gallon	Value	Gallons	Price Per Gallon	Value
1948	16,323,061	$1.13	$18,449,870	722,329	$17.18	$12,411,652	17,045,390	$1.81	$30,861,522
1947	15,900,382	1.26	20,107,194	832,510	13.99	11,643,468	16,732,892	1.90	31,750,662
1946	19,135,051	1.11	21,223,098	895,884	15.20	13,618,549	20,030,935	1.72	34,841,647
1945	23,697,564	0.68	16,033,515	804,288	13.93	11,202,207	24,501,852	1.11	27,235,722
1944	27,324,173	0.65	17,771,346	998,802	13.25	13,237,435	28,322,975	1.09	31,008,781
1943	22,264,362	0.67	14,970,884	851,854	17.42	14,841,970	23,116,216	1.29	29,812,854
1942	19,549,283	0.64	12,518,206	1,029,821	9.77	10,061,396	20,579,104	1.10	22,579,602
1941	28,045,869	0.52	14,719,628	1,237,758	12.02	14,874,586	29,283,627	1.01	29,594,214
1940	24,023,661	0.29	6,936,608	791,877	6.43	5,088,570	24,815,538	0.49	12,025,178
1939	35,064,420	0.29	10,221,407	687,693	6.51	4,475,662	35,752,113	0.41	14,697,069

crease of 2 percent in volume, but a decline of 3 percent in value compared with the previous year. Menhaden oil accounted for over half of the production and nearly one-third of the value; fish liver oils accounted for only 4 percent of the volume, but represented 40 percent of the total value.

U.S. PRODUCTION OF MARINE PEARL-SHELL BUTTONS, 1948

The 1948 production of marine pearl-shell buttons (produced principally from imported shells) amounted to 4,974,073 gross, valued at $8,587,011 to the manufacturers. This was an increase of 44 percent in volume and 52 percent in value compared with 1946, the most recent previous year for which data are available. While the 1948 production of marine pearl-shell buttons was considerably below the normal prewar yield, the value was the largest in histroy. Manufacturers received an average of $1.73 per gross for their 1948 production compared with an average of 58 cents in 1939. Marine pearl-shell buttons were manufactured in 4 plants in New York, 12 in New Jersey, 3 in Connecticut, 2 in Pennsylvania, 1 in Maryland and 2 in Iowa.

Table 1 - U. S. Production of Marine Pearl-Shell Buttons, 1948 1/ (Quantity & Value to Manufacturer)

State	Quantity	Price Per Gross	Total Value
	Gross	$	$
New York	1,358,712	1.66	2,248,887
New Jersey	1,333,384	1.65	2,198,112
Connecticut	1,055,467	1.81	1,914,499
Pa., Md., & Iowa ..	1,226,510	1.81	2,225,513
Total	4,974,073	1.73	8,587,011

1/ Produced principally from imported shells.

Table 2 - U.S. Production of Marine Shell Buttons, 1939-48 (Quantity & Value to Manufacturer)

Year	Quantity	Price Per Gross	Total Value
	Gross	$	$
1948	4,974,073	1.73	8,587,011
1947	1/	-	1/
1946	3,461,559	1.63	5,635,904
1945	2,398,020	1.37	3,286,245
1944	2,035,320	1.28	2,601,626
1943	2,949,978	1.29	3,792,059
1942	5,364,718	.84	4,532,695
1941	7,424,769	.72	5,337,351
1940	6,830,628	.61	4,140,984
1939	7,173,933	.58	4,174,417

1/ Data not available.

U.S. PRODUCTION OF FRESH-WATER MUSSEL-SHELL PRODUCTS, 1948

The 1948 production of fresh-water mussel-shell buttons amounted to 6,810,135 gross, valued at $5,396,511 to the manufacturers. In addition, crushed shell poultry feed, lime and chips, and novelties valued at $50,610 were produced by button manufacturers. While the production of buttons was far below normal, their average value, which amounted to 79 cents per gross, was the highest in history, and was over three times the average price received in 1939.

Table 1 - Production of Fresh-Water Mussel-Shell Products, 1948 (Quantity & Value to Manufacturer)

Product	Unit	Iowa & Missouri		N.Y., Pa., & Ill.		Total	
		Quantity	Value	Quantity	Value	Quantity	Value
Buttons	Gross	5,688,904	$4,261,195	1,121,231	$1,135,316	6,810,135	$5,396,511
Crushed shell poultry feed .	Tons	1/852	1/8,522	1/	1/	852	8,522
Lime	"	1,368	3,678	-	-	1,368	3,678
Chips, shells & novelties ..	-	-	38,410	-	-	-	38,410
Total	-	-	4,311,805	-	1,135,316	-	5,447,121

1/A small production in New York has been included with that in Iowa and Missouri.

Table 2 - U. S. Production of Fresh-Water Mussel-Shell Products, 1939-48 (Quantity & Value to Manufacturer)

Year	Buttons			Other Products 1/	Total
	Gross	Price Per Gross	Value	Value	Value
1948	6,810,135	$0.79	$5,396,511	$ 50,610	$5,447,121
1947	3/	-	3/	3/	3/
1946	9,669,580	0.68	6,527,758	101,820	6,629,578
1945	2/9,027,685	0.54	2/4,844,647	-	2/4,844,647
1944	8,024,609	0.54	4,306,353	122,550	4,428,903
1943	8,077,525	0.46	3,679,305	102,723	3,782,028
1942	11,585,292	0.43	4,980,476	83,795	5,064,271
1941	10,020,499	0.30	2,971,547	65,803	3,037,350
1940	8,860,113	0.27	2,434,257	55,181	2,489,438
1939	10,139,382	0.24	2,428,994	63,348	2,492,342

1/Crushed shell poultry feed, lime, chips, etc.
2/Estimated.
3/Data not available.

Mussel shells purchased during the year amounted to 9,657 tons, valued at $452,343. Shells were taken in 13 states in the Mississippi River and Great Lakes region. The producing states in the order of their importance were: Tennessee, which contributed 40 percent of the total quantity; Kentucky, 23 percent; Alabama, 19 percent; Indiana, 8 percent; Arkansas, 5 percent; Illinois, 4 percent; and Iowa, Michigan, Minnesota, Missouri, Ohio, South Dakota and Texas, 1 percent.

WHOLESALE AND RETAIL PRICES

As of June 14, 1949, the wholesale index for all commodities continued to drop and was 0.8 percent lower than on May 17 this year, and 6.5 percent lower than on June 15 last year, according to the Bureau of Labor Statistics of the Department of Labor. All foods, however, increased slightly and the index was 0.2 percent higher than on May 17 this year, but was still 9.4 percent lower than on June 15, 1948.

There was a big drop in the canned salmon wholesale prices during June due to attempts by wholesalers to clean up their stocks of the 1948 pack. Pink canned

salmon prices were 21.8 percent below May and 15.9 percent lower than in June 1948. Canned red salmon prices were 9.6 percent lower than in May this year and June last year.

Wholesale and Retail Prices

Item	Unit		Percentage change from--	
Wholesale: (1926 = 100)		June 14,1949	May 17,1949	June 15,1948
All commodities	Index No.	154.8	- 0.8	- 6.5
Foods	do	163.8	+ 0.2	- 9.4
Fish:		June 1949	May 1949	June 1948
Canned salmon, Seattle:				
Pink, No. 1, Tall	$ per doz. cans	4.432	-21.8	-15.9
Red, No. 1, Tall	do	5.787	- 9.6	- 9.6
Cod, cured, large shore, Gloucester, Mass.	$ per 100 lbs.	15.500	0	+ 6.9
Retail: (1935-39 = 100)		June 15,1949	May 15,1949	June 15,1948
All foods	Index No.	204.3	+ 0.9	- 4.6
Fish:				
Fresh, frozen and canned	do	312.6	- 0.9	+ 4.4
Fresh and frozen	do	252.2	- 0.9	+ 0.2
Canned salmon:				
Pink	¢ per lb. can	59.6	- 0.8	+12.0

Retail food prices rose slightly in June and as of June 15 the all-foods index was 0.9 percent higher compared with May 15, but 4.6 percent lower than on June 15 a year ago. Fishery products did not follow the same trend as all foods. The retail index for fresh, frozen, and canned fishery products was 0.9 percent below May 15 this year, but 4.4 percent higher than on June 15, 1948. The fresh and frozen index followed the same trend except that it was only 0.2 percent higher than the corresponding period a year ago. Canned pink salmon retail prices also continued to drop and were 0.8 percent lower than on May 15, but were still 12 percent above June 15 last year.