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COMMERCIAL FISHERIES REVIEW



A REVIEW OF DEVELOPMENTS AND NEWS OF THE FISHERY INDUSTRIES
PREPARED IN THE BRANCH OF COMMERCIAL FISHERIES

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Applications for COMMERCIAL FISHERIES REVIEW, which is mailed free to members of the fishery industries and allied interests, should be addressed to the Director, Fish and Wildlife Service, U. S. Department of the Interior, Washington 25, D.C.

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GEORGES BANK HADDOCK FISHERY--1951

Part I--Analysis of 1951 Fishery

By John R. Clark*

Unusual abundance of large scrod was the keynote of the 1951 haddock fishery on Georges Bank. These large scrod were members of the very successful 1948 brood which entered the fishery so spectacularly as small two-year-old scrod during 1950. The increase in size of the fish of this brood was due, merely, to the addition of another year's growth. Some grew enough to be sold as large haddock. ^{1/}

In a report on the 1950 fishery (Schuck 1951), it was predicted that this 1948 brood would contribute substantial numbers of larger-sized haddock to the fishery in the future and that landings could be expected to increase. That an

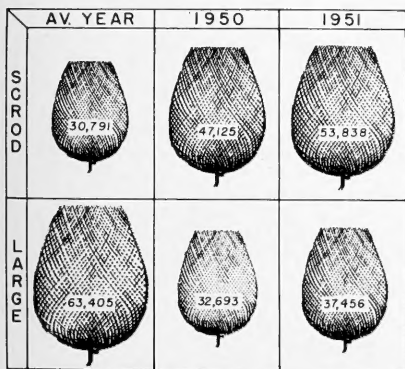


FIG. 1 - HADDOCK LANDED FROM GEORGES BANK-- IN THOUSANDS OF POUNDS.

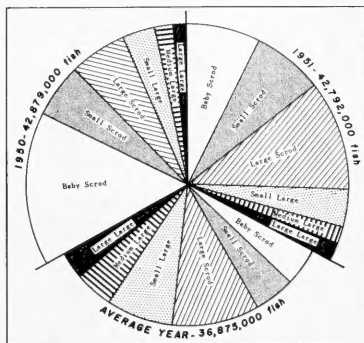


FIG. 2 - NUMBERS OF HADDOCK OF VARIOUS SIZES LANDED FROM GEORGES BANK IN 1951, 1950, AND THE AVERAGE YEAR.

increase did occur is shown by figure 1. It can be seen from the figure that 1951 landings of scrod bettered 1950 by almost 7,000,000 pounds. Landings of large haddock were about 5,000,000 pounds higher than 1950. The average year ^{2/} is also included in figure 1 for comparison.

The increase in landings of scrod was due, simply, to their larger size, as fewer individual scrod were landed in 1951 than in the previous year. The number of scrod landed in 1951 (32,600,000) dropped off a million from 1950 (33,600,000). The number of large haddock landed in 1951 (10,300,000) increased about a million over 1950 (9,200,000).

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^{1/}AS DEFINED BY THE NEW ENGLAND FISH EXCHANGE, SCROD ARE HADDOCK OF 1½ TO 2½ POUNDS, LARGE HADDOCK ARE OVER 2½ POUNDS.

^{2/}ALL AVERAGE-YEAR DATA ARE BASED ON THE PERIOD 1931-48.

The average weight of scrod landed in 1951 was 1.65 pounds apiece as compared to only 1.40 pounds in 1950. The 1951 large haddock averaged 3.65 pounds as compared to 3.54 pounds for 1950.

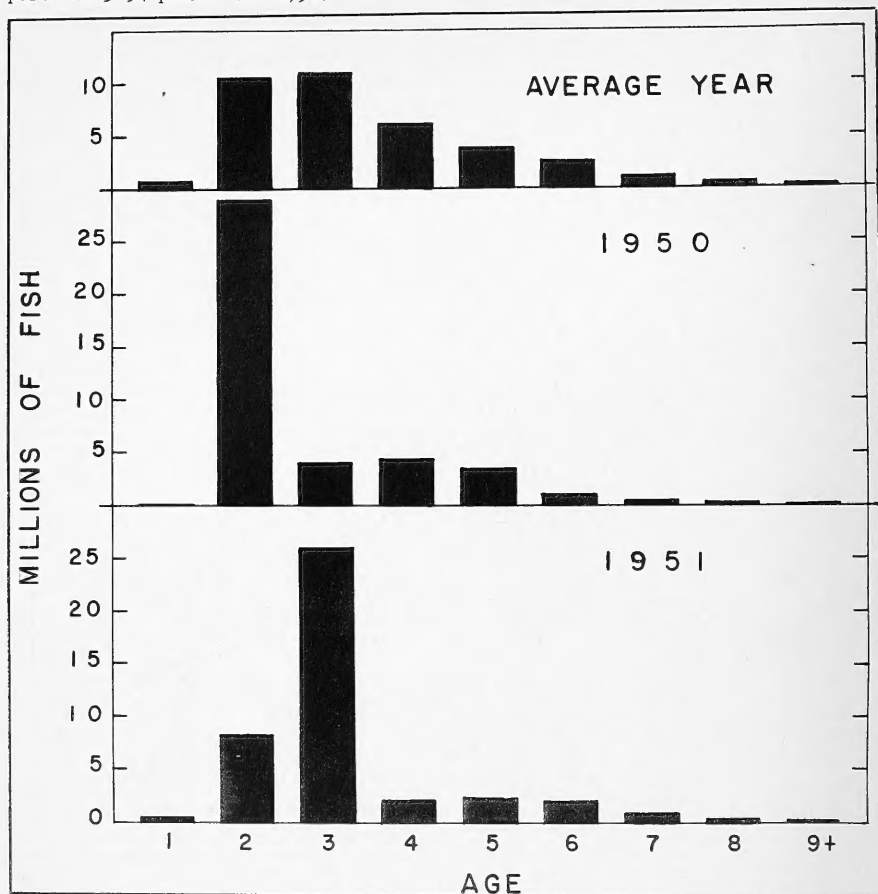


FIG. 3 - AGE COMPOSITION OF HADDOCK LANDINGS FROM GEORGES BANK IN 1951, 1950, AND THE AVERAGE YEAR.

The numbers of the various sizes of fish landed are shown graphically in figure 2. Although the total numbers of fish landed in 1950 and 1951 are almost equal, the proportions of the various sizes differ considerably. The most striking difference appears in the decrease in landings of baby scrod and the increase in landings of large scrod in 1951. Inspection of the graph will reveal lesser differences in the other size categories. For comparison, the average year is also shown in figure 2.

The unusually great abundance of the 1948 brood is demonstrated in figure 3, which shows the age composition of the landings. As two-year-olds in 1950 and 3-year-olds in 1951, the 1948 brood was $2\frac{1}{2}$ times as abundant as the average brood.

Of all other broods to enter the fishery since 1931, three were really outstanding. The large 1936 brood was primarily responsible for increased catches of haddock in the late 1930's and the successful 1939 and 1940 broods provided good catches of haddock in the early 1940's. These three (1936, 1939, and 1940) yielded respectively 181, 181, and 145 percent more 2- and 3-year-olds than the average brood. The 1948 brood has contributed 250 percent more 2- and 3-year-olds than the average brood, far exceeding the yield of any other for which we have records.

LITERATURE CITED

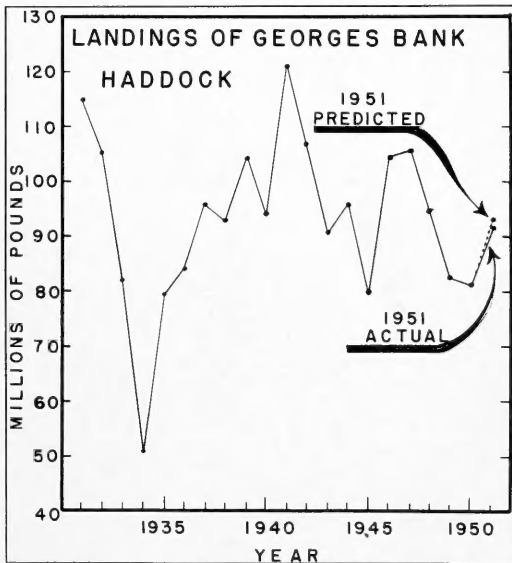
SCHUCK, HOWARD A.

1951. 1950--AN UNUSUAL HADDOCK YEAR ON GEORGES BANK. COMMERCIAL FISHERIES REVIEW, VOL. 13, NO. 6 (JUNE), PP. 27-9.

Part II--Accuracy of 1951 Prediction

By Howard A. Schuck*

A method of predicting the catch of haddock from Georges Bank a year in advance has been developed by the U. S. Fish and Wildlife Service's Woods Hole Fishery Laboratory. This method is dependent on the analysis of detailed data which have been collected routinely by the Service since 1931. Required for this analysis are the statistics of catch (including especially measures of the effort expended in making these catches) and data on the age composition and on the lengths and weights of the haddock landed over a period of years. The method depends on establishing the relation of the decline in abundance of each age group between succeeding years, together with establishing the variations in abundance of the several age groups contributing to the fishery. Once these relations have been established, it is possible to predict the landings for any year, providing data on the landings and on the age composition of the year preceding are available.



Although it has not yet been possible to present the full details of this method, it has been used to predict the Georges Bank haddock catch. This prediction was made by Dr. William F. Royce to the National Fisheries Institute at their 1951 annual meeting in Boston, and excerpts of it were subsequently printed in the Food Field Report of April 1951. The prediction was for the "haddock year" of 1951, which differs by one month from the calendar year. The 1951 haddock year began February 1, 1951, and ended January 31, 1952.

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It was predicted that a considerably greater catch would be made from Georges Bank in 1951 than the 80.5 million pounds landed in 1950. Just how much increase could be expected over 1950 obviously depended upon how much fishing would be done on Georges Bank in 1951. Thus, predictions were made for each of several fishing intensities.

If, in 1951, the amount of fishing on Georges Bank were the same as in 1950, the catch to be expected was set at 88 million pounds; for a 10 percent increase in fishing effort, the prediction was set for 93 million pounds; and for a 10 percent decrease in effort, a catch of 83 million pounds was anticipated.

Now that the 1951 haddock year is over, it is possible to make an evaluation of the prediction.

The records show that there were 9.7 percent more days fished in 1951 than in 1950. With this increase in fishing, the catch was predicted to be 92.8 million pounds. Actually, 91.3 million pounds were landed. Thus the landings differed from the predicted by only 1.5 million pounds. The prediction proved 98.4 percent accurate.

The Georges Bank landings of haddock for a 20-year period (1931 through 1950) and the predicted and actual 1951 landings are shown in figure 1.

A prediction was also made of the size of haddock to be expected in the landings. It was predicted that "a larger than usual percentage of the 1951 catch would be good-sized scrod, averaging about $2\frac{1}{4}$ pounds."

In the average year, haddock weighing about $2\frac{1}{4}$ pounds (2- to $2\frac{1}{2}$ -pound range) have accounted for approximately 29 percent of the landings. For 7 trips to sea made by Service biologists in 1951 fully 43 percent of the landings were composed of 2- to $2\frac{1}{2}$ -pound fish. Thus, as predicted, considerably more of this size group were taken than are taken in an average year.

EDITORS' NOTE: Haddock Catch on Georges Bank to Decrease in 1952: The Service's North Atlantic Fishery Investigations predicts that the 1952 catch of haddock on Georges Bank will be 89.0 million pounds if the fishing effort is the same this year as in 1951. This prediction was announced on April 29 this year. This would be a reduction of 2.3 million pounds or 2.5 percent of last year's catch of 91.3 million pounds. (See Commercial Fisheries Review, May 1952, p. 20.)



POTENTIAL MARKETS FOR ALASKA SALMON CANNERY WASTE

By Norman B. Wigutoff*

INTRODUCTION

Since the beginning of salmon canning in Alaska late in the nineteenth century, waste disposal or utilization has been a problem. The canning process results in the use of only two-thirds of the whole fish. The other one-third--head, tail, fins, and viscera or entrails--is discarded.

Although reduction plants are successfully operated in areas of Alaska where large volumes of waste are available from several canneries, it has proved impractical with present costs to operate the usual type of reduction plant in areas where only one or two canneries are located. Inasmuch as many canneries are located in isolated places, the problem of waste utilization in these areas remains.

Between 100,000,000 and 125,000,000 pounds of salmon waste are discarded annually in Alaska.

The simplest way to dispose of this waste is to discharge it into deep water for the tides to carry it away. This is one reason why salmon canneries in Alaska

are located on docks over deepwater whenever this is at all possible. Canneries located near shoal water must devise other means of disposal. This results in an expense, sometimes rather large, for chutes, bins, and scows, with which to collect and carry the waste to deep water and away from currents which might return the waste to the beach near the cannery.

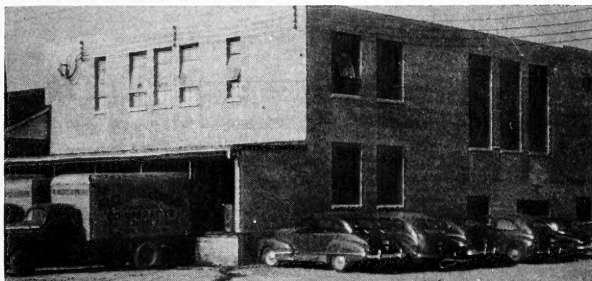


FIG. 1 - HORSE SLAUGHTERING AND FOOD-MIXING PLANT OF A MINK FARMERS' COOPERATIVE NEAR SALT LAKE CITY, UTAH.

With the increase in population and commerce in Alaska, the disposal of the waste into tidal water also becomes a health hazard. Recently the Territorial legislature created a Water Pollution Control Board which has already issued orders prohibiting this type of fish-waste disposal in several specific places. But, more important, it is economic waste to throw away one-third of the salmon which does not go into the can. Therefore, the U. S. Fish and Wildlife Service and the Alaska Fisheries Experimental Commission have devoted considerable research into the economic possibilities for the use of this salmon waste.

Research on the utilization of Alaska salmon-cannery waste was conducted in 1947 by the Fishery Products Laboratory at Ketchikan, Alaska, and the Service's Fishery Technological Laboratory at Seattle, Washington. That research was made possible by a grant of funds to the Alaska Fisheries Experimental Commission from the Industrial Research and Development Division, Office of Technical Services, U. S. Department of Commerce. As a result of that work a series of articles was published in two reports issued by the Department of Commerce in 1947 and 1948.

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These reports discussed the production of biologicals, vitamin oils, industrial oils, salmon head oil for addition to canned salmon, and hatchery fish feeding from salmon waste. Research on the utilization of salmon cannery waste for hatchery fish feeding has been continued by the Fishery Technological Laboratory at Seattle. Several reports on various phases of this subject are now being prepared for publication. The most recent work (Landgraf, et al 1951, and Leekley, et al, unpublished data, 1952) was directed toward determining the suitability of salmon cannery waste as an ingredient in feeds for fur animals and hatchery fish. All of these researches have shown that salmon waste, particularly the soft visceral portions, is an excellent source of protein and vitamins. Much of the vitamins and the best protein are reported to be concentrated in the salmon eggs.

This part of the investigation was on the technical or manufacturing phase. Nothing was done on the marketing or distribution of fish food from salmon waste. Therefore, a study of potential markets for salmon was made in 1951.

POTENTIAL MARKETS

The potential market for salmon waste in the fur-farm and fish-hatchery industries in the western and midwestern United States is discussed in this report. To determine whether such a potential market exists, a field survey was made in the summer of 1951 in Washington, Oregon, Idaho, Utah, Colorado, Illinois, and Wisconsin. Fur farms, fish hatcheries (private, state, and federal), feed dealers, and feed cooperatives were visited. Feeding practices, costs, and individual preferences were observed and discussed.

Table 1 - Mink-Farm Populations in 17 States, 1948-50 Average ^{1/}		
State	Number of Mink Kits Raised	Number of Females on Farms
Wisconsin	712,000	203,144
Minnesota	224,467	70,304
Illinois	133,307	36,287
Michigan	125,000	40,802
Washington	87,442	29,360
Utah	72,414	25,886
Oregon	64,368	21,027
Iowa	58,352	18,319
Colorado	22,050	7,787
Idaho	19,266	6,359
California	14,384	5,467
South Dakota ...	13,716	4,107
Nebraska	9,176	3,079
Wyoming	7,424	2,912
Montana	7,251	2,282
Missouri	5,421	2,136
Kansas	4,333	1,767
Total	1,580,371	481,025
Subtotal (Kits and Females) ..		2,061,396
Males ^{2/}		137,500
Total, all mink		2,198,896
^{1/} CALCULATED FROM DATA OF THE NATIONAL BOARD OF FUR FARM ORGANIZATIONS.		
^{2/} CALCULATED ON AVERAGE OF ONE BREEDING MALE PER 3.5 BREEDING FEMALES.		

FUR FARMS: The number of mink and fur farms in 17 Western and Midwestern states is presented in table 1. In the Pacific Northwest it is common practice to supply an annual over-all average of about 60 percent fish in mink diets, while in the Midwestern states 15 to 20 percent fish in mink diets is considered high. If mink can be raised successfully in the Northwest on a large proportion of fish in the diet, there is reason to believe that the same average proportion of fish might be used for mink elsewhere. Mink ranchers are encountering greater difficulty in obtaining satisfactory and sufficient supplies of feeding materials at a price they can afford to pay. For the last several years, horse meat, the main feed ingredient, has become more expensive and less available. It is generally accepted in the fur-farming industry that some other material, cheaper and more abundant is needed. The greatest potential source of fur-animal feed is the fishing industries.

Mink ranchers report an annual average feed requirement of 100 to 125 pounds per animal. On the basis of the number of animals on mink farms as shown in table 1 and using the lower average of 100 pounds

of food per animal, the annual potential market was calculated and is shown in table 2.

Table 2 - Mink Feed Requirements in 17 States

	lbs.
Annual average number of mink on farms in 17 States	2,198,000
Total annual mink-feed requirements at 100 lbs. per animal	219,896,000
Potential fish requirements based on 60 percent fish in diets	131,934,000
Potential fish requirements based on 15 percent fish in diets	32,984,000

The total salmon-cannery waste per year in Alaska is estimated at from 100,000,000 to 125,000,000 pounds. In southeastern Alaska, the annual volume of salmon cannery waste is estimated to be between 25,000,000 and 30,000,000 pounds. On the basis of the requirements in table 2 it appears that the potential market for salmon-cannery waste in the 17 listed states would vary from 33,000,000 pounds to a maximum of over 131,000,000 pounds per year. The maximum potential exceeds the total waste available from all salmon canneries in Alaska. The lower figure (32,984,000 pounds) approximates or exceeds the amount of salmon waste which is produced annually in southeastern Alaska.

HATCHERIES: Fish food is reported to be one of the major items of expenditure in trout and salmon hatcheries. Fiedler and Samson (1935) reported a total of over 11,000,000 pounds of food used in 1934 in the fish hatcheries operated by 42 states, about two-thirds of the privately-owned hatcheries, and all the federal hatcheries.

In a later survey made by Tunison, et al (1949), a total of over 29,000,000 pounds of food was reported used by hatcheries of 38 states and the Federal Government. Privately-operated hatcheries were not included in that study. The increase is due to the tremendous growth of the industry. This growth is continuing at a steady pace.

The food used in fish hatcheries operated by 12 of the 17 states is shown in table 3. The total, over 16,000,000 pounds, does not include private or commercial hatcheries or those of the federal government in these states. Fiedler and Samson (1935) reported private hatcheries represented 29 percent of the industry. On the basis of this figure and adding a conservative estimate of 1,000,000 pounds for the federal hatcheries, the total food used in all hatcheries in the 17 states amounts to about 24,000,000 pounds per year. This total is actually low, for several reasons. No data are available for the states of Wisconsin, Illinois, Iowa, South Dakota, and Idaho. Idaho and Wisconsin have extensive fish-hatchery operations. Illinois and Iowa have less extensive but substantial hatchery operations. Supervisors of the U. S. Fish and Wildlife Service hatchery operations in Region 1, comprising the states of Washington, Oregon, California, Idaho, Montana, and Nevada, report annual requirements of salmon viscera alone at 1,000,000 to 1,500,000 pounds.

Table 3 - Food Used in State Fish Hatcheries of certain States^{1/}

State	Food Used
	lbs.
Wisconsin	2/
Minnesota	297,683
Illinois	2/
Michigan	2,191,778
Washington	2,929,300
Utah	4,140,500
Oregon	2,225,766
Iowa	2/
Colorado	1,000,000
Idaho	2/
California	2,353,342
South Dakota ...	2/
Nebraska	95,192
Wyoming	44,942
Montana	415,470
Missouri	338,000
Kansas	16,000
Total	16,047,973

^{1/} FROM TUNISON, ET AL (JANUARY AND OCTOBER, 1949). DATA ARE FOR CALENDAR YEAR 1947 OR CLOSEST FISCAL YEAR.

^{2/} NOT REPORTED.

The Federal hatcheries are in the market for salmon viscera or soft portions only; heads, tails, fins and trimmings are not desired. Viscera are fed up to a ratio of 30 percent of the food used in these Federal hatcheries.

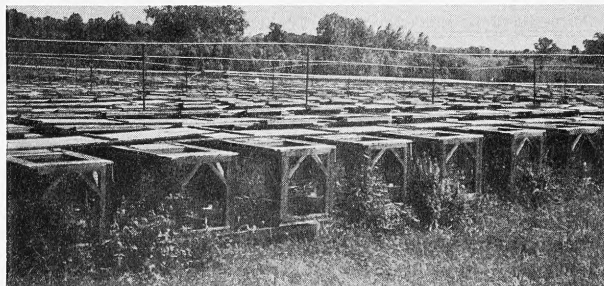


FIG. 2 - PORTION OF A TYPICAL WISCONSIN MINK RANCH.

The states of Oregon and Washington, on the other hand, use the entire waste and even include chopped whole salmon carcasses (spawned-out fish) in fish food fed in state-operated hatcheries. Fish comprise 75 to 90 percent of the foods used in the state-operated hatcheries of Oregon and Washington. In one salmon hatchery in Washington where feeding experiments are conducted, successful results have been obtained on a diet of almost 100-percent salmon-cannery waste plus some small amounts of supplements.

As power, flood control, and irrigation dams are built on the river systems of the Northwest, the need for fish hatcheries increases. In addition, the present hatchery practice is to keep the fish in the hatcheries until they are of larger size to increase their ability to survive. It is estimated by research workers in this field that the projected fish hatcheries for the lower Columbia River will create a total annual demand of 25,000,000 pounds of fish food for that area alone.

COMPARATIVE COSTS AND FACILITIES

Methods used and the costs involved in the collection of salmon cannery waste were described by Landgraf, et al (1952). During the summer of 1951 over 100,000 pounds of frozen salmon viscera--soft portions of whole waste only--were collected at Petersburg, Alaska, for use in a Federal hatchery in the state of Washington. The costs of the collection and shipment to Seattle, Washington, are given in table 4. The total cost of the salmon viscera delivered at dockside in Seattle was 5.21

Table 4 - Cost for Collecting and Shipping 100,750 Pounds of Salmon Viscera from Petersburg, Alaska, to Seattle, Washington

Cost f.o.b. dock at Petersburg, Alaska ^{1/}	\$3,084.00
Freight, wharfage, and handling charges Petersburg, Alaska, to Seattle, Washington	\$2,167.39
Price per pound f.o.b. dock, Petersburg, Alaska ^{1/}	3.06¢
Shipping cost per pound--Petersburg, Alaska, to Seattle, Washington (includes wharfage and handling both places)	2.15¢
Price per pound f.o.b. dock, Seattle, Washington	5.21¢

^{1/}INCLUDES LABOR AND MATERIALS FOR COLLECTION OF WASTE, INSTALLATION OF COLLECTION FACILITIES, HAULING TO COLD STORAGE, FREEZING CHARGES, AND COST OF VISCERA AT 2¢ PER POUND, BUT DOES NOT INCLUDE THE PACKER'S PROFIT ON THIS OVER-ALL COLLECTION.

cents per pound. From the dock in Seattle, additional costs are involved in transporting the product to the fish hatcheries and mink ranches either by rail or by truck. The railroad freight rate for the commodity "Fish scraps, ground, frozen, having value only for animal feeding purposes, not prepared for human consumption, wrapped in waxed or Kraft paper" shipped in refrigerated cars is \$1.33 per 100 pounds from Seattle to Salt Lake City, points in Colorado, North Dakota, South

Dakota, Minnesota, Wisconsin, northern peninsula of Michigan, Illinois, Iowa, Nebraska, Kansas, Missouri, Oklahoma, Arkansas, Texas, and Louisiana. Carload minimums are 60,000 pounds in refrigerator cars of less than 2,200-cubic-foot loading capacity and 72,000 pounds in refrigerator cars of 2,200-cubic-foot or greater capacity. In addition, there are charges for ice and salt for cooling the refrigerator cars en route. The refrigerated truck rate for the commodity: "Scrapfish frozen in blocks, loose" is \$1.00 per 100 pounds, minimum 30,000 pounds, from Seattle to Salt Lake City and way points on the direct route. Delivered costs to Wisconsin points, for instance, would be between 6.54 and 7.00 cents per pound for frozen salmon viscera as collected in 1951 in Petersburg, Alaska.

These costs are considerably higher than the prices now being paid for fishery feed materials by the mink ranches in the Midwest. The costs of various fishery items now used range from a low of 3.60 to 5.05 cents per pound delivered to the users (table 5). Even considering the high nutritive quality of salmon-cannery waste, it is doubtful whether the difference in price would make it possible to develop an extensive market among the mink ranchers of the Midwestern States under the conditions prevailing in 1951 and 1952.

Table 5 - Prices of Frozen Fishery Items Used on Mink Ranches in Midwest, Fall 1951

Fishery Item	Source	Prices per 100 lbs. in Indiana, Michigan, Illinois, and Southeastern Wisconsin	Price per 100 lbs. in Iowa and Minnesota
Whiting, fillet carcasses, whole, in 25-lb. tins	Atlantic Coast	\$3.60 ^{1/}	\$3.80 ^{1/}
Haddock and flounder fillet carcasses, ground, in 35-lb. blocks	Atlantic Coast	\$3.85 ^{1/}	\$4.05 ^{1/}
Ocean Perch (rosefish), fillet carcasses, ground, in 50-lb. cartons ...	Atlantic Coast	\$4.30 ^{1/}	\$4.50 ^{1/}
Whiting, whole, in 35-lb. blocks	Atlantic Coast	\$4.35-4.85 ^{1/}	\$4.55-5.05 ^{1/}
Standard mink food, ground, in 50-lb. paper bags (consists of fish-fillet carcasses--90 percent cod and sole, 10 percent salmon, plus 5 percent salmon liver)	British Columbia, Canada	\$4.75 ^{2/}	\$4.75 ^{2/}

^{1/}FOR MINIMUM OF 30,000 POUNDS DELIVERED TO ONE RANCH OR DIVIDED AMONG SEVERAL RANCHES IN SAME AREA.
^{2/}IN 60,000-LB. CARLOAD LOTS DELIVERED TO NEAREST RAIL TERMINAL.

In Utah most mink ranchers are organized into a cooperative. The cooperative has a membership of over 300 mink ranchers who annually feed over 9,000,000 pounds of food. This organization maintains two plants--one in Midvale (a suburb of Salt Lake City), and the other in Logan, Utah. At these plants fleets of trucks are maintained which make daily deliveries of mixed rations to members. Each plant maintains a horse slaughterhouse. The organization has so far succeeded in supplying horse meat to its members at a fraction of less than 6 cents per pound. Fishery items, primarily ground fillet waste frozen in blocks, are obtained from the Seattle area. The price for these delivered at Midvale is 3½ cents per pound.

In Denver, Colorado, about 225 mink ranchers maintain a cooperative. The plant butchers horses and supplies horse meat to ranchers at 7½ cents f.o.b. plant. The manager reported that horse meat prices are expected to rise. In 1951 the cooperative was paying \$1.00 more per 100 pounds for live horses than was paid in 1950. Frozen fish, mostly ground bottom-fish fillet carcasses, in 50-lb. laminated paper bags, cost \$4.85 per 100 lbs. in 60,000-lb. carload lots shipped from Oregon and delivered at Denver railroad yards.

In Astoria, Oregon, 55 mink ranchers organized a cooperative and purchased a former fish-processing and cold-storage plant in 1951. Fish waste is obtained from local canneries, filleting plants, and cold storages for which the cooperative pays ½ cent per pound and uses its own trucks to pick up the fish waste at the plants. Ranchers in the Astoria area report paying 9 cents for horse meat in 1951.

In the vicinity of Seattle, Washington, mink ranchers also own a cooperative cold-storage plant. The cooperative contracts with fishery plants on the Seattle waterfront to collect their waste products. Member ranchers pay 3 cents per pound at the plant for the fish waste frozen in block. The membership rebate at the end of the year usually amounts to $\frac{1}{2}$ cent per pound, making the actual final price $2\frac{1}{2}$ cents per pound. The cooperative plant's fish-waste sales average about 12,000,000 pounds each year. Some of this fish waste is shipped to a Utah cooperative by refrigerated truck.

Feeds used in state and Federal hatcheries are usually obtained by contract purchasing on tendered bids. The problem of obtaining fish food is steadily becoming more difficult according to Tunison (1951). Competition from other users, such as dog and cat food plants, livestock feed manufacturers, and pharmaceutical plants, creates shortages and higher prices. In comparing fish food costs in Federal hatcheries between the years 1945 and 1949, Tunison (1951) found an increase of 57 percent in unit prices, from 5.6 to 8.8 cents per pound. Some of the foods used in the Federal hatcheries are condemned beef and pork livers, horse liver, horse meat, beef and pork packinghouse waste, and various types of fishery items.

FUTURE POSSIBILITIES

It is apparent from the prices which mink ranchers and fish-hatchery operators now pay for feeds that Alaska salmon-cannery waste cannot now profitably enter the market. However, a number of expected future developments might alter the marketing situation to a large extent.

SHORTAGES OF OTHER FEEDS: In most areas the prices of horse meat are approaching the level at which it will become unprofitable to use this product and it will be necessary to use other feeds. In the Midwest, one of the large feed dealers is already informing customers that: "The last quotation on horse meat we saw was $7\frac{1}{2}$ cents a pound. And the rapidity with which the horse population of this country is diminishing indicates that horse meat soon will disappear from the market. One large Midwest rancher who has fed western ocean fish for several years..., feeds it at the level of 20 percent of the diet. If horse meat is very high in price or unobtainable, this level can be increased." It has already been pointed out that the diets of mink in the Pacific Northwest run as high as 60 percent fish.

After the many new dams with accompanying hatcheries now contemplated are built on the Columbia River, a severe shortage of hatchery feed is expected to

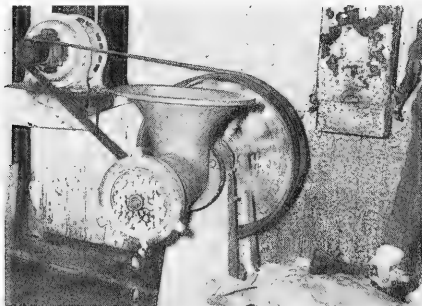


FIGURE 3

POWER GRINDER AND BATCH MIXER USED IN FOOD PREPARATION AND MIXING IN MINK RANCHES AND FISH HATCHERIES.



FIGURE 4

develop. At present, the fish waste from Washington and Oregon plants is being fully utilized either for fur-animal or hatchery feeding purposes or for reduction into oil and meal. As the demand for fish waste for feed continues to develop, Alaska is the largest potential source on the Pacific coast.

TO REDUCE COST OF PROCUREMENT: In the work done at Petersburg, Alaska, in 1951, only the visceral portions of the salmon waste were collected. This amounted to about 29 percent of the total waste. The other 71 percent--heads, tails, fins, and trimmings--was discarded. Additional costs were involved in setting up special equipment at the iron chink or butchering machine to separate these portions. It also required time to dispose of the unused parts. The volume which was collected per man hour was less than if all the waste were taken. This increased the unit cost of collection.

The collecting at Petersburg was discontinued ten days before the canning season ended. Had the collection continued over the entire season the final unit cost would have been lower, especially since the heaviest production of fish was during the last ten days of the season.

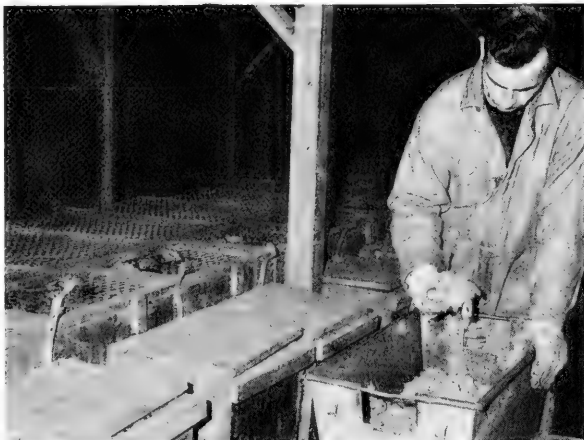


FIG. 5 - MIXED FOOD BEING FED TO MINK.

To assemble the bags used for packaging the collected material required a few hours each day, i.e., a polyethylene bag had to be inserted into a slightly smaller burlap bag. An already assembled, laminated, moistureproof paper bag would cost less to procure and would require no labor to assemble at the collection station.

TO REDUCE COST OF SHIPPING: The shipping costs of the viscera collected in Petersburg in 1951 were 2.15 cents per pound (table 4) from Petersburg to Seattle. Shipments to the midwest could be made through Prince Rupert, British Columbia, Canada, via the Canadian National Railroad whose rates are the same as those for shipments of the same commodity from Seattle. Prince Rupert is about 500 miles closer to the point of production than is Seattle. Fish dealers now charter a vessel to haul frozen fish to the railhead in Prince Rupert from southeastern Alaska points for from 85 cents to \$1.00 per 100 pounds, including unloading from the vessel and loading the freight cars in Prince Rupert. As much as 1 cent per pound saving could probably be realized by this routing of shipments.

With the announcement of the coming of a paper-pulp industry to southeastern Alaska, plans are being made for the establishment of a railroad car ferry system serving ports in southeastern Alaska, ports on the coast of British Columbia (Canada), Seattle, and Puget Sound points. It is expected that shipments from some ports in southeastern Alaska over this ferry system through Prince Rupert will enjoy terminal rates, that is the rates will be the same as those now applicable for

shipments originating at the railhead. This will result in the saving of the entire shipping cost of 2.15 cents per pound shown in table 4. This would reduce the cost per pound at the railhead to 3.06 cents, thus bringing the price range to what is now being paid by Midwestern mink farmers for other fish foods.

SUMMARY

The marketing of Alaska salmon waste to fur farms and fish hatcheries in the United States is not considered profitable at present, but it might be in the future if (1) there is a shortage of other feed materials, (2) the entire waste was used instead of only the viscera, and (3) lower freight rates from Alaska can be obtained.

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U. S. CANNED FISHERY PRODUCTS PRODUCTION

The pack of canned fishery products in the United States and Alaska in 1951 amounted to 800,514,576 pounds, valued at \$301,210,295 to the packers. This was a decrease of 17 percent in volume and 9 percent in value as compared with the 1950 production. These decreases resulted principally from smaller packs of tuna and California sardines (pilchards). Canned fishery products were packed in 473 plants in 21 States and Alaska during 1951.

Canned Fish & Byproducts--1951, C.F.S. No. 772



RESEARCH

IN SERVICE LABORATORIES

July 1952

NUTRITION: Thiaminase Content of Certain Species of Fish Used in Feeding Fur-Bearing Animals: Different types of fishery waste were spot checked for thiaminase activity during the past year. All of the samples analyzed were found to have low thiaminase activity. A final report summarizing the data obtained is now being prepared. (Seattle)

* * * * *

ANALYSIS AND COMPOSITION: Composition and Cold-Storage Life of Fresh-Water Fish: The proximate composition of seven buffalofish and eleven carp was determined. The buffalofish were caught in the upper Mississippi River in June 1952; the carp in the upper Mississippi in May 1952. The results are presented in the following table:

Composition of Edible Portion of Buffalofish and Carp

Species	Sample No.	Length	Weight	Fillet Yield/	Proximate Composition			
					Moisture	Fat	Protein	Ash
		Centimeters	Grams	Percent	Percent	Percent	Percent	Percent
Buffalofish (<u>Ictiobus</u> sp.)	1	44	1270	35.3	79.7	1.88	18.4	1.16
	2	36	915	30.6	78.2	4.78	17.6	1.15
	3	53	2285	30.9	78.6	2.68	17.1	1.10
	4	40	1400	38.8	73.6	6.93	16.9	1.08
	5	51	2280	32.5	76.1	3.69	19.0	1.08
	6	50	2229	33.6	80.5	1.58	16.9	1.11
	7	61	3795	34.0	76.3	6.11	16.3	1.19
Carp (<u>Cyprinus</u> <u>carpio</u>)	1	57	1955	27.1	79.1	2.63	17.5	1.14
	2	58	2460	33.1	76.4	4.32	18.3	1.16
	3	51	1505	31.6	78.5	2.65	17.5	1.14
	4	45.5	1230	31.0	77.9	3.82	19.3	1.11
	5	52	1700	28.2	80.8	4.18	17.00	1.18
	6	52	1425	32.0	80.5	2.39	18.1	1.11
	7	52	1487	29.8	77.9	2.61	19.0	1.21
	8	54	1845	30.0	76.1	5.31	18.6	1.16
	9	61	2935	35.0	81.9	1.78	17.4	0.99
	10	54	1960	30.3	79.7	3.69	18.0	1.02
	11	64	2615	31.0	79.2	2.64	18.7	1.18

1/ BASED ON WHOLE FISH

(Seattle)

* * * * *

REFRIGERATION: Freezing Shrimp at Sea--Gulf States Area: Organoleptic examinations were made on the frozen shrimp prepared in the Gulf States area after 5 and 8 weeks' storage of the samples. All samples are stored at 0° F. The test included the following samples:

Brine-frozen shrimp tails: The shrimp tails were frozen by immersing in 85-degree salinometer brine (sodium chloride) at 5° F. for 15 minutes. The frozen shrimp were then drained and packaged in one- and five-pound waxed cartons.

Refrozen shrimp: Whole shrimp were frozen by immersing in brine (85-degree salinometer at 5° F.) for 15 minutes. Later the frozen whole shrimp were thawed by immersing in fresh water at 60° F. for 15 minutes. The heads were removed and the tails were packed in one-pound cartons. The shrimp, in cartons, were frozen in air at -20° F. and then glazed by flooding with cold water.

Air-frozen shrimp tails: The shrimp tails were packed in one- and five-pound waxed cartons, frozen in air at -20° F., and glazed by flooding with cold water.

All samples were shipped to the Ketchikan laboratory for storage and testing.

Organoleptic examinations of the samples at the end of 5 and 8 weeks of storage indicated that brine-frozen whole shrimp or tails and the air-refrozen shrimp tails prepared from brine-frozen whole shrimp compared favorably in color, texture, and flavor with air-frozen shrimp. The salt absorption of the brine-frozen shrimp was not excessive and was below the apparent threshold of acceptability. (Ketchikan)

* * * * *

Freezing Fish at Sea, Defrosting, Filletting, and Refreezing the Fillets:

The new radar unit, installed on the Delaware and operated for instruction and testing purposes during Test Cruise No. 11 (no fishing carried out on this cruise),



VIEW SHOWING LARGE SINGLE CATCH OF FISH ABOARD THE SERVICE'S TECHNOLOGICAL RESEARCH TRAWLER DELAWARE.

performed satisfactorily. The radar unit is the first to be installed on a trawling vessel operating out of the Port of Boston.

The experimental freezing vessel Delaware left East Boston on Test Cruise No. 12 on July 16 and returned on July 24. Fishing was carried out on Georges Bank. Twenty-five haul backs were made for a total of 25,500 pounds of fish. Of this total, 4,800 pounds were haddock and 20,700 pounds were scrod haddock.

All fish were frozen in-the-round immediately after being caught and

were stored in the vessel's refrigerated hold until arrival at port. The frozen fish were landed at the Boston Fish Pier. The 4,800-pound lot of haddock was sold through the New England Fish Exchange to two of the larger processors of fish. The fish were placed in commercial cold storage by the buyers for later thawing and processing into frozen fillets.

The lot of 20,700 pounds of scrod haddock was stored in a commercial cold-storage plant by the laboratory as one of two lots that will be used for obtaining information on the length of time that round frozen fish can be stored commercially prior to processing. Sample parcels of fish of several thousand pounds each from this and a subsequent lot of like size will be withdrawn from commercial cold storage at periodic intervals over a period of nine months. (Boston)



SWORDFISH STEAKS

Swordfish is plentiful and moderately priced, according to reports from the U. S. Fish and Wildlife Service.

Swordfish steaks, entirely free from bones, are cut from large fish which weigh from 200 to 300 pounds. Swordfish has a rich distinctive flavor, different from other fish. Broiling is the favorite method of cooking this fish, with baking a second choice.

Here's a recipe recommended by the Service's home economists:

BROILED SWORDFISH STEAKS

2 POUNDS SWORDFISH STEAKS	DASH PEPPER
1 TEASPOON SALT	CUP BUTTER OR OTHER FAT, MELTED

Cut fish into serving-size portions. Sprinkle both sides with salt and pepper. Brush fish with butter and place on a preheated, greased broiler pan. Broil 2 inches from the flame from 5 to 8 minutes or until slightly brown, baste with butter, and turn carefully. Brush other side with butter and cook 5 to 8 minutes or until fish flakes easily when tested with a fork. Remove to hot platter. Garnish. Serve immediately, with a brown butter sauce. Serves 6.

BROWN BUTTER SAUCE

CUP BUTTER	CHOPPED PARSLEY
2 TABLESPOONS LEMON JUICE	

Melt butter in a small saucepan and heat until light brown. Remove from heat. Add lemon juice and parsley. Serve immediately.



TRENDS AND DEVELOPMENTS

California Shrimp Resources Being Exploited

Two California farmer-businessmen from the San Joaquin Valley, who recently took up commercial fishing, are reporting \$300-a-day catches of shrimp from grounds off Morro Bay, a July 2 news release from the California Department of Fish and Game states. Discovered by that Department in 1941, and seriously studied by its marine biologists in 1950 and 1951, the offshore shrimp beds were opened for commercial trawling April 1. Three-year permits were issued under carefully formulated gear and bag regulations.

Although a total of 46 permits have been issued by the Department, the two farmer-businessmen aboard the Grace H. (accompanied occasionally by another Morro Bay boat) are the only men on the California Coast who have installed the required beam-trawl gear to exploit the new shrimp grounds.

The five known shrimp beds are scattered in the Pacific at 50- to 100-fathom depths, from Crescent City to Morro Bay.

The problem of marketing the small shrimp has stopped other permittees from all-out efforts. California sea-food processors have been reluctant to set up special "shrimp lines" of workers to clean and pack the catch. They want advance assurance of steady landings by the fishermen and a steady demand from the retail market.

However, the two men arrived at an agreement with an operator of a Morro Bay abalone-packing plant and a refrigeration company at San Luis Obispo. Both operators agreed to process the shrimp catches, and sent their salesmen out to introduce the new California sea food to markets and restaurants throughout the West.



Federal Purchases of Fishery Products

FRESH AND FROZEN FISH PURCHASES BY DEPARTMENT OF THE ARMY, JUNE 1952: Fresh and frozen fishery products purchased in June this year by the Army Quartermaster Corps amounted to 3,989,047 pounds (valued at \$1,743,593) for the military feeding of the U. S. Army, Navy, Marine Corps, and Air Force (see table). Higher than the previous month's purchases by 58.4 percent in quantity and 47.6 percent in value, these purchases were also considerably above June 1951--29.9 percent in quantity and 34.5 percent in value.

Purchases of Fresh and Frozen Fishery Products by Department of the Army
(June and the First Six Months, 1952 and 1951)

Q U A N T I T Y				V A L U E			
June		January-June		June		January-June	
1952	1951	1952	1951	1952	1951	1952	1951
lbs.	lbs.	lbs.	lbs.	\$	\$	\$	\$
3,989,047	3,070,923	16,224,580	14,598,689	1,743,593	1,295,946	7,471,047	6,033,318

For the first six months this year purchases were greater by 11.1 percent in quantity and 23.8 percent in value as compared with the same period of 1951. Fresh and frozen fishery products were purchased by the Quartermaster Corps during the first six months this year at an average price per pound of 46.0 cents--somewhat higher than the average of 41.3 cents paid in January-June 1951. This indicates to a certain extent that higher-priced products were purchased this year.



Gulf Exploratory Fishery Program

SHRIMP-TRAWLING CONDITIONS EXPLORED WEST OF THE MISSISSIPPI RIVER (Trip No. 13): Earlier exploratory coverage by the Service's vessel Oregon west of the Mississippi River left large gaps, and the purpose of Trip No. 13 was to get information on trawling conditions in previously unexplored sections as well as to compile additional data on the seasonal differences in productivity. Another objective was to work over some areas of particularly soft bottom with mud ropes and rocking-chair doors. The vessel operated east of the mouth of the Mississippi River March 27-28 and March 31-April 2, and west of the Mississippi River to Brownsville, Texas, April 7-23.

General Fishing Conditions in the Area Covered: Reports from the fishing fleet during the period covered by this cruise indicated that shrimp fishing was relatively poor with only scattered brown-grooved shrimp showing, and white shrimp production only fair. Reduced shrimp landings in the northwest Gulf during the months of March and April may in part be attributed to adverse weather conditions. The shrimp boats encountered by the Oregon during the cruise reported scattered shrimp and slow fishing.

Along with generally rough weather during March and April, the fishing log of the Oregon shows that bottom water temperatures were remarkably uniform in a wide range of depths from 10 to 60 fathoms, with surface water temperatures one or two degrees colder or warmer and with little consistency in distribution. Past experience of the Oregon has shown that concentrations of shrimp are easier to locate and generally better shrimp fishing prevails when the temperature bands are narrower. That is, when the temperature of the bottom water differs appreciably at different depths.

White shrimp were found out to 32 fathoms in drags off the Southwest Pass of the Mississippi River mixed with about equal numbers of brown-grooved shrimp. These drags produced about 20 to 30 pounds per hour, but the white shrimp were more numerous inshore in 20 fathoms.

Brown-Grooved Shrimp: Catches of brown-grooved shrimp were made south of Trinity shoal in 30 to 40 fathoms, south of Galveston in 20 to 40 fathoms, and northeast of Brownsville in 20 to 40 fathoms. The best catches were not good (about 90 pounds an hour) and were made in the 30-fathom depth range in all areas. Catches were smaller in both the 20- and 40-fathom ranges. There was no clear-cut relation between count and depth as is usual at times when temperature bands are narrow. For example, northeast of Galveston samples of brown-grooved shrimp from 20, 30, and 40 fathoms were all 7 count (heads-on).

Deep-Water Red Shrimp: Drags were made off the edge of the continental shelf between 93° west longitude and 26°40' north latitude off the Louisiana and Texas coasts in depths of 200 to 450 fathoms. Only a few pounds of red shrimp were taken, although some were present in all of the successful drags from 200 to 300 fathoms.

These shrimp appear to be less common in this area at this season than in the vicinity of the Mississippi River mouth. A series of four drags attempted in 200 fathoms near 27°25' north and 95°50' west were unsuccessful because of failure of the trawls to reach bottom. The possibility that this was the result of strong and unusual currents was suggested by the behavior of the rig.

Gear Observations: A "mud rope" used on a 100-foot flat trawl gave very good results on soft bottom. The "mud rope," used as a ground line of the trawl, was constructed by binding old webbing on 5/8-inch wire rope to bring the diameter to about 6 inches. Our rig worked better with a somewhat reduced length of trawling cable as compared with the standard flat-trawl rig.

* * * * *

"OREGON" EXPLORES FOR TUNA IN GULF (Trip No. 14): Exploration for tuna in the vicinity of Dry Tortugas and in the approaches to the Gulf of Mexico was the main purpose of the Oregon's Trip No. 14. Secondary objectives were to try mid-water trawls in cooperation with the M/V Antillas in the area of Key West-Tortugas shrimp fishery and to check conditions for hand-line fishing and dragging off the eastern edge of the Campeche shelf. The Oregon, the Branch of Commercial Fisheries' Gulf exploratory fishery vessel, left Pascagoula on May 19 and worked in the vicinity of Dry Tortugas off Florida until June 2, entered port at Miami, and left again on June 4 returning to the Tortugas area. The Oregon went into Key West harbor on June 10 and left the following day to meet the M/V Antillas at Tortugas for tests of mid-water trawls. On completion of this phase of the work on June 14, the Oregon crossed the Straits of Florida and the Yucatan Channel to Campeche Bank at north latitude 22°20' and worked in a northerly direction. The vessel arrived at Pascagoula on June 25.

Tuna trolling lines were used throughout the cruise. Little tuna, Euthynnus alletteratus (over 10 pounds each) were taken inside the 100-fathom curve between Tampa and Key West. A single specimen weighing 3½ pounds was taken in shallow water off Pascagoula on June 25. As in all preceding trips, little tuna were not taken by trolling outside the 100-fathom curve. Two specimens of tuna, provisionally identified as Katsuwonus pelamis, weighing 10 and 14 pounds each, were taken on trolling lines southeast of Tortugas from a large school in waters over 250 fathoms deep. Several others were hooked but lost and the school sounded when the speed of the Oregon was reduced.



THE OREGON DOCKED AT PASCAGOULA, MISS., HEADQUARTERS OF THE GULF EXPLORATORY FISHERY PROGRAM CONDUCTED BY THE SERVICE'S BRANCH OF COMMERCIAL FISHERIES.

Three sets with a purse seine made northerly from Dry Tortugas in 25, 20, and 17 fathoms on small wild schools of little tuna were unsuccessful. Additional sets were not attempted. The little tuna in the area were found in schools of less than 300 fish and appeared more or less regularly at the surface around shrimp boats

during the last drag at dawn. The Oregon trawled at night in sections of the shrimp grounds where little tuna were reported and worked little tuna at dawn with hand lines and jack poles using whole or ground shrimp-trawling scrap for chum and dead gerrid fishes (locally called "shiners") for bait. These latter fish, about 4 inches long, were common in the shrimp trawling scrap. On three successive dawn fishing periods of two to three hours, 3/4 ton, 2 tons, and 1 1/2 tons of little tuna averaging 14 pounds each were taken on jack poles and hand lines.

Some few were taken at other times of the day or night but fishing was slow and the fish generally remained near the bottom. A total catch of about 8 tons was made.

No tuna were observed by the Oregon near the Campeche shelf or on the return trip from Campeche to Pascagoula. Blackfin tuna were reported on June 6, 1952, by a snapper fishing boat at about latitude 25° north; longitude 88° west, or about 60 miles north of the Campeche shelf. A few miles north of this location the Oregon observed large numbers of shearwaters and brown porpoises on June 22. These are frequently associated with blackfin tuna but no fish were seen at the surface.

Other Observations: A trial drag with a 40-foot shrimp trawl in 206 fathoms east of the Campeche shelf produced nothing of commercial interest. The net was damaged by coral shreds and small obstructions damaged the doors. The catch included a variety of echinoderms and some shrimp of no commercial interest.

Sperm whales were observed at dusk June 17 and June 18 in crossing from Tortugas to the Campeche Bank, and several large schools of blackfish or pilot whales were seen in the area.

A few specimens of unidentified jacks and runners were taken from schools working the eastern edge of the Campeche shelf. Hand-line fishing on the Campeche Bank in 40 to 60 fathoms produced mostly yellow-eyed snappers of two species and some unidentified carangids.

Next Cruise: The Oregon left Pascagoula, Mississippi, July 9 on Trip No. 15 for work in the northeast Gulf of Mexico. Shrimp-trawl drags will be made from shallow to deep water in an attempt to find suitable trawling bottom for shrimp between Tarpon Springs and Cape San Blas, Florida. Bottomless and roller trawls will be used experimentally in the area.

The Oregon will also carry a purse seine for use on little tuna in case these are encountered in sufficient quantity for a set.



Metal Cans--Shipments for Fishery Products, May 1952

Total shipments of metal cans for fish and sea food for May this year amounted to 7,754 short tons of steel (based on the amount of steel consumed in the manufacture of cans), which was still considerably below 12,790 short tons of steel during the corresponding month in 1951. A decline in West Coast tuna canning was largely responsible for this drop in use of metal cans for packing fishery products. This is based on a report issued by the Bureau of the Census on July 23.

For the first four months of this year, metal can shipments for fishery products totaled 28,237 short tons of steel as compared with 36,709 short tons of steel during January-May 1951.

NOTE: DATA CONVERTED TO SHORT TONS OF STEEL ARE ON THE BASIS OF 23.0 BASE BOXES OF STEEL PER SHORT TON OF STEEL.



New England Tuna Explorations

DIFFERENT TYPES OF TUNA GEAR TESTED BY "MARJORIE PARKER" (Fishing Cruise No. 2): Three long-line sets for tuna in the waters east of Portland near Half-way Rock, over depths up to 30 fathoms, were made by the Marjorie Parker, after it left Portland on June 17. In addition, one night set was made with two gill nets and a trammel net in the same general area with negative results. This vessel has been chartered by the U. S. Fish and Wildlife Service for a 4-month exploratory fishing operation to obtain information on bluefin tuna in the Gulf of Maine and adjacent waters.

Operations were continued in the Boon Island-Isle of Shoals area on June 20 and 21, employing gill nets and trammel nets; surface trolling was conducted during daylight hours. Long line and gill nets were set off Race Point, Cape Cod, on June 22 and 23. The following day the vessel picked up at New York City 40 baskets of Japanese-type long-line gear and a line hauler procured in Japan for testing during this summer's work.

East of Fire Island, New York, 20 baskets of Japanese type gear were set. Additional sets were made off Shinnecock Inlet, Long Island, Block Island, south-east of Nantucket Lightship, southwest part of Georges Bank and Stellwagen Bank off Race Point, Cape Cod. No tuna were captured either by long-lining, gill-netting, or trolling operations, and no surface fish were sighted.



M/V MARJORIE PARKER IS A 78-FOOT SCHOONER CHARTERED BY THE SERVICE FOR CONDUCTING A BLUEFIN TUNA EXPLORATION IN NEW ENGLAND WATERS.

The final set of the trip was made on June 30 when 20 baskets of long line baited with fresh squid were set near Sewell Ridge, approximately 50 miles E. x S. of Cashe Ledge Buoy, in an area where the year's first report of school tuna was received from a Gloucester dragger on June 28. No tunawere taken. The vessel returned to port on June 30.

Sets were made without difficulty, and the line hauler handled the Japanese gear smoothly and efficiently. Surface water temperatures and bathythermo-

graph casts were taken daily during the trip. Seven surface lines were trolled at all times when the vessel was under way.

Fishing Cruise No. 3 started on Saturday, July 5. The vessel is expected to return to Portland on or about July 19 after exploring for tuna on Jeffreys Bank, Cashe Ledge, Fippennies Ledge, and the northern edge of Georges Bank.



North Pacific Exploratory Fishery Program

SHRIMP GROUNDS OFF ALASKA EXPLORED BY "JOHN N. COBB": Exploring for new commercial shrimp grounds off Southeastern Alaska was the purpose of the John N. Cobb's Cruise No. 10. This exploratory fishing vessel of the Service's Branch of Commercial Fisheries conducted a two-month exploration which extended from Glacier Bay to as far south as Davidson Inlet, and also included some localities near Sitka. A 20-foot beam trawl and several types of shrimp traps were the types of gear used. The vessel left Seattle on March 3 and returned May 3.

Of the areas investigated on this trip, the most promising indications of the availability of shrimp in commercial quantities were found in Glacier Bay. A total of 52 beam-trawl drags were made in various parts of Glacier Bay, most of which resulted in the capture of shrimp. The best drags were made in the vicinity of Sturgess and Seebree Islands, where catches of up to 330 pounds per hour of mixed pink and side-stripe shrimp were made.

Glacier Bay is an extensive area, about 56 miles long, and has not been previously explored for shrimp. The numerous icebergs encountered in the bay did not hamper operations on this trip.

Aside from Glacier Bay, the best showings of shrimp were found in Port Althorp and in Affleck Canal, but catches were not of commercial quantity. In the other areas explored, shrimp catches were negligible.



Pacific Oceanic Fishery Investigations

"CAVALIERI" SUCCESSFUL IN LONG-LINING FOR TUNA: The Cavaliere, a commercial purse seiner chartered by the Service's Pacific Oceanic Fishery Investigations to long-line for tuna south of the Hawaiian Islands, during two days of fishing averaged almost 9 fish per 100 hooks. This was considerably more than the average of less than 3 fish per 100 hooks in the vicinity of Hawaii. Unfortunately the vessel was forced to return to Honolulu after fishing only two days because of engine trouble. The Chief Scientist aboard reported that had the Cavaliere been able to continue there is little doubt that a full load of fish would have been caught. It is hoped that the voyage can be completed after repairs to the vessel have been made.

Although the vessel is a commercial purse seiner, it is equipped with tuna long-line gear. It was fishing for tunas in the area where the Hugh M. Smith, another research vessel operated by the Pacific Oceanic Fishery Investigations, had worked previously.

* * * * *

EQUATORIAL WATERS STUDIED BY "HUGH M. SMITH" (Cruise 15): To investigate certain physical, chemical, and biological features of the equatorial waters in

relation to the abundance and distribution of tunas, the research vessel Hugh M. Smith left Pearl Harbor May 21. This vessel, one of three operated by the Service's Pacific Oceanic Fishery Investigations, operated in waters of the equatorial region along 140° W. longitude, from 9° N. to 7° S. latitude, and returned to port on July 1.

Water currents and temperatures, chemical nutrients, phytoplankton, zooplankton, and forage organisms were investigated.

The cruise was planned so that a section of stations along the area of operations was repeated four times in a period of three weeks. These observations, based on 62 stations in all, will provide information on the rate and degree of change in the physical, chemical, and biological environment along this meridian during the time of study.

Observations with the ship's depth recorder showed extensive "scattering" in the "rich zone" near the Equator.

The next cruise of the Hugh M. Smith (July 18 to August 22) in the same area will be to observe in greater detail the convergence or "front" phenomenon, the velocity and direction of surface currents in the equatorial region, and the vertical distribution of marine life in respect to the thermocline. The cruise will be in collaboration with the long-line fishing cruise of the John R. Manning.



Political Party Platforms Contain Planks of Interest to Fishery Industries

The Democratic and Republican platforms for 1952 contain a number of planks which are of specific interest to the fishery and allied industries.

DEMOCRATIC PARTY PLATFORM: The following are excerpts from the Democratic platform which directly or indirectly concern fisheries:

"Our Foreign Policy:...HELPING OTHER PEOPLE TO HELP THEMSELVES. Even though we can not now disarm, we will go forward as rapidly as possible in developing the imaginative and farsighted concept of President Truman embodied in the Point Four program.

"We will continue to encourage use of American skills and capital in helping the people of undeveloped lands to combat disease, raise living standards, improve land tenure and develop industry and trade. Continuing stronger and more vigorous Point Four programs--sponsored both by this country and by the United Nations--are an indispensable element in creating a peaceful world....

"EXPANDING WORLD TRADE. The Democratic Party has always stood for expanding trade among free nations. We reassert that stand today. We vigorously oppose any restrictive policies which would weaken the highly successful reciprocal trade program fathered by Cordell Hull.

"Since 1934 the United States has taken the lead in fostering the expansion and liberalization of world trade.

"Our own economy requires expanded export markets for our manufactured and agricultural products and a greater supply of essential imported raw materials.

At the same time, our friends throughout the world will have opportunity to earn their own way to higher living standards with lessened dependence on our aid....

"Our Natural Resources:...We favor sound, progressive development of the Nation's land and water resources....

"The Democratic Party is dedicated to a continuation of the natural resources development policy inaugurated and carried out under the administrations of Presidents Roosevelt and Truman and to the extension of that policy to all parts of the Nation, North, South, East, Midwest, West and the Territories, to the end that the Nation and its people receive maximum benefits from these resources to which they have an inherent right.

"The Democratic Party further pledges itself to protect these resources from destructive monopoly and exploitation.

"We pledge the continued full and unified regional development of the water, mineral, and other natural resources of the Nation....

"DOMESTIC FISHERIES. We favor increased research and exploration for conserving and better utilizing fishery resources, expanded research and education to promote new fishery products and uses and new markets, promotion of world trade in fish products, a public works and water policy providing adequate protection for domestic fishery resources, and treaties with other nations for conservation and better utilization of international fisheries.

"WILDLIFE RECREATION. In our highly complex civilization, outdoor recreation has become essential to the health and happiness of our people.

"The Democratic Party has devoted its efforts to the preservation, restoration and increase of the bird, animal and fish life which abound in this Nation....

"To the 28 million of our citizens who annually purchase fishing and hunting licenses, we pledge continued efforts to improve all recreational areas....

"Social Security:...SCHOOL LUNCHES. We will enlarge the school lunch program which has done so much for millions of American school children and charitable institutions while at the same time benefiting producers.

"Strengthening Democratic Government:...ALASKA AND HAWAII. By virtue of their strategic geographical locations, Alaska and Hawaii are vital bastions in the Pacific. These two territories have contributed greatly to the welfare and economic development of our country and have become integrated into our economic and social life. We therefore urge immediate statehood for these two territories.

"OTHER TERRITORIES AND POSSESSIONS: We favor increased self-government for the Virgin Islands and other outlying territories and the trust territory of the Pacific...."

REPUBLICAN PARTY PLATFORM: The planks which directly or indirectly concern fisheries in the Republican platform are:

"Natural Resources: We vigorously advocate a full and orderly program for the development and conservation of our natural resources....

"We favor restoration to the States of their rights to all lands and resources beneath navigable inland and offshore waters within their historic boundaries.

"We favor protection of our fisheries by domestic regulation and treaties, including safeguards against unfair foreign competition.

"Water Policy:...We favor continuous and comprehensive investigations of our water resources and orderly execution of programs approved by the Congress. Authorized water projects should go forward progressively with immediate priority for those with defense significance, those in critical flood and water shortage areas, and those substantially completed....

"Statehood: "We favor immediate statehood for Hawaii.

"We favor statehood for Alaska under an equitable enabling act.

"We favor eventual statehood for Puerto Rico."



Underwater Powder Charges Not Harmful to Fish

With the aid of three deep-sea divers, a group representing the California Department of Fish and Game, sportsmen, commercial fishermen, county supervisors, and the press has decided that black-powder charges used in the underwater search of oil deposits off the California coast have no harmful effects on fish life.

The conclusion was the result of a two-day series of experimental seismic blasts in the Pacific Ocean near San Luis Obispo, states a June 25 news release from the Department. Independent underwater observations were made by a State marine biologist, a commercial abalone fisherman, and an oil company employee wearing diving suits.

The observation parties were taken by boats to the test areas, where charges were set off by the Western Geophysical Company. Typical seismic shots exploded in various water depths failed to produce evidence of fish deaths above or below the water surface.

The Marine Biologist of the Department of Fish and Game reported that all divers agreed that black-powder charges detonated six feet below the water surface in depths of 50 feet or more "have no harmful effects on fish or other invertebrates in the immediate vicinity."

The unique experiment was conducted at the request of fishermen, who have contended that "floating" blasts kill fish which never surface. Standard powder charges, required under the latest Fish and Game Commission regulations, were used.

Divers descended to the ocean floor before and after the explosions. In simultaneous underwater trips averaging 20 minutes for each diver, no blast effects were noted on rockfish, priestfish, flatfish, sea cucumbers, sea anemones, tube worms, corals, sea urchins, clams, or starfish.

Further explorations on the possible harmful effects of seismic blasts will be conducted in San Luis Obispo Bay until mid-July.



Wholesale and Retail Prices

WHOLESALE PRICES, JUNE 1952: A seasonal spurt in production caused June prices for edible fishery products to drop substantially below May levels. The wholesale over-all index for edible fish and shellfish (fresh, frozen, and canned) for June was 102.8 percent of the 1947-49 average (see table)--2.3 percent below the previous month and 3.6 percent lower than in June 1951, the Bureau of Labor Statistics of the Department of Labor reports.

Liberal fish landings in New England during June brought prices for fresh offshore drawn haddock 5.6 percent below those reported in May this year and 7.7 percent below June 1951. An increase in the landings of halibut and salmon in the Northwest caused June prices for these species to also drop (4.3 and 4.0 percent, respectively) below May, but they still wholesaled substantially (6.7 and 3.9 percent, respectively) above the same month last year. Drawn whitefish receipts at Chicago and New York were fairly heavy in June and prices were considerably lower than the previous month and a year earlier. Lake trout and yellow pike production in the Great Lakes was light and June prices for these were somewhat higher than in May this year and in June last year. The drawn, dressed, or whole finfish subgroup index this June was 6.0 percent below the previous month and 0.6 percent lower than in June 1951.

Table 1 - Wholesale Average Prices and Revised Indexes for Edible Fish and Shellfish, June 1952 with Comparative Date							
Group, Subgroup, and Item Specification	Point of Pricing	Unit	Avg. Prices (\$)		Indexes (1947-49 = 100)		
			June 1952	May 1952*	June 1952	May 1952	June 1951
ALL FISH AND SHELLFISH (Fresh, Frozen, and Canned)							
Fresh and Frozen Fishery Products:							
Dress, Dressed, or Whole Finfish:							
Haddock, large, offshore, drawn, fresh	Boston	lb.	.10	.11	102.8	105.8	105.2
Halibut, Western, 20/80 lbs., dressed, fresh or frozen	New York City	"	.33	.35	102.2	106.8	106.8
Salmon, king, lge. & med., dressed, fresh or frozen	"	"	.54	.56*	120.9	125.9	128.7
Whitefish, mostly Lake Superior, drawn (dressed), fresh	Chicago	"	.39	.53	96.7	130.1	179.7
Whitefish, mostly Lake Erie pound or gill	"	"					
Net, round, fresh	New York City	"	.44	.57*	68.0	131.4	182.0
Lake trout, domestic, mostly No. 1, drawn (dressed), fresh	Chicago	"	.53	.65*	107.8	101.4	137.3
Yellow pike, mostly Michigan (Lakes Michigan & Huron), round, fresh	New York City	"	.46	.44	106.7	102.0	93.8
Processed, Fresh (Fish and Shellfish):							
Fillet, haddock, small, skins on, 50-lb. tins							
	Boston	lb.	.28	.30	93.6	100.4	97.0
Shrimp, lge. (26-30 count), headless, fresh or frozen	New York City	"	.59	.56	93.3	88.5	93.3
Oysters, shucked, standards	Norfolk area	gal.	4.50	4.50	111.3	111.3	111.3
Processed, Frozen (Fish and Shellfish):							
Fillet, flounder (yellowtail), skinless, 10-lb. pkg.							
	Boston	lb.	.27	.37	129.7	129.7	136.7
Haddock, small, 10-lb. cello-pack	"	"	.24	.24	89.3	89.3	91.1
Ocean perch (rosefish), 10-lb. cello-pack	Gloucester	"	.23	.23	108.3	110.7	109.5
Shrimp, lge. (26-30 count), 5-lb. pkg.	Chicago	"	.65	.61	99.5	94.1	97.9
Canned Fishery Products:							
Salmon, pink, No. 1 tall (16 oz.), 48 cans per case	Seattle	case	21.00	21.00	109.6	109.6	109.6
Tuna, light meat, solid pack, No. 8 tins (7 oz.), 48 cans per case	Los Angeles	"	14.25	14.35	89.6	89.6	89.0
Sardines (pilchards), California, tomato pack, No. 1 oval (15 oz.), 48 cans per case	"	"	9.38	9.38	109.4	109.4	109.4
Sardines, Maine, keyless oil, No. 4 drawn (5 1/2 oz.), 100 cans per case	New York City	"	6.70	9.65	71.3	102.7	102.7

1/REPRESENT AVERAGE PRICES FOR ONE DAY (MONDAY OR TUESDAY, IF AVAILABLE) DURING WEEK BEGINNING JUNE 15. PRICES ARE NOT THE ACTUAL ONES USED TO COMPUTE THE INDEXES SINCE THE PRICES USED FOR THAT PURPOSE ARE CARRIED OUT TO TWO DECIMAL PLACES.

2/REVISED. SOME OF THESE MAY 1952 AVERAGE PRICES AS SHOWN IN THE JULY 1952 ISSUE OF COMMERCIAL FISHERIES REVIEW WERE REVISED (* INDICATES REVISION) IN A COMPUTATION MADE AFTER THAT ISSUE WENT TO PRESS.

Processed fresh fish and shellfish prices from June to July rose 1.5 percent, but were 2.8 percent lower than in June last year. Heavier haddock landings in New England caused June's fresh haddock fillet prices to drop 6.3 percent below May and 1.0 percent below June 1951. Although fresh headless shrimp prices rose 5.4 percent from May to June this year, they were still 5.8 percent lower than in June last year.

Processed frozen fish and shellfish prices this June went up 1.7 percent over May, but were 2.2 percent lower than in June 1951. Frozen shrimp, which went up 5.7 percent from May to June, was mainly responsible for the increase in this subgroup. A drop of 2.2 percent in frozen ocean perch fillet prices was not enough to counterbalance the increase in shrimp prices. Compared with June 1951, frozen fillet prices this June were all somewhat lower while frozen shrimp prices were 1.6 percent higher.

Except for a drop of 30.6 percent in canned Maine sardine prices, all other canned fish items were quoted at May levels. With approximately 1,500,000 cases of Maine sardines packed by July 1 and prospects for a large pack very good, Maine sardine brokers reduced prices in an effort to increase demand to levels corresponding to this year's supply. Compared with June 1951, this June's prices for canned pink salmon were 13.4 percent lower and Maine sardines slightly lower, but prices for canned tuna and California sardines were higher. The June index for the canned fishery products subgroup was 2.7 percent below May and 6.7 percent below June 1951.

RETAIL PRICES, JUNE 1952: Higher prices were reported for all foods between mid-May and mid-June, but retail prices of all finfish continued to decline. The mid-June retail price index for all foods (based upon prices paid by urban families of moderate incomes) was 0.3 percent higher than a month earlier and 2.0 percent above mid-June 1951.

Fresh, frozen, and canned finfish retail prices dropped 0.4 percent from mid-May to mid-June and were 3.5 percent lower than during the same period last year. Most of the drop was due to lower prices for fresh and frozen fish.

Table 2 - Adjusted Retail Price Indexes for Foods and Finfish,
June 15, 1952, with Comparative Data

Item	Base	I N D E X E S		
		June 15, 1952	May 15, 1952	June 15, 1951
All foods	1935-39 = 100	231.5	230.8	226.9
All finfish (fresh, frozen and canned)	do	343.9	345.3	356.3
Fresh and frozen finfish	1938-39 = 100	293.3	295.1	291.4
Canned salmon: pink	do	456.9	456.7	511.0

From May 15-June 15, fresh and frozen finfish prices continued to decline and were 0.6 percent below a month earlier, but still 0.7 percent higher than in mid-June 1951. Canned finfish prices remained almost steady, but still were 10.6 percent lower than on June 15, 1951.

In mid-June prices at retail for frozen ocean perch fillets averaged 46.1 cents and frozen haddock fillets averaged 50.5 cents per pound. A year earlier

Table 3 - Average Retail Prices and Price Ranges
of Individual Finfish Products, June 15, 1952

Product	Unit	United States	
		Average	Range of Prices
Frozen Finfish Fillets:			
Ocean perch ^{1/}	lb.	46.1	29-69
Haddock ^{2/}	lb.	50.5	35-75
Canned Finfish:			
Salmon, pink	16-oz. can	56.5	39-79

^{1/} PRICED IN 46 CITIES OUT OF 56.

^{2/} PRICED IN 47 CITIES OUT OF 56.

frozen ocean perch fillets averaged 46.4 cents and frozen haddock fillets 50.5 cents per pound. The average retail price for canned pink salmon was 56.5 cents per 16-oz. can, compared with 63.2 cents per can in mid-June 1951.



International

FOOD AND AGRICULTURE ORGANIZATION

FIRST MEETING OF GENERAL FISHERIES COUNCIL FOR THE MEDITERRANEAN ANNOUNCED: Invitations to the first meeting of the General Fisheries Council for the Medi-

terranean were issued recently by the Food and Agriculture Organization's Director-General. The meeting is to be held at Rhodes in the Dodecanese Islands, July 21-24, 1952. This invitation has been extended not only to the Council Members (Egypt, Greece, Israel, Italy, the United Kingdom, and Yugoslavia) but also to the following Governments which are not yet members of the Council: France, Lebanon, Libya, Monaco, Spain, Syria, and Turkey. Also invited are the International Council for the Exploration of the Sea, the International Commission for the Scientific Exploration of the Mediterranean, and UNESCO, states a July 1 FAO news release.



In addition to the questions that normally concern the first meeting of any new organization, the Council will consider a program of work aimed at developing fisheries in the Mediterranean region. It is expected that this Council will function in much the same way as the Indo-Pacific Fisheries Council, also established through the initiative of FAO. This Council will take a large share of the responsibility in coordinating programs and projects in its region, and will be especially valuable in stimulating a series of Training Centers, through which government officials acquire the knowledge and experience with which they can return to their respective governments and further local application of the most modern developments in the various aspects of the industry.

INTERNATIONAL WHALING COMMISSION

REPORT ON FOURTH ANNUAL MEETING: Conservation of whale stocks played a large part in the deliberations of the Fourth Annual Meeting of the International Whaling Commission which convened in London on June 3. Considerable attention was given to scientific research on whales, particularly whale marking, in favor of which a number of decisions were taken with a view to its organization on as extensive a scale as possible, reports the June 14 issue of The Fishing News, a British fishery periodical. The Commission had before it a number of reports from different countries on the research carried out during the preceding year, notably in Australia, Canada, Japan, Netherlands, and Norway.

The Commission made no alteration in the present limit as regards pelagic whaling in the Antarctic, namely 16,000 blue-whale units, and no alteration in the opening and closing dates of the Antarctic season.

As reported at the meeting, the total production of whale oil in the Antarctic in the 1951-52 pelagic season amounted to 2,328,869 barrels. Production of

the Antarctic land stations during the 1951-52 season added 144,812 barrels, bringing the total to 2,473,681 barrels, or 169,991 barrels more than the previous season. Outside the Antarctic in 1951, the total production amounted to 656,426 barrels, as against 382,699 in the previous year. Pelagic whaling in the Antarctic was stopped at midnight March 5, 1952--over a month before the normal end of the season (April 7)--by which time 16,006 (barely over the authorized limit of 16,000) blue-whale units had been taken. Catching of humpback whales (permitted only from February 1, 1952) was also stopped at midnight on February 5, 1952, by which time 1,545 humpbacks had been taken, 295 more than the permitted figure of 1,250.

A large number of amendments to the Schedule to the 1946 Convention were before the Commission at this meeting. The amendments which were decided upon will have to be referred to the contracting governments and cannot come into force until a period of 90 days has elapsed and only then if there are no objections. Regarding the remainder of the proposed amendments, the Commission decided to set up a subcommittee to examine the whole Schedule and to produce a revised Schedule version for submission at the next annual meeting, which was fixed for June 22, 1953, in London.

The retiring chairman, Birger Bergersen of Norway, having completed his three years of office, was succeeded by Dr. Remington Kellogg of the United States, who has been vice-chairman for the past three years. Dr. Kellogg was succeeded as vice-chairman by Dr. G. J. Lienesch of the Netherlands.

The Commission resolved that the contribution to be asked of each Contracting Government be raised from £125 to £150 (as in 1950/51); that the next (Fifth) Meeting of the Commission be held in London towards the latter part of June 1953.

The Commission also resolved that the present limit on the catch of 1,250 humpbacks should be continued, but in a different form. The only amendments that were adopted by the Commission were in respect to Article 6 (a) and Article 8 of the Schedule. As regards 6 (a), the Commission resolved unanimously that the words "provided that in the pelagic whaling season for baleen whales 1952 a maximum of 1,250 humpback whales may be taken in those water commencing on February 1st" be deleted and the following words substituted therefor: "provided that in the pelagic whaling season for baleen whales 1953 the taking of humpback whales shall be permitted on the 1st, 2nd and 3rd February and if the number of humpback whales taken on those three days is less than 1,250, the International Bureau of Whaling Statistics shall in their discretion specify one or more days later in the season on which further humpback whales may be taken, so as to bring the total up to a maximum of 1,250." Article 8 (c) of the Schedule was amended slightly and the underlined words were added to the part regarding reporting daily on the catch of humpback whales "and in addition notification of data on the number of humpback whales taken in pursuance of Paragraph 6 including nil returns on days when no humpback whales are taken shall be given at the end of each day on which the taking of humpback whales is permitted."

Commissioners were present from Australia, Brazil, Canada, Denmark, France, Iceland, Japan, Netherlands, New Zealand, Norway, Panama, Sweden, Union of South Africa, U.S.S.R., United Kingdom, and the United States. Mexico was not represented. Representatives were also present, all as observers, from Argentina, Italy, Peru, and Portugal, from the Food and Agriculture Organization of the United Nations, from the International Council for the Exploration of the Sea, and from the Association of Whaling Companies.

WHALING

ANTARCTIC PELAGIC PRODUCTION OF WHALE AND SPERM OIL, 1950/51-1951/52: The pelagic output of baleen whale oil during the 1951/52 Antarctic season (based on provisional data) amounted to 382,377 short tons--an increase of more than 7 percent from the 356,462 tons produced in 1950/51 (see table), reports the American Embassy at London. Although the catch limit of 16,000 blue-whale units remained the same as in the previous season, the average oil yield per unit was larger in 1951/52. More extensive use of apparatus for the extraction of oil from waste and glue

Antarctic Pelagic Production of Whale and Sperm Oil, (Preliminary 1951/52, Final 1950/51)							
Country	No. of Expeditions	Whale Oil		Sperm Oil		Total	
		1951/52 Season	1950/51 Season	1951/52 Season	1950/51 Season	1951/52 Season	1950/51 Season
.....(short tons).....							
Norway	10	180,508	174,685	21,818	23,601	202,326	198,286
United Kingdom	3	71,055	68,515	12,253	9,466	83,308	77,981
Japan	1/3	38,707	27,646	9,814	4,197	48,521	31,843
Union of South Africa	1	30,649	25,788	3,703	4,436	34,352	30,224
The Netherlands	1	17,360	17,055	3,229	2,276	20,589	19,331
Panama	1	17,910	23,160	560	457	18,470	23,617
U.S.S.R.	1	26,188	19,613	1,373	900	27,561	20,513
Total 2/	20	382,377	356,462	52,750	45,333	435,127	401,795

1/ ONE EXPEDITION ENGAGED SOLELY IN SPERM WHALING.
2/ DOES NOT INCLUDE PRODUCTION OF SOUTH GEORGIA LAND STATIONS.

waters, the later opening date for hunting whales (resulting in generally fatter whales), and the raising of the minimum catch-size for fin whales from 55 to 60 feet were contributing factors towards the increase in production.

Sperm oil production of 52,750 tons for 1951/52 increased more than 16 percent from the 45,333-ton output in 1950/51. High demand and prices for sperm oil at the beginning of the 1951/52 season resulted in the greater output. Sperm oil prices in 1951, January through October, ranged from £85 to £120 per long ton (US\$213--\$300 per short ton) in drums, compared with only £48-£80 (US\$120--\$200) in 1950. Current quotations, however, are as low as £60 (US\$150), with some buyers looking for a further reduction to £50 (US\$126). Unlike baleen whales, the catch of sperm whales is not limited by quota. Thus, sperm oil production fluctuates more nearly with demand.

In addition to the above quantities of whale and sperm oil (combined 1951/52 output--435,127 tons), South Georgia shore-based operations produced some 26,000 tons of whale oil and around 1,600 tons of sperm oil, both slightly less than in 1950/51.

The 1951-52 Antarctic whaling season lasted only 64 days (January 2 to March 5, 1952) compared with 78 days in 1950/51 and 115 days in 1947/48. The steadily shorter hunting period is due to the greater number and modernization of factory-ships and catcher boats. According to reports from the 19 participating expeditions, the catch of baleen whales represented 15,971 blue-whale units or just short of the 16,000-unit quota established by international agreement.

Final disposition of the 1950/51 whale oil production, according to the January 1952 issue of the Norwegian Whaling Gazette, was as follows: Norway (domestic consumption)--46,300 tons; Norway (for refining and subsequent export)--73,965 tons; Denmark--8,284 tons; Sweden--8,315 tons; United Kingdom--138,153 tons; Netherlands--29,426 tons; Germany--25,044 tons; Belgium--6,720 tons; Japan--27,756 tons; Russia--19,691 tons; and Italy--560 tons.

It is unlikely that production of whale oil in 1952/53 will differ greatly from the past season unless the catch quota is reduced. If present low prices for whale and sperm oils persist, however, some reduction may take place in the size of the 1952/53 whaling fleet. Whaling tankers and factoryships are employed profitably as petroleum tankers between seasons by many of the whaling companies, and unless sufficient inducement exists, some may continue in that service. Present stocks of sperm oil and low prices may result in a curtailment of sperm oil output for the remainder of 1952 and possibly next season, unless conditions became more favorable for profitable operation.



Bolivia

POSSIBLE DEVELOPMENT OF FISHERY RESOURCES: A firm in Bolivia has obtained approval of the government to exploit fishery resources in the Pilcomayo River, states an April 7 American consular dispatch from La Paz.

To carry out this program will involve the construction of small cold-storage and packing plants to be located at Villamontes in the Department of Tarija, La Paz, Cochabamba, Oruro, Potosi, Sucre and Tarija; purchase of a transport plane; importation of machinery for canning fish, meat, and other byproducts of the industry; purchase of two electric power plants (one each for the plant and airport); construction of an airport; organization of fishing villages at Choro, Villamontes, and other points on the Pilcomayo River; preparation of feeding grounds for use of cattle to be utilized for meat-packing purposes during periods when fish will not be available and, finally, the development of the hide industry.

This corporation expects to employ 1,000 persons; save foreign exchange through supplying the market with domestic canned fish and meat; curtail contraband sale of Bolivian cattle to Argentina; and provide much-needed fish supplies to the general public.

It is estimated that necessary imports of material will require US\$154,000 in exchange, and this amount has been requested at the official rate of 60 bolivianos to the dollar.



Canada

CANNED SALMON STOCKS: Warehouse inventories on the west coast of Canada, as of May 31 this year, showed almost 700,000 cases of all varieties of canned salmon. This does not include stocks held by wholesalers and retailers. Since there are few foreign outlets for this canned salmon (Great Britain does not plan to purchase any this year), this inventory did not change very much during June, according to reports. This inventory represents the surplus from the 1951 pack.

There is considerable concern as to the disposition of this salmon. The 1952 salmon pack is under way and it is estimated that the total Canadian west coast pack will be about 1,400,000 cases. Although the Canadian Government has indicated that it will purchase between 6,000 and 10,000 cases of canned salmon for troops in Europe and Korea and the Canadian domestic consumption has increased to a certain extent, the sale of a good portion of the production depends on export markets.

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NEWFOUNDLAND'S PRODUCTION OF FILLETS AND DRESSED GROUND FISH, 1951: Newfoundland's production of fillets and dressed groundfish during 1951 amounted to 32,746,345 pounds, according to revised figures released by the Provincial Depart-



FILLETTING OPERATION AT A LARGE FISH PLANT IN ST. JOHN'S, NEWFOUNDLAND.

ment of Fisheries and reported on June 11 by the American Consulate at St. John's. This production, the bulk of which consists of fillets, was exported soon after it was produced (see table).

Newfoundland's Production of Fillets and Dressed Groundfish, 1951			
Species	Production	Heaviest Monthly Production	
		Month	Quantity
	lbs.		lbs.
Cod	16,901,988	August	2,564,727
Haddock	2,020,601	April	701,664
Rosefish	9,659,116	June	1,360,748
Catfish	119,784	September	22,708
Flounder	3,051,698	November	517,706
Grey sole	731,803	April	255,699
Halibut ^{1/}	261,355	May	114,738
Total	32,746,345		

^{1/} OF THIS AMOUNT, 57,897 LBS. WAS DRESSED HALIBUT.

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NEW NEWFOUNDLAND FILLETING PLANT READY BY JULY: The new filleting plant now being erected at Gaultois, Hermitage Bay, on the south coast of Newfoundland, should be ready for operation late in July of this year, a June 5 American Consular report from St. John's states. The plant building will be a one-story structure of 280 feet over-all length. The machinery is said to be very modern. A total of 100 plant employees are envisaged and a yearly output of about 5,000,000 pounds of filets is hoped for. At this rate, some 15,000,000 pounds of round fish are expected to be handled. Crew members of two 104-foot trawlers now being built at Clarenville shipyards will be added to the payroll. One vessel will be ready for delivery this month, according to reports, and the other later in August.

It is understood that the company will concentrate on the shore fishery, operating its own druggers, and also effect a collection service covering all of Hermitage Bay. Ice and bait will be delivered by the vessels to different depots to be established and then return with catches of cod and other fresh fish. Although there is no trap fishing in Hermitage Bay, there is, nevertheless, an all-year fishery for different species of groundfish; therefore, the firm is encouraging fishermen to own and operate their own small "long-liners" suitable for shallow as well as deep-sea fishing. One of the principal reasons why Hermitage Bay was chosen as the site for the new filleting plant is because these particular waters, known to be excellent fishing grounds, abound with a large variety of miscellaneous fish at all seasons.

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INSURANCE PLAN FOR FISHING INDUSTRY STUDIED: Insurance may be provided for Canada's fishermen and their boats according to a statement by the Canadian Fisheries Minister in the House of Commons, states a June 27 American Embassy dispatch from Ottawa. He said the scheme now under study by the Fisheries Department may turn out to be a three-way insurance with the fishermen, and the Provincial and Federal governments contributing. The insurance will cover the men's lives and their boats, but will not include the gear for the present.

GOVERNMENT MEASURES TO AID FISHERIES: In a five-hour debate on Fishery Department expense estimates, later passed, the Canadian Fisheries Minister indicated that the following measures were contemplated to aid the fisheries:

1. Some of British Columbia's surplus canned salmon may be sent to Canadian forces in Korea.
2. Legislation prohibiting foreign fishing vessels from having shore rights at East Coast ports, except Newfoundland, may be revised.
3. The Fisheries Council is studying the possibility of widening the list of fishermen's gear now exempt from sales tax.
4. Although subsidizing the building of certain types of fishing boats, the Government is opposed to any direct subsidy to fishermen who have poor catches as this might curb incentive to produce.

He also stated that, in general, the fishing industry is continuing to grow and that prices for salt-water and fresh-water fish were holding up well.

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STATUS OF NOVA SCOTIA FISH-PROCESSING PLANTS: The official opening of the multi-million dollar Louisburg fish plants was scheduled for sometime in June, states an American consular dispatch from Halifax dated May 2. Operations, however, have been in progress on a part-time basis at both plants being built on

the Louisburg location. Reports indicate that some work remains to be done at one plant and at the fish-meal plant.

A fish plant at Petit de Grat was severely damaged by fire on March 2, 1952. The older buildings, containing the fish-processing and cutting-line equipment, were completely destroyed. Since the freezer building was untouched, the company has contracted for the season's catch to be cut and filleted at nearby plants in Petit de Grat and then brought to the company's property for freezing, packing, and storage. It was expected that the Petit de Grat plant would be in shape again to freeze and store on its previously planned scale (15,000,000 pounds annually) by the end of May at the latest.

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TRAWLING FOR SARDINES SUCCESSFUL: A new method of fishing for sardines has been introduced into the Charlotte County area of the Bay of Fundy in Canada, reports the May 1952 Trade News of the Canadian Fisheries Department.

During the first week of February 1952, the Atlantic Biological Station at St. Andrews, N. B., conducted experiments with floating and bottom trawls in Lepreau Harbour. These experiments showed that it was possible to catch sardines profitably with trawls, and about two weeks later the Lil' Abner, a boat from Wilson's Beach, Campobello, started to use the method for commercial fishing. Right from the beginning the operations of the Lil' Abner were extremely successful, although some improvements in the gear were made from time to time.

Two-Man Operation: The Lil' Abner is a 50-foot Cape Island-type boat, partially decked, powered with a 165 hp. Diesel engine, and equipped with gallows frames, double drum winch, and an echo sounder. The trawl used was an ordinary 3/4 No. 35 Yankee with a small mesh cod end. This cod end was later replaced by a nylon cod end to reduce the over-all weight of the gear. The trawl was used without wings and with only short ground lines (ea. 20 feet) to the doors which weighed 320 pounds each. Two men operated the boat and gear. Fishing was carried on during the daylight hours and catches varied from 500 to 8,000 pounds for tows usually of 60 minutes' duration. For the five-week period, for which reports were received, the average catch was 50,000 pounds per week with an average of three fishing days per week. Since sardines are worth two cents per pound to the fishermen, this adds up to an extremely successful operation.

In March another privately-owned boat began using a trawl for catching sardines with similar success, and at last report a boat from Digby, N. S., was being fitted for this method of fishing.

Echo Sounder Not Essential: Although some method, such as an echo sounder, is essential for the general location of bodies of sardines, this instrument was useless for the actual fishing operation as the sardines were so close to the bottom that it was impossible to determine their distribution. The echo sounder on the Lil' Abner was not operated while the boat was fishing. An echo sounder on the Gulf Explorer was used throughout an hour-long tow by the Lil' Abner, cruising over and on all sides of the trawl, which could be readily distinguished, but there were no indications whatsoever of bodies of fish. During this tow the Lil' Abner caught 2,000 pounds of sardines.

A comparison between the trawling and purse-seine methods of fishing sardines indicates the superiority of the trawling method. A purse seine costs from \$5,000 to \$6,000, requires from six to eight men to operate, and is usually efficient only at dawn and at dusk when sardines can be located in dense schools close to

the surface. A bottom trawl costs about \$500, can be operated by two men, and can be fished throughout the daylight hours when the sardines are on or close to the bottom.



German Federal Republic

GERMAN VESSELS EXPLORE FISHING OFF GREENLAND: Two Diesel-electric German trawlers left Bremerhaven and Cuxhaven on June 11 for a 30-day exploratory fishing trip to waters off Greenland, according to reports in the June 26 issue of Fiskets Gang, a Norwegian trade paper. Fifteen years have elapsed since Germans fished these waters. At that time lines were used for catching halibut. Now the 450-ton vessels will trawl only.



Greenland

SHRIMP CANNING: The fish canning industry in Greenland has grown since last year, according to a report in Dansk Fiskeritidende (May 23), a Danish trade paper.

The cannery in Narssak began operations in January and packs 4,000 cans of shrimp daily, most of which is sent to Denmark.



India

WEST BENGAL TO PURCHASE TRAWLERS FROM JAPAN: The West Bengal Government has decided to purchase only three trawlers from Japan, according to an April 21 American consular dispatch from Calcutta. Details of possible aid from the Technical Cooperation Administration are said to be under discussion in New Delhi. It is estimated that the three Japanese trawlers and equipment, including a cold-storage plant for storing the fish, would cost about half a million US dollars.

The State's Director of Fisheries estimates a future regular daily supply of at least 10 long tons of sea fish as a result of the operation of a trawler fleet of five--the two existing ones and the proposed three Japanese vessels. Current supplies of sea fish to Calcutta, as a result of the operation of the two Danish trawlers, are not considerable, as the average catch per vessel is estimated at present to be only about 37.6 maunds (3,095 pounds) per trawling day. Total available supplies of fish (of all kinds) in Calcutta at present are estimated at about 1,700 maunds (13,990 pounds) per day, against requirements which are estimated to be at least 7,000 maunds (57,610 pounds).

The two Danish trawlers at present operating have a crew of 20, of which six are Danes--two skippers, three fishermen, and one net-maker. The two chief engineers are Indians, the rest of the Indian crew being trainees. The catch is at present sold in bulk to a contractor who sells at controlled prices to retailers. There is no system of auctioning at present because of the irregularity of arrivals and the uneconomical volume of catches.

NOTE: ALSO SEE COMMERCIAL FISHERIES REVIEW, MARCH 1952, PP. 42-43.

BOMBAY STATE REPORTS RECORD FISH CATCH DURING 1950-51: Despite the late commencement of the fishing season, the quantity of fish caught by launches along the Bombay coast reached a record of 8,081,663 pounds during 1950-51 as compared with 6,225,831 pounds caught in the previous year, according to a recently published report of the Department of Fisheries of the Government of Bombay supplied by the American Consul at Bombay.



The Department's efforts to increase the supply of fish reaching the Bombay City from all sources met with considerable success. Fish brought to the city during the year totaled 31,674 metric tons as against 31,627 tons in 1949-50, and 29,000 tons in 1948-49. These figures do not include considerable quantities of fish sold at landing sites and villages around the city. An increase of more than 40 percent was recorded in the quantity of fish brought to Bombay from places in Saurashtra--4,059,837 pounds as compared with about 2,930,000 pounds for the previous year and 1,500,000 pounds for 1948-49. Thus, more effective exploitation of the rich waters of Saurashtra was rendered possible through the many facilities placed within the reach of the fishermen in Saurashtra and launch owners.

The major events during the year were the inauguration of the Taraporevala Aquarium, expansion of the Technological Laboratory, and erection of a new fish market in Bombay.

Even though the fishing season of the year started rather late, it was free from the usual unexpected gluts and sudden disappearance of fish. The chief characteristic of the season was its uniformity, catches being regular and steady. Markets were well supplied with different varieties of fish and prices generally tended to be low. Large catches of fish were landed in Bombay from Saurashtra, greatly augmenting the supplies procured from adjacent areas. Likewise, the markets were well stocked with supplies of mackerel, derived mainly from North Kanara District, where the season also commenced late, but large catches continued to be available throughout the season, which lasted from October to the end of March. The season in Ratnagiri District, however, proved to be slack.

The number of launches for catching fish in the State increased from 62 to 65. However, only 44 of them were used for fishing as against 35 during the previous year.

Experiments have shown that the most promising success was obtained by fishermen using vessels powered by small engines. The fishermen, by their own unaided efforts, were able to land larger catches, which have averaged twice, and at times thrice, as much as those of sailing boats. This performance is heightened by the fact that these vessels were able, at the same time, to range as far as 35 miles from the coast, a distance incapable of being traversed by a sailing craft, if its haul has to reach the market quickly. Fishermen are now thoroughly convinced of the advantages of powered craft over sailing craft and they are increasingly applying for engines for installation in their vessels.

Besides the new fish market in Bombay, fish markets were also established at Malwan, in Ratnagiri District, and at Ankola and Bhatkal, in Kanara District. Provision of adequate landing facilities were also added during the year. The Government also provided fishermen with trade accessories, such as hemp twine, yarn, fish hooks, etc. Provision of ice factories and enlargement of cold-storage capacity continued to be made during the year.

During 1950-51, loans amounting to Rs.522,879 (about US\$109,800) were granted to fishermen's cooperative societies for expanding their trade as against Rs.410,728 (US\$86,250) during the previous year.

There were 36 fish-curing yards in the State during the year 1950-51 as against 35 in the previous year.



Indonesia

FISHERY CONFERENCES: An International Seminar on Fish Culture sponsored by the Food and Agriculture Organization opened in Bogor on May 1, reports a June 18 American consular dispatch from Djakarta. Representatives from Indonesian ministries, the Technical Assistance Mission of the United Nations, and delegates from several Far Eastern countries attended. This is the second seminar to be held in Indonesia; the first, convoked last year, dealt with the cultivation of fishponds, but this year's seminar concerned itself with all aspects of fish cultivation.

An all-Indonesia Sea Fishery Conference was held at Surabaya May 15-18 and 250 delegates from throughout Indonesia attended. The Minister of Agriculture, in his speech of welcome, pointed out that every Indonesian requires 33 to 44 pounds of fish yearly. Only one third of the needs were being met, he observed, in spite of the 44 million pounds imported annually. The present domestic yield amounts to 777 million pounds yearly and 2.2 billion pounds must be added to this production to come up to requirements.



Japan

PROPOSED FISHING OPERATIONS IN NORTH AND CENTRAL PACIFIC: The intention of Japanese fishermen to extend their high seas fishing operations into the north and central Pacific is indicated from recent Japanese press items. Tokyo Shinbun (June 10) reported three Japanese fishing companies are planning a joint operation for whales in the north Pacific during the current summer, a June 19 American Embassy dispatch states. The plan reportedly provides:

1. The fleet to be used for this purpose will consist of one mothership and four catcher boats.
2. The operation period to be from the end of June to the middle of September.
3. The planned catch....about 400 whales.
4. Operation waters: Seas near the Aleutian Islands.

An official of the Japanese Fisheries Agency said on June 17 that the Agency had not yet received any application for the approval of the proposed whaling ex-

petition and that the Agency had not made any prior decision to approve or disapprove the request if and when submitted.

Proposed development of tuna-fishing regions south of Hawaii was also reported in the Japanese press (Nihon Keizai, June 11). It was stated that ten fishing companies at Misaki and other principal tuna ports were already constructing large size boats (100 to 300 tons) for operation in this central Pacific area. The Japanese are hopeful of a successful operation in the area south of Hawaii because the waters "are calm and safe" and the "catch in the areas high." An official of the Japanese Fisheries Agency said on June 17 that the Agency considered the proposal simply a plan of operations and that the proponents may encounter difficulty in financing the construction of the new vessels for this tuna fishing.

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INDO-JAPANESE PEACE TREATY INCLUDES FISHERY CLAUSE: The Indo-Japanese Treaty of "perpetual peace and amity" was signed the first part of June, reports an American Embassy dispatch from New Delhi, dated June 10. Pending the conclusion of a treaty to place trade, maritime, aviation and other commercial relations "on a stable and friendly basis," both India and Japan have agreed to accord each other most-favored-nation treatment with respect to air traffic rights and privileges, customs, imports, and exports.

Article 3 of the treaty states: "Japan agrees to enter into negotiations with India, when India so desires, for the conclusion of an agreement providing for the regulation or limitation of fishing and the conservation and development of fisheries on the high seas."

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CANNED TUNA CHECK PRICES REVISED AGAIN: The Japanese Government recently again revised the check prices (in effect floor prices) on canned tuna for export, reports a June 20 American Embassy dispatch from Tokyo. A committee comprised of members of the Ministry of International Trade and Industry and the Ministry of Agriculture and Forestry (which includes the Fisheries Agency) announced the new prices at a meeting held June 24. The latest revised check prices, f.o.b. Japan, are as follows:

Size Can	No. Cans per case	White Meat Tuna			Light Meat Tuna	
		Brine	Oil A ^{1/}	Oil B ^{2/}	Oil	Brine
3.5 oz.	48	US\$ 5.10	US\$ 5.30	US\$ 4.85	US\$ 4.80	US\$ 4.60
7 oz.	48	8.50	8.80	8.10	7.90	7.60
13 oz.	48	15.00	15.60	14.35	14.00	13.50
2 kg. (4.4 lbs.)	12	17.00	17.60	16.20	15.80	15.40

^{1/} "OIL A" --EXTRA FANCY PACK EARMARKED FOR EXPORT ONLY TO THE U. S.

^{2/} "OIL B" --FANCY PACK, BUT INCLUDES SOME BROKEN PIECES.

NOTE: ALSO SEE COMMERCIAL FISHERIES REVIEW, JULY 1952, P. 39.

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SALMON FISHING AREA EXTENDED WESTWARD: In an effort to improve the catch, the Japanese Government on July 3 authorized the westward extension of the salmon fishing area toward Kamchatka and Kurlies, reports a July 3 American Embassy dispatch from Tokyo. The new area is as follows:

- | | |
|--|--|
| 1. 170° E. LONGITUDE AND 48° N. LATITUDE. | 3. 156° E. LONGITUDE AND 48° N. LATITUDE. |
| 2. 170° E. LONGITUDE AND 53° ^{30'} N. LATITUDE. | 4. 163° E. LONGITUDE AND 53° ^{30'} N. LATITUDE. |

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FISHING EXPEDITIONS IN OVERSEAS AREAS: The principal Japanese fishing expedition (excepting Bonin Island whaling) in overseas areas during May was the salmon expedition to the North Pacific. Three fleets departed from Hokodate on May 1 for these northern fishing grounds. The catch as of May 31 of red andketa salmon totaled 288,108 fish. No pink salmon were caught during May. Rough weather was encountered in May and fishing throughout the month was curtailed, states a July 8 American consular dispatch from Tokyo.

Two Japanese companies obtained government licenses to operate mothership tuna expeditions in equatorial waters. One company will operate in the general region between 5° N. latitude to 20° S. latitude and 154° E. longitude to 140° W. longitude. The second company will fish in the region bounded by 5° N. latitude to 25° S. latitude and 95° E. to 135° E. longitude. Fishing will not be conducted in territorial limits (3 miles) of countries or islands lying within these areas. Both companies expect to catch a total of approximately 7,125 metric tons of tuna and shark during the fishing period from June 20 to September 4.

PATROL VESSELS ASSIGNED TO OVERSEAS AREAS: The Japanese government assigned patrol vessels to the East China and Yellow Seas, northern waters off Sakhalin and Kuriles, and southern waters (equatorial region general vicinity of East Indies). These vessels will render whatever assistance necessary to Japanese fishing boats, including actions to prevent Japanese boats from fishing in territorial waters (3 miles) off islands in the regions.

FISHERIES LEGISLATION: Fisheries legislation being considered by The Diet includes: (1) authority to restrict fishing operations in accordance with needs (training and billeting) of the U. S. Security Forces stationed in Japan, (2) introduction of the Tripartite Fisheries Treaty for ratification (the Treaty was formally signed by representatives of Japan-Canada-United States at Tokyo on May 9), and (3) provisions for financial assistance to fisheries cooperatives and vessel owners.

FISHERIES RESEARCH APPROPRIATION: Appropriations for the eight principal Japanese Government fisheries research laboratories and two research vessels total 262,045,000 Yen (US\$727,900) for fiscal year 1952 (12 months ending March 31, 1953). These laboratories are located at points throughout Japan from Hokkaido, (the northernmost main island) to Honshu (the southern main island). Coordination of regional programs is subject to the general supervision of the Director, Japanese Fisheries Agency at Tokyo.



Korea

FAO REHABILITATION TEAM TO SURVEY FISHERIES: An international team of ten experts is being recruited by the Food and Agriculture Organization of the United Nations for Korea. This team in six months is to draw up a five-year program for rehabilitating the nation's agriculture. Fisheries is one of the fields to be surveyed by the FAO Mission. The other fields to be surveyed are agriculture, forestry, and nutrition. Of the ten experts, two will be fisheries specialists.

Mexico

NEW SHRIMP GROUNDS OFF BAJA CALIFORNIA: Following the discovery of new shrimp fishing grounds on the southwestern shores of Baja California early in June, the shrimp industry on Mexico's west coast enjoyed a short boom, state several American consular reports from Mexico. A large part of the Mazatlan, Guaymas, and Santa Rosalia fleets sped for the new beds. During the first three weeks of the month their catches were large, but during the closing days of June many boats reported that it was as difficult to find shrimp there as on the coasts of the mainland.

The distance from any base of operations made trips to the new grounds expensive and, as the route to and from the new beds lay largely in the open Pacific, also dangerous for the small type of shrimp boat common to the industry in this area. At the end of the month, many boat owners decided to cease operations unless more "rich strikes" were reported.

The large catches and profits made by boat owners will aid many of them to weather the summer closed-season financially and to prepare for the opening of the new season in October. The shrimp fishing season closes officially on August 1.

The majority of the shrimp from the new beds were brought to freezing plants in Mazatlan, the nearest suitable base, and Guaymas profited directly from the new developments only to a moderate degree.

MAZATLAN SHRIMP EXPORTS: During May and June the Mazatlan freezing plants operated at full capacity. The three continued operations in May and June were able to take care of all shrimp brought to that city, and though the other four freezing plants considered reopening, the developments at the shrimp beds in late June made this impractical.

A total of 7,054,780 pounds of shrimp were exported from the Mazatlan freezing plants during the 1951-52 season, compared with 6,552,770 pounds during the 1950-51 season.

Most of the shrimp exported from Mazatlan during May and June was of the size 12-15 count (heads off) and 16-20 count, and was sold for 80-85 US cents a pound f.o.b. point of destination in the United States. During the month of June, the freezing plants bought the shrimp from the boat owners at an average price of 9,400 pesos (US\$1,087) a metric ton or about 49 US cents per pound.

Mazatlan (Mexico) Shrimp Exports By Months,
1950/51-1951/52

Month	1951-52	1950-51
	Season	Season
	lbs.	lbs.
October	670,575	136,000
November	916,845	1,035,400
December	720,000	919,000
January	774,353	1,106,378
February	300,291	1,112,580
March	598,182	598,182
April	291,766	808,227
May	1,733,535	809,310
June	1,047,233	227,693
Total	7,054,780	6,552,770



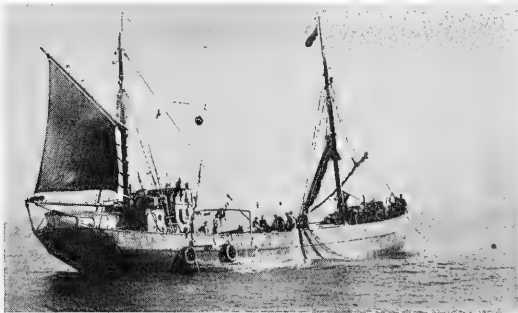
Netherlands

IMPROVEMENT OF SEA FISHERIES RECOMMENDED: Scrapping of a large portion of the present Dutch fishing fleet, and construction during the next ten years of a smaller, more efficient fleet is recommended in the Tinbergen Report recently presented to the Minister of Agriculture, Fisheries and Food, a June 23 American Embassy report from The Hague reports.

The report is the result of more than a year's study by a 20-man committee representing the Government, the fleet, factory owners, and the fishery unions, under the chairmanship of Professor J. Tinbergen, Director of the Central Planning Bureau. The report further recommends Government financing of 50 percent of the estimated 37 million guilder (US\$9,731,000) cost of such improvements.

Noting the steady drop in the average daily catch in the North Sea since the end of the war (now less than 50 percent of the 1945 average), the committee also recommended the construction of three long-distance trawlers costing an additional 4 million guilders (US\$1,052,000).

Examining the background of the fisheries business in the Netherlands, the report states that it can be an economically rewarding enterprise, but that to



A TYPICAL LUGGER-TRAWLER OF THE NETHERLANDS. SEVEN NEW VESSELS ARE TO BE ADDED TO THE PRESENT FLEET OF 34 MEDIUM-SIZE LUGGER-TRAWLERS.

be so, methods and equipment must be modernized and efficiently used. This would include not only fishing vessels and actual fishing, but extend to more efficient processing of fishery products, and a more aggressive promotion policy in the sale of fish in the Netherlands and for export.

The report points out that the Dutch have a low per-capita fish consumption, even though meat prices remain high, and suggests that greater emphasis should be put on the substitution of fish for meat as a protein food. A 20-percent in-

crease in domestic consumption of fish is urged.

Details of the reconstitution of the Dutch fishing fleet over a ten-year period as suggested in the report include addition of 30 new small cutters to the present 84, but scrapping of 100 other inefficient and low-powered types. Seven new vessels would be added to the present fleet of 34 medium size lugger-trawlers. Of the present fleet of 208 herring vessels, 118 should be scrapped and 72 new ones built to make a total of 162 boats in the new fleet.

The report further recommends that all 15 low-powered motor trawlers of the present fleet be scrapped, and that 13 of the present 28 higher-powered motor trawlers be replaced with more modern vessels. With the suggested addition of three long-distance trawlers, the new fleet as recommended would total 248 vessels instead of the present 469.

The Committee estimates that this fleet could produce 50,000 metric tons of fresh herring as compared with the present fleet's 40,000 tons, and bring in the

same 80,000 tons of salted herring. In addition, the Committee estimates that with the three long-distance trawlers contributing approximately 5,000 tons of fresh sea fish to the total, the fleet could increase the catch of the other sea fish from the present 50,000 tons a year to 57,500.



Norway

NYLON NETS FOR HERRING FISHING TESTED: Nylon nets for herring fishing have been tested on the Norwegian research vessel G. O. Sars, states a July 2 American Embassy dispatch from Oslo. According to a report in Fiskaren, the catches made with these nets were from 80 to 100 percent better than with ordinary nets. However, it was more difficult to take the fish from the nylon nets, but attempts have been made to correct this by changing the size of the meshes. It is estimated that a nylon net will last six times longer than a cotton net.

Further tests will be made by fishermen in the Icelandic fishing this summer.

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BRISLING CANNED FROM FROZEN FISH: Norwegian tests of brisling which were frozen, stored for 3 to 11 weeks at temperatures varying from -9° to -31° F., and then canned, showed that the product prepared from fish stored at -22° to -31° F. was fully equal in quality to brisling canned from fresh fish. Frozen brisling stored at higher temperatures did not give as good results.

To be of any practical help to the fishermen, the minimum storage period must be at least 8 weeks, reports the April 29 issue of Fiskaren.

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MACKEREL EXPORTS MAY INCREASE: A large increase in the export of Norwegian mackerel is probable if the current good fishing continues, according to a report from Norway's Mackerel Association in Fiskaren (May 20), a Norwegian trade paper. Holland and England are interested in fresh, iced mackerel. The frozen product has a good market in Germany and a number of other European countries, and is being introduced in Israel.

Export of mackerel fillets to the United States is mentioned as a possibility.

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COD-LIVER OIL OUTPUT IN 1952 MAY EQUAL LAST YEAR'S: Norway's production of cod-liver oil in 1952 is expected to approximate that of 1951 provided fishing conditions remain favorable, reports the American Consulate at Bergen. The major cod fisheries began their operations in January and usually close in May or June.

Production of cod-liver oil this season (as of March 22) was reported at 1,320,875 U.S. gallons. This was somewhat below the comparable figure of 1,585,050 gallons in 1951, but somewhat higher than the 1,056,700 gallons reported for the same period in 1950. Production for the whole of 1951 was 3,170,000 gallons.

More boats and more men are engaged in cod fishing this year than ever before. As of late March there were 5,593 vessels and 24,053 men participating in the most important cod area, the vicinity of the Lofoten Islands.

A price war in the fishing area as of late March had been in full swing since operations began in January. This was said to be the result of a minimum price schedule for fish established by the Fishery Department and the Price Directorate, as was done last year. Keen competition had arisen among the factories, canneries, and others, in their efforts to procure fish. As a result, prices had gone up materially. And prices of raw livers climbed correspondingly.

Export prices for cod-liver oil this year had not been announced as of late March. However, the fishing organizations were pressing the Norwegian Government to initiate action toward that end. Prices were reported to have strengthened somewhat owing to a recent sale of 660 short tons of oil to Germany. This was to be used in the making of margarine, soap, and other products.

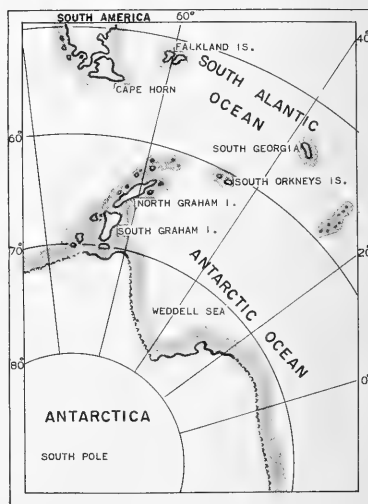
Prices of oil for export probably will not change much this season as long as world political conditions remain as they are, according to the opinion of one of the leading men in the industry.

Buyers in the United States, the largest single importing country of Norway's steamed medicinal cod-liver oil in 1951, were reported recently as being "very cautious" compared with last year. Exports to the United States last year were 330,388 gallons out of a total of 1,726,690 gallons. The Netherlands and Western Germany, second- and third-largest purchasers, took 219,117 and 182,883 gallons, respectively.

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ANTARCTIC FISHING VENTURE: Two strongly-built Norwegian fishing vessels (62 metric tons each) recently returned to Norway from a fishing venture off South Georgia in the Antarctic, according to the June 4 issue of Fiskaren, a Norwegian trade paper. These vessels (manned with 8 or 9 men) fished for a whaling station at Husvika, using purse seines to catch a fish called "sea cod." The "sea cod" was reported as having no relationship to the ordinary cod but as being more nearly like a sculpin. Actually, the fish were fat and resembled wolffish or "catfish" in taste. They ranged up to 3 feet in length and weighed from 11 to 18 pounds each.

Large quantities were caught in a single set of the seine. Those which were not eaten by the staff (up to 2,000 men) at Husvika were utilized for meal and oil by the whaling station. Hook and lines were tried, but the "sea cod" would not take a hook. Seining in the winter months was not possible. Even in the summer months conditions could be arduous for a crew of 8 or 9 men. The vessels were able to fish at considerable distances from the land station because they were equipped with radar, radio, and echo sounders. Before beginning their 59-day voyage to 60 degrees south latitude at South Georgia, the vessels last year had fished off Spitsbergen to 80 degrees north latitude.



- Panama

BAIT-FISHING REGULATIONS CHANGED: The Panamanian Government has issued two decrees changing the bait-fishing regulations in Panamanian Pacific coastal waters. The Decrees are No. 324 dated May 28, 1952, and No. 330 dated June 7, 1952. Although not yet published in the *Gaceta Oficial*, the Decrees became effective on the dates indicated according to the Ministry of Agriculture, Commerce and Industries, reports a July 8 American Embassy dispatch from Panama.

Decree No. 324 modifies Decree No. 216 of October 27, 1951, to the extent that henceforth foreign vessels licensed to fish for bait in the jurisdictional waters of the Republic will be required to pay as compensation for the services of a chief inspector and two assistant inspectors the monthly sum of US\$1,000. The decree fixes the monthly salary of the chief inspector at US\$500 and US\$250 for each of the assistant inspectors.

The Ministry of Agriculture, Commerce and Industries revealed informally that the Decree has been issued in error and that, therefore, either a substitute Decree will be forthcoming or the present one revoked.

Decree No. 330 of June 7, 1952 (in modifying Decree No. 216 of October 27, 1951) (a) extends the limit of the bait-fishing area in Panama's Pacific territorial waters, (b) reduces the license fees for bait-fishing vessels, and (c) alters the period during which bait fishing is authorized.

Under Decree No. 216 of October 27, 1951, bait fishing was limited to the continental submarine shelf of the Pacific Ocean south of latitude 8°30' N. Decree No. 330 changes Article 1 of Decree No. 216 of October 27, 1951, to read in effect: "Bait fishing will be permitted only within the limits of the continental submarine shelf south of latitude 8°30' N. and to the East of longitude 79° 15' W.

Article 2 of the same decree was modified to read: "The owners or agents of the vessels engaged in this type of fishing must obtain an annual license which will be issued by the Ministry of Agriculture, Commerce and Industries and a navigation permit issued, in these instances, by the Ministry of Finance and Treasury. These licenses will be valid for one year from the date of issue."

The newly-designated area for bait fishing thus includes Chepillo Island, the mouth of the Bayano River, and part of the Perlas Islands. The prohibited zone includes the Chame point area and the islands of Otoque, Bona, Taboga, and Taboguilla, which areas are used by local fishermen who supply the market of Panama City.

New license fees (which are to be paid annually when license is solicited) for bait-fishing vessels of foreign registry as established by Decree No. 330 are as follows:

Vessels of less than 100 net tons	US\$ 400
" " 101 to 150 net tons	800
" " 151 to 200 net tons	1,000
" " 200 net tons and over	2,000

Under the previous schedule of fees as set forth in Article IV of Decree No. 216 of October 27, 1951, vessels paid at the following rates:

Vessels of less than 25 tons	US\$ 450
" " 25 to 50 tons	600
" " 50 to 100 tons	900

Vessels of 100 to 150 tons	US\$1,000
" " 150 to 200 tons	1,500
" " 200 tons and over	2,000

Where formerly the authorized period for bait fishing was from February 15 through October 31, the open season as established by Decree No. 330 begins February 1 and ends September 30, "unless the Ministry of Agriculture, Commerce and Industries should decide otherwise."

The Ministry has indicated that Decree No. 330 has also been issued in error and that a substitute decree is to be issued in the near future.



Republic of the Philippines

CONTINUATION OF DUTY-FREE STATUS FOR U. S. FISH IMPORTS RECOMMENDED: Inclusion of fishery products in duty-free imports under the proposed selective free trade with the United States was recommended by the Director of the Philippine Bureau of Fisheries, according to an American Embassy dispatch from Manila. This recommendation was made in connection with the public hearings being held to consider proposals to modify the terms of the present Philippine agreement on trade provided by the Philippine Trade Act of 1946 and subject to change after July 4, 1954. Approval of this recommendation would maintain the present duty-free status of United States fishery products.

The Bureau declared that the local fish supply is insufficient to meet the normal consumption requirements of the Philippines; the fish-canning industry in the Philippines is unprofitable because of insufficient catch; and big-scale deep-sea fishing is not possible in that country as shown in the three-year survey made by the Philippine Bureau of Fisheries.



Union of South Africa

WHALE-OIL OUTPUT IN 1951/52 SEASON AGAIN HIGH: The Union of South Africa's whaling factoryship Abraham Larsen and 16 catcher boats accounted for the largest combined output of whale and sperm oil by a single expedition during the 1951/52 Antarctic season, reports the American Consulate at Durban. Of the total output of 34,350 short tons, all but 3,700 tons consisted of whale oil. In the previous season, South Africa's total output of whale and sperm oil also ranked first with 30,224 tons.

According to pre-season agreement, the entire 1951/52 output of whale oil was sold to the British Ministry of Food at £110 per long ton (US\$275 per short ton). The United Kingdom also purchased 2,427 tons of sperm oil at £58 (US\$182). The remaining 1,273 tons from the 1951/52 season was unsold as of the first of May.

Shore-based whaling operations in the Union during 1951 produced some 11,400 tons of whale oil and 6,000 tons of sperm oil, a substantial increase from respective quantities of 6,640 and 3,510 tons produced in 1950. Sales by the larger of the two shore-based stations in 1951 consisted of 6,257 tons of whale oil to a local concern at a controlled price of £95 per long ton (US\$237 per short ton) and

2,902 tons to various European countries at prices ranging from £115 to £132 (US\$287-£330). Sperm oil sales by the same station totaled 3,665 tons, of which all but 225 tons went to Norway, the United Kingdom, and Italy.



United Kingdom

FISHERIES TECHNOLOGICAL RESEARCH PROGRAM: Freezing-Fish-at-Sea Studies: Among other investigations by the United Kingdom's Department of Scientific and Industrial Research, those on the freezing and cold storage of fish continue, priority being given to the development of a suitable labor- and space-saving plant for freezing fish at sea. A small pilot plant, freezing large slabs of fish between moveable, vertical, directly-refrigerated plates, has been designed and installed on board the research vessel Keelby, according to the July 1952 issue of Food Manufacture quoted by an American consular dispatch from London.

This pilot plant quick freezes blocks up to 5 inches thick of cod or similar fish weighing up to 112 pounds at a freezing temperature of -30° F. to -35° F. The fish are merely dropped or poured in, their weight providing sufficient contact with the metal. The frozen slab is released by warming with compressor gas.

If mechanical filleting and freezing at sea should become possible, preliminary tests show that a very high freezing performance would be possible even at -10° F. or 0° F. with a considerable reduction in cost, weight, space, and power consumption of condensing units.

Antioxidants for Storage of Frozen Herring: In recent work on antioxidants, none of the substances tested (ascorbic acid, gallic acid, and ethyl gallate) has proved to be of much value in the storage of frozen herring. Preliminary inquiries as to whether it is better to store frozen kippers or herring show that a better product is obtained by freezing the latter when fresh, and that the quality of frozen kippers may depend much on the degree of curing.

Chemistry of Wood Smoke: Work on the chemistry of wood smoke has been continued. It has been found that phenols can be separated on paper chromatograms according to their hydroxyl content, and the individual components of these groups, e.g. di- or tri-hydroxyl compounds, can be separated from one another. Using a paper partition chromatogram technique and employing special conditions for elution and a suitable colorimetric procedure, it has been possible to achieve estimations of microgram quantities of individual phenols in a mixture with an accuracy of ± 5 percent.

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CANNED CRAB AND SALMON IMPORTS FROM RUSSIA PLANNED: The United Kingdom will export cured herring (about 135,000 barrels) valued at £850,000 (US\$2,380,000) and tin plate valued at £100,000 (US\$280,000) to Russia in exchange for canned salmon valued at £200,000 (US\$2,240,000) and crab meat valued at £150,000 (US\$420,000). It is presumed that the canned fish will be consumed domestically and will not be re-exported, state May 19 and June 16 American Embassy reports from London.

The agreement provides for a carryover to 1953 for quantities not delivered in 1952. The tin plate going to Russia is to be used for canning salmon and crab meat.

The first arrivals of canned fish from Russia are expected in September. Canned crab meat is scheduled to retail at about 3s.9d. (52 US cents) for a "half tin."

* * * * *

NEW FISH CANNERY IN SCOTLAND: The opening of a new fish cannery at Ayr in Scotland was reported in the July 1952 issue of Food Manufacture, an American consular dispatch from London states. It provides an outlet (which was badly needed) for the West Coast fishing, as it establishes a process point to handle the catch of the Clyde and West Coast fisheries on the spot.

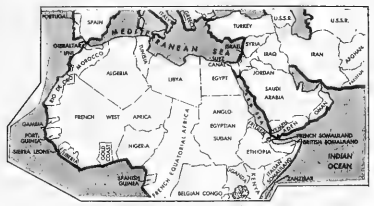
Ayr has been increasing in popularity as a port of landing because of the short haulage distance to the main markets, and its advantage over East Anglia in offering a year-round season. The herring season in East Anglia is largely restricted to summer and early autumn. Should supplies of herring fail off the West Coast, they can readily be imported.

The initial layout of the plant comprises some 5,000 square feet allocated in an ice factory which can be expanded with the progress and success of the plant. The present capacity is about 20,000 cans per day, rising to 30,000. The first pack will include herring in tomato sauce, fresh herring, and canned kippers. Later it is planned to pack vegetables and fruit. It is expected that this canned produce will find its way into the world markets, but a certain proportion will go to home-market outlets.



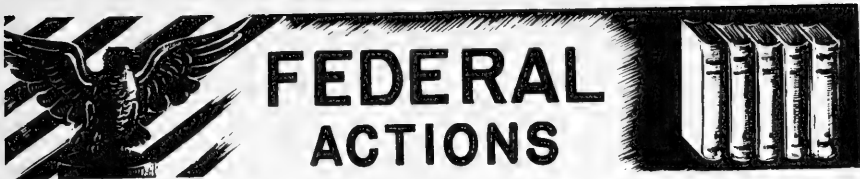
EGYPTIAN FISHERIES

Egypt's postwar plans to improve the well-being of her increasing population include the reorganization and expansion of the fishing industry. Egypt, with a Mediterranean littoral to the north, a long sea coast on the Red Sea to the east, and an extensive system of lakes, canals, drainage and irrigation works connected with the Nile may become self-sufficient in edible fish and solve the problem of feeding her under-nourished population.



In the commercial field, the Egyptian Fisheries Administration's main activities are:

1. DAILY COLLECTION OF STATISTICS FROM VARIOUS FISHERIES.
2. KEEPING A RECORD OF PRICES IN THE VARIOUS MARKETS.
3. RAISING THE STANDARD OF LIVING AMONG THE FISHERMEN; PROTECTING THEM AGAINST THE FISH DEALERS; PROMOTING COOPERATION AMONG THE FISHERMEN.
4. ESTABLISHMENT OF TECHNICAL SCHOOLS FOR FISHERMEN.
5. ESTABLISHMENT OF CANNING, SMOKING, AND PICKLING FACTORIES.
6. CREATION OF PLANS FOR PRODUCTION OF FISH OILS AND FISH MEAL.
7. DEVELOPMENT OF THE SPONGE INDUSTRY ALONG THE COAST FROM ALEXANDRIA TO SOLLUM WHERE SOME OF THE BEST SPONGE BEDS IN THE WORLD ARE FOUND.
8. INTRODUCTION OF OYSTER AND MUSSEL CULTURE.



FEDERAL ACTIONS

White House

SPECIAL SURVEY OF U. S. TRADE POLICIES: A special survey of the foreign trade policies of the United States was ordered by the President, according to a July 13 release from the White House. The full text of the release follows:

The President has sent identical letters to the members of the Public Advisory Board for Mutual Security, asking them to undertake a special survey of United States trade policies. This Board was established by the Mutual Security Act of 1951 as the successor to the Public Advisory Board created in the European Recovery Act of 1948. Under the terms of these Acts the members of the Board have been appointed with the advice and consent of the Senate.

The Board's membership includes:

Miss Sarah C. Blanding
President, Vassar College

James B. Carey
Secretary-Treasurer
Congress of Industrial
Organizations

Jonathan T. Daniels
Editor, Raleigh, N. C.
News and Observer

Robert H. Hinkleley
Vice President
American Broadcasting Co.

Eric A. Johnston
President, Motion Picture
Association of America, Inc.

Allan B. Kline
President, American Farm
Bureau Federation

Orin Lehman
1 William Street
New York, N. Y.

A. E. Lyon
Executive Secretary
Railway Labor Executives
Association

George H. Mead
Chairman of the Board
The Mead Corporation
Dayton, Ohio

George Many
Secretary-Treasurer
American Federation of Labor

Herachel D. Newsum
Master, National Grange

James G. Patton
President, National
Farmers' Union

The Director for Mutual Security, Mr. Averell Harriman, is ex officio Chairman of the Public Advisory Board, but for purposes of this special study it is expected that the Board will name an acting chairman who is not connected with the Government service.

The text of the President's letter follows:

Dear _____:

I am writing you and the other members of the Public Advisory Board for Mutual Security to ask that the Board undertake an investigation of the foreign trade policies of the United States, particularly as they affect our efforts under the Mutual Security Program to achieve economic strength and solvency among the free nations.

I am asking the Board to undertake this assignment because I fear that recent developments affecting our trade policy may work at cross purposes with the basic objectives of the Mutual Security Program.

We are working night and day to help build up the military and economic strength of friends and allies throughout the free world. We are spending very substantial sums of money to do this, to the end that our friends can grow strong enough to carry on without special aid from us. This is why we have urged upon them programs of increased production, trade expansion and tariff reduction, so that through world trade they can expand their dollar earnings and progressively reduce their dependence on our aid.

Yet, at the same time, we find growing up in this country an increasing body of restrictive laws attempting to further the interests of particular American producers by cutting down the imports of various foreign goods which can offer competition in American markets. The so-called "sheep" amendment to the Defense Production Act — enacted despite a number of existing safeguards — is a striking example of this trend. On the one hand we are insisting that our friends expand their own world trade; on the other hand we seem to be raising new bar-

riers against imports from abroad. This poses a very real dilemma for our whole foreign policy.

In my judgment, the first step toward clarifying this situation is for a responsible public group to study this problem and recommend to the President and the Congress the course we should follow in our trade policy. I can think of no group better qualified to do this than the Public Advisory Board for Mutual Security. Representatives of business, labor, agriculture, education and the public at large make up your membership. Both major political parties are represented. Many of you have held other high positions of public trust. From long association with the Marshall Plan and now the Mutual Security Program, you are familiar with the foreign policy of this country and the problems of international relations.

I want you to consider all aspects of our foreign trade policy as coming within the scope of your investigation. In particular, I think you should examine our tariff policy, with special reference to the expiration of the Reciprocal Trade Agreements Act in 1953; import restrictions, including quotas and custom procedures; agricultural policies affecting foreign trade; maritime laws and regulations concerning carriage of American goods; and what to do about the problems of domestic producers who may be injured by certain types of foreign commerce. I would also like to have your views on the role of international agencies in the trade field.

It is extremely important that the whole problem be examined. The effect of raising a tariff to protect a domestic industry, for example, should be evaluated in terms of the counter-restrictions which are raised against American exports abroad. Our tobacco producers know what this kind of discrimination can mean, but I am sure that there are many others who are not fully aware of it. Neither, I feel, have we really thought through the full implications of our efforts to prevent the rest of the free world from trading with the Iron Curtain bloc. Having insisted that these countries severely restrict their trade in one direction, what can we suggest to replace it?

These are the kinds of problems which I want you to consider. Mr. Gordon Gray made a significant contribution in his study of foreign economic policies in 1950. More recently, the President's International Policy Commission, under the leadership of Mr. William S. Paley, has emphasized our national dependence on overseas sources of raw materials. Both of these studies, however, were concerned primarily with other problems and touched rather incidentally upon trade policy.

In order that your recommendations may have the widest possible influence, I believe that you should proceed on an independent basis, not subordinated in any way to the Government agencies concerned. I recognize that the Director for Mutual Security is, by statute, Chairman of your Board. However, Mr. Harriman has suggested, and I agree, that he not sit with the Board for the purposes of this undertaking.

I am asking all the departments and agencies concerned with trade matters to give you full cooperation and whatever assistance you may desire in carrying this work forward.

Very sincerely yours,

HARRY S. TRUMAN



Department of Agriculture

PROPOSED REGULATIONS GOVERNING ENTRY OF MOLLUSKS: Notice of proposed regulations governing entry into this country of all types of mollusks was published in the Federal Register of July 25, 1952, by the U. S. Department of Agriculture. These regulations have been formulated by the Bureau of Entomology and Plant Quarantine. The inspection, treatment of infestation, and permit procedures are covered by the regulations.

Permits will not be issued for the entry of the giant African snail, Achatina fulica (Bowdich) or and other species of Achatina; Theba pisana (Muller); and species of slug; or any other species of mollusk determined by the Bureau to be similar to the giant African snail in its destructiveness to plant life. Permits will also be refused for the entry of other species of mollusks unless it is determined by the Bureau that the particular shipment will be entered and subsequently handled under such safeguards as deemed necessary to prevent injury to the agriculture of the United States.

Under these new regulations, permits will be required to import edible snails.

The proposed regulations as they appeared in the Federal Register follow:

Notice is hereby given under section 4 of the Administrative Procedure Act (5 U. S. C. 1003) that the Secretary of Agriculture, pursuant to Public Law 152, 82d Congress (65 Stat. 335, 7 U. S. C. Sup. 441), approved September 22, 1951, is considering the adoption of regulations, to appear in Part 324 of Chapter III, Title 7 of the Code of Federal Regulations, as follows:

PART 324—MOLLUSKS

- Sec.
324.1 Definitions.
324.2 Mollusk infestation in Guam.
324.3 Inspection.
324.4 Treatment.
324.5 Entry of mollusks; permits required.
324.6 Restrictions on issuance of permits.
324.7 Permit procedure.
324.8 Mollusks entered for scientific purposes.

AUTHORITY: §§ 324.1 to 324.8 issued under Pub. Law 152, 82d Cong.; 65 Stat. 335, 7 U. S. C. Sup. 441.

§ 324.1 *Definitions.* Words used in the singular form in the regulations in this part shall be deemed to import the plural and vice versa, as the case may demand. For the purposes of this part, the following words shall be construed, respectively, to mean:

(a) *Chief of Bureau.* The Chief of the Bureau of Entomology and Plant Quarantine, or any officer or employee of the Bureau to whom authority has heretofore been delegated or may hereafter be delegated to act in his stead.

(b) *Bureau.* The Bureau of Entomology and Plant Quarantine, United States Department of Agriculture.

(c) *Inspector.* Any person authorized by the Secretary of Agriculture of the United States to enforce the provisions of the Plant Quarantine Act (7 U. S. C. 151 et seq.).

(d) *Person.* Any individual, corporation, company, association, firm, partnership, society, joint stock company, or other organized group of any of the foregoing.

(e) *Owner.* The owner or the person having responsible custody of a carrier or other regulated article subject to the regulations in this part.

(f) *Mollusk.* All living stages, including eggs, of the giant African snail or other species of terrestrial or fresh-water forms of the phylum Mollusca.

(g) *United States.* The 48 States, the District of Columbia, the Canal Zone, and the United States possessions, including but not limited to the Territory of Hawaii and other Territories of the United States, but excluding Guam.

(h) *Carrier.* Any vessel, vehicle, aircraft, or other kind of conveyance entering any part of the United States.

(i) *Regulated article.* Any produce, baggage, salvaged war material or other goods entering any part of the United States.

(j) *Permit.* An authorization allowing the entry into the United States of certain mollusks in accordance with the regulations in this part.

(k) *Treatment.* Fumigation or any other process designed to eliminate infestation by the giant African snail or any other mollusk prohibited entry under the regulations in this part.

§ 324.2 *Mollusk infestation in Guam.* The Secretary of Agriculture finds that Guam is infested with the giant African snail. Therefore, the entry of mollusks, carriers, and other regulated articles from Guam into any part of the United States is subject to the same conditions as are applicable to the entry thereof from foreign countries.

§ 324.3 *Inspection.* As a condition of entry into any part of the United States, all carriers and other regulated articles from any foreign country or Guam shall be subject to examination by an inspector for the purpose of determining whether they are infested with the giant African snail or any other mollusk prohibited entry under the regulations in this part.

§ 324.4 *Treatment.* (a) A carrier or other regulated article found upon examination to be infested with the giant African snail or other species of mollusk prohibited entry under the regulations in this part shall be promptly removed from the United States or shall be promptly treated by the owner or his agent in a manner prescribed by the inspector and under his supervision. Pending such action, the carrier or other regulated article shall be immediately subject to such safeguards against escape of the mollusks as the inspector may prescribe.

(b) All costs or charges incident to the inspection, handling, cleaning, safeguarding, or treatment of an infested carrier or other regulated article, except for the services of the inspector during regularly assigned hours of duty and at the usual places of duty, shall be borne by the owner or his agent. Neither the Department of Agriculture nor the inspector will be responsible for any costs accruing for demurrage, shipping charges, wharfage, cartage, labor, chemicals, or the like incidental to such inspection, handling, cleaning, safeguarding, or treatment.

(c) If the treatment or safeguards prescribed by the inspector are not applied promptly by the owner or his agent, the inspector shall apply measures necessary to prevent the escape of the mollusks. The entire cost of such application shall be borne by the owner or his agent and shall constitute a debt payable to the Treasurer of the United States.

§ 324.5 *Entry of mollusks; permits required.* Entry into the United States of any species of mollusk from any foreign country or Guam is prohibited, except under permit issued by the Chief of Bureau or authorized official of the United States Public Health Service, and in compliance with such safeguards as may be prescribed in connection with the issuance of such permit.

§ 324.6 *Restrictions on issuance of permits.* Except as provided in § 324.8, permits will not be issued for the entry of the giant African snail, *Achatina fulica* (Bowdich), or any other species of *Achatina*; *Theba pisana* (Muller); any species of slug; or any other species of mollusk determined by the Chief of Bureau to be similar to the giant African snail in its destructiveness to plant life. Permits will also be refused for the entry of other species of mollusks unless it is determined by the Chief of Bureau that the particular shipment will be entered and subsequently handled under such safeguards as he deems necessary to prevent injury to the agriculture of the United States.

§ 324.7 *Permit procedure.* Any person desiring to enter any mollusks into the United States may submit to the Chief of Bureau an application for permit stating the name and address of the importer, the approximate quantity and species (scientific name) it is desired to enter, the country of origin, the port of entry, the purpose of the entry, and the place, where and conditions under which the mollusks will be handled. If available, an empty shell of the species to be entered should accompany the application, for purposes of identification. In considering such applications, the Chief of Bureau will confer with other interested agencies, which may include the Division of Mollusks, United States National

Museum; United States Public Health Service, Federal Security Agency; and state plant pest officials, in determining the eligibility for entry of the species covered by the applications. Upon determination that a particular species is eligible for entry under § 324.6 or § 324.8, a permit will be issued by the Chief of Bureau specifying the conditions of entry and the port of entry, except that if the species is subject to regulation by the United States Public Health Service, the application for permit will be referred to said agency for such action as it finds is warranted under its regulations.

§ 324.8 *Mollusks entered for scientific purposes.* Mollusks not otherwise eligible for entry under § 324.6 may be entered into the United States for scientific purposes under permit issued by either the Chief of Bureau or by an authorized official of the United States Public Health Service, under such safeguards and restrictions as may be prescribed in connection with the issuance of such permit after review of each individual application for such permit.

The purpose of the proposed regulations is to prevent importations into non-infested parts of the United States of terrestrial and fresh-water mollusks which would be injurious to agriculture. This objective would be accomplished under the proposed regulations by re-

quiring permits for the entry of all terrestrial and fresh-water mollusks and providing for the inspection, treatment, and safeguarding of carriers and other regulated articles coming from a foreign country or from Guam to any other part of the United States. In administering the regulations recognition would be given to such interests as the United States Public Health Service may have in the entry of certain mollusks, particularly snails that are known to be carriers of human diseases. This Service has regulations (Sec. 71.156 of Public Health Service Manual of Laws and Regulations; 42 CFR 71.156) governing the entry of etiological agents and vectors of human diseases that apply to mollusks affecting human health.

Any person who desires to submit written data, views, or arguments concerning the proposed regulations should file them with the Chief of the Bureau of Entomology and Plant Quarantine, Agricultural Research Administration, United States Department of Agriculture, Washington 25, D. C., within 30 days after the date of publication of this notice in the FEDERAL REGISTER.

Done at Washington, D. C., this 22d day of July 1952.

[SEAL] K. T. HUTCHINSON,
Acting Secretary of Agriculture.



Department of Commerce NATIONAL PRODUCTION AUTHORITY

PERISHABLE FOOD PACKERS GRANTED FIRST PRIORITY ON CANS: A clarification of the recently issued Direction to can manufacturers requiring them to use all available tin plate (or tin plate that may become available) to fill orders for cans for packing perishable foods was issued by the National Production Authority on July 18. The action was taken in an amendment to Direction 4 to NPA Order M-25 (cans), which became effective immediately upon release.

The amendment deletes the words "so far as practicable" from Section 4 of the original Direction in order to insure the maximum number of cans for packing the 1952 perishable food crop. This Section of the Direction, as amended, states: "Subject to the provisions of Section 8 of NPA Order M-25, every can manufacturer shall schedule his operations (including the use of all tin plate in his possession, and his ordering of any such tin plate) so as to insure preference in the filling of orders for cans for packing perishable foods." The amendment was issued to strengthen the intent of the Direction.

Direction 4 to M-25 was originally issued to cushion the impact of the steel strike on the preservation of the 1952 food crop. The action suspended certain can material specifications, directed can manufacturers to give preference to can orders for packing perishable food products, and made it possible for packers to use tin plate containing any weight of tin coating for perishable foods without regard to Schedule 1 of M-25.

For details: See Direction 4 (Emergency Packing of Perishable Food Products) as amended July 18, 1952, to M-25 (Cans).

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ALUMINUM FOIL ORDER REVOKED: Removal of all end-use restrictions on aluminum foil for packaging and similar purposes was announced on July 8, 1952, by the National Production Authority. The action was taken by revoking (effective July 14) NPA's aluminum foil order M-67.

The order was issued June 1, 1951, to limit the amount of aluminum foil of a thickness of .005 inches or less which a manufacturer might use in protective packaging. The restrictions superseded aluminum foil usage controls previously established in Order M-7 (Use of Aluminum). M-67 covered foil used for container and packaging purposes and similar uses for household purposes, for florists, gift wrapping, and seal and label usages.

For details: M-67 (Aluminum Foil, Converted) Revocation and News Release NPA-2389, dated July 8, 1952.

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ALUMINUM FOIL REMOVED FROM CONTROLLED MATERIALS LIST: Removal of aluminum foil from the list of aluminum controlled materials forms and shapes, was announced July 23 by the National Production Authority.

This was done by NPA's issuance of amendments to CMP (Controlled Materials Plan) Regulation 1, Revised CMP Reg. 6, Direction 3 to NPA Reg. 2, NPA Order M-5 (Rated Orders for Aluminum), NPA Order M-84 (Aluminum for Destructive Uses), NPA Order M-88 (Aluminum Distributors) and NPA Order M-89 (Distribution of Controlled Materials to Retailers).

NPA pointed out that the revised regulations permit unrestricted use of aluminum foil, although the acquisition of controlled materials from which they are produced will be subject to limitations as provided in order M-5.

NPA further explained that this action is in accordance with the determination of NPA's Administrator to revise all controls in an orderly way when the materials situation justifies.

The action eliminates all use restrictions and the necessity of foil converters filing CMP-4B application forms or using self-certification. However, NPA emphasized, some rein is kept on the production of foil by issuance of production directives to producers of basic forms from which foil and powder are produced, despite the fact that there will be no control on the amount which may be purchased by converters.

For details see: CMP Reg. 1 amended; Revised CMP Reg. 6 amended; Direction 3 to NPA Reg. 2 amended; Order M-5 amended; Order M-84 amended; Order M-88 amended; Order M-89 amendment 2; and press release NPA-2435 dated July 23.

NOTE: FULL TEXTS OF MATERIALS ORDERS MAY BE OBTAINED FROM NATIONAL PRODUCTION AUTHORITY, WASHINGTON 25, D. C., OR FROM ANY DEPARTMENT OF COMMERCE REGIONAL OR FIELD OFFICE.



Economic Stabilization Agency

OFFICE OF PRICE STABILIZATION

ORGANIZATIONAL CHANGES: Because of a cut by Congress in stabilization operating funds, the Office of Price Stabilization on July 12 announced a staff reduction program and changes in organization. The organizational changes are as follows:

1. In the 13 cities in which OFS now has both a regional and a district office, the staffs will be reduced and combined into one office in each regional headquarters city. There are now 103 OFS field offices, including 14 regional and 89 district offices. The total number of field offices will be reduced to 90 by this change. The cities in which the combining of field offices will occur are: Boston; New York; Philadelphia; Richmond; Atlanta; Cleveland; Chicago; Minneapolis; Kansas City, Missouri; Dallas; Denver; San Francisco; and Seattle.
2. In the National Office, the Consumer Durable Goods Division and the Consumer Goods, Distribution, Textile and Apparel Division will be combined into one division.
3. The Transportation, Public Utilities, and Fuels Division will be merged with other existing divisions. The Transportation Branch will become part of the Services, Export-Import Division. The Solid Fuels and Petroleum Branches will be included in the Rubber, Chemicals and Drugs Division. The Public Utilities Branch will be abolished.

In announcing these changes, the Director of Price Stabilization said: "The cost-of-living is at an all-time high and defense expenditures are growing. Therefore, even though this slash in our staff will be a big handicap to us, we still intend to carry on the very best price control program we can. And we certainly don't intend to go into a willy-nillyrush of lifting price ceilings just because our staff will be so reduced after September 1.

"Of course we will keep on with the program we have already started for the orderly and reasonable suspension of ceilings where there is little danger that prices will move up rapidly. The Congress approved that program when it passed the new Defense Production Act the other day, and we will stick right to the law."



Department of the Interior

DEFENSE FISHERIES ADMINISTRATION

EFFECT OF DEFENSE PRODUCTION ACT 1952 EXTENSION ON FISHERY INDUSTRIES: The extension of the Defense Production Act of 1950, with 1952 amendments, was signed by the President on June 30, 1952, and became Public Law 429. Provisions of the Act affecting controls on prices, wages, and salaries were extended to April 30, 1953, while those affecting materials priorities and allocations were extended to June 30, 1953.

The 1952 amendments to the Defense Production Act of 1950 do not materially affect the materials priorities and allocations.

There have been some amendments in the present extension which change the price and wage control provisions of the original Act. According to the Defense Fisheries Administration, fishery products may be affected by Section 412, which was added to the 1952 extension of the Defense Production Act of 1950, under Title IV:

"Suspension of Controls

"It is hereby declared to be the policy of the Congress that the President shall use the price, wage, and other powers conferred by this Act, as amended, to promote the earliest practicable balance between production and the demand therefor of materials and services and that the general control of wages and prices shall be terminated as rapidly as possible consistent with the policies and purposes set forth in this Act; and that pending such termination, in order to avoid burdensome and unnecessary reporting and record keeping which retard rather than assist in the achievement of the purposes of this Act, price or wage regulations and orders, or both, shall be suspended in the case of any material or service or type of employment where such factors as condition of supply, existence of below ceiling prices, historical volatility of prices, wage pressures and wage relationships, or relative importance to business costs or living costs will permit, and to the extent that such action will be consistent with the avoidance of a cumulative and dangerous unstabilizing effect. It is further the policy of the Congress that when the President finds that the termination of the suspension and the restoration of ceilings on the sales or charges for such material or service, or the further stabilization of such wages, salaries, and other compensation, or both, is necessary in order to effectuate the purposes of this Act, he shall by regulation or order terminate the suspension."

The meaning of this Section for fishery products was analyzed in conference with representatives of the Office of Price Stabilization. The result of this analysis is this:

The President shall promote the earliest practical balance between production and demand. In determining this balance, increases in production as well as population will be considered.

It will be kept in mind that general control of wages and prices shall be terminated as rapidly as possible consistent with the policies and purposes of the Defense Production Act of 1950. The policies of the Act are mainly to promote the National defense and to prevent undue strain and dislocations upon prices, production, distribution of materials for civilian use in connection with the defense effort.

Suspension of price ceilings, where appropriate, also will be effected for the purposes of avoidance of burdensome and unnecessary recording and reporting provisions in ceiling price regulations. As far as is known, no ceiling price regulations applying to fishery products requires recording or reporting of any kind. Ceiling Price Regulation 22 requested reports on ceiling prices for canned and otherwise manufactured products, but this reporting has now been discontinued. Future reporting affects only new products for which a ceiling price has to be established.

The following specific factors have to be considered before suspension of price ceilings can take place:

(a) The conditions of supply must be such that the regular demands of an increased population can be met. In considering the supply, OPS will not only have

to consider domestic production, but also import excesses of fishery products which are in a comparative price range and which are consumed by approximately the same portion of the population by which the domestic production is consumed.

(b) The fishery products for which suspension is sought should have been offered below ceiling prices for a significant length of time.

(c) Historical price movements should be observed and the "below ceiling" prices should follow seasonal patterns which are customary for the fishery products under consideration for suspension.

(d) Suspension can only be considered if the part of the industry producing the fishery products in question is not threatened by strikes, boycotts, or other influences which would significantly increase wages.

(e) In considering suspension, OFS must study the relationship of wages to total cost, and it has to consider any abnormality in this relationship.

(f) Suspension may take place more easily if the item for which suspension is sought is not of great importance to general business costs. For example, the price of fishery commodities used in restaurants may not have great importance in the total sales price and, therefore, the price of such fishery commodities may be suspended if the other criteria prevail.

(g) In non-restaurant items, OFS must consider whether the item is not too important as a general living cost item, and that eventual failure of the suspension (sharply increased price) will not put too much strain on the living costs of the average household.

(h) OFS must check that the suspension will not have an unstabilizing effect on the American economy generally.

The President may terminate the suspension of ceiling prices and restore ceilings if the suspension results in a price movement contrary to expectations and the restoration is necessary in order to effectuate the purposes of the Defense Production Act of 1950.

In the conference of representatives of the Defense Fisheries Administration and the Office of Price Stabilization, it was considered that the decontrol of fresh and processed (including canned) fruits and vegetables (Section 106) may affect the price of all canned goods, including canned fishery products. However, no definitive forecast on this interrelation can now be made. Also undetermined is the effect of the protection of retail sales prices, established under State Fair Trade Laws (Section 111). In the trade of fishery products, the application of Fair Trade Laws was negligible until now.

By Section 109 of the Defense Production Act Amendments of 1952, small business enterprises are exempt from wage and salary control. The pertinent statutory provision follows:

"Title IV. Price and Wage Stabilization

"....The authority conferred by this title shall not be exercised with respect to the following:.....

"IX. Wages, salaries, or other compensation of persons employed in small-business enterprises as defined in this paragraph: Provided, however, that the

President may from time to time exclude from this exemption such enterprises on the basis of industries, types of business, occupations, or areas, if their exemption would be destabilizing with respect to wages, salaries, or other compensation, prices, or manpower, or would otherwise be contrary to the purposes of this Act. A small-business enterprise, for the purpose of this paragraph, is any enterprise in which a total of eight or less persons are employed in all its establishments, branches, units, or affiliates. This paragraph shall become effective thirty days after its enactment."

As far as can be seen from the wording as stated above, fishery enterprises in which a total of eight or less persons are employed will be exempt from wage and salary controls. On a Nation-wide average, fishery shore establishments employ twenty-six employees. However, this figure varies very much according to areas, fishery species handled, and seasons.

As far as employment on fishing craft is concerned, the average is, on a Nation-wide basis, about three to a boat. This factor may be of importance to the fishery industries because the owners of smaller boats and vessels will not be able to use the Defense Production Act as a basis for refusing requests for wage increases.

* * * * *

MATERIALS PRIORITY AND ALLOCATION ACTIVITIES FOR FY 1953: The Defense Production Act of 1950 as amended June 28, 1952, continues the authority for the emergency priority system until June 30, 1953. The Defense Fisheries Administration will, therefore, continue to act as claimant agency for the fishery industry and to exercise its priority and allocation functions with respect to the production of fishery commodities or products.

These functions include:

- (1) The claiming for controlled materials (steel, copper, and aluminum) for the construction of fish-processing facilities and the allocation of these materials to members of the fishery industry.
- (2) Furnishing spot assistance to members of the fishery industry in securing priorities for use in obtaining necessary supplies, materials, and equipment.
- (3) Membership on numerous NPA requirements committee in order to insure that the fishery industry receives proper consideration in the allocation of controlled materials to industries requiring these metals. These committees determine the allocation of controlled materials to industries producing equipment and supplies required by the fishery industry.
- (4) Membership on the Department of the Interior Order Clearance Committee which reviews proposed NPA material orders and prepares the Department's recommendations relative to these orders.

To carry out these functions, the Defense Fisheries Administration will continue to maintain a small staff in Washington, D. C., and will utilize the services of the field staffs of the Market News Section of the Branch of Commercial Fisheries.

FISH AND WILDLIFE SERVICE

NOTICE OF INTENTION TO ADOPT AMENDMENTS TO ALASKA COMMERCIAL FISHERIES REGULATIONS: The Secretary of the Interior gave notice in the Federal Register of July 3 that he intends to adopt amended regulations permitting and governing the time, means, and methods for taking of commercial fish in the waters of Alaska.

The regulations are to become effective beginning about February 1, 1953, and to continue in effect thereafter until further notice.

Interested persons are hereby given an opportunity to participate in formulating the regulations by submitting their views, data, or arguments in writing to the Director of the Fish and Wildlife Service, Department of Interior, Washington 25, D. C., before November 20, 1952, or by presenting their views at a series of open discussions scheduled to be held at the following designated places on the dates specified:

Naknek, Alaska	August 8	Klawock, Alaska	October 14
Dillingham, Alaska ..	August 9	Wrangell, Alaska ..	October 15
Kodiak, Alaska	September 26	Petersburg, Alaska .	October 16
Anchorage, Alaska ...	September 29	Sitka, Alaska	October 17
Cordova, Alaska	October 1	Juneau, Alaska	October 20
Ketchikan, Alaska ...	October 13	Seattle, Wash.	November 5, 6, 7



Interstate Commerce Commission

ORDER FOR HEAVY LOADING OF FREIGHT RESCINDED: Interstate Commerce Commission Service Order 878, prescribing minimum loading requirements for canned goods and foodstuffs in railroad freight cars, was vacated and set aside effective July 15, according to the Federal Register of July 17. Just recently the order had been extended to November 30, 1952.

NOTE: ALSO SEE COMMERCIAL FISHERIES REVIEW, JULY 1952, P.50.



Department of State

NORTHWEST ATLANTIC FISHERIES COMMISSION--SECOND ANNUAL MEETING: The Second Annual Meeting of the International Commission for the Northwest Atlantic Fisheries opened on June 30 at St. Andrews, New Brunswick, Canada, and continued until July 9, 1952. The United States Delegation was:

UNITED STATES COMMISSIONERS:

JOHN L. KASK, ASSISTANT DIRECTOR, FISH AND WILDLIFE SERVICE, DEPARTMENT OF THE INTERIOR.
BERNHARD K. KNOLLENBERG, CHESTER, CONNECTICUT.

FRANCIS W. SARGENT, DIRECTOR, DIVISION OF MARINE FISHERIES, DEPARTMENT OF CONSERVATION, COMMONWEALTH OF MASSACHUSETTS, BOSTON, MASSACHUSETTS.

ADVISERS:

HERBERT W. GRAHAM, CHIEF, NORTH ATLANTIC FISHERY INVESTIGATIONS, FISH AND WILDLIFE SERVICE, DEPARTMENT OF THE INTERIOR.

LIONEL A. WALFORD, CHIEF, BRANCH OF FISHERY BIOLOGY, FISH AND WILDLIFE SERVICE, DEPARTMENT OF THE INTERIOR.

OBSERVER FROM THE UNITED STATES INDUSTRY ADVISORY COMMITTEE:

PATRICK MCHUGH, SECRETARY-TREASURER, ATLANTIC FISHERMAN'S UNION (AFL), BRIGHTON, MASSACHUSETTS.

In accordance with the terms of the International Convention for the North-west Atlantic Fisheries, which entered into force in July 1950, the Commission provides the machinery for international cooperation in the scientific investigation and development of the fishery resources of the waters off the west coast of Greenland and the east coasts of Canada and New England. While the Commission has no direct regulatory powers, it may recommend to governments the regulatory measures that it considers necessary for maintaining, at a maximum level for sustained production, the stocks of fish which support the international fisheries in the Convention area. Upon approval by the governments directly concerned, regulations become applicable to all member countries. The First Meeting of the Commission was held at Washington in April 1951.

This Meeting served as an opportunity for a review of the first year of the Commission's operations. The Commission heard committee reports on research and statistics, finance and administration, permanent headquarters site, ratifications of the Convention, staff matters, and certain panel reports. The 1952-53 budget was considered in accordance with decisions concerning a permanent headquarters and secretariat. Membership of the panels, established under the Convention to exercise primary responsibility concerning each of the five subareas into which the Convention area is divided, was reviewed. The Commission elected a new Chairman to serve for one year, and appointed a permanent Executive Secretary. Policies on the collection, compilation, and dissemination of statistical data; on the development of research programs for the entire Convention area and its five subareas; and on the Commission's Working relationship to other international organizations with related objectives were discussed and formulated.

The United States and Canada are the members of the Panel for subarea V, covering that portion of the total area adjacent to the New England coast. The Commission considered a report from this panel, which met in February 1952 to determine whether measures for the regulation of fisheries in subarea V should be recommended to the Commission for adoption. The Panel recommended that the Commission: (1) instruct its Research and Statistics Committee to make a detailed study of all fish resources falling within the purview of the Convention; (2) consider a proposed regulation for haddock fishing, including a proposal to increase the average mesh size of the nets used in fishing for haddock off the New England coast; and (3) call the attention of interested governments to a recommended research program concerning haddock.

Invitations to participate in this meeting were extended to Canada, Denmark, Iceland, Spain, the United Kingdom, and the United States, which are parties to the Convention; to France, Italy, Norway, and Portugal, which have signed but not yet ratified the Convention; and to the Food and Agriculture Organization of the United Nations and the International Council for the Exploration of the Sea.



Tariff Commission

TUNA INVESTIGATION ANNOUNCED: A public notice announcing a tuna investigation under Section 332 of the Tariff Act of 1930 was issued by the U. S. Tariff Commission on June 30, 1952. The full text of the notice follows:

"PUBLIC NOTICE

"TUNA FISH

"INVESTIGATION UNDER SECTION 332 OF THE TARIFF ACT OF 1930

"By direction of the Committee on Finance of the United States Senate on June 26, 1952, the United States Tariff Commission, on the 30th day of June 1952, instituted a general investigation under the provisions of section 332 of the Tariff Act of 1930, as amended, of the domestic tuna industry, including the effect of imports of fresh or frozen tuna fish on the livelihood of American fisherman.

"The purpose of the investigation is to determine the facts relative to the production, trade, and consumption of tuna fish in the United States, taking into account all relevant factors affecting the domestic economy, including the interests of consumers, processors, and producers. Upon completion of the investigation the Commission will submit a report of the results thereof to the Senate Finance Committee. Such report will include a statement of findings as to the effect upon the competitive position of the domestic tuna fishing industry of the present duty-free entry of fresh and frozen tuna.

"A public hearing at which all interested parties will be given opportunity to express their views will be held in connection with this investigation. The time and place of such hearing will be announced at a future date.

"I hereby certify that the above investigation was instituted by the United States Tariff Commission on the 30th day of June 1952."

/s/ Donn N. Bent
Secretary

On July 10, 1952, the Tariff Commission ordered that a public hearing be held in connection with this investigation, beginning at 10 a.m. November 17, 1952, in the Hearing Room, Tariff Commission Building, 8th and E Streets, N.W., Washington, D. C. All interested parties will be given an opportunity to appear and to be heard with respect to the subject matter of the investigation.

Interested parties desiring to appear and to be heard at the public hearing should notify the Secretary of the Commission in writing at its offices in Washington, D. C. in advance of the date set for the hearing.



Eighty-Second Congress (Second Session)

JULY 1952

The Eighty-second Congress adjourned sine die on July 7, 1952. All bills and resolutions introduced and not passed by this Congress will have to be reintroduced in the Eighty-third Congress if they are to be considered.

Listed below are public bills and resolutions introduced and referred to committees, or passed by the Eighty-second Congress (Second Session) and signed by the President. However, the more pertinent reports, hearings, or chamber actions on some of the bills shown in this section from month to month are also listed.

BILLS INTRODUCED:

Interstate Shipment of Fish: S. 3438 (Magnuson) - A bill to extend the provisions of the act of May 20, 1926, as amended, so as to further regulate the interstate shipment of fish; to the Committee on Interstate and Foreign Commerce.

BILLS PASSED:

Interior Appropriations: H. R. 7176, Interior appropriations for 1953, was cleared by the Senate for the President by adoption of conference report thereon. (Includes Fish and Wildlife Service appropriations.)

House adopted by a voice vote the conference report on H. R. 7176, after rejecting a recommittal motion.

Seaward Boundaries: House adopted by a voice vote H. Res. 676, to authorize the Committee on Interior and Insular Affairs to study the seaward boundaries of the United States.

Territorial School-Lunch Program: House cleared for Presidential action, after taking by unanimous consent from the Speaker's table with Senate amendments thereto and the amendments agreed to, H. R. 1732, which would put Alaska and Hawaii on the same basis as the States in the apportionment of funds for the school-lunch program.

Senate passed with amendment and sent back to the House H. R. 1732, to place Alaska and Hawaii on the same basis as the States in the apportionment of funds for the school-lunch program.

Undersized Fish--To Prevent Shipment in Interstate Commerce: Senate passed on the call of the calendar H. R. 5083, to regulate further the interstate shipment of undersized fish.

Water Pollution: On call of the calendar Senate passed without amendment and cleared for the President H. R. 6856, providing a 3-year extension of the Water Pollution Control Act.

North Pacific International Fisheries Convention: Resolution of ratification was adopted by Senate on the treaty and international convention for high-seas fisheries of North Pacific Ocean, to-

gether with a protocol on behalf of U. S., Canada, and Japan (Exec. S, 82d Cong., 2d sess.).

BILLS SIGNED BY THE PRESIDENT:

Defense Production Act: S. 2594, amending and extending the Defense Production Act of 1950, as amended, and the Housing and Rent Act of 1947, as amended, was signed by the President June 30, 1952 (P. L. 429).

Sea Lamprey Studies: H. R. 6500, authorizing \$446,000 during fiscal year 1953 for investigations and studies of the sea lampreys of the Great Lakes, signed by the President July 1, 1952 (P. L. 434).

COMMITTEE MEETINGS:

Interstate Transportation of Fish: Committee on Interstate and Foreign Commerce in executive session ordered favorably reported without amendment S. 3438, to regulate further the interstate shipment of fish.

CONGRESSIONAL REPORTS:

Committee reports on bills reported in this section of interest to the fishery and allied industries (available only from the committee submitting the report).

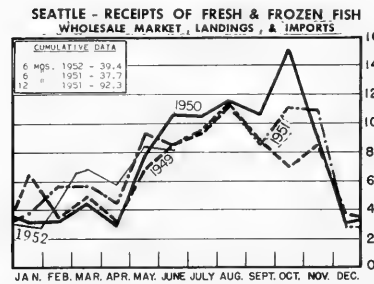
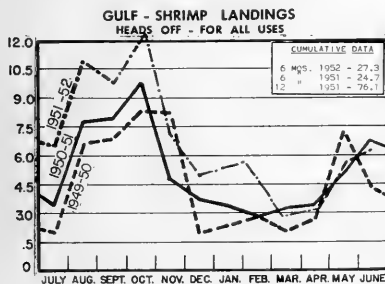
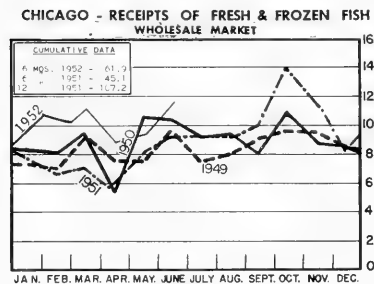
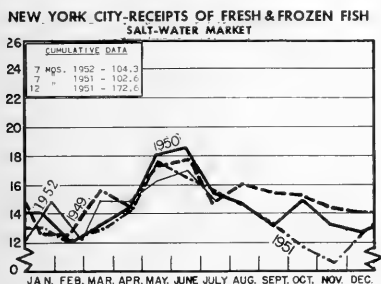
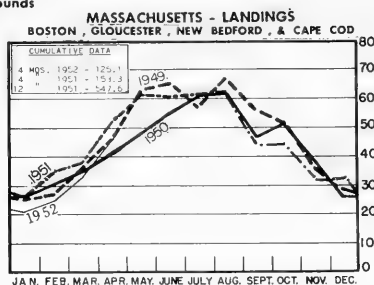
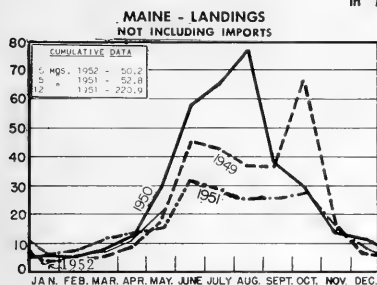
Amending the Joint Resolution on August 8, 1946, as Amended, with Respect to Appropriations Authorized for the Conduct of Investigations and Studies Thereunder, Senate Report No. 1793 (June 19, 1952, 82d Congress, 2d Session), 3 p., printed, to accompany H. R. 6500. Committee on Interstate and Foreign Commerce, to whom H. R. 6500 was referred, recommended passage of the bill, which would authorize the continuation of the investigations and studies of the Great Lakes sea lampreys. Authorized limit of cost for fiscal year ending June 30, 1953, is set at \$446,000 by the bill.

Interior Department Appropriation Bill, 1953, House Report No. 2451, (July 3, 1952, 82d Congress, 2d Session), 11 p., printed, to accompany H. R. 7176. Gives recommendations of Committee of Conference on disagreement of the two Houses on the amendments of the Senate to the H. R. 7176, making appropriations for the Department of the Interior for the fiscal year ending June 30, 1953 (includes Fish and Wildlife Service appropriations).

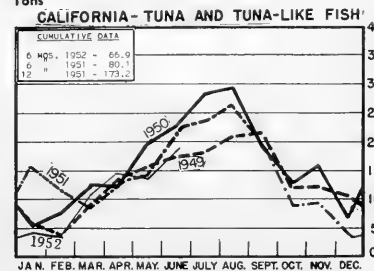
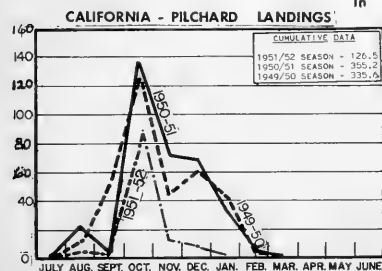


LANDINGS AND RECEIPTS

In Millions of Pounds



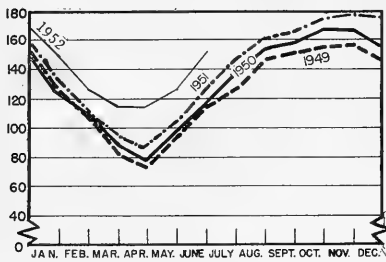
In Thousands of Tons



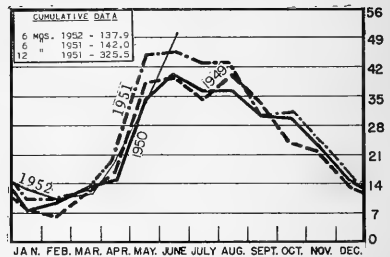
COLD STORAGE HOLDINGS and FREEZINGS of FISHERY PRODUCTS

In Millions of Pounds

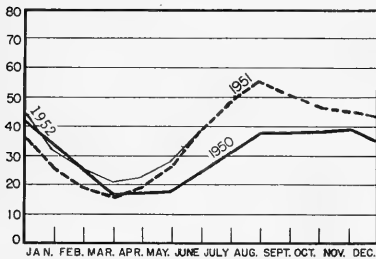
U.S. & ALASKA - HOLDINGS OF FROZEN FISH



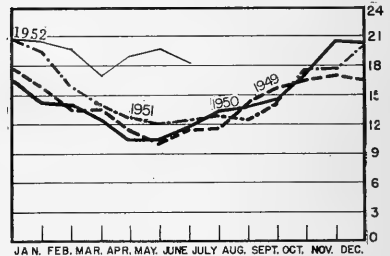
U.S. & ALASKA - FREEZINGS



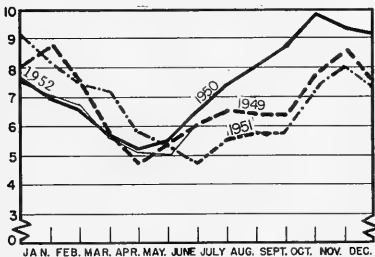
NEW ENGLAND - HOLDINGS OF FROZEN FISH



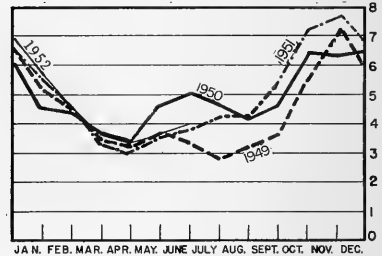
NEW YORK CITY - HOLDINGS OF FROZEN FISH



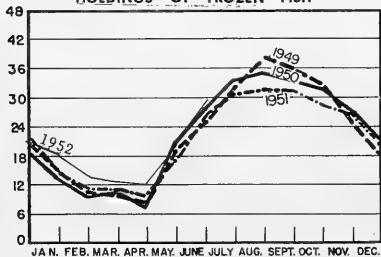
CHICAGO - HOLDINGS OF FROZEN FISH



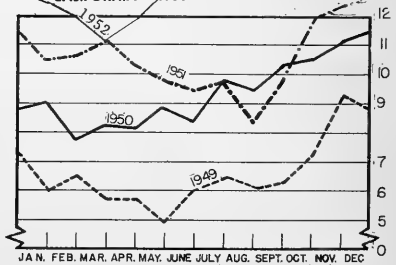
GULF - HOLDINGS OF FROZEN FISH



WASHINGTON, OREGON, AND ALASKA - HOLDINGS OF FROZEN FISH



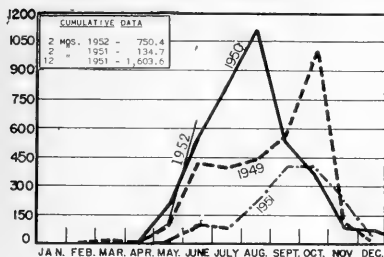
CALIFORNIA - HOLDINGS OF FROZEN FISH



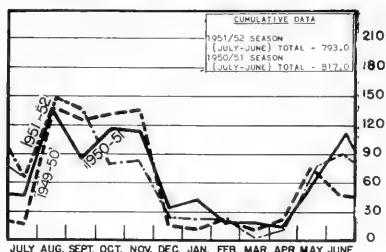
CANNED FISHERY PRODUCTS

In Thousands of Standard Cases

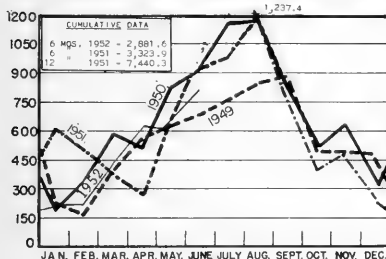
MAINE - SARDINES, ESTIMATED PACK



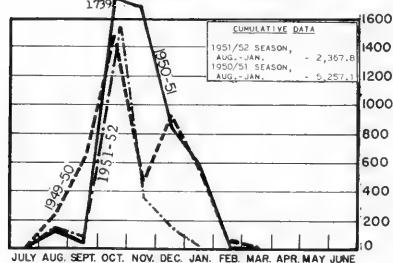
UNITED STATES - SHRIMP



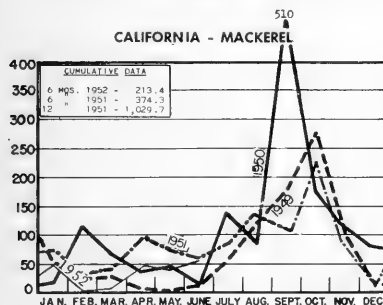
CALIFORNIA - TUNA AND TUNA-LIKE FISH



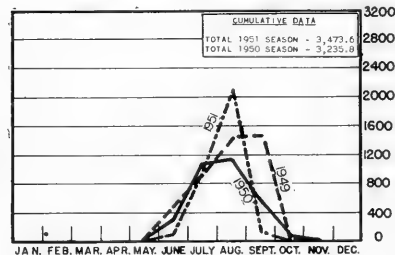
CALIFORNIA - PILCHARDS



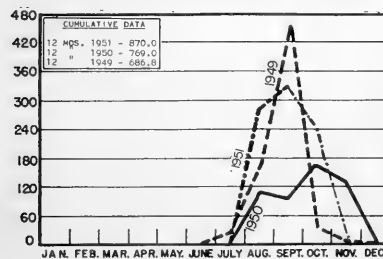
CALIFORNIA - MACKEREL



ALASKA - SALMON



WASHINGTON - PUGET SOUND SALMON

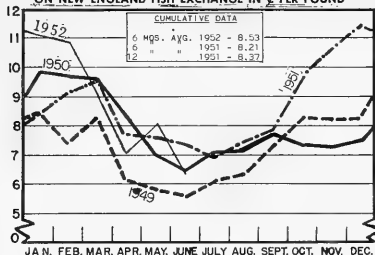


STANDARD CASES

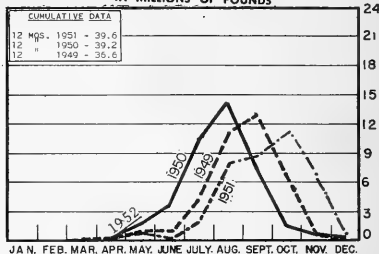
Variety	No. Cans	Can Designation	Net. Wgt.
SARDINES	100	1/4 drawn	3 1/4 oz.
SHRIMP	48	—	7 oz.
TUNA	48	No. 1/2 tuna	7 oz.
PILCHARDS	48	No. 1 oval	15 oz.
MACKEREL	48	No. 300	15 oz.
SALMON	48	1-pound toll	16 oz.

PRICES, IMPORTS and BY-PRODUCTS

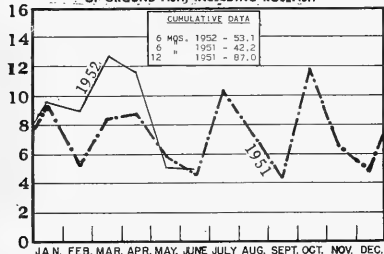
**BOSTON - WEIGHTED AVERAGE PRICE
ON NEW ENGLAND FISH EXCHANGE IN ¢ PER POUND**



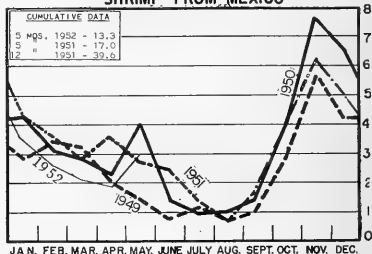
**MAINE - IMPORTS OF FRESH SEA HERRING
IN MILLIONS OF POUNDS**



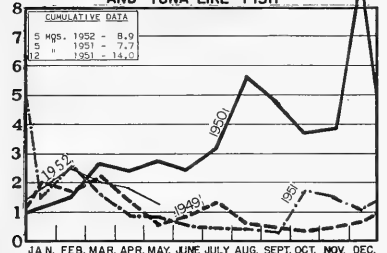
**U.S. - IMPORTS OF FRESH AND FROZEN FILLETS
OF GROUND FISH, INCLUDING ROSEFISH**



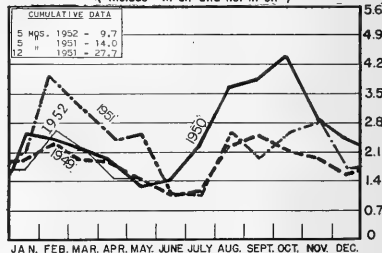
**U.S. - IMPORTS OF FRESH AND FROZEN
SHRIMP FROM MEXICO**



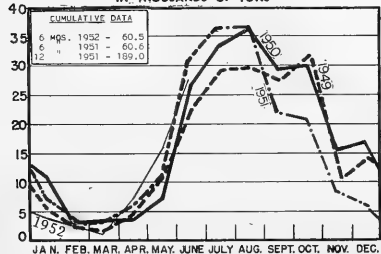
**U.S. - IMPORTS OF CANNED TUNA
AND TUNA-LIKE FISH**



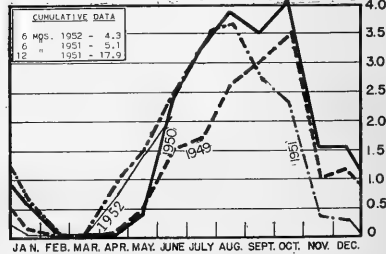
**U.S. - IMPORTS OF CANNED SARDINES
(Include in oil and not in oil)**



**U.S. & ALASKA - PRODUCTION OF FISH MEAL
IN THOUSANDS OF TONS**



**U.S. & ALASKA - PRODUCTION OF FISH OIL
IN MILLIONS OF GALLONS**





RECENT FISHERY PUBLICATIONS

Recent publications of interest to the commercial fishing industry are listed below.

FISH AND WILDLIFE SERVICE PUBLICATIONS

THESE PROCESSED PUBLICATIONS ARE AVAILABLE FREE FROM THE DIVISION OF INFORMATION, U. S. FISH AND WILDLIFE SERVICE, WASHINGTON 25, D. C. TYPES OF PUBLICATIONS ARE DESIGNATED AS FOLLOWS:

- CFS - CURRENT FISHERY STATISTICS OF THE UNITED STATES AND ALASKA.
 FL - FISHERY LEAFLETS.
 SL - STATISTICAL SECTION LISTS OF DEALERS IN AND PRODUCERS OF FISHERY PRODUCTS AND BYPRODUCTS.
 SEP.- SEPARATES (REPRINTS) FROM COMMERCIAL FISHERIES REVIEW.

Number	Title
CFS-757	- Imports & Exports of Fishery Products, 1947-1951 Annual Summaries, 8 p.
CFS-763	- Middle Atlantic Fisheries, 1950 Annual Summary, 8 p.
CFS-765	- Massachusetts Landings, April 1952, 14 p.
CFS-766	- Mississippi Landings, April 1952, 2 p.
CFS-767	- Texas Landings, May 1952, 4 p.
CFS-768	- Fish Meal and Oil, May 1952, 2 p.
CFS-769	- Maine Landings, April 1952, 4 p.
CFS-770	- Florida Landings, April 1952, 6 p.
FL-292	- List of Fishery Cooperatives in the U.S. & Alaska (Revised), 4 p.
FL-336m	- Quarterly Outlook for Marketing Fishery Products, July-Sept. 1952, 28 p.

Firms Canning (Revised):

SL-109	- Caviar and Fish Roe 1951, 2 p.
SL-110	- Oysters, 1951, 2 p.
SL-111	- Clam Products, 1951, 2 p.

Number	Title
<u>Firms Canning (Revised) (Contd.):</u>	
SL-113	- Crab Meat, 1951, 2 p.
SL-118	- Groundfish Flakes, 1951, 1 p.

Firms Manufacturing (Revised):

SL-151	- Fish Meal, Scrap, Body end Liver Oils, 1951, 8 p.
SL-152	- Oyster Shell Products, 1951, 1 p.
SL-159	- Fresh-Water Mussel-Shell Products, 1951, 1 p.
Sep. 316	- Increasing the Spread of Shrimp Trawls.
Sep. 317	- Technical Note No. 21--Equipment and Procedure for Thawing Fish Frozen at Sea.
Sep. 318	- Technical Note No. 22--Fish Frozen in Brine at Sea: Preliminary Laboratory and Taste Panel Tests.

MISCELLANEOUS PUBLICATIONS

THESE PUBLICATIONS ARE NOT AVAILABLE FROM THE FISH AND WILDLIFE SERVICE, BUT USUALLY MAY BE OBTAINED FROM THE AGENCIES ISSUING THEM. CORRESPONDENCE REGARDING PUBLICATIONS THAT FOLLOW SHOULD BE ADDRESSED TO THE RESPECTIVE AGENCIES OR PUBLISHERS MENTIONED. DATA ON PRICES, IF READILY AVAILABLE, ARE SHOWN.

The Biology of the Dover Sole, MICROSTOMUS PACIFICUS (Lockington), by Frederick B. Hagerman, Fish Bulletin No. 85, 52 p., illus., printed. Bureau of Marine Fisheries, Department of Fish and Game, San Francisco, Calif., 1952. Facts on the biology of the Dover sole (Microstomus pacificus) are presented in this publication, as well as data on the trawl fishery it partially supports.

Carp as a Food Fish, Publication 219-52, 4 p., illus., processed. Wisconsin Conservation Department, Madison, Wisconsin. This leaflet gives

information on the construction of a smokehouse and a method of preparing carp for smoking. Recipes for cooking carp are also included, together with instructions for cleaning, filleting, and skinning carp.

(Canada) Brief on the Fishery Wealth of British Columbia, by J. L. Hart, Ferris Neave, and D. B. Quayle, 35 p., processed. British Columbia Department of Fisheries, Vancouver, B. C., Canada. (This report was presented at the Second Resources Conference in Victoria on February 17 and

THESE PUBLICATIONS ARE NOT AVAILABLE FROM THE FISH AND WILD-LIFE SERVICE, BUT USUALLY MAY BE OBTAINED FROM THE AGENCIES ISSUING THEM.

18, 1949.) Discusses the status of the various fisheries of British Columbia and gives statistical data on the quantity and value of the fisheries from 1917 through 1948.

"Canada's Lobster Regulations," by A. L. Pritchard, article, Trade News, May 1952, vol. 4, no. 11, pp. 3-5, 13, illus., processed. Department of Fisheries, Ottawa, Canada. This article reviews the past history of the lobster fishery in the Maritime Provinces and attempts to clarify the existing problems in the fishery. It explains the conservation principles now being followed and the necessity for protecting the lobster fishery for the future. The value of the various regulations is reviewed and assessed.

Canada's Pacific Salmon, by Roderick L. Haig-Brown, 23 p., illus., printed. (Reprinted from Canadian Geographical Journal). Department of Fisheries of Canada, Ottawa, Canada, 1952. Describes the spawning and migration of British Columbia's five species of salmon, their salt-water life and feeding, the salmon industry as a whole, commercial fishing methods, catch, utilization, and international aspects of the fishery. A discussion of the Pacific salmon as a game fish is also presented.

Commercial and Sport Fishes of the Mississippi River between Caruthersville, Missouri, and Dubuque, Iowa, by Paul G. Barnickol and William C. Starrett, Bulletin of the Illinois Natural History Survey, vol. 25, art. 5, 87 p., illus., printed. Illinois Natural History Survey, Natural Resources Building, Urbana, Illinois, September 1951. This paper is based on an analysis of the data relative to the species composition of the fishes appearing in test-net collections taken in 1944 and 1946 with various types of commercial gear at 31 sampling stations in the Mississippi River between Caruthersville, Missouri, and Dubuque, Iowa. The gear used included types that could not be used legally by commercial fishermen in some or all of the cooperating states. The discussion is limited largely to the commercial and sport fishes of the river. The writers believe that, regardless of any shortcomings of the sampling methods employed in this study, the data are extensive enough to allow a rough estimate of the status of the various commercial and game fishes now occurring in the Caruthersville-Dubuque section of the Mississippi River. According to the authors, commercial fishes amounted to 76.4 percent by weight of all fishes caught in the section surveyed. The commercial fishes discussed individually are sturgeons, paddlefish, American eel, suckers and redhorses, buffalo-fishes, carp, catfishes and bullheads, and fresh-water drum. Gars and bowfin, which are designated as predatory fishes, are also discussed. Included is a list of accepted common, scientific, and local names of the fishes occurring in the Mississippi River survey collections in the Caruthersville-Dubuque section.

The Commercial Fisheries of Virginia (Report of the Council Committee on Fisheries, The Advisory Council on the Virginia Economy), 51 p., illus., processed. Division of Planning and Economic

Development, 301 State Finance Building, Richmond 19, Virginia, October 1951. Presents reports and abstracts of studies on the marketing of Virginia sea food; the nature of Virginia's sea-food resources; the importance of catch records in the management of the fisheries of Virginia with recommendations for the establishment of a fishery statistical laboratory; a proposed oyster survey program for Virginia; and a new approach in fishery management--the Maryland management plan. Steps which should be taken if the fisheries are to make their maximum contribution to the economic well-being of the people of Virginia are outlined.

Conditions of Work in the Fishing Industry, 215 pages, printed. International Labor Organization, 1825 Jefferson Place, Washington 6, D. C. price \$1.25. A general description of conditions of work in the commercial fishing industry of 24 nations is given in this book. The more important fishing nations of the world are covered, although no information is given for Japan, and U.S.S.R., and a number of others. Interesting information on the nature (types of fishing, seasons, etc.) of the commercial fisheries of these countries is presented. Many features of working conditions, such as wages, hours, manning, contracts and conditions of employment, accommodations on board, medical care, safety, social security, cooperative societies, etc., are covered. Some detailed data are given under a few of these items; for example, the number of fishermen, average earnings, etc. Because of delay in publishing and for other reasons, some of the data are quite old. This, however, together with the lack of information on Japan and U.S.S.R. do not affect the value of the general information obtainable from the book. Although not designed to give complete legal details on all matters, the book does treat many items in considerable detail. —W. H. Stoltzing

Conversion Factors and Weights and Measures for Agricultural Commodities and their Products, 96 p., processed. Production and Marketing Administration, U. S. Department of Agriculture, Washington 25, D. C., May 1952. The tables presented were compiled primarily to provide uniform conversion factors in handbook form for use of Department of Agriculture personnel in converting food and fiber requirements of various segments of the economy into production and allocation units. Factors relating to specified weights-of fish and shellfish are included.

Defense Mobilization--The Shield Against Aggression (Sixth Quarterly Report to the President by the Director of Defense Mobilization), 54 p., illus., printed, 30 cents. Office of Defense Mobilization, Washington, D. C., July 1, 1952. (For sale by Superintendent of Documents, Washington 25, D. C.) This is the sixth quarterly report on the defense mobilization program of the United States. Included are discussions on military production, the mobilization base for military production, economic expansion, supply and distribution of materials, meeting manpower requirements, price stabilization, maintaining

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vital production and wage stability, cooperating in the free world defense, and progress in civil defense.

The Effectiveness of Crab Traps in South Carolina,

by J. C. Green, Contributions from Bears Bluff Laboratories No. 14, 13 p., illus., printed. Bears Bluff Laboratories, Wadmalaw Island, South Carolina, June 1952. Describes the Chesapeake Bay-type crab pot and its value to South Carolina crabbers. Results of experiments conducted on the South Carolina coast which show the effectiveness of crab pots are presented. Statistical data are also included on the annual catch of hard shell crabs in South Carolina for a ten-year period, 1941-1951.

Fisheries of Japan, 1952, by Fisheries Agency, Japanese Government, 127 p., illus., printed. Domestic & Foreign Fisheries Institute, Tokyo, Japan. A summary of the past and present status of the fisheries of Japan prepared to help in promoting better understanding of the programs being carried out in the fishing industry. This report discusses Japan, its people and fishing industry; fishery policy and its administration; changes and status quo of fisheries; circulation, processing and export of marine products; and the future course of Japan's fishing industry. Also included are a list of fisheries organizations and companies in Japan and copies of the "Draft International Convention for the High Seas Fisheries of the North Pacific Ocean" and "Protocol to the International Convention for the High Seas Fisheries of the North Pacific Ocean."

How to Prepare a State of Maine Clambake, by Robert L. Perry, 12 p., illus., printed. Department of Sea and Shore Fisheries, Augusta, Maine. This leaflet describes the most popular methods of preparing a typical Maine clambake.

(International Pacific Salmon Fisheries Commission) Annual Report 1951, 36 p., illus., printed. International Pacific Salmon Fisheries Commission, New Westminster, B. C., Canada, 1952. A report of the Commission, an international agency, which has by agreement between Canada and the United States a responsibility to preserve, protect, and extend the sockeye salmon fisheries of the Fraser River system. Discussed in this report are the various activities of the Commission during 1951, the regulations, the United States fishery, the Canadian fishery, the Indian fishery, escapement, the 1952 cycle, rehabilitation of barren areas, general investigations, and construction and maintenance of fishways.

A Preliminary Report on the Behavior of the Pacific Sardine (SARDINOPS CAERULEA) in an Electrical Field, by Tom Groody, Anatole Loukashkin, and Norman Grant, 13 p., illus., printed. (Reprinted from Proceedings of the California Academy of Sciences, vol. XXVII, no. 8, April 16, 1952, pp. 311-323.) California Academy of Sciences, Golden Gate Park, San Francisco, Calif. Reports on a study undertaken to determine the behavior of the Pacific sardine in an electrical field. Pacific sardines were found to respond to a pulsating direct electric current by orienting to face the anode and swimming toward the pole in a forced

manner. Of the many types of current tried, the type of current wave form found to be most effective in causing this behavior was one in which the density began at zero, increased to a maximum of 30 milliamperes per square inch of cross-sectional area of water for a duration of 8 cycles, and then returned to zero for 4 cycles. Under the influence of this current the fish did not respond to stimuli normally causing fright reactions. The current density required to produce directional swimming appeared to vary inversely with the size of the fish tested. The fish were not killed by the above current as long as they were prevented from direct contact with the electrodes. The period of captivity seemed to have no bearing on the response of the sardine to the electrical field. Analysis of the relative effects of the three variables of this current, viz., density, pulsation frequency, and ratio of current-on to current-off period, tends to confirm the earlier findings that the most effective type of current producing directional swimming and electrical control of movements of the Pacific sardine is within the range of that stated above. It is suggested that before the application of electrical fishing methods to marine fisheries can be made, detailed research to determine the current wave form most effective for each species and size of fish will be necessary.

Production Economics in Fisheries, by G. M. Gerhardsen, 12 pages, printed. Reprint from *Revista de Economia*, Lisbon, Vol. V, No. 1, March 1952. This is an interesting article covering some of the more important principles of production economics in fisheries. In addition to explaining the importance of economics in formulating production plans both individually and nationally, it points out that consideration of economic principles in fisheries management or fisheries development should go hand in hand with the tools of biologists and technologists. Some interesting graphical descriptions are given to illustrate the points discussed. Although of a technical nature, the ideas contained therein are clearly stated and should be readily grasped by the layman.

—W. H. Stolting

(Scotland) Herring Industry Board, Seventeenth Annual Report for the Nine Months from 1st April, 1951 to 31st December, 1951, Cmd. 8565, 35 p., printed, 1s. 3d. net (about 18 U.S. cents.) Her Majesty's Stationery Office, London, England, 1952. A report of Scotland's herring fisheries, with data on marketing, research and development, and the herring fleet. A discussion of the commercial arrangements between the catchers, the Herring Industry Board, and the shore-based sections of the industry is presented. Included are statistics on the landings and values of catches in principal ports or areas, cured herring production and herring klondyck, the composition and distribution of the fleet operating in East Anglia, and the utilization of herring. A statement of receipts and payments and a financial report of the Herring Industry Board as of December 31, 1951, are also included.

(Scotland) Report of the Committee on the Aberdeen

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Fishing Industry, by the Scottish Council (Development and Industry), 48 p., printed, 6s. (84 U.S. cents.) The Secretary, 1 Castle Street, Edinburgh, Scotland, 1951. This report covers a survey made to investigate the difficulties of the fishing industry at Aberdeen and, in particular, to examine the layout of the facilities for the fishing industry at that port and the organization of the various sections of the industry. Among the subjects covered are: the structure and operation of the Aberdeen fishing industry; difficulties at the port of Aberdeen; views of the industry on the solution of their difficulties; and proposals for reorganization and development.

(Scotland) Report on the Fisheries of Scotland, 1951, Scottish Home Department, Fourth Report, 64 p., illus., printed, 1s. 9d. net (25 U.S. cents.) Her Majesty's Stationery Office, Edinburgh, Scotland. This is a report of Scotland's fisheries, with statistical data, for the year 1951. Contains total production figures by

species and by port (both comparative and historical) and information on the number of boats, personnel, and methods of capture. Production and value of lobsters, crabs, and fishery by-products, and the number (by species) of whales captured during 1951 are also included. Sections are also devoted to discussions of marine fisheries law enforcement, scientific investigations, and harbor maintenance.

Scottish Sea Fisheries Statistical Tables for 1939-48, 76 p., printed, 4s. 6d. net (about 63 U.S. cents.) Scottish Home Department (Available from Her Majesty's Stationery Office, Edinburgh, Scotland), 1952. Statistics on the Scottish fisheries for the years 1939 to 1948 are presented. Number, net tonnage, and value of different types of fishing vessels; types and value of gear; number of fishermen employed; and the amount and value of the fish catch by areas and type of vessels, average prices, utilization of the catch, and fishery products exports are some of the statistical data included.



LAKE TROUT PRODUCTION AND ESTIMATE OF LOSSES RESULTING FROM SEA LAMPREY DEPREDATIONS

(Great Lakes Fisheries Investigations, Fish and Wildlife Service,
Ann Arbor, Michigan)

Comparison (by state or province) of the pounds and value of the lake trout production in Lakes Huron, Michigan, and Superior for 1950, with the modern normal for those waters and an estimate of losses resulting from sea lamprey depredations in Lakes Huron and Michigan

(Values computed at rate of 50 cents per pound¹)

Region	Normal catch ^{1/}			1950 catch			Loss			Percentage loss in region ^{2/}
	Pounds (3/)	Value (4/)	Percentage of total	Pounds (3/)	Value (4/)	Percentage of total	Pounds (3/)	Value (4/)	Percentage of total	
Michigan	6,390	\$3,195	42	2,425	\$1,213	47	4,185	\$2,092	40	65
Wisconsin	3,075	1,538	20	616	308	12	2,517	1,258	24	82
Illinois	457	228	3	4	2	0	453	227	4	99
Minnesota	336	168	2	202	101	4	-	-	0	-
Indiana	126	63	1	-	-	0	126	63	1	100
U. S. total	10,384	5,192	68	3,247	1,624	63	7,281	3,640	70	70
Ontario	4,991	2,496	32	1,922	961	37	3,180	1,590	30	64
Grand total	15,375	7,688	100	5,169	2,585	100	10,461	5,230	100	68

^{1/} Periods of years on which the modern "normal" catches are based: Canadian waters of Lake Huron, 1923-1939; U. S. waters of Lake Huron, 1895-1939; Lake Michigan, 1927-1944; Canadian waters of Lake Superior, 1930-1949; U. S. waters of Lake Superior, 1926-1949.

^{2/} Based entirely on losses of production in Lakes Huron and Michigan; differences between the 1950 and the normal catches in Lake Superior are not interpreted as gains or losses.

^{3/} Thousands of pounds.

^{4/} Thousands of dollars.

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* * * * *

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IMPORTS & EXPORTS OF FISHERY PRODUCTS, 1947-

Data on United States foreign trade in fishery products for the years 1947-51 are presented in Imports & Exports of Fishery Products, 1947-1951, C.F.S. No. 757, recently issued by the Service's Branch of Commercial Fisheries.

The quantity and value of imports and exports by species are given for both edible fishery products (fresh, frozen, and processed) and inedible fishery products (fish and marine-animal oils and meals, pearls, shells, sponges, etc.) for the four-year period. This 8-page publication also contains historical tables giving United States imports and exports since 1924.

Trade in fishery products by the United States was valued at \$248,184,079 in 1951, an increase of 10 percent as compared with the previous year. Import trade, valued at \$212,452,628 was 7 percent greater than the previous year. Export trade, valued at \$35,731,451, was 30 percent greater than in 1950.

Imported edible fishery products amounted to 646,667,762 pounds, with a value of \$158,363,287. Nonedible fishery products imports were valued at \$54,089,341. Items received in greater volume than in 1950 were fresh and frozen tuna, groundfish and other fillets, and sperm oil.

Exports of edible fishery products totaled 165,623,935 pounds, with a value of \$27,072,723. Nonedible fishery products exports were valued at \$3,658,728. Canned fish exports increased from 108 million pounds in 1950 to 147.3 million pounds in 1951, while the quantity of fish oil exported decreased 34 percent in that period.

Free copies of this publication (C.F.S. No. 757) are available upon request from the Division of Information, U. S. Fish and Wildlife Service, Washington 25, D. C.



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