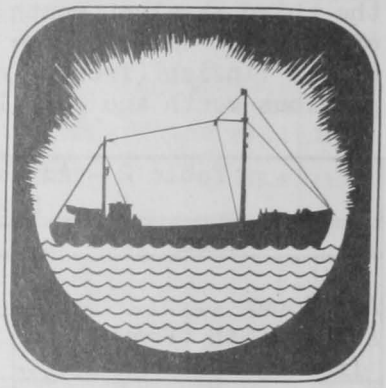
FOREIGN

International

NORTHWEST ATLANTIC FISHERIES COMMISSION

REVIEW OF ACTIVITIES, AUGUST-NOVEMBER 1952: Italy Ratifies Convention: The Government of Italy deposited its instrument of ratification of the Northwest Atlantic Fisheries Convention on August 19, 1952. The member Governments of the Commission are now: Canada, Denmark, Iceland, Italy, Norway, Portugal, Spain, United Kingdom, and United States. The Government of France is taking action toward early ratification.



Net-Mesh Regulation in Subarea 5: The Depositary Government transmitted the Commission's proposal concerning the net-mesh regulation for haddock fishing in subarea 5 to Contracting Governments on August 28. The regulation will become effective four months following acceptance of the proposal by Canada and the United States, the Governments holding membership on the panel for subarea 5.

Annual Report: The Commission's report for the year ending June 30, 1952, is in the hands of the printer and distribution is anticipated during January 1953. The report contains four parts: (1) Administrative report for the year ended June 30, 1952, (2) Report of the Second Annual Meeting, (3) Mesh regulation to increase the yield of the Georges Bank haddock fishery, (4) Statistics of landings of groundfish from the Convention area.

Panel and Committee Meetings: A meeting of the Panel for subarea 1 was held at Copenhagen, Denmark, on October 8. Delegates were present from Denmark, Norway, Portugal, Spain, and United Kingdom; and observers attended from France, Iceland, United States, and the International Council for the Exploration of the Sea. The report of the meeting to the Commission contains two resolutions dealing with (1) improved statistics and (2) coordination of 1953 research programs.

A meeting of the Special Committee on the Commission's research program was held at Copenhagen on September 26-27. A draft program was prepared and arrangements for further committee meetings have been made. A preparatory discussion will be held at St. Andrews, N. B., in late January 1953 and a three-day meeting of the Committee will be held beginning May 21, 1953 at New Haven, Connecticut, immediately before the Third Annual Meeting of the Commission.

Third Annual Meeting: The 1953 Commission Meeting will be held at New Haven, Connecticut, U.S.A., from May 25 to 30, inclusive. The dates have been selected to conform with availability of meeting space and living accommodations at Yale University.

FOOD AND AGRICULTURE ORGANIZATION

COUNCIL'S SIXTEENTH SESSION CONVENES IN ROME: The Sixteenth Session of the Council of the Food and Agriculture Organization of the United Nations (FAO) convened in Rome, Italy, on November 17. The main topic of discussion was the FAO report, "The State of Food and Agriculture (including fishery products): Review and Outlook 1952." At this session the Council will for the first time be substituting for the Conference in reviewing the world food and agricultural situation, according to a State Department press release of November 17.

The FAO report presents a detailed picture of the changes in world production and consumption of agricultural products from 1950/51 to 1951/52 and a brief outlook for production in 1952/53. It also contains a review and outlook by regions and a similar analysis of major commodities. Fisheries are included.

Progress reports were made to this session of the Council on investment for agricultural development, production of pulp and paper, expanded technical assistance program, locust control, and the progress and improvement of statistical technology.

In establishing the FAO program of work and budget for 1953, the Council reviewed its information, educational, and extension services, and FAO activities in the fields of agriculture. This included the progress in economics, fisheries, forestry, and nutrition.

The session was open to the representatives of the 18 governments which are members of the Council. The Fifteenth Session of the Council met in Rome, Italy, June 9-14, 1952.

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REVIEW OF TECHNICAL ASSISTANCE PROGRAM: The technical assistance program of the Food and Agriculture Organization of the United Nations (FAO) has developed to a point where it is as large as the Organization's regular program, reported Sir Herbert Broadley, Deputy Director-General and Chief of FAO's technical assistance program, in a recent report to FAO's Council in session in Rome, Italy, during November 1952. This year's technical assistance budget of $6,300,000 is more than three times the amount spent by FAO during its first year. Such an expansion is accounted for by the increasing ability of underdeveloped countries to utilize the technical assistance provided, as well as by the need for supporting projects required to make the first ones undertaken wholly effective. FAO has signed agreements with 52 countries to provide technical assistance, and has recruited 890 experts, including those who have completed their assignments, to do the work. Included are fisheries projects and experts.

FAO has reached the position where requests from its member nations for technical aid are beginning to show signs of outstripping available resources, and priorities must soon be initiated. FAO will follow the principle that priority will be given to projects where it is clear that the requesting government is determined to implement them and undertake the full financial and administrative commitments implied in their adoption. It has always been the policy of FAO to require governments asking for aid to meet the local operating costs of the FAO experts.

The expanded technical assistance program is shaping into a three-stage program, beginning with advice and planning, passing to implementation and pilot projects, and ending when governments take over the full operation of development plans on a wide basis with general assistance from FAO. The stages are necessarily of a long-term nature and could not show immediate results.

Australia

CANNED FISH PRODUCTION, 1951/52: The total production of canned fish in Australia during the 1951/52 season totaled 7,140,331 pounds, an increase of only one percent over the 1950/51 season pack. Barracouta (46 percent) and Australian salmon (44 percent) comprised 90 percent of the output (see table).

Australian Canned Fish Pack, 1950/51-1951/52 1/

Species	1951/52	1950/51
	lbs.	lbs.
Australian salmon	3,089,803	2,948,964
Barracouta	3,269,900	3,504,007
Tuna	142,057	244,075
Whitebait	27,479	120,593
Miscellaneous	520,096	320,692
Total	7,049,335	7,140,331

1/ FISCAL YEAR JULY 1 THROUGH JUNE 30.

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TUNA CANNER RECEIVES RECORD ORDER FROM UNITED KINGDOM: A Sydney tuna canner has received an initial order for approximately £80,000 (US$177,300) worth of canned tuna from a major distributor in the United Kingdom, reports the October 1952 Fisheries Newsletter of the Commonwealth Director of Fisheries. This order (for a million cans) is believed to be the record commercial export order for Australian canned fish. It will be packed from this season's tuna catch at the company's canneries at Eden and Narooma, N.S.W.

Some Australian canned tuna had previously been shipped to the same United Kingdom firm. Distribution by one of the largest group of retail food stores in Great Britain has been scheduled for this previous order. It is estimated that this distributor has more customers than the entire population of Australia. These early shipments will give the United Kingdom housewife her first taste of Australian canned tuna.

The Australian canning firm has opened up new markets for canned fish of all types in Kenya, Uganda, Mauritius, and Zanzibar. The Managing Director of the cannery, who has just returned from England, said: "....our problem was to establish a well-spread market, here and overseas, to enable us to plan continuous production in all our canneries. The economic position today is quite obscure and our company must do everything possible to keep its employees and fishermen fully engaged, as well as assist the country's export drive."

The Australian tuna industry is in its infancy, dating back only four years. The Australian cannery Director indicated that the high capital outlay for vessels suitable for catching tuna at present hinders further development. He further indicated that "Government assistance in expanding these activities could be of material benefit towards increasing food production, as well as helping the export trade and stabilizing the position of the fishermen upon whom, of course, the industry ultimately depends." The Commonwealth Government has assisted in developing the industry, and investigations which should expand the tuna catch are being carried out.

Reports have been received from the fishermen that more boats will fish for tuna this season. The Australian cannery announced that a substantial part of the return from the season's catch will be passed on to the fishermen. In order to do this they increased tuna prices to: albacore, northern and southern bluefin, and yellowfin, 8d. (7½ U.S. cents); and striped tuna, 6½d. (6 U.S. cents).

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SPINY LOBSTER FISHERY, 1951/52: Production of spiny lobster in Australia during the 1951/52 season totaled 14,002,545 pounds (round weight), of which

10,957,000 pounds were packed for export and 3,045,545 pounds for domestic consumption (see table 1), reports the October 1952 Fisheries Newsletter of the Commonwealth Director of Fisheries.

Spiny-lobster exports from Australia in the 1951/52 season totaled 3,606,095 pounds of tails and 54,472 pounds of whole spiny lobsters (table 2), with a total value of £1,777,880 (US$3,940,000). The United States received 95 percent of these exports, nearly all in the form of frozen tails.

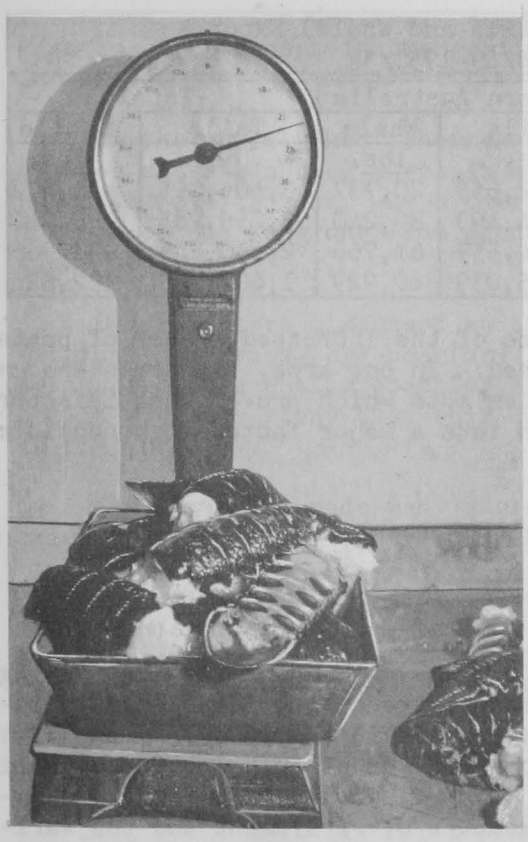
Table 1 - Australian Spiny-Lobster (Crayfish) Production by States, 1951/52 1/

State	Quantity
	Pounds 2/
Western Australia	7,790,946
Tasmania	2,052,129
South Australia	3,000,000
New South Wales	655,470
Victoria	504,000
Total	14,002,545

1/ FISCAL YEAR JULY 1, 1951, TO JUNE 30, 1952.
2/ ROUND WEIGHT (LANDED WEIGHT).

There was an increase of 42 percent in dollars earned for the spiny-lobster industry as compared with the previous fiscal year. This large increase in dollar earnings was due to a rise in price during the year from 6s.3d. (69 U.S. cents) per pound to 7s. (77 U.S. cents) per pound, and a 25-percent increase in quantity of spiny lobsters exported to the United States.

There has been a steady increase in Australian exports of spiny-lobster tails from fiscal year 1948/49 to 1951/52, while exports of whole spiny lobsters have declined (see table 3).



AUSTRALIAN SPINY LOBSTERS BEING WEIGHED BEFORE PACKING.

Western Australia Fishery: About 60 percent of the Australian spiny-lobster production and 77 percent of the exports of this shellfish originate in Western Australia. There has been a steady increase in production in that State for the past 3½ years. However, the number of boats fishing has also increased. Spiny-lobster fishing came into prominence in the State in 1947/48. The next year production was doubled because fishermen realized that a livelihood could be obtained from spiny-lobster fishing by working about eight months of the year. There seems to be a slight decrease in production per boat in recent years. Although there is little evidence to prove depletion, there are definite signs of strain. Before 1952 in certain areas of Western Australia it was the exception rather than the rule to fish deeper than 25 fathoms; now pots are being set in depths up to 40 fathoms, and some of the larger boats have dropped their pots in 50 fathoms with a consequent loss of gear. The spiny lobsters have shown a decline in size since fishing in deeper water began, and there is a possibility that the boats are encroaching on the natural maturing ground of the shellfish. This appears to indicate that the "accumulated stocks" have been removed, and that the fishery is beginning to "settle down." In

order to stabilize the industry, Western Australia has placed certain restrictions, such as closed seasons, on spiny-lobster fishing. The minimum length pre-

Table 2 - Australian Spiny-Lobster (Tails and Whole) Exports by State of Origin and Country of Destination, 1951/52 1/

Item	Quantity	
	Tails	Whole
By State of Origin:	Pounds	Pounds
Tasmania	17,400	33,480
South Australia ..	556,040	255
Western Australia.	3,032,655	20,737
Total	3,606,095	54,472

Item	Quantity	
	Tails	Whole
By Country of Destination:	Pounds	Pounds
United States	3,593,595	4,255
Singapore	2,305	43,217
Canada	10,195	7,000
Total	3,606,095	54,472

1/ FISCAL YEAR JULY 1, 1951, TO JUNE 30, 1952.

scribed for spiny lobsters is 2-3/4 inches measured from the rear ends of the horns to the end of the carapace or body.

The cost of maintaining efficient boats is becoming a great concern to the Western Australian spiny-lobster skippers. Many are finding that production costs are forcing them into an unfavorable position. The general cost of upkeep and fueling is, of course, increasing, but this has been somewhat offset by higher prices. The main factors affecting the industry are the scarcity and cost of wire and bait.

Sheep heads and animal hooves were the popular bait for spiny lobsters, but these have become scarce and fishermen have been forced to use salmon heads from

Table 3 - Australian Spiny-Lobster (Tails and Whole) Exports by State of Origin, 1948/49-1951/52

Fiscal Year	Tasmania		South Australia		Western Australia		Total	
	Tails	Whole	Tails	Whole	Tails	Whole	Tails	Whole
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
1951/52 ...	17,400	33,480	556,040	255	3,032,655	20,737	3,606,095	54,472
1950/51 ...	96,625	-	577,147	-	2,584,493	80,240	3,258,265	80,240
1949/50 ...	31,400	28,112	614,286	3,488	2,004,559	61,766	2,650,245	93,366
1948/49 ...	63,695	73,431	323,741	48,464	1,215,039	60,929	1,602,745	182,824

the southern coast of Western Australia. Because of the increased number of boats operating, a greater number of pots are being used. In one area, fishermen who are now using cane and wire pots, formerly used batten pots which proved unsatisfactory in deep water. The shortage and cost of wire is thus a major factor when considering production costs.

Canada

BAN ON FOREIGN FISHING VESSELS TO BE LIFTED: The law banning foreign fishing vessels from entering Canadian ports for other than emergency purposes will be repealed, according to the Government's decision announced in a Speech from the Throne in Ottawa at the opening of Parliament on November 20. As of July 1, 1952, it had been announced that this 58-year old law was to be applied with full effect. However, this action was protested by Nova Scotia members of Parliament and the various affected ports on the east coast of Canada, reports a November 21 American Consulate dispatch from Halifax. The Throne Speech said that "to meet conditions resulting from the entry of the Province of Newfoundland into Confederation and the

introduction of new methods of fishing off the Atlantic Coast, a bill to revise the Customs and Fisheries Protection Act will be placed before you." The ban will be lifted by amending the aforementioned Protection Act of 1868 to empower the cabinet to make new regulations allowing foreign vessels to enter Canadian ports for specific purposes; these will include the purchase of supplies, repairs, and other emergencies.

The prohibition against fishing and loitering at sea within territorial waters without permission will be continued. Some provision is also expected to be made for the protection of the equipment of inshore fishermen.

The United States and British vessels will not be affected by this ban. The British are permitted to enter Canadian ports by rights carried over from colonial days; United States vessels hold it by a right granted under an annual Order-in-Council passed by the Federal Government since 1888 extending these special privileges to United States fishing craft under what are known as "modus vivendi" licenses.

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LOBSTER FISHERY REGULATIONS UNDER DISCUSSION IN MARITIME PROVINCE: A series of open meetings were held in October 1952 at key points in the Canadian Maritime Provinces' lobster fishing areas. Problems peculiar to this fishery were discussed, reports the November 1952 Trade News of the Canadian Department of Fisheries. These meetings, arranged by the Department of Fisheries, were held at Moncton, N. B., Summerside, P. E. I., Antigonish, and Shelburne, N. S. In attendance were representatives of the Department, the Fisheries Research Board of Canada, the fishermen, and the dealers. A memorandum (previously circulated by the Department suggesting certain changes in the lobster regulations) was used as a basis for discussion.

On the whole, the fishermen were against any major changes in fishing areas or open seasons and as a result no important changes are to be made except in one Bay-of-Fundy district, where there will be two short seasons in the fall and spring instead of one long one from January to July. This was done at the request of the fishermen.

Other matters discussed at the meetings were minimum-size limits, the protection of berried (egg-bearing) lobsters, licenses, and lath spacing. The importance of preventing poaching and the taking of small lobsters was stressed, and it was made clear that this would mean the cooperation of everyone involved in the industry.

The fishermen made many suggestions at the meetings, one of the most frequent being that a minimum fine should be set for each illegal lobster discovered.

The departmental officials told the fishermen that the division of Maritime waters into areas and the setting of different seasons in each appeared to be of little benefit in conservation. The fishermen were informed that the Department's opinions on conservation were based on scientific investigations which had shown that the intensity of fishing for lobsters varied from 50 to 75 percent of the catchable population, an extremely high figure reached in very few fisheries. Lobsters of the size used in the present fishery, when left alone, increase each year about 15 percent in length and 50 percent in weight. Also, that lobsters do not move about much and their populations should be considered local. Tagging has shown that it is not usual for a lobster to move more than three or four miles from any one spot.

An increase in the minimum-size limit of lobsters, in the "canning" areas was suggested by the Department's representatives. The present limit, set earlier this year, is 2-3/8 inches (carapace measure). The proposal was that, for reasons of conservation, it should be raised to 2-1/2 inches.

The fishermen were advised that this year's increase in the minimum-size limit for market lobsters arose from the fact that the State of Massachusetts had adopted the 3-3/16-inch minimum. The Canadian change to that figure from the previous 3-1/8 inches was made because a large part of the Maritime lobster production is sold in Massachusetts and a serious marketing problem would have arisen if no action had been taken.

Under present regulations, a fisherman may take lobsters in only one district each year and may use his boat and gear in only that district. It was pointed out to the fishermen that this seemed to be a wasteful practice, employing more boats and traps than were necessary. However, there was almost unanimous opposition to any change in the present system.

The lobster catch in Canada's Martime Provinces is worth more to the fishermen than any other single fishery of that area. It provides them with an annual revenue of between C$11 million and C$12 million, an income which gains in significance because of its wide distribution. If entirely unrestricted, the lobster resource could easily be overfished. The Canadian Department of Fisheries regulates it by prohibiting the taking of small or berried lobsters and by dividing the Maritime coastline into various areas which have different open and closed seasons. The main objectives are to make possible a maximum catch and at the same time guarantee the survival of stocks for the future. Over the years the lobster industry has changed and developed, and scientists have collected new information on the life history, behavior, and populations of the species.

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BRITISH COLUMBIA CANNED SALMON PACK, 1952: The 1952 British Columbia salmon canning season ended November 29 with a total pack of 1,286,468 cases (48 1-pound cans), the Canadian Department of Fisheries reported on December 3. This is 34 percent less than the 1951 pack of 1,955,475 cases; and it is the smallest pack since 1944 when 1,097,000 cases were packed. Substantially smaller packs of coho (silver) and chum (keta) salmon were responsible for most of this decline.

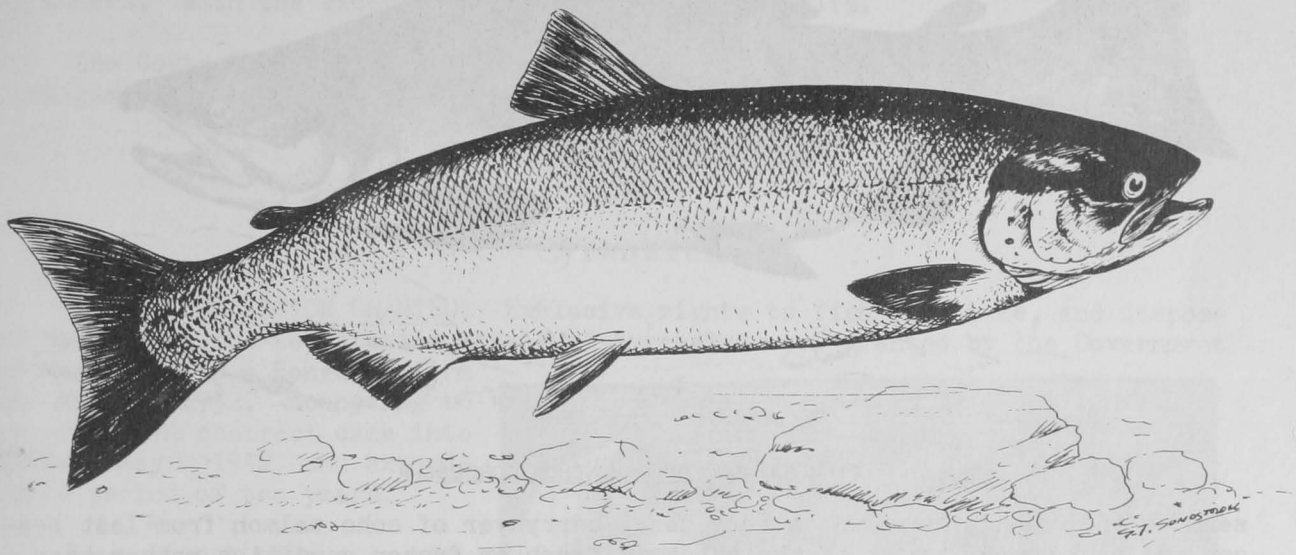
BRITISH COLUMBIA CANNED SALMON PACK, 1947-52 (In Standard Cases of 48 1-Pound Cans)

Species	1952	1951	1950	1949	1948	1947
	Cases	Cases	Cases	Cases	Cases	Cases
Sockeye (red) ..	449,174	428,217	408,041	259,880	260,642	286,285
Blueback	5,581	13,224	7,371	6,876	20,307	4,545
Spring (king) ..	9,064	13,631	9,133	21,065	16,438	9,955
Coho (silver) ..	58,514	300,521	109,272	208,063	186,810	140,484
Pink	675,836	735,494	446,516	709,217	321,722	599,212
Chum (keta)	84,547	460,740	498,984	226,241	496,553	460,999
Steelhead	3,752	3,648	3,243	2,381	5,665	3,234
Totals	1,286,468	1,955,475	1,482,560	1,433,723	1,308,137	1,504,714

British Columbia's 1952 salmon fishing season was unpredictable from the start, reports a December 8 Consular dispatch from Vancouver. The industry was faced with complex marketing problems and was, therefore, not prepared for the great all-out efforts of production which marked the war and postwar years. The heavy carryover of canned salmon packed in the previous year provoked a cautious attitude on the part of cannery operators and this resulted in protracted price

disagreements between operators and fishermen. Cycle-year catch records did not offer promise of any great salmon runs. The general forecast, before the season got under way, was for one of a comparatively small operation.

However, the 13,000 fishermen of British Columbia set out in early summer and by the end of August had landed one of the largest total catches of salmon



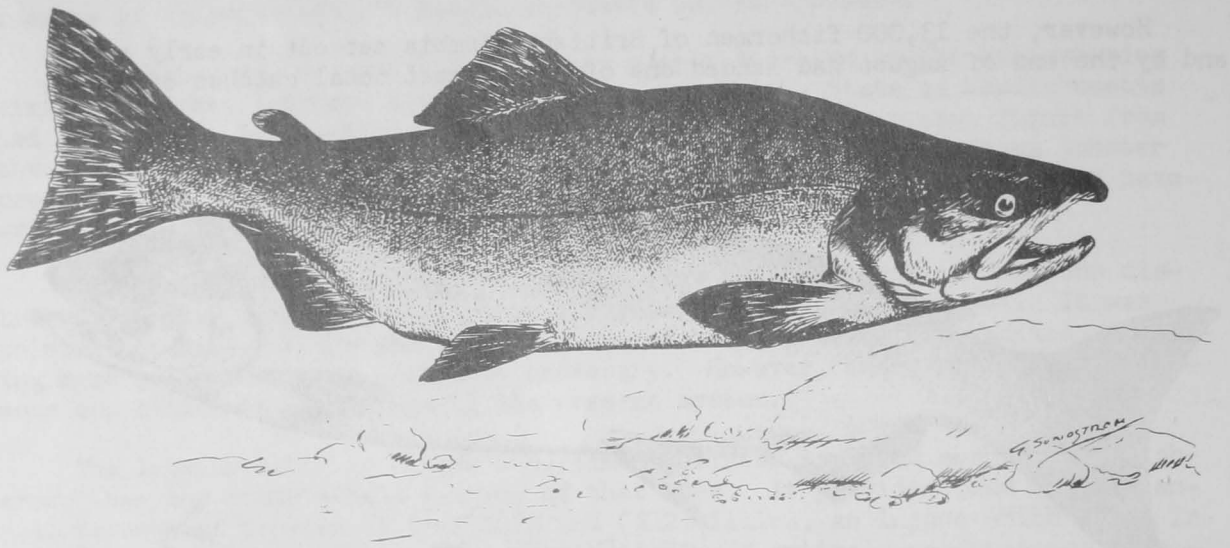
SOCKEYE (RED) SALMON, ONCORHYNCHUS NERKA.

in ten years; this despite a tie-up of several days during which price arguments were resumed. The fishing tempo halted abruptly at the beginning of September as another price dispute tied up the fleet and prevented what might have been a record catch for the season.

Sockeye gill-netters on the Nass River began the season by making heavy hauls. With the few sockeye taken by purse seines in this area, the total passed the quarter million mark before the season closed. On the Skeena River, an all gill-net area, upwards of 800 boats were busy during July and August and by the end of the season had taken 1,269,000 sockeye salmon. Rivers and Smith Inlets did not produce the phenomenal sockeye yields of the previous year but were nevertheless exceptionally good, with a combined season total of 1,270,000 fish. The Fraser River later yielded 1,100,000 sockeye to Canadian fishermen and a like number to American fishermen. This was the Chilko sockeye run and was well above expectations.

Following brief rains in June, a long dry spell gripped the coast, but in July the pink salmon fishing got under way to an auspicious start. The Skeena River run brought a second harvest to gill-netters, in spite of the fact that this run was substantially tapped by purse-seiners operating in Ogden Channel. Between them the two fleets accounted for 1,500,000 pink salmon. Nearly two million of this species were caught by seine in Massett Inlet and Naden Harbour, and a very good run to the central and southern waters of the Queen Charlotte Islands provided better than another million fish. Altogether, with Whales Channel, Bella Coola, and Johnstone Strait contributing strongly, the total catch of pink salmon exceeded 10,000,000 fish. In mid-August a prolonged dry spell caused masses of pink salmon to be temporarily stalled, unable to ascend to the rivers and streams to spawn. In the interests of conservation the Canadian Department of Fisheries made several early closures of salmon fisheries.

Coho salmon was in relatively short supply and the trollers had a somewhat mediocre season, but not as bad as the figures of the pack of this species would



PINK SALMON, ONCORHYNCHUS GORBUSCHA

seem to indicate. There was a very heavy carryover of coho salmon from last season and packers sold most of the catch in fresh or frozen condition rather than add to canned stocks in the warehouses.

The pack of chum salmon was also comparatively very light as fishermen were unwilling to catch this species and sell at prices offered by the operating companies. As a result of the disagreement on prices there was a labor dispute which lasted seven weeks.

Early in December, British Columbia wholesale prices for advertised brands of fancy-quality salmon were reported as follows:

Case	Sockeye	Coho	Pink	Chum
	..... (Per Case)			
48 1-lb. tall ..	C$31.50	C$20.50	C$15.00	C$13.00
48 ½-lb. flat ..	16.50	11.00	8.25	7.25
96 ¼-lb. flat ..	19.00	13.00	-	-

However, in some instances export prices for unadvertised brands of standard quality were selling for C$3.00 less a case than the prices quoted in the table.

In 1951, the United Kingdom purchased 300,000 cases of salmon in British Columbia, costing approximately C$6,700,000, but not a single case was sold in that market in 1952. Early in 1952 there was a heavy carryover of chum, coho, and pink salmon amounting to about 698,000 cases and a substantial quantity of the latter species were sold in the United States. The complexion of the marketing problem has now changed and the emphasis now is on the disposal of sockeye and pink salmon.

Costa Rica

GOVERNMENT TO DEVELOP SHRIMP FISHERY: The Costa Rican Government has licensed a California firm to fish for shrimp on the Pacific side of its coastal waters as part of its plan to develop a more significant shrimp fishery, reports a November 14

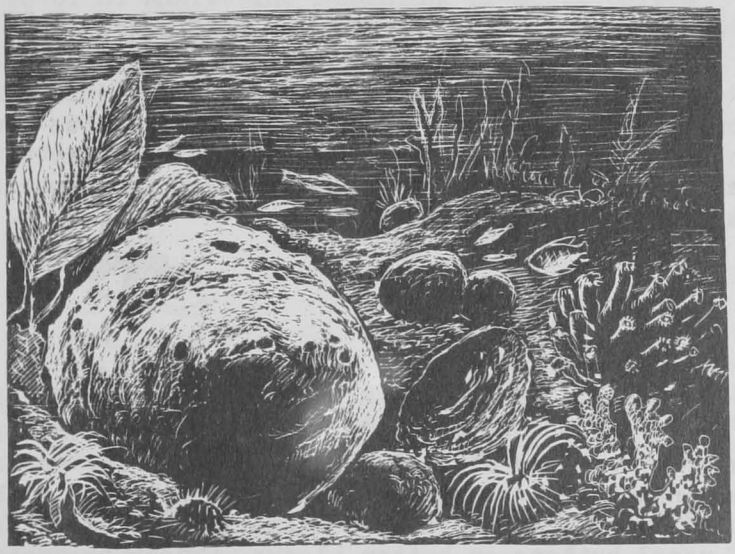
dispatch from the American Embassy at San Jose. This company's operations will be largely exploratory and it will report to the Costa Rican Government in detail its findings on tides, size and location of hauls, size of shrimp, etc.

The California firm will pay an export tax of US$12.00 for each metric ton of shrimp caught and will be permitted to fish in Costa Rican Pacific territorial waters, with the exception of Nicoya and Dulce Gulfs.

The Costa Rican Government hopes to license more shrimpers under similar arrangements in the future.

Cyrenaica

SPONGE CONCESSION GRANTED: Exclusive rights to fish for, take, and dispose of sponges in the territorial waters of Cyrenaica were granted by the Government of Cyrenaica to a Benghazi firm on May 14, 1952, according to reports. The contract came into force on May 1, 1952, and extends for a period of ten years.



SPONGES ON THE SEA BOTTOM.

The contract allows the hiring of foreign vessels with foreign crews until such time as the company-owned vessels with Cyrenaican crews are trained in sponge fishing. Payment for the hire of these vessels may be either in cash or a share of the sponges, at the option of the company.

Divers of foreign nationality may be employed in accordance with a plan agreed to by the Government. All foreign divers must have had no less than two years' experience as sponge divers.

The only sponge-fishing methods to be employed are: the diving system, the "tuffo" system, and the harpoon system. Dragging for sponges will not be permitted.

The company undertakes to train each year a number of Cyrenaicans (not less than 10 nor more than 25) as sponge fishermen and shall employ as many of these as have acquired the necessary skill and knowledge of sponge diving to replace foreign divers. In addition, the company undertakes to insure all divers in its employment against the risk of death, injury, or disease arising out of or in the course of their employment for such sums and with such insurance company as the Government may approve or with an insurance company recognized by the Government. Vessels licensed for the purpose of sponge fishing may operate in the territorial waters of Cyrenaica within an area bounded on the East by the meridian of longitude passing through Bardia and on the West by the meridian of longitude passing through El Agheila. Sponges are to be landed in prescribed areas at the ports of Benghazi, Derna, and Tobruk only, and declared for grading, weighing, and valuation. Sponges will be processed in Cyrenaica. The company is to pay the usual export duties on all sponges exported from Cyrenaica.

Ecuador

UNITED STATES-OWNED ECUADORAN FISHERY COMPANIES ENCOUNTER DIFFICULTIES: Two United States-owned Ecuadoran fishing companies encountered difficulties during the third quarter of 1952 because of alleged failure to fulfill their contracts with the Ecuadoran Government. In addition, some California vessels fishing off Ecuador were seized and fined, reports a November 10 dispatch from the American Embassy at Quito. It was reported that the two companies and some California vessels expanded their fishing operations in waters off Ecuador.

In general, the situation in the Ecuadoran fishing industry was chaotic and many difficulties arose, not only economic but also with respect to both Ecuadoran and international laws. If these problems can be solved satisfactorily, the fishing industry, especially tuna fishing, should grow rapidly and become an important factor in the Ecuadoran economy, according to reports.

Egypt

FISH EXPORTS PROHIBITED: Fish and industrial feedstuffs are included in a long list of products which cannot be exported from Egypt. A communique issued on November 17, 1952, by the Egyptian Ministry of Finance announced the enforcement of new regulations to govern Egyptian exports, a November 24 American Embassy dispatch from Cairo states.

Ethiopia

EXPORT DUTIES ON CERTAIN FISHERY PRODUCTS: An export duty of 5 percent ad valorem has been established by Ethiopia for certain fishery products. This duty was announced by Legal Notice 171, published in the Negarit Gazeta of September 26. The fishery products affected are: fish meal, fish livers and fins, and mother-of-pearl buttons or button blanks. These products were previously exportable free of duty.

French Morocco

FISHERY INDUSTRIES TAXED TO FINANCE RESEARCH AND MARKET DEVELOPMENT: Two new taxes on the "industrial" production of sardines, anchovies, mackerel, and tuna have been levied by the Protectorate Government of French Morocco in a decree of October 4.

The first tax is to be levied on fish destined to be canned or exported frozen. The proceeds will be applied to governmental scientific research on fishing and to the agency charged with the inspection of fresh fish. This tax is 0.60 francs per kilogram (about 7-3/4 U.S. cents per hundredweight) of edible fish caught, or 0.30 francs per kilogram (about 3-3/4 U.S. cents per hundredweight) of fish destined for the production of byproducts, the charges to be shared equally by the fishermen and the industry purchasing the catch.

The second tax is levied on fish delivered to the canneries. Tax proceeds will be given to the Federation of Fish Canners, which is charged with protecting the interests of the canners and with aiding them in developing foreign markets for their products. The tax is 0.20 francs per kilogram (about 2-1/2 U.S. cents per hundredweight) payable by the canners.

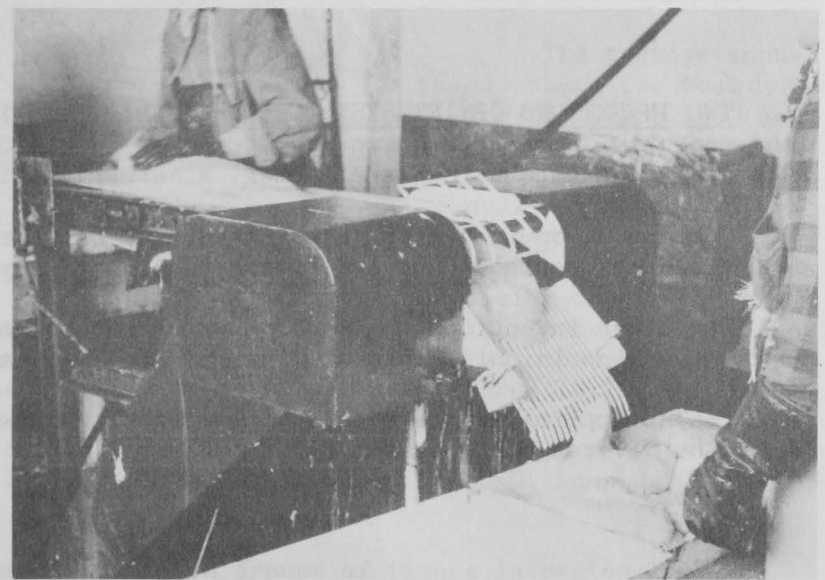
The imposition of these taxes at a time when the fishing industry of French Morocco is encountering export difficulties demonstrates the determination of the Protectorate Government to develop the activities of organizations devoted to scientific fishing research and the development of foreign markets for fresh and canned fish. This step was taken as a measure to aid in the rehabilitation of the industry, reports a November 20 American Consulate dispatch from Casablanca.

German Federal Republic

AMERICAN TRAWLERS RETURNED TO U. S. ARMY: The remaining 11 of 12 United States fishing trawlers furnished to the Federal Republic of Germany on a charter basis (under the authority of the Foreign Aid Appropriation Bill of 1949) were returned to Army control on December 5, 1952, the U. S. Fish and Wildlife Service was advised by the U. S. Department of State. It has been determined that the German fishing industry has reached a position whereby the further use of these trawlers was no longer required.

Iceland

FROZEN FISH PRODUCTION HIGH: Continued high demand for frozen fillets during the early months of 1952 resulted in the delivery of large quantities of fish to Icelandic freezing plants. Production of frozen fish during January-June 1952 rose 37 percent over the corresponding period of 1951, according to an October 24 American Embassy dispatch from Reykjavik. However, by the end of the second quarter of 1952 large unsold stocks of frozen fish packed for the European market had begun to accumulate, causing a great deal of concern as to their disposition. The manner in which they are packed makes their diversion to the United States market (in which demand held steady) impractical. Though considerable demand exists for frozen fish in Central and Eastern Europe, and Israel, trade with these countries has been hampered by difficulties. The principal hindrance was Iceland's disinclination to accept manufactured products from these countries in return so long as the



COD FILLETS PASSING THROUGH SKINNING MACHINE PREPARATORY TO QUICK FREEZING AT ICELANDIC PLANT.

Icelandic Government's trade liberalization policies made imports from the dollar area possible.

HERRING FISHERIES PROSPECTS POOR: About 140 vessels prepared to take part in the summer herring fishery off the North Coast. Unfavorable weather made the prospects poor, but hope was expressed that the introduction of floating trawls would improve the herring catch. This new gear enables the fishermen to trawl below the surface, and it is hoped that a combination of sonar-searching and subsurface trawling might improve the chances for a good herring catch. However, this hope proved illusory this year, but may prove justified in the long run. Failure of the herring fisheries again this year would have serious repercussions upon the motorboat fleet and herring factories already heavily in debt. Many trawler owners were also in difficulty, being unable to meet their obligations and repay loans from the Fisheries Loan Department.

Although the herring fisheries were a failure last year, they still provided Iceland with about 100 million kroner (US$6,127,000) in foreign exchange. This year the price of herring and herring oil slumped around 50 percent, making a much greater catch necessary if the foreign exchange earnings of the industry are merely to hold their own.

In 1952, the State herring factories were authorized to purchase herring for processing into oil at 60 kroner per mal (approximately 1¼ U. S. cents per pound) as compared with 110.16 (2¼ U. S. cents per pound) in 1951, 65 kroner (1-1/3 U. S. cents per pound) in 1950, and 40 kroner (3/4 U. S. cents per pound) in 1949.

MOTORBOAT FISHERY FLEET DENIED GREENLAND HARBOR FACILITIES: Iceland was anxious this spring to obtain the harbor facilities necessary to enable its motorboat fleet to engage in fishing in the grounds off Greenland. A representative was sent to Denmark to discuss this question, but no concessions could be obtained from Denmark, which still refuses Icelandic vessels anything but water and other internationally recognized harbor services. This makes it about impossible for the Icelandic motorboat fleet to operate in the grounds off the west coast of Greenland, but a few Icelandic trawlers did operate there during the second quarter of 1952.

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TWO INVENTIONS OF INTEREST TO FISHERMEN: The Director of Fisheries in Iceland recently demonstrated two new Icelandic inventions of interest to fishermen, according to a report in Fiskets Gang, a Norwegian fishery periodical.

One invention is a machine which cuts up bait herring, one at a time. This device can be regulated to cut pieces of bait of any desired size.

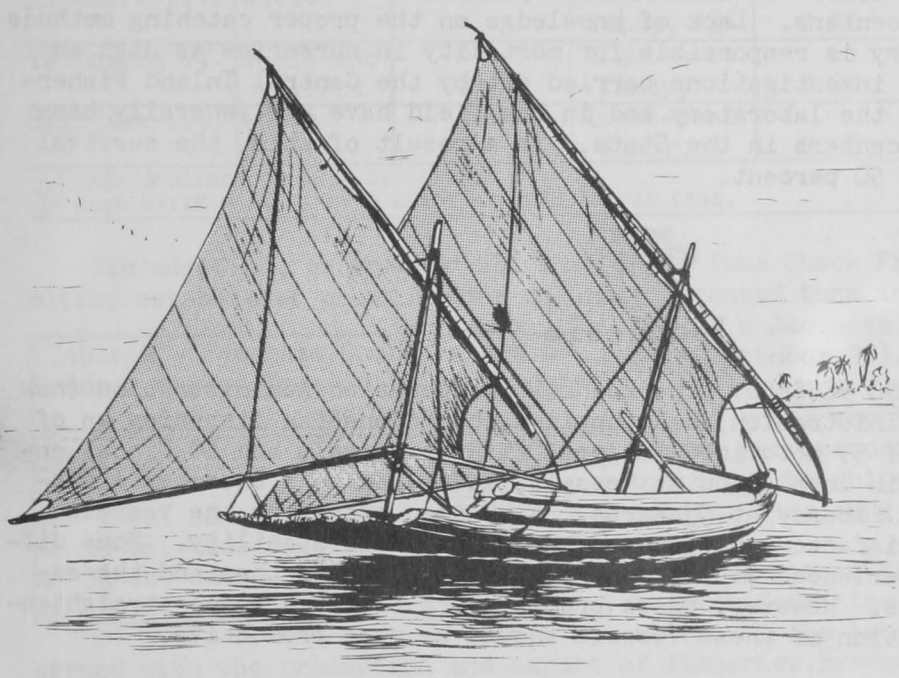
The other invention is a machine which can be used in the line-trawl fishery to lay the line in coils in a half barrel as it is hauled in by the winch.

Patent applications are being made for both inventions in those countries where the devices would be useful.

India

SURVEY OF THE FISHERIES: Marine Fisheries: For the past few years the Central Marine Fisheries Research Station, Mandapam, South India, with survey centers located along the coastline of India, has been collecting statistics on the marine fisheries of India, in addition to its normal scientific activities. A 1948 census revealed that there are 1,264 marine-fishing villages with 74,241 indigenous boats of different types engaged in marine fishing, reports FAO's Indo Pacific Fisheries Council in its September 1952 Current Affairs Bulletin. The boats range from an ordinary raft of 3 logs lashed together and known as a "catamaran" to the very skillfully designed plank-built boat. There are more than 364,000 pieces of nets in use, ranging from the small cast net to a mile-long "rampani" net of the Ratnagiri Coast.

Since 1949, attention has been paid to estimating the total landings of marine fish in India by the sampling method. In 1951, total landings of marine fish by the indigenous boats and nets amounted to 521,438 long tons, as compared with 567,246 tons in 1950. The west coast of India contributed the major portion of the landings and accounted for about 82 percent of the total catch in 1951 and about 75 percent in 1950. There is a small number of mechanized vessels operating in Indian waters, but when compared with landings from indigenous craft the production is negligible.



TYPICAL CATAMARAN USED FOR FISHING IN INDIA.

An analysis of the seasonal variation of the landings reveals that almost two-thirds of the landings occur from October to March. The heavy monsoons on the West Coast from June to August bring fishing activities almost to a standstill.

The average annual return per boat during the years 1950 and 1951 was 16,083 pounds, while the average annual return per active fisherman was 1,590 pounds. The percentage yields of different species vary from year to year. The figures for 1950 and 1951 show that sardines, mackerel, and prawn form nearly half of the total catch. The average percentage yields of some of the important groups of fishes are: mackerel 18.20, sardines 16.58, prawn 14.18, anchovy and herring 11.38, jewfish 5.90, sharks and rays 4.43, silverbellies 3.31, ribbonfish 3.27, catfish 3.00, flatfish 2.89, perches 2.57, Bombay duck 1.98, carangids 1.51, pomfrets 1.33, seerfish 1.30, tuna 0.50, other fishes 7.67.

The distribution of some of the above groups of fishes is regional while others are available along the entire coast. Mackerel form 18 percent of the total catch and are mainly landed along the Malabar and Kanara coasts of Madras and Bombay States. Sardine, sharks, rays, and catfish occur throughout, but the

oil sardine occur only on the West Coast. Prawn are especially abundant off Bombay and Cochin. Jewfish, though an all-India fishery, are caught heavily off Bombay coast. Bombay duck as a fishery is confined to the Bombay coast. Tuna are caught off Travancore and Tuticorin, although they have been reported at Ratnagiri and along Orissa and Andhra coasts.

The oil-sardine fishery has been showing a notable recovery during the past three years after a long period of decline which had caused much distress to the Malabar fishermen.

An advisor to the Norwegian Director of Fisheries has taken up a six months' assignment at Bombay in the FAO-ETAP. He will be engaged in making an appraisal of the operations undertaken by the Indian Pilot Deep-Sea Fishing Station and assessing future possibilities. He will soon be joined in west Bengal by a Netherlands fishery engineer who will work for one year with special reference to capture methods in fresh and brackish water and inland fish distribution.

Inland Fisheries: CARP CULTURE: Survey work for locating river spawning areas of quick-growing carp like Labeo rohita, Cirrhina mrigala, Catla catla, and Labeo calbasu, which do not as a rule breed in confined waters, has been taken up systematically since 1945. It has now been possible to establish 50 spawn-collecting and rearing centers. Lack of knowledge on the proper catching methods and feeding habits of fry is responsible for mortality in nurseries as high as 97 percent. Results of investigations carried out by the Central Inland Fisheries Research Station in the laboratory and in the field have now generally been applied to the nursery centers in the State. As a result of this, the survival rate has been raised to 50 percent.

Indonesia

ECA "MAJANG" FISHING VESSELS: The Economic Cooperation Administration (now the Mutual Security Administration) had supplied the Indonesian fisheries as of November 1952 a total of 57 motorized "majang" fishing vessels and 60 Diesel engines for installation in locally-built vessels, according to a December 1 dispatch from the American Embassy at Djakarta. Fishermen operating the vessels claim they are very satisfactory because of their speed and stability. Some difficulties have been experienced with training crews to operate them and the selection of fishing areas. However, these problems are reported to be straightened out and future operation of these vessels should be more productive.

Italy

CONSTRUCTION OF WHALING FACTORYSHIP SUSPENDED: Construction of the 22,500-ton Italian whaling factoryship Trinacria has been suspended due to the drop in whale-oil prices and the opposition of Italian butter and olive oil producers, according to a recent Trieste press report. It is now believed that the ship will not be completed and that the hull may be turned into a tanker, according to the October 1952 Fisheries Newsletter of the Australian Commonwealth Director of Fisheries.

The Palermo, Sicily, firm, owners of the Trinacria, had obtained a 9-billion lire (US$14,500,000) subsidy from the Italian Government for the building of this ship and 12 other ships of 1,000 tons each to be used in Antarctic whaling.
NOTE: ALSO SEE COMMERCIAL FISHERIES REVIEW, OCTOBER 1952, P. 65.

Japan

LATEST CHECK PRICES FOR TUNA EXPORTS TO U. S. AND CANADA: The latest Japanese check prices (floor prices) on tuna exported to the United States and Canada were released recently by the Ministry of International Trade and Industry (table 1), reports a November 17 American Embassy dispatch from Tokyo. The prices are:

Table 1 - Japanese Check Prices For Tuna Exports to U. S. and Canada

Product	Frozen		Canned in Oil		Canned in Brine	
	Form	Price per short ton	Grade	Price per case[1]	Grade	Price per case[1]
		US$		US$		US$
Albacore	whole	300	white-meat fancy, A[2]	8.80	white-meat fancy, A	8.50
Yellowfin ...	whole and fillets	240	light-meat fancy, A	7.90	light-meat fancy, A	7.60
Skipjack	whole	180	light-meat fancy, A	7.90	light-meat fancy, A	7.60

1/ CASE CONSISTS OF 48 7-OZ. CANS.
2/ ALSO WHITE MEAT FANCY B GRADE AT US$8.10 PER CASE.

In addition, on October 24, the Canned Tuna Check Price Administration Committee established check prices on Grade B canned tuna in brine (table 2), according to a Japanese press report (Suisan Tsushin, October 25).

Table 2 - Japanese Check Prices on Grade B Canned Tuna in Brine Exported to U. S. and Canada

Case Size	Price Per Case
	US$
48 7-oz. cans	8.00
48 13-oz. cans	14.00
48 3½-oz. cans	4.75
24 2-kg. cans	16.00

A group representing the canning industry recommended that Grade B tuna in brine not be shipped to North and South America, Hong Kong, Singapore, and Okinawa.

The Canned Tuna Check Price Administration Committee is composed of representatives of the two governmental units concerned with the production and export of fisheries products, namely, the Fisheries Agency of the Ministry of Agriculture and Forestry and the Agricultural and Aquatic Products Section of the Trade Promotion Bureau, Ministry of International Trade and Industry. This Committee meets monthly in consultation with the industry to determine whether changes in check prices on exports of tuna are advisable in view of prevailing production and marketing conditions.

FROZEN TUNA EXPORTS TO U. S. AND CANADA: Data on Japanese tuna exports to the United States and Canada on a monthly basis were recently released by the Japanese Ministry of International Trade and Industry (see table):

Japanese Approved Exports of Frozen Tuna to United States and Canada by Months, January-October 1952

1952	ALBACORE[1]				SKIPJACK		YELLOWFIN[2]		TOTAL	
	United States		Canada		United States		United States			
	Quantity	Avg. Price/ Short Ton	Quantity	Avg. Price/ Short Ton	Quantity	Avg. Price/ Short Ton	Quantity	Avg. Price/ Short Ton	Quantity	F.O.B. Value
	Short Tons	US$	Short Tons	US$	Short Tons	US$	Short Tons	US$	Short Tons	US$
Jan. ...	2,180	263	35	295	-	-	661	204	2,896	722,907
Feb. ...	1,021	286	-	-	-	-	340	197	1,361	359,000
Mar. ...	2,188	325	-	-	20	200	-	-	2,208	715,194
Apr. ...	1,079	332	-	-	21	220		-	1,100	362,884
May ...	1,231	331	-	-	70	212		-	1,301	422,871
June ...	6,590	302	300	300	-	-	2,286[3]	-	6,890	2,079,277
July ...	2,703	301	1,103	301	-	-		-	3,806	1,146,470
Aug. ...	340	306	1,355	311	-	-		-	1,695	524,925
Sept. ..	-	-	75	300	1	260		-	76	22,760
Oct. ...	1,438	301	-	-	470	210		-	4,194[3]	1,054,474
Total	18,770	-	2,868	-	582	-	3,307	-	25,527	7,410,762

1/ WHOLE AND LOINS.
2/ WHOLE (HEADLESS AND GUTTED) AND FILLETS.
3/ THIS ENTIRE QUANTITY INCLUDED IN OCTOBER MONTHLY TOTAL.

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FACTORYSHIP CRAB FISHING IN BERING SEA PLANNED FOR 1953: The first Japanese factoryship crab-fishing operation in the Bering Sea since World War II is being tentatively planned for 1953, according to a recent announcement by the Japanese Fisheries Agency published by the Japanese Press (Kyodo, November 12).

The Japanese Government's plans are still indefinite on details of the expedition, reports a November 24 dispatch from the American Embassy in Tokyo. It has been agreed, however, that there will be only one factoryship. Its size, the number of catcher boats, and the catch target will be decided after a study is made of information on United States crab fishing in the East Bering Sea during the last several years. This survey will be related to the total catch which should be taken on the basis of the present known facts of crab resources and the extent of United States fishing operations. Estimates for the 1953 catch will include consideration of prewar Japanese fishing.

In 1933, two Japanese factoryships produced 50,000 cases of canned crab meat. A case consisted of 96 8-oz. cans, or double the contents of a present-day case. Hence the 1933 Japanese catch was equivalent to about 100,000 cases at current estimates. There were no large United States fishing operations for crabs in waters off Alaska in 1933.

Officials of the Japanese Fisheries Agency strongly favor a scientific study of the crab resources of the Bering Sea. They hope that such a survey will be sponsored by the International Commission which will be established in accordance with the North Pacific Tripartite Fisheries Treaty.

The Japanese crab-fishing expedition is expected to depart in late April 1953. Its area of operation will be in the East Bering Sea. Current production of Japanese crab is limited to the inshore waters off Hokkaido, large island in northwestern Japan. Output in 1951 consisted of 192,871 actual cases, as follows:

Type of Can	No. cans per case	Cases
No. 2, 6½ oz. each..	48	192,039
No. 2, 6½ oz. each..	96	632
No. 3, 3¼ oz. each..	48	200
Total		192,871

Domestic consumption accounted for 46.5 percent of the pack and exports, 53.5 percent. The United States received 91 percent of the crab meat exports, with Hawaii 3 percent, European countries 3 percent, and other countries (including the Far East) 3 percent.

Export prices (f.o.b.) in 1951 ranged from a monthly average of $22.50 per case (fancy grade, 48 6½-oz. cans) in February to $26.24 in December. The prevailing price for the same quality is quoted at $26.00 per case.

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EXPERIMENTAL PURSE-SEINING FOR TUNA IN CELEBES SEA: One of the largest companies in the Japanese fishing industry has notified the Japanese Fisheries Agency of its plan to engage in experimental purse-seining for tuna and skipjack in the Celebes Sea. This report was published in the Japanese press (Suisan Tsushin, October 25). The Japanese fishing boat Kosei Maru (190 gross tons) will operate like an American purse-seiner would. A net constructed of amylon (synthetic fiber) will be used. The total Japanese fishing fleet includes 18 boats of this type, ordinarily used in the highly competitive fisheries for skipjack and mackerel in the coastal waters of Japan. The experiment will be watched with interest by operators of this type of craft to determine whether the American-type purse-seine vessel will produce profitable catches in these distant fishing grounds. The Kosei Maru sailed from Japan on November 30 and was expected to return by the end of December, declares an American Embassy dispatch from Tokyo dated December 17.

Recent Japanese fishing in the Celebes Sea was by a tuna mothership expedition using long lines. This fleet consisted of one mothership (2,940 gross tons) and 10 catcher boats. The catch totaled 2,005 metric tons, including 988 tons of yellowfin and 247 tons of other tuna. The remainder of the catch was composed chiefly of shark and swordfish. The fleet operated from June 17 to September 2, 1952.

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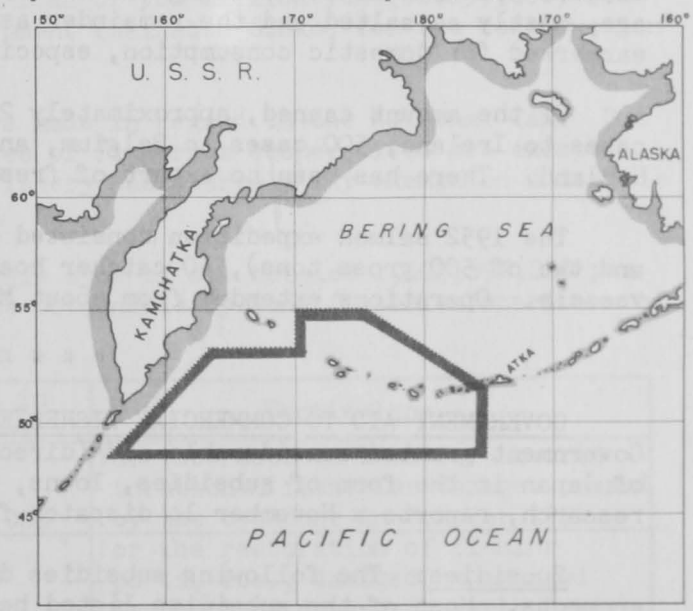
MOTHERSHIP-TYPE SALMON FISHING IN NORTH PACIFIC PLANNED FOR 1953: A plan for Japanese mothership-type salmon fishing in the North Pacific in 1953 was announced by the Japanese Fisheries Agency in November. These operations will be similar in some respects to the 1952 operations, according to a November 21 dispatch from the American Embassy in Tokyo. The fleets are expected to sail in May 1953.

No decision has been reached on the number of motherships that will operate. The expedition will include a total of 85 catcher boats and 15 research vessels. In contrast to the joint arrangement in 1952, each fleet in 1953 will be headed by a mothership and will be operated independently by a Japanese firm. Operations will be in accordance with Japanese Government regulations.



APPROXIMATE AREA (AREA ENCLOSED WITH DIAGONAL-LINED STIPPLING) OF OPERATIONS FOR PLANNED 1953 JAPANESE MOTHERSHIP-TYPE SALMON FISHING IN THE NORTH PACIFIC.

To qualify as motherships, vessels must (1) exceed 1,000 gross tons; (2) have a freezing capacity of 10 tons per 24 hours; (3) be fully equipped with wireless, radar, direction finders, and similar apparatus; and (4) have machine-shop facilities for repairs to catcher boats. Catcher boats must (1) exceed 50 gross tons; (2) have proper wireless and radio equipment; and (3) have Diesel power and be capable of a speed of 7 knots.

The region to be fished will be in accordance with provisions of the Tripartite Fisheries Agreement (Canada-Japan-United States). The Japanese Government will instruct the motherships to confine their salmon activities to the following area in the North Pacific:

Beginning at 55°00' N. latitude, 175°00' W. longitude, south to the territorial waters limit of Atka Island, resuming at the western extremity of the territorial water limits of Atka Island and running due south to 48°00' N. latitude, west to 48°00' N. latitude, 156°00' E. longitude, northeasterly to 53°30' N. latitude, 163°00' E. longitude, east to 53°30' N. latitude, 170°00' E. longitude, north to 55°00' N. latitude, 170°00' E. longitude, and east to the beginning point at 55°00' N. latitude and 175°00' W. longitude. This area extends approximately from Atka Island in the Aleutians westward toward Kamchatka and the Northern Kuriles.

The Japanese fishing industry is showing keen interest in participating in these operations. According to a recent press item (Kyodo, December 4), applications have already been filed with the Japanese Fisheries Agency for authorization to participate in such fishing during the next season to begin in May 1953. Applicants include the three major firms which engaged in the 1952 expedition. The applications to date total 6 motherships ranging from 1,100 to 4,700 gross tons each, 195 catcher boats, and 35 research boats. The Japanese Fisheries Agency has not announced a decision on the number of applicants to be authorized or the number of motherships to be permitted.

NOTE: ALSO SEE COMMERCIAL FISHERIES REVIEW, NOVEMBER 1952, P. 40.

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RESULTS OF 1952 NORTH PACIFIC SALMON EXPEDITION: The 1952 Japanese North Pacific salmon expedition produced a total catch of 2,100,000 salmon with a total weight of about 6,800,000 pounds, compared with the catch target of 1,800,000 fish, report recent dispatches from the American Embassy in Tokyo. Of the total catch, 209,000 pounds went for canning and the balance (6,600,000 pounds) placed in storage, mostly as salted and the remainder as frozen fresh. Most of this stock was earmarked for domestic consumption, especially during the New Year holiday season.

Of the amount canned, approximately 2,000 cases have been exported--1,000 cases to Ireland, 500 cases to Belgium, and an additional 500 cases to Belgium and Holland. There has been no export of fresh and salted salmon.

The 1952 salmon expedition consisted of 3 motherships (one of 3,600 gross tons, and two of 500 gross tons), 50 catcher boats, 2 inspection vessels, and 2 research vessels. Operations extended from about May 10 to August 6.

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GOVERNMENT AID TO COMMERCIAL FISHERIES: During fical year 1952 the Japanese Government granted considerable aid (direct and indirect) to commercial fisheries of Japan in the form of subsidies, loans, tax exemptions, and appropriations for research, reports a November 14 dispatch from the American Embassy in Tokyo.

Subsidies: The following subsidies do not include aid from prefectural governments. Most of the subsidies listed below are for fisheries operators in the inland, coastal, and offshore waters. Tuna fisheries operators are not included as they are not interested in this type of aid. Direct subsidies totaled 633,791,000 yen (about US$1,760,000).

Item	Amount in 1,000 Yen 1/	Particulars
1. Experiments on utilization of marine products	30,000	Studies or experiments on utilization of seaweeds, fish meal, fishing gear of synthetic fiber, etc.
2. Reduction and readjustment of small-type trawlers ..	322,510	Compensation for compulsory reduction of small-type trawlers.
3. Improvement of inland-water resources	42,026	Seed fish transplantation in inland waters.
4. Conservation of marine resources in shallow seas .	12,800	Promotion of the growth of shallow seas resources (algae, etc.).
5. Development of marine resources propagations	67,974	Development of unexploited fishing grounds in shallow waters.
6. Increased production of pearl oysters	5,875	Increase production of pearl oysters.
7. Training of staffs and officials of fisheries cooperatives	2,715	Lectures and training for democratic management and accounting of fisheries cooperatives.
8. Training of crew members of fishing boats	10,310	Democratic and effective education for fishing crew members.
9. Establishment of small-type land radio stations for fishing use	6,760	Increased establishment of radio land stations of small type for fishing use.
10. Administrative expenses of fishing boat insurance associations.	21,953	National share in the expenses to enforce the Fishing Boat Damage Compensation Law.
11. Reconstruction and rehabilitation of fishermen's cooperatives	110,868	Aid for reconstruction and rehabilitation of depressed fishermen's cooperatives.
Total	633,791	

1/ ¥360 = US$1.00

Loans for Vessel Construction: A loan of 300 million yen (US$833,000) was recently favored by the Bank of Development (Kaihatsu Ginko) for the construction of 10 tuna vessels over 200 tons.

Tax Exemptions: No exemptions are made in regard to the National Tax. But in the Local Tax, warehouses and offices of fisheries cooperatives are exempted from the fixed assets tax. The tuna fishery has scarcely any exemption under this category.

Emergency and Disaster Relief: This type of aid totaled 1,402,692,000 yen (US$3,900,000). The amount of benefits obtainable by tuna fisheries operators under this type of aid is very small.

Item	Amount in 1,000 Yen	Particulars
1. Subsidy for interests of restoration loan for fisheries damages	30,000	For interests of loan for the restoration of fisheries damages caused by the typhoons in October 1951.
2. Subsidy for expenses of counter-measure works for changed foundation of fishing ports, etc.	33,500	For the restoration of fishing ports, etc., damaged by changed foundations caused by earthquakes in Nankai district, etc., in 1944 and 1947.
3. Subsidy for expenses of restoration works for fishing ports	1,339,192	For the restoration of fishing ports damaged by storms and floods in the period from 1948 to 1951.
Total	1,402,692	

Loans or Grants for Harbor Improvements:

Loans ..... ¥440,000,000 (US$1,222,000).
Grants ..... ¥1,841,100,000 (US$5,115,000).

Administrative Costs: Costs for the administration of fisheries regulations, supervision, and guidance totaled 485,378,000 yen (US$1,350,000).

Item	Amount in 1,000 Yen
1. Regulation expenses for small trawler fisheries	29,136
2. Regulation and guidance-adjustment expenses for off-shore fisheries	112,544
3. Regulation and guidance-supervision expenses for high-seas fisheries 1/	343,698
Total	485,378

1/ THE AMOUNT FOR TUNA FISHERIES REGULATIONS, GUIDANCE, AND SUPERVISION OCCUPIES ONLY A SMALL PART OF THIS ITEM.

Assistance Rendered Through Research: BIOLOGICAL AND OCEANOGRAPHIC STUDIES: Appropriation: ¥262,000,000 (US$730,000)--¥15,000,000 is appropriated for biological studies of tuna and tuna-like fishes. Number of experimental stations: 28 (3 of them carry on studies of tuna, principally of tuna and skipjack resources, etc.). Number of research vessels: 14 (4 of them are mainly used for tuna research, principally of tuna and skipjack resources, etc.).

TECHNOLOGICAL STUDIES: Appropriation not available. Number of laboratories: 15 prefectural laboratories with 15 vessels engaged in research on tuna, skipjack, and saury pike fisheries.

MARKETING AND OTHER ECONOMIC STUDIES: Appropriations of ¥44,414,000 (US$123,000). Types of studies: (1) survey on economical activities in fishing industry and their effects on the national economy; (2) rational adjustment of fishing techniques; (3) improvement of fish marketing; (4) rationalization of fishing industry; (5) administration of inland waters; (6) overseas fisheries information.

Kenya

TURTLE INDUSTRY PLANNED: The possibilities of establishing a large-scale turtle industry off the Lamu Archipelago and the Bajun Coast on the borders of Kenya and Somalia (Africa) are being explored by a Mombasa vessel owner, the October 1952 South African Shipping News and Fishing Industry Review states. It is reported that the turtles will be exported to the United States since importers in that country have shown considerable interest in the possibility of obtaining turtles from Kenya. This proposed project is the outcome of a report concerning turtle fishing in the Bajun Islands issued recently by the Fisheries Department of the Kenya Government.

REMORA (LEPTECHENEIS NAUCRATES) BELIEVED TO BE SIMILAR TO THE FISH USED BY KENYA FISHERMEN TO HUNT TURTLES.

The plan calls for establishing a "turtle park" in a suitable bay frequented by turtles. This "park" would be fenced off to provide a natural sanctuary where turtles can live and feed without danger, and assuring a steady supply of turtles.

It is hoped that the turtles will breed in such a sanctuary so that the industry would be a long-term one. It takes about five years for turtles to mature to marketable size.

The turtles will be caught by specially-designed harpoons which will penetrate the shell but will not kill. Hunting will take place at night when lanterns will be used to attract the turtles.

A further supply of turtles will be obtained from the Bajun natives who use a most unique method to catch turtles. Live suckerfish, abundant near the sandy beaches of the Bajun Islands, are "allowed" to cling to the side of a canoe. When the turtles are sighted, a strong line is affixed to a suckerfish and the fish is then thrown towards the turtles. With its sucker the fish attaches itself to the turtle. The fishermen then "play" the turtle with the suckerfish acting as a hook. So strong is the suction these fish exert that rarely do fish and turtle part. This method of catching turtles is a carefully guarded tribal secret and the Bajun natives will not allow any outsiders to learn the art.

Present plans are to make monthly trips to the Archipelago to collect about 200 to 300 turtles a trip. The meat will be exported to the United States and Britain. From the balance, oil will be extracted for use in cosmetics.

Lebanon

A REPORT ON THE FISHERIES: Fishery production from local Lebanese waters depends largely on migratory species. Catch per fisherman is so small and the competition so keen that fishermen will use any means to catch fish, including explosives. The use of explosives has depleted stocks so low that national attention is being focused on this method of fishing.

Sardine Fishery: Sardines are reported to be present in Lebanese waters the year-round, but are landed in abundance only from May through September. The general pattern of occurrence of these fish is believed to be a northward spring migration, building up in intensity during the summer months, and tapering off during the fall and winter.

Sardines comprise 25 to 30 percent of the annual fisheries production. During a regular "shabak luse" season (extending from June through September), approximately 200,000 kg. (440,000 pounds) of sardines are caught.

Sardines occur in small numbers in April and May and again in the fall in the beach-seine fishery, but this is of little importance as a measure of abundance. A large mesh net is employed, and fishing is done in the daytime.

The chief method of capture for sardines is an adaptation of the lampara method ("shabak luse," or "light fishing with net"). The Arabic name of this fishing method refers to the fact that in its most effective operation it depends upon attracting fish at night through the use of lights. These lights are pressure-type petroleum oil lamps suspended downward, either singly or in pairs, from a frame on a bow of a small skiff, at a height of 1 to 1½ meters (3 to 5 feet) above the surface. These skiffs, usually operated by one man, are rowed to location just before sunset where they are anchored with lights on. These locations are usually within 1½ kilometers (1 mile) from shore in a depth of about 30 meters (98 feet). Later in the evening, a larger skiff carrying the net and 3 to 6 men

proceeds to the location, usually securing to an anchor buoy previously set near the location. This buoy and anchor are actually components of the gear unit. On the judgment of the man in the skiff with the light that a reasonable number of fish have collected under the light, the net is cast (usually in a clockwise loop) around the smaller skiff which serves as a guide point for the set. Before the start of this setting operation, the anchored line is hauled in short and transfered from its normal attachment to the net skiff over to the "first-end" of the net itself, thereby providing for the necessary drag which with the forward movement of the net skiff will cause the net to unfold out into the water. This attachment to the anchor buoy simplified picking up the "first-end" again when the skiff completes its loop to the starting point. The "last-end" of the net is equipped with a running line, paid out from the skiff until the "first-end" can be retrieved. In the hauling operation which follows, the two ends of the net are brought together by hauling in the running line, which for this purpose is now a towline. Having brought these two ends or wings together and lifting the lead lines, both wing ends are hauled aboard the skiff's starboard side. In the meantime, the anchor line has been shifted from the "first-end" of the seine, back to the skiff, passing around a row pin on the port gunwale which now serves as a snubbing pin. As the two ends of the net are brought aboard, the lead lines tend to come together, closing the net at the bottom. This rather sharp closing action of the lead line is a result of both the normal drag of the net and an opposite drag on the skiff accomplished by paying out the anchor line slowly, under tension, around the snubbing pin. As the hauling process continues, the "light" skiff is worked over the cork line to a position outside of the circle. This enables the man there to give added support to the cork line and to assist in emptying the net at the completion of the haul.

The net used is more or less a conventional two-wing and bag structure floated by a cork line and weighted down by a lead line. The wings start with approximately 50-mm. (2-inch) knot-to-knot mesh. This mesh size is successively reduced as the wings approach their attachment to the large bag of the net. This main net section is made chiefly of 18- to 20-mm. (3/4-inch) mesh. In actual local practice (though illegal) the center of the main net is supplied with a final bag with a 7-mm. (1/4-inch) mesh. After the balance of the net has been hauled aboard, this final bag holds the catch until it can be removed. This lifting may first be done with a dip net and later by bringing aboard both net and catch as a "blanket." After completing the haul, the net is overhauled to place the ends in proper order for a new set. As many as five sets per night may be made. Average weekly production is said to be approximately 200 kg. (440 pounds). The catch will, of course, vary according to the dark- and light-phases of the moon.

The length of the entire net may vary with the number of men in the fishing group, but a a typical net would be 75 meters (246 feet) long at the cork line, and are reported to cost up to L£3,000 (US$900).

In addition to sardines, which dominate the catch of "shabak luse," anchovies, scup (porgy), and mackerel as well as immature forms of bonito occur.

The consumption of these sardines is almost entirely restricted to the fresh form, fried in olive oil. However, some salting on a family scale does take place. The general problem of disposal of the catch is little different from that of other species. Demand for fresh fish exceeds supply and preservation is not yet required. Canned sardines are imported into Lebanon.

Tuna and Tuna-Like Fish: Tuna and tuna-like fish are known to inhabit Lebanese waters, but there are no assembled data as to their occurrence, habits, species, abundance, or the contribution they make to the total fisheries production.

Tuna-like fish are only occasionally observed in the markets and in the small recreational fishery of Beirut.

One observer reported that for a 3-week period in August 1952 particularly large aggregations of tuna-like fish were seen in the outer Beirut harbor during the evenings and about two miles westward during the mornings. This occurrence of tuna is reported as common during the summer months, but they are not fished commercially. Tuna appear in the catch only incidentally. Since it is a dark-meat tuna, it is not liked by the Lebanese.

Marketing: The fish markets of Beirut offer both locally-caught and imported fish. However, the handling of the latter does not typify local marketing and transportation patterns.

In general, fish are received at fishing squares in boxes or baskets directly from the fisherman who usually remains on the spot to watch the sale and collect his money. At these squares, proprietors auction the fish either in bulk, by individual species, or in lots of usually 3 kg. ($6\frac{1}{2}$ pounds) each. In extreme cases the amount offered may actually be only a handful. The fisherman receives the auction price in cash less 5 percent commission. In the event that no bids are made or if the proprietor desires to purchase for later retail sale, he may agree with the fisherman on an acceptable lot price.

Another method of disposal is by direct sale from the fisherman to the consumer, usually by peddling. Still another form of marketing is the peddler who regularly handles fish from individual fishermen or fishing groups.

There are no well-defined patterns for delivering fish to market or to the peddlers with whom a regular sales arrangement has been established. In the larger ports, such as Tyre, Sidon, and Tripoli, fishermen bring their catch directly from their boats to the fishing squares where they are bought and selected largely for distribution in Beirut. In Beirut, this intermediate step is eliminated. For those fishermen who are scattered along the coast, each must devise his own delivery method. The pattern here is to carry the catch to the highway and hail a passing taxi, truck, or bus on its way to town. In such cases the fisherman is obliged to accompany his catch to the point of sale and later seek transportation back home. This may mean that the time spent on the disposal of the catch is equal to the time spent in making the catch. This method probably stems from the fisherman's desire to see his fare disposed of and the need to receive his money on the spot.

The transportation of fish in iced boxes by truck and also by taxi, from the larger towns to Beirut, is a typical method of transport.

The typical shop where fish is sold to the consumer is open to the street with fish segregated by species and displayed on concrete or marbleized counters. Other fish are set in boxes or baskets on the floor. Frequent applications of water on the fish reduce drying and preserve an appearance of freshness. In some instances ice is used in the display. No covered or screened display cases are used. Where larger volumes of fish are handled, particularly if they consist of imported fish, these are stored in ice chests until needed. In most cases the fish offered for sale are small, but in the larger shops it is possible to buy cuts or sections of large fish. Other than this, the dressing of fish is not practiced.

In addition to those fish which are peddled house to house the same day they are caught, day-old fish are sold out in the open at street stands which may be only upturned packing boxes. Under these circumstances, the fish may be completely exposed to the elements or may be sheltered by an umbrella. It is usually only the very poor who will buy fish handled under such conditions.

Shrimp, lobster, red mullet, and sole in that general order command very high prices. Next are the bream and perch-like fishes. Bonito, sardines, dogfish, and mackerel are the lower-priced varieties.

The high average temperature which characterizes Eastern Mediterranean countries is always a factor to be considered in the handling of fish. However, the problem of transporting fish in Lebanon is not particularly one of distances. Nearly every population center where fish could be marketed lies within two hours travel time from the several fishing ports. Beirut, which itself is on the coast, lies midway between the fishing centers of Tripoli on the north and Tyre on the south.

Retail Prices: Typical retail fish prices in Beirut during July 1952 are shown in the table.

Retail Fish Prices in Beirut, July 1952

Species	Price Per Pound	Species	Price Per Pound
	US$		US$
Red Mullet ("Pandora")	1.23	Sole	1.07
Red Surmullet	.50	Dogfish	.16
Sea Bream	.62	Bonito	.15
Sea Perch	.71	Common shrimp .	1.38
Sardine (fresh)	.24		

It is apparent that these prices are in no way a reflection of the relative food values of the several species listed. These prices are regarded as being partly an expression of cultural preference.

Consumer Preferences: Lebanese taste is restricted to fried or baked fish. Boiled (or steamed) fish is almost unheard of. Imported canned tuna is well received in Lebanon, but it is not recognized as fish processed from tuna similar to that caught locally. There is a preference for small fish.

Mexico

GUAYMAS SHRIMP FISHERY OUTLOOK DARK: Approximately 400 metric tons of shrimp were landed at Guaymas in October 1952 (the first month of the current shrimp-fishing season). This is just about one-half the production in October 1951 and considerably below the most pessimistic predictions. The average catch per boat this year was only about two metric tons each as compared with three tons in October 1951. Unlike last year, fishing was poor this year, even the first few days of the season. Most shrimp caught were small and the relatively few tons of the large premium size landed were mixed with the smaller shrimp.

Freezing plants paid about 5½ pesos per kilo (29 U. S. cents per pound) in October as compared with 8 pesos per kilo (42 U. S. cents per pound) in October 1951.

Shrimp landings at Guaymas during November 1952 were estimated at less than the 400 metric tons landed in October, and not more than one-half the 775 metric tons landed in November 1951. The average catch per vessel in November was approximately 1½ metric tons; and the shrimp caught was of mixed sizes with only a small proportion of the large (26-30 count) size.

Two of the seven shrimp-freezing plants at Guaymas failed to open for the 1952/53 season because of financial difficulties brought about by too rapid expansion and the steady decline of the industry generally. Boat owners and freezing-plant owners are seriously upset over their future prospects at Guaymas. No government loan was granted them this year, and most are heavily in debt to supply houses and financial institutions. It is feared that the smaller operators and boat owners have little chance of completing the season unless conditions improve. Credit has been uniformly denied shrimp dealers, and collections are down to a bare trickle by comparison with those of the late 1940's when the shrimp "boom" was in full swing at Guaymas.

During October some vessels searched for productive beds as far south as Mazatlan and others north to the Gulf of California with little success. Most vessels are currently confining their efforts to waters in the immediate area to conserve fuel and provisions.

Shrimp fishermen blame the scarcity of shrimp and their financial straits upon a number of factors. However, two factors stand out: (1) the reported preseason operations of canoe fishermen (approximately 3,000 in number) with throw nets in the bays where the shrimp spawn and grow; and (2) the refusal of the Government to further lower export taxes totaling nearly 1,000 pesos (US$116) per metric ton. The second complaint has been aggravated by the levying of an additional 50 pesos (US$5.80) per ton "vigilance tax" to defray expenses of the Mexican Navy for patrolling the spawning grounds.

Most responsible shrimp operators feel that no preseason concessions should be made to the myriad canoe fishermen, and that the Navy patrol should be an honest and efficient one, which they state has not always been the case. Further, they see no reason why the Government cannot absorb the "vigilance tax" within the export levy, in view of present circumstances. It would seem the need is not for additional loans but for a retrenchment to fit operations for a reduced scale of production. Prominent Guaymas shrimp men are reported to be planning a trip to Mexico City to voice their complaints before the Government.

A protective move that has been applauded locally is the announcement that no additional boats will be licensed to enter the industry, at least on the West Coast.

Guaymas newspapers have begun to carry editorials pointing out the necessity of basing the local economy on activities other than shrimping if the town is to survive, according to American consular dispatches from Guaymas dated November 6 and December 5.

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MAZATLAN SHRIMP FISHERY, NOVEMBER 1952: Shrimp exports from Mazatlan in November were almost double those for the month of October, but Mazatlan freezing-plant owners did not feel that the increase was an improvement, according to a December 6 American consular dispatch from Mazatlan. They felt that the resetting of the Escuinapa weirs and heavy shrimp fishing in the Bays of Altata and Topolobampo have prevented this season's shrimp from moving into the ocean.

The weirs in Escuinapa during October caught more shrimp than could be handled by the local cannery and some of their catch went to waste. However, the opening of these weirs would arouse the opposition of several hundred Escuinapa fishermen who would be left without means of livelihood. It is reported that the monthly output of the fishing firm that has the concession in the Bays of Topolobampo and Altata is as much as that of the four Mazatlan freezing plants put together.

A committee is scheduled to leave for Mexico City to discuss the problem with the Secretario de Marina.

The Mazatlan freezing plants in November 1952 exported to the United States 24 cars (1,222,614 pounds) of shrimp as compared to 13 cars (705,050 pounds) in October and 25 cars in November 1951.

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IMPORT DUTIES INCREASED FOR CERTAIN FISHERY PRODUCTS: Some higher import duties for certain fishery products were announced by the Mexican Government in a decree published in the Diario Oficial. The changes became effective October 13.

The modifications of the Mexican import tariff affecting fishery products are (shown are tariff fraction number; item description; specific duty in pesos per gross kilogram; ad-valorem duty; new and former rates):

Mexican Import Tariff Schedule	Products	New Duties		Former Duties	
		Specific Plus Ad Valorem			
		Pesos/ Gross Kg.	Percent	Pesos/ Gross Kg.	Percent
1.21.04	Codfish, dried, salted, or smoked, in any container.	0.80	+ 30	0.30	+ 30
1.21.09	Fish, salted, smoked, pressed, or preserved, not specified	1.00	+ 40	0.80	+ 35
1.21.10	Crustaceans and molluscs, dried, salted, or preserved, all kinds	1.00	+ 35	0.80	+ 35

NOTE: ONE MEXICAN PESO EQUALS ABOUT 11.5 U.S. CENTS.

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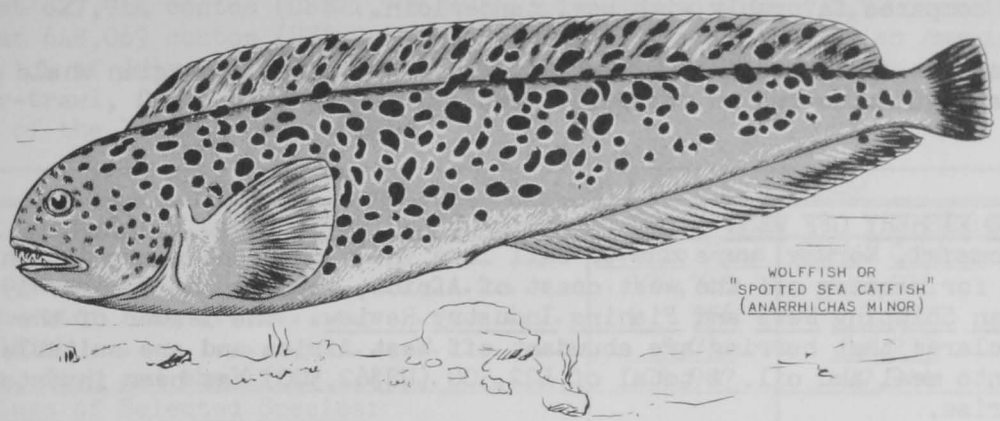
SPINY LOBSTER AND CURED FISH EXPORT TARIFF FRACTIONS CHANGED: Mexico has changed the number of the export tariff fraction for dried, salted, or smoked fish from 11-10 to 11-02, and the number of the cooked, fresh, or chilled (spiny) lobster from 11-02 to 11-10, effective November 11. The duties remain unchanged. This change was announced in the Diario Oficial of November 7, 1952.

Norway

WOLFFISH FISHERY INCREASING IN IMPORTANCE (Correction of news item titled "Lumpfish Fishery Increasing in Importance"): In the October 1952 (Vol. 14, No. 10) issue of this Review, page 73, appeared the news item "Lumpfish Fishery Increasing in Importance." Due to an error in translating the Norwegian word "steinbit" to "lumpfish," the news item referred to lumpfish when it should have referred to wolffish. The Universitetets Biologiske Laboratorium og Statens Institutt for Hvalforskning, Oslo, Norway, called to our attention that "steinbit" refers to two species of wolffish (catfish)--Anarrhichas minor and A. latifrons. The lumpfish (Cyclopterus lumpus), called "stenbider" in Denmark and in some places in southern Norway and officially known in Norway as "rognkjeks," has no economic importance at the present time. Therefore, actually all references to lumpfish in the news item published in the October 1952 issue of the Review should be interpreted to refer to the wolffish (catfish).

The Norwegian frozen fish industry has developed the wolffish from an almost unknown species to a fairly important one. Both in quality and appearance wolf-



WOLFFISH OR SPOTTED SEA CATFISH (ANARRHICHAS MINOR) IS ONE OF TWO SPECIES OF WOLFFISH FILLETED AND FROZEN IN NORWAY.

fish yield white-meated fillets which look good in cellophane packages. Reports indicate that Norwegian sales efforts for these fillets (marketed as ocean catfish fillets) in the United States have met with unusual success.

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NEW TYPE BARREL INVENTED: A new type of barrel, which is 100 percent airtight and watertight, has been patented by Johannes Thaule of Haugesund, Norway, reported the Norwegian Information Service on November 20. First ever to be designed for liquids of light buoyancy, this barrel is now in production at O. Hamres Fabrikk, Haugesund, and will shortly be made at five other cooperages in Norway. The inventor has already sold production rights to a Swedish factory and is presently negotiating with companies in Denmark, Canada, and the United States.

This cylinder-shaped barrel is made according to a new patented method which cuts labor cost substantially. Composition staves, fastened to a specially-designed cylinder of the same shape and cubic content as the finished barrel, are fused under great hydraulic pressure by means of ultrahigh-frequency rays. The conic bottom, which snaps into a conic hoop, is patented throughout the world.

Made of "fibonitt," a composition of wallboard and plastic, the low-cost barrel is ideally suited for salted herring because it saves 20 to 30 percent of the required brine. Barrels made of wooden staves usually absorb quite a few pounds of the salt solution.

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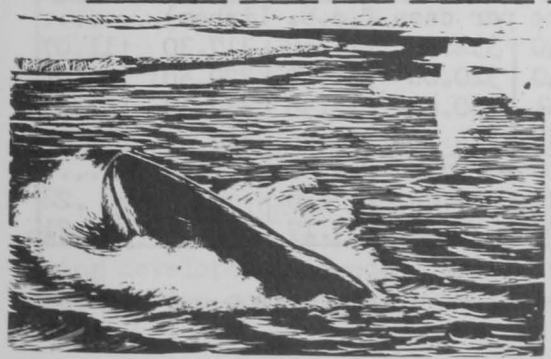
NORWEGIAN WHALE MEAT ACCEPTED IN UNITED STATES RESTAURANTS: Introduced in the United States late in 1951, Norwegian whale meat has already met with wide acceptance by some of the finest restaurants in the United States, reports The South African Shipping News and Fishing Industry Review of October 1952. Surveys indicate that there is a potential market for about 10 million pounds of whale meat in the United States. The main problem to date has been limited supply rather than demand, but one of Norway's main exporters hopes to increase exports to the United States to about 5 million pounds in 1952.



Whale meat exported to the United States is quick-frozen and packed in handy cartons. A good whale steak, enough for three persons, sells for 85 to 90 cents retail. It compares favorably with beef tenderloin.

The Seamen's Institute in New York City recently added Norwegian whale meat cutlets as a regular course on its daily menu.

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HERRING FISHERY OFF WEST COAST OF AFRICA BEING DEVELOPED: Two fishing vessels from Romsdal, Norway, were due to sail late in October on an expedition to purse seine for herring off the west coast of Africa, reports the October 1952 South African Shipping News and Fishing Industry Review. The leader of the expedition declares that herring are abundant off West Africa and are suitable for reduction into meal and oil. A total of £22,500 (US$62,500) has been invested in this enterprise.

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NEW HERRING FISHING GROUNDS DISCOVERED: For the first time in history, Norwegian fishing vessels fished for herring in waters 280 nautical miles off the west coast of Norway near the Faeroe Islands and made large catches, the Norwegian Information Service reported on December 4. A total catch of well over 200,000 barrels of pickled herring (average catch--4 barrels per net) was landed in a two-month period by a fleet of about 15 ocean-going vessels (ranging in size up to 400 tons) using drift nets on the Faeroe Banks.

The Faeroe fishery actually was the tail-end of the Iceland herring fishery. On its search for food, the herring follow the current of cold water running from Iceland past the Faeroes until they plunge through warmer waters in order to spawn along the Norwegian coast. Rough outlines of the route followed by the herring throughout the year have been established by means of tagging and electronic instruments by the Norwegian Fisheries Directorate research vessel G. O. Sars.

Portugal

WHOLESALE PRICES FOR SELECTED CANNED FISH AND FROZEN SHELLFISH: The table lists average Portuguese wholesale prices for selected canned fish products and frozen shellfish products during January, February, and March 1952.

Portuguese Average Wholesale Prices for Preserved Fish, January-March 1952

Item	January 1952		February 1952		March 1952	
	Escudos	US$	Escudos	US$	Escudos	US$
Canned Fish:	(Price per case f.o.b. Lisbon)					
Sardines in olive oil 1/	355.30	12.40	332.50	11.60	317.30	11.07
Sardines in peanut oil 1/	326.30	11.40	320.00	11.17	229.50	8.00
Mackerel in olive oil 1/	330.60	11.54	360.00	12.56	332.12	11.59
Fillets of anchovies 2/	323.00	11.27	314.10	10.96	317.50	11.08
Frozen Shellfish:	(Price per pound f.o.b. Lisbon)					
Octopus, frozen	5.91	.20	5.64	.20	6.36	.22
Cuttlefish and squid, frozen	6.36	.22	5.45	.19	6.14	.21

1/ PACKED IN 100-CAN CASES, 1/4 CLUB, 30 MM.
2/ PACKED IN 100-CAN CASES, 1/10 CLUB.

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FISHERY LANDINGS, 1951: Landings of fish and shellfish (not including whales and cod) in continental Portugal during 1951 amounted to 176,987 metric tons, valued at 627,944 contos (US$21,978,040), as compared with 171,720 metric tons, valued at 648,069 contos (US$22,682,415), in 1950, according to an American Embassy dispatch of July 21 from Lisbon. These totals include landings of the coastal, otter-trawl, fresh-water, and shellfish fisheries. Salt-water fish comprised the bulk of the landings (see table).

Portuguese Fish and Shellfish Landings, 1951 1/

ITEM	Quantity	Value	
	Metric Tons	Port. Contos	US$
Salt-water fish	170,715	610,714	21,374,990
Fresh-water fish	556	3,992	139,755
Shellfish	5,716	13,237	463,295
Total fish and shellfish	176,987	627,944	21,978,040
Landings of Selected Species:			
Tuna and similar species	2,090	18,717	655,095
Sardines	78,252	244,311	8,550,885
Chinchards (horse mackerel)	34,727	69,746	2,441,110
Pargo and common sea bream	9,288	42,829	1,499,015
Whiting	11,221	93,090	3,258,150
Anchovy and Sprat	2,983	14,719	515,165
Cuttlefish	554	2,025	70,875
Squid	462	2,367	82,845
Octopus	742	4,002	140,070

1/ DOES NOT INCLUDE: (A) LANDINGS AT MADEIRA AND AZORES ISLANDS; (B) LANDINGS OF COD AND WHALES.

Trawl Fishery, 1951: Trawling on the high seas during 1951 yielded a catch of 37,074 metric tons, valued at 189,932 contos (US$6,647,620), compared with 38,644 tons, valued at 183,711 contos (US$6,429,885), in 1950. The average monthly number of vessels utilized in 1951 was 77. A total of 3,892 trips were made during the year as compared to 3,101 trips in 1950. Trawling operations were carried out chiefly off Cabo Branco on the northwestern coast of Africa. Varieties of fish caught were chiefly whiting, pargo, and sea bream. (The gremio of owners of trawling vessels, a semi-official trade organization, reports the 1951 trawl landings as 39,351 tons and the 1950 catch as 40,593 tons; total trips in 1951 as 3,937 and in 1950 as 4,179.)

Cod Fishery, 1951/52: Vessels taking part in the 1951/52 cod-fishing season (July 1-June 30) were 45 schooners and 20 trawlers. These vessels operated off the Grand Banks of Newfoundland and Greenland and brought in 48,959 metric tons of wet cod, of which 24,528 tons were caught by schooners and 24,431 tons by trawlers. During fishing operations, however, three schooners were lost. The amount of dried cod obtained from this catch is not yet available, but on a percentage loss basis of wet to dry cod that figure should be about 34,761 tons, or slightly less than the 1950/51 season.

Sweden

DEPTH INDICATOR DEVICE FOR FLOATING TRAWL NETS BEING DEVELOPED: A device which will indicate the depth of a floating trawl within one meter (3.3 feet) is being developed in Sweden, according to Fiskaren (Nov. 12), a Norwegian trade paper. Upon completion it is slated for testing by a Government research vessel.

A one-boat floating trawl has been developed by a Norwegian and demonstrated before the Ocean Research Institute which, reportedly, was enthused over the results of the test. The trawl stays open without otter boards, can be operated by a 50 hp.-boat, and is cheaper than drift gill nets, according to the inventor, who is now seeking a patent on his invention.

Union of South Africa

NEW SPINY LOBSTER FISHING GROUNDS EXPLORED: Experimental trawling for spiny lobsters was carried on during August 1952 off the Natal Province coast of South Africa by the privately-owned Cape Town trawler Mary Mortimer, the October 1952 South African Shipping News and Fishing Industry Review reports. Although the vessel had varied success in the initial stages of the trip, one catch yielded 8,000 spiny lobsters. The catches so far have been absorbed by the local market at Durban. The dealers in that city reported that the spiny lobsters were 16 to 18 inches in length and possessing a softer shell than the Cape-Town variety. The color is lighter and when cooked the spiny lobsters turn pink instead of red.

Whether or not further development of these spiny lobster grounds is possible will not be known until data collected are studied and additional reports are received on the acceptability of the product. In the past other research vessels have established that there are spiny lobster resources off the Natal coast which have not been exploited.

United Kingdom

GOVERNMENT AID TO THE FISHING INDUSTRY: Further Government aid to the fishing industry was announced in the House of Commons before the 1952 summer recess of Parliament, reports an August 12 dispatch from the American Embassy in London. This additional assistance is to be given as (1) a continuance of the white-fish subsidy, and (2) loans for building and equipping fishing vessels for the inshore, and near- and middle-water fleets.

White-Fish Subsidy: The white-fish subsidy was introduced as a temporary measure to alleviate the distress of those engaged in this industry (as distinct from the herring fisheries) following the disastrous glut in 1949. After the creation of the White Fish Authority in 1951 it was continued pending studies by that Authority with a view to reorganize the industry along more profitable lines which would eliminate the need for such assistance. It applied to near- and middle-water vessels and the inshore fisherman only, and was introduced July 30, 1950, for a period of six months' duration. Since its inception it has been extended several times and efforts have been made to include the distant-water trawlers (over 140 feet in length). On July 24, 1952, the Minister of Agriculture and Fisheries announced that payment would be maintained until March 1953 although it had been agreed not to increase the rates generally but to consider "one or two minor upward adjustments" to make the total level of expenditure almost that of last year. This was done in consultation with the White Fish Authority whose first annual report recommended such continuance. The total subsidy for the year ending March 1952 was close to the annual estimated total projected when the subsidy was first put into operation. The subsidy payments were as follows:

Near- and Middle-Water Trawlers:	£	US$
England and Wales	722,353	2,022,588
Scotland	348,690	976,332
Inshore Trawlers:		
England and Wales	182,572	511,202
Scotland	301,173	843,284
Northern Ireland	19,404	54,331
Total	1,574,192	4,407,737

Loans: Proposed legislation was also announced in the House to provide grants for building and equipping fishing vessels not exceeding 140 feet in length. The intention is that the grant should be at the rate of not more than 20 percent with a maximum of £16,000 (US$27,800) and, in the case of the smaller vessels owned by working fishermen, 25 percent with a maximum of £4,000 (US$11,120). It is understood these loans will be in addition to those empowered to the White Fish Authority by the Sea Fish Industry Act of 1951 and to the Herring Industry Board by the Herring Industry Scheme of 1951. The White Fish Authority report put the cost of building a 110- to 125-foot trawler at £60,000 to £100,000 (US$166,800-278,000) at present. An inshore vessel under 70 feet would cost not less than £30,000 (US$83,400).

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GOVERNMENT TO BUILD FISHING TRAWLERS: A plan for the British Government to build fishing trawlers for lease to private fishing firms was under discussion by the National Executive Committee of the Labour Party at a conference held in November, reports the November 15 Fish Trades Gazette, a London trade periodical. The cost of building modern fishing vessels is now so high that private enterprise cannot afford to re-equip the industry, and since up-to-date trawlers would be necessary for national defense in wartime, the Government must now build them. Also, the fishing industry would be in a better position to keep down the price of fish if it was not burdened with the capital cost of building new vessels.

The president of the British Trawlers' Federation commented that if the charter rate for leasing such government-owned vessels was considerably less than the present cost of keeping trawlers at sea and building new vessels, the plan would be welcome. However, until the stocks of fish in the near and middle waters are considerably improved, the real incentive to go along with such a plan would be lacking.

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GOVERNMENT GRANTS FOR BUILDING AND EQUIPPING FISHING VESSELS: The proposal to provide Government financial help for the building of fishing vessels will be implemented in a bill to be introduced before the new Parliament, according to the Speech from the Throne at the formal opening of Parliament on November 4, 1952. The original plan for British Government grants for building and equipping fishing vessels was announced in the House of Commons in July 1952.

As this project was considered an essential one by the White Fish Authority in its first annual report, it is expected that action will not be long delayed. However, should orders for new fishing vessels be forthcoming from foreign sources, particularly those in a position to assist the dollar-export program, delay may be experienced through lack of shipyard facilities, reports a November 6 dispatch from the American Embassy in London.

Although the deep sea or "distant water" trawlers will be excluded from the scheme of financial assistance, it is probable that the smaller vessels that will

be built will incorporate many of the improved features of design and equipment found in the larger vessels. Particular attention will likely be paid to mechanization of the tasks incidental to fishing and comfort of the crew, since efforts will be made to attract men to these smaller vessels which always suffer in competing with the larger vessels for fishermen.

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WHITE FISH AUTHORITY REPORT ON LEVIES COLLECTED FROM FISHING INDUSTRY: The White Fish Authority collected £252,591 (US$703,314) in levies from the British fishing industry as of November 15, reports a dispatch from the American Embassy at London dated November 24. This levy was placed on the industry when the White Fish Authority was given approval on May 10 by the Minister of Agriculture and Fisheries to grant loans (up to 60 percent of the cost) for building or improving fishing vessels not exceeding 140 feet in length.

The Authority has spent £65,912 (US$183,525) on general administrative expenses, training grants, research and experiment, and export promotion. The balance is being held for expenditure on projects which the Authority will be undertaking under the powers conferred on it by Section 4 of the Sea Fish Industry Act, 1951.

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SHIP-TO-SHORE TELEVISION PICTURES OF SEA BOTTOM: Television pictures of the sea bottom 100 feet below the surface were clearly seen on the shore some 16 miles distant in trials carried out in Portsmouth, England, during September by the H. M. S. Reclaim, reports the November 22 issue of The Fishing News, a British trade periodical. Viewers in Portsmouth were able to see the diver, fish, and crabs.

These tests were successfully completed using special equipment for relaying underwater television pictures from ship to shore. The equipment was designed and produced by a Cambridge (England) firm. The 16-mile distance tested is not the full range of the ship-to-shore link nor is the 100-foot depth the maximum operating depth of the television camera.

"The ship-to-shore transmitter was supplied from the normal ship's A. C. supply, the input was 2.8 kw. from a 240-volt, 50-cycle supply. The output of the transmitter was theoretically 500 watts, but it was estimated that the actual output during the trials was in the order of 250 watts R.F. At the shore station the signals were frequency-converted, amplified, and fed in a closed circuit to a number of standard receivers," according to the British trade periodical.

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ULTRASONIC BEAM TO LOCATE WHALES: British whaling expeditions to the Antarctic this season (commencing January 1953) will employ a device which utilizes ultrasonic sound pulses to locate whales, a November 28 dispatch from the American Embassy reported. This ultrasonic "whale-finder" uses the Asdic principle by which the range of a target in the water is measured by the time interval between the transmission of an ultrasonic sound pulse and the reception of an echo from the object. Its bearing relative to the vessel is also indicated.

This "whale-finder" equipment was demonstrated at the Barkingside factory of a British marine firm under electronically-simulated sea conditions. Its potential value to whale hunters was shown successfully.

Although the whale can be attacked only on the surface, its position in the water can be located with reasonable accuracy at any distance up to 2,000 yards. Since the ultrasonic beam can be deflected downward to an angle of 45 degrees to the water's surface, the whale's movement can be followed while it is "sounding," which may be for as long as 15 to 20 minutes. The harpoon-gunner will then know the location of the whale as it again surfaces.

Also, it has been reported that helicopters will be used for locating whales this season.

COD - THE BEEF OF THE SEA

Cod is extremely plentiful and inexpensive this winter, according to reports from the U. S. Fish and Wildlife Service.

Economical main dishes that will lower the homemakers' food budget are featured in Fishery Leaflet 269--Cod - The Beef of the Sea. This publication contains background material and helpful suggestions on the purchase and preparation of cod.

Have you ever smelled the delicious aroma of a cod chowder simmering on the stove, and sat down to a big bowl of its creamy goodness? Have you ever tried those delectable morsels from the land of the Cabots and Lodges--cod cakes fried in hot fat until they are a glorious sun tan? Have you ever tried smoked cod, that table delicacy that holds a gustatory pleasure for many? At the next opportunity try this cod chowder and see if it doesn't rate high in eating pleasure.

COD CHOWDER

2 POUNDS COD FILLETS
1/4 CUP BACON, DICED
3/4 CUP ONIONS, DICED
2 CUPS HOT WATER
2 CUPS POTATOES, DICED
1-1/2 TEASPOONS SALT
DASH PEPPER
4 CUPS RICH MILK

Cut fillets in 1 inch cubes. Fry bacon until crisp and golden brown. Add onion and slightly brown. Add water and potatoes and cook 10 minutes, or until potatoes are practically done. Then add cod, and cook until it can be separated into large flakes with fork. Add remaining ingredients and heat. Sprinkle top with chopped parsley. Makes 6 servings. This is a U. S. Fish and Wildlife Service tested recipe.