

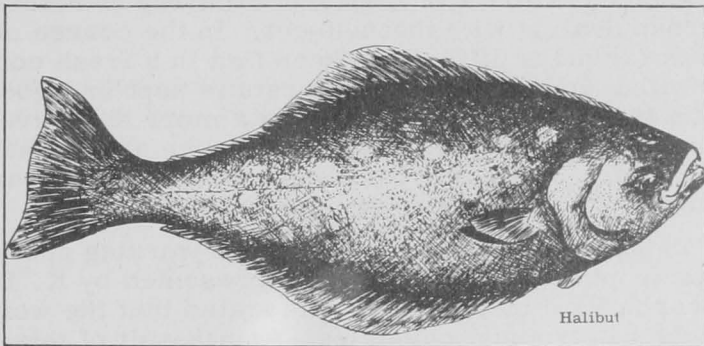


International

INTERNATIONAL PACIFIC HALIBUT COMMISSION

FIRST SEASON IN AREAS 2 AND 1B CLOSED: The International Pacific Halibut Commission announced the closure of the first season in Areas 2 and 1B to halibut fishing at 6 a. m. (P. S. T.), June 27, 1956, until the beginning of the second fishing season in these areas. The Commission estimated that the 26.5-million-pound limit set for Area 2 would have been caught by that date. Area 1B which had no catch limit was also closed when the quota for Area 2 was attained.

The official opening date for all halibut fishing in the Pacific regulatory areas this year was May 12 at 6:00 a. m. (P. S. T.). However, this year both United States and Canadian fishermen voluntarily agreed not to start fishing until May 20. In 1955 the official opening date was also May 12 (actual fishing also started on that date), and Areas 2 and 1B in that year closed on June 5. Halibut fishing Areas 2 and 1B this year were open for 46 days, but because of the voluntary agreement to start fishing on May 20, fishing took place for only 38 days. These same areas were fished for 24 days in 1955, 21 days in 1954, and 24 days in 1953. The fishing in these areas lasted longer this year because (1) fishing started 8 days later than the opening date, (2) most vessels voluntarily agreed to remain idle for 7 days after each trip, (3) there was about three days of inclement weather on the fishing grounds, and (4) fish were scarce in certain popular fishing sections.



The second fishing season in Areas 2 and 1B shall commence at 6 a. m. (P. S. T.) on August 10 for at least seven days with no catch limit, or on a later date that may be announced by the Commission prior to commencement of the second season, or if the termination of the first season in Area 2 or in Area 3A be later than 6:00 a. m. on July 25, the second season in Area 2 shall commence at 6:00 a. m. 16 days after termination of the first season in Area 2 or in Area 3A, whichever shall be later, and shall terminate at 6:00 a. m., seven days after commencement of the second fishing season in Area 2, or on any later day that may be announced by the Commission prior to the commencement of the second season.

Area 2 includes all Convention waters off the coasts of the United States and Alaska and Canada between Willapa Bay and Cape Spencer, Alaska.

Area 1B includes all Convention waters between Heceta Head and Willapa Bay, Wash.

Areas 3A and 3B on June 27 were still open to halibut fishing and will close when the limit for Area 3A of 28 million pounds has been attained.

FOOD AND AGRICULTURE ORGANIZATION

ANTIBIOTICS USE AND QUALITY ASSESSMENT HIGHLIGHTS FISH-PROCESSING TECHNOLOGISTS MEETING:

The use of antibiotics as an aid to keeping fish in a fresh condition and the problems associated with the assessment of the quality of fish were the highlights of the International Meeting of Fish Processing Technologists which was held at Rotterdam, The Netherlands, June 25-29, 1956.

The meeting, which was organized by the Food and Agriculture Organization of the United Nations, was attended by more than 100 fishery technologists from about 30 countries. The reports from working groups set up by the FAO Interim Committee on Fish Handling and Processing were first heard and then followed a symposium on the chilling of fish.

The first report of the working groups of the FAO Interim Committee on Fish Handling and Processing was on chilled fish, presented by F. Bramsnaes, Director, Technical Laboratory, Danish Ministry of Fisheries, as Chairman of the working group dealing with that subject. In the course of his report, Bramsnaes said that it was far more difficult to keep fish in a fresh condition than to keep other food in a similar condition. Most foodstuffs kept in a good condition at any one of a range of low temperatures, but fish was a more sensitive product. He gave as an example the fact that cod will keep fresh twice as long at 0°C. (32° F.) as at 4°C. (39° F.). This fact, which has been shown in the later years by the scientists, was of practical importance to the fishing industry.

The second report, that of the working group concerned with fishery products for tropical consumption, was presented by K. Bakken, Norwegian Fisheries Research Institute, Bergen, who stated that the working group had surveyed the food habits in tropical countries. As a result of this survey the group had come to the conclusion that there was a potential market in many tropical countries for unsalted, dried, or smoked and dried whole herring and other fish, as well as for dried minced fish and for fish meal. This report indicated that the fishing industry in Europe and North America might find a considerable market for certain products in countries in Africa and Asia where there was an acute need for providing more animal protein in the diet of the masses of the people.

E. Heen, Director, Norwegian Fisheries Research Institute, Fisheries Department, Bergen, as Chairman, presented the report of the working group concerned with the freezing of fish in bulk.

These reports stimulated considerable discussion among the delegates before the meeting turned to the symposium on the chilling of fish, in the course of which some 27 papers were presented.

The first session of the symposium was concerned with 9 papers dealing with the use of antibiotics, bacteriostatic ices and dips, and it was clear from the discussion which followed that the subject of antibiotics was in the forefront of the minds of most participants. Most of the 9 papers were concerned with experiments which have been made with such antibiotics as aureomycin and it can be generally said that these experiments show that the use of antibiotics may help considerably in keeping fish in a fresh condition, in some cases as much as 2 or 3 times as long as is now possible by using such conventional methods as storing in ice. Various uses of antibiotics were described in the papers, some of them concerned with impregnating ice with aureomycin or other antibiotics.

It was clear from the papers presented and from the discussion that one of the problems confronting fishery scientists was to devise a method which would insure that the residue of any antibiotics left in fish would be so minute as to be innocuous to human beings. Scientists are also concerned with insuring that antibiotics used are distributed evenly throughout the ice.

It was pointed out at the meeting that the Governments and public health authorities would need to have very carefully detailed facts concerning the residue and its harmlessness to human beings before they would be justified in officially sanctioning the use of antibiotics to preserve fish. So far, no government has approved the use of antibiotics for this purpose.

Some experts at the meeting urged that this problem of residual antibiotics should be approached with "common sense" and that excessive apprehension as to any possible injurious effect of residual antibiotics should not stand in the way of progress in this field. Indeed, many experts at the meeting were emphatic that the time had come to conduct large-scale experiments by responsible institutes in the use of, for example, aureomycin-treated ice on trawlers engaged in long-distance fishing. This could be done, they urged, with the consent of the public health authorities in the countries concerned, and the results would, they suggested, provide a very clear guide as to future action.

While the points concerned with the public health factor were given due consideration by the experts at the meeting, it was evident that most of the technologists felt that the use of such antibiotics as aureomycin might be extended to commercial fishing in the near future. Some experts, indeed, feel that antibiotics should be introduced without delay.

Dr. H. L. A. Tarr, of the Fisheries Research Board of Canada, who was a pioneer in the use of antibiotics to preserve fish, has expressed an opinion that the residual antibiotics would not be dangerous to human health.

Two reports by United States scientists showed that, in one experiment, fish fillets treated with 10 p.p.m. of chloramphenicol, oxytetracycline, tetracycline, and chlortetracycline spoiled after 8, 11, 10, and 13 days respectively, as compared with 4 days for untreated fillets.

In another experiment, haddock fillets dipped for 30 seconds in antibiotic-treated brine kept in good condition for 7 days and more.

Dr. J. M. Shewan, of the Torry Research Station, Aberdeen, reporting on experiments with aureomycin, stated that such fish as haddock and cod had been kept in an edible condition for 7 to 10 days longer than possible by conventional methods. These results had been confirmed by pilot-scale trials on board a trawler.

Japanese scientists, T. Tomiyama, Y. Yone and S. Kuroki, of Kyushu University, also recorded similar successful results in experiments with aureomycin used in storing yellow croaker, red sea bream, and red-tongue sole.

A paper on "Aureomycin as an Ice Additive" by B. Albertsen, of the Technological Laboratory, Danish Ministry of Fisheries, stated that tests indicated cod could be kept in good condition 5 to 6 days longer in aureomycin-treated ice. Similar results were reported by Sverre Hjorth-Hansen of the Norwegian Fisheries Research Institute, Bergen.

Dealing with the "Public Health Aspects of the Use of Antibiotics in Foods," C. Engel, of the Central Institute for Nutrition Research, Utrecht, said that "sensitization of future patients" and the induction of resistance in strains of bacteria are important problems which must be carefully considered before permission is granted to use antibiotics for keeping food in a fresh condition. If the residual level of the antibiotic in fish or other fresh food is negligible some, but not all, of the objections to its use will be eliminated. The best answer would be to use antibiotics which are not applied in medical practice and do not give rise to bacterial cross-resistance to antibiotics used in the human body.

C. H. Castell, of the Fisheries Research Board of Canada, said that the first requirement for landing fish in a fresher condition was more hygienic handling of

the catch on board fishing vessels. When this was achieved, then the antibiotics might be used with advantage to preserve fish. Antibiotics should not be used to overcome bad, unhygienic handling of fish.

Other experts at the meeting pointed out that manufacturers of antibiotics were aware of this and were in agreement with the view expressed by Castell.

Five papers were presented on brine cooling and seawater ice, and considerable discussion took place concerning them. But, next to the papers concerned with antibiotics, the 12 papers dealing with quality assessment of fresh fish provoked the most discussion. Here the meeting considered both organoleptic and objective methods of quality assessment, and it was evident from the discussion that the technologists thought that much more use should be made of the panel system for testing quality of fish. It was clear that no method or system had yet been devised which was applicable generally but it was felt that progress had been made in this field. The aim was to devise an objective method of testing the quality of fish which could be applied on a commercial basis, but much experimental work remained to be done.

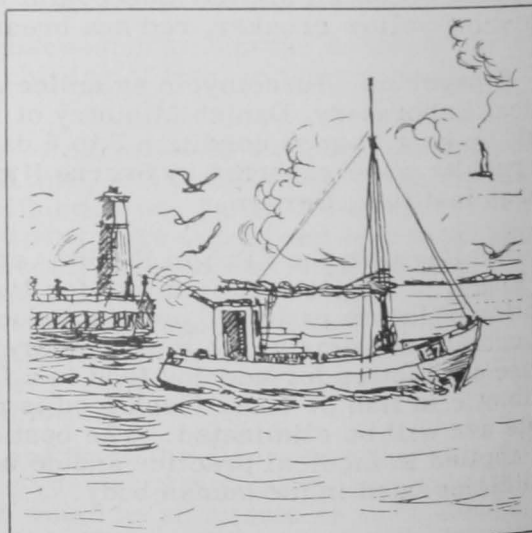
There is no doubt that the meeting had several practical results. Perhaps the most important for the fishing industry throughout the world was the clear expression of opinion of the experts that the time had come to carry experiments in the use of antibiotics from the laboratory to the commercial field. The experts felt that these experiments should be conducted, with the concurrence of governments and public health authorities, on a large scale with fishing vessels, particularly those engaged in long-distance fishing. This, it was felt, would establish the effectiveness of antibiotics in preserving the fresh condition of fish and would also enable authorities to determine the element of risk entailed in residual antibiotics in fish.

The meeting also showed that a great deal of work is now being done in the assessment of the quality of fish and that ultimately this may lead to the establishment of quality assessment of all catches landed by the leading fishing countries.

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PLAN FOR CUTTING COSTS IN BUILDING FISHING BOATS: Costs of building fishing boats may be cut by as much as 10 percent if a plan for establishing a universal system of standards for scantlings, now being prepared by naval architects of the Food and Agriculture Organization (FAO), Rome, is finally adopted. The system would also lead to developments in the design of fishing vessels and an increase in their seaworthiness and operational efficiency.

Speaking at FAO headquarters this week, Jan Olof Traung, Chief, Fishing Boat Section, Fisheries Division, said: "Work on preparing a first draft of a universal system of standards of scantlings is still in the formative stage, although we have for some years past been gathering information on the design and construction of fishing boats, paying special attention to the smaller vessels, those under 100-foot over-all length.



"We have acquired first-hand knowledge of construction problems and local requirements in Europe, North America, and also in the Near, Middle, and Far East and South America, where FAO naval architects have been engaged on various projects.

"At the present moment we are especially well placed to plan the future work on reducing boat construction costs," he continued, "as we have four FAO naval architects at headquarters: Paul Ziener of Norway, who has been working for us in India for the past two years, Howard Chapell, an American naval architect who is known throughout the world for his work on fishing boats (he is going on an FAO assignment in Turkey), my assistant, Peter Gurtner from Switzerland, and myself."

These four experts have been reviewing the progress made in fishing-boat construction, based on the reports, plans, and designs of naval architects throughout the world.

"Recently," said Traung, "Dwight Simpson, a well-known American naval architect, in an unpublished study dealing with wooden-trawler construction, made some far-reaching recommendations for minimum standards of scantlings.

"Simpson based his findings on the case history of more than 20 vessels. By comparison, European vessels were found to be surprisingly heavily constructed. This is also true, as we know from experience, of fishing boats in many other parts of the world and we believe that if the Simpson recommendations were universally adopted the result would be to cut the present high costs of fishing-boat construction, especially in Europe and in many of the underdeveloped countries."

The system envisaged by the FAO naval architects would call for no departure from normal construction methods carried out by skilled craftsmen.

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INTERNATIONAL FISHING GEAR CONGRESS PLANNED: An International Fishing Gear Congress is being planned by the Food and Agriculture Organization (FAO), Rome, to take place in October 1957 in Hamburg, Germany.

The Congress will bring together from many parts of the world specialists working in the field of fish gear research, design, and manufacture to discuss such subjects as net yarns, net-making, rational design of fishing gear, including fish detection and the use of electrical equipment.

"This will be the first time that such specialists from various parts of the world will meet to exchange knowledge, experience, and ideas," explained the Chief of the Fishing Gear Section of the Fisheries Division of FAO. "The Congress will last a week and will concentrate on recent developments in fishing-gear design, materials, and construction, including such matters as the measurement of the performance of gear, detection of fish, behavior of gear under water, reaction of fish to it, and so on.

"There has been a vast increase in capital investment in fishing equipment in recent years," he continued, "and fishing-gear technology is assuming an ever-growing economic importance. One objective of the Congress will be to focus attention on this, taking stock of existing knowledge in this field."

In connection with the Congress, FAO is compiling a comprehensive Handbook of Fishing Gear and Methods, the first of its kind. The book will provide detailed descriptions and specifications of advanced types of fishing gear, equipment and methods, and will give solid background information to the many topics which will be discussed at the Congress.

The purpose of this Congress is to emphasize the recent developments in fishing gear, not to describe traditional types of gear which have long been used in fishing in various countries. The Congress therefore is concerned with the latest types of commercially-important gear and with current thought and experiment concerned with improving existing fishing gear and accessory equipment, manufacturing it more economically, making it more efficient, and operating it more effectively. In view of these considerations, the proposed agenda for the Congress has been drawn up under these main headings: (1) materials; (2) rational design of fishing gear; (3) rational construction of nets; (4) operation of fishing gear; (5) strategy and tactics of fishing; (6) electrical fishing; (7) future developments.

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UNITED STATES NOMINEE FOR DIRECTOR-GENERAL OF FAO: The Departments of State and Agriculture announced jointly July 12 that John H. Davis, director of the Program in Agriculture and Business at Harvard University Graduate School of Business Administration, will be the United States Nominee for Director-General of the Food and Agriculture Organization.

A special conference of FAO is being held in Rome in September to select a successor to Dr. P.V. Cardon, who was elected Director-General in 1953 and resigned last March because of ill health.

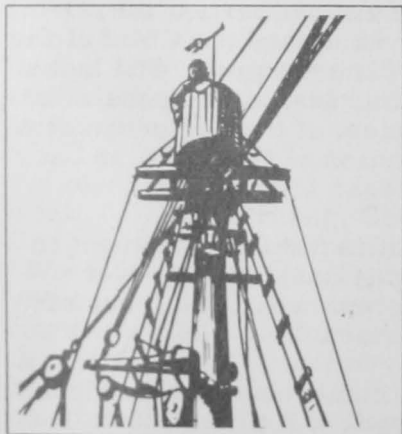
Davis is a former Assistant Secretary of Agriculture and former president of the Commodity Credit Corporation.

The decision to nominate Davis for the Director-Generalship has been made after consultation with, and the approval of, Congressional and farm organization leaders. Member nations of FAO have been consulted regarding Davis and a number of them have informally indicated their support.

Under FAO procedure, the United States delegation to the special conference will formally submit the name of Davis as candidate for the Director-Generalship. The member countries of FAO will elect the new FAO head by majority vote.

WHALING

NUMBER OF WHALE CATCHER BOATS REDUCED BY AGREEMENT: According to an agreement arrived at in June 1956 between Norwegian, British, Dutch, and Japanese whaling companies, the number of catching boats engaging in Antarctic whaling will be reduced from last season's 257 to 225 in the 1956/57 season.



Under the agreement the nine Norwegian expeditions will reduce their catchers from 110 to 95, the four British expeditions from 59 to 47, and the Dutch from 18 to 14. The five Japanese expeditions, including the newly purchased Onassis expedition, will have 54 catchers, compared to 55 for the same expeditions last season.

The agreement also specifies that no one expedition will use more than 12 catcher boats. The Soviet Union has not yet indicated whether it will also reduce its total of catchers.

The agreement is the result of efforts on the part of Norwegian whaling companies to limit the number of catchers per expedition as a conservation measure, states a June dispatch from the United States Embassy in Oslo.

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SOUTH PACIFIC SPERM WHALE ALLOTMENT PROPOSED: An advertisement in the Lima newspaper El Comercio of June 10, 1956, signed by the Secretary General of the "Permanent Commission of the South Pacific," it stated that the Commission of the Conference of Exploitation and the Conservation of the Maritime Resources of the South Pacific was scheduled to meet on June 25 in Lima. The meeting was to deal with allocating to interested parties their share of the allotment of 2,100 sperm whales which has been set for the period July 1, 1956, to June 30, 1957. Such parties were advised to send their applications through their Consuls or representatives to the Secretary General of the Permanent Commission in care of the Ministry of Foreign Relations, Quito, Ecuador, before June 23, according to the United States Embassy at Lima (June 20, 1956).

An article in La Prensa of June 19 on this subject stated that any attempt to hunt whales within 200 miles of the coasts of Chile, Ecuador, and Peru would be considered an act against the sovereignty of those nations unless permission had first been obtained from The Permanent Commission.



Australia

FISHERIES DEVELOPMENT FUND PLANNED: Legislation is in the process of passing through the Australian Parliament setting up under the Fishing Industry Bill of 1956 a Fisheries Development Trust Account. The trust fund would be used as a revolving fund for the development of new projects which could be liquidated as soon as private investors were willing to take them up. The fund is to be administered by Australia's first Minister for Primary Industry. Marked for first attention in planning a developmental program for consideration by the Minister are shrimp, pilchards, tuna (Queensland, North-West Australia and outer South-Eastern Australian waters), and trawling in the Great Australian Bight.

The fund will be financed from the surplus which will arise from the sale of the Australian Whaling Commission's business (a Government operation) at Carnarvon in Western Australia for about US\$2.0 million. It is reported that the sale will make possible the biggest move in Australia's history for the development of the nation's fishery resources, for the surplus from it, which may amount to US\$1.7 million, will be paid into a new Fisheries Development Trust Account for that purpose, a June 6 United States Embassy dispatch from Canberra points out.

In his Second Reading Speech on the Fishing Industry Bill, the Minister for Trade explained, "The surplus funds received from the sale of the Australian Whaling Commission will be used for the purpose of developing fishing industries which have great potentialities, but which would not attract--at any rate up to now have not attracted--investment funds without Government support or demonstration." He indicated that with large-scale investment and new techniques on fishing there was hope that the catch of tuna, prawn, shrimp, and perhaps other fish (e.g. pilchards, barracouta, and Australian "salmon") could be improved. Were the Government to show the way, it might be possible that private interests would come in to enlarge the present investment--"about US\$22.5 million in fishing and pearling fleets, shore installations and factories and a further US\$7.9 million in the whaling industry"--in the Australian fishing industry, the Minister indicated.

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STATE CABINET MINISTER TO VISIT U. S. FISHING PORTS: The Honorable Lionel Francis Kelly, West Australian State Cabinet Minister for Mines, Fisheries, Industrial Development and Tourism, was planning a three months' visit to the United States and Canada starting in late July 1956. He will be accompanied by two of his staff.

In addition to providing information on Western Australia to interested persons and groups throughout the United States, the Minister was specifically interested in certain industries related to his cabinet responsibilities, including fisheries, the United States Consulate at Perth points out in a June 12 report.

Commercial development of West Australian fisheries, with the exception of spiny lobster for export to the United States, has lagged. The Minister was interested in studying catching and handling methods for tuna, herring, shrimp, and lobster, and particularly wished to contact any groups which might consider investment in fisheries projects in Western Australia.

With reference to spiny lobster (crayfish), the Minister wished to meet importers and distributors and to study marketing techniques, with special reference to trade promotion by South Africa and other competing countries to determine whether Australia is losing potential markets or failing to get best prices.



Canada

MANDATORY STANDARDS FOR FISH STICKS: Canadian producers of cooked and uncooked fish sticks must comply with certain mandatory standards put into effect June 7, 1956 in an amendment to the Fish Inspection Regulations. Any fish sticks imported into Canada must also conform to these mandatory standards.

The text of the amendment is as follows:

"His Excellency the Governor General in Council, on the recommendation of the Minister of Fisheries, pursuant to section 4 of the Fish Inspection Act, is pleased, hereby, to amend the Fish Inspection Regulations made by Order in Council P. C. 1954-1973 of 16th December 1954, as amended, as follows:

"1. (1) Section 2 of the Fish Inspection Regulations is amended by adding thereto, immediately after paragraph (a) the following paragraph:

"(aa) 'breaded fish' means fish flesh coated with breading or batter and breading but does not include fish sticks.

"(2) Section 2 of the said Regulations is further amended by adding thereto, immediately after paragraph (b) thereof, the following paragraph:

"(bb) 'fish sticks' means uniform, rectangular shaped portions of fish flesh which are coated with breading or batter and breading.

"2. The said Regulations are further amended by adding thereto the following section:

"60. No person shall pack or sell fish sticks which do not meet the following requirements:

"(a) fish sticks shall weigh not less than 1 ounce each; (b) cooked fish sticks shall include a minimum of 66 $\frac{2}{3}$ % by weight of fish flesh; (c) uncooked fish sticks shall include a minimum of 75% by weight of fish flesh; and (d) fish sticks shall be free from defects and shall be of good merchantable quality."

It should be noted that these are mandatory standards as compared to the voluntary United States standards for grades of frozen fried fish sticks developed by the U. S. Fish and Wildlife Service in cooperation with interested industry representatives. Any fish sticks exported to Canada must conform to the Canadian mandatory standards for cooked and uncooked fish sticks.

LARGE NEW RESEARCH VESSEL: A larger and more extensively-equipped research vessel than any in its present fleet of about 14 is to be built for service in the Northwest Atlantic by the Fisheries Research Board of Canada. Tenders are being called for a 167-foot Diesel-powered steel-hulled trawler with a 32-foot beam, a draught of 12 feet 9 inches, and a refrigerated fish hold. This is part of the Board's expanded program, made necessary in part by Canada's increasing commitments in international fisheries affairs, according to the June 8 Bulletin of the Fisheries Council of Canada.

The new vessel will carry a crew of about 22 and will have accommodations for 4 or 5 scientists who will work in specially-designed laboratories to be incorporated in the vessel's working quarters. The craft is designed for exploratory and investigational work and will be capable of extended trips, often in areas remote from present fishing ports, to study the population densities of various species of fish. She will operate mainly out of St. John's Newfoundland, but is designed to serve other Board stations situated on the mainland as well.

In addition to the laboratories for biological and hydrographical work, the new research ship will carry all the latest detection devices. The fishing gear will be calibrated so that the catches will be compared with the catches of a regular trawler. She will have adequate power to fish at depths greater than those fished normally. A controllable-pitch propellor will enable her to cruise at speeds from zero to a maximum of about 12 knots.



Denmark

TWO NEW FISH MEAL PLANTS IN OPERATION: Two new fish meal and fish oil plants have begun operations at Ronland, on the northwestern coast of Jutland in Denmark. One plant is a corporation and the other is a cooperative. Present capacity of both plants is about 150 tons of raw fish daily, but the corporation plant has already announced plans to extend its daily capacity to nearly 300 tons of raw fish.

It is also reported that landings of "tobis" (a type of small sand eel) on the west coast of Jutland have been unusually heavy in the current season and that fish meal plants in the area have been forced to set an informal limit upon the total amount of "tobis" which will be accepted from each vessel, states a report (June 21) from the United States Embassy at Copenhagen.



German Federal Republic

TRAWLER OWNERS TO CONTINUE SUPPORT OF EXPORTS OF FROZEN FISH: An overwhelming majority of the owners of large German trawlers based at Bremerhaven have decided to continue the supporting of exports of quick frozen ocean fish which exporters have purchased from the trawler owners and have had processed in Bremerhaven.

Exports to the United States and to Austria, especially, will be supported according to Dansk Fiskeritidende (June 8), a Danish fishery trade paper.

This support will, at the same time, promote the rational storage of quick-frozen ocean fish at times when there are large supplies at the four main German

fish markets. Often it is difficult to dispose of all supplies, especially early in the year when 60 percent of the large trawlers trawl for herring in the westerly North Sea. In addition, it will provide for making full use of the Bremerhaven freezing capacity.



Iceland

FISH FREEZING PLANTS: There are 82 freezing plants in Iceland that are available for fish freezing and storage, according to the April 1 issue of Aegir, an Icelandic fishery publication. Two of the plants are reported to have been inactive for some time. In addition to the land-based plants, four of the larger trawlers are equipped with freezers, each with a freezing capacity of two metric tons of fillets in 16 hours.

The 82 plants are located in six districts and vary from 7 to 24 plants in each district. Under the most favorable conditions the land-based plants can freeze 1,102 metric tons each 16 hours and store 38,270 tons. The annual capacities for both freezing and storage will vary according to the length of the season, the availability of labor, and transportation facilities. The capacity of the plants for the storage of fish for human consumption is limited by the need for space for about 8,000 tons of fish bait and the seasonal storage of 6,000 tons of meat products (Fiskets Gang, May 3, 1956).



Japan

JAPANESE-MEXICAN FISHING COMPANY PLANNED: A joint Japanese-Mexican fishing company known as the Japan-Mexico Enterprises, Ltd. (Nichi-boku Kigyo Kabushiki Kaisha) has been formed, according to the May 15, 1956, issue of Hokkaido Shimbun, a Japanese newspaper. Plans reportedly call for 70 Japanese drag-net fishermen to go to Mexico initially, with a possible increase in numbers up to 3,600 in the future.

The organizer of the new company is the Hakodate (Hokkaido) Drag-Net Fishery Cooperative Association. This cooperative has formed, in association with Mexican fishing interests and with the blessing of the Mexican government, a Japanese-Mexican joint fishery company in Mexico. It is stated that the Mexican government has granted permission for the entry into Mexico of 6 Japanese trawlers and 36 skilled Japanese fishermen for a period of six months. Application has been made to the Fisheries Division of the Hokkaido Prefectural Government for certificates of qualification for the 36 fishermen. A representative of the Fisheries Division confirmed this last item, but stated that he could not confirm the rest of the report. His office is awaiting more details before deciding what attitude it will take toward the request for certificates.

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PRODUCERS FORM NEW FROZEN TUNA SALES AGENCY: Currently, albacore is exported by private exporters but transactions are controlled by an association of Japanese exporters which maintains a list of approved importers. This organization, Japan Frozen Food Exporters Association, also determines and controls the voluntary limits which have been placed on albacore exports to the United States

Another organization, known as the Japan Export Frozen Tuna Sales Co., Ltd., was scheduled to begin functioning on June 15, 1956. This organization will act as sole purchaser from fishing companies of Japanese frozen albacore destined for export and will in turn sell to exporters. The purpose of the new organization, which will be controlled by fishing firms, is to protect the interests of producers and, in so doing, to control the amount of albacore that is exported. An important consideration in this connection is the producers' interest in fixing prices in accordance with market conditions.

The new organization in its initial stages will control only albacore, but it will also handle other species of tuna in the future. The limitations on albacore export sales to the United States for the Japanese fiscal year 1956 (which began on April 1, 1956) has been fixed at 32,000 short tons, of which 20,000 short tons are to be sold in the period April-September and 12,000 for the October-March period, according to a dispatch from the United States Embassy in Tokyo

JAPANESE GOVERNMENT



Mexico

FISHING-PERMIT FEES INCREASED: Mexico has increased its fees for commercial and sport fishing permits issued to nonresident aliens and vessels of foreign registry.

The fees were raised in accordance with two decrees published in the Diario Oficial of May 15 and effective the following day.

Under one decree nonresident aliens who fish for sport in any Mexican territorial water must pay for a general fishing permit valid for 1 month, 3 months, or 1 year from date of issue, a fee of 10, 25, or 50 pesos (about US\$0.80, \$2, \$4), respectively. Previously applicable fees, established by a decree of January 20, 1933, were 4, 10, or 20 pesos (about US\$0.32, \$0.80, \$1.60).

The other decree, modifying fees for commercial and sports fishing, established by a decree of November 17, 1939, provides that persons desiring to fish commercially in Mexican territorial waters of the Pacific Ocean and Gulf of California in vessels of foreign registry and sending their catch to foreign markets will pay annual fees in accordance with the type of permit obtained. The new fees, together with old fees, are as follows:

General fishing permit for vessels having a net cubic capacity of:

	New Fees		Old Fees	
	Pesos	US\$	Pesos	US\$
Up to 2 tons	130	10.40	50	4.00
2-15 "	260	20.80	100	8.00
15-50 "	520	41.60	200	16.00
50-100 "	775	62.00	300	24.00
100-200 "	1,035	82.80	400	32.00
Over 200 "	1,290	103.20	500	40.00

Use of foreign-registered vessels having a net cubic capacity of:

	New Fees		Old Fees	
	Pesos	US\$	Pesos	US\$
Up to 2 tons	130	10.40	50	4.00
2-15 "	520	41.60	200	16.00
15-50 "	1,200	96.00	500	40.00
50-100 "	2,580	206.40	1,000	80.00
Over 100 "	5,160	412.80	2,000	160.00

If two or more boats are to be used, the tonnage is taken together and the fees established for the vessels, as shown above, are charged on the basis of total tonnage. If after obtaining a general fishing permit or authorization for use of a foreign-registered vessel an amplification of a permit or authorization is requested because the tonnage has been increased to

exceed the tonnage shown in the category to which the permit applies, the difference in fees for the lower and higher categories must be paid for the length of time still remaining in the original permit.

Item	New Fees		Old Fees		Item	New Fees		Old Fees	
	Pesos	US\$	Pesos	US\$		Pesos	US\$	Pesos	US\$
COMMERCIAL FISHING:					SPORT FISHING (for nonresident aliens):				
Registry of foreign vessels:					Fishing for sport on board a foreign vessel (per day) . . .	12	0.96	2.50	0.20
For each ton or fraction thereof of net cubic capacity . . .	15	1.20	5.70	0.46	Fishing for sport on board a privately-owned vessel or a vessel of Mexican registry:				
Registry of nets:					For 3 days	6	0.48	2	0.16
For each linear meter or fraction thereof, measured on cork line	0.55	0.044	0.21	0.017	For 1 month	12	0.96	4	0.32
Issuance of identification cards:					For 3 months	25	2.00	10	0.80
To nonresident aliens	12	0.96	4	0.32	For 1 year	50	4.00	20	1.60
To nationals or resident aliens	1	0.08	1	0.08					

The year will be counted from date of issue of a general permit, authorization for use of foreign vessel, or registration of vessel and nets. Identification cards are valid only during the year of issue.

Individuals and organizations owning foreign vessels engaged in sport fishing in Mexican territorial waters of the Pacific Ocean and Gulf of California will pay an annual fee of 2,070 pesos (US\$165.60). Formerly the fee for this type of permit was 800 pesos (US\$64.00).

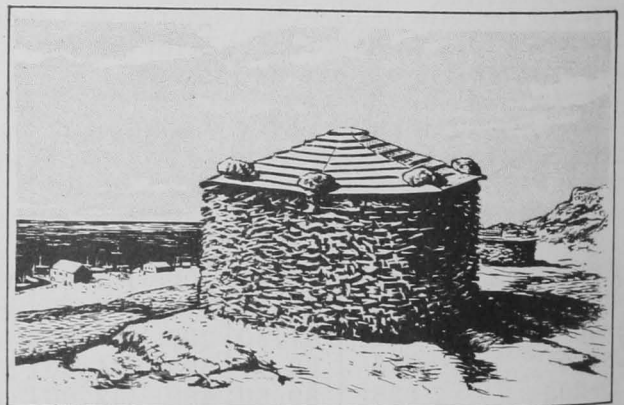
Nonresident aliens engaged in sport fishing in Mexican territorial waters of the Pacific Ocean and Gulf of California will pay fees for individual permits in accordance with registry of vessel.



Norway

DRIED AND SALTED FISH EXPORT PROSPECTS REVISED: The predictions made by Norwegian exporters early in the spring of 1956 of good export prospects for fishery products have not materialized, according to a June dispatch from the United States Embassy in Oslo.

In spite of the fact that exports of salt cod and dried fish were larger from January-April 1956 than for the comparable period in 1955, increased production and difficulties in expanding the market have caused large stocks of unsold fish to accumulate. Frozen fish fillet plants have 10,000 metric tons on hand with little prospect of early sales. The outlook for increased exports of dried fish is so poor that some producers have suggested selling it to fish meal plants, if no financial support is provided by the Price Regulation Fund for Fish.



The klipfish is carefully stacked between spells of exposure to the sun.

There are still 3,000 to 4,000 tons of unsold dried fish on hand from 1955. Klipfish or salt cod is in a somewhat more favorable position, with exports of 22,000 tons by June 1 compared to 18,000 tons in the comparable 1955 period, but the outlook in several markets, notably Brazil, is uncertain.

A quota system for klipfish exports has been hotly debated since the latter part of 1955, but no decision has been reached as yet. Unless market conditions improve or the Government permits acceptance of lower export prices, industry circles anticipate unsold stocks of 30,000 to 40,000 tons of fish by the end of the year. It is believed that the fish exporters tend to exaggerate the gravity of the export situation, but the high prices of Norwegian fishery products are undoubtedly affecting the sales in foreign markets.

* * * * *

COD CATCH HEAVY THIS YEAR: Owing to the favorable results of fishing off Finnmark and partly good fishing in other districts, this year's cod fishing season has yielded a rather heavy catch. This season's catch as of June 16 totaled 159,671 metric tons of cod as against 123,286 tons last year. The cod catch was utilized



Sorting the catch--Lofoten cod fishing.

as follows this year: 77,961 tons sold for drying (last year 63,038 tons), 60,776 tons for curing (last year 40,017 tons), and 20,934 tons for the fresh fish trade (last year 20,231 tons). In addition, there was a production of 6,614 tons of cod-liver oil; 3,050 tons of roe were cured and 1,132 tons of roe were canned or sold fresh, reports the June 21 Fiskets Gang, a Norwegian fishery periodical.

year the catch off Finnmark amounted to 46,767 tons.

A new postwar record of 53,562 metric tons of spring cod were caught off Finnmark this season--almost one-third this season's total cod catch of 159,671 tons. Last

The Finnmark spring cod fishery is becoming increasingly important. For the last two years, the total Finnmark catch, including other types of fish such as saithe, ocean perch, haddock, and halibut has exceeded the Lofoten cod catch. The number of freezing plants in Finnmark is still insufficient to process a larger catch, but freezing capacity is being expanded rapidly. If present marketing difficulties are overcome, the outlook for further growth of the Finnmark fishery is good, points out a United States Embassy dispatch (June 29) from Oslo.

* * * * *

AUTOMATIC HERRING FEEDING AND SORTING MACHINE: An article titled "Sorting Machine for Herring" which appeared in the Norwegian Fisheries Directorate's publication Fiskets Gang, No. 23, June 7, 1956, is a research report on the successful trials of a machine which both aligns the herring for feeding and feeds them into the heading and gutting part of the machine. Experiments conducted by the Directorate's Chemical-Technical Research Institute have proved successful, and a prototype is now being tested commercially in the Icelandic fishery, points out a United States Embassy dispatch (June 26) from Oslo.

If the machine is commercially feasible, it will be a great help to the herring industry. It can possibly be used in processing other types of fish as well with certain modifications. The machine takes little space, is relatively inexpensive, and results in a significant saving in labor. It is also apparently suitable for use on board fishing vessels which operate in waters distant from their home ports and consequently process their catches on board.

The principal portion of a translation of the article follows:

"In the following we shall give an orientation concerning a new machine for aligning and feeding herring to other herring processing machines. There has been some incorrect information on this machine in the press. Otherwise it may be of interest to hear something of the problems of which this machine is only a part and on which we in the Fishery Directorate Chemical-Technical Research Institute have been working and will continue to work to the extent we get the necessary funds.

"It is common knowledge that little has been done so far to rationalize and improve the salted herring production. Most of the salting is still manual. The lack of mechanization is largely due to the fact that production takes a relatively short time, so that the costs of mechanization become too high in relation to the quantity produced.

"Ordinary salted herring (pickled herring) is one of the important products where a certain degree of mechanization at the larger salting works would pay, and we have made some experiments in this field. For example, we tried drum salting some years ago. Salt and herring were fed into one end of a revolving drum. The mixing in the drum was most effective and the product evenly salted. However, the best utilization of drum salting requires that the herring and salt be fed automatically into the drum in specific adjustable quantities direct from a large reservoir. We completed plans for this method long ago but have been unable to put it into effect, chiefly because of shortage of funds.

"In the case of salting in barrels the outlet end of the drum is automatically conducted from each barrel, as it is filled, to the next empty one. It is obvious that some of the labor costs of manual salting could be saved in this way. And it is no great problem to mechanize this production. The problem is doing it in a simple, cheap and effective way. The long periods of inactivity, usually in surroundings which make for corrosion and rust, are another problem. All machines and conveyors must either be made of material which does not corrode or rust or else be protected against corrosion.

"If the herring head could be cut off and the entrails removed before salting in a cheap and quick way, a better product would be produced and costly packing material and salt could be saved.

"The waste is of no value to the consumer, so if he pays a certain amount for a barrel of whole salted herrings there is no reason why he should not pay the same for the same quantity without heads and entrails. It must therefore be assumed that, for example, 1,000 hectoliters (205,000 a pound) of herring will represent at least the same sales value to the producer whether decapitated or not. The decisive factor is production cost in each case. By heading and gutting, about 200 barrels and 4 tons of salt per 1,000 hectoliters of raw product could be saved. At current prices, this would mean a cut of approximately 4,400 kroner (US\$616) in all. In addition there is the income from sale of the waste, today a minimum of 15 kroner per hectoliter (about one U. S. cent a pound). For 1,000 hectoliters of herring this would mean approximately 3,000 kroner (US\$420), in all approximately 7,800 kroner per 1,000 hectoliters (about US\$0.53 a 100 pounds), by heading and gutting. If almost 8 kroner per hectoliter can be saved, it would be defensible to make quite large investments in mechanization, particularly if the producer is certain that labor costs are no higher for headless than for whole salted herring.

"This calculation is so simple and convincing that there is every reason to make an effort to find the most rational method for production of decapitated salted herring. The same applies to filleting.

"... Some heading machines, more or less efficient, exist already. Typical of all of them is that the herring must be fed in one by one by hand. This requires a good deal of manual work and limits capacity. Most of the machines are unsuitable for ships, and for the Iceland fishery in particular this is important, as the herring should be headed and gutted on board.

"The research institute at first thought to concentrate on mechanically aligning and feeding the herring to heading machines and filleting machines for land plants. However, Engineer Peter J. F. Christie of Bergen showed us plans for a heading machine constructed for use on board vessels. We found this machine so interesting that we decided to support further work on it. The machine is now completed and has been tested two seasons during the Icelandic fishery. ... Its capacity depends chiefly on how quickly herring can be fed into it. The gutting is entirely satisfactory. It requires little space and is cheap.

"There were several principles to work on in the case of aligning herring. We found a proposal presented by Engineer Christie the most promising, however, and decided to try it, particularly since this method not only aligns the herring but also delivers the herring one by one with suitable intervening spaces. A trial machine was built, and after some experimentation we have arrived at a type which seems 100 percent satisfactory as regards turning the head one way and delivering the herring singly. It also turns the belly in a certain direction, but the guarantee is not 100 percent here, as there seems to be a margin of error of 5-10 percent. For heading it is less important whether the turning of the belly is 100 percent certain, and for this purpose the machine is considered satisfactory. The machine has as yet been tried only with thawed frozen herring. If the belly is somewhat different from that of fresh fish and the herring is less smooth, there will probably be a smaller margin of error in turning the belly of fresh fish.

"The machine also aligns headed herring, which may be of some importance later, for example in filleting headed herring.

"It now remains to try this machine in regular production. The trial machine was a typical experimental type unsuitable for regular production. A prototype is now being made which will be sent on an Iceland vessel in July of this year to be tried in regular operation and find out whether it will be influenced by rough seas, which we do not think it will.

"The machine is simple and cheap and requires comparatively little space. It can take the herring from a reservoir or be supplied with smaller or larger quantities at a time, delivering the herring singly with the head turned in one direction at a speed of about 2 per second, or about 30 barrels per hour.

"It is clear that this machine could facilitate the production of headed herring, and as the machine is small and cheap several of them can be set up parallel for increased capacity. ... It can also be adjusted to filleting machines, but experiments have not yet been made in this field. The turning of the belly would have to be 100 percent certain in that case, and we expect further studies will be required."

Note: Also see Commercial Fisheries Review, July 1956, p. 85.



Panama

RECENT DEVELOPMENTS IN FISHERIES: Shrimp: This year the Gulf of Panama pink shrimp came in with the cold tides around the end of February, remained throughout March, and then left as quickly as they had appeared. Fishing for pink shrimp lasted 30 days. Because of lower prices and a dull market for pink shrimp, it was necessary to peel and devein more than half of the total catch.

The principal company (which owns about 50 shrimp trawlers and operates 10 more independent trawlers) in Panama exported to the United States in March 1956



Fig. 1 - Part of shrimp fishing fleet anchored in Panama Bay.



Fig. 2 - Bella Vista Pier and several shrimp trawlers in foreground. Taboga Island can be seen in the distance.

a total of 436,200 pounds of frozen shrimp. Included was 107,800 pounds of heads-off (average 26-30 count) pink shrimp and 102,800 pounds of peeled and deveined

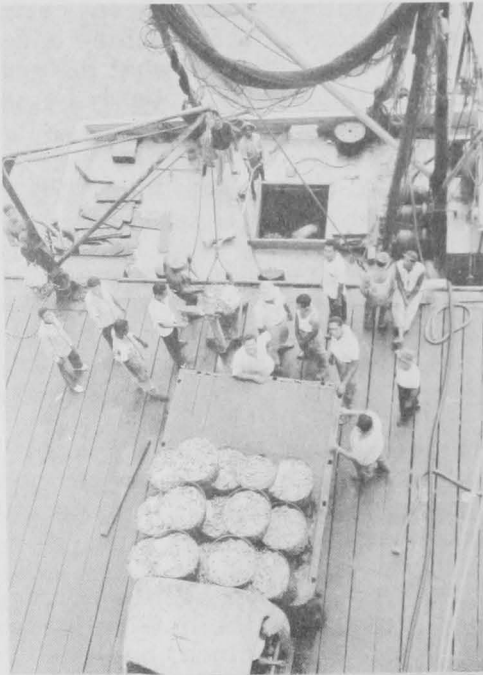


Fig. 3 - Unloading a shrimp trawler at Bella Vista Pier



Fig. 4 - Another view of Bella Vista Pier with freezing plant in background.

pink shrimp. The balance of the exports consisted of white shrimp and a small quantity of peeled and deveined "titi" (Xiphopenes kroyeri).

The Panamanian pink shrimp have been classified by an FAO technical advisor as Peneus creviroctris and the jumbo white shrimp as Peneus occidentalis.

Corvina Fillets: Frozen corvina (Cynoscion stlozmanni) fillets are going over very well in Panama and the Canal Zone. Up to August about 6,000 pounds a month were marketed, and after August sales were expected to reach 10,000 pounds a

month because there were plans of supplying frozen corvina fillets to United States Army installations in the Canal Zone.



Fig. 5 - Shrimp in a brine-freezer tank aboard a Panamanian shrimp trawler.



Fig. 6 - Shrimp trawler tied up at Bella Vista Pier. Truck leaving pier loaded with shrimp.



Fig. 7 - Removing frozen shrimp from freezers at Bella Vista plant.

Dried Fish: One company in Panama has installed fish driers which will be capable of producing 5,000 pounds of dried corvina a day. This should more than take care of the local requirements for dried fish. About one million pounds of dried cod ("bacalao") a year is imported by Panama at present.

Fish Cannery: Plans for a fish cannery are still under discussion. The location of the cannery has not been decided upon as some favor Panama and others

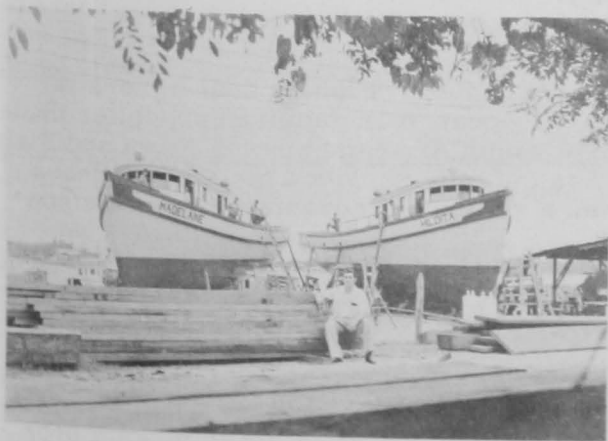


Fig. 8 - Two new shrimp trawlers built in Panama.



Fig. 9 - Taboga Island showing construction and dirt movement in the foreground. (Photo taken the latter part of 1955.)

nearby Taboga Island. The projected cannery is expected to start out on a small scale and pack about 5,000 cans of fish a day to supply the local market. Later the cannery hopes to work out plans to buy frozen tuna and attempt to launch its own brand of canned tuna in the Central American market.

Byproducts Plant: The fishery byproducts reduction plant at Taboga Island is expected to be finished and operating about September. The plant can process 12 metric tons of raw fish an hour. It has not yet been determined the type of fish which will be processed.

--Carlos A. Arosemena L.,
Panama City, Panama (June 22, 1956)



Peru

WHALING ACTIVITIES: The Peruvian-Panaman-French Company which obtained a license in 1955 to use the whole quota of 2,100 sperm whales made available by the generally-unrecognized South Pacific Conservation Agreement during the year July 1, 1955, to June 30, 1956, has disbanded without ever operating. The quota applies only to pelagic whale hunting (i.e. deep-sea).

However, two shore-based companies not subject to quotas continued to kill sperm whales and a very small number of fin whales.

In June 1956 the Secretary General of the signatories of the South Pacific Conservation Agreement issued a public invitation to apply for permits for the 1956/57 quota. No whaling companies, either foreign or local (i.e. Chilean, Peruvian, or Ecuadorean) are likely to apply for the license while the shore-based companies enjoy special advantages. A new shore-based company has been formed with a capital of US\$400,000 and will probably begin operating in 1956; its base will be at Tierra Colorado, just south of Paita. This company, like the other two, will kill sperm whales almost exclusively and will use no factoryship, announces a June 26 United States Embassy dispatch from Lima.



Union of South Africa

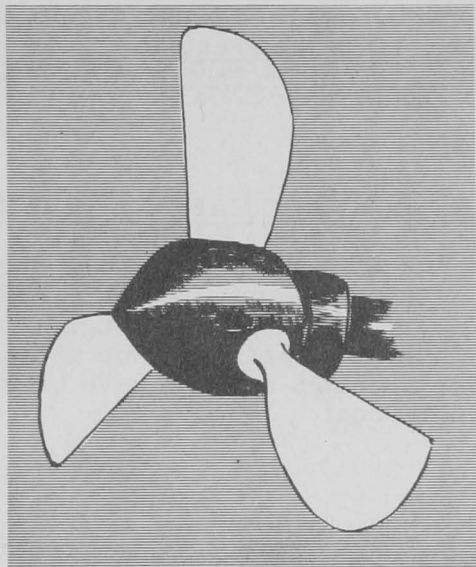
FISHING BOATS OFFERED NYLON PROPELLERS: Fishing boat owners of South Africa are showing some interest in a European-manufactured propeller made from nylon, states the April 1956 issue of The South African Shipping News and Fishing Industry Review. The nylon propeller has not only survived the most arduous tests, but its manufacturers claim that it has a number of advantages over the conventional metal propeller.

This remarkable innovation to boat propulsion was developed by technicians with nearly 40 years of experience in the development of the once startling, but now commonplace variable-pitch propeller.

After the war, when nylon was being adapted for more and more uses, a Danish firm making variable-pitch propellers was asked if it was possible to make a propeller of nylon. They examined the project and decided that it was possible if the special properties of nylon were considered.

The blades were molded to a rather rounded shape on the fore edges, something like the flippers of a small whale, and a small three-blade fixed propeller was made and tried out. It worked well and stood the tests which included running in a tub full of wood blocks and fitting it to a boat which ran it at full speed against a stony beach. The only damage consisted of a few small hacks on the blades. Realizing the advantage of a tough resilient propeller with little friction between it and the water in which it revolved, they decided to try it on variable pitch. Again it worked and so nylon propellers are now being offered to fishermen.

Among the many advantages claimed by the manufacturers are resistance to cavitation and sufficient flexibility to absorb shocks without breaking. The propellers, made of a completely inert substance, will not corrode and so might offer a solution to the problems of boats in Walvis Bay waters. These propellers, both left and right hand, are supplied with variable pitch or standard fixed type.



The manufacturing firm has now gone beyond experiments with the smaller fishing boat propeller and is now working on propellers for a 150-hp. trawler engine.



U. S. S. R.

FISHING FLEETS EXPANDING FOR DISTANT-WATER FISHING: The Russian fleet of large ocean trawlers or factoryships will be increased to 50 during the sixth five-year plan running from 1956 to 1960, according to Norwegian journalists who recently visited Russia and talked with Russian Fishery Minister Isjkov. The trawlers are equipped with freezing and filleting machinery and use a stern slipway for hauling the trawls. The first group of 14 trawlers have a cargo capacity of 600 metric tons each, carry 100 men, have 1,900-horsepower engines, and fish for both cod and herring, according to reports in the Norwegian fishery journals Fiskets Gang (June 21) and Fiskaren (May 30).

Since the trawlers are too large to go through the White Sea Canal, they must go back and forth along the Norwegian Coast between Tallin and Leningrad in the Baltic Sea and Murmansk and Archangel in the North.

The Russian herring fleet off the Norwegian coast was reported to number 300 units. Fifty vessels have conducted extensive herring research and now know exactly the herring migrations from Norway to the Baltic Sea and Murmansk.

In further conversations with Russian Rear Admiral Burkhanov, Director for the Administration of the Northern Sea Routes and Viceminister for the Ocean Fleet, it was reported that there are five Arctic weather observatories supplemented by smaller coastal stations and four floating icefield stations. The stations make the usual meteorological observations, conduct ocean research and other research in connection with navigation. The Northern Sea route is now kept open 3 to 4 months each year, but the goal of the sixth five-year plan is to increase this to 5 to 6 months.

This will be accomplished with the regular icebreakers. An icebreaker with atomic engines will be tested during the five-year plan but cannot be set into operation until after 1960. The longer navigating season will be of considerable importance to the Soviet fisheries since it will then be possible to shift the new trawler fleet back and forth between the North Atlantic and the North Pacific to areas where the fishing potential is the greatest.

Note: See Commercial Fisheries Review January 1955, p. 69; April 1955, p. 75; June 1955, p. 91; July 1955, p. 72; October 1955, p. 83; and December 1955, p. 64.

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HERRING AND CARP CAUGHT WITH SUCTION HOSE: Herring and carp are pumped directly into Russian fishing vessels in the Caspian Sea, according to an executive of the Norwegian Fishermen's Association who witnessed the operation while visiting Russia as a member of a Norwegian fishery delegation. He reported to Fiskaren (May 30), a Norwegian fishery journal, that a hose is lowered to a depth of 100 meters. A strong lamp is attached to the end of the hose. When an echosounder indicates that fish have been drawn to the hose by the lamp, they are pumped into the boat.

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FISH PRESERVED BY ELECTRICAL SHOCK: An electric shock is used to preserve some fish for marketing in Russia, according to an executive of the Norwegian Fishermen's Association while visiting Russia as a member of a Norwegian fishery delegation. He reported to Fiskaren (May 30), a Norwegian fishery periodical, that the fish in well boats were stunned with an electrical shock and then placed in crushed ice in barrels. Even after being in transit 2 or 3 days the fish could be sold as living fish.



United Kingdom

GRIMSBY TO HOLD FISHING INDUSTRY EXHIBITION: A Grimsby Fishing Industry Exhibition was scheduled to be held September 1-8, 1956, in celebration of the Centenary of the opening of the first Fish Dock at that port. The Exhibition was to portray the size and scope of the fishing industry at Grimsby which ranges from the largest distant-water trawlers to inshore fishing vessels. All aspects of the fishing industry was to be covered.

To commemorate the event, social and other functions are being arranged during Centenary Week in Grimsby, one of the largest fishing ports in the world.



Venezuela

TUNA LONG-LINER RETURNS TO JAPAN: The Japanese long-line tuna vessel Bozo Maru, which started to fish experimentally for tuna off Venezuela about December 14, 1955, returned to Japan on June 2, according to a Venezuelan press report of May 31. The vessel returned to Japan with 200 tons of frozen tuna. The results of the Venezuelan venture are now being studied with a view to forming a joint Venezuelan-Japanese company to bring four Japanese vessels, of the same type as the Bozo Maru, to Venezuela in November 1956.

The 200 tons of tuna taken to Japan were said to be for the purpose of studying the canning characteristics of these tuna. Other reports indicate that the tuna were

unsalable in Venezuela due to the absence of canning facilities and lack of appeal to the Venezuelan consumer. Some attempts were made to sell the tuna at retail for as low as US\$0.22, but apparently the Venezuelan consumer preferred to pay about US\$0.74 for red snapper at retail.



MORE GLAMOROUS AND ECONOMICAL FISHERY PRODUCTS ON THE WAY

A new day is dawning for the American housewife as far as her food problems go; new, more glamorous, and economical foods are on their way to her in fishery products.

This was the prediction made on April 18, 1956, by Frank W. Wilkisson, of New York, upon election as president of the National Fisheries Institute, at its Eleventh Annual Convention in Miami Beach, Fla.

"The fisheries business is growing out of its swaddling clothes so far as knowing and appealing to the housewife and her family," said Wilkisson. "While fish products have been part of the American menu since the founding of our nation, it is only in the past few years that we have realized that our products can be merchandised and sold to the consumer in new and more effective ways.

"There was a time when fisheries foods were largely consumed on the nation's coasts. But that day is rapidly passing. Today the housewife can get varieties of our products in the innermost sections of the nation; brought to her in the most modern methods of refrigeration.

"Fish products have always been glamorous in the eyes of the American people. We have managed to preserve their glamor at the same time developing newer and more attractive ways of preparation and presentation. Not only is this true in pre-cooked fish such as fish sticks, but it is also true of fresh fish products."

Wilkisson said that Americans are eating more fishery products than ever before and he anticipates that increased consumption will continue for some years to come, because the housewife is always looking for new, economical, and glamorous foods to serve her family and fish products offer all three.

At the same time, hotels and restaurants are finding increasing demand for fishery products, he said. Americans are eating out and they are getting a thorough sampling job done on them on fish and seafoods because of the large place hotels and restaurants are giving to these items on their menus.

Asked about the long-range situation on availability of fish products, Wilkisson said he cannot foresee any shortage for years to come. The problem of fishing rights off the coasts of nations is giving the industry some concern at the moment, he pointed out, but added he felt sure these problems would be worked out through conference and arbitration without causing any hardship on the processors or retailers of the products.

--Excerpt from address at National Fisheries Institute Eleventh Annual Convention, April 18, 1956.