

TRENDS AND DEVELOPMENTS

Additions to the Fleet of U. S. Fishing Vessels

A total of 77 vessels of 5 net tons and over received their first documents as fishing craft during September 1949--40 less than in September 1948, according to the Bureau of Customs of the Treasury Department. Washington and California led with 13 vessels each, followed by Louisiana with 9. During the first nine months of 1949, a total of 804 vessels were documented, compared with 962 during the same period in 1948.

Vessels Obtaining Their First Documents as Fishing Craft, September 1949					
Section	September		Nine mos. ending with Sept.		Total 1948
	1949	1948	1949	1948	
	Number	Number	Number	Number	Number
New England	2	3	27	42	52
Middle Atlantic	1	2	39	36	40
Chesapeake Bay	6	9	55	45	59
South Atlantic and Gulf	30	68	273	423	541
Pacific Coast	31	29	293	1/300	1/348
Great Lakes	2	3	33	36	51
Alaska	5	2	80	72	81
Hawaii	-	1	3	8	12
Unknown	-	-	1	-	-
Total	77	117	804	1/962	1/1,184

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



California Adds New Marine Research Vessel

California's newest marine research vessel has completed its test runs and is now operating in the Pacific under the flag of the State's Division of Fish and Game, according to the agency's Outdoor California of October 19, 1949.

Rechristened Yellowfin, the 114-foot surplus Army freight and personnel carrier was converted by the Bureau of Marine Fisheries at a cost exceeding \$100,000. It is powered by twin six-cylinder diesel engines, 640 hp., and has a cruising speed of 12 knots.

In its long-range research missions, it will use radar, sonar, short-wave radio, automatic steering, fathometer, bathythermograph, and the latest in technical fishing gear.

Ten crew members and three marine biologists make up the normal complement for cruises up to 4,000 miles.

From its San Pedro headquarters, the Yellowfin will seek out schools of fish to determine size and species. At the same time, data on physical and chemical conditions in the ocean where the fish are found will be collected and correlated with other information gathered by the agency's 100-foot M. V. Scofield, and vessels operated by the University of California.



California Landings of Fishery Products, 1948

The quantity of fish and shellfish landed by commercial fishing craft in the State of California during 1948 amounted to 897,737,718 pounds, an increase of over 104,000,000 pounds compared with 1947, according to the California Division of Fish and Game. The major species responsible for this increase were pilchards with an increase of 106 million pounds and tuna and tuna-like fishes with an increase of almost 45 million pounds. The landings of jack and Pacific mackerel were 63 million pounds below the previous year.

Area	1948	1947
	(in pounds)	
Eureka	33,593,924	31,052,270
Sacramento	3,358,043	4,040,961
San Francisco	23,761,958	15,446,925
Monterey	137,654,847	76,128,022
Santa Barbara	38,326,139	22,615,527
Los Angeles	340,241,593	392,710,752
San Diego	14,990,133	10,508,297
From waters north of the State Boundary	2,136,335	1/
From waters south of the International Boundary	303,674,746	240,762,151
Grand Total	897,737,718	793,264,905

1/Included with local catches.

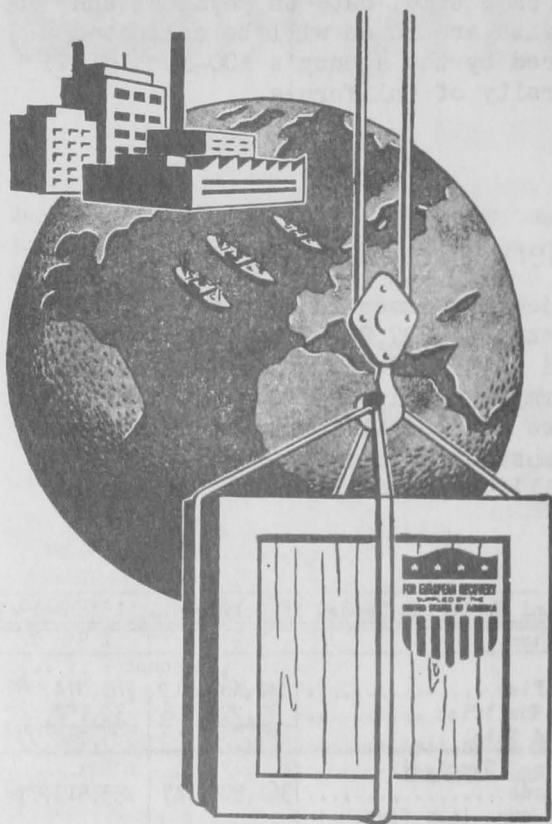
Item	1948	1947
	(in pounds)	
Total Fish	840,463,812	761,074,063
" Shellfish	37,273,906	32,190,842
Grand Total	897,737,718	793,264,905
Principal Species:		
Pilchards	361,906,747	255,513,948
Tuna & tuna-like fishes:		
Albacore	34,481,013	13,145,780
Bluefin	6,528,807	20,837,634
Skipjack	58,752,316	52,315,449
Yellowfin	191,635,651	149,066,794
Bonito	2,125,737	13,697,171
Yellowtail	10,445,663	9,952,761
Total	303,969,187	259,015,589
Jack mackerel	72,864,675	129,048,318
Pacific mackerel	39,385,796	46,477,205
Sole	21,653,927	12,332,749
Anchovy	10,835,930	18,940,521
Salmon	7,767,886	11,428,030
Squid	19,255,687	14,542,649
Abalone	3,227,988	2,669,950



ECA Procurement Authorizations for Fishery Products

No fishery products were included among the procurement authorizations for commodities and raw materials announced by the Economic Cooperation Administration during October this year. In October 1948, \$4,120,000 was authorized for fishery products. The total authorized for fishery products since the beginning of the ECA program on April 1, 1948, through October 31, 1949, was \$34,340,911.

There was a cancellation of \$500 during October which was to be used for the purchase of fish meal from Portuguese African Dependencies for delivery to Bizone Germany.



Made public during the month was a report to ECA by a special ECA-Department of Commerce mission to Europe last May to study trade problems, which stated, in substance, that trade of the United States with western Europe and the rest of the world is so badly unbalanced that this country in its own interest, as well as that of Europe, must seek a fundamental solution based primarily upon greatly expanded imports to the United States.

In accordance with an ECA program to give small independent firms a greater chance to supply goods to European recovery announced in September, ECA announced in October the establishment of an inquiry and export counseling group to aid small businessmen on their export problems under the Marshall Plan. This is the first of five steps to give small business enterprises information which may enable them to share more fully in European recovery orders. The ECA Office of Small Business pointed out that the businessmen can utilize the export counseling service by letter or by personal consultation. Arrangements also have been made with the Department of Commerce whereby its 42 field offices will render assistance to small businessmen seeking information on ECA operations, and these offices can furnish, among other serv-

ices, the names and addresses of firms abroad importing specific products. Assistance to small businessmen includes explanations of ECA's price provisions as a guide to sellers in conducting negotiations; information on documentation; advice on regulations governing the handling of overseas shipments; explanations of ECA marking requirements; and information on how the ECA Commodity Supplier Data may be used as a guide for finding potential European purchasers.



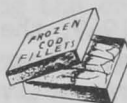
Federal Purchases of Fishery Products

DEPARTMENT OF THE ARMY, September 1949: Fresh and frozen fishery products purchased by the Army Quartermaster Corps during September 1949 for the U. S. Army, Navy, Marine Corps, and Air Force for military feeding totaled 1,872,844 pounds (valued at \$639,460). Purchases during the month increased 7 percent in

quantity and 26 percent in value over August this year and 19 percent in quantity and 12 percent in value over September 1948.

Purchases of Fresh and Frozen Fishery Products by Department of the Army (September and Totals for Nine Months, 1949 and 1948)							
Q U A N T I T Y				V A L U E			
September		January-September		September		January-September	
1949	1948	1949	1948	1949	1948	1949	1948
lbs.	lbs.	lbs.	lbs.	\$	\$	\$	\$
1,872,844	1,571,665	12,962,832	12,672,316	639,460	569,821	4,276,365	4,501,819

Total purchases for the first nine months this year were 2 percent higher in quantity, but 5 percent lower in value, compared with the corresponding period a year ago.



Fishery Biology Notes

BEAUFORT SHELLFISH LABORATORY PROJECTS: Physiological and biochemical researches on the metabolism of shellfish is the objective of the Service's Shellfish Laboratory at Beaufort, North Carolina. This laboratory was reactivated in September this year.

Experimental projects to be undertaken are:

- (1) Studies of the sources of supply of the various elements entering into the nutrition of shellfish.
- (2) Effect of radioactivity resulting from the introduction of various elements into the tissues and organs of shellfish.
- (3) Metabolism of the various elements required for the growth and reproduction of shellfish.

INDIRECT EFFECTS OF SEA LAMPREYS ON GREAT LAKES FISHERIES: The transfer of fishing activity from lake trout — which are being destroyed in the Great Lakes by the parasitic sea lamprey — to other fish, like the chub, threatens the commercial fish resources of the Great Lakes, and the indirect effects of the sea lamprey on the fishery are as important and destructive as the direct effects, the Service reported in October.

Lake Huron's trout fishing has been completely destroyed by the sea lamprey, Lake Michigan's is 50 percent reduced, and Lake Superior's potentiality is 30 percent below that of former years — the latter's decline caused by the increased rate of exploitation, rather than by direct attack of the sea lamprey. This decline in the trout fisheries has caused fishermen to redirect their efforts to other species of fish.

The take of chubs in Lake Michigan has increased more than 400 percent in the last few years. Commercial fishermen are greatly concerned about the maintenance of the fishery under this increased catch.

Fishery scientists at the Service's Great Lakes Laboratory at Ann Arbor, Michigan, emphasize that any program directed toward the study and control of the sea lamprey must take account of these indirect effects of the sea lamprey (such as increased exploitation of the remaining trout and the redirecting of commercial fishery activities toward other varieties of fish), as well as the direct attacks of the lamprey on trout. Government scientists are at present working on methods of lamprey control, and Congress recently made additional funds available for the study.

NORTH ATLANTIC FISHERY INVESTIGATIONS: Georges Bank Haddock Fishery: About 94,196,000 pounds of haddock have been landed from Georges Bank in the average year over the period 1931 through 1948 by all fishermen, or about 36,875,000 individual fish. Average weight of each fish was 2.55 pounds.

During the first nine months of 1949, the baby scrod destruction on Georges Bank was estimated at 2,776,000 pounds, compared to 2,618,000 and 7,897,000 pounds in similar periods of 1948 and 1947, respectively. Responsible for the decrease is believed to be the small sizes of year classes since the 1945-year class rather than a change in fishing practices.

Rosefish Fishery: The Gulf of Maine is still producing a considerable amount of rosefish. Of the 176,000,000 pounds landed in Gloucester during 1948, about 35 percent came from the Gulf of Maine, but the area no longer produces a "pure" trip. Rosefish that do come from there are merely small parts of trips made by vessels in passing through. These vessels report that the Gulf fish are very small.

Sea Scallop Fishery: Index of sea scallop abundance shows that landings have been steadily on the increase since 1942, with a corresponding decrease in abundance. This decrease has not been great enough to cause any serious concern to the fishermen. Ten-day-trips and 100-gallons-per-man catch limits have helped to prevent the abundance from dropping faster. Discovery of new beds has eased the pressure on the more commonly fished beds.

OBSERVATIONS ON DESTRUCTION OF MOLLUSKS BY CRABS: The Service's Milford, Connecticut, Shellfishery Laboratory has been conducting experiments in the aquaria and outdoor tanks to establish once more the rate of damage that various species of crabs could cause to oyster set. The results showed that any species of local crabs possessing strong claws will attempt to crush oyster set if other food is not available. The crabs prefer other food, such as dead fish, if it is present.

The destruction of other mollusks by crabs was also observed. Blue crabs opened and devoured some quahogs (Venus mercenaria) measuring over two inches in size. The crabs crushed and ate large numbers of soft clams, especially those of small size. Therefore, it is concluded that in nature crabs cause heavy mortality among clam set and young clams.

SERVICE RECEIVES EUROPEAN OYSTERS FOR EXPERIMENTAL PURPOSES: The Service's Milford Shellfishery Laboratory in Connecticut reported the arrival on October 11 of the European oysters, Ostrea edulis, from the Netherlands. Most of them arrived alive but gaping. After being placed in water, they showed satisfactory and rapid recovery, and at present are acting quite normally. Although they were out of the water approximately fourteen days before reaching this country, mortality was relatively low. Some of them will be used in experiments at the Milford Laboratory; others at the Service's Laboratory at Boothbay Harbor, Maine.

SERVICE TO COMBAT STARFISH IN LONG ISLAND SOUND: The Service's Shellfishery Laboratory at Milford, Connecticut, is concentrating its efforts during November and December to combat the starfish, a natural enemy of the oyster.

For several years, surveys showed the presence of two very large concentrations of starfish short distances outside the cultivated oyster areas near New Haven.

Regular bulletins to the oystermen from the laboratory have called attention to the starfish problem and suggested that the growers eliminate them before they spread to the cultivated beds.

These masses of starfish are now overrunning the oyster beds of the New Haven and West Haven areas. In response to requests from the oyster growers, the Service will render emergency assistance during the critical period.

It is important to note that one of the small non-commercial clams, Mulinia lateralis, has disappeared. It played a definite role in the economy of Long Island Sound because it served as food for the masses of starfish concentrated on the uncultivated grounds. This clam at one time was very common in the Milford waters. Since its disappearance, the starfish, have moved to the cultivated oyster beds searching for new food supplies.

SPONGE DISEASE OFF FLORIDA VERIFIED: Reports that a disease again was killing sponges in that section of the sponge fishery off the west coast of Florida lying between Anclote Key and St. Marks led to a survey of conditions by the Service in cooperation with the Marine Laboratory of the University of Miami and the Florida Board of Conservation.

Using the Service's research vessel, Pompano, and a sponge-diving boat, the area was worked during the period September 8 to 14, 1949. In general, evidence was found that a disease is killing sponges and that the population of sponges is so low on the grounds that the entire sponge fleet based at Tarpon Springs is tied up and unable to make expenses on a trip.



FAO Concludes First Meeting On Herring Industry ✓

The Herring Meeting called by the Food and Agriculture Organization of the United Nations, which on September 2 concluded a week's deliberations at The Hague, was concerned with all aspects of the herring industry, according to a September 9 FAO news release. This was the first meeting sponsored by FAO on this commodity which occupies so important a place in the economic life of some countries. The invitations were extended only to producing countries, since it was felt that the problems of the industry had to be investigated first from the production, processing, and marketing sides. Consumer countries will be brought into future discussions as will also the countries concerned with sardines and other species of the herring family.

In the preliminary discussions it was agreed that, in the absence of representatives of countries with a substantial interest in European sardines, and in view of the heavy agenda, more progress would be made if the discussions were confined to the herring problems. It was recognized that problems confronting the European sardine industry were equally pressing but that another occasion should be selected for discussion of these, preferably at a point in Southern Europe.

1/See Commercial Fisheries Review, September 1949, page 47.

Although the techniques of catching herring and the many processes used in their preparation for sale to the consumer were extensively examined by the meeting, a good deal of emphasis was placed on the economic problems of the industry. The loss of historical markets, the decline in consumption of herring in certain forms, particularly salted herring, and the disruption of international trade were among the topics explored.

The trade aspect is a most important one, as a number of the most important herring producers are small countries with a small population quite incapable of absorbing the available herring. Consequently they must rely heavily on export markets in order to maintain the industry.

The challenge to the producing industry is one of improving the technical processes to turn out a product that will find favor not only with people accustomed to eating herring, but will also attract the consumer less familiar with herring products. Being a cheap food, the herring does not lend itself to processes or to packaging and types of transport that would add much to the price.

It was recommended that market research should be carried on through the FAO secretariat in regions where herring by tradition forms a part of the diet. Sizeable increases might well be possible if consumer demand were more carefully studied and greater publicity given to the nutritional value of herring products. Evidence brought before the meeting indicates however that even if such attempts were successful, all the outlets which are necessary for an increasing herring production could hardly be found in traditional markets. The meeting felt that it was necessary therefore to study also the potential market outlets on a somewhat broader basis. It recommended a study of the dietary need for nutrients contained in herring. As one of the steps necessary in order to translate this need into effective demand, the meeting recommended a study of methods which might be used for processing herring into a form which is more acceptable to the consumers of Asia and Africa.

The Preliminary Report of the Meeting contained the following section on future action:

It is abundantly clear from the free and informal deliberations of this exploratory meeting that some further action should be taken to attempt a solution of at least some of the problems now facing the herring industry. No single remedy is likely to be found, but some measures can be taken that will influence the situation. Emphasis was placed on the investigations of product forms that might be suitable for consumers in other regions, on dietary and economic market research, and on studies of operational costs within the industry. The more complex problem of currency will be solved only when a solution has been found in the wider field of trade and commerce. None of the problems is likely to solve itself.

Some of the suggestions for remedial action have already been stated in the preceding pages, but they may be restated in this final chapter of the report.

It is believed that the meeting has served a most useful purpose. The knowledge gained should not be lost but should form a basis for further study and practical application in the future. The Meeting suggests, therefore, that the following are some of the practical steps that might be taken by FAO:

1. Bring together technologists to examine the possibilities of developing new or existing processes

that would lead to an increase in the marketing of herring;

2. Explore the possibilities of introducing into the diet of Asiatic and African people a product acceptable to their tastes derived from herring;
3. Investigate the dietary need for nutrients which can be supplied by the herring industry.
4. Conduct economic market research in countries of Europe and in other regions where herring is consumed but where an expansion of the consumption is believed to be possible;
5. Collect from the herring producing countries all available information on costs of fishing operation, and costs of production in processing and marketing;
6. Foster international coordination of nationally conducted economic research of the herring industry; and
7. Collaborate with existing International Organizations having an interest in this field: The ECE on Transport questions; the ICES on Biological Research.

FAO'S Annual Conference (5th Session)

Two related but apparently conflicting issues faced the annual Conference (5th Session) of FAO's 58 member governments which opened on November 21 for a two-week session in Washington--how to increase food production in some countries, and how to prevent unmarketable surpluses from appearing in other countries.

To deal with the first half of the problem, agricultural, nutrition, forestry, and fishery technicians of the world gathered in Washington's Shoreham Hotel to review FAO's plans for expanding production in the underdeveloped countries as worked out under the impetus of President Truman's "Point IV" declaration on technical assistance.

The Conference unanimously adopted the technical assistance (Point IV) program initiated through the Economic and Social Council of the United Nations in which FAO got 29 percent of the funds available to the United Nations for this purpose. Steps were taken to get underway immediately. Member nations were urged to survey their situation and develop specific plans to meet their needs, which could be put into operation as soon as funds were available.

At the same time, leading economists of member countries dealt with what is described as the "terrible paradox" which finds farmers in some lands threatened with ruin by plenty while millions in other lands are appressed by hunger and poverty.

Although some features of the International Commodity Clearing House presented at the Conference were unacceptable to most of the nations, they were unanimous, however, in their approval for ICCH objectives--international cooperation in the distribution of agricultural surpluses. Under the alternate plan worked out and adopted by the full Conference, a special 14-nation committee will be set up under the FAO Council which will:

- (a) consider the needs of deficit nations,
- (b) consider distribution schemes proposed by surplus nations, and
- (c) study general methods of surplus disposal.

Additional matters before the Conference were:

WORLD REVIEW AND OUTLOOK: The Conference undertook the annual review of the world food situation, with particular relation to goals and long-term trends in consumption, production, foreign trade, and prices. For this purpose the FAO secretariat submitted The State of Food and Agriculture 1949, one of the basic Conference documents.

THE FAO WORK PROGRAM: The Director-General submitted a report on the Organization's work during 1949 and proposed a work program for 1950 for Conference approval. Fisheries was included as one of the phases of this program.

APPLICATIONS FOR MEMBERSHIP: Indonesia, Israel, Korea, Afghanistan, Sweden, and Spain have applied for membership and, all but Spain, were accepted, making in all 63 member nations.

FAO'S PERMANENT HEADQUARTERS: A decision as to the site of permanent headquarters was reached. Offers were received from Denmark, Italy, Switzerland, the

United Nations. However, Rome (Italy) was chosen as the site for FAO's permanent headquarters, but the move will not take place late in 1950 or even early in 1951.

TIMING OF CONFERENCE SESSIONS: A recommendation that the annual Conference be held in the spring biennially rather than annually in the fall was proposed and accepted. The next meeting will probably be called for April 1951 unless the Director General with the agreement of the Council feels the need of a meeting in 1950.

MEDITERRANEAN FISHERIES COUNCIL: The Director-General presented a report on the proposed establishment of a regional fisheries Council for the Mediterranean, and its establishment was approved.

ELECTION OF COUNCIL CHAIRMAN AND COUNCIL MEMBERS: The Conference appoints an independent Chairman of the Council to serve for one year. Under the rules the terms of six members of the Council (China, Cuba, Czechoslovakia, Netherlands, Philippine Republic, and United Kingdom) expired during the Fifth Session, and the following nations were elected to these places: Pakistan, Venezuela, Yugoslavia, Burma, Belgium, and the United Kingdom.

Several items of interest to the fishing industry were considered during the conference.

Commission II, which deals with technical subjects, has reviewed and approved the report of the Fisheries Panel.

Commission II also approved the report of the Working Party on Technical Assistance for Economic Development. This report contains some comments on the Fisheries Panel.

Commission II has further approved the report of the Working Party on Extension and Advisory Services. This report also contains a brief comment of the Fisheries Panel.

Fisheries Panel meetings were attended by representatives from:

Belgium	Egypt	Ireland	Netherlands	United States
Canada	France	Italy	Norway	Uruguay
Denmark	Indonesia	Mexico	United Kingdom	Venezuela
The Supreme Commander for the Allied Powers (SCAP)				

The general functions of the Conference are to determine general policy questions, to approve budget, to make recommendations for implementation of national action, to submit conventions concerning food and agriculture (including fisheries) to member nations, to make recommendations to public international organizations, to arrange procedure for consultation with governments, national institutions, and individuals; and to discharge any other functions within the scope of the organization.



Functions of the General Mediterranean Fisheries Council^{1/}

Establishment of a General Fisheries Council for the Mediterranean, with headquarters in Rome, to promote cooperative action by governments in developing the

^{1/}See also Commercial Fisheries Review, November 1949, p. 22; October 1949, p. 29.

seas' resources will be proposed to FAO Member Governments attending the Organization's Fifth Annual Conference in Washington this month.

If approved by the Conference, the Mediterranean council will be the second fisheries council to be formed under FAO sponsorship.

In July, FAO issued invitations to governments concerned to meet in Rome in September to consider the formation of a council for the Mediterranean.



Delegates from France, Greece, Italy, Lebanon, Turkey, United Kingdom and Yugoslavia, with observers from the United States, Spain, the Holy See, and the International Council for the Exploration of the Sea, attended the meeting and drew up an agreement for the establishment of a General Fisheries Council for the Mediterranean.

The agreement consists of a Preamble and ten articles. The Preamble reads:

The Governments of France, Greece, Italy, Lebanon, Turkey, United Kingdom, Yugoslavia, members of the Food and Agriculture Organization of the United Nations, having a mutual interest in the development and proper utilization of the resources of the Mediterranean and contiguous waters, and desiring to further the attainment of these ends through international cooperation by the establishment of a General Fisheries Council for the Mediterranean agree, as follows:

Except for Article III, the ten articles provide that each member government would be represented by one delegate with accompanying experts or advisers. The Council would elect a Chairman and two Vice-Chairmen, form committees, establish rules of procedure, and decide dates and locations of meetings. Initial meetings would be called by FAO within six months of the receipt by FAO of the fifth acceptance of the agreement, when the Council would enter into force.

Council would meet once a year, unless additional meetings were to be decided upon by the members of the Council. FAO would provide the Council secretariat. The seat of the Council would be the European Office of FAO, now in Rome.

FAO would bear the cost of the Secretariat, within the limits of its annual budget. Member governments would bear the expenses of research and development, whether undertaken by individual members of the Council or cooperatively.

Acceptance of the agreement will be open to member governments of FAO, or to non-members who have the approval of the Council and of the FAO Conference, each of the latter to assume its proportionate share in the expenses of the Secretariat.

Notifications of acceptance of the agreement will be sent to the Director-General of FAO, who will notify all governments concerned, and the Council will come into force on the date of the fifth acceptance. Member governments may withdraw from the Council after two years from the time the agreement enters into force.

Article III (Functions) provides that the Council shall have the following functions and duties:

a. To formulate all oceanographical and technical aspects of the problems of development and proper utilization of aquatic resources;

To encourage and coordinate research and the application of improved methods employed in fishery and allied industries with a view to the utilization of aquatic resources;

c. To assemble, publish or otherwise disseminate all oceanographical and technical information relating to aquatic resources;

d. To recommend to Member Governments such national and international research and development projects as may appear necessary or desirable to fill gaps in such knowledge;

e. To undertake, where appropriate, cooperative research and development projects directed to this end;

f. To propose, and where necessary to adopt, measures to bring about the standardization of scientific equipment, techniques and nomenclature;

g. To make comparative studies of the fishery legislation of different countries with a view to

making recommendations to its Member Governments respecting the greatest possible coordination in the interests of fuller utilization of the resources of the sea.

h. To encourage research into the hygiene and prevention of the diseases peculiar to the calling of fishermen.

i. To extend its good offices in assisting Member Governments to secure essential materials and equipments;

j. To report upon such questions relating to all oceanographical and technical problems as may be recommended to it by Member Governments or by the Food and Agriculture Organization of the United Nations and, if it thinks proper to do so, by other international, national or private organizations, with related interests;

k. To report annually upon its activities to Member Governments and to the Conference of the Food and Agriculture Organization of the United Nations; and to make such other reports to the Food and Agriculture Organization of the United Nations on matters falling within the competence of the Council as may seem to it necessary and desirable.



National Fisheries Trends, October-December 1949^{1/}

Production, Freezings and Canned Pack: Commercial fishing activity and, consequently, the commercial freezing of fish will decline seasonally as winter approaches. October 1 cold storage stocks of frozen fishery products for human consumption in continental United States were 128.9 million pounds, 6 percent above a year earlier. Output of canned salmon (particularly pink salmon) and pilchards in 1949 will exceed last year's production. The Maine sardine pack will be about the same as in 1948. Canned tuna output probably will be slightly lower than the record 1948 pack.

Consumption: Civilian consumption of fishery products during the remainder of 1949 was expected to be at about the same rate as in the latter part of 1948 with supplies (especially of canned fish) somewhat larger than a year earlier.

Prices: Retail prices of fresh and frozen fish probably will increase seasonally, while declines from recent levels are anticipated for canned fish. As compared with the same months of 1948, retail prices of fishery products were expected to be lower during the latter part of 1949.

Foreign Trade: Imports of fresh and frozen groundfish and rosefish fillets this fall were not expected to vary much from the quantity received from abroad in late 1948.

Exports of fishery products during the remainder of 1949 may not be as high as a year ago.

^{1/} Prepared by the Bureau of Agricultural Economics, Department of Agriculture, in cooperation with the Fish and Wildlife Service.

Outlook for 1950: Supplies of fishery products are expected to be plentiful during 1950. Civilian demand for fish is likely to continue strong throughout most of the year, although somewhat weaker than in 1949.

Retail prices of fish in 1950 are expected to average below the 1949 level, especially if market supplies of livestock products increase as is currently anticipated.

Imports of fish in 1950, especially frozen groundfish and rosefish fillets, are likely to be somewhat larger than in 1949. The devaluation of foreign currency in terms of American dollars makes it more advantageous than in recent years for foreign producing areas to sell fish in the United States.



Pacific Marine Fisheries Commission Meets

The Pacific Marine Fisheries Commission met on September 7 and 8, 1949, at San Francisco, California. It discussed the troll salmon, albacore, pilchard, otter trawl, and soupfin shark fisheries; the proposed amended International Halibut Treaty; and the fisheries legislation enacted by the member States of the Commission. California, Oregon, Washington, Alaska, the United States Government, and Canada were represented at the meeting.

TROLL SALMON FISHERY: The West Coast States, Alaska and Canada reported on the number of salmon tagged; also Oregon and Washington on the number marked in state hatcheries, and Washington and Canada on the returns received from tagged fish.

Washington advised that regulations pertaining to the troll salmon fishery as recommended by the Commission were adopted by the State except that the 22-inch size limit on silver salmon was continued.

Oregon informed the meeting that it was continuing to sample troll salmon landings in order to study seasonal variations and sizes, and was making some preliminary studies on age determination of salmon. In addition, several regulations have been adopted by the Oregon Fish Commission affecting the salmon fisheries on coastal streams and providing for quotas on silver salmon; and on the Columbia River there has been a 30-hour closed period during the fall season and a shortening of the season by 15 days at the end.

California told the meeting that it has inaugurated a separation of salmon species in the records maintained by the industry and submitted to the California Division of Fish and Game but the results have not been very encouraging to date because there is no price differential for the various salmon species and no incentive for the California fishermen to keep the records by individual species; and that experiments have been conducted on mortality of salmon by use of certain types of gear. In addition, the new California law to close the salmon season September 30, which becomes effective next year, could not be put into effect this year because the State Department has not been delegated authority to enact regulations pertaining to the commercial fisheries like Oregon and Washington.

Canada announced that studies are being made on size limits and the percentages of salmon taken of various sizes.

A motion was made and carried that the Salmon Committee of the Commission "be instructed to make a thorough survey of the sport salmon fishery and regulations and laws pertaining to this fishery in the Pacific states, the territory of Alaska and coastal waters of Canada, the findings of such survey and recommendations to be submitted to the Commission at its next meeting."

In accordance with a motion unanimously passed on September 7, the Salmon Committee also was instructed to meet and submit the following day to the Commission recommendations for coordinating the salmon marking program. The report of this Committee was unanimously approved by the Commission with a suggested amendment to include the landings of the other offshore salmon fisheries. The members of the Salmon Committee were instructed to conduct the program. The Committee's recommendations and program were as follows:

"The Salmon Committee of Pacific Marine Fisheries Commission met and discussed the marking and tagging of chinook and silver salmon. The emphasis of the meeting was on marking. The following conclusions were reached:

"1. The Pacific Marine Fisheries Commission should take over the assignment of salmon marks to all agencies on the Pacific Coast wishing to do such work. The assigning is now being done by the Canadians who would be glad to turn the job over to us. We recommend that this be done now.

"2. Collection of marks and tags is now being done by the individual states. This should be continued.

"3. Compilation, tabulation and analyses of tag and mark data from the troll fishery should be done by the individual states; this summarized data should then be turned over to the Pacific Marine Fisheries Commission for a final summary and for re-distribution.

"We recommend the adoption of such a system.

"4. A great deal can be learned about the source of our troll fish by a large scale marking experiment which would include marking of young chinooks and silvers in streams of California, Oregon and Washington, and preferably in Canada and Alaska as well.

- a. This problem would require the marking of a total of at least 500,000 to 1,000,000 fingerling chinooks and the same number of silvers in about ten different areas along the Pacific Coast.
- b. The work should be repeated in two or three different seasons, preferably consecutive.
- c. While a problem of this magnitude was being carried out, it would require the

use of all or nearly all the desirable marks for both silvers and chinooks. Some small scale hatchery experiments would either have to take the less desirable marks during this period or postpone their experiments until the work was over.

- d. Collection of marks should be done by quantitative sampling of the commercial catch rather than by paying rewards. This is because if a known fraction of the catch is carefully examined for marks, it is then possible to calculate the number of marks in the entire catch, but if collection is done by offering rewards, there is no way of knowing how many were missed.

- e. A large-scale marking experiment of the type described above should be started as soon as all the member states can be sure that they are ready and able to carry it through, but the matter should not be rushed to such an extent that any organization starts before it is properly prepared.

This committee recommends that it or some similar committee be authorized to meet and draw up plans for a coastwise marking and recovery experiment which should include Canada and Alaska if possible. This will require at least one and probably two interstate trips for part of the members, and for other representatives participating in the troll program.

ALBACORE FISHERY: Washington advised that very little research had been done by them except recording catch statistics, and noting the area and time albacore were taken.

Oregon informed the Committee that they continued the gathering of data on the albacore; made racial measurements and counts of fish brought into the port

of Astoria, and plan to make comparisons with racial data as gathered in Japan and Hawaii; and have also continued length-frequency sampling.

California advised that they have continued length-frequency studies to determine the size and weight of the catch; experiments were conducted on the use of gill nets; population studies made were unsuccessful since no information was available from Hawaii; and a study of the species taken off California waters and from other waters near Japan and Hawaii is also being undertaken.

Canada stated that an observer was placed on the Canadian Fisheries patrol boat off the West Coast and analyses of catches made; and that a new method of tagging by use of a small celluloid tag attached to a barbless hook was undertaken.

Alaska reported that attempts have been made to conduct a survey off Alaska but the work was difficult in that the source of information is dependent upon radio communication, but that large tuna in small numbers were taken 300 miles off the coast of Sitka.

PILCHARD FISHERY: California, reporting for the group of agencies participating in sardine research on the West Coast, submitted a report on the sardine fishery and on the meeting held in Vancouver in June 1949 on this fishery. The report contained catch figures during the 1948 season; shore studies, including detailed records of individual boat catches, sizes of fish, age composition of fish; and study of physical and biological conditions in the ocean to determine the effect of such conditions on the sardine population specifically and on all marine fish in general.

It was reported that those in attendance at the Vancouver meeting felt that there were no immediate prospects for a good sardine fishery in the Pacific Northwest, and that from studies made in California, conditions during the coming season should be somewhat better with the fishery concentrating on the 1947 and 1946 broods. For a long-range forecast, good spawn survival over a period of years should be followed by good fishing; however, high and low levels of abundance and a much less stable fishery can be expected.

Washington and Oregon advised that no pilchards were landed in their states this year.

Canada reported that they are not conducting studies of the pilchard at present because there are no fish in Canadian waters.

OTTER TRAWL FISHERY: The Commission was advised that various suggestions have been submitted by the industry as to a possible regulation of the trawl fishery. The various representatives present reported on the otter trawl fishery research being conducted. No definite commitments were made on this fishery.

SOUPFIN SHARK FISHERY: Washington reported that the present catch exceeds that of the last few years, and the tagging program is being continued.

Oregon advised that considerable effort has been made to gather information on this fishery and that regulations recommended by the Commission have not been enacted as yet; and that investigations are continuing.

No definite commitments were made on this fishery.

PROPOSED AMENDED INTERNATIONAL HALIBUT TREATY: The proposed revision of the Halibut Treaty, in particular, to include the sablefish as being under regulation by the International Halibut Commission was discussed. A motion was unanimously passed "that a study of the sablefish population be conducted to determine if it is a local, interstate or international problem and what, if any, cooperative or joint action either by the several states, Canada and Alaska is necessary to protect or further conserve the sablefish; such study to be conducted by the member states of this Commission, and the Dominion of Canada, Territory of Alaska and International Halibut Commission be invited to participate in these studies if they so desire; and pending completion of this study treaty negotiations with respect to the sablefish, be suspended until the receipt of such reports and further action by this Commission."

PORT PRIVILEGES TO FISHING VESSELS IN ALASKA AND BRITISH COLUMBIA: With reference to the proposed draft on Convention for Extension of Port Privileges to Fishing Vessels in Alaska and British Columbia, a motion was unanimously passed, "that Restricted Draft, dated June 22, 1949, 'Convention for the Extension of Port Privileges to Fishing Vessels in Alaska and British Columbia' be approved in substance."

GENERAL ACTION: The Commission unanimously passed a motion "that this Commission through its Chairman, extend standing invitations to the directors of the governmental agencies handling fisheries matters of the Dominion of Canada, Republic of Mexico, and the Territories of Alaska and Hawaii to attend and participate in the discussions of the meetings of the Pacific Marine Fisheries Commission."



Pacific Oceanic Fishery Investigations

HAWAIIAN TUNA FISHERY: Tuna fishing generally was slow in the Hawaiian Islands during September, according to a report from the Section of Biology and Oceanography of the Service's Pacific Oceanic Fishery Investigations. The flag-line catches averaged daily one fish per hundred hooks, a figure considerably below the average for the early part of the season. The yellowfin tuna, generally preponderant during September, were almost absent from the catch.

The skipjack season in this area is drawing to a close. By the end of September, landings were sufficient to allow only a limited amount of canning. In general, the season is not believed to have been up to average. While steady catches were made during the summer, the good fishing prevailing in previous years was not encountered.

Long-line catches were markedly better in October than they had been for months, and were composed almost entirely of big-eyed tuna, black marlin, and striped marlin. The average of over 3 tunas per 100 hooks daily off Hana, Maui, represents almost a 100 percent improvement.

Bait continues to be a problem. Fishermen have been paying 35 to 50 cents a pound for the opelu which is used as long-line bait. The largest big-eyed tuna (332 pounds) seen to date was encountered in October.

All tuna gonads (i. e., yellowfin and big-eyed tuna) from fish landed at Honolulu during October have been found to be spent and in process of recovery,

according to a report from the Pacific Oceanic Fishery Investigations. A female albacore, which it was possible to examine, was spent also. The ovaries were recovering, but eggs in process or reabsorption could be seen as well as a few translucent, misshapen ova which had been neither shed or absorbed.

"HUGH M. SMITH" TO BEGIN OPERATIONS IN DECEMBER: The Hugh M. Smith, the second of three fishery research and exploratory fishing vessels to be completed for the Service's Pacific Oceanic Fishery Investigations, sailed from Seattle on November 15 for Honolulu. A former Navy vessel of the YP class, the vessel is designed for use as a biological and oceanographical research vessel, and will be used to study the life histories and habits of the various tunas of the central Pacific Ocean.

The Hugh M. Smith was converted at Tacoma, Washington. The scientific equipment includes laboratory facilities, winches for use in oceanographic studies of plankton and water temperature, tanks for bait-holding experiments, and refrigerated holds; an auxiliary propulsion motor for traveling at the low speeds required for much of the work is included also.

The vessel's fishing gear will include a long bait net (80 fathoms long by 6 fathoms deep), a medium-size net (40 fathoms long by 3 fathoms deep), and a short net (15 fathoms long by 1 fathom deep): and a lift net for night bait fishing.

Operation of this vessel is scheduled to begin in December.

"HENRY O'MALLEY" ARRIVED AT HONOLULU: The exploratory fishing vessel Henry O'Malley arrived at Honolulu on October 20. Making of bait nets and accessory equipment for live-bait fishing and preparing the vessel for sea are now in progress. This vessel will be fitted for bait fishing and deep trolling.

STATUS OF VESSELS: The exploratory fishing vessel, Henry O'Malley, arrived at Honolulu on October 20. Making of bait nets and accessory equipment for live-bait fishing are now in progress. This vessel will be fitted for bait fishing and deep trolling.



Sardine Film Takes Honors in International Exhibition

It's the Maine Sardine (a Fish and Wildlife Service film) took first prize in the public relations series at the 10th International Exhibition of Cinematographic Art in Venice, Italy, according to a cable received on October 19 from the United States Embassy at Rome.

The film was produced by the Service for the Maine Department of Sea and Shore Fisheries and the Maine Sardine Packers Association. The picture shows the catching of sardines off the Maine coast and the methods of packing used in local canneries. Intended for general showing to schools, clubs and organizations, It's the Maine Sardine is a 16 mm. sound and color film which runs about 18 minutes.



THE FACE OF THE MEDAL PRESENTED TO THE SERVICE FOR THE PRIZE-WINNING FILM, IT'S THE MAINE SARDINE.



FISH AND WILDLIFE SERVICE DIRECTOR, ALBERT M. DAY (CENTER), ACCEPTING A MEDAL AND DIPLOMA FROM COUNSELOR MARIO LUCIOLLI OF THE EMBASSY OF ITALY (LEFT) FOR THE SERVICE'S PRIZE-WINNING FILM, IT'S THE MAINE SARDINE, IN THE CONFERENCE ROOM OF THE U.S. DEPARTMENT OF STATE ON NOVEMBER 21, 1949. THE DEPUTY ASSISTANT SECRETARY OF STATE FOR PUBLIC AFFAIRS, HOWLAND H. SARGEANT (RIGHT, SEATED) PRESIDED AT THE CEREMONY.

The picture was one of several United States films selected by a joint committee of officers designated by the heads of motion-picture producing agencies of the Government, and was chosen for the competition for "its excellence in continuity and color and its general effectiveness in presentation." Entered in the Venice film festival (one of the world's most outstanding exhibitions of cinematographic art), the film was in competition with educational motion pictures exhibited by more than 40 nations.



Texas Monthly Fishery Bulletin Issued

Texas Landings, a new fishery bulletin, is the first of a series of monthly reports by the Fish and Wildlife Service and the Texas Game, Fish and Oyster Commission on the landings of fishery products in Texas.

This bulletin reports on the inside (bay) waters and the offshore (Gulf of Mexico) commercial catch of fishery products by species, gear, area; total catch by species and area of capture; summary data on landings for each month and cumulative totals for the current Texas fiscal year (September 1 to August 31); and comparative data.

Collection and publication of these monthly statistics will provide the fishing and allied industries with data on the Texas fisheries many months earlier than they have been available in the past.

Other states for which monthly bulletins are issued by the Service are Massachusetts and Maine.

To receive copies of Texas Landings, or to be placed on the mailing list, requests should be addressed to the Branch of Commercial Fisheries, U. S. Fish and Wildlife Service, Washington 25, D. C. In Texas, the distribution of the new bulletin is being handled by the Texas Game, Fish and Oyster Commission, Austin, Texas.



WHOLESALE AND RETAIL PRICES

Average primary wholesale prices for all foods on October 11 this year were 1.6 percent below September 13 and 9.5 percent below October 12, 1948, according to the Bureau of Labor Statistics of the Department of Labor.

Canned red salmon wholesale prices during October 1949 were at the same level as in September, but were 7.4 percent lower than in October 1948. Prices for canned pink salmon in October continued to drop and were 7.3 percent lower than in September and 33.3 percent lower than in October last year.

Wholesale and Retail Prices				
Item	Unit		Percentage change from--	
		Oct. 11, 1949	Sept. 13, 1949	Oct. 12, 1948
<u>Wholesale: (1926 = 100)</u>				
All commodities	Index No.	152.1	- 1.6	- 7.8
Foods	do	160.0	- 3.2	- 9.5
<u>Fish:</u>		<u>Oct. 1949</u>	<u>Sept. 1949</u>	<u>Oct. 1948</u>
Canned salmon, Seattle:				
Pink, No. 1, Tall	\$ per doz. cans	3.94	- 7.3	-33.3
Red, No. 1, Tall	do	6.156	0	- 7.4
Cod, cured, large shore, Gloucester, Mass.	\$ per 100 lbs.	15.50	0	+ 3.3
<u>Retail: (1935-39 = 100)</u>		<u>Oct. 15, 1949</u>	<u>Sept. 15, 1949</u>	<u>Oct. 15, 1948</u>
All foods	Index No.	200.6	- 1.8	- 5.2
<u>Fish:</u>				
Fresh, frozen and canned	do	306.8	- 1.6	- 5.9
Fresh and frozen	do	268.4	+ 3.2	- 1.7
Canned salmon:				
Pink	¢ per lb. can	50.5	-10.1	-15.0

The drop of 1.8 percent in retail food prices between September 15 and October 15 this year, more than the usual seasonal decrease, was the largest monthly change in the retail prices since February 1949. On October 15, the retail food index was 1.8 percent below the previous month and 5.2 percent below mid-October 1948. Chiefly responsible for the decline from September to October was a decrease of 3.5 percent in the prices of meat, poultry and fish.

The fresh, frozen and canned retail fish index was 1.6 percent lower than in mid-September and 5.9 percent below mid-October 1948, reflecting mainly the lower prices for canned fish which prevailed during the month. Canned pink salmon retail prices showed a substantial decline, reflecting the decrease in wholesale

prices which started in September. As is usual at this time of the year, due to lighter production, the fresh and frozen fish index increased 3.2 percent as compared with mid-September, but was still 1.7 percent below October 15, 1948.



FISH REDUCTION PROCESSES

Reduction of fish and fish waste to fish meal and fish oil has been the basis for commercial operations along our seacoasts for many years. Methods employed have changed with the gradual improvements in equipment available for adaptation to the peculiar needs of the operators and with the background of practical experience that only actual plant operation can develop. The fish processors' control over raw materials harvested from the sea is very limited even as to quantity and quality. Localized adaptations of plant equipment and day-to-day changes in technique of operations by plant crews have been the original designs of factory installations.

Fish reduction procedure depends upon (1) volume of raw material, (2) percentage of oil it contains, (3) peculiarities of the raw material, (4) quality of oil and meal produced, and (5) extent of investment. There are two general types of processes in use for fish reduction: wet reduction and dry rendering.

Each method of reduction has its place. Dry rendering is more costly to install for the same capacity, it yields an inferior quality of oil, and the operation expense may be higher. The water-soluble materials are retained in the meal, however, and the meal yield per ton of raw material is appreciably larger. The wet-reduction equipment enables the processor to handle a large volume of material continuously, the initial expense and the operating expense are less, and a good quality oil may be obtained. The meal does not contain water-soluble materials, so the yield is lower.

--Fishery Leaflet 126