

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF FISHERIES

**FISHERY INDUSTRIES
OF THE UNITED STATES
1939**

By R. H. FIEDLER

ADMINISTRATIVE REPORT No. 41

UNITED STATES DEPARTMENT OF THE INTERIOR
HAROLD L. ICKES, Secretary
BUREAU OF FISHERIES
CHARLES E. JACKSON, Acting Commissioner

Administrative Report No. 41

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APPENDIX III TO REPORT OF COMMISSIONER OF FISHERIES
FOR THE FISCAL YEAR 1940



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ADMINISTRATIVE REPORT SERIES

Since the advent of the Administrative Report Series, considerable confusion has arisen concerning its system of numbering the separates composing it. Inasmuch as the Reports of the Divisions vary in order from year to year, many have found their designations as "Appendix No. I, II, III, or IV" very confusing. To relieve this, it has been decided to number them as "Administrative Report No. —." Inasmuch as 20 separates had already been printed in this series before starting the numbers, it was deemed advisable to begin the numbering with Administrative Report No. 21. Of course, numbers cannot be printed on those already off the press, but for the information of those who wish to know what the first 20 were, they are numbered for filing purposes as follows:

- No. 1. Report, Commissioner of Fisheries, 1931.
- No. 2. Alaska Fishery and Fur-Seal Industries, 1930.
- No. 3. Fishery Industries of the United States, 1930.
- No. 4. Progress in Biological Inquiries, 1930.
- No. 5. Propagation and Distribution of Food Fishes, 1931.
- No. 6. Report, Commissioner of Fisheries, 1932.
- No. 7. Alaska Fishery and Fur-Seal Industries, 1931.
- No. 8. Fishery Industries of the United States, 1931.
- No. 9. Progress in Biological Inquiries, 1931.
- No. 10. Propagation and Distribution of Food Fishes, 1932.
- No. 11. Alaska Fishery and Fur-Seal Industries, 1932.
- No. 12. Progress in Biological Inquiries, 1932.
- No. 13. Fishery Industries of the United States, 1932.
- No. 14. Propagation and Distribution of Food Fishes, 1933.
- No. 15. Fishery Industries of the United States, 1933.
- No. 16. Alaska Fishery and Fur-Seal Industries, 1933.
- No. 17. Progress in Biological Inquiries, 1933.
- No. 18. Propagation and Distribution of Food Fishes, 1934.
- No. 19. Alaska Fishery and Fur-Seal Industries, 1934.
- No. 20. Fishery Industries of the United States, 1934.

Note that the last Commissioner's Report was for 1932. Since then its place has been taken by a reprint from the Report of the Secretary of Commerce under the title "Bureau of Fisheries." Inasmuch as it is no longer a Bureau publication, it is not numbered; but it will be supplied to any who request the Report of the Commissioner for any year since 1932.

FISHERY INDUSTRIES OF THE UNITED STATES, 1939¹

By R. H. FIEDLER, Chief, Division of Fishery Industries

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¹ Administrative Report No. 41, Appendix III to the Report of the U. S. Commissioner of Fisheries, 1940. Approved for publication June 20, 1940.

FOREWORD

This report constitutes a summary of the activities of the Division of Fishery Industries, as well as a review of the fishery statistics collected by the Division during the past year. As its name indicates, this Division of the Bureau is concerned with the activities and welfare of the commercial fisheries and fishery industries and the fishermen and shoresmen engaged therein; the fish canning and preserving industries; and the trade in fishery products. Its functions include the conduct of studies or activities: (1) To determine the extent and magnitude of our aquatic resources and the commercial importance of our fishery industries; (2) to learn the economic condition of fishermen and shoresmen engaged in the fishery industry, their place in the national economy, and what measures can be taken to improve their well-being; (3) to determine the character, utility, and effectiveness of different forms of fishing apparatus and vessels, suggest improvements therein, and discourage the use of those forms which are unnecessarily destructive or unprofitable; (4) to learn the effect of fishing on the supply of fish and suggest measures to promote orderly and sustained production; (5) to study and develop fisheries for hitherto unutilized fishes; (6) to investigate the preservation of fishery products, suggest improved methods, and discourage wasteful practices in this field; (7) to ascertain what use can be made of aquatic products not now utilized to economic advantage; (8) to inquire into the nutritive value of aquatic foods for man and his domestic animals, and promote the consumption of these foods; (9) to ascertain the means and methods of transporting fishery products on land and sea and recommend economical practices; (10) to inquire into the condition and extent of the wholesale and retail trade in fishery products and promote the more orderly marketing of our fishery harvest; (11) to introduce useful foreign methods or processes of capture, preservation, utilization, or marketing fishery products; (12) to handle matters relative to the administration of the act which authorizes cooperative associations of producers of aquatic products; and (13) to conduct the Fishery Market News Service authorized by act of Congress in 1937.

Results of the various technological, economic, and marketing investigations carried on by the Division are published in separate documents as each project is completed, and a brief résumé of each current project is contained in this report. Information obtained from statistical surveys is published in part 2 of this report, which includes all the detailed statistical information that has become available since issuance of the previous report,² together with such summarized statements and interpretations of the statistics as are deemed significant and useful.

² Fishery Industries of the United States, 1938, by R. H. Fiedler: Appendix III to the Report of the U. S. Commissioner of Fisheries for 1939. pp. 169-554.

Part 1. OPERATIONS OF THE DIVISION

COOPERATION WITH OTHER FEDERAL AGENCIES

It has been the established policy of the Bureau of Fisheries, and of this Division, to cooperate with other Federal agencies wherever the activities are such that mutual information can be exchanged with advantage, or where, by working cooperatively, the results of such mutual work may be furthered or its ends made more effective and valuable.

Thus, the technologists of this Division gave courses in canning fishery products to State Extension Service workers at the request of and with the cooperation of the Extension Service of the United States Department of Agriculture. Demonstrations and practical instruction on other related subjects pertaining to the preservation of fishery products, and a better utilization of the excellent food value of fish, were given to State Extension Service workers through and with the cooperation of the Extension Service of the United States Department of Agriculture. In some cases, students or State Extension Service workers were detailed to the Bureau's laboratories in Washington, D. C., for instruction, and in other cases one of our technologists visited some of the States for this purpose.

Cooperation was also given by members of our technological staff to chemists and bacteriologists of the Food and Drug Administration, United States Department of Agriculture, at various times in connection with the development and application of tests or methods of determining the quality and constituents of various fishery products.

The Department of Labor, through several of its divisions, has been helpful during the past year in connection with the Division's studies of the retail marketing of fish as well as studies of labor conditions in the fisheries. This Division's staff also assisted and was aided by the Maritime Commission and the Maritime Labor Board in studies of fisheries employment. Advice and assistance has been furnished the Federal Surplus Commodities Corporation in connection with its programs of buying fish for distribution to relief clients. The Food and Drug Administration of the Department of Agriculture has cooperated with this Division in furnishing current statistics on the pack of canned shrimp and allied data. Cooperation has been continued by the Bureau of Foreign and Domestic Commerce in furnishing monthly and annual statistics of foreign trade in fishery products, while the local offices of the Bureau of the Customs has furnished the several Market News offices of the Division daily statistics of the imports of fishery commodities. Assistance has been accorded by several of the economic and technological staff of the Division to the Federal Trade Commission in its work in connection with the preparation and promulgation of trade practice rules for the sardine and tuna industries.

The Division also has worked with various Federal agencies in obtaining statistical data on our fisheries. In a cooperative arrangement, the Bureau of Agricultural Economics, Department of Agriculture, furnished statistics on the volume of cold-storage holdings of fish and quantities frozen, and the health authorities in Washington, D. C., assisted in obtaining data on the volume of fish handled at the Municipal Fish Wharf and Market in this city. Cooperation was accorded the Bureau of the Census in obtaining for that Bureau figures on the volume of the quarterly production and holdings of fish oils in the United States.

In addition to the specifically enumerated instances of cooperation with other Federal agencies cited above, which are on a continuing basis or were of a more detailed nature, it should be stated that a very close relationship exists between this Division and many of those Federal agencies whose duties require an interest in fish in particular, foodstuffs or feedstuffs in general, or in various marine activities. The staff of the Division is in almost daily contact with some one or more of these Federal agencies in the exchange of information of inestimable value to the scientific work of the Federal establishment.

COOPERATION WITH STATE AGENCIES

The Division has continued to encourage cooperative relations with State institutions and agencies in the conduct of researches and investigations of mutual interest. This policy has resulted in expanded programs and decreased costs. During 1939 the following cooperative investigations with various States were conducted:

Our Seattle technological laboratory staff has continued its close cooperative relation with members of the faculty and staff of the University of Washington, Seattle, Wash., as in past years.

The University of Maryland and the Maryland State Agricultural Experiment Station, College Park, Md., continued their excellent cooperative relations with our College Park technological laboratory staff. The various departments of animal husbandry of the Maryland State Agricultural Experiment Station continued their cooperation in the conduct of feeding tests of fishery byproducts in the rations of farm animals. The members of the staffs of these two institutions who have worked closely with our College Park technological staff are Dr. L. B. Broughton, Dean of the College of Arts and Sciences; Dr. W. C. Supplee and Mr. L. E. Bopst of the Chemistry Department; Dr. L. H. James, Head of the Department of Bacteriology; and Prof. M. H. Berry, of the Dairy Department. These various cooperative studies are described in greater detail elsewhere in this report.

As discussed in the 1938 report, the Bureau's technologists continued their cooperation with the Virginia State Division of Markets in extending and improving State marketing grades for fishery products sold in that State.

In the conduct of its statistical and market research work, the Bureau obtains unusual cooperation from various States. The statistical surveys of the fisheries in the various States bordering on the Great Lakes, the Pacific Coast States, and Maryland and Virginia have been greatly facilitated by the cooperation obtained from the fishery agencies in these States. With this aid it is now only necessary for the Bureau to conduct partial surveys in these States to supplement the data available from the fishery agencies.

During the year several members of the Bureau's staff cooperated with officials of the Maine Sea and Shore Fisheries Commission and the Connecticut State Board of Fisheries and Game in establishing systems for the collection of detailed fishery statistics in Maine and Connecticut. As the data collected by these agencies will be available to the Bureau, it is anticipated that in the future it will only be necessary for our agents to conduct limited field surveys in these States in order to obtain complete operating unit and catch data.

In addition, in nearly every other State where commercial fishing is prosecuted, some type of cooperation in its statistical work is rendered the Bureau by the State fishery agencies or other organizations. This makes it possible for the Bureau to make statistical surveys of a greater portion of our fishery industries than otherwise would be possible.

COOPERATION WITH FISHERY ADVISORY COMMITTEE

The Division of Fishery Industries cooperated during the year with the Fishery Advisory Committee in the carrying out of the Committee's function as a body advisory to the Secretary. Technical assistance was made available to the Committee at all times, current information upon the Bureau's work was furnished from time to time for the information of the members, and help was furnished in the planning and arrangement of the annual Committee meeting.

On February 2 and 3, 1940, the annual meeting of the Committee was held in Washington, D. C., in the Conference Room of the Secretary of the Interior. Members of the staff of the Division attended. Special statements were furnished to facilitate the conduct of business and considerable assistance and advice were supplied after the meeting in the preparation of the annual report of the Committee.

COOPERATIVE PAN-AMERICAN FISHERY RESEARCH

During the past year the Division continued work toward the development of a program for Pan-American fishery research. Following the detail of the writer as adviser on fishery matters to the President's Educational Commission, which visited Puerto Rico in April 1939, as reported in last year's report of the Division, the Bureau was allotted \$25,000 by the Public Works Administration for the establishment of a fishery research laboratory in Puerto Rico. A site for this laboratory, consisting of a plot of approximately 2 acres, has been obtained on the campus of the College of Agriculture and Mechanics Arts at Mayaguez, a fishing port on the western side of the island. This was secured through the cooperation of the Board of Trustees of the University of Puerto Rico. Plans are being drafted for the construction of the laboratory building, which is expected to be ready for occupancy early in 1941.

TECHNOLOGICAL FISHERY RESEARCH

Recent tabulations indicate that the people of Puerto Rico consume around 40 million pounds of fish annually. Except for a few million pounds produced locally, this is all imported—mostly from foreign countries. There is reason to believe that local fisheries can be expanded to supply a large part of this demand. Thus, research at

the laboratory will center on the development of more efficient means for capturing local species, on exploration of nearby fishing banks to locate productive fishing areas, on technological improvement of processing methods, on means for distributing the preserved catch to the people of the island, and on the biology of various important aquatic forms. Some work may also be done on the culture and distribution of fresh-water fishes to augment the very effective work in this field now being done by the local fishery agency. The fisheries of the Virgin Islands of the United States will also benefit by research at this laboratory.

Located at the "cross roads" between North and South America, the new laboratory will also serve as a focal point for fishery research in the American republics. In addition to the permanent research staff which will be assigned to the laboratory, it is planned to employ a group of student assistants, recruited from various American republics, to assist in the research work of the laboratory. After a training period of about 2 years, these assistants would be in a position to aid their own governments in solving their local fishery problems.

In this connection the Bureau has received numerous requests from other American republics for the detail of fishery investigators to assist in the development of their local fisheries. Some assistance has already been given and further work is contemplated during the coming year. However, the requests for this type of service are greater than our ability to serve. It is believed, therefore, the establishment of the laboratory in Puerto Rico will be of material assistance in this direction.

STATISTICS

In the development and prosecution of a fishery, it is important that statistics be collected and published on its yield and abundance. This is most necessary in order to evaluate the condition and trend of the fishery from the standpoint of conservation and sustained production. In the main there is a lack of statistical information on the fisheries of most of the countries of the Western Hemisphere. This situation was brought to the attention of delegates from various American republics attending the Eighth American Scientific Congress at Washington, D. C., in May 1940, in an address by the writer before the statistical section of the Congress on the subject "Need and plan for a statistical program in furthering conservation of Inter-American fisheries."³ The delegates showed considerable interest toward the development of such a program and as a result the statistical section of the Congress, and the Congress in plenary session, passed the following resolution:

Since the fishing industry represents a great natural resource both from the national and inter-American viewpoints—

BE IT RESOLVED by the Eighth American Scientific Congress that the Inter-American Statistical Institute be requested to devise a plan in accordance with which the American Republics may collect and publish fishery statistics in a uniform manner.

The Inter-American Statistical Institute, based on the lines of the International Statistical Institute, was formed at the time of the congress by the American members of the International organization.

³ Published as Fisheries Memorandum S-352, U. S. Bureau of Fisheries, Washington, May 1940.

EXHIBITS AT EXPOSITIONS

Exhibits depicting the contributions of the Bureau of Fisheries in the broad fields of Federal activity were displayed at the New York World's Fair and San Francisco Golden Gate International Exposition in 1939. These displays were planned with the aid of the Division of Fishery Industries.

Various display materials were furnished to individuals and groups during the year to exhibit as widely as possible through these devices the various phases of the fishery industries.

At Tampa, Fla., a diorama of the sponge fisheries of Florida was exhibited through the duration of the Pan-American Exposition in January 1939.

ECONOMIC AND MARKETING INVESTIGATIONS

There is a constant demand upon the Division of Fishery Industries for studies of the marketing of fishery commodities and other economic studies relating to the commercial fisheries. It has been possible to undertake only one new large-scale study of this kind with available personnel and funds during the past year. However, a continuing study of cooperation among fishermen, and other long-time studies, were active during 1939, and, as is customary each year, many short-time economic and marketing studies were made in order to satisfy the urgent demands placed upon the Division. Some of these shorter studies were conducted preliminary to or closely associated with administrative activities of the Bureau and consequently were not published. Other studies, which were published through the Bureau's facilities, were also widely circulated through fishery periodicals and other publications.

One of the chief aims of the Division's marketing research is to portray the processes of fish distribution in such a way as to enable all elements of the trade to understand more completely their functions as they relate to the rest of the industry. As the details of this picture are clarified, it is possible to point out respects in which the marketing system may not operate with full efficiency. These economic studies may serve as a basis for rationalizing the distribution of fishery products, through the suggestion of remedies for various defects in the marketing system and in its operations. Since there are areas in the fish trade which are relatively unorganized as compared to many other distribution systems, and since fish consumption is unjustifiably low, this type of work should be productive.

In pursuing this program the Division carries on studies of its own, such as the retail survey and other studies discussed below. It also analyzes the products of research in other fields so as to apply to fishery marketing whatever is of significance. In this way not only new findings but new research methods and techniques are made available. Innovations in marketing practice developed in this country and abroad are also examined and given currency, if likely to be of value.

During 1939 the economic and marketing investigations of the Division were largely conducted under the immediate supervision of Ralph Russell, Associate Economist, with the assistance of Keith O. Burr, Junior Statistician.

Reports of various economic studies and activities in progress during 1939, or completed during that year, are given below.

FISHERY COOPERATIVE ORGANIZATIONS

The research and services in regard to fishery cooperative organizations, like those in the other economic fields covered by this Division, consist primarily of collecting, analyzing, and disseminating information. An advisory service is offered to fishermen who are considering the desirability of forming cooperatives, and information is given to enable them to decide whether or not cooperative organization is likely to bring them benefits.

In addition, fishery cooperatives already in operation are advised as to how to meet characteristic problems of cooperatives, as well as difficulties peculiar to their particular situations. While it is difficult to handle requests on this subject by correspondence, our statistical agents are often able to give advice on the spot in regard to matters requiring broad knowledge of the fisheries. With specific regard to the organization of cooperatives, and with reference to cooperative principles or methods, Fishery Circular No. 22, "Organizing and Incorporating Fishery Cooperative Marketing Associations," by L. C. Salter, has been particularly useful in answering inquiries.

Cooperative associations enable fishermen to undertake collective action in conducting their economic affairs. They also serve as a device for readily disseminating information and educating fishermen as to the fundamental economic relationships of their industry. When organized into cooperative associations, fishermen can effect desirable practices whereby the fish they catch are processed and distributed. The cooperative enables them to extend their marketing operations, if necessary, into any phase of marketing which is not operating to their advantage. Through cooperatives fishermen are usually better able to control the availability, quality, and prices of supplies and services which they require. Cooperation offers a method whereby it may be possible to rehabilitate certain fish populations which have suffered severe depressions over a long period.

In the pursuit of its functions of collecting, analyzing, and disseminating information, the Bureau endeavors to keep informed of new cooperative undertakings by fishermen, and to serve as a clearing house for such material.

At present, 35 active fishery cooperatives which engaged in economic activities are listed in the Bureau's files, though full information is not available on all of them. Twenty-one are on the West coast, 11 on the East coast, and 3 in the Great Lakes region. As regards their distribution by States, California has 10, Washington 9, Oregon 2, New Jersey 3, Florida 4, Minnesota and Maine each have 2, and Michigan, Maryland, and North Carolina each have 1. Cooperatives in 3 States have suspended operations since the 1935 canvass, as follows: California 1, Minnesota 1, and Virginia 1.

During the past year the organization of 7 fishery cooperatives on the West coast was reported; 6 of these being in Washington and 1 in California. Another West coast cooperative, organized in 1938, first came to the Bureau's attention in 1939. Considerable organizational activity occurred on the East coast without as yet resulting in the formation of new cooperatives. This interest was particularly

noted in Boston, Gloucester, and Martha's Vineyard, Mass., and on certain parts of the Maine coast.

Current information on cooperation among fishermen in other countries is obtained through publications and correspondence. During the year, requests for information were received from neighboring countries to the north and south of the United States. Visitors from Newfoundland, Nova Scotia, Venezuela, Brazil, and Sweden discussed cooperation among fishermen with members of our staff.

Of particular interest among foreign developments are the programs of fishery rehabilitation arising in Nova Scotia and spreading to New Brunswick, Newfoundland, British Columbia, and, to a limited extent, to the United States. The Nova Scotian development was reported by Ralph Russell in an article entitled, "Nova Scotia Fishermen Aided by Cooperatives," in the November 1939 issue of *Fishery Market News*. Progress in Newfoundland was summarized in the February 1940 issue of this publication in a report entitled, "Newfoundland Develops Fishermen's Cooperatives."

The process of adult education and establishment of economic enterprises, which is the fundamental concept of the programs, begins with the awakening of interest and the development of local leadership. Under their own selected leaders, the people study their economic situation and then plan to correct it. Usually a start is made by establishing credit unions. The experience gained by managing these credit unions teaches the people business methods and control of economic enterprises. Other economic and social developments usually follow and involve cooperative techniques. This program seems adaptable to conditions in some fishing areas of the United States. In fact, the movement has already begun in one or two localities. The Bureau is an interested observer of such attempts to adapt the procedure to our conditions.

A committee of the Maine State Chamber of Commerce studied the problems of the fisheries of that State and recommended the formation of a division of fishery rehabilitation in the State government. This division would undertake to evoke leadership among the fishermen so that they might initiate a program of adult education and cooperative development.

Lectures on cooperation, designed primarily for Boston fishermen, were sponsored by the Massachusetts State Board of Education. These lectures, each of which was given by a different authority in this field, extended over a period of several weeks. Among other subjects, the Nova Scotian developments were discussed.

A report containing material collected in a recent survey of fishery cooperatives in the United States was advanced further toward publication during the year, and an excerpt was printed in a report of hearings before the House Committee on Merchant Marine and Fisheries. The study dealt with data obtained from 54 of the 59 cooperative associations reporting. The number of producers dealing with these cooperatives, either directly as members or indirectly as fishermen on boats commanded by members, totaled 12,500 and the volume of business was over \$9,000,000. The investment of the cooperatives in plants, equipment, and other facilities was about \$5,200,000. The investment by the members of these cooperatives in fishing equipment totaled over \$20,700,000 in boats and over \$3,600,000 in gear.

Commercial operations of one type or another were conducted by 31 of the 59 associations reporting. Of 22 associations on the Pacific coast, 14 were commercial, while only 9 of the 22 in the North Atlantic area were commercial. The South Atlantic and Gulf area also reported a predominance of noncommercial associations, only 4 of 11 being commercial. Although no survey was made in the Great Lakes area, 3 commercial associations were located and reported.

Number and type of fishermen's cooperatives, according to location, 1935

Area	Total number of associations	Number of commercial associations	Number of noncommercial associations
North Atlantic.....	22	9	13
South Atlantic and Gulf.....	11	4	7
Great Lakes.....	3	3	.....
Pacific coast.....	22	14	8
Alaska.....	1	1	.....
Total.....	59	31	28

Of the 31 commercial associations shown in the above table, 13 reported business in fresh fish, 2 sold only processed fish, and 4 sold both fresh and processed fish. In addition, there were 8 cooperatives that did not handle fish for sale, but acted as bargaining associations, while 4 associations made no report as to the type of business they conducted.

Over one billion pounds of fish were sold by 19 associations reporting on volume, and the dollar volume of all associations reporting this figure totaled \$8,921,615. The value of fish represented in this amount does not include all of the billion pounds, since some associations reported volume but not value.

Purchasing of supplies for members is an important function of cooperatives in this field, and 12 associations reported purchases ranging from \$1,800 to \$100,000, and totaling nearly \$300,000. The association reporting purchases of \$100,000 was engaged only in purchasing. In addition, there were 7 associations engaged in purchasing which did not report the volume. Eight other cooperatives indicated their intention to undertake purchasing for their members. Petroleum products, chiefly motor fuel, were the leading items purchased by the fishery cooperatives for their members, although nets and netting, ice, boxes, tanbark, tar, rope, and miscellaneous marine supplies and fishing equipment were also reported.

A bill (S. 2605) to amend the Agricultural Marketing Act was introduced by Senator Norris, and hearings will be held during 1940. This bill, if enacted into law, might be of some value to fishermen in that it would broaden the definition of cooperatives so as to permit Federal loans to cooperatives with a considerable proportion of nonfarmer membership. Thus, agricultural cooperatives with some fishermen members might be eligible for assistance by the Farm Credit Administration.

The report of the Maritime Labor Board, made available early in 1940, deals to some extent with the types of union organization among fishermen and among workers in allied industries. This report may well serve as a basis for further study of the status of this type of organization among fishermen.

During the year 1939 no complaints of violation of the antitrust acts by fishery cooperatives were referred to the Secretary of the Interior, who is empowered under the Fishery Cooperative Marketing Act to investigate such complaints. However, it should be noted that during the spring of 1939 a decision of a Federal district judge in Portland, Oreg., declared a fishermen's union to be a cooperative and subject to the provisions of the antitrust laws. This decision may prove of considerable importance in the field of labor problems in the fishery industry, as well as in the whole field of cooperation.

RETAIL MARKETING OF FISH AND SHELLFISH

An extensive survey of the retailing of fresh and frozen fish was initiated early in 1939 and continued throughout the year. This study embraced many phases of fish retailing, but emphasis was upon the methods and practices of the trade. During the spring the Bureau employed 25 temporary investigators who surveyed 10,000 retail food stores in representative cities in the Eastern United States. It was found that only 4,000 of these stores handled fresh fish, and these were investigated in detail as to type of customers, nature of fish business, and facilities for handling fish. From the 6,000 stores not handling fresh fish, only a few general facts were requested.

The volume of fish sales represented by the stores which handled fresh fish amounted to over 60 million pounds in 1938, while the reported value of sales exceeded \$9,000,000. These 4,000 stores, located in both commercial and residential sections of some 50 cities, include nearly 1,200 chain stores, over 2,000 independent stores and voluntary chain stores, and about 400 fish markets.

The volume of sales of fresh fish and shellfish was small for most stores, with heavy sales reported by a small percentage only. Nearly 40 percent of the stores had annual fish sales amounting to less than \$500, while about 30 percent reported fish business ranging from \$500 to \$1,500 and almost 30 percent indicated a volume of \$1,500 or more. A small percentage of the stores did not report on dollar volume of fish sales. For the entire area surveyed, sales of fish on Friday comprised about half of the total weekly sales. About one-third of the weekly sales was divided between Thursday and Saturday, but sales on Thursday were substantially above those on Saturday. The remaining sales were spread over the other days of the week, but less than one-half of 1 percent of the weekly sales occurred on Sunday.

All species that constituted any appreciable percentage of total fish sales were tabulated. However, the data regarding the number of stores selling each species are primarily useful for comparative purposes, since the schedules usually reported only the species making up the bulk of sales. The preliminary results indicate that oysters, with sales by over 2,900 stores in all cities, were reported by more stores and in a larger number of cities than any other species. Haddock, sold by nearly 2,000 stores in some 35 cities, was the second most widely distributed species and halibut, next in importance, was reported by over 1,300 stores in about 30 cities. In the distribution of fresh-water species, catfish, handled by nearly 900 stores in 36 cities, ranked first, while yellow perch was second with sales by some 550 stores in 25 cities. By further analysis of the number of cities and

stores within cities that reported sales of various species, it is hoped to obtain an indication of the importance of the fisheries of different regions in supplying fresh fish and shellfish to consumers in representative localities in the Eastern United States.

The tabulation of the species sold by retailers indicates that about 150 names were reported for the salt-water species sold, about 60 for fresh-water species, and over 20 for shellfish. A preliminary analysis demonstrates that the actual numbers of species involved are much smaller than those indicated, for there is widespread confusion in the names applied to various species. Often a given species is sold by 2 or more names, even within the same city. Over larger areas the same species may be sold under several names, or several species by the same name. This lack of standardized nomenclature is a handicap to increasing the sale and consumption of fishery products.

Preliminary results of the study indicate that very few stores have extensive facilities devoted to selling fish, and only a relatively small amount of space is available for this commodity. Frequently stores handle fish only 2 or 3 days per week, and on these days fish is allocated to a small part of the space usually taken up by meats.

A large percentage of stores report that fish business is profitable, and some operators indicate that fish is the most profitable item handled. However, some owners and managers evidenced little interest in fish sales and consequently devoted little effort to promoting this phase of their business. The schedules are being further analyzed to determine which policies and methods are most effective in the sale of fishery products.

An investigation of food consumption in some of the cities included in our survey is being conducted by the Department of Labor. This material will be useful in interpreting the retail fish marketing data. It will also provide a basis for a detailed analysis of the total amount of fish consumption per capita and the relative consumption of various forms of fishery products in a considerable number of cities.

SURPLUS-FISH SITUATION

As a result of special legislation the Federal Surplus Commodities Corporation, during the fiscal year 1937, purchased 12,059,000 pounds of fishery products at a commodity cost of \$597,000, for distribution to relief clients. In the following fiscal year purchases under similar authority amounted to 3,595,000 pounds at a commodity cost of \$265,000. No fish were purchased by the Corporation during the fiscal year 1939, but in the fiscal year 1940 purchases through March 14 had aggregated 382,000 pounds, with a commodity cost of \$22,300. Authority for the purchase of surplus stocks of fish in 1940 was incorporated in Public Act 393, which was approved on August 11, 1939. The text of this act follows:

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That any part of the funds not to exceed \$1,500,000 per year, transferred by the Secretary of Agriculture to the Federal Surplus Commodities Corporation created under and to carry out the provisions of section 32 of the Act of August 24, 1935 (49 Stat. 774), as amended, may also be used by such Corporation for the purpose of diverting surplus fishery products (including fish, shellfish, mollusks, and crustacea) from the normal channels of trade and commerce by acquiring them and providing for their distribution through Federal, State, and private relief channels: *Provided*, That none of the funds made available to the Federal Surplus Commodities Corporation under this Act shall be used to*

purchase any of the commodities designated in this Act which may have been produced in any foreign country. The provisions of law relating to the acquisition of materials or supplies for the United States shall not apply to the acquisition of commodities under this Act.

Sec. 2. (a) From the fund authorized to be transferred by section 1 hereof, the Secretary of Agriculture is authorized to transfer to the Secretary of the Interior sums as follows to be maintained in a separate fund, \$75,000, which shall be used by the Secretary of the Interior to promote the free flow of domestically produced fishery products in commerce by conducting a fishery educational service; and \$100,000, which shall be used by the Secretary of the Interior to develop and increase markets for fishery products of domestic origin.

It will be noted that Public 393 includes, as section 2, provision for expanded fisheries economic, marketing, and technological services; however, the funds for this purpose have not as yet been provided.

COMMERCIAL FISHERIES OF THE WORLD

The world's annual catch of fishery products, based on the most recent available data, amounts to about 35,200,000,000 pounds, valued at \$762,000,000. The United States, including Alaska, with a catch valued at \$100,845,000, leads the countries of the world in the annual value of its yield. Japan's annual catch, valued at \$100,807,000, ranks second. Other countries, the annual catch of which exceeds \$50,000,000 in value, are, in order of their importance, Union of Soviet Socialist Republics; England, including Scotland, Northern Ireland, and Wales; and China. Japan, with a catch of 8,108,000,000 pounds, leads in the annual volume of the catch among the countries of the world, and following is the United States, with a catch aggregating 4,353,000,000 pounds. Other countries whose annual catches exceed 1,500,000,000 pounds are, in order of their importance, Union of Soviet Socialist Republics; China; England, including Scotland, Northern Ireland, and Wales; Norway; and Germany.

STATISTICAL INVESTIGATIONS

Fishery statistics are collected by the Bureau to serve two principal purposes—biological and economic. For this reason the Bureau plans its statistical surveys to obtain comprehensive data which will furnish a complete and reliable picture of the condition and trend of the fisheries. The collection and compilation of these data involve many problems because the fisheries are broad in scope, including over 160 varieties of aquatic products which enter into commercial production. Many of these species are migratory and are taken by a great variety of types of gear in areas along the seacoast, or in interior lakes and streams. If the biological aspect is to be served, complete annual statistics are needed on each of these phases in every section. If the economic aspect is to be served, statistics are needed not only on the phases listed above relative to the biological aspect, but also on the price structure, the processing function, and on marketing and distributing.

It is essential that statistics on these latter phases of the industry be collected and published as soon as possible after the close of business transactions in order that they may be of maximum value to the fishery industry and other interested parties.

BIOLOGICAL ASPECT

The biological aspect must be considered as two problems—the conservation and sustained supply of the resource, and the prediction of future trends or yields. Since the fisheries are usually prosecuted in areas not under private ownership, the problem of the conservation of these fisheries is of national concern. It is important that close watch be kept over the condition of the various fisheries in order to detect depletion, so that remedial measures can be promulgated timely and wisely. For this reason it is imperative that current statistical data be obtained on the yield of our fisheries.

These statistics furnish the biologist with a background upon which to base his prediction of future trends and yields by coupling these data with studies of the life history of the species. Difficulty is experienced in making these predictions because the supply (population) of the species cannot be seen, as is the case with farm animals or crops. The more complete and reliable the statistics on yield are, the better foundation the biologist has for conducting his studies. The Bureau, therefore, attempts to obtain a complete picture of each individual fishery to further these biological studies.

ECONOMIC ASPECT

When the fishery has been conserved, and trends and yields of the fishery have been predicted, the problem still remains of supplying the fishery trade with the information so essential to the conduct of its business activities. In these days of increased competition the very existence of the fishery industry must depend upon reliable economic and statistical information. Such material has been especially valuable during the past few years, when it has been used in national planning. The Bureau endeavors to make its statistical surveys so complete that the industry and the various governmental organizations may turn to it for reliable fishery statistics.

SURVEYS CONDUCTED

The statistical surveys during 1939 were conducted under the immediate supervision of Edward A. Power, Associate Statistician, who was assisted by R. T. Whiteleather, Associate Marketing Agent. The statistical surveys were conducted under the general direction of Fred F. Johnson, Assistant Chief of the Division. These surveys included the collection and dissemination of statistics of the commercial catch and its value, fishing craft and apparatus, and employment in the fisheries. In addition, data were collected on employment and compensation of those engaged in, and products of, fishery wholesale and manufacturing establishments.

Surveys were made during the year covering all coastal sections as well as the Great Lakes and a portion of the Mississippi River for 1938. Statistics of the fisheries of Alaska were collected by the Division of Alaska Fisheries.

In addition to the above, statistics were collected on the following special phases: The landings of fish by United States fishing vessels at the ports of Boston and Gloucester, Mass., Portland, Maine, and Seattle, Wash. (published monthly); the catch of mackerel in the North Atlantic fishery; the cold-storage holdings of frozen and cured

fish and amount of fish frozen, which are furnished by the Bureau of Agricultural Economics (published monthly); the production, consumption, and holdings of marine-animal oils of the United States and Alaska (published quarterly by the Bureau of the Census); the production of canned fishery products and byproducts of the United States and Alaska; the transactions on the sponge exchange at Tarpon Springs, Fla.; the volume of fishery products handled at the Municipal Fish Wharf and Market, Washington, D. C.; and the volume of the United States foreign trade in fishery products, furnished by the Bureau of Foreign and Domestic Commerce.

The following statistical and marketing agents assisted in the collection and compilation of the statistical data: D. Y. Aska, R. L. Busby, C. H. Chilton, L. S. Christey, E. V. Ebner, M. J. Fraser, R. L. Greer, R. L. Hacker, V. E. Heffelfinger, C. H. Lyles, C. E. Peterson, C. J. Robbins, C. B. Tendick, and F. M. Wood.

For detailed information on the methods employed in the collection of fishery statistics the reader is referred to Administrative Report No. 37, "Fishery Industries of the United States, 1938", by R. H. Fiedler. This Report was published as Appendix III to the Report of the Commissioner of Fisheries for the fiscal year 1939.

FISHERY MARKET NEWS SERVICE

Activities in connection with the organization and development of the Bureau's Fishery Market News Service were continued by the Division during 1939. Several features were added to the service during the year, and a field office was established at Jacksonville, Fla., early in the year. An office also was opened at New Orleans, La., early in January 1940. The Division now has in operation a total of six market news reporting offices in the field. The new features of the service and the activities of each of the field offices are discussed in appropriate sections of this report.

The offices of the Fishery Market News Service, due to their well-chosen locations, release current data covering the production and marketing of about 1½ billion of the nearly 3 billion pounds of fish and shellfish taken annually for food in the United States and Alaska. Landings of fresh fish for food listed daily in the various reports amount to one-quarter of the total annual catch, or over 750 million pounds. Daily reports of receipts at terminal markets add an additional 150 million pounds not duplicated in the landings. Periodic coverage of important canned fishery products, particularly salmon and shrimp, accounts for over 500 million pounds not otherwise included. In addition, about one-half of the fishery products in cold storage in the country are reported upon. Movements in and out of cold storage are released daily and holdings weekly.

The importance of this service to the fishery industry and allied interests is evidenced by the widespread localities and diverse classes of recipients from which requests for this service have been received. Addresses on the mailing lists include every producing and marketing area of importance in the country. Every branch of the fishing industry and numerous groups from allied fields are represented. Among the various classifications on the mailing lists are fishermen and producers; wholesale dealers; brokers; importers and exporters; buyers; retailers; chain stores; cold-storage plants; canners; salters; smokers;

byproducts manufacturers; supply firms; transportation companies; Federal, State, and municipal agencies and officials; unions; associations; fishery publications; newspapers; magazines; libraries; banks; and statistical organizations.

In addition to its activities in connection with the direction and administration of the service, the Washington office of the Fishery Market News Service prepares and disseminates periodic current reviews of fishery market information. These are issued in multilith form and distributed to fishermen, dealers in fishery commodities, and other interested parties. Between 10 and 15 of these reviews are prepared and disseminated each year. These reports, issued in a publication entitled "Fishery Market News," include summarized data made available through the daily and monthly releases of the Fishery Market News Service on the movement, prices, current status of production, and stocks on hand of fishery commodities; articles relating to the fisheries prepared by members of the Bureau's staff, members of the industry, or other parties; excerpts or abstracts from Bureau or other publications relating to the fisheries; and related information.

During 1939 the work of the Fishery Market News Service was carried on under the immediate supervision of A. W. Anderson, Fishery Marketing Specialist, and the general direction of Fred F. Johnson, Assistant Chief of the Division, Assisting in this work, with headquarters in Washington, D. C., but working both at the headquarters office and in the field, were H. E. Timmis, Fisheries Statistical and Marketing Agent, and P. W. Evans, Junior Fisheries Marketing Agent.

FIELD OFFICES

The locations of the offices of the Fishery Market News Service have been carefully chosen in order that they might not only provide a maximum service to the important producing, shipping, or consuming communities near their locations, but that they also be of greatest possible benefit to the industry as a whole. With these important considerations in mind, field offices have been established in New York, N. Y.; Boston, Mass.; Chicago, Ill.; Seattle, Wash.; Jacksonville, Fla.; and New Orleans, La.

Probably the most important of the newer features of the Fishery Market News Service has been the utilization of the radio for the dissemination of fishery market news. Following preliminary surveys and planning during the latter part of 1939, radio programs were inaugurated early in 1940, twice daily over station WWL at New Orleans and station WJJD at Chicago. A fishery program already being broadcast over station WHDH at Boston also was augmented with data made available each day from the Fishery Market News Service at Boston. The scripts for these programs are prepared in the local Fishery Market News offices and include timely data on production, receipts, or other factors of the movement or marketing functions of fishery commodities.

A sample radio script for broadcasting Wednesday morning May 29, 1940, as prepared by the Chicago office, follows:

The following information is made available through the cooperation of the Chicago Market News Service of the United States Bureau of Fisheries:

The Chicago Wholesale Market reports that on Tuesday, May 28, trading was generally light on all varieties with the exception of lake trout and whitefish.

These items were moderate in demand and the market remained fairly steady. The remaining varieties, especially roughfish, moved slowly for the most part and prices were generally low.

Receipts of new fresh-water species for 24 hours ending at 8 a. m., Tuesday, amounted to 128,000 pounds. Trucks transported 65,000 and rail express 63,000 pounds. Individual supplies of the more important varieties, and the market trend, were as follows: Carp, 12,000 pounds, 2 to 2½ cents, liberal supplies combined with a heavy carry-over from Monday kept the market price in a low or depressed condition. Lake herring, 15,000 pounds, 6 to 7, some 8 cents, supplies increased somewhat in comparison with the past week. Prices were moderate though evidencing a downward tendency. Lake trout, 35,000 pounds, 17 to 19 cents, supplies liberal, demand fair, prices remaining steady within the moderate range. Sheepshead, 7,000 pounds, 3 to 3½ cents, supplies plentiful for demand which was rather light. Prices remained low for hard meats and semi. Suckers, 3,000 pounds, 3 to 4 cents, supplies moderate to light, demand light and market prices low. White bass, 4,000 pounds, 7 to 7½ cents, supplies liberal, demand light and prices low. Whitefish, 8,000 pounds, pound net 18 to 20 cents, some at 21 to 22 cents, gill net 17 to 19 cents, supplies moderate, demand fair, prices remaining steady within the moderate to low range. Yellow pike, 9,000 pounds, 12 to 13 cents, demand rather light with prices remaining fairly steady.

The local cold-storage warehouses reported on Monday, May 27, a moderate movement taking place. Approximately 13,000 pounds were frozen, consisting largely of 9,000 pounds of blue and sauger pike; 1,000 pounds each of lake herring and sturgeon, and lesser amounts of filets, lake trout, and pickerel. Approximately 9,000 pounds were withdrawn from the warehouses, consisting mainly of 4,000 pounds of whitefish, 2,000 pounds of lake herring, and 1,000 pounds of lake trout.

Arrangements are now being made not only for market news broadcasts in the other cities where the Division maintains Fishery Market News offices, but also for the conduct of broadcasts to acquaint the general public with information of assistance in buying fish and shellfish, and on the nutritional value of these commodities.

The activities of each of the Division's Fishery Market News offices are here discussed in greater detail.

NEW YORK, N. Y.

The release of reports from the New York office of the Fishery Market News Service was continued during 1939 on a daily basis, with the exception of Sunday and holidays. There were no major changes in the form of these reports from those prepared and disseminated in the preceding year; however, the coverage of firms reporting their daily receipts to the Market News office has been expanded to include most of the hotel supply firms, as well as a majority of the local filleting companies. It also was found possible, through a detailed study of the office procedures, to further simplify certain of the practices and effect greater efficiency and speed, which are essential to a Market News office.

Persons in the fishery and allied industries in the vicinity of New York and elsewhere are placing more and more dependence upon this office as a source of market and other fisheries information. Not only has the mailing list for the daily reports continued to grow, but inquiries by telephone, mail, and by personal visit continue to increase. Persons from the fishery industry in particular avail themselves of the opportunity of making personal contacts with this office; however, other callers conferring with the New York staff for information essential to their activities include representatives of transportation agencies; food editors of publications; editors of trade and industrial magazines; press associations; foreign fishery experts, editors and

students; research students; representatives of other Federal agencies; and agents of city, State, and foreign governments.

During 1939 over 261 million pounds of fresh and frozen fishery products were received in New York. Wholesale dealers in fish and shellfish on the New York Salt-water Market reported to the New York Market News office receipts totaling 228,293,000 pounds, including incomplete data from filleting and hotel supply firms. In addition, imports received by steamship and entered at New York City amounted to 7,711,000 pounds. Detailed records covering the volume of fresh-water fishery products received at Peck Slip are not available, but it is estimated that these receipts totaled about 25 million pounds.

Of the fishery products received at the Salt-water Market, 219,607,000 pounds, or 96 percent, were shipped from domestic sources comprising 27 States and Alaska. The remaining 4 percent consisted of imports, not entered at New York City, from 6 Provinces of Canada and Newfoundland.

Of the Salt-water Market receipts, 122,867,000 pounds, or 54 percent, were transported by truck. Over 21 percent came by freight, 18 percent was landed by fishing craft, 6 percent arrived by express, and less than one-half of 1 percent by coastwise vessels. Domestic shipments were distributed almost exactly in the same manner as the total shipments. The fishery products from Canada and Newfoundland, however, arrived almost exclusively by rail; freight shipments constituting 55 percent and express 44 percent.

Massachusetts, with 57,381,000 pounds, or 25 percent, was the shipper of the greatest volume of fishery products to the Salt-water Market from a single geographical area, well over one-half being shipped by freight and most of the balance by truck. New York State was the second largest supplier, its shipments, practically all by truck, amounting to 22 percent. Fishing craft docking directly at the Salt-water Market were next, landing 18 percent. Following in order were New Jersey, with 7 percent; Florida, 4 percent; and Connecticut and North Carolina, each 3 percent.

Salt-water fish constituted 159,332,000 pounds, or 70 percent, of the total salt-water market receipts. Slightly less than one-half arrived by truck, the remainder being about equally divided between freight shipments and fishing-craft landings.

Of the salt-water fish, flounders—including blackbacks, dabs, gray sole, fluke, lemon sole, and yellowtails—were received in the greatest volume, 39,197,000 pounds, or 25 percent. One-half was shipped by truck and one-third by freight. Cod, with 20,186,000 pounds, or 13 percent, followed, the bulk arriving by freight. Next were haddock, 9 percent, mainly fishing-craft landings; mackerel, 7 percent, mostly truck receipts; and butterfish and scup, each 6 percent, largely truck receipts and fishing-craft landings.

Shellfish and miscellaneous fishery products accounted for most of the remaining 68,582,000 pounds, or 30 percent, four-fifths arriving at the Salt-water Market by truck. Hard clams in the shell, totaling 23,589,000 pounds, formed 34 percent of these products, and practically all the clams were transported by truck. The next most important shellfish items were shrimp, 22 percent, the bulk arriving by truck, and oysters in the shell, 13 percent, almost entirely truck receipts.

Receipts of fresh-water fish at the Salt-water Market were negligible; carp, the largest quantity as well as the most important species, arriving mainly by express.

Of the 7,711,000 pounds of imported fishery products received by steamship and entered at New York City, 3,914,000 pounds, or 51 percent, were classified as fish, and the remainder as shellfish and miscellaneous products. Sixty-one percent of the fish was frozen swordfish from Japan. Frozen sturgeon, 8 percent, mostly from Russia, and frozen smelt, 7 percent, largely from Newfoundland, were the next most important items.

Of the shellfish and miscellaneous fishery products, frozen spiny lobster tails, almost exclusively from the Union of South Africa, amounted to 37 percent. Next in importance were snails, 20 percent, mainly from Morocco, and frozen pulpi, 15 percent, mostly from Portugal.

Japan supplied 2,801,000 pounds, or 36 percent, of all the imports; about 90 percent of which were frozen swordfish. Imports from Portugal accounted for 10 percent, mostly frozen pulpi and frozen sepia. Morocco sent 9 percent, all snails; and Russia 7 percent, largely frozen sturgeon and frozen salmon.

The operations of the Fishery Market News office in New York City during 1939 were carried on and the daily report issued under the supervision of Wm. H. Dumont, Senior Fisheries Marketing Agent, assisted by F. J. Anderson, W. D. Glidden, Jr., and C. W. Morrison, Junior Statistical and Marketing Agents, Joseph Pileggi, Assistant Clerk, and Peter DiMarco, Junior Clerk.

BOSTON, MASS.

The Fishery Market News Service at Boston has been augmented by several new features. These have included the addition of data in the daily reports on the range of prices of fish sold through the New England Fish Exchange; the wholesale prices of fillets of important species; the volume of fish livers landed by fishing craft each day; and the daily movements and weekly holdings of frozen fish at Gloucester. Monthly summaries of receipts and prices, together with appropriate comparisons with the preceding months, also were inaugurated during the year. Of outstanding importance also has been the cooperation of the Market News Service in Boston in supplying current news to station WHDH to augment its radio program relating to fisheries. Particularly is this radio service of interest to fishing craft at sea, since it furnishes them with the latest available information on supplies and prices and consequently gives them a basis on which to determine the most suitable time for landing their fares.

As in the case of the Fishery Market News Service in New York, the service in Boston extends far beyond the release of its daily, monthly, and annual reports. Requests for specialized information available from this office are received daily by telephone, mail, and from individuals calling at the office. Visits to the office are convenient for persons in Boston's fishery industry, since the Fishery Market News office is located on Northern Avenue near the Fish Pier.

Landings at the Boston Fish Pier sold through the New England Fish Exchange during 1939 amounted to nearly 275 million pounds, valued at about \$7,700,000, which represented a decrease of 8 percent

in volume but an increase of 5 percent in value as compared with the landings in the preceding year. Decreased landings of cod, cusk, flounders, mackerel, pollock, rosefish, and whiting all contributed to the reduced receipts in 1939.

Higher average prices were paid for all varieties except flounders, mackerel, and swordfish landed by offshore vessels, and flounders and whiting taken by inshore craft. The average price paid for all varieties was \$2.79 per hundredweight, as compared with \$2.44 in 1938. The average price paid offshore vessels increased to \$2.84 from \$2.45 in 1938, while inshore craft received an average of \$2.40 as compared with \$2.36.

The activities of the Boston office and the issuance of the daily reports and monthly summaries were under the supervision of B. E. Lindgren, Senior Fisheries Statistical and Marketing Agent, who was assisted by J. J. O'Brien, Senior Clerk, and D. L. Knox, Junior Clerk.

For further statistical data on the landings of fish at Boston as well as at Gloucester and New Bedford, Mass., and Portland, Maine, see pages 312 to 346 of this report.

CHICAGO, ILL.

Outstanding among the newer developments in the Fishery Market News Service at Chicago has been the inauguration of a program for the wider and more rapid dissemination of market news information by radio. Two programs are broadcast daily providing shippers in the Great Lakes area with timely information regarding the market for fresh-water fish in both Chicago and New York. It is believed that this service will become increasingly valuable, permitting producers to gauge more accurately the proper volume of production and enabling shippers to determine when and where they should ship.

The large volume of data collected daily in Chicago constantly is being made available to the industry in new and more useful forms. A summary of the data in the daily reports for the preceding week is released each Monday, providing an opportune review of the market. The monthly summary has been expanded to include detailed current and comparative figures on market receipts with particular respect to the origin and method of transportation. Despite the added information and increased volume, the monthly summaries continue to retain their timeliness, each being available to the trade within 10 days after the close of the month covered. An annual summary also is prepared.

During 1939 the rail arrivals reported by express and freight terminals to the Chicago Market News office, and the truck receipts reported by wholesale dealers, amounted to 48,419,000 pounds. About 72 percent, 34,654,000 pounds, was shipped to Chicago from domestic sources—31 States and Alaska. The remaining 28 percent, which also included "in-bond" shipments from Alaska, was imported from 8 Canadian Provinces.

Thirty-six percent of the total, 17,315,000 pounds, arrived by rail freight, 34 percent by express, and 30 percent by truck. Domestic shipments reversed this order—37 percent being shipped by truck, 33 percent by express, and 30 percent by freight. Shippers of imported fishery products, due to the distant production areas, favored rail freight transportation; 50 percent being transported in this manner, 38 percent by express, and only 12 percent by truck.

The State of Michigan shipped to Chicago 6,219,000 pounds of fishery products amounting to 13 percent of the year's supply, mostly by express; followed by Wisconsin with 12 percent, mainly by truck; British Columbia with 11 percent, almost equally divided between express and freight; and Manitoba with 10 percent, largely by freight.

Fresh-water varieties of fishery products constituted 26,891,000 pounds, or 55 percent of Chicago's receipts; salt-water species 26 percent; and shellfish and miscellaneous classifications 19 percent. Fresh-water fish arrived in the greatest quantity by truck and express, salt-water fish by freight and express, and shellfish mostly by freight. Of the fresh-water fish 20 percent, 5,246,000 pounds, was lake trout, being shipped mostly from Michigan by express and from Wisconsin by truck. Thirteen percent was sauger, practically all from Manitoba and largely by freight; and 11 percent was whitefish, mostly from Michigan by express.

Halibut, with 6,725,000 pounds, was shipped to Chicago in greater volume than any other item, and dominated the salt-water fishery supplies. It furnished 54 percent of the 12,476,000 pounds, as compared with 16 percent for rosefish fillets, the next most important variety. There were slightly more fresh than frozen halibut, British Columbia sending the bulk of each classification. The fresh fish were shipped by express and the frozen fish by freight. Rosefish fillets came almost exclusively from Massachusetts, by far the greater amount by truck.

Shrimp, with 6,398,000 pounds, followed halibut in volume and constituted 71 percent of the 9,052,000 pounds of shellfish and miscellaneous varieties. Louisiana shipped about two-thirds of the shrimp and Texas about one-third, nearly all being transported by freight.

The activities of the Chicago office during 1939 were supervised by E. C. Hinsdale, Fisheries Marketing Agent, assisted by B. F. Lucarz, Junior Clerk.

SEATTLE, WASH.

During 1939 the Seattle reports were expanded to include data each day on the receipts and prices of Alaska halibut and troll-caught salmon at Ketchikan, Juneau, Petersburg, and Sitka and weekly receipts at Wrangell. Bureau representatives transmit these data through the cooperation of the Army Signal Corps. Additional coverage during 1939 was obtained by arrangements with the Canadian Government, through the Halibut Marketing Board at Vancouver, B. C., to receive daily information on the sales of the halibut fleet over the Vancouver fish exchange. With daily receipts and prices now included for these ports, the Seattle market news report presents a current picture of fish receipts throughout Southeastern Alaska, British Columbia, and most of Washington. Plans are now under way to include daily receipts of troll-caught salmon and halibut landings at Eureka, Calif., during the 1940 season.

Another addition to the Seattle reports during 1939 was the development of a weekly summary of fish receipts at Seattle, and a written summary of market conditions, trends, and comparisons with the preceding week's receipts. These summaries are issued every Tuesday and cover the week ending the previous Saturday.

During 1939 it was also possible to obtain and publish weekly statistics on the pack of canned salmon in Alaska, British Columbia, and

Puget Sound, with comparative data for the same period during previous years. Unsold stocks and prices of canned salmon also are reported monthly, with comparative data for the preceding year. Statistics further are obtained and published showing the landings of pilchard in British Columbia, Washington, and Oregon, on a weekly basis. Plans to include similar data for California during the 1940 season are now being made.

Fresh-fish landings at Seattle during the 12-month period ending December 31, 1939, amounted to 47,250,000 pounds, valued at approximately \$3,225,000 to the fishermen. This represented a decrease of 3,750,000 pounds as compared with 1938, but a decrease of only \$50,000 in value. The principal decreases during 1939 were noted in the receipts of chum, or fall salmon, at Seattle, which declined over 3½ million pounds, and halibut, which decreased approximately 1 million pounds, as compared with 1938.

During 1939 the Seattle office was operated and the daily report was issued under the general supervision of V. J. Samson, Fisheries Statistical and Marketing Agent, assisted by K. G. Nordquist, Junior Clerk.

For further statistical data on the landings of fish at Seattle see pages 506 to 511 of this report.

JACKSONVILLE, FLA.

The Fishery Market News Service was inaugurated in Jacksonville early in 1939. The daily report carries the commercial production of fishery products for the majority of the important producing areas in Florida; lists the outgoing shipments by motortruck, rail freight, and express; quotes New York receipts and prices for southern varieties of fish; and summarizes Boston landings and first sales prices. The cold-storage movements and holdings in a number of warehouses in the South Atlantic States are included weekly. A detailed tabulation of the pack of shrimp produced under the supervision of the Seafood Inspection Service of the Food and Drug Administration also is incorporated. The activities of the industry, as reported during the preceding week, are summarized, reviewed, and carried each Monday.

Florida annually produces approximately 70 million pounds of food fish, about 40 percent of which is mullet. Spanish mackerel, red snapper, grouper, bluefish, kingfish, and spotted sea trout are other important marine varieties, while catfish and bullheads are the predominating fresh-water species. The annual shellfish production approximates 20 million pounds. Over one-half of this total consists of shrimp, and crabs make up the major portion of the balance.

Food fish and shellfish are handled by 273 producer-wholesalers in 97 localities. Of the total, 211 produce salt-water fish at 76 localities; 10 producing 1,000,000 pounds or more yearly, 15 producing from 500,000 to 1,000,000 pounds, and 186 producing less than 500,000 pounds. Fresh-water fish are produced by 29 producers at 14 localities, shucked oysters by 42 producers at 20 localities, raw shrimp by 28 producers at 9 localities, crab meat by 24 producers at 18 localities, dry salt fish by 21 producers at 12 localities, sea crawfish by 18 producers at 4 localities, bay scallops by 13 producers at 9 localities, and spiny lobster meat by 3 producers at 2 localities. In addition, at a few localities, stone crabs, conchs, hard clams, green sea turtles, and

soft-shell turtles are produced. There are 8 canning plants at 6 localities packing shrimp, oysters, hard clam products, turtle meat and soup, coquina broth, and frog legs. There also are 5 menhaden meal and oil plants and several shark products and shell novelty companies.

Shipments of fishery products from Florida are made by motortruck, rail freight and express; only nominal quantities being transported by steamship. It is estimated that approximately 59 percent of the fresh fish is shipped in bulk, 35 percent in barrels, 5 percent in 100-pound boxes, and 1 percent in containers of miscellaneous sizes.

After excluding August and September, for which records are not available, truck shipments reported from the Atlantic coast of Florida, and lower Gulf coast as far west as Cedar Keys, totaled about 18 million pounds, or an average of 2,250,000 pounds monthly during the period March to December, 1939.

Rail shipments and passings covering virtually all movements of fishery products by this type of carrier from the Peninsula of Florida, with the exception of some express shipments from middle and upper Gulf coast sections, totaled, during the 10 months from March to December, 1939, 115 carloads of fresh fish, 8 carloads of frozen fish, 1 car of frozen shrimp, and 32,396 express packages of unclassified fishery products. Of the 115 carloads of fresh fish, 59 were shipped during December.

During the first 6 months of the shrimp season starting July 1, 1939, the 40 canneries under the supervision of the Seafood Inspection Service of the Food and Drug Administration operated an average of 63 days each and packed a total of 1,048,754 standard cases of shrimp from 56,512,000 pounds of raw shrimp. The pack was divided into 824,000 cases of wet-pack shrimp in 5 $\frac{3}{4}$ -oz. tins, 179,000 cases of dry pack shrimp in 5-oz. tins, about 25,000 cases in miscellaneous sizes of tins, and 21,000 cases in glass containers.

During 1939 S. C. Denham, Fisheries Statistical and Marketing Agent, supervised the Jacksonville Fishery Market News office, assisted by J. E. Borum, Junior Clerk.

NEW ORLEANS, LA.

The work of organizing the Fishery Market News Service at New Orleans was started in October 1939, and the first daily report was issued on January 5, 1940. New Orleans is not important in itself as a production center for fishery commodities, but it is the largest centrally located city in the Gulf States and this area is important in the production and distribution of many fishery commodities, particularly shrimp. Considerable dependence is placed upon the market news reporters for furnishing daily information on the status of the fisheries along the Gulf coast to the Market News office in New Orleans. These market news reporters, who are employed on a part-time basis, are located in important producing centers in Alabama, Mississippi, Louisiana, and Texas.

The first section of the daily report issued by the New Orleans office includes information on the production of fish and shellfish in the Gulf producing area. This section is followed by information on carlot rail shipments of fresh and frozen fishery commodities from the Gulf States; express shipments of these commodities from New Orleans; passings of fishery products through New Orleans; rail

arrivals in New Orleans; prices in the New Orleans French market; and marine weather and river forecasts which are furnished by the Weather Bureau. The report also includes daily prices at New York and Chicago for species of local interest; daily cold storage movements and holdings of shrimp; weekly cold storage movements and holdings of all fishery commodities in the Gulf States, and of shrimp in other areas; weekly data on the pack of shrimp by canneries operating under the Seafood Inspection Service of the Food and Drug Administration of the Department of Agriculture; and a weekly summary of the production, shipments, and prices of Gulf fishery products.

Late in January 1940 arrangements were completed with radio station WWL in New Orleans for the broadcasting twice daily of summarized market information. These broadcasts have enabled the industry and allied interests to obtain market information earlier than through the mimeographed releases distributed by mail. Considerable interest has been manifested in the inauguration of this new service, and it has been followed by the establishment of radio market news services in other cities in which the Bureau has Market News offices.

While many species of fish and shellfish contribute to the important fishery industry of the Gulf States, shrimp is by far the most important species, both with respect to volume and value. Although the bulk of the catch of shrimp is canned, large quantities also are marketed either fresh, dried, frozen, or "cooked and peeled." There is a considerable concentration of the shrimp canning industry at Biloxi, Miss., and in the area surrounding Houma, La., both of which are within a 100-mile radius of New Orleans. A large part of the shrimp consumed in New Orleans and its adjacent territory is landed in the Buras, La., area, near the mouth of the Mississippi River. This shrimp is usually sold "heads on," due to a local preference for it in this form. On the other hand, fresh shrimp handled by dealers in the vicinity of Morgan City and Berwick, La., is prepared as "headless" shrimp for the northern markets. The shrimp-drying industry, which is centered in Terrebonne and Jefferson Parishes, south of Houma, commonly utilizes shrimp which is small or mixed in size. A large part of this product is normally exported to the Orient. Shrimp is frozen in several localities along the Gulf coast, the most important freezing centers being New Orleans and Galveston, Tex.

Considerable quantities of fresh shrimp are utilized in the production of shrimp meat or as "cooked and peeled" shrimp. This product is normally packed in 5-pound cans, iced, and shipped to both local and distant markets. It is produced principally in the region between Berwick, La., and Biloxi, Miss.

The oyster and crab industry of the Gulf coast is also of importance. Large quantities of oysters are canned, some sold in the shell, and the balance shucked. After cooking crabs, the meat is usually removed and packed in cans, iced, and shipped to local and northern markets. One cannery in Louisiana is engaged in the processing of crab meat in hermetically sealed cans. There also is a considerable fishery for soft crabs in the vicinity of New Orleans, although it is primarily for nearby markets.

The production of fish in Louisiana and Mississippi is mainly of local interest, with only small quantities being shipped to other markets. However, larger quantities of fish are produced in Alabama

and considerable quantities are shipped into other Southern as well as Northern States.

The New Orleans Fishery Market News office is supervised by C. E. Peterson, Fisheries Statistical and Marketing Agent, who is assisted by R. A. Hoerner, Junior Clerk.

TECHNOLOGICAL INVESTIGATIONS

The purpose of the technological investigations of the Bureau of Fisheries is to increase the economic value of the fishery harvest by more complete and efficient utilization. Toward this end, studies are conducted of the technical phases of fish production, processing, and marketing. In planning these studies efforts are made to select those which have a broad fundamental application.

An important problem facing the fishery industry, and common to many other food industries, is that of seasonal gluts and other irregularities of production. This problem has both its economic and technological aspects. From the economic standpoint the influence of these irregularities on distribution and prices is quite obvious. However, it may be that through further technological research new methods of preserving and storing fishery products may be developed which will assist in adjusting distribution of fishery products to the ability of the markets to absorb them. Such control of the flow of products to the market would tend to eliminate ruinous fluctuations in prices. Therefore, research is being conducted on the refrigeration of fish and its various ramifications, including the role of the individual cold-storage locker in effecting the removal of surplus fish from the market.

The maintenance and improvement of quality in byproducts is another problem of primary concern to the fishery industry which is receiving continuous study. In this connection it is interesting to note that technological research was responsible for improvement in the quality of fish meal, and shifted this product from the fertilizer field to the field of animal foodstuffs, the latter being a more profitable outlet.

A further problem facing the fishery industry is that relative to grading and standardization of fishery products. Through the interests of a section of the industry, companion bills were introduced in Congress (H. R. 6130 and S. 2380, 76th Cong.) to provide for a mandatory or compulsory inspection and permissive or voluntary grading service for fish and fishery products. Hearings were held during the early part of 1940 on H. R. 6130 by the Committee on Merchant Marine and Fisheries of the House of Representatives, but the testimony adduced by witnesses at the hearings indicated that the provisions of the bill had rather far-reaching consequences, and the bill was not reported out by the committee. Later, however, another bill was introduced in the Senate (S. 3576) which would limit the inspection and grading services to fish to be frozen and frozen fish. This was still pending before the Senate Committee at the time this report was prepared.

The value of technological investigations to the welfare of our people does not end with aiding the fishing industry, for other American industries also are making extended use of the results of this work. For example, the Bureau of Fisheries pioneered in this country in the

development of quick-freezing methods as adaptable to the preservation of fishery products. These methods now have widespread application in the preservation of a large number of other foods such as fruits, vegetables, poultry, and meat. In another instance the Bureau led in the search for new sources of vitamins A and D, and found that oils from many species of fish are rich in these vitamins. A direct outgrowth of these investigations is the manufacture of high-vitamin oils from the livers and viscera of various species of fish such as halibut, tuna, and swordfish. Formerly, only cod livers were used for this purpose. This has resulted not only in raising the income of the fishery industry through the sale of products heretofore wasted, but it has also been a boon to the drug industry. Of most importance, however, is the contribution of this work to the health of our people by providing an economical and convenient source of vitamins A and D.

LABORATORIES

The Division carried on its technological studies during 1939 under the direction of Dr. J. R. Manning, Senior Technologist, until his death in August, and since that time under the direction of J. M. Lemon, Technologist. These studies were conducted at the Bureau's laboratories located in Washington, D. C., College Park, Md., and Seattle, Wash. In addition, members of our technological staff cooperated in the conduct of investigations in the laboratories of the University of Maryland and Maryland State Agricultural Experiment Station at College Park, Md.; the University of Washington, Seattle, Wash.; and Washington State College, Pullman, Wash.

The following personnel, in the various laboratories listed below, contributed to the technological investigations described in the ensuing pages of this report:

College Park, Md.—J. M. Lemon, Technologist in Charge; W. T. Conn (deceased) and S. R. Pottinger, Assistant Technologists; Dr. H. W. Nilson, Assistant Pharmacologist; C. F. Lee, W. B. Lanham, Jr., A. L. Fowler (resigned), and W. H. Baldwin, Junior Chemists; J. F. Puncochar and Dr. R. J. Reedy, Junior Bacteriologists; H. E. Crowther, C. E. Swift, and R. H. Flowers, Research Associates; L. F. Ortenzio, H. F. Kraybill, N. G. Sprague, L. J. Barton, R. C. Dawson, Research Fellows; and Roscoe Dwiggin, J. D. Rollow, Ned Oakley, D. J. Bowman, and C. M. Forsythe, Student Assistants.

Seattle, Wash.—R. W. Harrison, Technologist in Charge; M. E. Stansby, Assistant Technologist; and L. O. Simenson, William Clegg, Robert Carlton, Marie Sater, William Winberg, and Leslie Lowen, Chemical or Research Assistants.

Washington, D. C.—N. D. Jarvis, Associate Technologist.

COLLEGE PARK, MD.

Additional facilities for scientific study of problems concerning the fishing industry on the Atlantic coast will be provided the Bureau through an allotment of \$100,000 from the Public Works Administration for the construction of a technological laboratory building on the campus of the University of Maryland at College Park.

The plans contemplate erection of a building which will permit consolidation of the Bureau's technological laboratories which are

now in operation in various buildings of the university, and in the Commerce Building at Washington, D. C. This will provide unified facilities for the study of problems facing the fishery industry of the Atlantic coast.

The work of the College Park Laboratory is in three principal fields: First, chemical and engineering studies on the preservation and utilization of fishery products; second, nutritional and pharmacological studies with fishery products; and third, bacteriological and sanitation studies involving fishery products.

SEATTLE, WASH.

Various improvements were made at the technological laboratory at Seattle in order to increase our facilities for chemical studies in fishery products. Among these were the construction and installation of a special fume hood for exhausting inflammable solvent vapors; a 4- by 8-foot chemical laboratory table with center sink, water, gas, and electrical services; a 2- by 10-foot wall-type titration and apparatus table; and several work tables.

KETCHIKAN, ALASKA

In view of the necessity for technical research from the national standpoint, plans have been prepared by the Bureau for the establishment of a fully equipped fishery products laboratory in Ketchikan, at a cost of \$50,000, made possible by an allotment from the Public Works Administration. This laboratory will be maintained in cooperation with the Territory, a sum of \$20,000 having been appropriated by the Territorial Legislature for this purpose. The Territorial contribution will be administered by the Fisheries Experimental Commission appointed by the Governor of Alaska in accordance with the provisions of the Territorial Act. Establishment of a laboratory of this type in Alaska will fill the pressing need for a greater fund of technical knowledge regarding the utilization of the fishery harvest of Alaska and will, in effect, double the Bureau's facilities for technological research on the Pacific coast.

The research program of the Alaska Laboratory will be concerned with increasing the utilization of fishery waste materials now being discarded; improvement of methods for handling, preserving, and marketing the various species of fish and shellfish now taken commercially for consumption as food; and the development of new and useful products from species of fish and shellfish present in Alaskan waters which heretofore have not been commercially utilized to any extent; all having the primary aim of increasing the value of the fishery industries in the Territory and stimulating and extending employment.

MAYAGUEZ, P. R.

As indicated previously, plans also call for the establishment of a fishery products laboratory in Mayaguez, made possible by an allotment of \$25,000 from the Public Works Administration. Here studies will be conducted on fish production, preserving, and marketing, as related to the fishery industry in Puerto Rico and the Virgin Islands.

PRESERVATION OF FISHERY PRODUCTS FOR FOOD

Studies on this phase of fishery technology are conducted in the field of chemistry, bacteriology, and engineering. These studies are for the purpose of improving the quality of fishery food products; development of scientific tests for judging the quality of fishery products; development of methods for improving the sanitary conditions in fish-packing plants; and the development of additional fresh, frozen, cured, and canned fish foods. During the past year there have been many demands on the Bureau for research on problems of this type. This is indicative of the desire of the fishery industry to place on the market a food product which will meet the most exacting requirements as to quality and wholesomeness, and of the desire to make the most effective use of the fishery harvest. Not only has the fishery industry been instrumental in having these studies conducted, but it has been quick to adapt to commercial practice many of the recommendations of the Bureau resulting from this work. During 1939 studies on the preservation of fishery products for food were conducted in the Bureau's technological laboratories at College Park, Md., Seattle, Wash., and Washington, D. C.

PREPARATION OF CRAB MEAT

Bacteriological and chemical studies of the commercial preparation of the meat of the blue crab (*Callinectes sapidus*), which were begun in 1938, were continued during the past year. These studies were conducted for the purpose of developing more rapid chemical and bacteriological tests for judging the quality of crab meat, for exploring new methods for the packing of crab meat, for effecting improvements in plant equipment, and for more efficient and sanitary handling of crab meat. Following the completion of the work at a temporary laboratory in Crisfield, Md., where bacteriological investigations of the various operations required in the preparation of crab meat were made under actual plant conditions, the laboratory equipment was returned to the Bureau's laboratory at College Park, Md., where additional work was conducted.

Studies to develop a more rapid chemical test for determining the quality of crab meat were conducted on the product as stored in ice under the same conditions as practiced commercially. The following chemical reactions were given consideration as a basis for possible tests for detecting freshness in the crab meat: Degree of acidity or alkalinity (pH), ammonia formation, hydrogen sulfide formation, and the electrometric test for relative freshness.⁴ In studying the degree of acidity or alkalinity of the crab meat, it was found that the pH of the "lump" or white meat increased from about 7.2 in the fresh product to about 7.9 in the stale meat, while the claw meat showed very little variation in pH between the fresh and the stale product. This indicates that the pH test has promise of commercial application at least on the white meat. In studying the formation of ammonia in the crab meat under storage, it was found to increase steadily to a value of about 400 parts per million for white meat and 500 parts per million for claw meat, when a stale odor was evident. This reac-

⁴ The electrometric test was developed for testing the quality of fish such as haddock by technologists of the Bureau of Fisheries. The details of this test are contained in "An Electrometric Method for Detection of Relative Freshness of Haddock," by Maurice E. Stansby and James M. Lemon, U. S. Bureau of Fisheries. Industrial and Engineering Chemistry, Vol. 5, pp. 208-211, May 1933.

tion also has promise of commercial application. The formation of hydrogen sulfide could not be detected in white meat and only a trace in claw meat while still in an edible condition. Therefore, this reaction seems to have no value as a test for freshness. The results obtained by the electrometric test for freshness as now operated cannot be relied upon when applied to crab meat because under commercial practice the crab meat is cooked prior to storage and sale.

Studies to develop a bacteriological test for judging the quality of crab meat were continued at Crisfield, Md., where a large number of cultures were prepared of the various types of bacteria found in that locality. A study of the differential cultural characteristics of the organisms so isolated is now in progress.

Various methods were studied for processing crab meat to retard spoilage. One showing promise of possible use as a precautionary measure to insure the elimination of *Bacillus coli*, and also to reduce the total number of bacteria in the meat, consisted of the pasteurization of the meat after packing in 1-pound cans. It was found that by heating the packed meat for a period of 10 minutes in a steam cooker at a pressure of 5 pounds per square inch, all *B. coli* which had been experimentally inoculated into the meat were destroyed. The total number of bacteria also was lowered considerably as a result of this pasteurization, and the keeping quality of the meat improved as compared with that of the commercially prepared product. The change in the appearance of the meat was negligible, and only a slight decrease in weight occurred.

In connection with the chemical and bacteriological studies relative to the testing and packing of crab meat, an engineering and sanitary study was made of the physical equipment in crab-picking plants located in the area between Maryland and Louisiana. This work was conducted for the purpose of securing information on the most efficient labor and handling practices, and to obtain data on technique for maintaining the plants in a sanitary condition. Following the study, a sanitary code was developed for the preparation of crab meat in cooperation with the industry and at the request of a group of crab packers and other interests. This code was presented to the entire crab-picking industry in the Chesapeake Bay area for its guidance. It is understood that this has been adopted by the majority of the crab-packing plants in this area and has resulted in placing a product of higher quality on the market.

Following is the full text of the code:

SANITARY CODE FOR THE PREPARATION OF CRAB MEAT

I. BUILDINGS AND EQUIPMENT.

a. *Walls*.—Walls, partitions, and ceilings should be as smooth as possible, with no crevices to retain dirt. They should be coated with a washable paint. The picking and packing rooms should be painted white; other rooms should be painted a light color. All openings in walls should be screened and ratproofed.

b. *Floors*.—All floors should be constructed of concrete laid in a single piece. The surfaces should be smooth and waterproofed to permit easy cleaning and should be inclined slightly in the direction of the drains to insure complete drainage of all waste water. Drains should not be simply holes, but should be fitted with drain pipes that have been ratproofed. These drain pipes should either lead into a sewer or should drain out into the water. In plants that are constructed over the water on pilings, floors of wood are permissible if the pilings are of insufficient strength to support a concrete floor. However, provisions should be made for ratproofing and proper drainage.

c. *Screens*.—All doors, windows, and ventilators should be screened. Screen doors should close automatically and should fit tightly for protection against flies, other insects, and vermin. As an extra precaution, flypaper or a non-poisonous insect spray should be used to destroy flies inside the plant.

d. *Toilets and hand-washing facilities*.—Toilets should be of sanitary construction and be of the type approved by the State board of health. Privies should be located at least 50 feet from the plant and be so placed that drainage from them will not contaminate the water supply if the supply is from wells. Toilet paper should be provided at all times.

Facilities for washing hands should be provided in the picking room and the packing room. Running water, liquid soap, paper towels, and a chlorine solution of at least 100 parts per million available chlorine, should be available at all times.

e. *Plant layout*.—Separate space should be provided for each of the various operations. Picking and packing should be done in separate rooms. The cooking room should be separated from the cooling room. A dressing room should also be provided and the hanging of garments in any other place should be strictly prohibited.

f. *Lighting and ventilation*.—Adequate light and ventilation should be provided. Windows should be large and numerous. If windows are obstructed, skylights should be provided. Artificial lights for night operation should be so placed as to provide for even illumination.

g. *Cooking*.—The space provided for cooking should be well screened. Retorts should be provided with vents to permit escape of air.

h. *Cooling*.—Cooling rooms should be used for this purpose only. They should be well screened and rat-proofed. The retort baskets should not be allowed to touch the floor. They should be suspended from the ceiling or allowed to rest on supports from the floor. The supports should be cleaned and sterilized before coming into contact with the baskets. If cooling platforms are used, they should be covered with metal, preferably noncorrosive, with all seams soldered. Low sides should be provided to prevent the crabs from falling from the platform. The surface of the cooling platform should be inclined slightly to permit thorough drainage. Crabs falling to the floor during the cooling process should not, under any circumstances, be replaced into retort baskets or on cooling platforms. They should be either reprocessed or thrown away.

i. *Picking and packing tables*.—Table tops should be covered with metal. Non-corrosive metal is recommended for covering tables. Concrete should not be used for table tops due to porosity, cracking, chipping, etc. Corroded or rusted table tops should not be used; tops should not be painted. Tables should be so constructed as to permit easy disposal of waste. They should be inclined slightly to provide for drainage. Tables next to walls should have the metal covering extend at least 10 inches above the table along the wall.

j. *Stools*.—Great care should be used to provide the proper type of stool or chair. Stools without backs are preferable to chairs, in that they are easier to clean and sterilize and also minimize hand contacts.

k. *Picking pans*.—These should be provided only for holding the 1-pound shipping cans during picking.

l. *Picking knives*.—These should be of one-piece construction, preferably of stainless steel.

m. *Blocks*.—Blocks used for cracking claws should be of smooth metal. Wooden blocks are not recommended.

n. *Cupboards or cabinets*.—These should be provided for storage of sterilized utensils when not in use. They should be constructed with screen doors and be provided with metal shelves.

II. OPERATIONS.

a. *General cleanliness of plant*.—For sterilizing the equipment, either steam under pressure or a chlorine solution should be used. Steam, if available, is preferable to chlorine for sterilizing purposes. Before sterilizing the equipment, all particles of shell, meat, viscera, etc., should be removed with soap and water. If chlorine solution is used for sterilizing, it should contain from 100 to 200 parts per million of available chlorine. Directions for making this strength solution will be found on the containers in which the concentrated chlorine is sold.

1. When cleaning the cookers, all shell, crabs, and foreign matter should be removed. The cookers should be cleaned with water under pressure at the close of operations each day.

2. Cooling platforms and bins should be cleaned and sterilized before use and after each batch of cooked crabs is exhausted.
3. Shovels used for handling cooked crabs and ice should be used for these purposes only. They should be cleaned and sterilized before use and should not be allowed to touch the floor. When not in use they should be kept either on the cooling platform or in the ice bin. Separate shovels should be used for each purpose. It is highly recommended that the blades of the shovels be submerged in a chlorine solution when not in use.
4. Containers used for carrying cooked crabs to the pickers should be cleaned and sterilized at least three times a day.
5. Tables used for all purposes should be cleaned and sterilized before use. Picking tables should be washed and sterilized after the supply of cooked crabs of each picker is exhausted. Packing tables should be washed and sterilized at least three times a day.
6. Picking utensils, such as knives and pans, should be cleaned and sterilized after each lot of crabs in front of the picker is exhausted. Cans in which the meat is picked should be rinsed in chlorine solution before use.
7. Hand contacts with stools should be avoided. Stools should be cleaned and sterilized at the end of operations each day and before use the next day.
8. Facilities for washing the hands should be segregated from facilities provided for washing picking utensils. Separate lots of chlorine solution should be provided for rinsing the hands and sterilizing picking utensils. These solutions should be made up fresh at least three times a day.
9. Ice crushers, bins, and boxes should be cleaned and sterilized before use and also at the end of operations.
10. Floors should be kept free from waste and should be cleaned thoroughly at least once daily. Steam or water under pressure should be used in cleaning.

b. *Personal cleanliness.*

1. No person afflicted with any communicable disease should be employed in a crab-meat plant. Persons with wounds or sores on the hands should not be allowed to pick crab meat. Periodic check-ups should be made by health authorities or physicians and those persons in good health should be issued approved health certificates.
2. All persons employed in crab-meat plants should wear clean aprons and wearing apparel. Clean, washable caps or hair nets should be worn.
3. Before visiting the toilet, employees should remove aprons and leave them in the room where they are employed. Hands should be washed thoroughly with soap and water followed by a rinse in chlorine solution before starting work and after each absence from the picking room; also after each lot of crabs in front of the picker is exhausted. A person should be designated to see that this provision is strictly followed.

c. *Preparation of the meat.*

It should be stressed that crab meat, as prepared and shipped, should at all times be free from pollution.

1. Crabs should preferably be picked immediately, or as soon after cooking as is practicable. It is to be emphasized that cooked crabs which fall to the floor or otherwise come into contact with the floor should be either reprocessed or thrown away. If this precaution is not taken, the entire batch of crabs may become contaminated.
2. Crabs should be delivered to the picking tables by a person assigned to that duty. When trimmed crabs are washed for the purpose of removing fat prior to picking, the washing should be done with water under pressure. This should be done at a central point in the plant.
3. Crab meat should be picked directly into new and unused shipping cans in preference to picking pans. This will tend to reduce the number of hand contacts with the meat. The cans should rest in a clean pan while being filled. A person should be assigned the duty of collecting the cans from the pickers as they are filled. The nesting of cans one on top of the other at any time before delivery to the packing room should be avoided. Pickers should use greater care in picking the meat in order to minimize the amount of shell and cartilage in the meat.

4. After the filled cans are delivered to the packing room they should not be permitted to accumulate on the packing table. The practice of dumping the meat out of the can and picking it over to remove cartilage and shells is not recommended. Cans of crab meat should not be nested one on top of the other prior to packing in ice. If the meat is to be washed before icing, this should be done in the can by means of a sprinkling device or spray over a perforated table top or screen. The water used for this purpose should be free from pollution.
5. Crab meat should be iced promptly. The ice prior to crushing should be thoroughly washed on an elevated metal-covered platform. Barrels or ice chests should be thoroughly cleaned and sterilized before use and should be so perforated as to allow proper drainage.

d. *Disposal of waste.*

1. In front of each picker an opening should be provided in the table for the disposal of waste. A large metal container should be placed under each opening. This method will prevent the scattering of waste over the floor. Pickers should not empty these containers; this should be done by a person assigned to this duty. Containers should be washed thoroughly and sterilized each time they are emptied. In no instance should waste be allowed to remain in the containers overnight.
2. In localities where the waste is dried for use in fertilizer, provisions should be made for storage of this waste at the plant. It should be stored in concrete or wooden metal-lined bins which are under cover outside the plant and which are adequately protected from flies and vermin. Waste should be removed at least once a day and should not be allowed to remain in the bin overnight. The bins should be thoroughly cleaned and disinfected after removal of the waste.
3. If drying facilities are not available, waste should be stored as above and disposed of daily by dumping into deep water where there is sufficient current to scatter the waste, or perhaps a more satisfactory disposal should be made of the waste by its use as a fertilizer by local farmers, unless sufficient quantities of waste are available for mechanical reduction.

NOTE.—It is suggested that a competent person be employed at each plant to see that these recommendations are carried out. He should supervise the washing of hands and equipment and be generally on the alert to correct any insanitary conditions that may occur.

PREPARATION OF FRESH OYSTERS

This study was continued during the past year through the use of additional funds obtained by the Division at the instance of members of the oyster-packing industry. A temporary field laboratory was established in the City Hall at Norfolk, Va., through the cooperation of the city health authorities. Technologists stationed at this laboratory made an extended study of commercial practices in the local oyster-packing plants and aboard oyster-fishing boats, and of the condition of oysters as found on the growing beds in that vicinity. One of the primary purposes of this study has been to determine the type of organism responsible for pink discoloration of certain shipments of oysters, and its prevalence. It was found to be an organism commonly known as "pink yeast," and that it was present in fairly large numbers in the mud on the oyster beds and on the equipment on the boats and in the packing plants. The best way to check the spread of this yeast is to wash contaminated equipment thoroughly with fresh water and then spray with a 3 percent solution of formaldehyde.

A survey of oyster-packing plants operating on the North Atlantic seaboard was made for the purpose of obtaining data on the commercial handling of oysters, and technique for maintaining the plants in a sanitary condition. As a result of this work a sanitary code for the

handling of fresh oysters was prepared and presented to the oyster packers at the 1940 annual meeting of the Association of Oyster Growers and Dealers of North America. This code is similar to that for the packing of fresh crab meat which appears on pages 213 to 216 of this report.

Toward the end of the year, the equipment at Norfolk was transferred to the College Park (Md.) Laboratory. Here the following phases of this problem are being considered and will be reported later: (1) Incidence of the pink yeast in fresh, commercially shucked oysters; (2) effect of various chemicals as germicides specific for the pink organism; (3) continuation of the studies on changes in hydrogen-ion concentration (pH) as oysters age, as a possible test for judging quality; (4) effect of washing and blowing on the mineral content of oysters; and (5) studies on containers for packaging oysters.

HANDLING OF FRESH FISH ABOARD FISHING VESSELS AND AT PACKING PLANTS

In recent years difficulties have been experienced in maintaining the quality of fish caught by the large otter trawlers operating from New England ports and handled on the Boston Fish Pier. From time to time, these difficulties have resulted in considerable financial loss to wholesale dealers. As a result, the Massachusetts Fisheries Association, Boston, Mass., and the Fishery Advisory Committee of the Department of the Interior requested the Bureau of Fisheries to conduct studies of this problem in order to recommend changes or improvements in existing methods which would result in the marketing of a product of higher quality. This problem was studied during the summer and fall of 1939.

Investigators accompanied the otter trawlers to observe the actual commercial methods for the capture of the fish and for handling them aboard the trawler. Information was obtained especially on the temperatures of the waters wherein the fish were caught; temperatures of the fresh-caught fish, and of the fish as stored in the hold; effect of the pressure on the various layers of fish as packed in the storage pens; effect of sanitary measures in retarding deterioration of the stored fish; and the applicability of the electrometric test for judging the quality of the stored fish. Studies also were made of the practices used in unloading the catch at the Boston Fish Pier and of the handling of the fish in the packing plants.

Methods for eliminating the use of pitchforks aboard vessels have been suggested by the investigators. These also include suggestions made by previous investigators and cover the use of wire-bladed (potato) shovels for moving fish from one place to another on the vessel, a basket arrangement in the washing boxes on deck which can be raised and tipped to slide the fish from the boxes, and a chute leading from the washing boxes for lowering the fish to the pens in the hold.

Methods suggested for eliminating the use of pitchforks in the unloading process include: (1) Substituting wooden rakes for pitchforks in removing the fish from the pens to the unloading baskets; (2) discharging the fish from the baskets to a weighing box fitted with a trapdoor at one end; (3) placing the weighing box on a raised platform on the pier; and (4) removing the fish from the weighing box to a cart by tipping the box at such an angle that the fish slide through the trapdoor into the cart.

It was found that the pens in the hold of vessels having mechanical refrigeration are constructed in such a manner that cold air cannot circulate around them. Thus the fish in the topmost layers may be frozen upon arrival at port, while the lower layers remain at a temperature conducive to rapid deterioration. To overcome this, the investigators suggested that the pens be so constructed as to allow an open space of about 2 inches around all sides of each individual pen.

It was found that one of the major factors contributing to deterioration of the fish is the physical damage from punctures made in the flesh by the use of pitchforks in handling the fish aboard vessels, in unloading at the pier, and, in some instances, in the packing plants. Physical damage also is caused by the pressure of large pieces of ice which bruise and rupture the flesh when fish are stored on the vessel in deep pens, or bins. This pressure was found to be as high as 2.5 pounds per square inch on the bottom layer of fish in a pen 5 feet deep. Bacterial contamination of the flesh is made easily possible through the ruptures and bruises caused by these practices. In pens 30 inches deep, the pressure on the lower layer was 1 pound per square inch and bruising was not excessive. It appears, therefore, that the storage pens should be as shallow as possible and that finely crushed ice should be used for refrigeration of the fish while in the pens.

Studies on handling the fish in the packing plants reveal the need for instituting improved sanitary practices. Toward this end, the investigators prepared a set of suggestions which was distributed among the owners of the packing plants. These suggestions are similar to those for the crab-packing plants as outlined on pp. 213 to 216 of this report.

During recent years some of the fish-packing firms in New England have been candling fish fillets to detect those which are unmarketable. The method used in Boston caused considerable glare, and resulted in eyestrain to the inspectors. Attempts were made to remedy this situation by polarizing the light for the candling operation. This proved successful in reducing the glare, but costs for general installation are somewhat high. A partial solution of the problem could be obtained by exposing a smaller illuminated area, thus reducing or entirely eliminating the stray light around the fillets. Special types of light bulbs which minimize glare also may be an aid in this connection. A detailed report of this study is now being prepared by the investigators.

ULTRAVIOLET RAYS IN KILLING BACTERIA

The work on this problem during the past year has been concerned with establishing the effects of intermittent irradiation on the keeping quality of haddock fillets stored under refrigerated conditions. The purpose of this work is to determine whether it would be possible to reduce bacterial contamination in fish while being prepared in the fish processing plants and while being held in cold-storage warehouses and retail display cases, by the use of ultraviolet lamps. A mechanical device, developed by the research workers at the College Park Laboratory, allowed a 30-second exposure of fish fillets to the rays of the ultraviolet lamps for each hour of storage in the experimental refrigerator. At 48-hour intervals during a total storage period of

8 days, samples of the fillets were withdrawn from the experimental and control refrigerators to determine comparative bacteriological counts, and for chemical and organoleptic tests. The results obtained thus far indicate: (1) Bacterial numbers were appreciably lower for the intermittently irradiated than for the nonirradiated control fillets stored under similar conditions of time and temperature (8° C. (46° F.)); (2) cellophane apparently permitted the passage of the ultraviolet rays to the surface of the haddock fillets wrapped in this material; (3) organoleptic tests of the irradiated and control haddock fillets indicated that the irradiated fillets were superior in flavor to the nonirradiated control fillets stored under similar conditions of time and temperature; and (4) this method of intermittent irradiation has commercial possibilities in prolonging the keeping qualities of haddock fillets during storage, especially in display cases or other glass-topped refrigerators as used in retail stores. It probably has similar application in prolonging the keeping qualities of other nonoily fish in storage. As time permits, certain other phases of this investigation which need verification will be made.

PREPARATION AND PACKAGING OF FRESH FISH

During the past year a study was initiated at the laboratory in Washington, D. C., on improvements in methods for the preparation and packaging of fresh fish. Results obtained to date indicate that the addition of preservatives to ice, such as sodium benzoate, are not effective in increasing the length of time during which the fish will remain in good condition. Preservatives added to brine dips do accomplish this purpose, but not in the lowest concentrations; or when the fish is given a very short dip. A plain salt solution is useful as a preservative measure for fresh pan-dressed or filleted fish, when the brine tests 50° salinometer and the dip is 15 minutes. The addition of organic acids to brine dips shows a slight improvement in keeping qualities.

From the standpoint of packaging and preparation, vegetable parchment paper wrappers are more satisfactory than wrappers of the cellophane type, but the retail customer seems to prefer the latter. Experiments with individual hermetically sealed No. 2 tin containers (19 oz.) for fresh fillets and fresh pan-dressed fish were not satisfactory. Fibreboard containers of about 1-pound size with slip cover tops were an improvement in the packaging of fresh pan-dressed fish, but not with fresh fillets.

Conclusions from a previous study that pan-dressing and brine-chilling improved the quality and increased the length of preservation, were confirmed. It was also found that while pan-dressing or brine-chilling were most effective at the point of production, a slight improvement was noted when this was done at the point of distribution.

Work in filleting and dressing various species of fish of the South Atlantic area indicates that these varieties, with the exception of the butterfish and possibly the spot, are suitable for filleting in sizes above one-half pound, round weight. Fish smaller than one-half pound were best prepared by pan-dressing.

FREEZING PACKAGED SALMON AND FLOUNDERS FOR SUBSEQUENT STORAGE IN REFRIGERATED LOCKERS

Salmon has long been the most important species of fish taken on the Pacific coast. Although the greater proportion of the catch is canned, considerable quantities also are sold fresh, frozen, salted, and smoked. Pacific salmon normally are frozen in the round in sharp freezers and distributed in this manner. During the past several years, however, an effort has been made to develop a market for frozen salmon products in packaged form.

For several years there has been a marked development in otter-trawl fishing in the Pacific Northwest, particularly on Puget Sound. This has led to an increased catch of flounders and other small bottom-fish which has created a supply of low-priced fish available for preparation as packaged, frozen products.

A market for packaged salmon and flounders seems possible through the development of the refrigerated locker industry. This industry is particularly beneficial to those who, owing to their geographical location, find it difficult to obtain sea foods during certain seasons of the year. Now, with the refrigerated-locker system, it is possible for them to obtain these foods during seasons of quantity production and store them until needed. In rural communities these lockers consist of self-contained units for installation on the farm. In many small towns and cities the locker is placed in a regular community cold-storage warehouse. These lockers, ranging in size from 8 to 12 cubic feet capacity, can be leased at prices ranging from 75 cents to \$1 per cubic foot per year. All facilities for freezing and preparing sea foods for storage are usually supplied by the operators of the community locker establishment.

In view of the need for information regarding the problems associated with the freezing of salmon and flounders for subsequent storage in refrigerated lockers, the Bureau has undertaken studies of this nature. The program of research is initially concerned with a survey of some of the practical aspects of freezing and storage based on existing commercial facilities on the Pacific coast, with particular attention to the significance of brining, method of packaging and type of wrappers, "quick" freezing versus "sharp" freezing, and temperature of storage. Observations are being made to evaluate drip, dehydration, discoloration, texture, rancidity, and the effects of possible transfer of odors between sea foods and other products stored in the same locker.

While these investigations have not as yet reached a point where it is possible to draw definite conclusions, the data obtained indicate that a latex composition bag furnishes the most efficient protection from evaporation of moisture, and that there is no transfer of odors from frozen sea foods to other foods stored in the same locker.

Additional information obtained suggests the use of chemical treatment (brine dip) as a method for minimizing drip of the stored fish. While storage temperature has some effect on drip, the rate of freezing seems to be of less importance; at least in the early stages of storage.

Storage temperature seems to be the most important factor influencing the color of the flesh. The use of the brine treatment, which

minimizes drip, has an adverse effect on color, but it is not as pronounced as the effect of storage temperatures.

Storage temperature also is an important factor in controlling rancidity, and the brine treatment so far has had less adverse effect in this connection than had been anticipated.

COMPOSITION OF COMMERCIAL SPECIES TAKEN ON THE PACIFIC COAST

Studies relating to the amount of wastage occurring during dressing, and the approximate chemical composition of the edible portions of the various species of food fish landed in Seattle by the commercial fishing fleet, discussed in last year's report, were completed during the year. The data have been tabulated and are being submitted, with a brief discussion, for publication. Information of this type has distinct practical value since it will inform fishermen, fish dealers, and housewives regarding the wastage occurring in preparing fish for market or for the table as dressed fish or packaged fish and will indicate the percentage of edible food material and its approximate food value.

CANNING AQUATIC PRODUCTS

During 1939 a study of commercial methods now used in the canning of fish was completed, together with a compilation of the principles governing these methods. Data were obtained on cannery construction, on the manufacture of glass and tin containers, wood and fibre cases, on the operation of canning machinery, sanitation in canning, spoilage in canned fishery products, methods used in the examination of canned fishery products, and cannery inspection. Flow sheets and charts have been prepared illustrating the preparation of almost every type of commercially canned fishery product. The results of this study have been prepared for publication.

Studies on the canning of the blue crab were completed. Packs were made at different seasons of the year to determine the effect of seasonal variation, and were processed at various pressures to determine the relation of process to discoloration. A number of packs canned previously, which had been in storage for varying periods of time—some up to 18 months—were examined and their condition noted. A report on the studies dealing with this research has been prepared and submitted for publication. It is believed that the method developed by the Bureau is commercially practicable, and if followed carefully a canned crab meat of good quality should be obtained by the packer.

One new study on the canning of fishery products was undertaken during the year. This had to do with the preparation of fish pastes, or sandwich spreads. In view of the fact that considerable quantities of such products are imported into this country, local manufacturers have manifested an interest in the production of these products, especially adapted to the American taste, and the Bureau has been called upon for assistance in this direction. A series of pastes were prepared from bloaters, crabs, shrimp, hard smoked herring, salmon, salmon and shrimp combined, smoked salmon, sardine, and tuna. Following an incubation period to determine which methods of preparation were successful, a report on this work will be prepared.

DEVELOPMENT OF TESTS FOR DETERMINING THE QUALITY OF FISH

During recent years there has been evidenced a need for the development of chemical and bacteriological tests as contrasted to organoleptic tests for determining the quality of fish. This has been occasioned by the desire of the fishery industry for control of quality at all stages in the production and marketing processes, so that the consumer may purchase a product of uniformly high quality. Moreover, there is a need for the industry to meet the requirements of the new food and drug regulations. Such tests also would be needed in an inspection and grading service for the fishery industry, such as has been under consideration in Congress during the past year, if the products handled and marketed are to be judged for quality on an impartial basis. In order to solve these problems, the Bureau during past years has conducted, and is continuing to conduct, considerable technological research on practical tests for quality which can be applied under commercial conditions. Mention has been previously made in this report of such tests for the quality of fresh crab meat and shucked fresh oysters. Following is a brief summary of the past year's progress in developing tests which properly identify the quality of fish under various types of preservation and having varying initial degrees of freshness.

FORMATION OF LACTIC ACID AND ACTION OF ENZYMES AS INDICES OF RELATIVE FRESHNESS OF FROZEN FISH

One of the principal indications of strictly fresh fish is the stiffness of the muscle tissue due to rigor mortis. This condition is accompanied by the development of a high lactic acid content in the flesh of the fish. The development of lactic acid progresses to a maximum in a period varying from 24 to 36 hours, then gradually diminishes until it has completely disappeared. This study was inaugurated for the purpose of observing whether there was a correlation between the lactic acid content of fish flesh and the relative freshness of the fish during periods of storage after freezing. If it can be established that there is a correlation between relative freshness and amount of lactic acid present, it will be possible to make use of this determination for the grading of fish as to quality. Early in the course of this study it was found that it would be necessary to divide the problem into three phases: First, a study of the development and gradual disappearance of lactic acid in the fish flesh; second, the effect of enzymes produced by bacteria which utilizes the flesh of the fish as a medium for growth; and third, the effect of the action of autolytic proteolytic enzymes contained in the flesh of the fish.

Lactic acid.—Information obtained thus far on this phase of the study indicates that the lactic acid content of the flesh of sea trout and striped bass was 0.60 percent at death, or in rigor mortis, and about 0.40 percent after 50 days in cold storage. Flesh of these fish kept on ice for 3 days showed a lactic acid content of about 0.40 percent, which decreased after 50 days in cold storage to 0.35 percent. The lactic acid content of the same kind of fish flesh kept without ice for 3 days dropped to 0.12 percent and showed no further change during 50 days in cold storage. It seems likely, therefore, that this reaction may be used as a test for judging the quality of fish, especially when frozen.

Bacterial enzymes.—The study of this phase of the problem, dealing with the effect of bacterial enzymes on the keeping quality of frozen fish, has not reached a point where any conclusions can be stated.

Autolytic proteolytic enzymes.—The information thus far assembled on this phase of the study indicates that there may be a direct correlation between the age of the fish; that is, whether the fish is one, two, or three or more years old when caught, and the rate of enzyme reaction in the flesh. It appears that the enzymes in the older fish react more slowly than those in the younger fish and, therefore, the older fish can be held in cold storage over considerably longer periods of time without appreciable deterioration from this reaction. The study has not progressed far enough to confirm this assumption. There does, however, appear to be a strong indication that there is a correlation between the age of the fish and the period of time frozen fish may be kept in good condition in storage.

TESTS FOR MEASURING DETERIORATION OF FRESH SALMON

As has been indicated previously, the quality of fresh or preserved fishery products is influenced largely by the conditions of handling prior to sale or preservation and the effectiveness of the methods of preservation used. In order to control the changes taking place in a product as perishable as fresh salmon, and thus improve handling or preservative methods which will lead to preparing products of higher quality, knowledge of the nature of its deterioration and means of measuring the degree of such deterioration quantitatively are helpful.

While several recent publications have suggested tests for measuring deterioration in salmon after canning, very little scientific attention has been given to development of tests for measuring deterioration of salmon while in the fresh condition prior to canning. Accordingly, studies of this nature were inaugurated during the past year. The preliminary work which is now in progress pertains to the significance of bacterial counts, content of ammonia, trimethylamine, volatile acids, volatile alcohols, and hydrogen sulfide; and decrease in the buffering action of the flesh as indices of deterioration indicative and descriptive of the nature of the changes taking place in salmon during storage at high temperature, that is, approximately 70° F., and at low temperature of about 32° F., in ice. At the time this report was prepared this work had not progressed sufficiently to permit reporting conclusions.

IDENTIFICATION OF CANNED SALMON

In previous reports we have discussed briefly the possible use of the refractive index of the free oil in canned salmon as an aid in identifying the species in the can. Data obtained from a representative sampling of the entire Pacific coast and Alaska salmon packs for 1936 and 1938 are summarized in the following table. While it is evident that the overlapping of the values for each species precludes the use of refractive index of free oil as a positive method for identification, the mean values and the standard deviations suggest the utility of the method for supplementing existing criteria. No further sampling is contemplated for the near future, but as time permits the data at hand will be subjected to detailed statistical analysis to determine the extent to which the method can be used.

Refractive index of free oil in canned salmon

Species	Year of pack	Number of samples	Refractive index		
			Range	Mean	Standard deviation
Chinook or king	1936	109	1.4693-1.4743	1.47159	0.00101
	1938	77	1.4698-1.4753	1.47178	.00109
Red or sockeye	1936	275	1.4705-1.4768	1.47328	.00104
	1938	225	1.4710-1.4773	1.47475	.00116
Chum or keta	1936	104	1.4720-1.4766	1.47444	.00090
	1938	103	1.4734-1.4771	1.47489	.00068
Silver and coho	1936	125	1.4718-1.4787	1.47584	.00089
	1938	113	1.4744-1.4788	1.47665	.00074
Pink or humpback	1936	186	1.4707-1.4789	1.47634	.00126
	1938	152	1.4750-1.4796	1.47718	.00101

CHANGES IN THE COMPOSITION OF PINK SALMON (*Oncorhynchus gorbuscha*)

The commercial fishery for salmon is predicated upon the natural instinct of these fish to return to their parent streams to spawn and die. During the course of the spawning migration, the fish undergo considerable physical change and have been assumed to become poorer in quality, inasmuch as there is a gradual decrease in the pigmentation and firmness of the flesh and a definite diminution of the fat content of the edible portion of the carcass.

In last year's report reference was made to chemical analyses of the flesh of pink salmon which indicated that, from a chemical standpoint, the pronounced changes in physical appearance were accompanied by much less change in the nature and composition of the flesh protein. During the past year feeding tests were made with extracted pink salmon flesh which substantiate the chemical tests in that there appeared to be no significant difference in the nutritive value of the extracted flesh of early- and late-caught fish despite the marked difference in physical appearance. A final report incorporating and discussing the various chemical and biological data is nearing completion and will be submitted for publication shortly.

PEROXIDE TEST AS A MEASURE OF OXIDATIVE DETERIORATION OF FISH OIL

Several years ago a study was begun on the development of rancidity in the oil of fatty fish held under varying conditions of storage. The criterion of rancidity had been the Wheeler test for peroxide formation. Further investigations of this general nature were planned but it was thought advisable to make a preliminary study of the various tests of rancidity, as to the type of rancidity each test indicated, and the relation of the various tests to each other and to that ultimate criterion of rancidity—the organoleptic test which, unfortunately, is not easily capable of quantitative determination.

A study of four methods for testing rancidity was begun, therefore, during the past year. Measurement of oxygen absorption as an estimation of the degree of rancidity was tried and discarded as impracticable. The Shibsted test for fat aldehyde was then applied to a number of fresh oils. Wheeler peroxide values on the same oils showed no correlation whatever to the Shibsted values. A group of measured

samples was also exposed to sunlight and air and the accelerated rate of rancidity was followed by the Wheeler peroxide test and also by a modification of the Wheeler test, suggested by another chemist of the Bureau of Fisheries for the purpose of a more complete estimate of the peroxide content of rancid oils.

As an outcome of this series of tests three further series of accelerated rancidity tests were set up using the same tests on different types of fish oils; body, liver, and viscera oils at all stages of the development of rancidity. Very interesting data have been obtained which permit the development of several new hypotheses concerning the formation and determination of peroxides in oils. The data show that the peroxide determination methods tested do not indicate the time values and cannot be correlated with rancidity formation in the various oils. More work is necessary before any one test, or group of tests can be intelligently interpreted to the determination of the rancidity of the oil in the flesh of samples of frozen fish.

TREATMENTS TO RETARD DETERIORATION OF FISHERY PRODUCTS

ANTIOXIDANTS

Under an industrial fellowship sponsored by the Musher Foundation of New York, studies were continued during most of the past year on the use of antioxidants in retarding the deterioration of fishery products.

The first phase of the problem dealt with preventing oxidation of oil, and with inhibiting protein decomposition, in frozen mackerel and haddock fillets during extended storage by the use of the following antioxidants: Oat flour, water extract of oat flour, and ice made from the water extract of oat flour. The resulting data indicate that fresh fillets dipped in the water extract of oat flour before freezing and storage changed less in cold storage than the controls. Dusting the fresh fillets with oat flour prior to freezing was less effective. Storing fresh fillets in ice made from the water extract of oat flour showed no advantage over storing them in ordinary water ice.

The second phase dealt with the use of an antioxidant mixture "Carblex" composed of glucose and lecithin in maintaining vitamin A potency by decreasing oxidation in cod-liver oil, particularly after the sealed containers are opened for household use. The addition of small amounts of Carblex appeared to be effective in this connection, but its use for this purpose is not recommended in view of a ruling of the United States Food and Drug Administration relative to the addition of preservative substances to food or medicinal products.

The third phase dealt with the addition of Carblex to raw menhaden prior to manufacture into meal and oil to determine whether it would reduce oxidation of the resultant products. A positive effect was observed in the rendered oil, but the finished meal showed generally negative results, since the heating process apparently had an antioxidant effect in itself. The phospholipids of the flesh appeared to be the naturally occurring antioxidants. In general, the addition of Carblex to the raw menhaden did decrease the rate of oxidation in the resultant oils and in some instances inhibited protein decomposition in the meal, but pilot plant studies will be necessary before the laboratory techniques can be applied to commercial practice, especially

to determine optimum amounts of the Carblex to add to the raw material and the best way to incorporate it. The above three phases of this study were conducted at the College Park (Md.) Laboratory.

Additional studies on the use of antioxidants for retarding deterioration of fishery products taken on the Pacific coast were continued at the Seattle (Wash.) Laboratory, also under the sponsorship of the Musher Foundation of New York. Here attention was given to the effectiveness of the various types of water extracts of oat flour, "Avenized" salt (a mixture of oat flour and salt), and Carblex in retarding oxidation of frozen or mild-cured salmon. It appears from this work that the water extracts and the mixtures of oat flour showed little effectiveness in improving the keeping quality of frozen salmon. However, brine containing the water extract of oat flour was found to retard protein and oil decomposition of mild-cured salmon to some extent.

CHEMICAL PRESERVATIVES

During most of the year three industrial fellows were maintained at the College Park Laboratory by the Aquacide Company of Washington, D. C. The research has dealt mainly with the development of chemical preservatives, both liquid and dry powder, for the preservation of fish bait and of fish livers prior to extraction of oil. Trials under practical conditions have shown that properly preserved livers could be held for weeks or even months without refrigeration and still yield a medicinal grade of oil.

A chemically treated fillet wrapper has also been developed which improves the quality and prolongs the keeping time of freshly cut fish fillets. In commercial practice, the coated wrapper has promise of eliminating the need for brine tanks and permitting more sanitary handling of fillets.

These fellowships were discontinued by the sponsors on December 31, 1939. The results of the investigations conducted by the industrial fellows assigned to these problems are being assembled for publication.

MANUFACTURE OF FISHERY BYPRODUCTS

Studies in this field cover the utilization of the various byproducts of the fisheries, and methods for testing and improving their quality.

UTILIZATION OF SALMON CANNERY TRIMMINGS

Because of the potential economic value of salmon-cannery trimmings now being discarded in Alaska, the Bureau has continued its studies to determine means for attaining more complete utilization of these materials. During the year Fishery Investigational Report No. 40, "Pacific Salmon Oils" was published and the information contained therein was made available to the public. This report supplies data regarding the chemical and physical properties of salmon oils, which are suggestive of their utility for technical consumption, and demonstrates conclusively the value of salmon oils as sources of vitamins A and D. It is significant that during the year a quantity of Alaska salmon oil was, for the first time to our knowledge, sold in commercial quantity on the basis of its vitamin potency.

The value of the Bureau's investigations on salmon-cannery trimmings becomes more in evidence with each passing year, as waste

utilization becomes more general and as the monetary return to the industry increases. Several years ago our technologists developed methods for producing high quality, edible salmon oils which could be incorporated in canned salmon, thus adding increased nutritive value to the canned product and leading to greater uniformity of the pack. This method of utilizing the edible portion of the trimmings has become universal practice on the Columbia River and is beginning to be adopted more generally throughout the salmon canning industry. The Bureau's work has brought about a new development in salmon canning methods which gives a product which is preferred in the more critical canned-salmon markets.

During the past several years the trend in vitamin oil consumption has been toward more concentrated products. The Bureau's studies have demonstrated that the visceral portions of the trimmings are a more potent source of vitamins than the body trimmings. Since the preparation of canning oil requires separation of the edible body trimmings from the visceral parts, the latter materials become available for utilization in the manufacture of special vitamin products of greater potency. Our studies on salmon trimmings have demonstrated that oils prepared from total cannery waste normally equal and frequently exceed poultry grades of cod liver oil as sources of vitamin D. However, in view of the above-mentioned trend toward the consumption of more concentrated sources of vitamins, it has become necessary to determine whether it would lead to greater monetary return to the industry to recover a greater total amount of vitamin in total waste oils or to recover a lesser total amount of vitamins in the manufacture of the more concentrated visceral oils. Studies of this nature are in progress. Attention is being given also to the study of equipment suitable for handling small quantities of waste which cannot be accumulated at a central reduction plant.

UTILIZATION OF FISH LIVERS AND VISCERAL ORGANS

In last year's report reference was made to a general survey being conducted to determine the potential value of the liver and viscera from the various species of food fish on the Pacific coast. All work contemplated on this project for the present has been completed, and the data are being tabulated for publication.

PREPARATION OF FISH MEALS OF IMPROVED NUTRITIVE VALUE

During the year the work mentioned in last year's report dealing with the preparation of special dehydrated fish foods was continued in cooperation with the Bureau's Division of Fish Culture and the University of Washington School of Fisheries. The results demonstrate the practicability of conserving special nutritive properties in dehydrated fish waste materials by low-temperature drying without prior removal of water-soluble extractives. Further work on the preparation of fish meals of improved nutritional value is being carried on in connection with the utilization of salmon cannery trimmings where attention is being directed to the possibility of preparing dehydrated products especially high in vitamins A and D, and in riboflavin content.

STORAGE OF FISH MEAL

As discussed in last year's report, the tendency for the so-called fatty fish meals, that is, those prepared from such fish as pilchard, menhaden, salmon, and herring, to heat spontaneously immediately following manufacture and during subsequent storage presents one of the most aggravating problems of the fishery byproducts industry. The spontaneous heating of fish meal necessitates precautionary handling procedures which increase cost of operation, frequently results in a decrease in the quality of the meal, and occasionally causes complete loss due to spontaneous combustion.

During the past year studies have been carried on which demonstrate that air- and moisture-proof containers, such as multiwall paper bags with asphalt-treated liners, prevent spontaneous oxidative heating in fish meal without necessity of the usual precautionary handling methods. The multiwall paper containers have the additional advantages of resisting insect infestation, preventing sifting of the meal during storage and shipment, and practically eliminating the fish meal odor of the package. These factors could possibly result in obtaining lower transportation rates for fish-meal shipments so packed.

After 12 months' storage the only disadvantages of the paper containers appeared to be their greater fragility as compared with the burlap bag and a very slight increase in the caking of the meal. Tests are now underway to determine the upper limit of moisture content permissible in meal if it is to be stored in this moisture-proof type of container. Should the test results continue as encouraging as those obtained to date, and this type of container be adopted by the industry, a considerable market would be developed for a domestic paper product in place of imported burlap.

OXIDATION OF FAT IN FISH MEAL

These studies deal with determining the factors affecting the oxidation of fats in fish meal under various conditions of processing and storage. However, a fundamental attack on the chemistry of fat in fish meal had to be pursued in order to get needed information before undertaking the more practical aspects of the problem.

A preliminary study was made with mixtures of solvents in order to obtain complete extraction of oils irrespective of degree of oxidation. Certain of the resulting data indicate that exposing the meals to light and conditions of elevated temperature and moisture produces an appreciable oxidation in the constitutive fats or oils. A determination of the iodine numbers of some samples of menhaden oil clearly indicates that oxidation of the fish oil takes place more rapidly when isolated from the meal. A protein-fat complex in the meal apparently acts as a natural antioxidant. Pharmacological studies are also being carried out with fractions of oils isolated from the various fish meals.

A second study regarding the determination of fat in fish meal was continued during the year as time permitted. Much useful data has been obtained relative to (a), the effectiveness of various solvents and solvent combinations; (b), the relation of different conditions of fish-meal manufacture and storage to change in the solubility of the fat; and (c), the possibility of differentiating between altered and unaltered fat as a means of evaluating the condition of the fat in the meal.

SOLUBILITY OF FISH PROTEINS

In the normal reduction of fatty fish and fish waste in the manufacture of fish meal and fish oil, approximately 20 percent of the original solid materials passes into solution and is discarded with the waste waters. Because of the importance of this loss, both from the standpoint of economical operation and conservation of raw materials, the Bureau has begun a study of the solubility of fish proteins during cooking in order to determine the possibility of treatment which would decrease the amount of material passing into solution.

NUTRITIVE VALUE OF AQUATIC PRODUCTS

Studies on the nutritive value of aquatic products have always occupied an important place in the Bureau's technological investigations because the nutritive value of a finished product ready for marketing is in most instances the true yardstick or measure of the value of a new method of processing or an improvement in existing methods in the industry. For example—assuming that costs of processing are equal in each case—if a new method of manufacturing fish meal or a new method of freezing fish fillets produces a finished product of better quality, measured in terms of food value, then that is a true estimate of its worth, or justification for its commercial application.

The problems undertaken in this field during the past year have been concentrated on determination of the nutritive value of the edible portion of fishery products, more particularly the biological value of the protein. Considerable effort has also been expended on evaluation of the feeding value of fish meals and a study of changes resulting from conditions of processing and storage.

Study also was made of the biological value of the protein of salmon taken under different physiological periods, such as prior to migration, during migration, and during spawning. Acute and chronic toxicity tests with certain kelp products, Irish moss, and agar, have also been carried out by an industrial fellowship.

NUTRITIVE VALUE OF PROTEINS OF CERTAIN SHELLFISH

Studies were conducted to determine the nutritive value of the protein from the edible portion of various species of shellfish. Adult rats were fed known amounts of the various proteins and the quantity used for maintenance was determined in metabolism trials. All of the proteins were well digested.

On the basis of 100 representing complete utilization for maintenance, the protein of beef round (control) scored 70; of white meat from blue crab, 74; of shrimp, 77; and for the Eastern oyster the comparative score was 90. These data corroborate the previously reported findings that the proteins from fishery products are superior to beef round in promoting growth.

NUTRITIVE VALUE OF ALGINATES FROM KELP

An industrial fellowship was sponsored by the Kelco Corporation, San Diego, Calif., to conduct certain biochemical and pharmacological studies of the nutritive value of products derived from the seaweed

commonly known as kelp (*Macrocystis pyrifera*). One of these problems was to study the nutritive value of an algin product known as "Dariloid." This is a sodiumphosphoalginate with added sugar and dextrin to render the product soluble in milk with a uniform colloidal strength. It is used as a stabilizer in ice cream, chocolate milk, and other food products.

At the close of a series of feeding experiments extending over a 10-week period the data showed that the rats fed the substituted basal diet containing 5 and 10 percent of Dariloid (20 and 40 times the recommended additions to ice cream) were no different in appearance and grew approximately as well as the control rats fed the basal diet. The rats fed diets containing 20 and 30 percent of Dariloid (80 and 120 times the recommended additions) did not grow quite as well but showed no gross symptoms of toxicity either by external appearance or at necropsy. A few rats died early in the test period but no characteristic changes could be discerned at necropsy. The algin did not serve as roughage alone but was digested in increasing amounts in the diets containing the higher levels.

The rats fed the 5 and 10 percent levels were continued on the substituted basal diet containing 5 percent of Dariloid. These rats showed no symptoms of chronic toxicity after a period of 10 months, and the live weights were about equal to those of the controls. Comparable experiments were carried out with sodiumalginate "Kelgin" and approximately similar results were obtained when calculated to equivalent alginate content.

Feeding studies also showed that Irish moss and agar have considerable nutritive value. These data are being summarized for publication.

KELP MEAL IN ANIMAL FEEDING

Several years ago a cooperative project was inaugurated between this Bureau and the Dairy Departments of the University of Maryland and of the State Agricultural Experiment Station at College Park, Md., in which it was hoped to determine whether kelp meal could be used as a supplement in the diet of dairy cattle for improving reproduction. This study is being continued with producing or lactating dairy cows on a more extensive scale, and it is believed that information of considerable interest and benefit to both the dairy industry and to the producers of seaweed meals will result from these experiments. It is generally understood that tests of this kind with large farm animals, such as dairy cows, require several years for the production of conclusive results. Up to the present time, however, quite definite improvements in the reproduction records of the animals fed kelp meal have been noted.

POSSIBLE TOXIC PROPERTIES OF CERTAIN FISH MEALS

Last year studies were begun to determine the feeding value of several fish meals which were stored under unfavorable conditions of high humidity and heat. Pilchard meal, a type of white meal made from various kinds of ground fish, and menhaden meal were tested.

Chicks were used largely as test animals and were fed diets in which the various experimental fish meals supplied nearly all of the protein. The data obtained on this experiment indicate that chicks could be

grown satisfactorily to an age of at least 7 weeks on the diets which contained 30 to 35 percent of this experimental meal. In fact, the protein of this meal was found to have a high nutritive value and under some conditions the exposure of meals to high humidity and heat markedly increased the vitamin K content and some vitamins of the B complex through bacterial action.

The data also showed that any subnormal growth in chicks fed diets incorporating the experimental meals was due to a deficiency state rather than any toxicosis caused by some protein or fat decomposition product. This finding is very important in actual practice, since it means that fish meals may be freely incorporated in the rations of farm animals for their valuable protein and mineral content, provided reasonable care is taken to balance the rations for all other food elements by a proper selection of cereals and leafy legumes.

The results obtained in this study have been prepared for publication under the title "Studies on the Feeding Value of Fish Meals: Effect of Heat and Moisture on Protein." It is planned to continue these studies to obtain further data relative to the development of vitamin K and the vitamin B complex in the experimental meals.

FLUORINE IN FISHERY PRODUCTS

These studies were completed and the results as outlined in last year's annual report were published as Fishery Investigational Report No. 44, "Study of the Metabolism of Naturally Occurring Fluorine in Canned Salmon and Mackerel." The conclusions derived from the study were: (1) Inorganic fluorine is three times as effective in producing defects of tooth enamel as is naturally occurring fluorine from canned salmon and mackerel; and (2) all of the fluorine ingested from the basal diet, and 67 percent of the added inorganic fluorine is stored in the body of the rat. Only 21 percent of the fluorine from the canned salmon or mackerel is stored, indicating that the naturally occurring fluorine from these fish is stored at only about one-third of the rate of added inorganic fluorides. Under practical conditions no toxicity symptoms need be expected from the ingestion of naturally occurring fluorine of fish, as evidenced from these tests.

RESEARCH ASSOCIATES AND STUDENT ASSISTANTS

Because of the relatively small size of the Bureau's technological staff, and the rather broad field of research it must cover, it is only possible, as indicated previously, to undertake those problems which are of a fundamental nature, those which have promise of the greatest value to the largest number of persons whose livelihood depends in whole or in part on the fisheries, and those which are possible with the funds and personnel available. For this reason the Division cannot, with present facilities, attack problems of special or restricted interest affecting certain products, process, methods, or industries. However, the Bureau has available, under an arrangement similar to that of other scientific Government bureaus, facilities for research associates and student assistants in its laboratories. The salaries and expenses of these employees are paid by the firms or groups who are interested in the problems on which they are working, and the investigations are carried out under the supervision of the Bureau's technologists in its

laboratories and under its control. Thus the Bureau provides these industries and groups with laboratory, consulting, and library facilities, which, in most instances, cannot be obtained elsewhere.

Within the limits of its facilities, the Bureau also has opened its technological laboratories to research students who are pursuing courses in universities, and who are selecting investigational problems in the fisheries as their major study. This may prove of special benefit to the industry as it brings its problems to the attention of a large group of research workers who in turn may spread interest to applied fishery research.

In the preceding sections of this report we have given the names of organizations which are conducting cooperative projects under the supervision of our technological staff, and which have employed research associates for this purpose. In the preceding section on laboratories we have given the individual names of these research associates and student assistants. The plan of utilizing graduate student assistants for part-time work on research projects has been so successful that the University of Maryland employed from its own funds additional graduate students, by establishing two research fellowships for work on fishery technological research. Some of the new research problems assigned to these research fellows are: (1) Studies on the enzymes in fresh and frozen fish; and (2) chemical and pharmacological studies on the oxidized oils in fish meals. These projects are selected by the student in accordance with his qualifications, approved by both the Bureau and the University, and the results are prepared in a thesis submitted for a master's or a doctor's degree at the end of 3 years of part-time work. The results of such studies are of direct value to the industry. This plan also serves to educate and train scientific fishery investigators for employment by industry and government.

COOPERATION WITH GOVERNMENTS OF DENMARK AND ICELAND

Early in the spring of 1940, at the request of the Danish Government, the facilities of the College Park Laboratory were opened to Ingi Bjarnason, of Iceland, as a Research Fellow. Mr. Bjarnason was in the United States on a scholarship given to him by the Icelandic Government for the purpose of studying the fisheries of this country. While at the laboratory in College Park he conducted research dealing with the development of leather bates from pyloric caeca of cod and haddock. Mr. Bjarnason completed this study early in June and is now summarizing the results of the study for publication.

EDUCATIONAL AND CONSULTING SERVICE

In addition to the research activities described in this report, our economic and technological staffs conduct, along with their regular duties, an educational and consulting service for those interested in the fisheries. During recent years the demand for this type of service has increased. Many requests have been received from groups and individuals to demonstrate improved methods developed in our laboratories for the handling and processing of fishery products, for instruction in fish cookery, and for aid in improving various marketing practices. Insofar as our facilities have permitted, we have

complied with these requests, endeavoring to offer assistance especially where the request has come from a large group or industry. However, we have not been able to satisfy all of the requests received because of insufficient personnel and because of inadequate funds to provide for travel expenses of the demonstrators.

Some of the educational services rendered are discussed or referred to in previous paragraphs of this report. In brief, this work has covered the fields of commercial preserving of fishery products, fish cookery in the home, and the marketing of aquatic products.

Another phase of this service has consisted of answering thousands of letters directed to the Bureau on fishery subjects and of supplying information to persons who have called at the Bureau personally. Many of the latter came from foreign lands to seek fishery information which might be useful in the conduct of the fishing industry in their native country.

PUBLICATIONS OF THE DIVISION

During the calendar year 1939, the following publications were prepared and addresses delivered by members of the Division's staff. These do not include the monthly statistical bulletins of the landings of fishery products at Boston and Gloucester, Mass.; Portland, Maine; and Seattle, Wash.; the monthly reports on the cold-storage holdings of fish and quantities of fish frozen; or the daily reports and monthly summaries of the Fishery Market News Service. The administrative reports, investigational reports, and fishery circulars may be purchased, at the prices shown, from the Superintendent of Documents, Government Printing Office, Washington, D. C. The statistical bulletins and special or S-memoranda are distributed free upon request to the Bureau. The special articles may be obtained from the sources of publication.

Those wishing to receive copies of this report, statistical bulletins as issued, or the periodic Fishery Market News reports issued from the Washington office, should request that their names be placed on the Bureau's mailing lists as follows: No. 128 for this report, 128a for general statistical bulletins, 128b for monthly cold-storage reports, and 128d for the periodic Fishery Market News reports. Those desiring daily reports or monthly summaries of fishery market news, issued from the Division's Fishery Market News offices, should apply direct to the Fishery Market News Service at the nearest of the following six addresses: 33A Fulton Street, New York, N. Y.; 253½ Northern Avenue, Boston, Mass.; 200 North Jefferson Street, Chicago, Ill.; 309 Duval Building, Jacksonville, Fla.; 417 Bell Street Terminal Seattle, Wash.; or 1100 Decatur Street, New Orleans, La. For historical statistical data on the domestic fisheries for the period 1880 to 1929, consult the report entitled "Fishery Industries of the United States, 1930," by R. H. Fiedler, appendix II to the report of the United States Commissioner of Fisheries for the fiscal year 1931. Statistical information for the years 1930 to 1937, inclusive, may be obtained from the annual reports of the Division for the years 1931 to 1938, inclusive.

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Part 2. FISHERY STATISTICS, 1938

GENERAL REVIEW

Data on the 1938 catch of fishery products were collected in all sections of the United States and Alaska except the Mississippi River area. The combined catch in the areas surveyed shows a decline of 2 percent in volume and 7 percent in value as compared with the catch in the same sections during the preceding year. Decreased catches were made in each of the geographical sections except the Chesapeake Bay and South Atlantic and Gulf States. Marked declines in the value of the catch occurred in the New England, South Atlantic and Gulf, and Pacific Coast States, and in Alaska. The value of the pack of canned fishery products in all sections declined 21 percent as compared with 1937; byproducts decreased 17 percent; cured fish about 5 percent; and packaged fish, 2 percent.

The total catch of fishery products in the United States and Alaska, as based on the most recent surveys, amounted to 4,253,445,000 pounds, valued at \$93,547,000. Slightly over 130,000 fishermen were employed in making this catch.

The production of canned fishery products in the United States and Alaska during 1938 amounted to 667,527,840 pounds, valued at \$83,445,889; the output of byproducts was valued at \$30,576,367; the production of frozen fishery products, excluding packaged products amounted to 117,125,519 pounds, estimated to be valued at \$7,800,000; and fresh and frozen packaged fish and shellfish, 216,661,255 pounds, valued at \$27,243,645. Based on surveys for 1938 in all sections except the Mississippi River area, and for 1931 in that area, the production of cured fishery products amounted to 102,617,256 pounds, valued at \$14,865,530. It is estimated that about 680,000,000 pounds of fresh fishery products (excluding packaged fish and shellfish) valued at about \$50,000,000 were marketed during 1938. The total marketed value to domestic primary handlers of all fishery products in 1938 is estimated at \$214,000,000.

New England States.—In 1938 the commercial catch of fishery products in these States showed an appreciable decrease in both the quantity and value as compared with 1937. Smaller catches of cod, hake, haddock, and sea herring chiefly contributed to the decrease, while catches of mackerel approximately doubled as compared with 1937.

A comparison of the combined vessel landings at Boston and Gloucester, Mass., and Portland, Maine, which are available for 1937 and 1938, shows that although the 1938 landings increased 3 percent in quantity, they declined 9 percent in value as compared with the preceding year.

Middle Atlantic States.—Although the yield of the commercial fisheries in the Middle Atlantic States during 1938 was less than in 1937, the value of the products landed showed an increase. Fewer

fishermen and fishing vessels operated in 1938 than in 1937, and the value of the manufactured fishery products showed a marked decline as compared with 1937. The catch of shad in the Hudson River likewise decreased.

Chesapeake Bay States.—In 1938 the catch of fishery products in these States increased both in volume and value. Catches of alewives, croaker, and spot increased, as did the catch of all species of shellfish taken in this section. The value of menhaden products produced in Virginia, and of fresh-shucked oysters in both States, decreased as compared with 1937, while the total value of salted alewives and fresh-cooked crab meat increased.

South Atlantic and Gulf States.—As compared with 1937, the 1938 catch of fishery products in the South Atlantic and Gulf States sharply increased in poundage; however, the value of the catch declined. The catch of menhaden, a low-priced fish, materially increased, while the catch of oysters and shrimp decreased. Likewise, the value of manufactured fishery products declined owing mainly to a decrease in the pack of canned oysters and shrimp, and in the production of fresh-cooked crab meat.

Pacific Coast States.—The commercial catch of fishery products in the three Pacific Coast States in 1938 declined both in volume and value as compared with the previous year. The 1938 production of canned sardines, tuna, and salmon was less than in 1937; however, the pack of canned mackerel and oysters increased. Although the production of pilehard meal and oil was greater than in the previous year, the combined value of these products was less.

Lake States.—In 1938 the yield of the commercial fisheries of the Lake States decreased in volume, but increased in value. The value of manufactured products, which consist largely of smoked, and fresh and frozen packaged fish, increased as compared with 1937.

Mississippi River and tributaries.—The most recent complete statistics of the catch of the Mississippi River and tributaries are those collected for 1931. As compared with 1922, when the most recent preceding survey was made, there was a decrease in the catch. The decrease was caused principally by a smaller catch of fresh-water mussels. A survey made for Lakes Pepin and Keokuk, and the Mississippi River between these lakes, for 1938, revealed an increase in the catch of fishery products in Lake Pepin and the Mississippi River between these lakes, but a decrease in the catch in Lake Keokuk as compared with the previous year. The production of fresh-water mussel-shell buttons declined in 1938 as compared with 1937.

Alaska.—The catch of fishery products in Alaska in 1938 decreased both in poundage and in value as compared with 1937. A slight decline occurred in the yield of the salmon and herring fisheries as well as in the production of shellfish. The value of cured and frozen fishery products increased while fresh and canned products and byproducts decreased in value as compared with the previous year.

*Fisheries of the United States and Alaska, 1938*¹

SUMMARY OF CATCH: BY SECTIONS

[Expressed in thousands of pounds and thousands of dollars; that is, 000 omitted]

Product	New England, area XXII		Middle Atlantic, area XXIII		Chesapeake, area XXIII		South Atlantic and Gulf, areas XXIV and XXV		Pacific	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Fish.....	581,198	12,014	181,814	3,827	202,823	2,590	433,896	5,822	1,496,320	23,987
Shellfish, etc.....	50,322	6,261	35,044	4,422	91,771	4,073	187,962	7,252	29,565	2,099
Total.....	631,520	18,275	216,858	8,249	294,594	6,663	621,858	13,074	1,525,885	26,086

Product	Lakes		Mississippi River and tributaries		Alaska		Total	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Fish.....	81,219	6,076	44,062	2,257	791,423	11,881	3,812,755	68,454
Shellfish, etc.....	305	7	38,321	640	2,526	159	435,816	24,913
Whale products.....					4,874	180	4,874	180
Total.....	81,524	6,083	82,383	2,897	798,823	12,220	4,253,445	93,547

NOTE.—The roman numerals appearing under the names of the sections are the numbers given these areas by the North American Council on Fishery Investigations. It should be explained that there are included under these areas craft whose principal fishing ports are in the respective areas but at times they may fish elsewhere.

OPERATING UNITS: BY SECTIONS

Item	New Eng- land	Middle Atlantic	Chesapeake	South At- lantic and Gulf	Pacific
Fishermen:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
On vessels.....	5,123	2,357	2,537	4,565	9,235
On boats and shore.....	15,125	5,192	12,766	25,023	14,400
Total.....	20,248	7,549	15,297	29,588	23,635
Vessels:					
Steam.....	20	7	25		1
Net tonnage.....	3,215	884	2,880		32
Motor.....	645	398	179	1,042	1,341
Net tonnage.....	19,313	6,951	2,805	12,656	39,125
Sail.....		4	137	73	3
Net tonnage.....		36	1,703	691	1,421
Total vessels.....	665	409	341	1,115	1,345
Total net tonnage.....	22,528	7,871	7,388	13,347	40,678
Boats:					
Motor.....	4,510	1,631	5,993	7,132	5,583
Other.....	4,490	2,442	5,285	9,083	989
Accessory boats.....	661	111	99	229	924
Apparatus:					
Haul seines.....	84	211	326	902	226
Purse seines.....	99	32	33	56	613
Lampara nets.....					233
Otter trawls.....	509	215	28	3,463	74
Beam trawls.....					21
Paranzella nets.....					12
Gill nets.....	6,856	3,594	8,991	10,292	3,980
Trammel and bar nets.....				985	34
Pound nets, trap nets, and weirs.....	524	412	2,419	2,762	38
Stop nets.....	53	68			
Fyke nets.....	140	1,416	2,900	665	1,660
Bag nets.....	138				9
Other nets ²	498	285	1,624	7,697	628
Hooks, baits, or snoods.....	2,687,707	493,669	2,145,820	1,127,219	1,439,654
Fish wheels.....				6	
Eel pots and traps.....	3,945	3,529	14,970	1,750	
Brush traps.....				29,600	
Lobster pots and traps.....	302,510	16,323			
Crab, crawfish, and turtle pots and traps.....	5,834	10	830	10,494	38,520

¹ All figures are for 1938, except those for the Mississippi River and tributaries, which are for 1931.² Includes dip, push, reef, crab, drag, cast, and drop nets.

Fisheries of the United States and Alaska, 1938—Continued

OPERATING UNITS: BY SECTIONS—Continued

Item	New England	Middle Atlantic	Chesapeake	South Atlantic and Gulf	Pacific
Apparatus—Continued.	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
Clam dredges.....	102	105	-----	1	-----
Crab dredges.....	-----	74	296	-----	-----
Mussel dredges.....	4	8	-----	-----	-----
Oyster dredges.....	150	285	447	864	2
Scallop dredges.....	3,270	56	-----	54	-----
Crab scrapes.....	-----	-----	784	-----	-----
Tongs, rakes, shovels, hoes, forks, picks, and grabs.....	6,757	3,878	6,967	3,440	5,846
Diving outfits.....	-----	-----	-----	72	18
Other apparatus ⁵	1,453	10,817	450	6,816	436

Item	Lakes	Mississippi River and tributaries	Alaska	Total
Fishermen:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
On vessels.....	1,616	-----	² 11,007	36,440
On boats and shore.....	5,360	15,884	-----	93,744
Total.....	6,976	15,884	11,007	130,184
Vessels:				
Steam.....	44	-----	5	102
Net tonnage.....	1,019	-----	417	8,447
Motor.....	425	-----	830	4,860
Net tonnage.....	5,003	-----	11,364	97,217
Sail.....	-----	-----	-----	217
Net tonnage.....	-----	-----	-----	3,851
Total vessels.....	469	-----	835	5,179
Total net tonnage.....	6,022	-----	11,781	109,515
Boats:				
Motor.....	1,662	4,426	1,682	32,619
Other.....	1,659	10,120	3,403	37,471
Accessory boats.....	-----	-----	-----	2,024
Apparatus:				
Haul seines.....	325	1,013	155	3,242
Purse seines.....	-----	-----	722	1,555
Lampara nets.....	-----	-----	-----	233
Otter trawls.....	-----	-----	1	4,290
Beam trawls.....	-----	-----	7	28
Paranzella nets.....	-----	-----	-----	12
Gill nets.....	177,167	101	4,719	215,700
Trammel and bar nets.....	116	518	-----	1,653
Pound nets, trap nets, and weirs.....	11,199	374	465	18,193
Stop nets.....	-----	-----	-----	121
Fyke nets.....	2,905	32,541	-----	42,227
Bag nets.....	-----	-----	-----	147
Other nets ³	-----	191	100	11,023
Hooks, baits, or snoods.....	3,685,250	2,459,179	(⁴)	14,038,498
Fish wheels.....	-----	-----	241	247
Eel pots and traps.....	-----	-----	-----	24,194
Brush traps.....	-----	-----	-----	29,600
Lobster pots and traps.....	-----	-----	-----	318,833
Crab, crawfish, and turtle pots and traps.....	740	456	2,193	59,077
Clam dredges.....	-----	-----	-----	208
Crab dredges.....	-----	-----	-----	370
Mussel dredges.....	-----	440	-----	452
Oyster dredges.....	-----	-----	-----	1,748
Scallop dredges.....	-----	-----	-----	3,380
Crab scrapes.....	-----	-----	-----	784
Tongs, rakes, shovels, hoes, forks, picks, and grabs.....	19	3,994	-----	30,901
Diving outfits.....	-----	-----	-----	90
Crowfoot bars.....	62	4,480	-----	4,542
Other apparatus ⁵	-----	3,781	-----	23,753

² Includes persons in boats and shore fisheries.³ Includes dip, push, reef, crab, drag, cast, and drop nets.⁴ Number not determined.⁵ Includes periwinkle, cockle, and fish pots; harpoons, spears, hooks, coquina scoops, octopus and slat traps, and wire baskets.

NOTE.—The South Atlantic and Gulf section includes the fisheries of Lake Okeechobee, Fla.

Fisheries of the United States and Alaska, 1938—Continued

CATCH: BY SECTIONS

[Expressed in thousands of pounds and thousands of dollars; that is, 000 omitted]

Species	New England		Middle Atlantic		Chesapeake		South Atlantic and Gulf		Pacific	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
FISH										
Alewives	4,307	20	122	2	23,087	215	11,611	114		
Amberjack			1	(⁶)			24	1		
Anchovies	61	1	10	(⁶)					735	9
Angelfish							1	(⁶)		
Barracuda							(⁶)	(⁶)	2,530	159
Black bass					93	10				
Bluefish	121	11	1,291	111	354	22	6,393	306		
Blue runner or hard-tail							749	9		
Bonito	28	3	805	31	42	1	11	(⁶)		
Bowfin							5	(⁶)		
Buffalo fish							60	2		
Butterfish	1,880	69	8,599	306	3,205	45	15	(⁶)		
Cabio or crab eater					23	1	8	(⁶)		
Cabrilla									145	7
Carp	35	2	628	43	824	50	225	3	130	4
Catfish and bullheads			182	12	1,181	44	4,961	178	312	41
Cigarfish							9	(⁶)		
Cod	118,385	2,211	10,848	469	(⁶)	(⁶)			10,352	142
Crappie					3	(⁶)	561	19		
Crevalle	1	(⁶)					190	4		
Croaker	1,729	32	5,987	72	46,310	599	6,692	98		
Cunner	90	1	2	(⁶)						
Cusk	7,545	130	(⁶)	(⁶)						
Dolphin							3	(⁶)		
Drum:										
Black			1	(⁶)	126	1	1,859	56		
Red or redfish	2	(⁶)	5	(⁶)	136	2	3,303	173		
Eels:										
Common	514	28	376	31	295	27	123	4		
Conger	126	3	38	1	4	(⁶)				
Flounders	46,836	1,571	14,908	804	838	46	1,035	64	15,401	739
Flying fish									63	2
Frigate mackerel	2	(⁶)	72	1						
Gizzard shad			(⁶)	(⁶)	562	7	63	1		
Goosefish	(⁶)	(⁶)	3	(⁶)						
Groupers			17	1			4,814	151	68	3
Grunts							54	1		
Haddock	157,935	3,453	11,109	414						
Hake	23,827	321	365	9	12	(⁶)			36	(⁶)
Halibut	1,972	206	48	6					23,900	1,931
Hardheads									13	1
Harvestfish or "starfish"					490	8	429	13		
Herring, sea	21,047	191	1,175	7					872	7
Herring smelt	(⁶)	(⁶)								
Hickory shad	7	(⁶)	29	(⁶)	167	3	156	4		
Hogchoker					2	(⁶)				
Hogfish					(⁶)	(⁶)	45	1	4,134	46
Horse mackerel										
Jewfish							136	5		
Kingfish (California)									493	13
Kingfish or "king mackerel"			140	5			3,667	137		
King whiting or "kingfish"	7	(⁶)	105	4	265	11	2,084	58		
Lamprey	2	(⁶)								
Lance			(⁶)	(⁶)						
"Lingcod"									3,810	105
Mackerel	39,346	1,165	3,923	148	20	1			79,848	859
Menhaden	328	2	86,941	340	95,083	361	303,122	825		
Minnnows	(⁶)	(⁶)								
Mojarra							333	8		
Moonfish							(⁶)	(⁶)		
Mullet			85	3	27	1	36,139	1,193	4	(⁶)
Muttonfish							283	18		
Paddlefish or spoonbill cat							40	4		
Permit							16	(⁶)		
Pigfish							71	1		
Pike or pickerel					46	7	1	(⁶)		
Pilchard or sardine									1,110,401	6,312
Pinfish							24	(⁶)		

¹ Less than 500 pounds or dollars.

Fisheries of the United States and Alaska, 1938--Continued

CATCH: BY SECTIONS--Continued

[Expressed in thousands of pounds and thousands of dollars; that is, 000 omitted]

Species	New England		Middle Atlantic		Chesapeake		South Atlantic and Gulf		Pacific	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
FISH--continued										
Pollock	40,287	449	407	8	(*)	(*)	907	165	1	(*)
Pompano									296	16
Rock bass									4,506	191
Rockfishes									28	1
Roselish	65,005	803							3,309	137
Rudderfish										
Sablefish										
Salmon:										
Atlantic	16	5								
Blueback, red, or sockeye									10,891	845
Chinook or king									24,350	2,884
Chum or ketoy									12,331	266
Humpback or pink									39	1
Silver or coho									16,615	930
Sand perch			1	(*)	7	(*)				
Sculpin									155	9
Scup or porgy	11,804	275	7,442	123	2,396	38	59	2		
Sea bass	3,727	155	2,219	126	344	15	203	11		
Sea bass, black (California)									408	24
Sea bass, white (California)									620	54
Sea catfish							221	6		
Sea robin	373	4	85	1	3	(*)				
Shad	503	30	3,591	286	4,207	394	1,418	217	1,798	68
Sharks, including grayfish	198	5	213	3	237	3	3,682	24	8,092	141
Sheepshead:										
Fresh-water							5	(*)		
Salt-water							976	31	72	3
Silversides			2	(*)						
Skates	354	4	139	1	9	(*)			528	5
Skipper or "billfish"	1	(*)								
Smelt	767	68	(*)	(*)					4,092	150
Snapper:										
Lane							2	(*)		
Mangrove							296	10		
Red			32	2			8,110	586		
Snook or sergeantfish							617	21		
Spadefish							11	(*)		
Spanish mackerel			10	1	457	31	7,225	337	13	1
Splittail									11	(*)
Spot	8	(*)	186	3	3,926	74	6,180	100		
Squawfish									1	(*)
Squeteagues or "sea trout":										
Gray	339	10	7,543	240	13,617	261	5,100	196		
Spotted					402	33	7,239	541		
White							249	9		
Squirrel hake			162	2						
Steelhead trout									2,264	140
Striped bass	301	29	311	37	2,869	232	523	49	44	2
Sturgeon	11	1	10	2	16	2	72	8	112	3
Suckers	124	3	91	4	4	(*)	2	(*)	(*)	(*)
Sunfish			1	(*)	9	(*)	868	31		
Surfishes (perch)									313	12
Swellfish			58	2	34	1	1	(*)		
Swordfish	2,088	350	51	10					722	81
Tautog	198	7	44	1	2	(*)	1	(*)		
Tenpounder							370	7		
Tilefish	367	14	808	25						
Tomcod	19	1	5	(*)	7	(*)			3	(*)
Tripletail							18	(*)		
Tuna and tunalike fishes:										
Albacore									17,726	966
Bluefin	1,567	58	256	10			1	(*)	17,728	983
Bonito									7,753	286
Skipjack									22,654	1,133
Yellowfin									78,318	4,705
Turbot							2	(*)		
Whitebait									107	7
Whitefish, common									68	4

* Less than 500 pounds or dollars.

Fisheries of the United States and Alaska, 1938—Continued

CATCH: BY SECTIONS—Continued

[Expressed in thousands of pounds and thousands of dollars; that is, 000 omitted]

Species	New England		Middle Atlantic		Chesapeake		South Atlantic and Gulf		Pacific	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
FISH—continued										
White perch.....	2	(^o)	71	5	727	26	145			
Whiting.....	25,095	274	10,184	114	140	3				
Wolfish.....	2,612	49		(^o)						
Yellow perch.....	19	(^o)	11	1	245	15	9	(^o)		
Yellowtail:										
Atlantic.....							169	14		
Pacific.....									6,812	253
Miscellaneous.....									285	6
Total.....	581,198	12,014	181,814	3,827	202,823	2,590	433,896	5,822	1,496,320	23,987
SHELLFISH, ETC.										
Crabs:										
Hard.....	2,048	52	1,684	61	49,390	871	25,154	347	12,899	658
King or "horse-shoe".....			2,541	6						
Soft and peelers.....	(^o)	(^o)	439	135	5,681	436	377	56		
Stone.....							54	12		
Crawfish.....									94	8
Lobsters:										
Common.....	11,408	2,143	574	102	2	(^o)				
Spiny.....							328	23	1,198	179
Shrimp.....	105	8	125	21	8	1	140,150	4,545	1,872	40
Abalone.....									424	92
Clams:										
Coquina:										
Hard.....	4,729	493	5,193	773	2,863	385	1,105	100	875	69
Pismo.....									54	11
Razor.....	513	14							1,228	212
Soft.....	12,735	844	1,246	88	2	1			28	6
Surf.....	1	(^o)	1,614	72						
Mixed.....									93	8
Limpets.....	1	(^o)								
Conchs.....			7	1			8	(^o)		
Mussels, sea.....	24	1	243	18	30	1				
Octopus.....									97	5
Oysters, market:										
Eastern, public.....	135	24	545	111	22,428	1,442	13,078	681		
Eastern, private.....	8,503	1,530	15,599	2,585	10,984	928	6,603	389	48	18
Pacific.....									8,734	562
Western.....									275	188
Periwinkles and "cockles".....	94	5								
Scallops:										
Bay.....	1,227	385	21	6			167	19	20	5
Sea.....	5,850	622	3,059	359						
Squid.....	2,153	29	2,047	34	363	4			1,615	37
Sea urchins.....	97	(^o)								
Terrapin.....					9	3	18	3		
Turtles.....	3	(^o)	58	4	11	1	298	6		
Irish moss.....	177	16								
Kelp.....	120	1								
Sponges.....							606	1,071		
Bloodworms.....	143	41	22	21						
Sandworms.....	256	53	27	25						
Trepang.....									11	1
Total.....	50,322	6,261	35,044	4,422	91,771	4,073	187,962	7,252	29,565	2,099
Grand total.....	631,520	18,275	216,858	8,249	294,594	6,663	621,858	13,074	1,525,885	26,086

^o Less than 500 pounds or dollars.

Fisheries of the United States and Alaska, 1938—Continued

CATCH: BY SECTIONS—Continued

[Expressed in thousands of pounds and thousands of dollars; that is, 000 omitted]

Species	Lakes		Mississippi River and tributaries		Alaska		Total	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
FISH								
Alewives							39,127	351
Amberjack							25	1
Anchovies							806	10
Anchovyfish							1	(⁶)
Barracuda							2,530	159
Black bass			14	2			107	12
Bluefish							8,159	450
Blue pike	8,718	594					8,718	594
Blue runner or hardtail							749	9
Bonito							886	35
Bowfin	6	(⁶)	428	9			439	9
Buffalofish			15,772	694			15,832	690
Burbot	358	6					358	6
Butterfish							13,699	420
Cable or crab eater							31	1
Cabrilla							145	7
Carp	4,859	170	11,892	155			18,593	727
Catfish and bullheads	791	58	10,267	878			17,694	1,211
Chubs	5,852	703					5,852	703
Cigarfish							9	(⁶)
Cisco	846	103					846	103
Cod					960	5	140,545	2,827
Crappie	(⁶)	(⁶)	41	3			665	22
Crocodile							191	4
Croaker							60,718	801
Cunner							92	1
Cusk							7,545	130
Dolly Varden trout					91	7	91	7
Dolphin							3	(⁶)
Drum								
Black							1,986	57
Red or redfish							3,446	175
Eels								
Common	44	3	7	1			1,359	94
Cunner							168	4
Flounders					258	7	79,276	3,231
Flying fish							63	2
Frigate mackerel							74	1
Garfish	6	(⁶)	73	1			79	1
Gizzard shad							625	8
Goldfish	215	9					215	9
Goosefish							3	(⁶)
Groupers							4,899	155
Grunts							54	1
Haddock							169,044	3,867
Hake							24,240	330
Halibut					19,366	981	45,286	3,124
Hardheads							13	1
Harvestfish or "starfish"							919	21
Herring								
Lake	20,523	635					20,523	635
Sea					179,735	899	202,829	1,104
Herring smelt							(⁶)	(⁶)
Hickory shad							359	7
Hogchoker							2	(⁶)
Hogfish							45	1
Horse mackerel							4,134	46
Jewfish							136	5
Kingfish (California)							493	13
Kingfish or "king mackerel"							3,807	142
King whiting or "kingfish"							2,461	73
Lake trout	9,360	1,497					9,360	1,497
Lamprey							2	(⁶)
Lance							(⁶)	(⁶)
"Lingcod"					2	1	3,812	106
Mackerel							123,137	2,173
Menhaden							485,474	1,528
Minnows			1	(⁶)			1	(⁶)
Mojarra							333	8
Mooneye	11	1	3	(⁶)			14	1
Moonfish							(⁶)	(⁶)
Mullet							36,255	1,197

⁶ Less than 500 pounds or dollars.

Fisheries of the United States and Alaska, 1938—Continued

CATCH: BY SECTIONS—Continued

[Expressed in thousands of pounds and thousands of dollars; that is, 000 omitted]

Species	Lakes		Mississippi River and tributaries		Alaska		Total	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
FISH—continued								
Muttonfish							283	18
Paddlefish or spoonbill cat.			951	43			991	47
Permit							16	(⁶)
Pigfish							71	1
Pike or pickerel	231	19	5	(⁶)			283	26
Pilchard or sardine							1, 110, 401	6, 312
Pinfish							24	(⁶)
Pollock							40, 694	457
Pompano							808	165
Quillback			268	11			268	11
Rock bass	38	2					324	18
Rockfishes					7	(⁶)	4, 513	191
Rosefish							65, 005	803
Rudderfish							28	1
Sablefish					1, 290	39	4, 599	176
Salmon:								
Atlantic							16	5
Blueback, red, or sock-eye					234, 203	5, 027	245, 094	5, 872
Chinook or king					18, 554	466	42, 913	2, 650
Chum or keta					76, 770	754	89, 101	1, 020
Humpback or pink					235, 937	3, 193	235, 976	3, 194
Silver or coho					24, 242	502	40, 857	1, 432
Sand perch							8	(⁶)
Sauger	935	91	2	(⁶)			937	91
Sculpin							155	9
Scup or porgy							20, 951	438
Sea bass							6, 523	307
Sea bass, black (California)							408	24
Sea bass, white (California)							629	54
Sea catfish							221	6
Sea robin							461	5
Shad							11, 517	995
Sharks, including grayfish							12, 452	176
Sheepshead:								
Fresh-water	3, 417	101	3, 905	143			7, 327	244
Salt-water							1, 048	34
Silversides							2	(⁶)
Skates							1, 030	10
Skipper or "billfish"							1	(⁶)
Smelt	1, 846	55					6, 705	273
Snapper:								
Lane							2	(⁶)
Mangrove							296	10
Red							8, 142	588
Snook or sergeantfish							617	21
Spadefish							11	(⁶)
Spanish mackerel							7, 705	370
Splittail							11	(⁶)
Spot							10, 300	177
Squawfish							1	(⁶)
Squeteagues or "sea trout":								
Gray							26, 599	707
Spotted							7, 641	574
White							249	9
Squirrel hake							162	2
Steelhead trout	1	(⁶)			8	(⁶)	2, 273	140
Striped bass							4, 048	349
Sturgeon	31	10					252	26
Sturgeon, shovelnose			88	8			88	8
Suckers	5, 002	154	315	13			5, 538	174
Sunfish	44	3	22	1			944	35
Surfishes (perch)							313	12
Swellfish							93	3
Swordfish							2, 861	441
Tautog							245	8
Tenpounder							370	7
Tilefish							1, 175	39
Tomcod							34	1
Tripletail							18	(⁶)
Tullibees	878	44					878	44

⁶ Less than 500 pounds or dollars.

Fisheries of the United States and Alaska, 1938—Continued

CATCH: BY SECTIONS—Continued

[Expressed in thousands of pounds and thousands of dollars; that is, 000 omitted]

Species	Lakes		Mississippi River and tributaries		Alaska		Total	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
FISH—continued								
Tuna and tunalike fishes:								
Albacore.....							17,726	966
Bluefin.....							19,552	1,051
Bonito.....							7,753	286
Skipjack.....							22,654	1,133
Yellowfin.....							78,318	4,705
Turbot.....							2	(⁶)
Whitebass.....	736	43	3	(⁶)			739	43
Whitebait.....							107	7
Whitefish:								
Common.....	3,302	659					3,370	663
Menominee.....	153	15					153	15
White perch.....							945	37
Whiting.....							35,419	391
Wolfish.....							2,618	49
Yellow perch.....	8,017	602					8,301	618
Yellow pike.....	4,999	499	5	1			5,004	500
Yellowtail:								
Atlantic.....							169	14
Pacific.....							6,812	253
Miscellaneous.....							285	6
Total.....	81,219	6,076	44,062	2,257	791,423	11,881	3,812,755	68,454
SHELLFISH, ETC.								
Crabs:								
Hard.....					886	81	92,061	2,070
King (Pacific coast).....					49	5	49	5
King or "horseshoe".....							2,541	6
Soft and peelers.....							6,497	627
Stone.....							54	12
Crawfish.....	6	1	29	(⁶)			129	9
Lobsters:								
Common.....							11,984	2,245
Spiny.....							1,526	202
Shrimp.....			49	4	792	34	143,101	4,653
Abalone.....							424	92
Clams:								
Coquina.....							16	(⁶)
Hard.....					14	(⁶)	14,779	1,820
Pismo.....							54	11
Razor.....					785	39	2,526	265
Soft.....							14,011	939
Surf.....							1,615	72
Mixed.....							93	8
Limpets.....							1	(⁶)
Conchs.....							15	1
Mussels, sea.....							297	20
Mussel shells.....	299	6	37,255	422			37,554	428
Octopus.....							97	5
Oysters, market:								
Eastern, public.....							36,186	2,258
Eastern, private.....							41,737	5,450
Pacific.....							8,734	562
Western.....							275	188
Periwinkles and "cockles".....							94	5
Scallops:								
Bay.....							1,435	415
Sea.....							8,909	981
Squid.....							6,178	104
Sea urchins.....							97	(⁶)
Terrapin.....			19	(⁶)			46	6
Turtles.....			94	3			464	14
Frogs.....			875	131			875	131
Irish moss.....							177	16
Kelp.....							120	1
Sponges.....							606	1,071
Pearls and slugs.....		(⁶)		80				80
Bloodworms.....							165	62
Sandworms.....							283	78
Trepang.....							11	1
Total.....	305	7	38,321	640	2,523	159	435,816	24,913

⁶ Less than 500 pounds or dollars.

Fisheries of the United States and Alaska, 1938—Continued

CATCH: BY SECTIONS—Continued

[Expressed in thousands of pounds and thousands of dollars; that is, 000 omitted]

Species	Lakes		Mississippi River and tributaries		Alaska		Total	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
WHALE PRODUCTS ⁷								
Meal.....					1,224	21	1,224	21
Oil, sperm.....					1,364	55	1,364	55
Oil, whale.....					2,286	104	2,286	104
Total.....					4,874	180	4,874	180
Grand total.....	81,524	6,083	82,383	2,897	798,823	12,220	4,253,445	93,547

CATCH: BY STATES

[Expressed in thousands of pounds and thousands of dollars; that is, 000 omitted]

States	Marine and coastal rivers		Mississippi River and tributaries		Lakes ⁸		Total	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Alabama.....	10,917	449	1,822	33			12,739	482
Arkansas.....			15,733	411			15,733	411
California.....	1,294,526	17,055					1,294,526	17,055
Connecticut.....	11,838	1,420					11,838	1,420
Delaware.....	17,507	144					17,507	144
Florida.....	239,103	4,908			2,335	80	241,443	4,988
Georgia.....	19,835	381					19,835	381
Illinois.....			14,263	367	1,155	157	15,418	524
Indiana.....			7,718	157	763	66	8,481	223
Iowa.....			7,778	302			7,778	302
Kansas.....			455	17			455	17
Kentucky.....			1,622	61			1,622	61
Louisiana.....	103,883	3,391	19,213	995			123,096	4,386
Maine.....	67,207	2,521					67,207	2,521
Maryland.....	57,263	2,260					57,263	2,260
Massachusetts.....	537,850	13,169					537,850	13,169
Michigan.....					28,838	2,265	28,838	2,265
Minnesota.....			3,498	138	8,203	291	11,701	429
Mississippi.....	14,260	603	2,650	123			16,910	726
Missouri.....			928	77			928	77
Nebraska.....			145	16			145	16
New Hampshire.....	796	109					796	109
New Jersey.....	108,095	2,908					108,095	2,908
New York.....	91,217	5,193			2,376	209	93,593	5,402
North Carolina.....	198,765	1,950					198,765	1,950
Ohio.....			185	7	22,040	1,503	22,225	1,510
Oklahoma.....			40	4			40	4
Oregon.....	71,728	2,400					71,728	2,400
Pennsylvania.....	39	4			2,674	268	2,713	272
Rhode Island.....	13,829	1,056					13,829	1,056
South Carolina.....	7,911	274					7,911	274
South Dakota.....			114	11			114	11
Tennessee.....			3,435	104			3,435	104
Texas.....	24,844	1,036	139	6			24,983	1,042
Virginia.....	237,331	4,403					237,331	4,403
Washington.....	159,631	6,632					159,631	6,632
Wisconsin.....			2,645	68	15,475	1,325	18,120	1,393
Alaska.....	798,823	12,220					798,823	12,220
Total.....	4,087,203	84,486	82,383	2,897	83,859	6,164	4,253,445	93,547

⁷ The weight of whales caught was not determined; therefore, the weight of manufactured products is shown.

⁸ Includes Lake Ontario, Lake Erie, Lake Huron, Lake Michigan, Lake Superior, Rainy Lake, Namakan Lake, Lake of the Woods, Lake Okeechobee, and several mussel-bearing streams tributary to Lakes Huron, Erie, and Michigan.

NOTE.—This table does not include data on the whale fishery conducted by United States enterprise in the Southern Hemisphere. There were 7,254,300 gallons of whale oil, valued at \$3,025,831, produced in this fishery during 1938.

Fisheries of the United States and Alaska, 1938—Continued

SEED OYSTER FISHERY

Item	New England		Middle Atlantic		Chesapeake		Total	
OPERATING UNITS								
Fishermen:	<i>Number</i>		<i>Number</i>		<i>Number</i>		<i>Number</i>	
On vessels.....	185		1,440		42		1,667	
On boats and shore:								
Regular.....	81		126		1,260		1,467	
Casual.....	93		31		138		262	
Total.....	359		1,597		1,440		3,396	
Vessels:								
Steam.....	3						3	
Net tonnage.....	279						279	
Motor.....	17		13		14		44	
Net tonnage.....	415		267		74		756	
Sail.....	21		118				139	
Net tonnage.....	155		2,713				2,868	
Total vessels.....	41		131		14		186	
Total net tonnage.....	849		2,980		74		3,903	
Boats:								
Motor.....	23		102		542		667	
Other.....	104		32		162		298	
Apparatus:								
Dredges.....	182		255				437	
Yards at mouth.....	161		333				494	
Tongs.....	96		157				253	
Rakes.....	27						27	
CATCH								
Oysters, seed:	<i>Bushels</i>	<i>Value</i>	<i>Bushels</i>	<i>Value</i>	<i>Bushels</i>	<i>Value</i>	<i>Bushels</i>	<i>Value</i>
Public, spring.....	90,812	\$60,913	1,616,678	\$496,882	613,800	\$122,890	2,321,290	\$680,685
Public, fall.....	28,822	23,396	7,108	5,983	620,340	109,068	656,270	138,447
Private, spring.....	328,061	335,063	29,800	32,553			357,861	367,596
Private, fall.....	25,379	24,161	20,533	23,113			45,912	47,274
Total.....	473,074	443,533	1,674,119	558,511	1,234,140	231,958	3,381,333	1,234,002

NOTE.—Of the total number of persons fishing for seed oysters, 2,367 are duplicated among those fishing for market oysters or other species. Similarly the following craft and gear are duplicated: 11 motor vessels, 72 sailing vessels, 343 motorboats, 277 other boats, 162 dredges, 556 tongs, and 135 rakes.

Yield of the fisheries of the United States, 1938: ¹ By gear

Gear	New England		Middle Atlantic		Chesapeake	
	Pounds	Value	Pounds	Value	Pounds	Value
Purse seines.....	33,813,700	\$933,356	84,553,600	\$390,972	93,612,000	\$378,798
Haul seines.....	1,376,100	37,973	1,642,100	107,725	10,842,500	263,560
Stop seines.....	10,193,600	109,686				
Gill nets.....	22,415,700	370,709	4,697,500	307,426	1,525,700	118,849
Lines.....	60,082,900	1,449,623	6,993,800	308,798	44,010,700	782,232
Pound nets.....	22,370,400	344,183	40,723,300	858,082	84,735,700	1,508,106
Floating traps.....	8,271,300	169,103				
Other traps.....	71,700	5,449			16,200	389
Weirs.....	5,770,000	48,308	1,176,000	2,806		
Stop nets.....			271,000	20,703		
Fyke nets.....	174,800	7,153	439,200	26,909	1,566,200	87,137
Dip nets.....	4,303,100	62,601	2,694,400	147,104	1,617,800	129,976
Cast nets.....			4,700	422		
Bag nets.....	147,900	12,250	100,000	17,000		
Push nets.....	49,100	14,624				
Other trawls.....	412,235,400	8,164,343	45,085,900	1,795,099	10,726,000	228,750
Pots.....	13,708,100	2,211,140	2,050,900	194,624	610,600	28,552
Harpoons.....	2,290,700	355,474	51,300	9,572		
Spears.....	20,300	1,950	25,000	1,674		
Scrapes, crab.....					2,842,500	178,370
Dredges.....	15,786,500	2,458,921	21,033,500	3,022,101	13,679,700	735,322
Tongs.....	1,972,000	228,203	3,793,500	641,109	23,757,300	1,705,496
Rakes.....	2,252,600	292,357	2,072,100	249,792	2,063,600	170,920
Forks.....	8,027,300	450,631	53,700	46,840		
Hoes.....	5,857,200	525,683	870,700	54,223		
Picks.....					420,000	78,750
By hand.....	339,900	21,462	521,300	56,263	2,537,400	257,744
Total.....	631,520,300	18,275,182	216,858,500	8,249,244	294,593,900	6,662,951

Gear	South Atlantic and Gulf		Pacific		Lakes	
	Pounds	Value	Pounds	Value	Pounds	Value
Purse seines.....	300,697,000	\$814,673	1,026,100,500	\$7,713,344		
Haul seines.....	35,933,800	1,053,896	3,687,700	231,733	5,484,800	\$220,567
Gill nets.....	46,494,100	1,966,983	34,520,700	1,914,688	38,273,700	3,176,278
Trammel nets.....	8,373,800	442,090	925,100	75,930	167,100	5,080
Lines.....	47,772,900	1,508,585	208,663,200	10,972,186	2,332,200	364,813
Pound nets.....	14,930,400	325,027	1,095,400	68,383	9,016,500	555,726
Other traps.....	81,000	12,000	14,019,700	834,949	23,018,200	1,596,293
Weirs.....			245,100	2,745		
Wheels.....	11,200	148				
Fyke nets.....	431,500	12,284	359,600	40,448	2,927,000	157,923
Dip nets.....	1,127,900	46,155	4,398,000	208,853		
Cast nets.....	358,400	14,807				
Bag nets.....			1,451,600	28,320		
Push nets.....	16,000	300				
Reef nets.....			476,800	27,092		
Lampara and ring nets.....			198,367,500	1,902,276		
Paranzella nets.....			12,525,200	595,635		
Other trawls.....	139,751,100	4,526,134	6,147,100	175,787		
Beam trawls.....			410,300	16,693		
Pots.....	3,693,500	108,055			6,000	450
Harpoons.....			721,800	80,708		
Spears.....	517,600	33,054				
Dredges.....	11,471,900	607,059	(²)	(²)		
Tongs.....	6,806,300	452,149	11,335,000	1,074,552		
Crowfoot bars.....					225,400	4,600
Rakes.....	387,400	35,727	(³)	(³)		
Forks.....	2,900	322				
Grabs.....	1,022,900	42,423				
Picks.....					30,000	770
Hooks.....	160,600	216,062				
Diving apparatus, abalone and sponge.....	482,000	857,930	424,300	91,979		
By hand.....	1,343,900	57,540			43,600	712
Total.....	621,858,100	13,073,403	1,525,884,600	26,086,301	81,524,500	6,083,212

¹ Data are for 1938 except those for Mississippi River and tributaries which are for 1931.² Includes the catch by drop nets and wire baskets.³ This catch was made by scoop nets.⁴ Includes a small catch by otter trawls.⁵ The catch by shovels, rakes, and dredges is included with tongs.

Yield of the fisheries of the United States, 1938: By gear—Continued

Gear	Mississippi River and tributaries		Total	
	Pounds	Value	Pounds	Value
Purse seines.....			1,538,781,800	\$10,211,143
Haul seines.....			72,706,657	2,519,995
Stop seines.....	13,739,657	\$574,541	10,183,600	109,686
Gill nets.....	166,598	6,547	148,093,998	7,831,480
Trammel nets.....	1,134,206	75,615	10,600,206	598,715
Lines.....	10,140,037	772,245	379,995,737	16,158,482
Pound nets.....	224,275	9,541	172,995,975	3,669,048
Floating traps.....			8,271,300	169,103
Other traps.....			37,206,800	2,449,080
Weirs.....			7,191,100	53,859
Wheels.....			11,200	148
Stop nets.....			271,000	20,703
Fyke nets.....	18,507,204	797,130	24,385,504	1,128,984
Dip nets.....	30,045	3,307	12,171,245	597,996
Cast nets.....			363,100	15,229
Bag nets.....			1,699,500	57,570
Push nets.....			65,100	14,924
Reef nets.....			476,800	27,092
Lampara and ring nets.....			193,367,500	1,902,276
Paranzella nets.....			12,525,200	595,635
Otter trawls.....			613,945,500	14,890,113
Beam trawls.....			440,300	16,693
Pots.....	6,310,455	6,26,277	20,409,555	2,559,098
Harpoons.....			3,063,800	445,754
Spears.....	2,250	270	565,150	36,948
Scrapes, crab.....			2,842,500	178,370
Dredges.....	3,699,100	40,958	65,670,700	6,864,361
Tongs.....	1,601,876	21,091	49,355,976	4,122,600
Crowfoot bars.....	20,893,550	265,443	21,118,950	270,043
Rakes.....	370,130	4,029	7,145,830	752,825
Forks.....	4,812,737	76,214	12,896,637	574,007
Hoes.....			6,727,900	579,906
Grabs.....	873,099	130,621	1,895,999	173,044
Picks.....			450,000	79,520
Hooks.....			160,600	216,062
Diving apparatus, abalone and sponge.....			906,300	949,909
By hand.....	5,877,304	93,528	10,663,404	487,249
Total.....	82,382,523	2,897,357	3,454,622,423	81,327,650

⁶ Includes the catch by baskets.

Industries related to the fisheries of the United States and Alaska, 1938¹

Item	New England	Middle Atlantic	Chesapeake	South Atlantic and Gulf
Transporting:				
Persons engaged:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
On vessels.....	241	134	1,187	325
On boats.....	65	104		188
Total.....	306	238	1,187	513
Vessels:				
Motor.....	91	34	593	121
Net tonnage.....	1,485	568	6,545	1,127
Sail.....				36
Net tonnage.....				359
Total vessels.....	91	34	593	157
Total net tonnage.....	1,485	568	6,545	1,486
Boats.....	35	82		138
Wholesale and manufacturing:				
Establishments.....	421	383	582	742
Persons engaged:				
Proprietors.....	440	179	737	770
Salaried employees.....	754	952	379	575
Wage earners:				
Average for season.....	10,968	5,065	11,728	16,822
Average for year.....	6,038	3,598	5,070	5,470
Salaries and wages paid.....	\$6,969,883	\$7,413,363	\$3,135,628	\$3,452,182
Manufactured products.....	\$19,967,143	\$15,435,934	\$9,224,417	\$11,762,783
Fishermen's manufactured products:				
Persons engaged.....	3,396	287	128	1,323
Products.....	\$1,216,024	\$347,970	\$17,009	\$264,271

Item	Pacific	Lakes	Mississippi River and tributaries	Alaska	Total
Transporting:					
Persons engaged:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
On vessels.....	190	30	29	1,923	4,059
On boats.....	1			(²)	358
Total.....	191	30	29	1,923	4,417
Vessels:					
Steam.....		2		5	7
Net tonnage.....		63		18,608	18,671
Motor.....	74	15	8	396	1,332
Net tonnage.....	1,539	175	104	13,989	25,532
Sail.....					36
Net tonnage.....					359
Total vessels.....	74	17	8	401	1,375
Total net tonnage.....	1,539	238	104	32,597	44,562
Boats.....	1			718	974
Wholesale and manufacturing:					
Establishments.....	341	214	217	230	3,130
Persons engaged:					
Proprietors.....	315	146	204		
Salaried employees.....	1,155	486	355	15,154	90,244
Wage earners:					
Average for season.....	16,645	2,140	4,275		
Average for year.....	6,065	1,268	3,483	(³)	(³)
Salaries and wages paid.....	\$10,282,514	\$2,830,878	\$3,080,430	(⁴)	(⁴)
Manufactured products.....	\$48,621,239	\$3,560,743	\$2,482,729	\$40,946,478	\$152,001,466
Fishermen's manufactured products:					
Persons engaged.....	133	206	216	(³)	(³)
Products.....	\$150,872	\$104,470	\$8,751	(³)	(³)

¹ Data for Mississippi River and tributaries are for 1931 except that the value shown for manufactured products includes that of mussel-shell products for 1938.

² Included on vessels.

³ Includes scows, houseboats, pile drivers, etc.

⁴ Statistics not available.

NOTE.—Of the total number of persons engaged in the preparation of fishermen's manufactured products 5,327 have also been included as fishermen, and 1,866 of the persons shown on transporting craft have also been included as fishermen.

MANUFACTURED FISHERY PRODUCTS

The output of manufactured fishery products (canned, cured, packaged, and byproducts), in the United States and Alaska during the most recent years for which data are available was valued at \$156,131,431. Of this amount, canned products accounted for 53 percent, byproducts 20 percent, fresh and frozen packaged products 17 percent, and cured products 10 percent.

Since complete general statistical surveys were conducted for 1938 in each of the geographical sections of the United States and Alaska, except the Mississippi River area, the following compilation of manufactured fishery products consists of data for 1938 with the exception of a small quantity of salted and smoked fish produced in the Mississippi River section.

Manufactured fishery products of the United States and Alaska, 1938¹

Item	Quantity	Value
Alewives:		
Salted:		
Round.....pounds	1, 114, 600	\$36, 292
Corned.....do	5, 739, 155	120, 255
Pickled ².....do	5, 188, 900	134, 037
Spiced.....do	2, 511, 300	400, 800
Tight-pack cut.....do	1, 166, 350	38, 164
Tight-pack roe.....do	58, 620	2, 369
Smoked.....do	221, 250	10, 712
Canned.....standard cases	52, 826	143, 558
Roe, canned.....do	37, 641	165, 711
Oil.....gallons	18, 681	3, 277
Amberjack, smoked.....pounds	2, 180	545
Barracuda, fresh fillets.....do	300, 000	44, 575
Bluefish, smoked.....do	1, 200	216
Blue pike:		
Fresh fillets.....do	2, 241, 695	477, 679
Frozen fillets.....do	317, 250	65, 013
Blue runner, salted.....do	325, 800	12, 962
Buffalofish, smoked ³.....do	477, 000	113, 226
Butterfish, smoked ³.....do	625, 325	159, 223
Cabrilla, fresh fillets.....do	85, 000	16, 300
Carp, smoked ³.....do	308, 017	89, 184
Catfish and bullheads, smoked.....do	10, 400	2, 080
Chub, cisco, and tullibee, smoked ³.....do	7, 130, 861	2, 030, 968
Cod:		
Fresh fillets.....do	12, 270, 194	1, 236, 041
Frozen fillets.....do	8, 607, 443	753, 713
Fresh sticks.....do	310, 900	34, 865
Smoked fillets.....do	622, 334	69, 170
Salted:		
Green ².....do	3, 888, 231	164, 004
Dry.....do	4, 253, 922	298, 411
Boneless and absolutely boneless.....do	9, 492, 797	1, 479, 789
Tongues.....do	25, 220	2, 442
Roe.....do	94	19
Stockfish.....do	6, 678	878
Oil:		
Cod.....gallons	4, 604	1, 308
Cod-liver.....do	261, 556	164, 986
Croaker:		
Fresh fillets.....pounds	142, 000	14, 230
Fresh pan-dressed.....do	280, 000	21, 000
Cusk:		
Fresh fillets.....do	1, 091, 785	105, 532
Frozen fillets.....do	184, 915	14, 813
Fresh sticks.....do	636, 300	65, 788
Salted:		
Green ².....do	1, 600	40
Boneless.....do	121, 958	9, 145
Smoked fillets.....do	753, 223	74, 780
Eels:		
Salted.....do	132, 854	12, 179
Smoked ³.....do	122, 938	32, 286
Flounders:		
Fresh fillets.....do	5, 818, 521	901, 264
Frozen fillets.....do	1, 876, 905	265, 262
Fresh steaks.....do	420, 000	86, 500

See footnotes at end of table.

Manufactured fishery products of the United States and Alaska, 1938—Continued

Item	Quantity	Value
Grouper:		
Fresh fillets.....pounds..	52,000	\$8,350
Fresh steaks.....do.....	421,630	69,471
Fillets, salted.....do.....	9,000	900
Smoked.....do.....	1,100	215
Haddock:		
Fresh fillets.....do.....	20,176,963	2,034,755
Frozen fillets.....do.....	21,203,405	1,382,355
Fresh sticks.....do.....	73,000	11,300
Smoked fillets.....do.....	45,300	8,450
Finnan haddie.....do.....	733,509	65,574
Finnan haddie, canned.....standard cases..	488	7,518
Hake:		
Fresh fillets.....pounds..	2,523,591	207,690
Frozen fillets.....do.....	351,948	20,385
Fresh sticks.....do.....	674,800	65,432
Salted:		
Green ¹.....do.....	1,873,142	59,547
Dry.....do.....	1,020,059	57,908
Boneless and absolutely boneless.....do.....	207,538	15,695
Halibut:		
Fresh fillets.....do.....	34,500	10,150
Frozen steaks.....do.....	82,089	13,052
Salted, green.....do.....	4,900	398
Herring, lake:		
Fresh fillets.....do.....	33,965	3,579
Salted.....do.....	3,561,960	132,960
Smoked.....do.....	698,944	71,659
Herring, sea:		
Salted:		
Pickled, Scotch cure.....do.....	2,186,150	130,424
Brine salted.....do.....	382,000	11,870
Pickled in vinegar.....do.....	835,900	35,522
Norwegian cure.....do.....	192,800	5,784
Roe.....do.....	2,100	357
Roused.....do.....	416,900	12,755
Spiced.....do.....	549,438	49,828
Split.....do.....	289,500	11,177
Smoked:		
Hard bloaters.....do.....	170,050	9,749
Soft bloaters.....do.....	491,140	28,028
Unclassified bloaters.....do.....	481,530	53,940
Boneless.....do.....	1,991,214	243,087
Lengthwise.....do.....	81,160	4,367
Medium scaled.....do.....	373,538	32,931
Kippered.....do.....	223,922	39,692
Unclassified, whole.....do.....	92,900	9,100
Canned, "sardines".....standard cases..	671,635	2,367,045
Meal.....tons.....	17,747	592,588
Oil.....gallons.....	4,579,565	1,298,837
Hogchoker, salted.....pounds..	11,000	500
King mackerel, smoked.....do.....	3,050	805
Lake trout:		
Fresh fillets.....do.....	74,038	23,453
Smoked.....do.....	748,044	222,217
"Lingcod," fresh fillets.....do.....	298,486	36,459
Mackerel:		
Fresh fillets.....do.....	202,302	34,332
Frozen fillets.....do.....	485,355	33,439
Salted, split, dry.....do.....	1,788,664	157,883
Smoked.....do.....	678,920	120,921
Canned.....standard cases..	965,629	2,896,220
Meal.....tons.....	1,574	58,580
Oil.....gallons.....	86,364	25,878
Menhaden:		
Acid scrap.....tons.....	21,814	418,936
Dry scrap.....do.....	26,096	1,006,428
Meal.....do.....	13,178	570,192
Oil.....gallons.....	4,189,129	1,173,667
Mullet:		
Salted.....pounds..	1,904,000	118,822
Roe, salted.....do.....	44,300	11,191
Smoked.....do.....	48,300	9,362
Paddlefish or spoonbill cat:		
Smoked ³.....do.....	276,200	168,833
Roe, salted ⁴.....do.....	1,595	812
Pilchard:		
Canned, "sardines".....standard cases..	2,261,678	7,102,358
Meal.....tons.....	89,927	3,437,892
Oil.....gallons.....	17,539,567	5,205,337

See footnotes at end of table.

Manufactured fishery products of the United States and Alaska, 1938—Continued

Item	Quantity	Value
Pollock:		
Fresh fillets..... pounds	2,720,958	\$179,188
Frozen fillets..... do	10,570,535	562,142
Salted:		
Green ¹ do	438,911	11,805
Dry..... do	332,225	14,985
do..... do	1,176,237	182,985
Rockfishes, fresh fillets..... do		
Rosefish:		
Fresh fillets..... do	6,066,632	478,197
Frozen fillets..... do	13,085,359	1,089,318
Sablefish:		
Kippered..... do	689,024	81,680
Pickled..... do	100,364	4,167
Salted..... do	182,740	10,107
Smoked ² do	184,840	47,270
Sailfish, smoked..... do	12,040	2,206
Salmon:		
Frozen steaks..... do	158,305	38,177
Dried..... do	1,002,025	71,340
Salted:		
Dry..... do	45,800	3,362
Mild-cured..... do	12,342,010	2,447,805
Pickled..... do	1,177,685	122,421
Eggs for fish food..... do	7,300	365
Smoked ³ do	9,049,520	2,692,296
Kippered..... do	2,728,875	468,980
Canned:		
Blueback, red, or sockeye..... standard cases	2,671,396	21,707,727
Chinook or king..... do	214,868	2,775,910
Chum or keta..... do	845,353	3,064,549
Humpback or pink..... do	3,233,258	12,484,099
Silver or coho..... do	299,588	2,161,302
Steelhead trout..... do	15,256	172,202
Caviar..... do	1,563	28,077
Eggs for bait..... do	4,656	85,348
Meal..... tons	1,846	61,807
Oil ⁴ gallons	165,825	68,593
Sauger:		
Fresh fillets..... pounds	1,089,164	231,257
Frozen fillets..... do	583,780	127,594
Sea bass:		
Fresh fillets (Atlantic)..... do	94,000	13,880
Fresh pan-dressed (Atlantic)..... do	95,000	9,900
Fresh steaks (black, Pacific)..... do	210,000	33,600
Fresh fillets (white, Pacific)..... do	143,000	28,600
Shad:		
Smoked..... do	185,425	37,696
Canned..... standard cases	10,845	29,950
Canned, roo..... do	3,015	95,909
Sharks, including gray fish, fresh fillets..... pounds	50,000	5,000
Sharks:		
Fins..... do	41,870	17,248
Skins..... do	147,520	17,555
Liver oil..... gallons	129,705	330,397
Sheepshead:		
Fresh fillets..... pounds	28,338	4,234
Smoked ³ do	37,517	4,015
Snapper, red:		
Fresh fillets..... do	75,824	23,268
Fresh steaks..... do	14,000	3,110
Spanish mackerel:		
Fresh fillets..... do	6,000	1,255
Salted..... do	88,000	4,973
Smoked..... do	950	178
Spot, salted..... do	201,600	10,559
Squeteagues, or "sea trout":		
Fresh fillets..... do	279,500	36,995
Fresh pan-dressed..... do	365,000	25,800
Salted..... do	13,300	1,995
Smoked..... do	1,150	257
Sturgeon:		
Smoked and kippered ³ do	842,683	570,632
Roe, salted ³ do	343	335
Caviar, canned..... standard cases	2,491	307,298
Suckers, smoked..... pounds	1,500	150
Swellfish, fresh sticks..... do	5,000	500
Swordfish, fresh steaks..... do	116,400	28,280
Totouava, fresh steaks..... do	1,790,000	358,000

See footnotes at end of table.

Manufactured fishery products of the United States and Alaska, 1938—Continued

Item	Quantity	Value
Tuna and tuna-like fishes:		
Canned:		
Albacore.....standard cases	384, 185	\$2, 310, 733
Bluefin.....do	333, 374	1, 694, 896
Bonito.....do	157, 979	676, 595
Striped.....do	348, 254	1, 729, 108
"Tonno".....do	140, 400	946, 725
Yellowfin.....do	1, 306, 132	7, 461, 671
Yellowtail.....do	83, 819	363, 908
Meal.....tons	9, 650	350, 631
Oil.....gallons	192, 515	55, 654
Wahoo, smoked.....pounds	600	40
White bass, fresh fillets.....do	22, 143	4, 093
Whitefish:		
Fresh fillets.....do	40, 865	14, 935
Smoked ¹.....do	1, 839, 539	493, 819
Caviar, canned.....standard cases	1, 052	36, 478
Whiting:		
Fresh fillets.....pounds	346, 646	25, 787
Frozen fillets.....do	830, 615	71, 752
Frozen sticks.....do	1, 173, 794	71, 665
Frozen pan-dressed.....do	5, 251, 639	192, 662
Smoked.....do	1, 200	240
Wolfish:		
Fresh fillets.....do	78, 537	7, 894
Frozen fillets.....do	130, 200	13, 634
Yellow perch:		
Fresh fillets.....do	855, 299	193, 285
Frozen fillets.....do	105, 812	24, 509
Yellow pike:		
Fresh fillets.....do	344, 859	76, 618
Frozen fillets.....do	83, 899	15, 723
Smoked.....do	2, 000	400
Crabs, hard:		
Meat, packaged, fresh-cooked.....do	9, 356, 122	2, 872, 532
Canned.....standard cases	13, 037	249, 268
Dry scrap.....tons	1, 515	25, 135
Crab, king, Pacific, canned.....standard cases	506	9, 747
Crab, king, "horseshoe":		
Meal.....tons	123	4, 215
Dry scrap.....do	255	9, 689
Lobsters, common, meat, packaged, fresh-cooked.....pounds	212, 529	228, 709
Shrimp:		
Frozen packaged.....do	3, 348, 500	457, 709
Cooked and peeled.....do	1, 478, 522	451, 269
Sun-dried.....do	2, 037, 209	359, 177
Smoked.....do	375	113
Canned.....standard cases	1, 077, 003	4, 872, 393
Bran or meal.....tons	1, 596	33, 163
Abalone steaks.....pounds	429, 343	151, 666
Clams, hard:		
Fresh-shucked.....gallons	27, 194	45, 565
Canned:		
Whole.....standard cases	20, 935	98, 337
Minced.....do	20, 885	116, 059
Chowder.....do	428, 321	1, 547, 780
Juice.....do	8, 329	33, 596
Broth bouillon, and cocktail.....do	8, 627	35, 618
Shells, ground, poultry food.....tons	3, 019	23, 524
Clams, razor:		
Fresh-shucked.....gallons	28, 280	11, 443
Canned:		
Whole.....standard cases	3, 402	27, 514
Minced.....do	87, 019	688, 228
Clams, soft:		
Fresh-shucked.....gallons	569, 714	722, 204
Pickled.....do	80	160
Canned:		
Whole.....standard cases	119, 622	439, 472
Chowder.....do	48, 274	156, 953
Juice.....do	23, 151	41, 267
Steamed ².....pounds	272, 745	21, 238
Clams, mixed, fresh-shucked.....gallons	1, 392	1, 740
Marine-shell products:		
Buttons.....gross	6, 228, 339	3, 642, 893
Novelties.....do		554, 610
Mussel-shell, fresh-water, products:		
Buttons.....gross	10, 022, 452	2, 639, 504
Novelties.....do		15, 400
Poultry feed.....tons	4, 446	25, 845
Lime.....do	1, 111	1, 140

See footnotes at end of table.

Manufactured fishery products of the United States and Alaska, 1938—Continued

Item	Quantity	Value
Oysters:		
Eastern:		
Fresh-shucked..... gallons.....	6,069,052	\$7,930,138
Canned..... standard cases.....	371,093	1,422,101
Pacific:		
Fresh-shucked..... gallons.....	377,763	417,031
Canned..... standard cases.....	111,348	464,375
Western or native, fresh-shucked..... gallons.....	27,473	216,642
Shell products:		
Poultry feed..... tons.....	258,431	1,075,709
Lime and dust..... do.....	61,461	213,636
Lime, burned..... do.....	14,789	93,338
Scallops:		
Bay, fresh-shucked..... gallons.....	122,133	362,858
Sea, fresh-shucked..... do.....	990,066	1,082,131
Alligator hides..... pounds.....	88,356	7,363
Whale products:		
Meal (meat)..... tons.....	396	15,796
Meal (bone)..... do.....	216	5,618
Oil, whale..... gallons.....	7,559,100	3,129,488
Oil, sperm..... do.....	181,900	54,570
Unclassified products:		
Fillets, fresh..... pounds.....	⁶ 68,200	⁶ 7,884
Fillets, frozen..... do.....	⁷ 304,766	⁷ 45,275
Pan-dressed, fresh..... do.....	⁸ 40,000	⁸ 2,780
Other packaged, fresh and frozen..... do.....	⁹ 299,716	⁹ 28,632
Salted, including spiced..... do.....	¹⁰ 1,908,675	¹⁰ 145,119
Smoked..... do.....	¹¹ 50,901	¹¹ 7,666
Canned:		
Fish for cat and dog food..... standard cases.....	413,434	888,399
Fish cakes, balls, etc..... do.....	97,263	665,307
Fish flakes..... do.....	45,721	291,426
Fish paste..... do.....	3,987	143,147
Other..... do.....	¹² 55,041	¹² 440,007
Scrap, miscellaneous, dry and green..... tons.....	¹³ 1,435	¹³ 38,101
Meal:		
Groundfish..... do.....	7,725	364,250
Miscellaneous..... do.....	¹⁴ 10,123	¹⁴ 425,142
Oil:		
Fur seal..... gallons.....	29,865	4,157
Miscellaneous..... do.....	¹⁵ 86,817	¹⁵ 28,906
Miscellaneous liver..... do.....	¹⁶ 114,942	¹⁶ 1,980,960
Glue..... do.....	383,769	805,804
Other byproducts..... do.....	¹⁷ 86,353	¹⁷ 505,983
Total, fresh and frozen packaged products..... pounds.....	216,661,255	27,243,645
Total, cured products..... do.....	102,617,256	14,865,530
Total, canned products..... do.....	667,527,840	83,445,889
Total, byproducts..... do.....		30,576,367
Grand total.....		156,131,431

¹ All data are for 1938 except for a small quantity of salted and smoked fish produced in the Mississippi River section which are for 1931.

² This is usually an intermediate product and although shown in the total may also be shown in its final stage of processing elsewhere in the table.

³ Data are for 1938 and 1931.

⁴ Data are for 1931.

⁵ Includes the production of both edible and industrial salmon oil.

⁶ Includes fresh filets of red drum, sablefish, scup, sea robin, striped bass, suckers and swellfish.

⁷ Includes frozen filets of croaker, halibut, lake herring, king whiting, lake trout, "lingcod," salmon, red snapper, Spanish mackerel, squeteagues, white bass, and whitefish.

⁸ Includes fresh pan-dressed king whiting, scup, and Spanish mackerel.

⁹ Includes fresh steaks of cod, sea bass, red snapper, swordfish, and wolffish; frozen steaks of cod, grouper, haddock, and pollock; fresh pollock sticks; and fresh packaged sea crawfish meat.

¹⁰ Includes dry salted barracuda, cusk, haddock, and sea bass; green salted haddock; salted boneless haddock and pollock; salted crevalle, mackerel, mackerel filets, pilchard, salmon eggs, salmon bellies and tuna; mild-cured shad; and spiced chubs and lake herring.

¹¹ Includes smoked alewives with roe, pollock filets, barracuda, cod, red drum, flounders, haddock, halibut, mooneye, scup and tuna.

¹² Includes canned salted cod, kippered sturgeon, pickled eels, haddock chowder, swordfish, tuna roe, soft crabs, shrimp soup, hard clam stew, razor clam juice, coquina clam broth, pickled sea mussels, oyster soup, smoked oysters, squid, crayfish bisque, fish chowder, groundfish roe, rat poison bait, crab and shrimp gumbo, fish bouillon, shore dinners, shellfish newberg, and turtle, terrapin, and frog products.

¹³ Includes alewife, herring, shark, and miscellaneous dry scrap; and miscellaneous green scrap.

¹⁴ Includes alewife, rosefish, salmon egg, shark, clam, starfish, and miscellaneous fish meal.

¹⁵ Includes rosefish, shark and miscellaneous fish oil.

¹⁶ Includes burbot, halibut, tuna, sablefish, swordfish, and miscellaneous liver oil. A small amount of halibut viscera oil is also included.

¹⁷ Includes herring pomace, pearl essence, lime from crushed clam shells, fresh-water mussel-shell products, isinglass, and kelp products.

NOTE.—Some of the above products have been manufactured from raw products imported from another country; therefore, they cannot be correlated directly with the catch within the United States and Alaska.

CANNED FISHERY PRODUCTS AND BYPRODUCTS TRADE

The output of canned fishery products and byproducts in the United States and Alaska in 1938 was valued at \$114,022,256. Of this total, canned products comprised \$83,445,889, and byproducts \$30,576,367; a decrease of 21 percent in the value of canned products and 17 percent in the value of byproducts when compared with the respective values of the same groups of commodities for the previous year.

Fishery products were canned at 382 establishments in the United States and Alaska during 1938. The combined output of these canneries amounted to 17,004,379 standard cases. The net weight of the products canned amounted to 667,527,840 pounds.

Canned fishery products or byproducts were prepared in 26 States and in Alaska during 1938. Alaska ranked first in the value of the products, accounting for 34 percent of the total, and California ranked second, with 31 percent.

Canned fishery products and byproducts of the United States and Alaska, 1938

SUMMARY OF PRODUCTION: BY COMMODITIES

Product	Number of plants	Standard cases	Pounds	Value
Canned products:				
Salmon:				
United States.....	27	472, 721	22, 690, 608	\$5, 728, 892
Alaska.....	98	6, 806, 998	326, 735, 904	36, 638, 897
Sardines:				
Maine.....	25	671, 635	16, 790, 875	2, 367, 045
California.....	31	2, 261, 678	108, 560, 544	7, 102, 358
Tuna and tunalike fishes.....	20	2, 754, 143	66, 099, 432	15, 183, 636
Mackerel.....	24	965, 629	46, 350, 192	2, 896, 220
Alewives.....	10	52, 826	2, 535, 648	143, 558
Alewife roe.....	29	37, 641	1, 806, 768	165, 711
Shad.....	8	10, 845	520, 560	29, 950
Shad roe.....	10	3, 015	144, 720	95, 909
Cat and dog food.....	9	413, 434	19, 844, 832	888, 399
Fish flakes.....	4	45, 721	2, 194, 608	291, 426
Finnan haddie.....	3	488	23, 424	7, 518
Fish cakes, balls, etc.....	6	97, 263	4, 668, 624	665, 307
Fish paste.....	3	3, 987	191, 376	143, 147
Sturgeon caviar.....	4	2, 491	119, 568	307, 298
Whitefish roe and caviar.....	5	1, 052	50, 496	36, 478
Salmon roe and caviar (for food).....	4	1, 563	75, 024	28, 077
Salmon eggs (for bait).....	8	4, 656	223, 488	85, 348
Miscellaneous fish and roe.....	14	19, 792	950, 016	182, 729
Clam products.....	60	1 769, 665	19, 312, 005	3, 189, 628
Oysters.....	42	482, 441	7, 236, 615	1, 886, 476
Shrimp.....	50	1, 077, 003	18, 113, 297	4, 872, 393
Crabs.....	21	13, 699	657, 552	260, 134
Turtle products.....	4	7, 410	355, 680	80, 869
Miscellaneous shellfish, etc.....	14	26, 583	1, 275, 984	170, 486
Total.....	2 382	17, 004, 379	667, 527, 840	83, 445, 889
Byproducts:			<i>Quantity</i>	<i>Value</i>
Oyster and marine clam-shell products.....		tons..	339, 425	\$1, 416, 557
Fresh-water mussel-shell products.....				2, 698, 879
Marine pearl-shell products.....				4, 197, 503
Scrap, meal, etc.....		tons..	205, 216	7, 418, 163
Marine animal oils.....		gallons..	35, 140, 135	13, 526, 015
Liquid glue.....		do.....	383, 769	805, 804
Miscellaneous byproducts.....				513, 446
Total.....				30, 576, 367
Grand total.....				114, 022, 256

¹ "Cut-out" or "drained" weights of can contents are included for whole or minced clams and gross can contents for other clam products.

² Exclusive of duplication.

Canned fishery products and byproducts of the United States and Alaska, 1938—Con.

VALUE OF PRODUCTION: BY STATES

State	Canned products	Byproducts	Total
Maine.....	\$3,319,212	\$340,060	\$3,659,272
Massachusetts.....	1,354,127	2,106,003	3,478,545
Rhode Island.....		18,415	
Connecticut.....	564,287	1,010,609	1,010,609
New York.....		4,586,870	5,151,137
New Jersey.....	1,215,126	1,692,644	3,020,702
Pennsylvania.....		112,932	
Delaware.....	506,476	364,179	1,862,872
Maryland.....		992,217	
Virginia.....	104,502	1,085,618	1,190,120
North Carolina.....	65,028	1,099,679	1,476,915
South Carolina.....	312,208		
Georgia.....	743,663	716,599	1,808,176
Florida.....	347,914		
Alabama and Mississippi.....	1,917,637	77,135	1,994,772
Louisiana.....	2,776,572	349,511	3,126,083
Texas, Illinois, Missouri, Wisconsin, and Minnesota.....	525,928	169,926	695,854
Iowa.....	3,762,575	2,169,263	2,169,263
Washington.....		1,444,398	5,206,973
Oregon.....	3,638,815	368,415	4,007,230
California.....	25,232,688	9,798,607	35,031,295
Alaska.....	37,059,151	2,073,237	39,132,438
Total.....	83,445,889	30,576,367	114,022,256

PACK OF CANNED SALMON: STANDARD CASES

Product	Alaska							
	Southeastern		Central		Western		Total	
	Cases	Value	Cases	Value	Cases	Value	Cases	Value
Chinook or king:								
1-pound tall.....	13,641	\$93,458	15,488	\$103,975	6,219	\$45,138	35,348	\$242,571
1-pound flat.....	1,450	11,890	4,381	40,887	280	2,580	6,111	55,357
½-pound flat.....	1,279	13,325	1,075	17,390	-----	-----	2,354	30,715
Total.....	16,370	118,673	20,944	162,252	6,499	47,718	43,813	328,643
Blueback, red, or sockeye:								
1-pound tall.....	125,542	911,488	384,267	2,850,896	1,828,605	13,928,747	2,338,414	17,691,131
1-pound flat.....	13,247	116,386	38,361	318,542	-----	-----	51,608	434,928
½-pound flat.....	53,802	598,554	50,618	578,628	18,222	216,029	122,642	1,393,211
4-pound flat.....	-----	-----	8,569	64,527	-----	-----	8,569	64,527
Total.....	192,591	1,626,428	481,815	3,812,593	1,846,827	14,144,776	2,521,233	19,583,797
Silver or coho:								
1-pound tall.....	132,147	807,301	69,839	428,613	345	1,937	202,331	1,237,851
1-pound flat.....	2,688	18,816	157	1,072	-----	-----	2,845	19,888
½-pound flat.....	8,930	84,746	3,092	27,921	-----	-----	12,022	112,667
4-pound flat.....	-----	-----	5,123	28,905	-----	-----	5,123	28,905
Total.....	143,765	910,863	78,211	486,511	345	1,937	222,321	1,399,311
Humpback or pink:								
1-pound tall.....	1,845,078	7,094,557	1,318,415	5,006,070	-----	-----	3,163,493	12,100,627
1-pound flat.....	-----	-----	4,105	18,317	-----	-----	4,105	18,317
½-pound flat.....	41,691	250,497	9,091	57,515	-----	-----	50,782	308,012
4-pound flat.....	-----	-----	14,498	54,767	-----	-----	14,498	54,767
Total.....	1,886,769	7,345,054	1,346,109	5,136,669	-----	-----	3,232,878	12,481,723
Chum or keta:								
1-pound tall.....	469,306	1,681,816	250,046	907,034	59,614	216,171	778,966	2,805,021
½-pound flat.....	5,147	28,969	376	2,105	-----	-----	5,523	31,074
4-pound flat.....	-----	-----	2,264	7,328	-----	-----	2,264	7,328
Total.....	474,453	1,710,785	252,686	916,467	59,614	216,171	786,753	2,843,423
Grand total.....	2,713,948	11,711,803	2,179,765	10,514,492	1,913,285	14,410,602	6,806,998	36,636,897

Canned fishery products and byproducts of the United States and Alaska, 1938—Con.

PACK OF CANNED SALMON: STANDARD CASES—Continued

Product	United States						Grand total United States and Alaska	
	Washington		Oregon		Total		Cases	Value
Chinook or King:	<i>Cases</i>	<i>Value</i>	<i>Cases</i>	<i>Value</i>	<i>Cases</i>	<i>Value</i>	<i>Cases</i>	<i>Value</i>
1-pound tall.....	905	\$4,696	1,953	\$9,783	2,858	\$14,479	38,206	\$267,050
1-pound oval.....	24	528	572	12,584	596	13,112	596	13,112
1-pound flat.....	5,334	59,446	21,936	239,661	27,270	299,107	33,381	354,464
½-pound oval.....	3	80	150	4,020	153	4,100	153	4,100
½-pound flat.....	23,474	337,791	106,278	1,612,677	129,752	1,950,468	132,106	1,981,183
¼-pound flat.....	213	2,215	10,213	163,786	10,426	166,001	10,426	166,001
Total.....	29,953	404,756	141,102	2,042,511	171,055	2,447,267	214,868	2,775,910
Blueback, red, or sockeye:								
1-pound tall.....	563	5,067			563	5,067	2,338,977	17,696,198
1-pound flat.....	30,359	346,093			30,359	346,093	81,967	781,021
½-pound flat.....	106,834	1,543,092	9,231	166,158	116,065	1,709,250	238,707	3,102,461
¼-pound flat.....	476	9,520	2,700	54,000	3,176	63,520	3,176	63,520
4-pound flat.....							8,569	64,527
Total.....	138,232	1,903,772	11,931	220,158	150,163	2,123,930	2,671,396	21,707,727
Silver or coho:								
1-pound tall.....	29	186	78	499	107	685	202,438	1,238,536
1-pound flat.....	2,872	21,253	13,967	111,736	16,839	132,989	19,684	152,877
½-pound flat.....	10,594	101,702	34,153	321,038	44,747	422,740	56,769	535,407
¼-pound flat.....			15,574	205,577	15,574	205,577	15,574	205,577
4-pound flat.....							5,123	28,905
Total.....	13,495	123,141	63,772	638,850	77,267	761,991	299,588	2,161,302
Humpback or pink:								
1-pound tall.....	13	55			13	55	3,163,506	12,100,682
1-pound flat.....	17	81			17	81	4,122	18,398
½-pound flat.....	350	2,240			350	2,240	51,132	310,252
4-pound flat.....							14,498	54,767
Total.....	380	2,376			380	2,376	3,233,258	12,484,099
Chum or keta:								
1-pound tall.....	22,786	82,576	31,004	111,614	53,790	194,190	832,756	2,999,211
½-pound flat.....	2,272	12,723	2,538	14,213	4,810	26,936	10,333	58,010
4-pound flat.....							2,264	7,328
Total.....	25,058	95,299	33,542	125,827	58,600	221,126	845,353	3,064,549
Steelhead:								
1-pound flat.....	601	4,808	1,621	12,968	2,222	17,776	2,222	17,776
½-pound oval.....			2,535	35,490	2,535	35,490	2,535	35,490
½-pound flat.....	670	6,700	5,471	54,710	6,141	61,410	6,141	61,410
¼-pound flat.....	340	4,488	4,018	53,038	4,358	57,526	4,358	57,526
Total.....	1,611	15,996	13,645	156,206	15,256	172,202	15,256	172,202
Grand total.....	208,729	2,545,340	263,992	3,183,552	472,721	5,728,892	7,279,719	42,365,789

NOTE.—“Standard cases” represents the various sized cases converted to the equivalent of forty-eight 1-pound cans to the case. Salmon were canned at 21 plants in Washington, 6 in Oregon, and 98 in Alaska.

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PACK OF CANNED SARDINES

Sardines (herring)	Maine		Sardines (pilchard)		California	
	Cases	Value			Cases	Value
Quarters, ¼ pound (100 cans):			1 pound:			
In olive oil.....	1,654	\$9,362	Oval:			
In cottonseed oil.....	502,640	2,018,613	In mustard (48 cans).....	222,069	\$673,768	
In mustard.....	56,267	222,117	In tomato sauce (48 cans).....	1,047,044	3,165,642	
In tomato sauce.....	3,914	16,764	In natural oil (48 cans).....	38,399	111,815	
Three-quarters, ¾ pound (48 cans):			Tall:			
In mustard.....	32,750	100,189	In natural oil (48 cans).....	382,270	884,394	
			Oval and tall:			
			In other sauces and oils (48 cans).....	12,627	40,796	
			½ pound:			
			8 Z short:			
			In tomato sauce (96 cans).....	9,860	28,451	
			In natural oil (96 cans).....	266,810	772,698	
			Flat, oval, oblong and 8 Z short:			
			In various sauces and oils (48 cans).....	136,160	337,415	
			5-ounce tall:			
			In tomato sauce (100 cans).....	30,115	94,657	
			In natural oil (100 cans).....	270,866	783,081	
			Other sizes:			
			In various sauces and oils (standard cases).....	18,568	209,639	
Total.....	657,225	2,367,045	Total.....	2,434,808	7,102,356	
Total (standard cases).....	671,635		Total (standard cases).....	2,261,678		

NOTE.—“Standard Cases” represents the various sized cases converted to the uniform basis of one-hundred ¼-pound cans to the case of sardines (herring), and forty-eight 1-pound cans to the case of sardines (pilchard).

Sardines were canned at 25 plants in Maine and 31 in California.

PACK OF CANNED TUNA AND TUNALIKE FISHES

Product and size	Albacore		Yellowfin		Bluefin		Striped	
	Cases	Value	Cases	Value	Cases	Value	Cases	Value
¼-pound (48 cans).....	29,883	\$118,206	198,472	\$781,977	33,432	\$120,599	20,391	\$71,265
¼-pound (100 cans).....	(2)	(3)						
½-pound (48 cans).....	273,802	1,714,572	887,059	5,151,739	265,036	1,346,944	287,362	1,435,646
1-pound (48 cans).....	22,490	251,901	84,878	890,452	16,187	147,554	19,046	170,242
1-pound (12 cans).....	(4)	(4)	2,522	33,761			(5)	(6)
Total (actual cases).....	326,175	2,084,679	1,172,931	6,857,929	314,655	1,615,097	326,799	1,677,153
Total (standard cases).....	333,723		1,161,095		314,125		335,650	
Flakes:								
½-pound (48 cans).....	34,664	162,090	118,129	503,346	15,390	66,722	12,604	51,955
1-pound (48 cans).....	77,899	763,964	713,454	7100,396	71,929	713,077	(6)	(6)
Total (actual cases).....	42,563	226,054	131,583	603,742	17,319	79,799	12,604	51,955
Total (standard cases).....	50,462		145,037		19,249		12,604	
Grand total (actual cases).....	368,738	2,310,733	1,304,514	7,461,671	331,974	1,694,896	339,403	1,729,108
Grand total (standard cases).....	384,185		1,306,132		333,374		348,254	

See footnotes at end of table.

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PACK OF CANNED TUNA AND TUNALIKE FISHES—Continued

Product and size	"Tonno"		Bonito		Yellowtail		Total	
	Cases	Value	Cases ⁽⁵⁾	Value ⁽⁵⁾	Cases	Value	Cases	Value
¼-pound (48 cans).....							282, 178	\$1, 092, 047
¼-pound (100 cans).....	119, 604	\$846, 356	4, 078	\$25, 573	(3)	(3)	123, 682	871, 929
½-pound (48 cans).....	15, 820	100, 369	87, 275	385, 540	51, 293	\$233, 241	1, 867, 647	10, 368, 051
1-pound (48 cans).....	(8)	(8)	33, 228	265, 482	16, 263	130, 667	192, 092	1, 856, 298
4-pound (12 cans).....							2, 522	33, 761
Total (actual cases)	135, 424	946, 725	124, 581	676, 595	67, 556	363, 908	2, 468, 121	14, 222, 086
Total (standard cases)	140, 400		157, 979		83, 819		2, 526, 791	
Flakes:								
½-pound (48 cans).....							180, 787	784, 113
1-pound (48 cans).....							23, 282	177, 437
Total (actual cases)							204, 069	961, 550
Total (standard cases)							227, 352	
Grand total (actual cases)	135, 424	946, 725	124, 581	676, 595	67, 556	363, 908	2, 672, 190	15, 183, 636
Grand total (standard cases)	140, 400		157, 979		83, 819		2, 754, 143	

³ The pack in ¼-pound cans, 100 to the case, has been converted to the equivalent of ½-pound cans, 48 to the case.

⁴ The pack in 4-pound cans, 12 to the case, has been converted to the equivalent of 1-pound cans, 48 to the case.

⁵ The pack in ¼-pound cans, 48 to the case, has been converted to the equivalent of ½-pound cans, 48 to the case.

⁶ The pack of creamed tuna in ¾-pound cans, 48 to the case, and tuna flakes in 1-pound cans, 48 to the case, have been converted to the equivalent of ½-pound cans, 48 to the case.

⁷ The pack of creamed tuna in ¾-pound cans, 48 to the case, has been converted to the equivalent of 1-pound cans, 48 to the case.

⁸ The pack in 4-pound cans, 12 to the case, has been converted to the equivalent of ½-pound cans, 48 to the case.

NOTE.—"Standard cases" represents the various sized cases converted to the equivalent of 48 ½-pound cans to the case. Tuna and tunalike fishes were canned at 15 plants in California, 1 in Washington, 3 in Oregon, and 1 in Massachusetts. The pack of all varieties of tuna and tunalike fishes in California amounted to 2,673,516 standard cases, valued at \$14,686,677, while the pack of albacore tuna in Washington and Oregon, and bluefin tuna in Massachusetts, totaled 80,627 standard cases, valued at \$496,959.

PACK OF CANNED MACKEREL

Size	Cases	Value
8-ounce (48 cans).....	10, 421	\$28, 849
8-ounce (96 cans).....	41, 869	135, 923
16-ounce (48 cans).....	902, 656	2, 592, 232
Other sizes (standard cases)	15, 893	139, 216
Total (actual cases)	970, 839	2, 896, 220
Total (standard cases)	965, 629	

NOTE.—"Standard cases" represents the various sized cans converted to the equivalent of 48 1-pound cans to the case. Mackerel were canned at 2 plants in Massachusetts, and 22 in California.

PACK OF CANNED ALEWIVES AND ALEWIFE ROE: STANDARD CASES

Product	Maine, Massachusetts, Delaware, and Virginia		Maryland		North Carolina		Total	
	Cases	Value	Cases	Value	Cases	Value	Cases	Value
Alewives.....	21, 064	\$50, 492	31, 762	\$93, 066			52, 826	\$143, 558
Alewife roe.....	16, 971	70, 897	12, 132	57, 661	8, 538	\$37, 153	37, 641	165, 711
Total.....	38, 035	121, 389	43, 894	150, 727	8, 538	37, 153	90, 467	309, 269

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PACK OF CANNED ALEWIVES AND ALEWIFE ROE: ACTUAL CASES

Product and size	Cases	Value
Alewives:		
14, 16, 17, 19 ounces (24 cans).....	⁹ 73, 027	⁹ \$91, 226
26 ounces (24 cans).....	24, 343	52, 332
Total.....		143, 558
Alewife roe:		
8 ounces (48 cans).....	21, 108	50, 206
10, 14, 16, and 17 ounces (24 cans).....	¹⁰ 51, 385	¹⁰ 115, 565
Total.....		165, 771
Grand total.....		309, 329

⁹ Consists principally of 14-ounce cans. Includes 4,450 cases of 48 cans to the case.

¹⁰ Consists principally of 17-ounce cans.

NOTE.—“Standard cases” represents the various sized cases converted to the equivalent of 48 1-pound cans to the case. Alewives were canned at 1 plant in Massachusetts, 1 in Delaware, 5 in Maryland, and 3 in Virginia. Alewife roe was canned at 1 plant in Maine, 1 in Delaware, 7 in Maryland, 6 in North Carolina, and 14 in Virginia.

PACK OF CANNED OYSTERS: STANDARD CASES

State	Cases	Value
New Jersey and Maryland.....	4, 967	\$20, 482
South Carolina.....	79, 811	297, 818
North Carolina and Florida.....	16, 791	60, 450
Alabama and Georgia.....	28, 167	105, 440
Mississippi.....	180, 328	714, 712
Louisiana.....	61, 029	223, 199
Washington and Oregon.....	111, 348	464, 375
Total.....	482, 441	1, 886, 476

PACK OF CANNED OYSTERS: ACTUAL CASES

Size	Cases	Value
3½-ounce (48 cans).....	¹¹ 20, 325	¹¹ \$68, 361
4-ounce (48 cans).....	12, 218	45, 079
5-ounce (24 cans).....	104, 379	193, 541
5-ounce (48 cans).....	297, 346	1, 143, 769
8-ounce (24 cans).....	13, 090	48, 609
8-ounce (48 cans).....	45, 584	290, 239
10-ounce (24 cans).....	25, 498	96, 878
Total.....		1, 886, 476

¹¹ Includes the pack in 2-ounce cans, 100 to the case, which has been converted to the equivalent of 3½-ounce cans, 48 to the case.

NOTE.—“Standard cases” represents the various sized cases converted to the equivalent of 48 five-ounce cans to the case. Oysters were canned at 1 plant in New Jersey, 2 in Maryland, 1 in North Carolina, 5 in South Carolina, 1 in Georgia, 2 in Florida, 2 in Alabama, 13 in Mississippi, 8 in Louisiana, 5 in Washington, and 2 in Oregon. The pack of oyster soup and smoked oysters has not been included in the pack of oysters but has been shown under “Pack of Miscellaneous Canned Products.”

Canned fishery products and byproducts of the United States and Alaska, 1938—Con.

PACK OF CANNED CLAMS AND CLAM PRODUCTS: STANDARD CASES

Product and State	Whole		Minced		Chowder		Juice, broth, and cocktail		Total	
	Cases ¹² 119, 622	Value ¹² \$439, 472	Cases	Value	Cases ¹³ 48, 274	Value ¹³ \$156, 953	Cases ¹⁴ 23, 151	Value ¹⁴ \$41, 267	Cases 191, 047	Value \$637, 692
Soft clams:										
Maine, Massachusetts, and New Jersey										
Hard clams:										
Maryland and Florida	(¹⁵)	(¹⁵)	(¹⁶)	(¹⁶)	13, 205	29, 113	(¹⁷)	(¹⁷)	13, 205	29, 113
New Jersey					179, 133	648, 776	(¹⁷)	(¹⁷)	179, 133	648, 776
Washington	16, 551	66, 080	12, 948	\$60, 356	(¹⁸)	(¹⁸)	2, 507	5, 876	32, 006	132, 312
New York and Alaska	¹⁵ 4, 384	¹⁵ 32, 257	¹⁶ 7, 937	¹⁶ 55, 703	(¹⁸)	(¹⁸)	¹⁷ 14, 926	¹⁷ 65, 650	27, 247	153, 610
Massachusetts, Rhode Island, Pennsylvania, and Illinois					¹⁵ 236, 518	¹⁵ 872, 031			236, 518	372, 031
Total	20, 935	98, 337	20, 885	116, 059	428, 856	1, 549, 920	17, 433	71, 526	488, 109	1, 835, 842
Razor clams:										
Washington and Oregon	1, 879	15, 032	54, 698	449, 718			88	352	56, 665	465, 102
Alaska	1, 523	12, 482	32, 321	238, 510					33, 844	250, 992
Total	3, 402	27, 514	87, 019	688, 228			88	352	90, 509	716, 094
Grand total	143, 959	565, 323	107, 904	804, 287	477, 130	1, 706, 873	40, 672	113, 145	769, 665	3, 189, 628

¹² Packed in Maine and New Jersey.

¹³ Packed in Maine and Massachusetts.

¹⁴ Packed in Maine.

¹⁵ A small production of whole clams in Florida has been included with the New York and Alaska production.

¹⁶ A small production of minced clams in Florida has been included with the New York and Alaska production.

¹⁷ The production of hard clam juice in New Jersey and Florida, and broth from coquina clams produced in Florida, has been included with the New York and Alaska production.

¹⁸ A small pack of hard clam chowder in Washington and New York has been included with the Massachusetts, Rhode Island, Pennsylvania, and Illinois production.

Canned fishery products and byproducts of the United States and Alaska, 1938—Con.

PACK OF CANNED CLAMS AND CLAM PRODUCTS: ACTUAL CASES

Product and size	Whole		Minced		Chowder		Juice, broth, and cocktail		Total	
	Cases	Value	Cases	Value	Cases	Value	Cases	Value	Cases	Value
Soft clams:										
No. 1 (48 cans)	89,761	\$327,698			15,790	\$59,532	(¹⁹)	(¹⁹)	105,551	\$387,230
1-pound (24 cans)					9,259	22,333			9,259	22,333
1-pound (48 cans)	8,956	54,292							8,956	54,292
No. 2 (24 cans)	11,999	43,810			(¹⁹)	(¹⁹)	11,741	\$18,978	23,740	62,788
No. 10 (6 cans)	(¹⁹)	(¹⁹)			(¹⁹)	(¹⁹)	1,488	2,334	1,488	2,334
Other sizes (standard cases)	3,532	13,672			25,077	75,088	9,513	19,955	38,122	108,715
Total		439,472				156,953		41,267		637,692
Hard clams:										
½-pound (48 cans)	(¹⁹)	(¹⁹)	12,823	\$46,191			(¹⁹)	(¹⁹)	12,823	46,191
No. 1 (48 cans)	1,137	9,155	2,573	14,465	231,575	822,942	2,779	13,853	238,064	\$60,415
1-pound (12 cans)					178,187	298,553	(¹⁹)	(¹⁹)	178,187	298,553
1-pound (48 cans)	2,735	18,682					269	1,279	3,004	19,961
No. 2 (24 cans)	4,419	26,941							4,419	26,941
No. 10 (6 cans)	7,708	35,553	(¹⁹)	(¹⁹)	8,082	31,346	4,796	23,185	20,586	90,084
Other sizes (standard cases)	983	8,006	8,053	55,403	115,702	397,079	8,109	33,209	132,847	493,697
Total		98,337		116,059		1,549,920		71,526		1,835,842
Razor clams:										
½-pound (48 cans)			86,566	552,144					86,566	552,144
No. 1 (48 cans)	3,028	24,958	17,576	134,495			88	352	20,692	160,205
1 lb. (48 cans)	234	2,556	119	1,189					353	3,745
Total		27,514		688,228			88	352		716,094
Grand total		565,323		804,287		1,706,873		113,145		3,189,628

¹⁹ The production of this item has been included with "Other sizes (standard cases)."

NOTE.—"Standard cases" represents the various sized cases converted to the equivalent of 48 No. 1 cans. Soft clam products were canned at 19 plants in Maine, 2 in Massachusetts, and 1 in New Jersey; hard clam products, at 1 plant in Massachusetts, 1 in Rhode Island, 1 in New York, 3 in New Jersey, 1 in Pennsylvania, 2 in Maryland, 1 in Florida, 4 in Washington, 1 in Illinois, and 3 in Alaska; razor clam products, at 5 plants in Washington, 1 in Oregon, and 13 in Alaska; and coquina clam products, at 1 plant in Florida.

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PACK OF CANNED SHRIMP: STANDARD CASES

State	Dry pack (in tins)		Wet pack (in tins)		Wet pack (in glass)		Total	
	Cases	Value	Cases	Value	Cases	Value	Cases	Value
Georgia.....	21,700	\$101,192	95,646	\$418,197	25,139	\$206,368	142,485	\$725,576
Florida.....	5,867	26,963	10,536	45,605	15,803	128,108	32,206	200,677
Alabama and Texas.....	8,903	37,820	97,963	400,843	(²⁰)	(²⁰)	106,866	438,663
Mississippi.....	59,582	241,540	167,524	706,206			227,106	947,746
Louisiana.....	110,617	485,990	428,057	1,818,869	²⁰ 29,666	²⁰ 254,692	568,340	2,559,551
Total.....	206,669	893,505	799,726	3,389,720	70,608	589,168	1,077,003	4,872,393

PACK OF CANNED SHRIMP: ACTUAL CASES

Size	Cases	Value	Size	Cases	Value
In tins, dry:			In tins, wet—Continued.		
4-ounce (48 cans).....	4,894	\$18,352	Other sizes (standard cases).....	46	\$210
5-ounce (24 cans).....	4,507	9,580	In glass, wet:		
5-ounce (48 cans).....	176,915	749,485	2½-ounce (48 jars).....	28,747	119,710
8¼-ounce (24 cans).....	28,588	116,088	4-ounce (24 jars).....	10,793	32,789
In tins, wet:			5¾-ounce (24 jars).....	48,769	206,876
4-ounce (48 cans).....	3,787	12,166	6-ounce (24 jars).....	57,450	229,793
5¾-ounce (24 cans).....	98,448	223,549	Total.....		4,872,393
5¾-ounce (48 cans).....	739,375	3,114,313			
9¾-ounce (24 cans).....	2,913	11,551			
32-ounce (12 cans).....	4,297	27,931			

²⁰ A small pack of shrimp in glass produced in Texas has been included with Louisiana production.

NOTE.—“Standard cases” represents the various sized cases converted to the equivalent of forty-eight 5-ounce cans to the case in the dry pack and forty-eight 5¾-ounce cans to the case in the wet pack. Shrimp were canned at 4 plants in Georgia, 5 in Florida, 2 in Alabama, 13 in Mississippi, 24 in Louisiana, and 2 in Texas.

PACK OF MISCELLANEOUS CANNED FISHERY PRODUCTS: STANDARD CASES

Product	Atlantic and Gulf coasts ²¹		Pacific coast (including Alaska)		Total	
	Cases	Value	Cases	Value	Cases	Value
Shad.....			10,845	\$29,950	10,845	\$29,950
Shad roe.....			3,015	95,909	3,015	95,909
Cat and dog food.....	230,010	\$347,171	183,424	541,228	413,434	888,399
Fish flakes ²²	45,721	291,426			45,721	291,426
Fish cakes, balls, etc.....	97,263	665,307			97,263	665,307
Fish paste.....	3,987	143,147			3,987	143,147
Finnan haddie.....	488	7,518			488	7,518
Sturgeon caviar.....	2,491	307,298			2,491	307,298
Whitefish roe and caviar.....	1,052	36,478			1,052	36,478
Salmon roe and caviar (for food).....	1,563	28,077			1,563	28,077
Salmon eggs (for bait).....			4,656	85,348	4,656	85,348
Miscellaneous fish and roe ²³	17,520	159,601	2,272	23,128	19,792	182,729
Crabs.....	(²⁴)	(²⁴)	²⁴ 13,699	²⁴ 260,134	13,699	260,134
Turtle products.....	7,410	80,869			7,410	80,869
Miscellaneous shellfish, etc. ²⁵	15,765	103,445	10,818	67,041	26,583	170,486
Total.....	423,270	2,170,337	228,729	1,102,738	651,999	3,273,075

²¹ Includes the production of whitefish caviar by one firm in Wisconsin.

²² Tuna flakes are not included in this table, but are included in the table for canned tuna and tunalike fishes.

²³ Includes fish chowder, salted cod, haddock chowder, pickled eels, fish bouillon, kippered sturgeon, rat poison bait, swordfish, deep sea roe, and tuna roe.

²⁴ The production of hard crabs by one firm in Virginia and one firm in South Carolina is included with the production for the Pacific coast.

²⁵ Includes terrapin products, oyster soup, pickled mussels, shrimp soup, frog and frogs' legs, crab and shrimp gumbo, crayfish, squid, shellfish newburg, and smoked oysters.

NOTE.—“Standard cases” represents the various sized cases converted to the equivalent of forty-eight 1-pound cans to the case. Shad were canned at 9 plants; shad roe, at 19 plants; cat and dog food, at 9 plants; fish flakes, at 4 plants; fish cakes, balls, etc., at 6 plants; fish paste, at 3 plants; finnan haddie at 3 plants; sturgeon caviar, at 4 plants; whitefish roe and caviar, at 5 plants; salmon roe and caviar (for food), at 4 plants; salmon eggs (for bait), at 8 plants; miscellaneous fish and roe, at 14 plants; crabs, at 21 plants; turtle products, at 4 plants; and miscellaneous shellfish, etc., at 14 plants.

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PRODUCTION OF OYSTER AND MARINE CLAM-SHELL PRODUCTS ²⁶

State	Crushed shell for poultry feed		Shell lime		Total	
	Tons	Value	Tons	Value	Tons	Value
Rhode Island, New York, and Delaware.....	1, 530	\$12, 662	433	\$1, 943	1, 963	\$14, 605
New Jersey.....	4, 514	35, 228	1, 480	6, 567	5, 994	41, 795
Pennsylvania.....	3, 606	35, 748	627	2, 744	4, 233	36, 492
Maryland.....	32, 200	145, 800	19, 970	35, 800	52, 170	181, 600
Virginia.....	21, 569	123, 071	²⁷ 32, 012	²⁷ 184, 665	53, 581	307, 736
North Carolina, South Carolina, and Florida.....	33, 565	159, 921	1, 375	4, 250	34, 940	164, 171
Alabama, Louisiana, and Texas.....	126, 431	392, 852	9, 431	32, 416	135, 862	425, 268
Mississippi.....	17, 584	64, 335	5, 338	4, 863	22, 922	69, 198
Washington and Oregon.....	8, 755	78, 183	5, 029	31, 643	13, 784	109, 826
California.....	11, 696	53, 433	2, 280	12, 433	13, 976	65, 866
Total.....	261, 450	1, 099, 233	77, 975	317, 324	339, 425	1, 416, 557

²⁶ The production in Washington includes both clam and oyster-shell products.

²⁷ Of this amount 14,789 tons valued at \$93,338 were reported as burned lime.

NOTE.—The above crushed shell products were prepared at 2 plants in Rhode Island, 1 in New York, 7 in New Jersey, 4 in Pennsylvania, 1 in Delaware, 3 in Maryland, 9 in Virginia, 4 in North Carolina, 1 in South Carolina, 1 in Florida, 1 in Alabama, 3 in Mississippi, 1 in Louisiana, 2 in Texas, 9 in Washington, 1 in Oregon, and 4 in California.

PRODUCTION OF FRESH-WATER MUSSEL-SHELL PRODUCTS

Item	Iowa, Missouri, Wisconsin, Illinois, Massachusetts		New York		Total	
	Quantity	Value	Quantity	Value	Quantity	Value
Pearl buttons.....gross.....	8, 376, 261	\$2, 189, 481	1, 646, 191	\$450, 023	10, 022, 452	\$2, 639, 504
Crushed shell for poultry feed.....tons.....	²⁸ 4, 446	²⁸ 25, 845	(²⁶)	(²⁶)	4, 446	25, 845
Lime.....do.....	²⁸ 1, 111	²⁵ 1, 140	(²⁶)	(²⁶)	1, 111	1, 140
Other products ²⁹.....do.....		32, 390				32, 390
Total.....		2, 248, 856		450, 023		2, 698, 879

²⁸ A small production in New York has been combined with that in Iowa.

²⁹ Consists of mussel-shell chips and novelties produced in Iowa; and novelties produced in Massachusetts.

NOTE.—Mussel shells purchased during the year amounted to 18,522,000 pounds, valued at \$219,196. Shells were taken in 15 States in the Mississippi River Valley and Great Lakes region. The producing States in the order of their importance were: Tennessee, which contributed 24 percent of the total quantity, Arkansas, 18 percent; Illinois, 16 percent; Indiana, 14 percent; Kentucky, 10 percent; Iowa, 5 percent; Texas, 3 percent; Alabama, Michigan, and Wisconsin, each 2 percent; Missouri, Ohio, Minnesota, and Oklahoma, each 1 percent; and Louisiana, less than 1 percent.

PRODUCTION OF MARINE PEARL-SHELL PRODUCTS ³⁰

Item	Massachusetts, Rhode Island, and Connecticut		New York		New Jersey	
	Gross	Value	Gross	Value	Gross	Value
Pearl buttons..... ³¹	1, 540, 363	\$919, 609	1, 254, 224	\$688, 604	1, 495, 932	\$1, 153, 457
Novelties ³³		149, 389		76, 200		78, 604
Total.....		1, 068, 998		764, 804		1, 232, 061

Item	Maine, Pennsylvania, Maryland, Florida, California		Total	
	Gross	Value	Gross	Value
Pearl buttons ³¹	³² 1, 937, 820	³² \$881, 223	6, 228, 339	\$3, 642, 893
Novelties ³³		250, 417		554, 610
Total.....		1, 131, 640		4, 197, 503

³⁰ Produced principally from imported shells.

³¹ Pearl buttons manufactured in Connecticut.

³² Pearl buttons manufactured in Maine, Pennsylvania, and Maryland.

³³ Includes knife handles, handles for manicure sets, dolls, lamps, mounted fish decoys, etc.

NOTE.—Marine pearl-shell products were manufactured at 1 plant in Maine, 2 in Massachusetts, 1 in Rhode Island, 6 in Connecticut, 9 in New York, 20 in New Jersey, 1 in Pennsylvania, 1 in Maryland, 12 in Florida, and 2 in California.

Canned fishery products and byproducts of the United States and Alaska, 1938—Con.

FISH UTILIZED AND PRODUCTS OF THE MENHADEN INDUSTRY

State	Menahden utilized	Products						
		Dry scrap and meal		Acidulated scrap		Oil		Total
	Number	Tons	Value	Tons	Value	Gallons	Value	Value
New York, New Jersey, Delaware, and Georgia.....	188,507,000	6,652	\$280,943	9,674	\$191,031	1,569,228	\$447,221	\$919,196
Virginia.....	144,167,000	10,681	401,468	(34)	(34)	1,087,503	319,065	720,533
North Carolina.....	271,322,000	14,338	594,252	7,176	133,481	1,301,042	346,638	1,074,371
Florida.....	168,437,000	7,603	299,957	4,964	94,424	231,356	60,743	455,124
Total.....	³⁵ 772,433,000	³⁶ 39,274	³⁶ 1,576,620	21,814	418,936	4,189,129	1,173,667	3,169,223

³⁴ The production of acidulated scrap by 1 firm in Virginia has been included with the New York, New Jersey, Delaware, and Georgia production.

³⁵ 466,330,800 pounds.

³⁶ Of this production, 26,096 tons, valued at \$1,006,428 were reported as dry scrap and 13,178 tons, valued at \$570,192, as meal.

NOTE.—The menhaden factories were located as follows: 1 in New York, 3 in New Jersey, 2 in Delaware 10 in Virginia, 10 in North Carolina, 1 in Georgia, and 5 in Florida.

PRODUCTION OF MISCELLANEOUS BYPRODUCTS

Product	Atlantic and Gulf coasts ³⁷		Pacific coast (including Alaska)		Total	
	Quantity	Value	Quantity	Value	Quantity	Value
Dried scrap:						
Blue crab..... tons.....	1,515	\$25,135			1,515	\$25,135
King crab..... do.....	255	9,689			255	9,689
Miscellaneous ³⁸ do.....	1,435	38,101			1,435	38,101
Meal:						
Groundfish "white fish"..... do.....	7,725	364,250			7,725	364,250
Herring..... do.....	1,652	42,974	16,095	\$549,614	17,747	592,588
Mackerel..... do.....			1,574	58,580	1,574	58,580
Pilchard..... do.....			89,927	3,437,892	89,927	3,437,892
Salmon..... do.....			1,846	61,807	1,846	61,807
Tuna..... do.....			9,650	350,631	9,650	350,631
King crab..... do.....	123	4,215			123	4,215
Shrimp..... do.....	1,426	29,763	170	3,400	1,596	33,163
Whale (meat)..... do.....			396	15,796	396	15,796
Whale (bone)..... do.....			216	5,618	216	5,618
Miscellaneous ³⁹ do.....	7,821	336,313	2,302	88,829	10,123	425,142
Oil:						
Alewife..... gallons.....	18,681	3,277			18,681	3,277
Cod..... do.....	4,604	1,308			4,604	1,308
Cod-liver..... do.....	261,556	164,986			261,556	164,986
Fur-seal..... do.....			29,865	4,157	29,865	4,157
Herring..... do.....	56,462	6,132	4,523,113	1,292,705	4,579,565	1,298,837
Mackerel..... do.....			86,364	25,878	86,364	25,878
Pilchard..... do.....			17,539,567	5,205,337	17,539,567	5,205,337
Salmon ⁴⁰ do.....			165,825	68,593	165,825	68,593
Shark liver..... do.....	(41)	(41)	⁴¹ 129,705	⁴¹ 330,397	⁴¹ 129,705	⁴¹ 330,397
Tuna..... do.....			192,515	55,654	192,515	55,654
Whale:						
Sperm..... do.....			181,900	54,570	181,900	54,570
Other..... do.....	7,254,300	3,025,831	304,800	103,657	7,559,100	3,129,488
Liver, miscellaneous ⁴² do.....	15,836	648,426	99,106	1,332,534	114,942	1,980,960
Miscellaneous ⁴³ do.....	74,322	25,541	12,495	3,365	86,817	28,906
Shark fins..... pounds.....	41,870	17,248			41,870	17,248
Shark skins..... do.....	147,520	17,555			147,520	17,555
Liquid glue ⁴⁴ gallons.....	383,769	805,804	(44)	(44)	383,769	805,804
Miscellaneous byproducts ⁴⁵		145,363		333,280		478,643
Total.....		5,711,911		13,382,294		19,094,205

³⁷ Includes the production of burbot-liver oil in Minnesota and Wisconsin.

³⁸ Includes alewife, herring, shark, and miscellaneous dry and green scrap.

³⁹ Includes alewife, roe-fish, salmon egg, shark, starfish, clam, and miscellaneous meals.

⁴⁰ Includes a considerable quantity of salmon oil especially prepared for human consumption.

⁴¹ The production of shark-liver oil in Massachusetts and Florida has been included with the production in the Pacific Coast States.

⁴² Includes burbot, halibut, sablefish, swordfish, tuna, and miscellaneous liver oils. A small quantity of halibut viscera oil has been included with the Pacific coast production of miscellaneous liver oils.

⁴³ Includes roe-fish, shark, and miscellaneous fish oils.

⁴⁴ A quantity of liquid glue produced by one firm in California is included with the production of liquid glue on the Atlantic and Gulf coasts.

⁴⁵ Includes isinglass, kelp products, pearl essence, and herring pomace.

NOTE.—The whale products shown for the Atlantic and Gulf Coasts were produced on factory ships operating in the Southern Hemisphere.

FROZEN FISH TRADE ⁵

FISH FROZEN

During 1938 the output of freezing plants which reported their activities to the Government amounted to 186,096,050 pounds of fishery products. At the time these products were held in cold-storage plants they were estimated to be valued at about \$13,000,000. Compared with the output in 1937, this is an increase of 11 percent in volume. Six items accounted for 48 percent of the total amount frozen. In the order of their importance, they were: Haddock fillets, which accounted for 11 percent of the total; rosefish fillets and whiting, each 9 percent; halibut, 8 percent; pollock, 6 percent, and mackerel 5 percent. Other products frozen in considerable quantity during the year were cod fillets, silver salmon, and shrimp.

Production of frozen fishery products, 1938

BY SPECIES AND MONTHS

Species	Month ending the 15th of—					
	January	February	March	April	May	June
FROZEN FISH						
Bluefish (all trade sizes).....	Pounds 385,429	Pounds 67,684	Pounds 9,043	Pounds 15,161	Pounds 35,999	Pounds 2,317
Butterfish (all trade sizes).....	15,542	4,966	26,821	29,856	123,587	208,142
Catfish.....	34,023	42,217	57,327	78,540	143,302	63,752
Cisco (Lake Erie).....	14,284	6,841	21,466	11,500	3,603	2,759
Cisco (lake herring), including bluefin, blackfin, and chub.....	204,282	39,057	23,656	15,779	57,184	38,313
Cisco (tullibee, Canadian lakes).....	280		6,635			
Cod, haddock, hake, and pollock (except fillets of cod, haddock, and pollock).....	209,187	98,613	134,468	156,877	203,436	318,898
Cod fillets.....	264,137	221,293	146,107	723,926	1,195,099	739,495
Croaker.....	9,612	1,076	16,608	625,654	660,250	430,731
Flounders.....	59,957	21,085	15,037	19,207	116,891	132,124
Haddock fillets.....	672,395	834,322	905,508	2,760,280	2,634,938	1,130,178
Halibut (all trade sizes).....			1,589	173,647	2,589,995	3,225,938
Herring, sea (including alewives and blue- backs).....	102,521	45,209	379,970	231,103	1,329,698	1,041,093
Lake trout.....	26,451	12,123	59,720	28,411	71,352	33,857
Mackerel (except Spanish).....	115,573	63,338	36,785	206,444	2,327,078	1,471,370
Perch, yellow.....	18,047	3,065	4,716	5,721	10,320	7,147
Pike, blue and sauger.....	5,307	34,092	4,809	230	248,871	4,628
Pike, yellow or wall-eyed.....	8,377	4,188	12,942	6,698	21,950	2,636
Pike (including pickerel, jacks, and yellow jack).....	2,499	1,428	58,578	5,109	9,632	1,349
Pollock fillets.....	1,369,512	703,239	67,900	324,110	862,828	694,509
Rosefish fillets.....	1,968,948	705,102	550,855	612,321	1,121,985	2,576,744
Sablefish (black cod).....	80,346	44,742	337,276	50,847	14,034	41,724
Salmon, king or chinook.....	12,412	46,066	5,983	46,792	34,355	341,085
Salmon, silver or coho.....	15,835	23,570	13,266	68,234	17,365	16,818
Salmon, fall and pink.....	17,099	17,568	209,714	74,942	42,127	15,911
Salmon, steelhead trout.....	15,659	4,256	16,751	27,732	18,409	27,095
Scup (porgies).....	1,623	10,379	1,000	900	61,168	63,181
Shad and shad roe.....	9,694	6,759	9,731	5,307	297,999	59,432
Smelts, eulachon, etc.....	101,212	229,964	73,495	116,806	230,539	60,192
Sturgeon and spoonbill cat.....	9,635	850	51,701	35,888	49,300	36,641
Suckers.....	460	60,000	1,214	672	4,671	14,080
Swordfish.....	434,527	190,023	50,446	92,710	109,152	25,966
Weakfish (including southern "sea trout").....	70,484	225	3,868	4,307	85,163	40,699
Whitefish.....	145,531	176,350	153,698	123,635	85,543	48,025
Whiting.....	630,627	47,366	121,911	185,059	325,699	2,512,798
Other fish.....	1,465,640	1,072,777	923,644	1,545,199	1,657,228	1,810,586
Total fish.....	8,497,147	4,839,833	4,519,239	8,409,726	16,805,750	17,240,113
FROZEN SHELLFISH						
Scallops.....	(1)	(1)	(1)	(1)	(1)	(1)
Shrimp.....	(1)	(1)	(1)	(1)	(1)	(1)
Spiny lobster tails.....	(1)	(1)	(1)	(1)	(1)	(1)
Squid.....	25,783	7,671	46,398	32,384	438,524	631,730
Other shellfish.....	683,674	921,712	653,127	640,292	1,004,010	1,505,291
Total shellfish.....	709,457	929,383	699,525	672,676	1,442,534	2,137,021
Total fish and shellfish.....	9,206,604	5,769,216	5,218,764	9,082,402	18,248,284	19,377,134

¹ Included with "Other shellfish."² The statistics in this section have been furnished by the Bureau of Agricultural Economics, Department of Agriculture

Production of frozen fishery products, 1938—Continued

BY SPECIES AND MONTHS—Continued

Species	Month ending the 15th of—						
	July	August	September	October	November	December	Total
FROZEN FISH							
	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>
Bluefish (all trade sizes).....	15,547	11,099	17,238	189,155	159,064	84,932	992,668
Butterfish (all trade sizes).....	73,929	220,652	30,171	163,669	247,538	32,071	1,181,944
Catfish.....	30,346	64,079	25,567	40,090	39,145	58,442	676,830
Cisco (Lake Erie).....	6,416	42,679	137,682	101,404	81,308	267,623	697,565
Cisco (lake herring), including bluefin, blackfin, and chub.....	253,973	283,119	236,090	294,902	845,942	1,309,469	3,601,766
Cisco (tullibee, Canadian lakes).....	4,580	36,277	136,183	880	23,965	19,082	228,304
Cod, haddock, hake, and pollock (except fillets of cod, haddock, and pollock).....	233,740	227,712	290,028	184,850	315,580	289,622	2,663,011
Cod fillets.....	806,561	667,516	418,246	454,623	784,342	715,453	7,136,798
Croaker.....	221,981	437,743	230,862	43,240	31,074	4,016	2,712,847
Flounders.....	92,954	54,762	55,471	46,741	235,835	18,159	868,223
Haddock fillets.....	1,818,857	2,744,825	3,673,869	1,350,695	1,045,967	522,507	20,094,341
Halibut (all trade sizes).....	3,135,702	3,681,266	824,971	937,599	791,700	-----	15,362,407
Herring, sea (including alewives and bluebacks).....	176,168	88,361	87,861	437,228	624,051	429,484	4,972,747
Lake trout.....	52,091	45,926	55,067	159,740	366,497	255,323	1,166,658
Mackerel (except Spanish).....	1,672,951	1,159,748	319,304	68,054	976,342	456,236	8,873,223
Perch, yellow.....	3,663	51,377	84,864	68,553	166,608	110,467	534,548
Pike, blue and sauger.....	6,880	1,951	285	226,794	235,263	108,480	877,590
Pike, yellow or wall-eyed.....	2,893	7,062	16,007	21,812	29,901	4,853	139,319
Pike (including pickerel, jacks, and yellow jack).....	3,189	11,343	7,431	6,219	45,709	23,038	175,524
Pollock fillets.....	702,200	457,129	450,815	679,600	2,392,322	3,285,694	11,995,858
Rosefish fillets.....	1,708,735	1,658,905	2,117,335	1,343,312	1,434,999	864,778	16,664,019
Sablefish (black cod).....	216,035	333,856	650,432	947,501	728,553	337,451	3,782,797
Salmon, king or chinook.....	546,476	436,593	930,321	1,679,563	591,908	48,640	4,620,194
Salmon, silver or coho.....	128,153	1,938,071	2,980,974	1,466,482	761,740	73,984	7,504,492
Salmon, fall and pink.....	45,252	298,620	388,076	631,593	3,251,337	514,900	5,507,139
Salmon, steelhead trout.....	112,556	217,270	149,163	145,637	37,915	46,403	818,846
Scup (porgies).....	124,794	75,851	26,382	17,988	4,963	1,974	390,203
Shad and shad roe.....	105,531	15,069	701	82,200	58,926	20,834	672,233
Smelts, eulachon, etc.....	23,588	53,871	35,670	29,980	58,343	70,372	1,084,033
Sturgeon and spoonbill cat.....	40,646	20,575	44,198	75,246	121,503	32,722	518,605
Suckers.....	12,788	10,475	-----	105	2,063	1,529	108,057
Swordfish.....	53,489	163,607	189,822	96,576	88,878	280,577	1,775,773
Weakfish (including southern "sea trout").....	145,546	234,097	136,513	13,418	43,336	45,904	823,460
Whitefish.....	70,111	85,434	49,421	78,515	186,598	276,617	1,479,528
Whiting.....	6,279,138	2,886,016	2,805,674	597,073	607,099	563,243	17,561,703
Other fish.....	1,752,157	1,469,260	1,749,429	2,522,044	2,020,673	2,211,653	20,205,290
Total fish.....	20,679,666	20,192,246	19,358,123	15,103,081	19,436,987	13,386,532	168,468,443
FROZEN SHELLFISH							
Scallops.....	448,154	202,945	584,291	226,035	291,651	256,868	2,009,944
Shrimp.....	558,760	180,944	226,143	1,038,638	2,403,567	1,627,356	6,035,408
Spiny lobster tails.....	80,337	16,060	42,189	68,429	27,976	45,949	280,940
Squid.....	395,151	184,869	160,256	18,683	149,032	175,936	2,266,417
Other shellfish.....	267,708	119,065	253,452	516,518	227,195	212,864	7,034,898
Total shellfish.....	1,750,110	703,883	1,266,331	1,898,303	3,099,421	2,318,963	17,627,607
Total fish and shellfish.....	22,429,776	20,896,129	20,624,454	17,001,384	22,536,408	15,705,495	186,096,050

Production of frozen fishery products, 1938—Continued

BY GEOGRAPHICAL SECTIONS AND SPECIES¹

[Expressed in thousands of pounds; that is, 000 omitted]

Species	New Eng-land	Middle At-lantic	South At-lantic	North Central, East	North Central, West	South Central	Pacific	Total
FROZEN FISH								
Bluefish (all trade sizes)	25	879	42	45	1	1		993
Butterfish (all trade sizes)	91	1,077	10	1		3		1,182
Catfish	166	1	59	62	163	221	5	677
Cisco (Lake Erie)		663		35				698
Cisco (lake herring) including blue- fin, blackfin, and chub	17	737		2,108	739			3,601
Cisco (tullibee, Canadian lakes)	9	24		11	184			228
Cod, haddock, hake, and pollock (except fillets of cod, haddock, and pollock)	1,268	109	4	129	56	510	587	2,663
Cod fillets	6,954	6		101	46		30	7,137
Croaker		357	2,321	35				2,713
Flounders	186	508	2	20		2	149	868
Haddock fillets	10,394	154	22	266	68		170	20,094
Halibut (all trade sizes)	194	265	29	265	58	4	14,547	15,362
Herring, sea (including alewives and bluebacks)	2,896	621	15	192	14	1	1,234	4,973
Lake trout	24	335	26	713	52	11	6	1,167
Mackerel (except Spanish)	6,348	2,073	82	210	6		154	8,873
Perch, yellow	5	11	6	419	91		3	535
Pike, blue and sauger		243		634			1	878
Pike, yellow or wall-eyed		63		59	17			139
Pike (including pickerel, jacks, and yellow jack)		12		54	110			176
Pollock fillets	11,740			251	5			11,996
Rosefish fillets	16,555			109				16,664
Sablefish (black cod)		457			148		3,178	3,783
Salmon, king or chinook	81	339		9	54		4,137	4,620
Salmon, silver or coho	36	244		19	21	5	7,178	7,503
Salmon, fall and pink	3	825		83	60	1	4,535	5,507
Salmon, steelhead trout		38	13				788	819
Seup (porgies)	43	347						390
Shad and shad roe	33	510	2	10	1	2	114	672
Smelts, eulachon, etc	58	470	7	421	1		127	1,084
Sturgeon and spoonbill cat		496		4	13	3	3	519
Suckers				70	38			108
Swordfish	268	1,057	15	3			433	1,776
Weakfish (including southern "sea trout")		487	336					823
Whitefish	84	995	57	206	66	2	70	1,480
Whiting	15,368	1,222	67	152	214	522	17	17,562
Other fish	2,532	2,480	3,839	2,256	736	3,220	5,142	20,205
Total fish	84,378	18,105	7,024	8,940	2,925	4,508	42,588	168,468
FROZEN SHELLFISH								
Scallops ²	920	739	16	26	13	3	293	2,010
Shrimp ²	275	1,168	595	943	738	1,405	911	6,035
Spiny lobster tails ²		183	8	18			72	281
Squid	1,139	756	1	5			366	2,267
Other shellfish	385	2,001	113	593	160	1,494	2,289	7,035
Total shellfish	2,719	4,847	733	1,585	911	2,902	3,931	17,628
Total fish and shellfish	87,097	22,952	7,757	10,525	3,836	7,410	46,519	186,096

¹ New England includes the 6 States of that section; Middle Atlantic—New York, New Jersey, and Pennsylvania; South Atlantic—Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, and Florida; North Central, East—Ohio, Indiana, Illinois, Michigan, and Wisconsin; North Central, West—Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas; South Central—Kentucky, Tennessee, Alabama, Mississippi, Louisiana, Texas, Oklahoma, and Arkansas; and Pacific—Washington, Oregon, California, and Alaska.

² Prior to July 15, 1938, this item was included with "Other shellfish."

*Production of frozen fishery products, 1938—Continued*BY GEOGRAPHICAL SECTIONS AND MONTHS¹

[Expressed in thousands of pounds; that is, 000 omitted]

Month ended the 15th of—	New England	Middle Atlantic	South Atlantic	North Central, East	North Central, West	South Central	Pacific	Total
January.....	5,096	2,328	314	357	178	235	699	9,207
February.....	2,794	1,248	388	135	137	363	704	5,769
March.....	1,995	1,078	59	169	380	464	1,074	5,219
April.....	4,737	863	1,280	566	113	570	953	9,082
May.....	8,446	3,417	1,310	853	147	588	3,487	18,248
June.....	10,855	1,582	1,139	750	119	776	4,156	19,377
July.....	13,495	1,272	676	591	371	638	5,387	22,430
August.....	10,280	1,125	666	674	222	401	7,528	20,596
September.....	10,514	1,858	271	604	215	523	6,639	20,624
October.....	4,912	2,559	279	1,309	195	839	6,909	17,002
November.....	7,727	2,909	679	2,377	638	1,162	7,044	22,536
December.....	6,246	2,713	696	2,140	1,121	851	1,939	15,706
Total.....	87,097	22,952	7,757	10,525	3,836	7,410	46,519	186,096

¹ New England includes the 6 States of that section; Middle Atlantic—New York, New Jersey, and Pennsylvania; South Atlantic—Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, and Florida; North Central, East—Ohio, Indiana, Illinois, Michigan, and Wisconsin; North Central, West—Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska and Kansas; South Central—Kentucky, Tennessee, Alabama, Mississippi, Louisiana, Texas, Oklahoma, and Arkansas; and Pacific—Washington, Oregon, California, and Alaska.

HOLDINGS

During 1938, monthly holdings of frozen fish and shellfish averaged 67,994,000 pounds, which is an increase of 7 percent as compared with 1937. The holdings during January, amounting to 93,024,000 pounds, were the largest for any month during the year; while those for April, amounting to 37,367,000 pounds were the smallest. During the last 4 months of the year an average of 88,484,000 pounds of fishery products were in storage, as compared with an average of 74,916,000 pounds for the same period in 1937.

Holdings of frozen fishery products, 1938

BY SPECIES AND MONTHS

Species	Month ended the 15th of—					
	January	February	March	April	May	June
FROZEN FISH						
	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>
Bluefish (all trade sizes).....	740, 725	690, 305	562, 636	401, 922	387, 309	268, 272
Butterfish (all trade sizes).....	535, 091	437, 958	347, 627	277, 282	322, 139	443, 782
Catfish.....	336, 140	309, 938	213, 801	219, 250	285, 893	268, 338
Cisco (Lake Erie).....	230, 005	166, 102	134, 159	91, 483	46, 726	55, 986
Cisco (lake herring) including bluefin, blackfin, and chub.....	1, 626, 950	1, 190, 453	841, 963	451, 179	362, 637	300, 492
Cisco (tullibee, Canadian lakes).....	47, 636	78, 032	90, 136	114, 065	104, 024	91, 730
Cod, haddock, hake, and pollock (except fillets of cod, haddock, and pollock).....	968, 580	906, 313	847, 468	806, 920	882, 481	1, 070, 593
Cod fillets.....	2, 422, 342	2, 333, 321	1, 863, 635	2, 106, 925	2, 855, 522	2, 954, 622
Croakers.....	590, 698	336, 219	154, 985	586, 518	1, 252, 152	1, 583, 894
Flounders.....	546, 387	524, 495	319, 221	330, 849	422, 755	478, 834
Haddock fillets.....	5, 194, 034	4, 313, 054	3, 008, 324	4, 641, 663	5, 892, 820	5, 428, 550
Halibut (all trade sizes).....	6, 245, 177	4, 316, 869	2, 589, 022	1, 450, 414	3, 809, 953	6, 817, 386
Herring, sea (including alewives and blue- backs).....	1, 672, 336	1, 500, 763	1, 224, 493	1, 094, 393	2, 165, 632	2, 899, 247
Lake trout.....	458, 817	323, 028	308, 532	174, 177	269, 106	282, 965
Mackerel (except Spanish).....	2, 956, 591	2, 379, 583	1, 640, 001	1, 048, 032	3, 124, 617	4, 217, 046
Perch, yellow.....	284, 369	191, 693	115, 511	75, 557	58, 575	70, 676
Pike, blue and sauger.....	226, 536	376, 424	353, 590	294, 448	526, 196	293, 991
Pike, yellow or wall-eyed.....	155, 174	196, 408	161, 813	113, 193	104, 702	69, 960
Pike (including pickerel, jacks, and yellow jack).....	161, 755	180, 385	217, 526	182, 539	133, 167	104, 940
Pollock fillets.....	4, 081, 904	3, 731, 436	2, 390, 310	1, 851, 799	2, 040, 138	1, 919, 238
Rosefish fillets.....	3, 728, 833	3, 243, 685	2, 548, 638	1, 622, 754	1, 704, 164	2, 704, 632
Sablefish (black cod).....	2, 261, 305	1, 733, 037	1, 468, 559	1, 139, 320	854, 086	724, 348
Salmon, king or chinook.....	2, 688, 014	2, 071, 844	1, 412, 694	940, 687	544, 016	545, 675
Salmon, silver or coho.....	3, 060, 582	1, 841, 676	999, 601	599, 654	428, 986	328, 034
Salmon, fall and pink.....	3, 758, 347	3, 061, 855	2, 376, 797	1, 827, 922	1, 536, 867	1, 245, 321
Salmon, steelhead trout.....	271, 411	239, 815	183, 669	143, 057	134, 378	123, 107
Scup (porgies).....	272, 266	207, 169	40, 592	37, 381	93, 903	153, 010
Shad and shad roe.....	384, 721	269, 129	206, 336	145, 736	427, 964	474, 664
Smelts, eulachon, etc.....	591, 215	1, 473, 769	1, 337, 364	852, 468	813, 020	829, 359
Sturgeon and spoonbill cat.....	(¹)	819, 254	661, 978	481, 582	458, 171	268, 374
Suckers.....	101, 333	102, 043	90, 962	88, 206	46, 295	54, 595
Swordfish.....	1, 947, 437	1, 848, 702	1, 443, 769	1, 145, 514	1, 136, 258	871, 257
Weakfish (including southern "sea trout").....	1, 208, 940	870, 068	614, 029	409, 430	455, 936	466, 650
Whitefish.....	1, 224, 257	1, 677, 872	1, 634, 692	1, 609, 572	1, 403, 088	1, 255, 072
Whiting.....	6, 621, 738	4, 391, 662	2, 280, 587	1, 126, 622	799, 404	2, 451, 273
Other fish.....	7, 973, 998	6, 908, 037	5, 685, 631	5, 266, 090	6, 020, 037	7, 217, 294
Total fish.....	65, 581, 648	55, 280, 396	40, 370, 651	33, 751, 603	41, 904, 083	49, 333, 286
FROZEN SHELLFISH						
Scallops.....	(²)	(²)	(²)	(²)	(²)	(²)
Shrimp.....	(²)	(²)	(²)	(²)	(²)	(²)
Spiny lobster tails.....	(²)	(²)	(²)	(²)	(²)	(²)
Squid.....	1, 736, 262	1, 510, 746	1, 080, 691	601, 100	881, 745	1, 445, 763
Other shellfish.....	5, 809, 661	5, 392, 638	4, 242, 581	3, 014, 620	3, 195, 304	4, 259, 842
Total shellfish.....	7, 545, 923	6, 903, 404	5, 323, 272	3, 615, 720	4, 077, 049	5, 705, 605
Total fish and shellfish.....	73, 127, 571	62, 183, 800	45, 693, 923	37, 367, 323	45, 981, 132	55, 038, 891

¹ Included with "other fish."² Included with "Other shellfish."

Holdings of frozen fishery products, 1938—Continued

BY SPECIES AND MONTHS—Continued

Species	Month ended the 15th of—					
	July	August	September	October	November	December
FROZEN FISH						
Bluefish (all trade sizes).....	Pounds 198,319	Pounds 106,934	Pounds 93,083	Pounds 294,947	Pounds 316,675	Pounds 252,017
Butterfish (all trade sizes).....	425,716	614,866	534,668	546,407	736,105	643,524
Catfish.....	241,991	242,661	227,902	234,173	273,771	306,058
Cisco (Lake Erie).....	52,118	115,778	257,680	511,619	546,585	749,444
Cisco (lake herring) including bluefin, blackfin, and chub.....	547,780	802,579	1,138,173	1,057,335	1,537,137	2,382,005
Cisco (tullibee, Canadian lakes).....	81,307	110,562	244,271	193,440	204,301	386,437
Cod, haddock, hake, and pollock (except fillets of cod, haddock, and pollock).....	1,200,476	1,171,969	1,156,562	1,116,432	1,105,553	1,139,670
Cod fillets.....	3,303,794	2,987,113	2,325,832	1,624,134	1,640,749	1,876,035
Croakers.....	1,908,359	2,397,789	2,196,057	1,555,805	1,483,346	1,097,902
Flounders.....	479,006	455,594	432,545	397,194	624,091	479,569
Haddock fillets.....	5,737,354	6,672,037	8,760,988	8,365,928	7,672,491	6,166,938
Halibut (all trade sizes).....	9,737,752	13,099,319	13,576,610	13,326,114	12,042,653	9,644,725
Herring, sea (including alewives and blue- backs).....	2,602,211	2,251,547	1,668,685	1,709,863	2,158,764	2,198,452
Lake trout.....	325,930	358,838	440,285	571,102	1,119,198	1,195,155
Mackerel (except Spanish).....	5,569,816	6,121,121	5,898,929	4,716,379	5,026,684	4,800,745
Perch, yellow.....	69,865	159,955	351,681	448,723	647,337	561,172
Pike, blue and sauger.....	147,523	98,681	42,086	287,683	614,218	680,130
Pike, yellow or wall-eyed.....	37,605	31,247	44,065	62,171	91,906	91,683
Pike (including pickerel, jacks, and yellow jack).....	97,783	85,572	91,116	86,186	110,160	100,723
Pollock fillets.....	1,890,874	1,076,483	668,928	575,151	2,183,053	4,738,427
Rosefish fillets.....	2,662,701	3,211,384	3,279,896	2,735,026	2,363,086	1,781,938
Sablefish (black cod).....	780,461	1,009,656	1,528,982	2,383,369	2,698,573	2,522,399
Salmon, king or chinook.....	835,004	1,092,219	1,927,962	3,267,374	3,596,899	3,187,585
Salmon, silver or coho.....	344,880	2,231,912	5,078,926	6,288,278	6,234,127	5,405,252
Salmon, fall and pink.....	1,100,463	1,208,316	1,244,255	1,546,938	4,450,648	4,156,684
Salmon, steelhead trout.....	205,072	389,488	495,043	559,465	478,565	441,208
Scup (porgies).....	275,552	348,334	360,036	322,889	316,708	264,049
Shad and shad roe.....	557,359	541,937	521,149	561,609	551,405	559,282
Smelts, eulachon, etc.....	799,112	819,172	920,809	837,295	710,852	675,837
Sturgeon and spoonbill cat.....	243,713	296,680	327,136	417,042	733,328	896,528
Suckers.....	64,084	67,786	60,315	54,086	44,733	138,658
Swordfish.....	625,550	676,064	891,752	711,095	548,068	741,839
Weakfish (including southern "sea trout").....	557,703	584,091	660,164	463,553	453,822	398,998
Whitefish.....	1,237,119	1,559,841	1,748,239	1,596,226	1,679,478	1,800,598
Whiting.....	7,588,360	9,151,206	11,140,277	9,693,904	8,905,985	8,228,204
Other fish.....	7,533,842	8,309,399	8,750,634	10,040,670	10,918,308	10,702,718
Total fish.....	60,366,554	70,458,130	79,085,721	79,159,605	84,819,362	81,392,588
FROZEN SHELLFISH						
Scallops.....	1,232,310	1,359,554	1,863,125	1,733,003	1,694,812	1,644,338
Shrimp.....	2,262,648	1,490,437	1,063,549	2,125,146	4,388,280	5,547,548
Spiny lobster tails.....	542,979	468,454	470,036	457,052	408,531	360,715
Squid.....	1,646,554	1,594,998	1,395,448	1,150,817	1,120,314	1,078,795
Other shellfish.....	665,286	510,188	659,357	1,039,434	592,632	687,329
Total shellfish.....	6,349,777	5,423,631	5,451,515	6,505,452	8,204,569	9,318,725
Total fish and shellfish.....	66,716,331	75,881,761	84,537,236	85,665,057	93,023,931	90,711,313

Holdings of frozen fishery products, 1938—Continued

BY GEOGRAPHICAL SECTIONS AND MONTHS¹

[Expressed in thousands of pounds; that is, 000 omitted]

Month ended the 15th of—	New England	Middle Atlantic	South Atlantic	North Central, East	North Central, West	South Central	Pacific ²	Total
January.....	22,402	15,329	2,734	9,239	5,350	753	17,321	73,128
February.....	19,573	14,204	2,357	8,606	4,445	742	12,257	62,184
March.....	13,334	10,799	1,654	7,089	3,623	578	8,617	45,694
April.....	12,185	8,068	2,333	5,698	3,122	602	5,359	37,367
May.....	16,015	10,298	3,394	5,596	2,737	528	7,413	45,981
June.....	20,783	10,447	4,228	5,924	2,555	1,026	10,076	55,039
July.....	27,754	10,513	4,831	5,960	2,728	1,175	13,755	66,716
August.....	29,958	10,393	5,500	6,129	3,269	744	19,889	75,882
September.....	31,791	10,999	5,110	7,733	3,275	862	24,707	84,537
October.....	26,593	11,759	4,569	9,398	3,388	1,437	28,521	85,665
November.....	26,144	13,880	4,787	11,916	4,182	2,016	30,099	93,024
December.....	25,600	14,545	4,275	12,692	4,964	2,458	26,177	90,711
Average.....	22,678	11,770	3,814	7,998	3,636	1,077	17,021	67,994

¹ New England includes the 6 States of that section; Middle Atlantic—New York, New Jersey, and Pennsylvania; South Atlantic—Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, and Florida; North Central, East—Ohio, Indiana, Illinois, Michigan, and Wisconsin; North Central, West—Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas; South Central—Kentucky, Tennessee, Alabama, Mississippi, Louisiana, Texas, Oklahoma, and Arkansas; and Pacific—Washington, Oregon, California, and Alaska.

² Includes a small amount of fish held in Colorado in the mountain section.

COLD-STORAGE HOLDINGS OF CURED FISH

During 1938 monthly cold-storage holdings of cured herring averaged 15,216,977 pounds, while those of mild-cured salmon averaged 4,426,537 pounds. This is a decrease of 12 percent in the holdings of cured herring and 22 percent in the holdings of mild-cured salmon, as compared with the previous year. Stocks of cured herring were the largest during May, when the holdings amounted to 19,876,405 pounds; while the largest holdings of mild-cured salmon occurred in November, when 7,423,880 pounds were in storage.

Holdings of cured fish, 1938, by species and months

Month ended the 15th of—	Cured herring	Mild-cured salmon	Total
	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>
January.....	11,525,064	4,801,472	16,326,536
February.....	13,254,354	4,165,890	17,420,244
March.....	13,184,469	3,520,588	16,705,057
April.....	15,082,197	2,719,225	17,801,422
May.....	19,876,405	1,868,542	21,744,947
June.....	19,443,598	1,718,462	21,162,060
July.....	18,231,065	3,362,173	21,593,238
August.....	18,163,544	4,526,797	22,690,341
September.....	16,264,456	5,558,828	21,823,284
October.....	13,785,060	6,892,659	20,677,719
November.....	12,003,249	7,423,880	19,427,129
December.....	11,790,258	6,559,927	18,350,185

FOREIGN FISHERY TRADE

The foreign trade in fishery products of the United States in 1938 amounted to \$53,722,221, of which \$39,307,089 represents the value of these products imported for consumption and \$14,415,132, the value of exports of domestic fishery products. Compared with the previous year there was a decrease of 18 percent in total trade, 22 percent in the value of the imports, and 1 percent in the value of the exports.

Imports consisted of 302,623,795 pounds of edible products valued at \$28,348,602, and nonedible products valued at \$10,958,487. Fishery exports consisted of 118,029,159 pounds of edible products valued at \$13,797,855, and nonedible products valued at \$617,277.

Import duties levied on fishery products imported during 1938 totaled \$5,700,534.

*Exports of domestic fishery products, 1938*¹

Item	Quantity	Value
EDIBLE FISHERY PRODUCTS		
Fish, fresh or frozen:		
Salmon.....pounds..	6,345,069	\$706,629
Other.....do.....	1,587,445	139,860
Fish, salted, pickled, or dry-cured:		
Salmon.....do.....	2,162,135	448,796
Cod, haddock, hake, pollock, cusk.....do.....	1,656,221	116,997
Fish, canned:		
Salmon.....do.....	48,290,957	7,269,171
Sardines.....do.....	40,811,807	2,786,163
Shellfish, not canned:		
Oysters, fresh, in the shell, shucked, frozen, or in ice.....do.....	5,322,624	374,355
Shrimp, fresh, frozen, or in ice.....do.....	382,089	55,211
Shrimp, dried.....do.....	1,709,775	304,307
Shellfish, canned:		
Shrimp.....do.....	5,083,489	993,505
Other.....do.....	1,518,475	249,981
Other fish and fish products.....do.....	3,159,073	352,880
Total edible products.....do.....	118,029,159	13,797,855
NONEDIBLE FISHERY PRODUCTS		
Marine-animal oils.....do.....	2,677,318	215,600
Fish meal for feed.....tons.....	1,431	65,061
Furs, fur-seal, dressed.....number.....	5,380	92,500
Oyster shells.....tons.....	36,280	244,116
Total nonedible products.....do.....		617,277
Grand total.....do.....		14,415,132

¹ These statistics have been furnished by the Bureau of Foreign and Domestic Commerce, Department of Commerce.

Imports of fishery products entered for consumption, 1938¹

Item	Pounds	Value
EDIBLE FISHERY PRODUCTS		
Fish, fresh or frozen:		
Whole or beheaded, or eviscerated, or both:		
Fresh-water fish, not elsewhere specified:		
Whitefish.....	12, 194, 864	\$1, 495, 764
Yellow pike.....	7, 686, 110	730, 606
Jacks or grass pike.....	3, 222, 871	150, 529
Lake trout.....	4, 584, 587	512, 277
Yellow perch.....	2, 742, 343	187, 482
Mullibees.....	1, 094, 420	77, 886
Lake herring and ciscoes.....	1, 778, 837	286, 593
Chubs.....	1, 158, 019	147, 833
Mullet (catostomus).....	749, 212	51, 342
Saugers.....	8, 187, 981	453, 701
Fresh-water fish, not elsewhere specified.....	5, 894, 783	348, 970
Eels.....	479, 986	35, 176
Salmon.....	5, 631, 822	605, 212
Cod, haddock, hake, pollock, and cusk.....	1, 521, 599	61, 182
Halibut:		
Fresh.....	4, 549, 801	500, 861
Frozen.....	1, 371, 833	130, 311
Mackerel.....	1, 148, 885	67, 602
Sturgeon.....	1, 183, 565	291, 528
Swordfish:		
Fresh.....	1, 231, 120	195, 168
Frozen.....	2, 965, 623	222, 801
Fish, not specially provided for.....	6, 256, 897	233, 322
Whether or not whole:		
Smelts.....	7, 075, 018	671, 943
Tuna fish.....	13, 693, 727	803, 229
Sea herring:		
Fresh.....	11, 628, 928	124, 879
Frozen.....	2, 171, 538	73, 215
Filleted, skinned, boned, sliced, or divided, not specially provided for.....	9, 454, 880	914, 565
Total.....	119, 659, 249	9, 373, 977
Fish, salted, dried, smoked, pickled, or preserved:		
Dried and unsalted:		
Cod, haddock, hake, pollock, and cusk.....	75, 666	5, 103
Other (including stockfish).....	2, 733, 006	351, 905
In oil or in oil and other substances:		
Sardines:		
Valued not over 9 cents per pound.....	² 4, 504	388
Valued over 9 cents per pound.....	² 21, 849, 658	3, 219, 426
Anchovies:		
Valued not over 9 cents per pound.....	² 50	3
Valued over 9 cents per pound.....	² 2, 061, 018	896, 924
Tuna fish.....	7, 192, 118	1, 252, 203
Antipasto, valued over 9 cents per pound.....	² 210, 679	78, 752
Other:		
Valued not over 9 cents per pound.....	60	5
Valued over 9 cents per pound.....	380, 879	79, 979
Not in oil or in oil and other substances:		
In airtight containers weighing, with contents, not over 15 pounds each:		
Anchovies.....	2, 019, 682	230, 627
Salmon.....	697, 645	67, 782
Herring and sardines.....	¹ 0, 150, 160	778, 104
Fish cakes, balls, and puddings.....	¹ 1, 648, 134	130, 783
Other.....	1, 137, 821	158, 582
Pickled or salted:		
Not in oil, etc., and not in airtight containers weighing, with contents, 15 pounds or less each:		
Salmon.....	224, 872	32, 663
Cod, haddock, hake, pollock, and cusk, neither skinned nor boned (except that vertebral column may be removed):		
Containing not more than 43 percent moisture by weight.....	6, 142, 552	285, 810
Containing more than 43 percent moisture by weight.....	39, 824, 832	1, 533, 499
Cod, haddock, hake, pollock, and cusk, skinned or boned.....	2, 235, 675	201, 291
Herring:		
In containers (not airtight), weighing, with contents, not more than 15 pounds each.....	440	36
In containers containing not more than 10 pounds of herring.....	³ 5, 882, 211	325, 447
Other, in bulk or in containers.....	³ 28, 321, 491	1, 168, 800
Mackerel, in bulk or in containers weighing, with contents, more than 15 pounds each.....	³ 5, 877, 536	304, 292
Alewives, in bulk or in containers weighing, with contents, more than 15 pounds each.....	³ 19, 016	850
Pickled or salted, not specially provided for, in bulk or in containers weighing, with contents, more than 15 pounds each.....	³ 1, 049, 993	83, 671

See footnotes at end of table.

Imports of fishery products entered for consumption, 1938—Continued

Item	Pounds	Value
EDIBLE FISHERY PRODUCTS—continued		
Fish, salted, dried, smoked, pickled, or preserved—Continued.		
Smoked or kippered:		
Not in oil, and not in airtight containers weighing, with contents, 15 pounds or less each:		
Salmon	3, 739	\$2, 128
Herring:		
Whole or beheaded:		
Hard, dry-smoked	1, 767, 310	51, 714
Other	348, 903	27, 766
Boned, whether or not skinned	64, 630	5, 777
Eviscerated, split, skinned, or divided (not boned)	762, 725	63, 203
Cod, haddock, hake, pollock, and cusk:		
Whole, or beheaded, or eviscerated or both	741, 439	65, 670
Filletted, skinned, boned, sliced, or divided	1, 753, 099	177, 822
Smoked or kippered, not specially provided for	3, 268	671
Fish paste and fish sauce	2 81, 677	18, 979
Prepared or preserved, not specially provided for:		
In containers weighing, with contents, not more than 15 pounds each ..	92, 379	12, 575
In bulk or in containers weighing, with contents, more than 15 pounds each ..	3 147, 295	14, 734
Total	144, 506, 162	11, 641, 054
Caviar and other fish roe:		
Not boiled:		
Sturgeon	107, 085	190, 887
Fish roe, not specially provided for	123, 563	25, 873
Boiled, packed in airtight containers	2 77, 449	10, 019
Total	308, 097	226, 779
Shellfish:		
Crab meat, crab sauce, and crab paste	2 7, 814, 293	2, 741, 348
Oysters, oyster juice, or either in combination with other substances, in airtight containers	2 166, 130	40, 580
Razor clams, canned	2 4, 036	462
Clams (except razor clams) and clams in combination with other substances (except clam chowder)	2 515, 858	105, 431
Clam chowder, clam juice, and clam juice in combination with other substances ..	826	149
Lobsters (including spiny lobsters and crawfish):		
Not canned		
Canned	14, 254, 249	2, 779, 605
Turtles	727, 398	326, 129
Crabs, fresh or frozen (not crab meat)	641, 017	33, 002
Clams, quahogs, not in airtight containers, fresh or frozen	2, 177	187
Shrimps and prawns	3, 123, 257	52, 904
Scallops:	3, 459, 558	240, 102
Fresh but not frozen	541, 840	90, 632
Other	750, 054	102, 244
Oysters, not in airtight containers:		
Fresh or frozen (except seed oysters)	243, 775	2, 398
Other	1, 811, 565	76, 258
Lobster paste and sauce	14, 630	4, 665
Pastes and sauces of shellfish, not specially provided for	94, 086	9, 200
Shellfish, not specially provided for	3, 985, 538	501, 496
Total	38, 150, 287	7, 106, 792
Total edible fishery products	302, 623, 795	28, 348, 602
NONEDIBLE FISHERY PRODUCTS		
Marine-animal oils:		
Cod oil	gallons 3, 057, 860	939, 481
Cod-liver oil	do 5, 228, 637	3, 326, 496
Eulachon oil	do 700	450
Halibut-liver oil	do 3, 541	12, 635
Herring oil	do 3, 964	982
Seal oil	do 35	57
Sod oil	do 56, 244	13, 855
Whale oil:		
Sperm:		
Crude	do 1, 200, 733	351, 562
Refined or otherwise processed	do 34, 728	11, 576
Whale oil, not specially provided for	do 1, 707, 510	561, 694
Marine-animal and fish oils, not specially provided for	do 10, 167	91, 267
Total	11, 304, 119	5, 310, 055

See footnotes at end of table

Imports of fishery products entered for consumption, 1938—Continued

Item	Quantity	Value
NONEDIBLE FISHERY PRODUCTS—continued		
Pearls and imitation pearls:		
Pearls and parts, not strung or set:		
Natural		\$247, 387
Cultured or cultivated		222, 917
Imitation pearls, half pearls, and hollow or filled		8, 700
Imitation pearl beads:		
Hollow or filled		41, 508
Solid, except iridescent:		
Valued at not more than ¼ cent per inch	102, 456, 122 inches	118, 840
Valued at more than ¼ cent and not more than 1 cent per inch	44, 773 inches	219
Total		639, 571
Shells and buttons of pearl or shell:		
Shells, unmanufactured:		
Green snail shell, unmanufactured	62, 516 pounds	9, 429
Mother-of-pearl	8, 024, 781 do	1, 273, 995
Shells, not specially provided for, unmanufactured	11, 685, 310 do	49, 634
Tortoise shell, not sawed, cut, flaked, polished, or otherwise manufactured or advanced in value from natural state	1, 056 pounds	5, 028
Shells and mother-of-pearl, engraved, cut, ornamented, or manufactured		36, 044
Pearl or shell buttons:		
Fresh-water	175, 743 gross	38, 018
Ocean	236, 812 do	72, 952
Buttons (from Philippine Islands)	522, 169 do	196, 426
Total		1, 681, 526
Sponges:		
Sheepswool	147, 236 pounds	284, 773
Yellow and grass	202, 813 do	73, 042
Velvet	30, 744 do	33, 808
Other	47, 808 do	83, 531
Manufactures of sponges, not specially provided for	63 do	84
Total	428, 664 do	475, 238
Agar-agar	588, 958 do	333, 238
Ambergris	79 do	8, 251
Cod-liver oil cake and cod-liver oil cake meal	1, 085, 419 do	21, 113
Cuttlefish bone	298, 467 do	24, 774
Goldfish	229, 958 number	2, 180
Fish for other than human consumption		17, 583
Fish livers	4, 931, 580 pounds	658, 057
Fish sounds	172, 821 do	22, 461
Fish scrap and fish meal, not fertilizer	32, 922 tons	1, 253, 231
Fish scrap and fish meal, fertilizer	6, 965 do	253, 231
Isinglass	95, 623 pounds	38, 146
Kelp	2, 719, 380 do	9, 034
Fish skins, raw or salted	1, 589, 126 do	74, 977
Seal skins, raw (not fur skins)	1, 089, 141 do	99, 081
Spermaceti wax	75, 180 do	14, 997
Whalebone, unmanufactured		185
Whalebone, manufactures of		957
Aquarium fish, not elsewhere specified		20, 601
Total		2, 852, 097
Total, nonedible fishery products		10, 958, 487
Grand total		39, 307, 089

¹ These statistics have been furnished by the Bureau of Foreign and Domestic Commerce, Department of Commerce.

² Including weight of immediate container.

³ Net weight.

FISHERIES OF THE NEW ENGLAND STATES

(Area XXII) ⁶

The yield of the commercial fisheries of the New England States (Maine, New Hampshire, Massachusetts, Rhode Island, and Connecticut) during 1938 amounted to 631,520,300 pounds valued at \$18,275,182 to the fishermen, representing a decrease of 6 percent in volume and 8 percent in value as compared with the catch in 1937. These fisheries gave employment to 20,248 fishermen, as compared with 19,624 in 1937.

There were 421 fishery wholesale and manufacturing establishments in the 5 States in 1938, as compared with 400 in 1937. In 1938 these establishments employed 12,162 persons, paid \$6,969,883 in salaries and wages, and produced manufactured products (canned, cured packaged, and byproducts) valued at \$19,967,143. In 1937 the wholesale and manufacturing firms employed 12,122 persons, paid \$7,705,479 in salaries and wages, and produced manufactured products valued at \$24,038,947.

Fisheries of the New England States, 1938

SUMMARY OF CATCH

Product	Maine		New Hampshire		Massachusetts	
	Pounds	Value	Pounds	Value	Pounds	Value
Fish.....	50,672,500	\$729,207	55,500	\$4,563	518,357,800	\$10,876,387
Shellfish, etc.....	16,534,100	1,791,643	740,200	104,572	19,492,700	2,293,000
Total.....	67,206,600	2,520,850	795,700	109,135	537,850,500	13,169,387

Product	Rhode Island		Connecticut		Total	
	Pounds	Value	Pounds	Value	Pounds	Value
Fish.....	5,957,800	\$196,492	6,154,500	\$207,146	581,198,100	\$12,013,795
Shellfish, etc.....	7,871,100	859,082	5,684,100	1,213,090	50,322,200	6,261,387
Total.....	13,828,900	1,055,574	11,838,600	1,420,236	631,520,300	18,275,182

OPERATING UNITS: BY STATES

Item	Maine	New Hampshire	Massachusetts	Rhode Island	Connecticut	Total
Fishermen:						
On vessels.....	484		4,109	252	278	5,123
On boats and shore:						
Regular.....	2,394	120	3,842	416	265	7,037
Casual.....	3,480	187	3,051	714	656	8,088
Total.....	6,358	307	11,002	1,382	1,199	20,218
Vessels:						
Steam.....			14	3	3	20
Net tonnage.....			2,589	45	581	3,215
Motor.....	122		395	63	65	645
Net tonnage.....	1,175		16,205	731	1,202	19,313
Total vessels.....	122		409	66	68	665
Total net tonnage.....	1,175		18,794	776	1,783	22,528

⁶ This is the number given this area by the North American Council on Fishery Investigations. It should be explained that there are included under this area craft whose principal fishing ports are in the area but at times fish elsewhere. Notable examples are the groundfish fishery in area XXI and the mackerel and southern trawl fisheries in area XXIII.

Fisheries of the New England States, 1938—Continued

OPERATING UNITS: BY STATES—Continued

Item	Maine	New Hampshire	Massachusetts	Rhode Island	Connecticut	Total
Boats:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
Motor.....	1,947	38	1,920	367	238	4,510
Other.....	1,930	68	1,487	640	365	4,490
Accessory boats.....	174		417	59	11	661
Apparatus:						
Purse seines:						
Mackerel.....	10		68	1	1	80
Length, yards.....	3,070		32,248	120	150	35,588
Other.....	15		4			19
Length, yards.....	4,060		2,110			6,170
Haul seines.....	36		9	16	23	84
Length, yards.....	3,650		409	2,407	3,079	9,545
Stop seines.....	53					53
Length, yards.....	39,430					39,430
Gill nets:						
Anchor.....	1,014		1,768		2	2,784
Square yards.....	318,116		578,055		375	896,546
Drift.....	530		3,369	16	42	3,957
Square yards.....	142,365		1,159,753	17,640	102,843	1,422,601
Runaround.....					1	1
Square yards.....					330	330
Stake.....	97				17	114
Square yards.....	7,338				2,699	10,037
Lines:						
Hand.....	4,741	750	536	230	63	6,320
Hooks.....	5,140	750	1,101	279	80	7,350
Trawl.....	14,984	50	29,064	43		44,141
Hooks.....	832,500	2,500	1,824,640	19,053		2,678,693
Troll.....				64		64
Hooks.....				64		64
Trot with hooks.....					14	14
Hooks.....					1,900	1,900
Pound nets.....			128	21	15	164
Floating traps.....	17		57	37		111
Weirs.....	247		2			249
Fyke nets.....	27		26	38	49	140
Dip nets.....	65		189	29	131	414
Bag nets.....	107	31				138
Push nets.....			84			84
Otter trawls.....	60		351	35	63	509
Yards at mouth.....	1,419		10,453	828	1,463	14,163
Box traps.....	14			2		16
Pots:						
Crab.....	200		5,634			5,834
Eel.....	173		775	1,087	1,894	3,929
Fish.....					24	24
Lobster.....	170,547	3,740	78,886	28,995	20,342	302,510
Periwinkle and cockle.....			104	1,033		1,137
Harpoons.....	62		99	49	13	223
Spears.....	5		38	24	2	69
Dredges:						
Clam.....			90	12		102
Yards at mouth.....			43	12		55
Mussel.....				4		4
Yards at mouth.....				4		4
Oyster.....	1		43	32	74	150
Yards at mouth.....	2		44	48	104	198
Scallop.....	140		2,496	634		3,270
Yards at mouth.....	168		2,327	512		3,007
Tongs:						
Oyster.....			43	57	44	144
Other.....			128	493	93	714
Rakes:						
Oyster.....				36	3	39
Other.....	3		1,130	101	79	1,313
Forks.....			579	39	3	621
Hoes.....	2,146	105	1,599	51	25	3,926

Fisheries of the New England States, 1938—Continued

CATCH: BY STATES

Species	Maine		New Hampshire		Massachusetts		Rhode Island		Connecticut		Total	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
FISH												
Alewives	3,140,100	\$12,160			957,800	\$6,348	180,600	\$1,194	28,300	\$283	4,306,800	\$19,985
Anchovies					61,000		61,000				61,000	670
Bluefish					71,100	5,692	39,400	3,690	10,100	1,511	120,600	10,893
Bonito					6,100	399	22,200	2,456			28,300	2,855
Butterfish	17,800	976			1,225,800	46,918	446,300	17,445	190,300	3,981	1,880,200	69,320
Carp									35,300	2,094	35,300	2,094
Cod	6,220,600	124,795	1,500	\$45	111,315,200	2,060,590	735,700	21,885	111,800	3,354	118,384,800	2,210,669
Crevalle							900	14			900	14
Croaker					1,729,100	31,927					1,729,100	31,927
Cunner	45,300	802					43,900	439	1,000	10	90,200	1,251
Cusk	1,505,900	27,638	1,000	28	6,037,800	102,571					7,544,700	130,237
Drum, red					1,600	25					1,600	25
Eels:												
Common	85,000	6,771			284,400	10,168	88,300	7,575	55,700	3,444	513,400	27,958
Conger					114,700	2,280	10,200	243	1,100	16	126,000	2,539
Flounders:												
Gray sole	763,200	22,835			7,436,700	291,388					8,199,900	314,223
Lemon sole	13,200	265			3,313,600	214,013					3,326,800	214,278
Yellowtail and dab	397,600	5,853			17,447,100	373,785	358,200	5,885	1,757,700	23,722	19,960,600	409,245
Blackback	590,200	16,493			8,745,800	305,611	419,700	14,028	2,527,200	99,885	12,282,900	436,017
Fluke					1,954,600	141,962	173,300	13,122	282,600	20,210	2,410,500	175,294
Unclassified	50,700	1,414			603,900	20,891					654,600	22,305
Frigate mackerel							2,000	20			2,000	20
Goosefish					400	7					400	7
Grayfish					42,400	1,065	3,800	46			46,200	1,111
Haddock	2,508,500	76,974	2,000	80	155,424,500	3,375,765					157,935,000	3,452,819
Hake	9,048,000	84,983	3,000	60	14,764,100	235,811	4,000	69	8,000	140	23,827,100	321,063
Halibut	39,400	5,595			1,932,600	200,608					1,972,000	206,203
Herring, sea	16,055,000	154,768			4,880,700	36,065	111,200	689			21,046,900	191,522
Herring smelt					500	10					500	10
Hickory shad							6,700	148	400	4	7,100	152
King whiting or "kingfish"					5,200	107	2,000	114	100	2	7,300	223
Lamprey									1,900	56	1,900	56
Mackerel	1,980,900	45,435			36,832,900	1,103,273	483,200	14,656	49,900	1,211	39,346,900	1,164,575
Menhaden					39,100	322	131,100	1,197	157,700	393	327,900	1,912
Minnows									600	79	600	79
Pollock	5,919,900	48,843			34,220,800	397,659	100,100	1,498	45,900	676	40,286,700	448,676
Rosefish	569,600	6,276			61,435,700	797,148					65,005,300	803,424
Salmon	15,700	4,720			500	92					16,200	4,812
Scup or porgy	100	2			9,816,600	252,260	1,145,900	20,582	121,000	2,435	11,083,600	275,279
Sea bass					3,603,300	144,057	67,100	4,947	56,700	5,620	3,727,100	154,624
Sea robin					80,500	1,288	288,600	2,686	4,000	80	373,100	4,054
Shad	11,900	512			54,600	2,171	9,600	981	426,800	25,788	502,800	29,452
Sharks	25,900	339			123,100	3,340	3,300	39			152,300	3,718

Fisheries of the New England States, 1938—Continued

CATCH: BY STATES—Continued

Species	Maine		New Hampshire		Massachusetts		Rhode Island		Connecticut		Total	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
FISH—continued												
Skates					66,200	994	221,300	1,714	66,000	672	353,500	3,380
Skipper or "billfish"					800	\$116	600	\$60			1,400	\$176
Smelt	692,800	\$58,302	48,000	\$4,350	25,900	5,101					766,700	\$7,753
Spot					8,200	163					8,200	163
Squeteagues, or "sea trout,"												
gray					271,700	6,050	61,100	3,550	6,200	\$261	339,000	9,861
Striped bass					81,600	8,586	210,300	19,867	9,000	943	300,900	29,396
Sturgeon	500	28			8,500	797	1,900	240	200	69	11,100	1,134
Suckers	30,500	762							93,600	1,831	124,100	2,593
Swordfish	59,500	10,326			1,826,100	307,544	167,900	25,097	34,000	7,133	2,087,500	350,100
Tautog					37,500	1,547	142,300	5,187	18,700	457	198,500	7,191
Tilefish					367,000	14,445					367,000	14,445
Tomcod	7,700	204			11,000	578					18,700	782
Tuna	181,600	5,146			1,364,900	50,926	20,900	2,054			1,567,400	58,126
White perch							2,000	140			2,000	140
Whiting	647,500	5,492			24,203,400	265,612	191,200	2,265	52,700	786	25,091,800	274,155
Wolfish	47,600	472			2,564,000	47,811					2,611,600	48,283
Yellow perch	300	26			18,300	501					18,600	527
Total	50,672,500	729,207	55,500	4,563	518,357,800	10,876,387	5,957,800	196,492	6,154,500	207,146	581,198,100	12,013,795
SHELLFISH, ETC.												
Crabs:												
Hard	523,300	14,168			1,292,600	30,742	229,000	6,977	2,800	165	2,047,700	52,052
Soft and peelers							300	100			300	100
Lobsters	7,659,200	1,310,013	170,200	37,272	2,315,100	499,410	709,700	159,876	553,600	136,047	11,407,800	2,142,618
Shrimp	82,500	5,691			23,200	1,930					105,700	7,621
Clams:												
Hard, public ¹	55,000	4,000			2,294,500	262,656	2,101,100	176,783	210,500	43,574	4,661,100	487,013
Hard, private ¹					4,200	518	63,100	5,750			67,300	6,268
Razor					512,900	13,859					512,900	13,859
Soft, public ²	7,134,300	317,951	570,000	67,300	4,749,700	436,858	237,100	16,515	15,500	2,636	12,706,600	841,260
Soft, private ²					28,000	2,500					28,000	2,500
Surf or skimmer					1,300	76					1,300	76
Limpets							900	70			900	70
Mussels, sea	7,200	175			15,700	441	1,200	180			24,100	796
Oysters, market: ³												
Public, spring					7,900	1,430	42,600	7,948	14,700	2,662	65,200	12,040
Public, fall							40,300	7,537	29,200	4,803	69,500	12,340
Private, spring					219,800	78,315	1,551,100	193,956	1,983,900	431,100	3,754,800	703,371
Private, fall							1,950,400	248,084	2,797,400	578,315	4,747,800	826,399
Periwinkles and cockles	1,800	150			9,600	747	83,100	4,363			94,500	5,260

Scallops:													
Bay					1,095,300	353,229	64,300	18,382	66,800	13,624	1,226,400	385,235	
Sea	792,900	86,477			5,057,200	535,406	400	118			5,850,500	622,001	
Squid	5,200	52			1,344,800	16,225	793,400	12,367	9,700	164	2,153,100	28,808	
Turtles:													
Green							3,000	75			3,000	75	
Loggerhead							100	1			100	1	
Sea urchins	97,500	455									97,500	455	
Irish moss					177,200	15,714					177,200	15,714	
Kelp					120,000	720					120,000	720	
Bloodworms	116,400	34,884			26,300	6,289					142,700	41,173	
Sandworms	58,800	17,627			197,400	35,935					256,200	53,562	
Total	16,534,100	1,791,643	740,200	104,572	19,492,700	2,293,000	7,871,100	859,082	5,684,100	1,213,090	50,322,200	6,261,367	
Grand total	67,206,600	2,520,850	795,700	109,135	537,850,500	13,169,387	13,828,900	1,055,574	11,838,600	1,420,236	631,520,300	18,275,182	

¹ Statistics on hard clams are based on yields of 11 pounds of meats per standard bushel in Maine; 11.13 pounds in Massachusetts; 15.81 pounds in Rhode Island; and 12.04 pounds in Connecticut.

² Statistics on soft clams are based on yields of 15 pounds of meats per standard bushel in Maine and New Hampshire; 13.93 pounds in Massachusetts; and 20 pounds in Rhode Island and Connecticut.

³ Statistics on oysters are based on yields of 6.57 pounds of meats per standard bushel in Massachusetts; 7 pounds in Rhode Island; and 7.63 pounds in Connecticut.

NOTES: - Data on the yield of shellfish meats per bushel are based on U. S. standard bushels of 2,150.4 cubic inches capacity. The above data includes the catch made by New England craft in the southern trawl fishery.

The seed oyster fishery in the New England States was prosecuted in Rhode Island and Connecticut. In Rhode Island, 24 fishermen, using 1 motorboat, 23 other boats, 4 tongs, and 20 rakes, took 39,050 bushels of seed oysters, valued at \$19,525 from public beds. Twenty-three of these fishermen are duplicated among those fishing for market oysters or other species. Similarly, the following craft and gear are duplicated: 23 rowboats, 3 tongs, and 20 rakes. In Connecticut, 335 fishermen, using 3 steam vessels, 17 motor vessels, 21 sail vessels, 22 motorboats, 81 other boats, 182 dredges, 92 tongs, and 7 rakes, took 80,584 bushels of seed oysters, valued at \$64,784 from public beds, and 353,440 bushels, valued at \$359,224 from private beds. Of the total number of persons fishing for seed oysters in Connecticut, 152 are duplicated among those fishing for market oysters or other species. Similarly, the following craft and gear are duplicated: 6 motor vessels, 18 motorboats, 65 other boats, 12 dredges, 72 tongs, and 3 rakes.

Fisheries of the New England States, 1938—Continued

SUPPLEMENTARY TABLE SHOWING THE PRODUCTION OF CERTAIN SHELLFISH IN NUMBER AND BUSHELS

Product	Maine		New Hampshire		Massachusetts		Rhode Island		Connecticut		Total	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Crabs:												
Hard.....number	1,786,400	\$14,168			5,137,200	\$30,742	687,000	\$6,377	8,050	\$165	7,618,650	\$52,052
Soft and peelers.....do							1,200	100			1,200	100
Clams:												
Hard, public.....bushels	5,000	4,000			206,155	262,656	132,897	176,783	17,483	43,574	361,535	487,013
Hard, private.....do					377	518	3,991	5,750			4,368	6,268
Razor.....do					17,051	13,859					17,051	13,859
Soft, public.....do	475,620	317,951	38,000	\$67,300	340,969	436,858	11,855	16,515	775	2,636	867,219	841,260
Soft, private.....do					2,010	2,500					2,010	2,500
Surf or skimmer.....do					76	76					76	76
Limpets.....do							69	70			69	70
Mussels, sea.....do	600	175			1,308	441	92	180			2,000	796
Oysters, market:												
Public, spring.....do					1,202	1,430	6,086	7,948	1,927	2,662	9,215	12,040
Public, fall.....do							5,757	7,537	3,827	4,803	9,584	12,340
Private, spring.....do					33,455	78,315	221,586	193,956	260,013	431,100	515,054	703,371
Private, fall.....do							278,629	248,084	366,632	578,315	645,261	826,399
Periwinkles and cockles.....do	100	150			533	747	4,617	4,363			5,250	5,260
Scallops:												
Bay.....do					182,550	353,229	9,186	18,382	10,277	13,624	202,013	385,235
Sea.....do	132,150	86,477			842,867	535,406	57	118			975,074	622,001

NOTE.—Bushels represent U. S. Standard Bushels of 2,150.4 cubic inches capacity.

Industries related to the fisheries of the New England States, 1938

OPERATING UNITS, SALARIES, AND WAGES

Item	Maine and New Hampshire	Massachusetts	Rhode Island	Connecticut	Total
Transporting:					
Persons engaged:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
On vessels.....	130	68	26	17	241
On boats.....	11	54	-----	-----	65
Total.....	141	122	26	17	306
Vessels, motor.....	65	9	8	9	91
Net tonnage.....	714	332	144	295	1,485
Boats.....	8	27	-----	-----	35
Wholesale and manufacturing:					
Establishments.....	150	212	29	30	421
Persons engaged:					
Proprietors.....	135	254	24	27	440
Salaried employees.....	164	514	39	37	754
Wage earners:					
Average for season.....	5,389	4,788	321	470	10,968
Average for year.....	1,638	3,958	189	253	6,038
Paid to salaried employees.....	\$259,012	\$1,553,622	\$83,190	\$115,205	\$2,011,029
Paid to wage earners.....	\$1,024,765	\$3,494,664	\$172,914	\$266,511	\$4,958,854
Total salaries and wages.....	\$1,283,777	\$5,048,286	\$256,104	\$381,716	\$6,969,883
Fishermen manufacturing.....	1,035	2,101	260	-----	3,396

PRODUCTS MANUFACTURED

Item	Maine ¹		Massachusetts		Rhode Island		Connecticut	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
By manufacturing establishments:								
Alewives, salted								
pounds.....	747,900	\$10,591	(²)	(²)	(²)	(²)	-----	-----
Cod:								
Fresh fillets...do....	151,000	15,230	7,979,059	\$692,987	(²)	(²)	-----	-----
Fresh sticks...do....	310,900	34,865	-----	-----	-----	-----	-----	-----
Frozen fillets...do....	126,000	12,480	8,481,443	741,233	-----	-----	-----	-----
Salted:								
Green ³ ...do....	745,881	32,202	-----	-----	-----	-----	-----	-----
Dry...do....	110,000	6,650	1,994,061	148,980	-----	-----	-----	-----
Boneless including absolutely boneless...pounds.....	297,294	39,475	7,425,378	1,078,918	-----	-----	-----	-----
Smoked fillets...do....	93,011	9,750	529,323	59,420	-----	-----	-----	-----
Oil:								
Cod...gallons.....	4,604	1,308	-----	-----	-----	-----	-----	-----
Cod liver...do....	20,565	11,409	240,991	153,577	-----	-----	-----	-----
Cusk:								
Fresh fillets								
pounds.....	69,250	7,100	1,022,535	98,432	-----	-----	-----	-----
Fresh sticks...do....	636,300	65,788	-----	-----	-----	-----	-----	-----
Frozen fillets...do....	(²)	(²)	183,915	14,713	-----	-----	-----	-----
Smoked fillets...do....	64,000	6,550	689,223	68,230	-----	-----	-----	-----
Flounders:								
Fresh fillets...do....	45,500	5,424	1,551,514	245,681	-----	-----	-----	-----
Frozen fillets...do....	(²)	(²)	1,677,810	244,401	-----	-----	-----	-----
Haddock:								
Fresh fillets...do....	148,500	23,635	16,013,963	1,510,178	(²)	(²)	-----	-----
Fresh sticks...do....	73,000	11,300	-----	-----	-----	-----	-----	-----
Frozen fillets...do....	59,000	6,150	21,144,405	1,376,205	-----	-----	-----	-----
Finnan haddie								
do.....	184,900	17,507	505,809	41,551	(²)	(²)	-----	-----
Hake:								
Fresh fillets...do....	213,000	19,250	2,205,091	177,890	-----	-----	-----	-----
Fresh sticks...do....	674,800	65,432	-----	-----	-----	-----	-----	-----
Frozen fillets...do....	(²)	(²)	301,948	15,385	-----	-----	-----	-----
Salted:								
Green ⁴ ...do....	1,872,842	59,542	-----	-----	-----	-----	-----	-----
Dry...do....	(²)	(²)	936,059	53,948	-----	-----	-----	-----
Boneless, including absolutely boneless...pounds.....	207,538	15,695	-----	-----	-----	-----	-----	-----

See footnotes, p. 287.

Industries related to the fisheries of the New England States, 1938—Continued

PRODUCTS MANUFACTURED—Continued

Item	Maine		Massachusetts		Rhode Island		Connecticut	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
By manufacturing establishments—Continued:								
Herring, sea:								
Salted:								
Split... pounds	(2)	(2)	165,500	\$7,457				
Brine salted								
pounds	382,000	\$11,870						
Pickled in vinegar								
pounds	364,200	14,472	(2)	(2)				
Smoked:								
Bloaters:								
Hard... do	66,150	2,685	(2)	(2)				
Soft... do	335,140	14,837	156,000	13,191				
Boneless... do	1,990,214	242,867	(2)	(2)				
Lengthwise								
pounds	81,160	4,367						
Medium scaled								
pounds	155,438	9,144	(2)	(2)				
Kippered... do	(2)	(2)	117,179	16,568				
Canned "sardines"								
std. cases	671,635	2,367,045						
Meal... tons	1,652	42,974						
Oil... gallons	56,452	6,132						
Mackerel:								
Fresh fillets								
pounds			127,302	23,082				
Frozen fillets... do			485,355	33,439				
Salted, split... do			1,784,690	157,547				
Smoked... do			123,720	21,519				
Pollock:								
Fresh fillets... do	135,000	7,310	2,540,458	166,748				
Fresh sticks... do	49,200	2,570						
Frozen fillets... do	1,182,000	71,560	9,388,535	490,582				
Salted:								
Green ³ ... do	386,611	10,498						
Dry... do	84,000	3,863	248,225	11,122				
Rosefish:								
Fresh fillets... do	(2)	(2)	6,051,632	476,397				
Frozen fillets... do	365,000	32,300	12,720,359	1,057,018				
Whitefish, smoked								
pounds			240,500	97,450				
Whiting:								
Fresh fillets... do			345,900	25,690				
Frozen fillets... do	(2)	(2)	530,615	35,752				
Frozen sticks... do			1,173,794	71,665				
Pan-dressed... do			5,251,639	192,662				
Wolfish:								
Fresh fillets... do			78,537	7,894				
Frozen fillets... do	(2)	(2)	123,200	13,004				
Crab meat, packaged, fresh-cooked... pounds	104,250	44,303	229,036	77,272	(2)	(2)		
Lobster meat, packaged, fresh-cooked... pounds	9,450	10,950	200,379	213,844				
Clams, hard, fresh-shucked... gallons			(2)	(2)	3,545	\$5,829		
Clams, soft:								
Fresh-shucked								
gallons	4 121,060	4 135,172	333,154	471,190	7,875	8,665		
Canned:								
Whole								
std. cases	119,612	439,384						
Juice, bouillon, and cocktail								
std. cases	23,151	41,267						
Chowder... do	42,716	135,028	(2)	(2)				
Oysters, fresh-shucked								
gallons			(2)	(2)	281,003	530,080	254,421	\$505,848
Unclassified products:								
Fillets, fresh and frozen... pounds	5 452,000	5 54,030	(6)	(6)	(6)	(6)		
Steaks, fresh and frozen... pounds			7 289,486	7 31,753				
Salted... do	8 231,058	8 8,871	9 2,032,064	9 148,521				
Smoked... do	(9)	(9)	10 590,341	10 97,763	(9)	(9)	(9)	(9)
Canned:								
Fish cakes, balls, etc. std. cases	(6)	(6)	81,084	572,946				
Cat and dog food								
std. cases			61,363	111,065				
Other... do	11 57,134	11 336,488	12 71,143	12 506,987	(6)	(6)		

See footnotes, p. 287.

Industries related to the fisheries of the New England States, 1938—Continued

PRODUCTS MANUFACTURED—Continued

Item	Maine		Massachusetts		Rhode Island		Connecticut	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
By manufacturing establishments—Continued.								
Unclassified products—Continued.								
Meal, miscellaneous tons	¹² 327	¹³ \$20, 610	¹⁴ 12, 987	¹⁴ \$581, 697				
Oil, miscellaneous liver gallons			¹⁵ 11, 900	¹⁵ 501, 960				
Glue do			364, 961	749, 380				
Miscellaneous		¹⁶ 307, 036		¹⁷ 161, 337		¹⁸ 195, 524	(¹⁹)	(¹⁹)
Total		4, 854, 966		13, 866, 231		740, 098	254, 421	\$505, 848
By fishermen:								
Alewives, smoked pounds	158, 000	8, 255	6, 000	470	1, 100	22		
Cod:								
Salted:								
Green ³ do	10, 000	375	66, 900	1, 947				
Dry do	2, 000	160						
Roe do					94	19		
Cusk, salted, green ³ pounds			600	12				
Hake, salted, green ³ pounds			300	5				
Halibut, salted, green ³ pounds			4, 900	398				
Mackerel, salted, split pounds			400	14				
Pollock, salted, green ³ pounds	50, 000	1, 250	2, 300	57				
Crab meat, packaged, fresh-cooked pounds	2, 730	956	200	91				
Lobster meat, packaged, fresh-cooked pounds			700	915				
Clams, hard, fresh-shucked gallons					250	437		
Clams, razor, fresh-shucked gallons			28, 280	11, 443				
Clams, soft:								
Fresh-shucked gallons	⁴ 71, 554	⁴ 63, 685	23, 601	31, 022				

¹ A small quantity of manufactured products which were produced in New Hampshire have been included with those of Maine.

² This item has been included under "Unclassified products."

³ This item is usually an intermediate product, and although included in the total, may be shown in the final stage of processing in this or another State.

⁴ Includes New Hampshire production.

⁵ Includes fresh fillets of rosefish; and frozen fillets of cusk, flounder, hake, whiting, and wolffish.

⁶ The production of this item has been included under "Miscellaneous."

⁷ Includes fresh steaks of cod; and frozen steaks of cod, haddock, halibut, pollock, salmon, swordfish, and wolffish.

⁸ Includes green salted cusk, and haddock; dry salted cusk, haddock, and hake; salted boneless cusk and pollock; brine salted mackerel, and split sea herring.

⁹ Includes dry salted cusk, and haddock; salted boneless cusk, haddock, and pollock; salted mackerel fillets and alewives.

¹⁰ Includes smoked butterfish, alewives, flounders, halibut, lake trout, salmon, shad, and carp; smoked fillets of haddock, and pollock; smoked boneless and medium scaled herring, and hard bloaters.

¹¹ Includes canned finnan haddie; fish cakes, flakes, and chowder; alewife roe, and crab meat.

¹² Includes canned alewives, tuna, mackerel, finnan haddie, salted cod, groundfish roe, fish flakes, haddock chowder, soft and hard clam chowder, and canned fish for rat-poison bait.

¹³ Includes clam, ground-fish, and miscellaneous fish meals.

¹⁴ Includes rosefish, ground-fish, and miscellaneous fish meals.

¹⁵ Includes halibut, sablefish, tuna, swordfish, shark, and mixed liver oils.

¹⁶ Includes alewives pickled in vinegar; smoked pollock fillets, and kippered herring; pearl essence, kelp products; herring dry scrap and pomace; and marine-shell buttons. There also is included in this item a production of smoked butterfish, carp, chub, cisco, salmon, spoonbill cat, and common eels, which was produced in Connecticut.

¹⁷ Includes fresh fillets of halibut, red snapper, and striped bass; frozen fillets of halibut and salmon; sea herring pickled in vinegar; and fresh-shucked hard clams, oysters, and bay scallops.

¹⁸ Includes fresh fillets of cod and haddock; smoked finnan haddie; canned hard clam chowder; fresh-cooked crab and lobster meat; and miscellaneous marine-shell products.

¹⁹ A small production of smoked butterfish, carp, chub, cisco, salmon, spoonbill cat and eels has been included under "Miscellaneous" for Maine.

NOTE.—The total value of manufactured products for the New England States was as follows: By manufacturing establishments, \$19,967,143; and by fishermen, \$1,216,024. Some of the above products may have been manufactured from products imported from another State or a foreign country, therefore, they cannot be correlated directly with the catch within the State. All of the persons engaged in the preparation of fishermen's manufactured products have also been included as fishermen, and 50 of the persons shown on transporting craft have also been included as fishermen. This should be considered when computing the total number of persons in the fishery industries exclusive of duplication.

Industries related to fisheries of the New England States, 1938—Continued

PRODUCTS MANUFACTURED—Continued

Item	Maine		Massachusetts		Rhode Island		Connecticut	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
By fishermen—Continued.								
Clams, soft—Continued.								
Steamed meats	272,745	\$21,238						
Pickled gallons	80	160						
Oysters, fresh-shucked gallons			1,000	\$2,200	1,624	\$3,003		
Scallops:								
Bay, fresh-shucked gallons			88,480	289,457	7,041	24,687		
Sea, fresh-shucked gallons	88,270	86,352	585,580	667,233	46	161		
Total		182,431		1,005,264		28,329		
Grand total		5,037,397		14,871,495		768,427	254,421	\$505,848

MAINE

Fisheries of Maine, 1938

OPERATING UNITS: BY GEAR

Item	Purse seines		Haul seines	Stop seines	Gill nets			Lines	
	Mack-erel	Other			Anchor	Drift	Stake	Hand	Trawl
Fishermen:	Number	Number	Number	Number	Number	Number	Number	Number	Number
On vessels	26	47		127	95	19		10	133
On boats and shore:									
Regular	20	16	47	75	28	41	1	164	308
Casual			39	7	49	5	34	838	64
Total	46	63	86	209	172	65	35	1,012	505
Vessels, motor	5	10		32	18	6		4	23
Net tonnage	40	77		293	167	55		24	296
Boats:									
Motor	5	4	33	22	17	30		150	238
Other	9	7	38	60	33	1	22	2	1
Accessory boats	8	9		90					66
Apparatus:									
Number	10	15	36	53	1,014	530	97	4,741	14,984
Length, yards	3,070	4,060	3,650	39,430	318,116	142,365	7,338		
Square yards									
Hooks, baits, or snoods								5,140	832,500

Item	Floating traps	Weirs	Fyke nets	Dip nets	Bag nets	Otter trawls	Box traps	Pots, crab
Fishermen:	Number	Number	Number	Number	Number	Number	Number	Number
On vessels						72		
On boats and shore:								
Regular	31	253		9	33	59		4
Casual	3	109	5	73	46	7	20	
Total	34	362	5	82	79	138	20	4
Vessels, motor						23		
Net tonnage						241		
Boats:								
Motor	14	31				46		4
Other	28	352	5	13	12		11	1
Apparatus:								
Number	17	247	27	65	107	60	14	200
Yards at mouth						1,419		

Fisheries of Maine, 1938—Continued

OPERATING UNITS: BY GEAR—Continued

Item	Pots—Contd.		Harpoons	Spears	Dredges		Rakes, other than for oysters	Hoes	By hand, other than for oysters	Total, exclusive of duplication
	Eel	Lobster			Oyster	Scallop				
Fishermen:										
On vessels.....	Number	Number	Number	Number	Number	Number	Number	Number	Number	Number
On boats and shore:		30	19		1	27				484
Regular.....	3	1,682	71			95	3	580	3	2,394
Casual.....	9	929	27	5		36		1,566		3,480
Total.....	12	2,641	117	5	1	158	3	2,146	3	6,358
Vessels, motor.....		27	3		1	5				122
Net tonnage.....		165	78		8	72				1,175
Boats:										
Motor.....		1,709	59			89				1,947
Other.....	9	761		5			3	735		1,930
Accessory boats.....			2							174
Apparatus:										
Number.....	173	170,547	62	5	1	140	3	2,146		
Yards at mouth.....					2	166				

CATCH: BY GEAR

Species	Purse seines				Haul seines		Stop seines	
	Mackerel		Other					
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Alewives.....	26,400	\$309	640,400	\$1,763				
Butterfish.....	100	4	1,400	66				
Herring, sea.....	152,700	1,501	647,500	5,325	227,200	\$1,930	10,183,600	\$109,686
Mackerel.....	348,800	8,859	284,000	7,013				
Pollock.....	532,200	3,422	876,400	6,001				
Shad.....	1,800	19						
Smelt.....					207,300	15,563		
Whiting.....					12,000	110		
Total.....	1,062,000	14,114	2,449,700	20,168	446,500	17,603	10,183,600	109,686

Species	Gill nets						Lines	
	Anchor		Drift		Stake		Hand	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Alewives.....	100	\$4	4,200	\$27				
Cod.....	2,231,100	53,354	100	1			413,000	\$6,829
Cusk.....	15,000	235					600	11
Flounders:								
Gray sole.....	700	12						
Yellowtail and dab.....	2,200	16						
Blackback.....	2,400	57						
Unclassified.....	300	4					1,600	85
Haddock.....	527,300	15,630					28,000	881
Hake.....	1,266,700	15,120	300	2			29,600	292
Halibut.....	200	22					3,500	562
Mackerel.....	200	7	191,000	7,410				
Pollock.....	4,006,200	34,438					153,900	1,503
Rosefish.....	3,400	27	200	1				
Shad.....	6,900	329	600	17	500	\$78		
Sharks.....	23,800	302	1,300	24				
Smelt.....	31,400	3,755			16,500	1,165	250,800	21,671
Sturgeon.....	300	14					9,800	295
Tuna.....								
Whiting.....	6,000	51	4,600	31				
Wolfish.....	2,109	22						
Total.....	8,126,300	123,399	202,300	7,513	17,000	1,243	890,200	32,131

Fisheries of Maine, 1938—Continued

CATCH: BY GEAR—Continued

Species	Lines—Continued		Floating traps		Weirs		Fyke nets	
	Trawl		Pounds	Value	Pounds	Value	Pounds	Value
Alewives			2,800	\$14	535,000	\$2,404		
Butterfish			16,100	896				
Cod	3,076,200	\$52,452						
Cunners	45,300	802						
Cusk	1,459,900	26,985						
Eels, common							300	\$23
Flounders:								
Gray sole	9,200	261						
Yellowtail and dabs	11,400	116						
Blackback	1,600	25						
Unclassified	5,000	110			3,000	40		
Haddock	1,368,500	42,717						
Hake	6,586,500	59,773						
Halibut	34,700	4,929						
Herring, sea			189,000	1,560	4,654,400	34,759		
Mackerel			735,100	17,679	421,800	4,467		
Pollock	339,000	3,389	2,000	11				
Rosefish	16,100	159						
Salmon			5,700	1,451	9,900	3,249		
Shad			1,800	65				
Sharks	600	9						
Smelt					22,100	2,298		
Suckers							30,500	762
Swordfish	100	12						
Tomcod							2,700	54
Tuna	200	5	100	3				
Wolfish	36,500	390						
Yellow perch							300	26
Squid			5,200	52				
Total	12,990,800	192,124	957,800	21,731	5,646,200	47,217	33,800	865

Species	Dip nets		Bag nets		Otter trawls		Box traps	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Alewives	1,931,100	\$7,636			100	\$3		
Butterfish					200	10		
Cod					500,200	12,159		
Cusk					80,400	407		
Eels, common							45,000	\$4,370
Flounders:								
Gray sole					753,300	22,562		
Lemon sole					13,200	265		
Yellowtail and dab					384,000	5,721		
Blackback					586,200	16,411		
Unclassified					41,400	1,175		
Haddock					584,700	17,746		
Hake					1,164,900	9,796		
Halibut					1,000	82		
Herring, sea					600	7		
Pollock					10,200	77		
Rosefish					549,900	6,089		
Salmon	100	20						
Scup					100	2		
Shad					300	4		
Smelt	29,800	2,500	134,900	\$11,350				
Sturgeon					200	14		
Tomcod			5,000	150				
Whiting					624,900	5,300		
Wolfish					9,000	70		
Shrimp					82,500	5,691		
Scallops, sea					400	63		
Sea urchins	97,500	455						
Total	2,058,500	10,611	139,900	11,500	5,337,700	103,654	45,000	4,370

Fisheries of Maine, 1938—Continued

CATCH: BY GEAR—Continued

Species	Pots						Harpoons	
	Crab		Eel		Lobster		Pounds	Value
	Pounds	Value	Pounds	Value	Pounds	Value		
Eels, common			37,000	\$2,135				
Sharks							200	\$4
Swordfish							59,400	10,314
Tuna							171,500	4,843
Crabs, hard	93,300	\$2,100			430,000	\$12,068		
Lobsters					7,659,200	1,310,013		
Total	93,300	2,100	37,000	2,135	8,089,200	1,322,081	231,100	15,161

Species	Spears		Dredges		Rakes		Hoes		By hand	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Eels, common	2,700	\$243								
Clams:										
Hard, public							55,000	\$4,000		
Soft, public							7,134,300	317,951		
Mussels, sea					7,200	\$175				
Periwinkles and cockles									1,800	\$150
Scallops, sea			792,500	\$86,414						
Bloodworms							116,400	34,884		
Sandworms							58,800	17,627		
Total	2,700	243	792,500	86,414	7,200	175	7,364,500	374,462	1,800	150

OPERATING UNITS: BY COUNTIES

Item	Cum-ber-land	Han-cock	Ken-nebec	Knox	Lin-coln.	Pe-nob-scot	Saga-dahoe	Wal-do	Wash-ington	York
	Number	Number	Number	Number	Number	Number	Number	Number	Number	Number
Fishermen:										
On vessels	238	39		101	67				24	15
On boats and shore:										
Regular	287	514		444	283		81	35	488	262
Casual	381	1,014	14	314	462	26	262	76	803	128
Total	906	1,567	14	859	812	26	343	111	1,315	405
Vessels, motor	43	13		40	17				6	3
Net tonnage	521	116		320	150				45	23
Boats:										
Motor	296	444		430	244		56	7	301	169
Other	238	398	5	204	238	18	73	56	588	112
Accessory boats	90	15		24	22				20	3
Apparatus:										
Purse seines:										
Mackerel	2	1		2	5					
Length, yards	550	250		370	1,900					
Other	2	2		1	6				1	3
Length, yards	600	400		140	1,830				270	820
Haul seines, common	30	1		1	4					
Length, yards	3,000	30		100	520					
Stop seines	13	11		4	12		1		12	
Length, yards	11,250	6,950		2,970	8,780		500		8,980	
Gill nets:										
Anchor	514	27			271				202	
Square yards	232,378	1,798			60,640				23,300	
Drift	303			16						211
Square yards	85,165			3,280						53,920
Stake					6	72		19		
Square yards					258	5,940		1,140		
Lines:										
Hand	69	2,135	54	65	1,017		1,263		136	2
Hooks	134	2,209	108	130	1,029		1,268		258	4
Trawl	5,304	3,487		1,690	1,415		690		2,198	200
Hooks	279,000	206,350		88,500	73,150		62,750		112,750	10,000
Floating traps	4	1			4		7		1	
Weirs		108		22	2			16	99	

Fisheries of Maine, 1938—Continued

OPERATING UNITS: BY COUNTIES—Continued

Item	Cumber-land	Han-cock	Ken-nebec	Knox	Lin-corn	Pe-nob-scot	Saga-dahoc	Wal-do	Wash-ington	York
	Number	Number	Number	Number	Number	Number	Number	Number	Number	Number
Apparatus—Continued.			27							
Fyke nets		5		15	18		2		24	1
Dip nets		2						50	55	
Bag nets		19		12	5				1	1
Otter trawl, fish	22	480		293	115				13	13
Yards at mouth	505									
Box traps		2		3					9	
Pots:										
Crab	200									
Eel					60			60	53	
Lobster	22, 175	38, 152		41, 315	22, 615		5, 240	810	26, 315	13, 925
Harpoons	41				9		12			
Spears				3	2					
Dredges:										
Oyster	1									
Yards at mouth	2									
Scallop	18	96		16					10	
Yards at mouth	26	98		32					10	
Rakes, other than for oysters	3									
Hoes	285	541		120	217		30	32	771	150

CATCH: BY COUNTIES

Species	Cumberland		Hancock		Kennebec		Knox	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Alewives	20, 600	\$186	556, 400	\$2, 669			413, 900	\$1, 006
Butterfish	4, 800	266						
Cod	3, 111, 800	70, 056	848, 700	12, 056			670, 600	11, 490
Cunners	28, 000	542	17, 300	260				
Cusk	1, 058, 900	20, 778	14, 800	168			54, 300	818
Eels, common			800	80	300	\$23	1, 500	131
Flounders:								
Gray sole	400, 700	12, 914	166, 200	4, 116			90, 200	2, 603
Lemon sole	7, 500	164	200	5				
Yellowtail and dab	175, 500	2, 158	33, 100	437			80, 300	1, 436
Blackback	38, 500	801	428, 600	12, 811			95, 900	1, 917
Unclassified	25, 900	840	10, 000	200			200	5
Haddock	1, 279, 300	40, 451	201, 900	6, 118			600, 900	17, 165
Hake	3, 664, 000	45, 507	2, 185, 500	13, 553			1, 509, 200	10, 858
Halibut	11, 100	1, 608	8, 200	1, 215			6, 500	923
Herring, sea	4, 449, 900	40, 418	2, 149, 300	18, 310			998, 400	9, 833
Mackerel	438, 500	12, 757	264, 500	3, 135			146, 100	1, 742
Pollock	3, 893, 500	33, 275	720, 300	5, 370			484, 700	3, 467
Rosefish	219, 500	2, 395	231, 100	2, 545			3, 600	45
Salmon	600	149	5, 200	2, 098				
Shad	10, 700	406					300	9
Sharks	24, 700	320					600	12
Smelt	182, 200	13, 477	166, 300	13, 670	6, 000	600	52, 000	4, 238
Sturgeon	500	28						
Suckers					30, 500	762		
Swordfish	59, 500	10, 326						
Tomcod					2, 700	54		
Tuna	91, 400	2, 387						
Whiting	400, 200	3, 179					300	3
Wolfish	27, 800	212	1, 500	20			12, 200	195
Yellow perch					300	26		
Crabs, hard	422, 800	11, 448					28, 000	620
Lobsters	1, 070, 800	181, 672	1, 591, 200	277, 088			1, 999, 500	333, 843
Shrimp	67, 600	4, 467						
Clams:								
Hard, public	55, 000	4, 000						
Soft, public	614, 400	32, 392	489, 900	29, 173			743, 400	23, 120
Mussels, sea	7, 200	175						
Scallops, sea	25, 400	3, 709	316, 500	36, 005			445, 200	45, 950
Squid	5, 200	52						
Bloodworms	58, 100	17, 407					2, 000	608
Sandworms	500	150					2, 000	608
Total	21, 952, 600	571, 072	10, 407, 500	441, 102	39, 800	1, 465	8, 441, 800	472, 645

Fisheries of Maine, 1938—Continued

CATCH: BY COUNTIES—Continued

Species	Lincoln		Penobscot		Sagadahoc	
	Pounds	Value	Pounds	Value	Pounds	Value
Alewives.....	1,052,200	\$3,454			90,000	\$500
Butterfish.....	100	4			11,500	640
Cod.....	555,200	14,928			201,100	3,730
Cusk.....	261,400	3,645			103,600	2,062
Eels, common.....	3,200	288				
Flounders:						
Gray sole.....	104,300	3,151			1,800	51
Lemon sole.....	5,500	96				
Yellowtail and dab.....	107,700	1,810			900	11
Blackback.....	19,200	414				
Unclassified.....	5,600	134				
Haddock.....	137,100	4,177			85,500	3,092
Hake.....	721,000	6,930			371,900	4,355
Halibut.....	1,000	137			900	141
Herring, sea.....	4,009,800	50,175			66,000	1,100
Mackerel.....	687,800	16,554			295,000	7,600
Pollock.....	602,400	4,840			10,300	85
Rosefish.....	114,800	1,285			600	6
Salmon.....	1,000	200			3,300	815
Scup.....	100	2				
Shad.....	900	97				
Sharks.....	600	7				
Smelt.....	48,500	3,555	14,500	\$1,015	51,000	5,900
Tuna.....	25,000	800			65,200	1,959
Whiting.....	247,000	2,310				
Wolfish.....	600	4			5,500	41
Crabs, hard.....	62,500	1,875			10,000	225
Lobsters.....	1,055,400	170,506			245,600	43,302
Shrimp.....	14,900	1,224				
Clams, soft, public.....	413,900	13,448			189,000	8,640
Scallops, sea.....	400	63				
Sea urchins.....	97,500	455				
Bloodworms.....	56,300	16,869				
Sandworms.....	56,300	16,869				
Total.....	10,469,200	340,306	14,500	1,015	1,808,700	84,255

Species	Waldo		Washington		York	
	Pounds	Value	Pounds	Value	Pounds	Value
Alewives.....			887,000	\$3,745	120,000	\$600
Butterfish.....					1,400	66
Cod.....			819,500	12,268	13,700	267
Cusk.....			8,500	78	4,400	89
Eels, common.....	30,000	\$1,500	49,200	4,749		
Flounders:						
Yellowtail and dab.....					100	1
Blackback.....			3,000	50	5,000	500
Unclassified.....			9,000	235		
Haddock.....			191,900	5,586	11,900	385
Hake.....			584,100	3,571	12,300	209
Halibut.....			11,600	1,557	100	14
Herring, sea.....	81,000	675	4,300,600	34,257		
Mackerel.....	25,400	212	8,200	104	115,400	3,331
Pollock.....			174,100	1,552	34,600	254
Salmon.....	5,400	1,428	200	30		
Smelt.....	71,000	4,980	100,500	10,767	800	100
Tomcod.....	5,000	150				
Lobsters.....	24,900	5,035	874,900	147,312	796,900	151,255
Clams, soft, public.....	54,000	7,000	3,128,700	104,888	1,501,000	99,290
Periwinkles and cockles.....			1,800	150		
Scallops, sea.....			5,400	750		
Total.....	296,700	20,980	11,158,200	331,649	2,617,600	256,361

NEW HAMPSHIRE.

*Fisheries of New Hampshire, 1938*¹

OPERATING UNITS: BY GEAR

Item	Lines		Bag nets	Pots, lobster	Hoes	Total, exclusive of duplication
	Hand	Trawl				
Fishermen, on boats and shore:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
Regular.....		1		35	95	120
Casual.....	125	1	20	49	10	187
Total.....	125	2	20	84	105	307
Boats:						
Motor.....		2		38		38
Other.....				35	36	68
Apparatus:						
Number.....	750	50	31	3,740	105	
Hooks.....	750	2,500				

CATCH: BY GEAR

Species	Lines				Bag nets		Pots		Hoes	
	Hand		Trawl							
	<i>Pounds</i>	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	<i>Value</i>
Cod.....			1,500	\$45						
Cusk.....			1,000	28						
Haddock.....			2,000	80						
Hake.....			3,000	60						
Smelt.....	40,000	\$3,600			8,000	\$750				
Lobsters.....							170,200	\$37,272		
Clams, soft, public.....									570,000	\$67,300
Total.....	40,000	3,600	7,500	213	8,000	750	170,200	37,272	570,000	67,300

¹ The commercial fisheries of New Hampshire are confined to Rockingham County.

MASSACHUSETTS

Fisheries of Massachusetts, 1938

OPERATING UNITS: BY GEAR

Item	Purse seines			Haul seines, common	Gill nets		Lines		Pound nets
	Mack-erel	Other			Anchor	Drift	Hand	Trawl	
	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
Fishermen:									
On vessels.....	642	39		211	227	35	675		
On boats and shore:									
Regular.....	53		13	64	72	162	572		211
Casual.....	1		7	5	8	258	8		3
Total.....	696	39	20	280	307	455	1,255		214
Vessels, motor.....	59	4		28	30	8	51		
Net tonnage.....	2,142	140		686	538	120	1,878		
Boats:									
Motor.....	9		2	28	30	156	185		51
Other.....	7		4	4		60	24		92
Accessory boats.....	57	1			1		316		
Apparatus:									
Number.....	68	4	9	1,768	3,369	536	29,064		128
Length, yards.....	32,248	2,110	409						
Square yards.....				578,055	1,159,753				
Hooks, baits, or snoods.....						1,101	1,824,640		

Fisheries of Massachusetts, 1938—Continued

OPERATING UNITS: BY GEAR—Continued

Item	Float- ing traps	Weirs	Fyke nets	Dip nets	Push nets	Otter trawl, fish	Pots	
							Crab	Eel
	Num- ber	Num- ber	Num- ber	Num- ber	Num- ber	Num- ber	Num- ber	Num- ber
Fishermen:								
On vessels.....				5		2,780		
On boats and shore:								
Regular.....	79	4	18	126	45	187	55	18
Casual.....			9	107	72	1	33	20
Total.....	79	4	27	238	117	2,968	88	38
Vessels:								
Steam:						14		
Net tonnage.....						2,589		
Motor:				1		278		
Net tonnage.....				8		12,659		
Total vessels.....				1		292		
Total net tonnage.....				8		15,248		
Boats:								
Motor.....	35			80		59	69	14
Other.....	21		9	52	71			14
Apparatus:								
Number.....	57	2	26	189	84	351	5,634	775
Yards at mouth.....						10,453		

Item	Pots—Continued		Harpoons	Spears	Dredges		
	Lobster	Peri- winkle and cockle			Clam	Oyster	Scallop
	Number	Number	Number	Number	Number	Number	Number
Fishermen:							
On vessels.....			601		10		265
On boats and shore:							
Regular.....	1,010	5	111	38	107	41	705
Casual.....	114	4	9		18	4	720
Total.....	1,124	9	721	38	135	45	1,690
Vessels, motor:			64		3		36
Net tonnage.....			1,889		40		828
Boats:							
Motor.....	914	1	35		63	22	518
Other.....	53	3	1				336
Accessory boats:			59				
Apparatus:							
Number.....	78,886	104	99	38	90	43	2,496
Yards at mouth.....					43	44	2,327

Item	Tongs		Rakes, other than for oysters	Forks	Hoes	By hand, other than for oysters	Total, ex- clusive of duplica- tion
	Oyster	Other					
	Number	Number	Number	Number	Number	Number	Number
Fishermen:							
On vessels.....							4,109
On boats and shore:							
Regular.....	30	49	455	120	714	2	3,842
Casual.....	13	81	675	459	885	89	3,051
Total.....	43	130	1,130	579	1,599	91	11,002
Vessels:							
Steam:							14
Net tonnage.....							2,589
Motor:							395
Net tonnage.....							16,205
Total vessels.....							409
Total net tonnage.....							18,794
Boats:							
Motor.....	2	25	67	1	16		1,920
Other.....	37	77	572	37	228	2	1,487
Accessory boats:							417
Apparatus, number.....	43	128	1,130	579	1,599		

Fisheries of Massachusetts, 1938—Continued

CATCH: BY GEAR

Species	Purse seines				Haul seines		Gill nets	
	Mackerel		Other				Anchor	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Alewives	72,000	\$520	78,500	\$571	248,000	\$1,270		
Butterfish	160,300	5,341					800	\$23
Cod	200	3					2,191,000	53,274
Cusk							4,000	45
Eels, common					220,900	2,827		
Flounders:								
Gray sole	900	15					100	7
Yellowtail and dab	37,600	544					29,300	379
Blackback	200	4			1,000	20	4,100	106
Fluke	100	6						
Unclassified							100	1
Haddock	700	12					698,000	16,909
Hake	100	1					1,198,400	14,128
Halibut	300	40					600	78
Herring, sea			100,000	700			1,700	11
Mackerel	28,858,500	854,270					227,800	6,917
Pollock	2,900	14					8,532,500	82,075
Rosefish							14,100	211
Scup	600	36						
Shad	900	22	3,700	48	3,000	56	20,300	1,119
Sharks	6,000	250					16,000	433
Skates							200	3
Sturgeon			200	47			800	57
Tuna	7,900	311	969,900	36,270				
Whiting							300	3
Wolfish							900	25
Total	29,149,100	861,389	1,150,300	37,638	470,900	4,173	12,941,000	175,802

Species	Gill nets—Con.		Lines				Pound nets	
	Drift		Hand		Trawl			
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Alewives	2,500	\$19					2,000	\$9
Bluefish	2,600	297	40,100	\$3,187	2,000	\$300	4,300	440
Bonito							5,000	344
Butterfish	7,400	323			200	5	348,500	14,889
Cod	100	2	174,300	4,173	14,589,300	334,849	21,900	424
Cusk					4,723,600	81,630		
Eels:								
Common							300	33
Conger					1,000	8	1,900	34
Flounders:								
Gray sole					2,300	141		
Lemon sole					47,000	3,862		
Yellowtail and dab			100	2	166,600	5,482	100	2
Blackback			600	24	189,000	6,981	16,100	161
Fluke							11,400	552
Unclassified							100	7
Grayfish							42,400	1,065
Haddock			20,900	567	15,574,100	450,950		
Hake	1,200	18	5,000	91	6,132,200	112,113		
Halibut					1,256,200	131,132		
Herring, sea	600	4					2,618,900	14,199
Mackerel	780,900	41,354	8,800	338	1,600	13	5,906,100	172,127
Menhaden							36,500	296
Pollock	100	2	199,200	1,863	1,057,100	15,940	883,700	7,925
Rosefish					3,100	40		
Salmon							100	11
Scup	100	3	28,800	856			131,500	1,461
Sea bass			8,300	616			7,700	747
Sea robin							400	8
Shad	300	8					25,500	884
Sharks	12,200	398	1,200	60	500	13	40,300	1,353
Skates					200	4	400	4
Skipper or "billfish"							800	116
Smelt			22,200	4,970				
Squeteagues or "sea trout," gray							180,500	1,863
Striped bass			33,800	2,993	600	126	18,200	2,115
Sturgeon							2,300	196
Swordfish	1,400	205			1,000	224		

Fisheries of Massachusetts, 1938—Continued

CATCH: BY GEAR—Continued

Species	Gill nets—Con.		Lines				Pound nets	
	Drift		Hand		Trawl		Pounds	Value
	Pounds	Value	Pounds	Value	Pounds	Value		
Tautog			15,000	\$732			21,400	\$755
Tilefish					366,600	\$14,430		
Tomcod							11,000	578
Tuna			3,500	140			306,500	11,227
Whiting	500	\$6			53,500	471	10,090,700	85,522
Wolfish			100	2	316,700	6,382		
Squid	100	3					993,900	10,182
Total	810,000	42,642	561,900	20,614	44,484,400	1,165,096	21,730,400	329,529

Species	Floating traps		Weirs		Fyke nets		Dip nets	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Alewives	56,000	\$615	123,800	\$1,091			320,200	\$1,599
Bluefish	100	11						
Butterfish	55,400	2,648						
Cod	72,300	1,338						
Eels, common					12,200	\$1,741		
Flounders:								
Blackback	16,100	160			1,800	72		
Fluke	200	9						
Hake	14,300	61						
Herring, sea	352,500	2,577					1,799,600	18,470
Mackerel	988,500	26,182			2,000	80		
Menhaden	2,600	26						
Pollock	266,200	2,280						
Salmon	400	81						
Scup	100	3						
Sea bass	400	44						
Shad	500	10						
Squeteagues or "sea trout,"								
gray	17,700	190						
Striped bass	15,200	1,552			13,800	1,800		
Sturgeon	1,600	186						
Tautog	100	4						
Tuna	21,900	773						
Whiting	1,856,200	13,114						
Scallops, bay							46,700	16,250
Squid	52,700	1,063						
Total	3,791,000	52,927	123,800	1,091	29,800	3,693	2,166,500	36,319

Species	Push nets		Otter trawls		Pots			
	Pounds	Value	Pounds	Value	Crab		Eel	
					Pounds	Value	Pounds	Value
Alewives			58,800	\$654				
Bluefish			22,000	1,457				
Bonito			1,100	55				
Butterfish			653,200	23,689				
Cod			94,266,100	1,666,527				
Croaker			1,729,100	31,927				
Cusk			1,310,200	20,896				
Drum, red			1,600	25				
Eels:								
Common							42,200	\$4,728
Conger			111,800	2,238				
Flounders:								
Gray sole			7,433,400	291,225				
Lemon sole			3,266,600	210,151				
Yellowtail and dab			17,213,400	367,376				
Blackback			8,516,900	298,083				
Fluke			1,942,900	141,395				
Unclassified			693,700	20,883				
Goosefish			400	7				
Haddock			139,130,800	2,907,327				
Hake			7,412,900	109,401				
Halibut			675,500	69,358				
Herring, sea			7,400	104				

Fisheries of Massachusetts, 1938—Continued

CATCH: BY GEAR—Continued

Species	Push nets		Otter trawls		Pots			
	Pounds	Value	Pounds	Value	Crab		Eel	
					Pounds	Value	Pounds	Value
Herring smelt.....			500	\$10				
King whiting or "kingfish".....			5, 200	107				
Mackerel.....			58, 700	1, 992				
Pollock.....			23, 279, 200	287, 560				
Rosefish.....			64, 418, 500	796, 897				
Scup.....			9, 655, 500	249, 901				
Sea bass.....			3, 586, 900	142, 650				
Sea robin.....			80, 100	1, 280				
Shad.....			300	24				
Sharks.....			46, 900	833				
Skates.....			65, 400	983				
Smelt.....			3, 700	131				
Spot.....			8, 200	163				
Squeteagues or "sea trout," gray.....			73, 500	3, 997				
Sturgeon.....			3, 600	311				
Swordfish.....			1, 900	317				
Tautog.....			1, 000	56				
Tilefish.....			400	15				
Tuna.....			18, 500	766				
Whiting.....			12, 202, 200	166, 496				
Wolfish.....			2, 246, 300	41, 402				
Yellow perch.....			18, 300	501				
Crabs, hard.....					1, 178, 100	\$27, 473		
Lobsters.....			10, 400	1, 818				
Shrimp.....			23, 200	1, 930				
Scallops:								
Bay.....	49, 100	\$14, 624						
Sea.....			9, 900	1, 049				
Squid.....			298, 100	4, 977				
Total.....	49, 100	14, 624	400, 474, 200	7, 868, 944	1, 178, 100	27, 473	42, 200	\$4, 723

Species	Pots—Continued				Harpoons		Spears	
	Lobster		Periwinkles and cockles					
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Eels, common.....							8, 800	\$839
Swordfish.....					1, 821, 800	\$306, 798		
Tuna.....					36, 700	1, 439		
Crabs, hard.....	114, 500	\$3, 269						
Lobsters.....	2, 304, 700	497, 592						
Periwinkles and cockles.....			9, 600	\$747				
Total.....	2, 419, 200	500, 861	9, 600	747	1, 858, 500	308, 237	8, 800	839

Species	Dredges		Tongs		Rakes	
	Pounds	Value	Pounds	Value	Pounds	Value
Clams:						
Hard, public.....	445, 400	\$45, 923	106, 500	\$12, 462	1, 573, 900	\$186, 670
Hard, private.....					4, 200	518
Soft, public.....	26, 000	2, 344				
Surf or skimmer.....					1, 300	76
Oysters, market:						
Public, spring.....			6, 100	1, 150	1, 800	280
Private, spring.....	78, 000	26, 051	141, 800	52, 264		
Scallops:						
Bay.....	885, 300	281, 388			114, 200	40, 967
Sea.....	5, 047, 300	534, 357				
Total.....	6, 482, 000	890, 063	254, 400	65, 876	1, 695, 400	228, 511

Fisheries of Massachusetts, 1938—Continued

CATCH: BY GEAR—Continued

Species	Forks		Hoes		By hand	
	Pounds	Value	Pounds	Value	Pounds	Value
Clams:						
Hard, public.....	400	\$40	168,300	\$17,561		
Razor.....			512,900	13,859		
Soft, public.....	285,800	26,191	4,437,900	408,323		
Soft, private.....			28,000	2,500		
Mussels, sea.....					15,700	\$441
Irish moss.....					177,200	15,714
Kelp.....					120,000	720
Bloodworms.....	21,900	5,249	4,400	1,040		
Sandworms.....	180,500	31,965	16,900	3,970		
Total.....	488,600	63,445	5,168,400	447,253	312,900	16,875

OPERATING UNITS: BY COUNTIES

Item	Barn-	Bristol	Dukes	Essex	Nan-	Nor-	Ply-	Suffolk
	stable				tucket	folk	mouth	
	Number	Number	Number	Number	Number	Number	Number	Number
Fishermen:								
On vessels.....	120	262	63	1,529	59		5	2,071
On boats and shore:								
Regular.....	1,063	288	302	1,001	117	84	445	542
Casual.....	629	501	375	500	32	297	424	293
Total.....	1,812	1,051	740	3,030	208	381	874	2,906
Vessels:								
Steam.....				1				13
Net tonnage.....				184				2,405
Motor.....	28	43	11	140	14		1	158
Net tonnage.....	332	739	201	5,160	184		21	9,568
Total vessels.....	28	43	11	141	14		1	171
Total net tonnage.....	332	739	201	5,344	184		21	11,973
Boats:								
Motor.....	515	228	150	470	81	61	266	149
Other.....	427	189	498	212	10	5	84	62
Accessory boats.....	5	11	5	278				118
Apparatus:								
Purse seines:								
Mackerel.....	3	1		44				20
Length, yards.....	1,200	540		21,358				9,150
Other.....				4				
Length, yards.....				2,110				
Hall seines, common.....			1	7			1	
Length, yards.....			4	380			25	
Gill nets:								
Anchor.....	300			1,464		4		
Square yards.....	51,200			526,695		160		
Drift.....	158	212		2,043	36		125	795
Square yards.....	61,280	62,541		718,354	10,200		50,860	256,518
Lines:								
Hand.....	95	125	31	102	26	150	5	2
Hooks.....	127	250	62	446	52	150	10	4
Trawl.....	3,340			12,876	70		200	12,578
Hooks.....	166,900			735,840	2,800		100,000	819,100
Pound nets.....	118	2	6					2
Floating traps.....	4	1		51				1
Weirs.....				1				1
Fyke nets.....	25		1					
Dip nets.....	126		10	38			9	6
Push nets.....			84					
Otter trawls, fish.....	47	40	14	75	19		6	150
Yards at mouth.....	1,220	1,088	408	2,412	499		175	4,651
Pots:								
Crab.....	37			1,039		376	355	3,827
Eel.....	174	94	220	160	100		27	
Lobster.....	9,829	4,813	7,677	27,127	875	3,682	14,430	10,453
Periwinkle and cockle.....	27			50	18		9	
Harpoons.....	12	16	17	43	1			10
Spears.....		9	29					

Fisheries of Massachusetts, 1938—Continued

OPERATING UNITS: BY COUNTIES—Continued

Item	Barnstable	Bristol	Dukes	Essex	Nantucket	Norfolk	Plymouth	Suffolk
	Number	Number	Number	Number	Number	Number	Number	Number
Apparatus—Continued.								
Dredges:								
Clam	25	50	5		8		2	
Yards at mouth	11	25	3		2		2	
Oyster	13						30	
Yards at mouth	14						30	
Scallop	774	586	844	10	212		66	4
Yards at mouth	661	639	746	35	177		55	14
Tongs:								
Oyster	32	11						
Other	6	56			2		64	
Rakes, other than for oysters	554	309	173		20		74	
Forks		21	4	114		98		342
Hoes	362	43	11	653	20	44	466	

CATCH BY COUNTIES

Species	Barnstable		Bristol		Dukes		Essex	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Alwayes	135,140	\$1,197			6,000	\$50	299,100	\$2,353
Bhicks	11,200	80	11,600	\$714	6,000	507	18,100	1,642
Bonito	2,500	216			2,500	128	1,100	55
Butterfish	262,400	12,883	201,500	7,388	34,400	1,973	458,100	16,264
Cod	1,823,300	11,113	591,200	21,351	22,000	303	12,928,900	295,239
Crowder			25,000	530			1,597,500	25,777
Cure	16,500	240	2,400	30			3,564,500	60,785
Drum, red							1,000	25
Eels:								
Common	19,200	2,457	13,300	1,549	21,800	2,585	221,800	3,062
Conger	1,100	22	1,400	19	800	12	94,700	1,992
Flounders:								
Gray sole	36,800	2,988	184,500	10,495	14,400	1,217	1,105,300	68,069
Lenon sole	130,100	9,358	465,500	28,480	1,900	166	378,300	21,515
Yellow tail and dab	1,868,500	46,607	3,545,000	69,440	1,600,000	29,712	2,082,900	44,147
Blackback	1,146,300	38,330	1,703,800	76,973	672,600	13,313	594,200	24,778
Blue	38,200	2,305	128,800	10,629	6,100	313	1,383,900	99,464
Unclassified	43,400	2,089	171,200	4,887	100	7	92,300	2,532
Goatfish							400	7
Grayfish	18,600	153			23,800	912		
Haddock	1,078,800	28,219	1,154,600	25,700	2,300	64	17,442,400	408,958
Hake	183,800	2,772	52,700	587	800	18	5,734,800	89,953
Halibut	45,400	5,611	2,800	303			699,800	71,220
Herring, sea	2,858,900	15,258	3,300	39	21,000	200	1,199,500	14,140
King whiting or "kingfish"			100	5			5,100	102
Mackerel	6,567,900	191,894	65,100	2,352	118,300	3,692	21,900,000	665,923
Menhaden	11,900	71	11,200	69	13,000	182		
Pollock	1,152,700	11,189	21,100	292	2,500	24	12,171,000	121,385
Rosellfish	7,400	89	1,076,500	10,821			28,230,900	333,381
Salmon	100	11					400	81
Scup or porgy	48,200	521	106,000	2,365	89,600	1,335	7,954,200	202,131
Sea bass	5,900	620	29,400	1,112	9,400	730	1,946,200	78,927
Sea robin	400	8					55,000	908
Shad	25,000	824	300	39	200	21	28,400	1,271
Sharks	2,800	101	38,400	1,282			73,900	1,651
Skates			700	8			15,600	309
Skipper or "billfish"	800	116						
Smelt							1,200	245
Spot							5,200	163
Squeteagues or "sea trout," gray	194,800	1,968	2,800	116	1,900	29	61,500	3,145
Striped bass	20,100	2,500	600	72	38,900	3,912	14,000	1,421
Sturgeon	2,400	207	200	28	100	16	3,500	354
Swordfish	25,100	3,923	147,800	23,916	112,400	18,049	1,326,100	225,859
Tautog	18,100	588	13,000	580	4,800	282	300	5
Tilefish							366,800	11,438
Tomcod	11,000	378						
Tuna	330,000	12,066	100	5	7,600	352	1,018,800	38,245
Whiting	11,095,400	95,561	101,600	1,305			3,339,000	37,927
Wolfish	48,100	1,194	4,000	57			181,600	3,226
Yellow perch							500	8
Crabs, hard	25,700	989	4,900	190			252,400	5,860
Lobsters	108,100	33,189	70,800	16,142	140,900	31,501	821,600	173,685
Shrimp							400	27

Fisheries of Massachusetts, 1938—Continued

CATCH: BY COUNTIES—Continued

Species	Barnstable		Bristol		Dukes		Essex	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Clams:								
Hard, public	914, 800	\$108, 634	1, 004, 500	\$118,842	55, 900	\$5, 465		
Hard, private	4, 200	518						
Razor	439, 300	11, 004						
Soft, public	375, 500	37, 110	19, 700	2, 448	4, 700	800	3, 307, 000	\$301, 444
Surf or skimmer					1, 300	76		
Mussels, sea	1, 300	90	4, 000	193			700	10
Oysters, market:								
Public, spring	1, 800	280	6, 100	1, 150				
Private, spring	193, 500	69, 315						
Periwinkles and cockles	300	50					1, 500	240
Scallops:								
Bay	700, 000	219, 867	102, 300	39, 020	238, 300	75, 048		
Sea	161, 000	20, 677	3, 204, 400	336, 904	821, 800	84, 811	682, 100	75, 163
Squid	957, 500	9, 713	44, 500	634	21, 700	235	301, 400	5, 123
Irish moss							5, 500	300
Kelp							120, 000	720
Bloodworms							5, 200	1, 240
Sandworms			41, 800	6, 608			21, 400	3, 811
Total	33, 238, 500	1,051,123	14,784,500	825, 579	4, 143, 700	278, 270	134,152,000	3,518,645

Species	Nantucket		Norfolk		Plymouth		Suffolk	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Alewives					480, 700	\$2, 698	6, 900	\$50
Bluefish	23, 000	\$1, 956					700	73
Butterfish	22, 400	642			1, 200	118	191, 800	7, 650
Cod	461, 900	9, 016			177, 300	4, 152	94, 910, 300	1, 716, 206
Croaker							306, 100	5, 630
Cusk					700	24	2, 453, 300	41, 502
Eels:								
Common	4, 800	505			500	50		
Conger	300	4					16, 400	231
Flounders:								
Gray sole	8, 700	665			124, 600	5, 039	5, 572, 400	203, 005
Lemon sole	102, 900	6, 899			3, 400	159	2, 241, 500	147, 436
Yellowtail and dab	2, 698, 600	51, 916			355, 200	7, 030	5, 296, 800	124, 943
Blackback	2, 463, 100	71, 790			224, 600	5, 571	1, 948, 300	74, 826
Fluke	122, 400	10, 649					275, 200	18, 602
Unclassified	20, 400	1, 098			14, 400	847	272, 100	9, 431
Haddock	286, 200	6, 043			162, 600	4, 796	135, 297, 600	2, 901, 955
Hake	15, 800	164			142, 300	1, 996	8, 634, 200	140, 321
Halibut	600	77					1, 214, 000	123, 397
Herring, sea					493, 400	4, 111	301, 600	2, 317
Herring, smelt							500	10
Mackerel	8, 000	240	7, 000	\$210	68, 600	3, 249	8, 098, 000	235, 713
Pollock	6, 100	98			26, 800	399	20, 840, 600	264, 272
Rosefish					194, 700	2, 544	34, 926, 500	450, 313
Scup or porgy	1, 400	19			700	14	1, 616, 500	45, 875
Sea bass					1500	28	11, 7, 900	64, 640
Sea robin							25, 100	372
Shad							600	16
Sharks							8, 000	306
Skates							49, 900	677
Smelt			21, 000	4, 725			3, 700	131
Squeteagues or "sea trout,"								
gray							10, 700	792
Striped bass	7, 000	531			1, 000	150		
Sturgeon	100	14					2, 200	178
Swordfish	37, 500	7, 500					177, 200	28, 297
Tautog	300	11			1, 000	81		
Tilefish							200	7
Tuna					500	13	7, 900	245
Whiting	21, 800	218			1, 609, 400	15, 535	8, 036, 200	115, 066
Wolffish					3, 300	47	2, 327, 000	43, 287
Yellow perch							17, 800	493
Crabs, hard			107, 500	2, 699	67, 300	2, 731	834, 800	18, 263
Lobsters	16, 300	4, 912	192, 500	41, 949	600, 500	121, 713	364, 400	76, 319
Shrimp							22, 800	1, 903
Clams:								
Hard, public	178, 300	16, 421			141, 000	13, 294		
Razor					73, 600	2, 855		
Soft, public	10, 700	2, 225	33, 900	5, 278	972, 400	85, 003	25, 800	2, 550
Soft, private					28, 000	2, 500		

Fisheries of Massachusetts, 1938—Continued

CATCH: BY COUNTIES—Continued

Species	Nantucket		Norfolk		Plymouth		Suffolk	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Mussels, sea							9,700	\$148
Oysters, market, private, spring					26,300	\$9,000		
Periwinkles and cockles	7,000	\$290			800	167		
Scallops:								
Bay	43,300	14,430			11,400	4,864		
Sea	1,300	164					186,600	17,687
Squid					1,300	63	18,400	457
Irish moss			1,800	\$160	169,900	15,254		
Bloodworms					4,200	1,000	16,900	4,049
Sandworms			100	12	14,300	3,450	120,300	22,054
Total	6,570,200	208,497	363,800	55,033	6,198,400	320,545	338,399,400	6,911,695

RHODE ISLAND

Fisheries of Rhode Island, 1938

OPERATING UNITS: BY GEAR

Item	Purse seines, mack- erel	Haul seines	Gill nets, drift	Lines			Pound nets	Float- ing traps
				Hand	Trawl	Troll		
Fishermen:	Number	Number	Number	Number	Number	Number	Number	Number
On vessels			7	43	2	2		87
On boats and shore:								
Regular	2	18		70	14	26	13	46
Casual		47		20	2	3	7	
Total	2	65	7	133	18	31	20	133
Vessels:								
Steam								2
Net tonnage								20
Motor			2	22	1	1		5
Net tonnage			18	161	10	8		69
Total vessels			2	22	1	1		7
Total net tonnage			18	161	10	8		89
Boats:								
Motor	1			42	8	20	1	
Other		20		25	1		14	27
Accessory boats	1		2	15	1			17
Apparatus:								
Number	1	16	16	230	43	64	21	37
Length, yards	120	2,407						
Square yards			17,640					
Hooks, baits, or snoods				279	19,053	64		

Item	Fyke nets	Dip nets	Otter trawls	Box traps	Pots			Har- poon	Spears	Dredges, clam
					Eel	Lob- ster	Peri- winkle and cockle			
Fishermen:	Number	Number	Number	Number	Number	Number	Number	Number	Number	Number
On vessels			44			35		62		16
On boats and shore:										
Regular	2	8	18	2	8	173	14	37	20	12
Casual	1	21	2	3	19	77	8	6	4	
Total	3	29	64	5	27	285	22	105	24	27
Vessels, motor			23			16		28		5
Net tonnage			184			114		214		52
Boats:										
Motor	2		12		15	159	17	21	1	6
Other	1	27		4	11	8	1		23	
Accessory boats								37		
Apparatus:										
Number	38	29	35	2	1,087	28,995	1,033	49	24	12
Yards at mouth			828							12

Fisheries of Rhode Island, 1938—Continued

OPERATING UNITS: BY GEAR—Continued

Item	Dredges—Con.			Tongs		Rakes		Forks	Hoes	By hand, other than for oyster	Total, exclusive of duplication
	Mus-sel	Oys-ter	Scal-lop	Oys-ter	Other	Oys-ter	Other				
	Num-ber	Num-ber	Num-ber	Num-ber	Num-ber	Num-ber	Num-ber	Num-ber	Num-ber	Num-ber	Number
Fishermen:											
On vessels.....		76	3								252
On boats and shore:											
Regular.....	4		103	32	121	25	42	16	9	1	416
Casual.....			115	25	372	11	59	23	42	11	714
Total.....	4	76	221	57	493	36	101	39	51	12	1,382
Vessels:											
Steam.....		1									3
Net tonnage.....		25									45
Motor.....		15	1								63
Net tonnage.....		331	11								731
Total vessels.....		16	1								66
Total net tonnage.....		356	11								776
Boats:											
Motor.....	3		125	9	63	1	13		2		367
Other.....			2	47	425	32	70	13	14	4	640
Accessory boats.....											59
Apparatus:											
Number.....	4	32	634	57	493	36	101	39	51		
Yards at mouth.....	4	48	512								

CATCH: BY GEAR

Species	Purse seines		Haul seines		Gill nets, drift		Lines, hand	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Alewives.....				103,600		\$530		
Bluefish.....				4,100		330		
Cod.....					3,700	\$270		
Eels, common.....				8,500		994	612,000	\$18,608
Flounders, blackback.....				400		20	9,400	932
Herring, sea.....				70,000		350	200	10
Mackerel.....	600	\$9						
Pollock.....							25,000	750
Scup or porgy.....							58,200	708
Sea bass.....							1,000	22
Squeteagues or "sea trout," gray.....				6,900		572	1,800	90
Striped bass.....				49,700		4,480		
Tautog.....				1,300		55		
White perch.....				2,000		140	68,200	2,576
Squid.....				1,000		20		
Total.....	600	9	247,500	7,491	28,700	1,020	750,800	22,946

Species	Lines—Continued				Pound nets		Floating traps	
	Trawl		Troll		Pounds	Value	Pounds	Value
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Alewives.....					44,300	\$277	13,700	\$137
Anchovies.....							61,000	670
Bluefish.....			6,400	\$477	800	52	24,400	2,561
Bonito.....							22,200	2,456
Butterfish.....					102,100	3,621	344,100	13,820
Cod.....	93,800	\$2,571					13,300	301
Crevalle.....							900	14
Cunners.....							9,400	94
Eels:								
Common.....					8,800	642		
Conger.....							10,200	243
Flounders:								
Blackback.....					8,200	250	8,500	263
Fluke.....	1,000	100			4,300	373	42,600	3,216

Fisheries of Rhode Island, 1938—Continued

CATCH: BY GEAR—Continued

Species	Lines—Continued				Pound nets		Floating traps	
	Trawl		Troll		Pounds	Value	Pounds	Value
Frigate mackerel.....							2,000	\$20
Grayfish.....	3,700	\$45					100	1
Hake.....							2,200	40
Herring, sea.....					15,000	\$75	26,200	264
Hickory shad.....							6,700	148
King whiting or "kingfish".....							2,000	114
Mackerel.....			81,300	\$2,424	30,600	2,018	345,700	9,455
Menhaden.....					78,500	687	52,600	510
Pollock.....							41,900	790
Scup or porgy.....					9,400	222	1,135,500	20,338
Sea bass.....							65,300	4,857
Sea robin.....					10,000	50	181,900	1,819
Shad.....					200	20	2,500	184
Sharks.....							2,500	21
Skates.....	200	1					18,600	128
Skipper or "billfish".....							800	60
Squeteagues or "sea trout," gray.....					10,900	592	43,300	2,366
Striped bass.....			16,900	1,449	1,800	159	141,900	13,779
Sturgeon.....							1,900	240
Swordfish.....							1,300	186
Tautog.....					36,100	1,430	31,400	926
Tuna.....			2,800	63			17,600	1,959
Whiting.....					10,400	89	117,600	1,176
Squid.....					59,400	1,050	727,800	11,193
Turtles:								
Green.....							3,000	75
Loggerhead.....							100	1
Total.....	98,700	2,717	107,400	4,413	430,800	11,607	3,522,500	94,445

Species	Fyke nets		Dip nets		Otter trawls		Box traps	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Alewives.....							19,000	\$250
Butterfish.....					100	\$4		
Cod.....					16,600	405		
Cunners.....					34,500	345		
Fels, common.....							600	48
Flounders:								
Yellowtail and dab.....					358,200	5,885		
Blackback.....	2,000	\$80			400,400	13,405		
Fluke.....					125,400	9,433		
Hake.....					1,800	29		
Sea robin.....					96,700	817		
Shad.....							6,900	777
Sharks.....					800	18		
Skates.....					202,500	1,585		
Tautog.....	4,000	160			1,100	36	200	4
Whiting.....					63,200	1,000		
Crabs:								
Hard.....			600	\$75				
Soft and peelers.....			300	100				
Lobsters.....					300	75		
Scallops:								
Bay.....			5,500	1,562				
Sea.....					400	118		
Squid.....					5,200	104		
Total.....	6,000	240	6,400	1,737	1,307,200	33,259	26,700	1,079

Fisheries of Rhode Island, 1938—Continued

CATCH: BY GEAR—Continued

Species	Pots						Harpoons	
	Eel		Lobster		Periwinkle and cockle			
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Eels, common.....	52, 700	\$4, 121					166, 600	\$24, 911
Swordfish.....							500	32
Tuna.....								
Crabs, hard.....			228, 400	\$6, 902				
Lobsters.....			709, 400	159, 801				
Periwinkles and cockles.....					83, 100	\$4, 363		
Total.....	52, 700	4, 121	937, 800	166, 703	83, 100	4, 363	167, 100	24, 943

Species	Spears		Dredges		Tongs		Rakes	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Eels, common.....	8, 300	\$838						
Clams:								
Hard, public.....			122, 500	\$10, 955	1, 545, 100	\$129, 822	387, 300	\$31, 382
Hard, private.....			56, 300	5, 150	2, 000	225	4, 800	375
Limpets.....			900	70				
Mussels, sea.....			1, 200	180				
Oysters, market:								
Public, spring.....					6, 700	969	35, 900	6, 979
Public, fall.....					12, 600	1, 737	27, 700	5, 800
Private, spring.....			1, 549, 400	193, 581	1, 700	375		
Private, fall.....			1, 948, 600	247, 709	1, 800	375		
Scallops, bay.....			58, 800	16, 820				
Total.....	8, 300	838	3, 737, 700	474, 465	1, 569, 900	133, 503	455, 700	44, 536

Species	Forks		Hoes		By hand	
	Pounds	Value	Pounds	Value	Pounds	Value
Clams:						
Hard, public.....		900	\$72	45, 300	\$4, 552	
Soft, public.....		169, 900	11, 996	58, 000	3, 942	9, 200
Total.....		170, 800	12, 068	103, 300	8, 494	9, 200
						577

OPERATING UNITS: BY COUNTIES

Item	Bristol	Kent	Newport	Provi- dence	Washing- ton
	Number	Number	Number	Number	Number
Fishermen:					
On vessels.....	41	6	159	25	21
On boats and shore:					
Regular.....	36	103	147	7	123
Casual.....	67	296	145	62	144
Total.....	144	405	451	94	288
Vessels:					
Steam.....	1		2		
Net tonnage.....	25		20		
Motor.....	8	2	40	5	8
Net tonnage.....	144	23	340	146	78
Total vessels.....	9	2	42	5	8
Total net tonnage.....	169	23	360	146	78
Boats:					
Motor.....	28	91	135	13	100
Other.....	62	339	71	49	119
Accessory boats.....			51	1	7
Apparatus:					
Purse seines, mackerel.....			1		
Length, yards.....			120		
Haul seines.....	3		1	3	9
Length, yards.....	135		260	192	1, 820
Gill nets, drift.....			16		
Square yards.....			17, 640		

Fisheries of Rhode Island, 1938—Continued

OPERATING UNITS: BY COUNTIES—Continued

Item	Bristol	Kent	Newport	Providence	Washington
Apparatus—Continued					
Lines:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
Hand.....	4	24	165	2	35
Hooks and baits.....	8	24	185	2	60
Trawl.....	2		29		12
Hooks.....	2,000		11,785		5,268
Troll.....			37		27
Hooks.....			37		27
Pound nets.....		2	15		4
Floating traps.....			22		15
Fyke nets.....		18	20		
Dip nets.....		5			24
Otter trawl.....			21		14
Yards at mouth.....			517		311
Box traps.....	2				
Pots:					
Eel.....	50	265	182	145	445
Lobster.....	2,000	1,048	16,195	150	9,562
Periwinkle and cockle.....	396	50	327		260
Harpoons.....	1		39	1	8
Spears.....	1	20		3	
Dredges:					
Clam.....	3		9		
Yards at mouth.....	3		9		
Mussel.....	3	1			
Yards at mouth.....	3	1			
Oyster.....	16	4		8	4
Yards at mouth.....	24	6		12	6
Scallop.....	34	255	152	14	179
Yards at mouth.....	27	211	119	11	144
Tongs:					
Oyster.....		40	4	9	4
Other.....	60	290	34	52	57
Rakes:					
Oyster.....		18	1		17
Other.....		61	27		13
Forks.....	3	27	1	3	5
Hoes.....	12		8	8	23

CATCH: BY COUNTIES

Species	Bristol		Kent		Newport		Providence		Washington	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Alewives.....	19,000	\$250			47,400	\$308			114,200	\$636
Anchovies.....					61,000	670				
Bluefish.....					28,400	2,936			11,000	754
Bonito.....					20,000	2,276			2,200	180
Butterfish.....			2,500	\$125	350,900	14,223			92,900	3,097
Cod.....			1,800	38	664,500	19,983			69,400	1,864
Crevalle.....					700	10			200	4
Cunners.....					33,500	335			10,400	104
Eels:										
Common.....	4,000	374	23,200	2,320	19,600	1,193	14,700	\$1,692	26,800	1,996
Conger.....					7,600	192			2,600	51
Flounders:										
Yellowtail and dab.....					284,600	5,141			73,600	744
Blackback.....	600	30	500	20	219,900	6,364			198,700	7,614
Fluke.....					94,000	7,011			79,300	6,111
Frigate mackerel.....					2,000	20				
Grayfish.....	3,700	45							100	1
Hake.....					2,200	40			1,800	29
Herring, sea.....					26,200	189			85,000	500
Hickory shad.....					5,300	141			1,400	7
King whiting or or "kingfish".....					1,800	106			200	8
Mackerel.....					422,800	13,056			60,400	1,600
Menhaden.....					3,400	34			127,700	1,163
Pollock.....					96,300	1,427			3,800	71
Scup or porgy.....	200	6			1,114,700	20,231			31,000	345
Sea bass.....					66,900	4,934			200	13
Sea robin.....					220,000	2,150			68,600	536
Shad.....	6,900	777			2,100	146			600	58
Sharks.....					1,200	22			2,100	17
Skates.....	200	1			181,100	1,463			40,000	250

Fisheries of Rhode Island, 1938—Continued

CATCH: BY COUNTIES—Continued

Species	Bristol		Kent		Newport		Providence		Washington	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Skipper or "billfish"					600	\$60				
Squeteagues or "sea trout," gray	2,700	\$200	300	\$21	39,000	1,998			19,100	\$1,331
Striped bass					124,400	12,342			85,900	7,525
Sturgeon					1,400	200			500	40
Swordfish	1,600	300			144,300	21,046	2,900	\$396	19,100	3,355
Tautog	1,000	44	3,000	150	85,500	3,132	500	15	52,300	1,846
Tuna					20,900	2,054				
White perch					2,000	140				
Whiting					186,200	2,215			5,000	50
Crabs:										
Hard	192,000	5,760	4,300	178	22,900	688			9,800	351
Soft and peelers									300	100
Lobsters	20,100	5,014	30,800	6,658	427,400	97,352	1,700	309	229,700	50,543
Clams:										
Hard, public	198,900	18,584	1,417,400	110,737	193,200	17,636	74,800	9,320	216,800	20,506
Hard, private	57,100	5,225	4,800	375			1,200	150		
Soft, public	17,800	1,274	104,000	7,650	16,700	1,254	42,000	2,650	56,600	3,687
Limpets	900	70								
Mussels, sea			1,200	180						
Oysters, market:										
Public, spring			9,800	1,400	6,900	998			25,900	5,550
Public, fall			6,000	862	7,100	999	1,200	106	26,000	5,570
Private, spring	900,500	103,080	49,000	7,000			500,400	66,920	101,200	16,956
Private, fall	967,500	112,585					881,600	118,542	101,300	16,957
Periwinkles and cockles	31,900	1,770	900	25	28,300	1,468			22,000	1,100
Scallops:										
Bay	1,800	528	18,300	5,238	15,600	4,446	1,500	440	27,100	7,730
Sea					200	54			200	64
Squid	1,000	20			380,400	6,471			412,000	5,876
Turtles:										
Green					3,000	75				
Loggerhead									100	1
Total	2,429,400	255,937	1,677,800	142,977	5,684,100	279,229	1,522,500	200,540	2,515,100	176,891

CONNECTICUT

Fisheries of Connecticut, 1938

OPERATING UNITS: BY GEAR

Item	Purse seines, mackerel	Haul seines	Gill nets				Lines	
			Anchor	Drift	Run-around	Stake	Hand	Trot with hooks
Fishermen:	Number	Number	Number	Number	Number	Number	Number	Number
On vessels							11	
On boats and shore:								
Regular	3	2		14		2	8	40
Casual		66	5	98			14	5
Total	3	68	5	112	2	22	63	5
Vessels, motor								
Net tonnage							4	38
Boats:								
Motor	1	3	1	22	1	7	29	2
Other		18	1	20		3	3	2
Accessory boats	1							
Apparatus:								
Number	1	23	2	42	1	17	63	14
Length, yards	150	3,079						
Square yards			375	102,843	330	2,699		
Hooks, baits, or snoods							80	1,600

Fisheries of Connecticut, 1938—Continued

OPERATING UNITS: BY GEAR—Continued

Item	Pound nets	Fyke nets	Dip nets	Otter trawls	Pots			Har- poons	Spears
					Eel	Fish	Lobster		
Fishermen:									
On vessels				77			8	28	
On boats and shore:									
Regular	9	3	7	51	14	2	158	7	
Casual	9	28	131	9	66	1	191		2
Total	18	31	138	137	80	3	357	35	2
Vessels, motor				33			4	10	
Net tonnage				374			26	127	
Boats:									
Motor	8	6		30	16	2	168	3	
Other	1	12	130		35		38		2
Accessory boats								10	
Apparatus:									
Number	15	49	131	63	1,894	24	20,342	13	2
Yards at mouth				1,463					

Item	Dredges, oyster	Tongs		Rakes		Forks	Hoes	By hand, other than for oysters	Total, exclu- sive of dupli- cation
		Oyster	Other	Oyster	Other				
Fishermen:									
On vessels	194								278
On boats and shore:									
Regular	8	34	27	3	16		7		265
Casual		10	66		63	3	18	30	656
Total	202	44	93	3	79	3	25	20	1,199
Vessels:									
Steam	3								3
Net tonnage	581								581
Motor	30								65
Net tonnage	809								1,202
Total vessels	33								68
Total net tonnage	1,390								1,783
Boats:									
Motor	4	4	3			1			238
Other		37	90	3	79	2	4		365
Accessory boats									11
Apparatus:									
Number	74	44	93	3	79	3	25		
Yards at mouth	104								

CATCH: BY GEAR

Species	Purse seines		Haul seines		Gill nets					
					Anchor		Drift		Runaround	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Alewives			4,000	\$40						
Carp	2,000	\$40	28,200	1,692			2,500	\$150		
Mackerel									1,000	\$5
Menhaden										
Minnows			600	79						
Shad			161,800	6,567	1,200	\$114	247,700	18,239		
Striped bass							500	55		
Suckers			16,600	328						
Total	2,000	40	211,200	8,706	1,200	114	250,700	18,444	1,000	5

Fisheries of Connecticut, 1938—Continued

CATCH: BY GEAR—Continued

Species	Gill nets—Continued		Lines				Pound nets		Fyke nets	
	Stake		Hand		Trot with hooks		Pounds	Value	Pounds	Value
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Alewives.....							10,300	\$103	14,000	\$140
Bluefish.....			10,100	\$1,511						
Butterfish.....							33,100	769	100	2
Carp.....									4,100	222
Cod.....			11,400	342						
Eels:										
Common.....			3,200	291	6,800	\$408	400	24	3,800	228
Conger.....							100	6		
Flounders:										
Blackback.....			400	16			1,900	76	3,100	124
Fluke.....							500	25		
Hickory shad.....							400	4		
Kingfish or "king mackerel".....									100	2
Lamprey.....									1,900	56
Mackerel.....			47,900	1,171						
Menhaden.....	30,200	\$151					126,000	231	500	3
Pollock.....			45,900	676						
Scup or porgy.....			3,800	76			400	8		
Sea bass.....			10,200	970			300	30		
Shad.....	7,300	376					6,700	347		
Skates.....							1,800	22	200	2
Squeteagues or "sea trout".....							6,200	261		
Striped bass.....			200	28			8,300	860		
Sturgeon.....									200	69
Suckers.....									77,000	1,503
Tautog.....			11,300	280			6,100	144	200	4
Squid.....							6,700	134		
Total.....	37,500	527	144,400	5,361	6,800	408	209,200	3,047	105,200	2,355

Species	Dip nets		Otter trawls		Pots					
	Pounds	Value	Pounds	Value	Eel		Fish		Lobster	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Butterfish.....			157,100	\$3,210						
Carp.....					500	\$30				
Cod.....			100,400	3,012						
Cunners.....			1,000	10						
Eels:										
Common.....					41,000	2,463				
Conger.....			1,000	10						
Flounders:										
Yellowtail and dab.....			1,757,700	23,722						
Blackback.....			2,521,800	99,669						
Fluke.....			282,100	20,185						
Hake.....			8,000	140						
Scup or porgy.....			116,800	2,351						
Sea bass.....			46,200	4,620						
Sea robin.....			4,000	80						
Shad.....	2,100	\$145								
Skates.....			64,000	648						
Tautog.....			500	13			600	\$16		
Whiting.....			52,700	786						
Crabs, hard.....	2,800	165								
Lobsters.....									553,600	\$136,047
Scallops, bay.....	66,800	13,624								
Squid.....			3,000	30						
Total.....	71,700	13,934	5,116,300	158,486	41,500	2,493	600	16	553,600	136,047

Fisheries of Connecticut, 1938—Continued

CATCH: BY GEAR—Continued

Species	Harpoons		Spears		Dredges		Tongs	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Eels, common.....			500	\$30				
Swordfish.....	34,000	\$7,133					97,200	\$20,047
Clams, hard, public.....								
Oysters, market:								
Public, spring.....							14,700	2,662
Public, fall.....					1,500	\$350	27,700	4,453
Private, spring.....					1,980,100	430,336	3,600	702
Private, fall.....					2,792,700	577,293	4,500	960
Total.....	34,000	7,133	500	30	4,774,300	1,007,979	147,700	28,824

Species	Rakes		Forks		Hoes		By hand	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Clams:								
Hard, public.....	93,900	\$19,011	3,400	\$656			16,000	\$3,860
Soft, public.....					15,500	\$2,636		
Oysters, market:								
Private, spring.....	200	62						
Private, fall.....	200	62						
Total.....	94,300	19,135	3,400	656	15,500	2,636	16,000	3,860

OPERATING UNITS: BY COUNTIES

Item	Fairfield	Hartford	Middlesex	New Haven	New London
	Number	Number	Number	Number	Number
Fishermen:					
On vessels.....	74		4	134	66
On boats and shore:					
Regular.....	62		52	55	96
Casual.....	112	69	151	48	276
Total.....	248	69	207	237	438
Vessels:					
Steam.....	1			2	
Net tonnage.....	51			530	
Motor.....	17		2	20	26
Net tonnage.....	274		22	589	317
Total vessels.....	18		2	22	26
Total net tonnage.....	325		22	1,119	317
Boats:					
Motor.....	36	1	51	36	114
Other.....	96	28	47	39	155
Accessory boats.....			1	1	9
Apparatus:					
Purse seines, mackerel.....					1
Length, yards.....					150
Haul seines.....		12	7	2	2
Length, yards.....		1,859	947	40	233
Gill nets:					
Anchor.....			1		1
Square yards.....			111		264
Drift.....	1	2	31		8
Square yards.....	2,200	4,440	82,877		13,326
Runaround.....	1				
Square yards.....	330				
Stake.....		7	7	1	2
Square yards.....		777	1,600	100	222
Lines:					
Hand.....	6		13	10	34
Hooks.....	6		17	15	42
Trot with hooks.....	2				12
Hooks.....	400			1,200	
Pound nets.....			1	3	11
Fyke nets.....		28	6	1	14
Dip nets.....	3	7			121
Otter trawls.....	6		5	5	47
Yards at mouth.....	124		98	112	1,129

Fisheries of Connecticut, 1938—Continued

OPERATING UNITS: BY COUNTIES—Continued

Item	Fairfield	Hartford	Middlesex	New Haven	New London
Apparatus—Continued.					
Pots:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
Eel.....	51	112	510	72	1,149
Fish.....	24				
Lobster.....	3,563		2,061	4,751	9,967
Harpoons.....			2	1	10
Spears.....					2
Dredges, oyster.....	30			42	2
Yards at mouth.....	40			62	2
Tongs:					
Oyster.....	11		18	12	3
Other.....	79			10	4
Rakes:					
Oyster.....	3				
Other.....	79				
Forks.....					3
Hoes.....	19		2	4	

CATCH: BY COUNTIES

Species	Fairfield		Hartford		Middlesex		New Haven		New London	
	Lbs.	Value	Lbs.	Value	Lbs.	Value	Lbs.	Value	Lbs.	Value
Alewives.....			15,900	\$159					12,400	\$124
Bluefish.....	300	\$41			3,200	\$480	400	\$60	6,200	\$30
Butterfish.....							3,700	129	186,600	3,852
Carp.....			21,600	1,272	6,800	408			6,900	414
Cod.....							1,000	30	110,800	3,324
Cunners.....									1,000	10
Eels:										
Common.....	2,800	186	3,500	210	14,200	852	10,700	642	24,500	1,554
Conger.....									1,100	16
Flounders:										
Yellowtail and dab.....					42,300	423	4,400	88	1,711,000	23,211
Blackback.....	87,400	3,072			12,200	472	83,500	2,890	2,344,100	93,451
Fluke.....					4,100	335	5,000	250	273,500	19,625
Hake.....									8,000	140
Hickory shad.....									400	4
Kingfish or "king mackerel".....									100	2
Lamprey.....			1,900	56						
Mackerel.....					900	20	5,000	100	44,000	1,091
Menhaden.....	1,000	5			23,400	117	19,200	96	114,100	175
Miwnows.....							600	79		
Pollock.....					20,900	286			25,000	390
Scup or porgy.....					400	8	1,000	20	119,600	2,407
Sea bass.....					1,200	120			55,500	5,500
Sea robin.....									4,000	80
Shad.....	7,500	543	110,600	3,902	229,900	14,391	200	10	78,600	6,942
Skates.....							1,200	12	64,800	660
Squeteagues or "sea trout," gray.....							1,300	65	4,900	196
Striped bass.....					500	55	100	12	8,400	876
Sturgeon.....									200	69
Suckers.....			71,000	1,383	13,700	270			8,900	178
Swordfish.....					9,300	1,970	4,000	600	20,700	4,563
Tautog.....	900	25			8,800	205	200	6	8,800	221
Whiting.....									52,700	786
Crabs, hard.....	2,100	98							700	67
Lobsters.....	73,300	18,389			58,100	14,513	122,100	27,496	300,100	75,649
Clams:										
Hard, public.....	189,100	39,988					14,500	2,325	6,900	1,261
Soft, public.....	12,100	1,995			1,000	150	2,400	491		
Oysters, market:										
Public, spring.....	3,800	800			8,900	1,424			2,000	438
Public, fall.....	4,700	875			3,300	528	21,200	3,400		
Private, spring.....	714,000	142,897			1,200	192	1,251,800	284,301	16,900	3,710
Private, fall.....	1,761,300	344,098					1,023,700	231,607	12,400	2,610
Scallops, bay.....									66,800	13,624
Squid.....									9,700	164
Total.....	2,860,300	553,012	224,500	6,982	464,300	37,219	2,577,200	554,709	5,712,300	268,314

VESSEL FISHERIES AT PRINCIPAL NEW ENGLAND PORTS

Due to the importance of the ports of Boston and Gloucester, Mass., and Portland, Maine, as landing points for fishery products, detailed monthly statistics are collected for these landings which are published in the following section. These landings are included in the catch by States appearing elsewhere in this document, but are presented here for their value in detailed form.

ECONOMIC ASPECT

The landings of fishery products at the three principal New England ports (Boston, Gloucester, and Portland), by vessels of 5 net tons capacity or more, during 1938, amounted to 400,611,381 pounds as landed, valued at \$8,956,523. This is an increase of 3 percent in the quantity of the catch as compared with 1937, but a decrease of 9 percent in the value of the catch. Of the total landings, 99 percent consisted of fresh fish and 1 percent salted fish. The landings at Boston accounted for 318,745,176 pounds, valued at \$7,623,465, or 79 percent of the total volume; the landings at Gloucester amounted to 63,009,136 pounds, valued at \$971,986, or 16 percent of the total; and the landings at Portland amounted to 18,857,069 pounds, valued at \$361,072, or 5 percent of the total.

Among the landings of fresh fish, haddock far outranked other species in volume landed, the landings of all sizes in 1938 amounting to 134,876,845 pounds, or 34 percent of the total fresh fish.

Landings by fishing vessels at the three principal New England ports, 1938

BOSTON: BY MONTHS

Species	January		February		March		April		May		June		July	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Cod, fresh:														
Large	2,540,785	\$77,186	3,339,775	\$88,610	5,197,020	\$122,664	3,377,170	\$66,569	3,018,180	\$45,913	1,583,675	\$38,120	1,534,555	\$36,755
Market	3,226,449	99,572	2,140,785	66,730	4,107,010	98,657	4,518,485	67,016	5,926,568	69,862	4,451,455	64,562	4,897,015	72,818
Scrod	135,645	3,371	29,360	728	19,000	464	63,750	981	77,200	783	209,500	2,654	222,475	3,016
Haddock, fresh:														
Large	6,282,965	251,591	9,987,970	318,896	13,600,330	366,675	13,151,450	242,154	7,648,845	173,020	6,625,325	151,860	5,422,415	142,451
Scrod	1,143,870	36,217	1,832,320	50,670	2,367,900	54,543	3,061,070	49,606	1,812,463	28,930	2,928,465	46,030	3,757,835	59,284
Hake, fresh:														
Large	1,061,565	34,335	612,795	22,819	420,885	16,358	409,330	12,192	305,505	5,561	343,110	5,412	343,325	4,927
Small	24,150	726	25,600	895	31,700	1,055	32,000	781	63,300	1,249	99,012	1,723	169,200	2,903
Pollock, fresh	3,603,295	60,313	1,355,345	25,595	1,451,650	27,574	1,676,645	20,715	1,459,285	15,586	518,285	7,184	609,410	9,804
Cusk, fresh	575,630	16,089	232,680	6,208	533,755	11,705	334,055	5,292	293,300	3,869	114,225	1,877	139,335	2,176
Halibut, fresh	36,800	6,359	85,420	13,785	198,418	31,887	200,351	23,697	176,646	17,176	239,411	23,140	147,359	16,139
Mackerel, fresh	15,075	1,276					287,250	5,582	4,185,730	80,596	2,741,510	72,841	3,205,535	76,116
Flounders, fresh:														
Gray sole	1,295,365	41,260	1,344,280	36,156	794,180	33,852	342,440	19,334	630,115	17,659	471,405	16,345	217,090	9,286
Lemon sole	143,845	11,190	95,370	8,912	146,448	11,376	79,531	5,423	266,760	7,455	163,075	7,923	127,720	9,023
Yellowtail	305,250	7,946	126,930	3,841	177,675	4,571	138,749	4,772	283,640	4,902	146,895	3,671	294,285	6,343
Blackback	79,150	3,908	43,215	2,298	30,190	1,569	30,475	1,050	81,270	1,664	75,675	2,381	72,630	2,417
Dab	69,610	1,669	104,865	2,166	155,095	3,755	232,965	5,365	355,265	5,072	463,905	8,370	204,805	4,578
Other	38,500	1,170	21,830	591	32,860	1,173	25,630	1,226	70,745	1,549	31,235	790	7,413	228
Swordfish, fresh														
Whiting, fresh	141,685	1,766	905	28	6,740	193	40,795	1,434	656,857	12,917	2,345,329	35,526	774,900	10,284
Wolfish, fresh	136,965	4,013	144,895	4,321	302,105	7,413	385,805	7,757	428,965	6,998	213,340	4,037	68,945	1,630
Rosefish, fresh	6,037,864	82,995	2,281,156	34,852	3,038,676	43,314	1,258,425	17,096	3,392,771	40,626	2,280,679	23,131	1,895,824	21,161
Other, fresh	5,930	438	10,245	436	9,855	249	36,298	2,355	7,920	82	41,640	2,858	83,377	5,487
Total, fresh	26,900,293	743,390	23,815,751	688,537	32,621,482	839,047	29,682,669	561,297	31,141,330	541,469	26,128,952	533,988	24,462,926	566,176
Landed in 1937, fresh	21,194,272	630,144	24,425,442	672,570	30,523,765	771,813	26,866,266	602,120	28,687,024	623,694	29,994,985	639,796	28,703,736	673,982

Landings by fishing vessels at the three principal New England ports, 1938—Continued

BOSTON: BY MONTHS—Continued

Species	August		September		October		November		December		Total, 1938		Total, 1937	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Cod, fresh:														
Large	1, 108, 565	\$32, 613	1, 059, 410	\$43, 329	1, 902, 386	\$60, 267	2, 016, 090	\$51, 092	2, 360, 860	\$58, 175	29, 038, 471	\$721, 293	29, 337, 085	\$801, 135
Market	3, 234, 980	56, 895	2, 472, 915	62, 108	3, 572, 020	83, 371	4, 796, 245	99, 686	3, 425, 540	86, 878	46, 769, 467	928, 155	53, 595, 693	1, 078, 298
Scrod	195, 575	2, 379	121, 955	1, 971	330, 380	5, 415	462, 420	7, 272	215, 380	4, 060	2, 082, 640	33, 094	2, 944, 710	46, 513
Cod, salted:														
Large														
Market			14, 300	536							14, 300	536	6, 000	255
Haddock, fresh:														
Large	5, 406, 515	143, 948	4, 817, 805	156, 829	4, 436, 140	173, 512	3, 831, 055	162, 984	4, 221, 515	180, 208	85, 432, 330	2, 464, 128	96, 818, 320	2, 889, 068
Scrod	9, 050, 285	107, 076	7, 372, 210	82, 883	3, 758, 220	66, 001	3, 517, 781	66, 899	2, 419, 524	56, 728	43, 021, 943	704, 867	33, 103, 115	762, 164
Hake, fresh:														
Large	499, 685	6, 060	477, 600	9, 842	994, 910	14, 227	642, 295	10, 830	440, 485	13, 453	6, 551, 490	156, 016	8, 111, 045	184, 814
Small	231, 700	3, 858	217, 550	4, 794	308, 670	4, 924	265, 310	4, 743	82, 170	2, 604	1, 550, 362	30, 255	1, 614, 385	35, 800
Pollock, fresh	427, 210	7, 227	404, 680	8, 327	1, 188, 060	19, 043	4, 144, 705	48, 715	3, 524, 495	38, 579	20, 363, 065	288, 662	16, 857, 310	310, 518
Cusk, fresh	245, 727	3, 788	237, 570	5, 085	733, 085	12, 465	490, 530	7, 810	381, 705	8, 065	4, 311, 497	84, 429	5, 555, 782	114, 915
Halibut, fresh	160, 662	17, 395	80, 855	9, 738	75, 930	9, 183	16, 105	2, 629	20, 770	3, 762	1, 438, 667	174, 890	1, 937, 638	236, 684
Mackerel, fresh	2, 026, 605	72, 531	676, 960	26, 402	1, 040, 095	43, 609	200, 345	11, 094	1, 648, 830	83, 386	16, 033, 695	473, 523	7, 485, 218	377, 251
Flounders, fresh:														
Gray sole	213, 650	10, 345	111, 935	7, 704	414, 095	19, 871	158, 595	9, 594	329, 025	17, 680	6, 322, 485	239, 086	6, 561, 939	268, 277
Lemon sole	278, 900	12, 949	398, 735	24, 095	278, 645	20, 672	345, 050	20, 501	209, 950	21, 519	2, 534, 029	161, 038	2, 436, 399	150, 968
Yellowtail	127, 320	3, 386	107, 580	2, 946	462, 105	9, 048	361, 615	8, 399	479, 950	10, 845	3, 011, 994	70, 670	3, 852, 180	86, 702
Blackback	159, 620	4, 363	320, 990	12, 489	376, 420	12, 733	230, 160	6, 861	121, 620	6, 364	1, 621, 405	58, 097	1, 032, 290	37, 959
Dab	154, 915	4, 243	149, 846	4, 778	178, 370	4, 861	66, 140	1, 680	88, 375	1, 902	2, 224, 155	48, 439	2, 081, 135	44, 401
Other	18, 310	554	23, 416	964	34, 070	1, 007	20, 145	913	18, 475	767	342, 628	10, 932	715, 639	21, 220
Swordfish, fresh	481, 517	88, 054	486, 388	102, 146	36, 267	8, 256				56	1, 313, 507	281, 471	1, 090, 618	225, 569
Whiting, fresh	2, 267, 645	30, 528	1, 172, 315	15, 707	254, 835	3, 951	50, 321	937	27, 075	544	7, 739, 402	113, 815	6, 213, 064	100, 192
Wolfish, fresh	27, 260	704	21, 865	666	47, 495	1, 657	25, 875	1, 020	47, 075	1, 735	1, 850, 590	41, 851	1, 838, 906	42, 751
Rosefish, fresh	3, 706, 533	40, 706	2, 929, 380	34, 364	3, 468, 289	41, 200	1, 801, 309	24, 938	2, 050, 568	37, 107	34, 141, 474	442, 450	41, 175, 252	641, 011
Herring, fresh													1, 400	18
Other, fresh	128, 487	11, 815	197, 649	18, 864	206, 825	25, 001	114, 766	13, 825	192, 888	14, 358	1, 035, 880	95, 768	234, 004	11, 488
Total, fresh	30, 151, 366	661, 417	23, 859, 607	636, 031	24, 103, 312	640, 424	23, 556, 857	562, 422	22, 306, 331	648, 731	318, 730, 876	7, 622, 929	324, 593, 127	8, 467, 716
Total, salted			14, 300	536							14, 300	536		269
Grand total	30, 151, 366	661, 417	23, 873, 907	636, 567	24, 103, 312	640, 424	23, 556, 857	562, 422	22, 306, 331	648, 731	318, 745, 176	7, 623, 465	324, 599, 527	8, 467, 985
Landed in 1937:														
Fresh	27, 224, 462	723, 563	26, 474, 171	754, 754	28, 285, 456	869, 036	29, 335, 270	844, 498	22, 878, 278	661, 746			324, 593, 127	8, 467, 716
Salted					0, 400	269							6, 400	269
Total	27, 224, 462	723, 563	26, 474, 171	754, 754	28, 291, 856	869, 305	29, 335, 270	844, 498	22, 878, 278	661, 746			324, 599, 527	8, 467, 985

NOTE.—The weights of fresh and salted fish given in these statistics represent the fish as landed from the vessels, and the values are those received by the fishermen. Large cod are classified as those weighing over 10 pounds; market cod, 2½ to 10 pounds; and scrod cod, 1 to 2½ pounds. Large haddock are those weighing over 2½ pounds and scrod haddock, 1 to 2½ pounds. Large hake are those weighing over 6 pounds and small hake, under 6 pounds. Only landings by vessels having a capacity of 5 net tons or greater are used in this tabulation.

GLOUCESTER: BY MONTHS

Species	January		February		March		April		May		June		July	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Cod, fresh:														
Large.....	178,166	\$5,654	89,915	\$3,346	533,370	\$10,910	1,034,402	\$20,012	596,661	\$11,615	258,211	\$6,714	182,530	\$3,917
Market.....	159,665	4,516	84,115	2,419	287,345	5,572	1,505,929	20,034	1,014,704	9,474	214,425	2,423	204,824	2,888
Scrod.....	17,120	437	7,020	127	36,290	646	26,925	503	34,535	223	1,225	13	10,320	125
Cod, salted:														
Large.....					23,750	714	5,050	99	251,820	7,594	33,445	1,107	26,075	838
Market.....					2,875	67	830	19	2,720	36	10,175	144	265,401	6,053
Scrod.....										210	3			
Haddock, fresh:														
Large.....	184,668	6,636	161,200	5,083	494,085	12,369	890,455	17,303	386,270	6,758	73,405	1,477	124,156	2,741
Scrod.....	32,725	846	16,395	331	27,700	645	125,875	1,782	60,950	872	20,210	261	132,295	2,156
Hake, fresh:														
Large.....	55,460	1,438	13,380	337	46,935	1,144	19,110	276	27,615	286	14,440	206	62,090	789
Small.....	15,340	334	14,105	440	9,300	180	13,375	196	95,605	969	96,935	1,003	89,535	950
Hake, salted, large.....					280	7			960	14				
Pollock, fresh.....	933,882	12,548	46,055	743	125,495	2,038	127,425	1,540	150,460	1,322	86,644	764	190,694	2,134
Pollock, salted.....											170	3	220	3
Cusk, fresh.....	1,540	34	1,015	19	4,605	105	1,945	20	32,365	325	23,610	260	52,815	714
Cusk, salted.....									160	2				
Halibut, fresh.....	765	76	7,995	996	4,000	406	2,752	199	43,138	3,354	34,088	1,810	1,907	144
Halibut, salted.....									4,935	398				
Mackerel, fresh.....							54,000	999	272,070	3,877	843,760	13,090	2,204,485	38,446
Flounders, fresh:														
Gray sole.....	41,615	1,132	41,860	1,244	44,625	1,588	29,070	1,055	39,325	833	24,055	663	40,560	1,321
Lemon sole.....									345	6	50	2	685	18
Yellowtail.....	32,935	608	4,895	86	9,680	191	245	7	5,165	50	6,275	100	7,695	130
Blackback.....	1,200	48	650	28	1,325	61	605	14	1,570	31	695	16	2,630	75
Dab.....	4,185	78	7,275	91	9,950	129	30,280	465	32,465	293	23,639	204	14,780	135
Other.....			580	52	125	11	210	3						
Swordfish, fresh.....											255	69		
Whiting, fresh.....			700	7	1,183	30	6,097	75	23,046	327	291,480	3,948	335,385	3,943
Wolfish, fresh.....	7,395	166	3,935	111	31,840	630	21,015	308	20,195	249	4,355	62	3,680	46
Rosefish, fresh.....	1,018,500	13,462	180,050	2,498	860,694	12,632	654,129	8,942	5,777,040	63,340	4,124,305	38,829	3,450,520	35,405
Other, fresh.....	1,745	43	4,833	55	11,043	1,052	15,136	2,980	18,572	1,619	25,060	2,054	246,457	9,491
Total, fresh.....	2,686,906	48,056	685,973	18,013	2,539,590	50,339	4,458,980	76,713	8,632,096	105,823	6,167,122	73,968	7,358,043	105,568
Total, salted.....					26,905	788	5,880	118	260,595	8,044	44,000	1,257	291,696	6,894
Grand total.....	2,686,906	48,056	685,973	18,013	2,566,495	51,127	4,464,860	76,831	8,892,691	113,867	6,211,122	75,225	7,649,739	112,462
Landed in 1937:														
Fresh.....	1,290,136	28,978	716,790	18,440	719,623	17,925	1,948,924	37,363	3,484,931	54,662	4,622,952	68,180	4,673,021	75,753
Salted.....	203,684	6,689			80,356	2,412	33,855	985	13,025	360	44,765	1,229	328,215	10,591
Total.....	1,493,820	35,667	716,790	18,440	799,979	20,337	1,982,779	38,348	3,497,956	55,022	4,667,717	69,409	5,001,236	86,344

Landings by fishing vessels at the three principal New England ports, 1938—Continued

GLOUCESTER: BY MONTHS—Continued

Species	August		September		October		November		December		Total, 1938		Total, 1937		
	Pounds	Value	Pounds	Value	Pounds	Value									
Cod, fresh:															
Large	115,410	\$3,005	107,435	\$4,694	253,210	\$7,814	156,041	\$3,904	157,655	\$3,672	3,663,006	\$85,257	3,615,563	\$102,979	
Market	182,385	2,645	100,055	2,300	257,564	5,676	220,820	4,136	167,885	3,513	4,299,716	65,596	4,410,286	85,593	
Scrod	415	3	650	7	8,070	132	23,050	368	23,875	414	189,495	2,998	184,945	2,931	
Cod, salted:															
Large	607,610	18,199			376,140	11,475				108,000	3,240	1,431,890	43,266	923,093	30,155
Market	298,050	8,923			186,190	5,404				55,000	1,595	821,241	22,241	327,301	9,739
Scrod											210	210	3	28,628	713
Haddock, fresh:															
Large	224,705	4,814	57,411	1,747	151,680	5,129	29,170	1,012	67,635	2,211	2,844,840	67,280	3,157,101	82,594	
Scrod	353,400	4,417	5,435	72	28,940	466	95,380	908	23,085	490	922,300	13,246	1,049,615	22,559	
Hake, fresh:															
Large	53,690	577	282,345	4,637	293,890	3,424	138,349	2,343	88,053	2,457	1,095,357	17,914	1,733,028	26,915	
Small	136,855	1,418	64,720	891	56,835	673	22,115	263	21,755	416	636,475	7,733	111,022	1,644	
Hake, salted, large	320	5									1,560	26	6,413	113	
Pollock, fresh	581,055	6,886	473,720	5,738	1,704,961	18,777	3,163,358	31,676	1,405,027	13,411	8,988,776	97,577	9,614,949	145,095	
Pollock, salted											390	6	2,130	39	
Cusk, fresh	27,660	305	9,595	132	53,390	792	1,820	17	10,270	161	220,630	2,884	300,478	4,273	
Cusk, salted											160	2	400	8	
Halibut, fresh	466	45	457	50	966	30	50	5	131	33	96,715	7,148	40,433	3,354	
Halibut, salted											4,935	398			
Mackerel, fresh	444,505	12,745	141,595	4,757	187,630	6,610	157,740	11,544	350,305	17,701	4,656,090	109,769	1,262,163	71,761	
Mackerel, salted	400	14			49,800	3,750					50,200	3,764	251,170	15,513	
Flounders, fresh:															
Gray sole	71,450	2,032	41,720	1,677	64,350	2,240	49,620	1,795	38,555	2,017	526,805	17,597	847,753	32,476	
Lemon sole	7,975	241			210	11	9,600	306	70	6	18,935	590	29,190	1,292	
Yellowtail	1,820	30	1,395	24	29,610	479	6,225	95	2,235	39	108,175	1,839	237,135	4,371	
Blackback	1,410	42	550	18	3,480	101	2,700	60	750	24	17,565	518	32,740	1,214	
Dab	26,988	291	24,330	349	24,075	353	15,035	171	17,125	226	230,127	2,785	300,768	4,819	
Other					110	7	1,465	27			2,490	100	8,310	656	
Swordfish, fresh	2,289	339	621	125							3,165	533	11,185	2,060	
Whiting, fresh	544,628	6,826	334,092	4,236	23,265	426	8,447	150	900	16	1,569,223	19,984	325,653	7,174	
Wolfish, fresh	3,195	38	905	7	410	7	65	1	435	9	97,125	1,634	102,415	1,663	
Rosefish, fresh	4,666,876	47,586	3,043,325	32,300	2,254,830	26,038	2,120,820	28,301	1,256,875	20,813	29,407,964	330,146	17,022,740	245,732	
Herring, fresh			1,600	10	100	1					1,700	11	4,875	45	
Other, fresh	512,342	22,928	232,233	7,335	5,811	180	21,719	1,080	6,835	324	1,101,786	49,141	297,489	10,528	
Total, fresh	7,959,519	117,213	4,923,889	71,106	5,403,387	79,366	6,243,589	88,162	3,639,456	67,953	60,698,550	902,280	44,699,836	861,728	
Total, salted	906,390	27,141			612,130	20,629			163,000	4,835	2,310,586	69,706	1,539,135	56,280	
Grand total	8,865,899	144,354	4,923,889	71,106	6,015,517	99,995	6,243,589	88,162	3,802,456	72,788	63,009,136	971,986	46,238,971	918,008	
Landed in 1937:															
Fresh	4,630,303	82,889	3,322,597	69,899	4,317,599	102,376	9,072,088	190,300	5,900,872	114,963			44,699,836	861,728	
Salted	425,685	16,026	210,870	9,858	196,685	8,038			1,995	92			1,539,135	56,280	
Total	5,055,988	98,915	3,533,467	79,757	4,514,284	110,414	9,072,088	190,300	5,902,867	115,055			46,238,971	918,008	

PORTLAND: BY MONTHS

Species	January		February		March		April		May		June		July	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Cod, fresh:														
Large.....	52,390	\$1,916	45,386	\$1,369	80,243	\$2,034	1,184,600	\$21,403	506,971	\$10,285	328,043	\$8,931	348,169	\$9,059
Market.....	43,495	1,138	35,742	995	57,654	1,284	1,066,828	18,753	582,183	10,593	38,284	600	22,320	359
Scrod.....	1,555	24	2,217	29	2,370	23	82,940	1,411	8,895	91	7,885	78	2,461	18
Haddock, fresh:														
Large.....	89,928	4,400	75,936	3,109	84,924	3,425	1,306,293	22,831	480,642	10,497	73,611	2,423	37,207	1,469
Scrod.....	8,445	200	11,471	213	6,694	139	3,726	43	3,025	28	4,995	56	3,667	43
Hake, fresh:														
Large.....	29,260	955	11,715	386	73,420	2,382	24,310	666	68,322	1,074	50,485	683	27,673	400
Small.....	76,515	2,531	80,888	2,703	29,735	914	58,837	1,298	155,618	2,367	219,711	2,725	230,980	3,047
Pollock, fresh.....	33,920	620	18,396	288	124,257	1,602	131,797	1,265	302,271	2,398	165,334	1,252	83,485	728
Cusk, fresh.....	88,276	2,636	212,542	5,952	184,048	4,408	181,897	3,103	170,435	2,734	60,417	1,157	7,502	150
Halibut, fresh.....	1,960	369	3,805	746	2,992	545	13,594	1,696	8,138	675	1,117	162	109	15
Mackerel, fresh.....									650	26	18,810	727		
Flounders, fresh:														
Gray sole.....	9,550	380	11,875	446	31,620	1,559	29,748	1,459	82,735	1,714	124,808	3,088	140,709	4,778
Lemon sole.....							2,085	48			5,515	95	5,690	141
Yellowtail.....	715	14	755	16	1,215	40	375	6	9,740	98	1,625	17	3,315	50
Blackback.....	3,210	108	4,315	76	2,360	68	6,235	183	8,605	124	3,079	46	3,615	63
Dab.....	3,335	73	3,920	82	19,897	432	37,005	409	26,737	206	44,135	451	25,485	256
Other.....							6,360	322	2,230	27	592	10	1,578	17
Swordfish, fresh.....												866	225	
Whiting, fresh.....							20		4,785	89	66,381	1,109	299,010	2,302
Wolfish, fresh.....	425	7	555	10	2,090	28	18,810	204	5,255	50	2,385	19	2,665	21
Rosefish, fresh.....	110,130	1,913	10,540	142	146,661	2,054	43,320	499	74,435	865	134,900	1,284	401,150	4,168
Herring, fresh.....					645	7								
Other, fresh.....	95	3	12,227	1,170	59,213	4,186	2,354	157	717	20	3,522	91	11,399	181
Total, fresh.....	558,204	17,287	542,284	17,732	910,038	25,190	4,201,134	75,756	2,502,389	43,961	1,355,634	25,004	1,659,055	27,470
Landed in 1937, fresh.....	969,739	32,827	939,261	28,127	995,057	26,252	3,656,284	69,177	3,374,261	61,549	1,196,702	25,615	1,037,424	25,448

FISHERY INDUSTRIES OF THE UNITED STATES, 1939

Landings by fishing vessels at the three principal New England ports, 1938—Continued

PORTLAND: BY MONTHS—Continued

Species	August		September		October		November		December		Total, 1938		Total, 1937	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Cod, fresh:														
Large.....	300,136	\$8,892	129,637	\$5,530	114,962	\$4,717	67,638	\$2,265	47,294	\$1,553	3,205,529	\$77,954	2,821,115	\$86,962
Market.....	36,021	546	39,046	680	58,389	1,197	50,701	1,055	42,384	752	2,073,047	37,952	2,999,130	57,456
Scrod.....	2,140	21	1,100	10	2,575	22	860	7	1,030	9	116,028	1,743	2,21,199	285
Haddock, fresh:														
Large.....	57,397	2,074	47,753	2,117	86,850	4,377	119,041	5,430	96,951	4,197	2,556,533	66,349	2,933,748	89,115
Scrod.....	6,755	69	7,620	144	13,966	219	16,730	276	11,715	206	98,809	1,636	113,370	2,105
Hake, fresh:														
Large.....	65,077	742	91,900	1,597	80,849	1,386	14,790	316	10,695	305	548,496	10,892	2,398,911	50,132
Small.....	241,504	2,726	229,723	3,491	225,875	3,413	225,785	4,103	104,930	3,049	1,880,101	32,367	223,035	3,792
Pollock, fresh	134,293	1,090	375,741	3,103	689,013	7,037	679,091	6,630	151,361	1,326	2,893,958	27,399	2,198,101	26,544
Cusk, fresh	29,862	570	37,073	908	45,999	1,128	151,704	2,725	63,135	1,679	1,232,890	27,150	2,170,017	49,180
Halibut, fresh	305	40	490	44	2,423	357	1,437	227	1,507	342	37,877	5,218	32,292	4,521
Mackerel, fresh	30,220	871	60,703	1,850	1,613	137	84,975	1,659			196,971	5,270	216,160	8,466
Flounder, fresh:														
Gray sole.....	86,468	3,154	32,800	2,095	24,730	1,049	8,874	605	9,083	502	593,000	20,829	436,093	14,379
Lemon sole.....	2,810	52	160	3	1,168	21	540	20	20	1	17,988	381	335	18
Yellowtail.....	2,830	47	2,275	37	7,050	150	620	9	15,630	277	46,145	761	54,370	745
Blackback.....	6,849	135	3,243	60	1,100	32	120	4	845	31	43,576	930	41,394	1,040
Dab.....	11,037	137	10,095	204	7,835	123	5,780	94	5,705	113	200,966	2,580	190,366	2,205
Other.....	13,001	300	4,445	136	4,690	96	1,170	39	2,145	74	36,211	1,021	2,830	138
Swordfish, fresh			5,119	872			68	12			6,053	1,109	22,617	3,833
Whiting, fresh	1,037,111	11,271	306,995	3,764	4,778	52					1,719,080	18,587	85	2
Wolfish, fresh	340	1	80		845	21	910	9	20		34,380	370	64,079	635
Rosefish, fresh	119,570	1,249	46,095	464	23,230	282	17,865	193	26,995	313	1,154,891	13,426	129,227	822
Herring, fresh							12,000	180			12,645	187	237	1
Other, fresh	23,987	477	5,698	152	8,665	186	23,728	348	290	10	151,895	6,961	52,801	1,509
Total, fresh	2,207,713	34,464	1,437,851	27,261	1,406,605	26,002	1,484,427	26,206	591,735	14,739	18,857,069	361,072	17,121,512	403,886
Landed in 1937, fresh	940,817	32,063	1,015,358	26,533	1,292,820	31,724	1,100,403	28,786	603,386	15,785			17,121,512	403,886

SUMMARY: BY PORTS

Species	Boston		Gloucester		Portland		Total, 1938		Total, 1937	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Cod, fresh:										
Large.....	29,038,471	\$721,293	3,663,006	\$85,257	3,205,529	\$77,954	35,907,006	\$884,504	35,773,763	\$891,076
Market.....	46,769,467	928,155	4,299,716	65,596	2,073,047	37,952	53,142,230	1,031,703	61,005,109	1,221,347
Scrod.....	2,082,640	33,094	189,495	2,998	116,028	1,743	2,388,163	37,835	3,150,854	49,729
Cod, salted:										
Large.....			1,431,890	43,266			1,431,890	43,266	929,093	30,410

Market.....	14,300	536	821,241	22,241			835,541	22,777	327,701	9,753
Scrod.....			210	3			210	3	28,628	713
Haddock, fresh:										
Large.....	85,432,330	2,464,128	2,844,840	67,280	2,556,533	66,349	90,833,703	2,597,757	102,909,169	3,060,777
Scrod.....	43,021,943	704,867	922,390	13,246	98,809	1,636	44,043,142	719,749	34,266,100	786,828
Hake, fresh:										
Large.....	6,551,490	156,016	1,095,357	17,914	548,496	10,892	8,195,343	184,822	12,242,984	261,861
Small.....	1,550,362	30,255	636,475	7,733	1,880,101	32,367	4,066,938	70,355	1,948,442	41,236
Hake, salted, large.....			1,560	26			1,560	26	6,413	113
Pollock, fresh.....	20,363,065	288,662	8,988,776	97,577	2,893,958	27,399	32,245,799	413,638	28,670,360	482,157
Pollock, salted.....			390	6			390	6	2,130	39
Cusk, fresh.....	4,311,497	84,429	220,630	2,884	1,232,890	27,150	5,765,017	114,463	8,026,277	168,368
Cusk, salted.....			160	2			160	2	400	8
Halibut, fresh.....	1,438,667	174,890	96,715	7,148	37,877	5,218	1,573,259	187,256	2,010,363	244,559
Halibut, salted.....			4,935	398			4,935	398		
Mackerel, fresh.....	16,033,695	473,523	4,656,090	109,769	196,971	5,270	20,886,756	588,562	8,963,541	457,478
Mackerel, salted.....			50,200	3,764			50,200	3,764	251,170	15,513
Flounders, fresh:										
Gray sole.....	6,322,185	239,086	526,805	17,597	593,000	20,829	7,441,990	277,512	7,845,785	315,132
Lemon sole.....	2,534,029	161,038	18,935	590	17,988	381	2,570,952	162,009	2,465,924	152,278
Yellowtail.....	3,011,994	70,670	108,175	1,839	46,145	761	3,166,314	73,270	4,143,685	91,818
Blackback.....	1,621,405	58,097	17,565	518	43,576	930	1,682,546	59,545	1,106,424	40,213
Dab.....	2,224,155	48,439	230,127	2,785	200,966	2,580	2,655,248	53,804	2,572,269	51,425
Other.....	342,628	10,932	2,490	100	36,211	1,021	381,329	12,053	726,779	22,014
Swordfish, fresh.....	1,313,507	281,471	3,165	533	6,053	1,109	1,322,725	283,113	1,124,420	231,462
Whiting, fresh.....	7,739,402	113,815	1,569,223	19,984	1,719,080	18,587	11,027,705	152,386	6,538,802	107,368
Wolfish, fresh.....	1,850,590	41,851	97,125	1,634	34,380	370	1,982,095	43,855	2,005,400	45,049
Rosefish, fresh.....	34,141,474	442,450	29,407,964	330,146	1,154,891	13,426	64,704,329	786,022	58,327,219	887,565
Herring, fresh.....			1,700	11	12,645	187	14,345	198	6,512	65
Other, fresh.....	1,035,880	95,768	1,101,786	49,141	151,895	6,961	1,289,561	151,870	584,294	23,525
Total, fresh.....	318,730,876	7,622,929	60,698,550	902,280	18,857,069	361,072	398,286,495	8,886,281	386,414,475	9,733,330
Total, salted.....	14,300	536	2,310,586	69,706			2,324,886	70,242	1,545,535	56,549
Grand total.....	318,745,176	7,623,465	63,009,136	971,986	18,857,069	361,072	400,611,381	8,956,523	387,960,010	9,789,879
Landed in 1937:										
Fresh.....	324,593,127	8,467,716	44,699,836	861,728	17,121,512	403,886			386,414,475	9,733,330
Salted.....	6,400	269	1,539,135	56,280					1,545,535	56,549
Total.....	324,599,527	8,467,985	46,238,971	918,008	17,121,512	403,886			387,960,010	9,789,879

¹ The items under "Other, fresh" include alewives, 216,739 pounds, value \$1,761; butterfish, 179,813 pounds, value \$3,045; eels, 5,873 pounds, value \$99; herring smelt, 4,600 pounds, value \$146; salmon, 53 pounds, value \$13; scup or porgy, 13,725 pounds, value \$320; sea bass, 205 pounds, value \$14; shad, 31,888 pounds, value \$1,513; sharks, 50,994 pounds, value \$1,534; skates, 57,575 pounds, value \$814; striped bass, 5 pounds; sturgeon, 2,295 pounds, value \$182; tautog, 55 pounds, value \$2; tuna, 805,101 pounds,

value \$37,615; mixed fish, 16,725 pounds, value \$142; lobsters, 18 pounds, value \$2; scallops, 828,886 pounds, value \$94,143; shrimp, 73,491 pounds, value \$5,489; and squid, 1,520 pounds, value \$36.

NOTE.—In addition to the above the following also were landed during 1938: Livers, 4,864,218 pounds, value \$137,484; spawn, 348,074 pounds, value \$10,314; tongues, 3,149 pounds, value \$21.

BIOLOGICAL ASPECT

In 1938 the fishing fleet landing fares at Boston, Gloucester, and Portland, and operating on the fishing banks of the North Atlantic, numbered 389 steam, motor, and sail vessels of 5 net tons capacity or greater, as measured by the United States Customs Service. The catch of edible fish landed at the three ports amounted to 402,710,099 pounds when the salted fish had been converted to the basis of fresh gutted or round weight as usually landed. This, however, does not represent the entire catch of edible fish of these vessels, for landings were also made at ports in New England other than these three; at New York City, and at more southern ports in connection with the southern winter trawl and mackerel fisheries.

Otter trawls on all sizes of vessels accounted for 319,195,082 pounds, or 79 percent of the total landings. Line trawls were next in importance, accounting for 42,026,955 pounds, or 10 percent of the total.

The catch taken off New England and landed at the three ports amounted to 249,185,412 pounds, or 62 percent of the total; that off Nova Scotia, 145,241,037 pounds, or 36 percent of the total; that off the east coast of Newfoundland, 5,028,681 pounds; and that off the Middle Atlantic States, 3,254,969 pounds; each representing about 1 percent of the total.

Landings by fishing vessels at the three principal New England ports, 1938

BY GEAR AND AREA

Gear and area	Vessels fishing	Trips	Days absent	Cod			Haddock		Hake		Pollock	Cusk	Halibut
				Large	Market	Scrod	Large	Scrod	Large	Small			
	Number	Number	Number	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
Line trawls:													
Treaty Coast	2	4	81	845,500	362,502								
Magdalen Islands	2	5	95	1,639,700	1,191,369								
Gulf of St. Lawrence, unclassified	3	3	60	6,783	7,343				135				108,484
Grand Bank	4	9	175	59,871	7,536				6,397	1,170		1,028	213,850
St. Pierre Bank	3	3	63	32,395	4,704				1,762			2,952	45,388
Newfoundland Banks, unclassified	1	2	16	2,765	436				554				25
Northeast Cape Breton	2	2	36	3,952	456								16,949
Misaine Bank	1	1	7	330	100		60						17,489
Banquereau	3	10	201	47,310	15,001				1,145	3,600		19,480	
Canso	1	1	26	3,952	456				23,366			8,367	280,099
Middle Ground	1	1	10	33,700	11,800								8,336
Northeast Sable Island Bank	3	4	21	79,400	52,808	2,480	34,000	800			600	100	5,182
Horseshoe Ground	1	1	15	6,175	1,600		39,010	1,400			1,530	8,988	5,021
Southwest Sable Island Bank	2	2	16	7,310	3,500	400	2,075				400	7,500	2,004
Emerald Bank	8	12	113	129,512	135,234	1,200	3,610	250			16,530	21,390	121
Central Nova Scotia	1	1	20	3,100	1,900		199,520	20,790			38,680	7,290	75,795
La Have Bank (including Sambro Bank)	8	20	234	108,692	101,235	11,186	250	34,100			150	12,625	179
Southern Nova Scotia	15	40	322	203,503	273,757	16,525	179,810	19,275			53,516	8,901	128,085
Browns Bank	21	195	1,850	1,872,444	1,824,962	51,315	642,720	111,831			159,400	28,690	4,333
Western Nova Scotia	18	65	562	364,196	535,727	9,990	5,402,520	606,805			779,360	197,003	1,386,156
Southern Bay of Fundy	3	4	43	13,675	12,545		1,002,306	194,799			360,280	50,674	504,191
Nova Scotia, unclassified	6	7	75	54,699	20,165		99,800	8,700			33,515	400	2,100
Eastern Maine	9	32	257	104,067	63,951		64,950	7,420			17,960	1,800	19,760
Central Maine	15	104	493	60,230	43,095	175	120,131	9,625			27,690	214,366	12,669
Western Maine	30	319	408	71,958	44,145	5,308	69,260	6,418			318,923	17,271	516,590
Eastern Massachusetts	24	683	1,362	313,675	399,445	61,225	5,152	146,510			125,444	22,268	113,864
Inner Grounds	36	269	962	303,444	288,400	8,055	86,388	5,152			634,060	46,600	90,180
Western Side South Channel	16	91	592	872,680	963,722	3,490	349,245	4,595			55,850	634,060	46,600
Eastern Side South Channel	15	45	246	138,377	142,155	250	957,227	44,775			657,593	330,202	79,828
Northern Edge of Georges	6	9	59	183,450	72,560		2,219,725	185,745			330,865	240,615	71,152
Northeast Peak of Georges	10	19	161	339,035	321,990	150	804,680	23,830			433,065	34,070	459,956
Off No Man's Land	3	3	15	4,580	4,300	50	165,745	2,100			48,540	9,440	94,430
							578,410	42,290			21,685	44,720	39,005
							22,395	2,145			1,900	3,325	45,268
Total	187	1,966	8,596	7,910,460	6,908,989	172,651	13,043,587	1,298,995	3,545,474	1,715,098	808,474	5,251,468	1,144,914

Landings by fishing vessels at the three principal New England ports, 1938—Continued

BY GEAR AND AREA—Continued

Gear and area	Vessels fishing	Trips	Days absent	Cod			Haddock		Hake		Pollock	Cusk	Halibut
				Large	Market	Scrod	Large	Scrod	Large	Small			
	Number	Number	Number	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	
Hand lines:													
Eastern Massachusetts	1	1	1	35	70					30			
Northern edge of Georges	1	1	6	25,900	21,100		50			1,000			
Total	2	2	7	25,935	21,170		50			1,030			
Harpoons:													
Northeast Cape Breton	13	13	256										
La Have Bank (including Sambro Bank)	1	1	12										
Browns Bank	21	35	521										
Western Nova Scotia	1	1	3										
Western Maine	1	15	15										
Eastern Massachusetts	1	2	2										
Western Side South Channel	2	2	6										
Eastern Side South Channel	1	1	11										
Northern edge of Georges	23	30	416										
Northeast peak of Georges	22	37	446										
Central Georges	1	1	20										
Southeast Georges	13	16	136										
Southwest Georges	15	18	229										
Lightship Grounds	11	11	92										
Off No Man's Land	1	1	12										
Southern New England, unclassified	6	6	117										
South	7	7	116										
Total	140	197	2,410										
Otter trawls, large:													
Newfoundland Banks, unclassified)	3	5	37	60,328	245,800	4,570	68,550	11,204	1,550	120	2,188		857
Banquereau	30	114	1,035	2,235,056	9,809,592	592,288	1,383,188	559,739	13,242	970	262,296	662	15,738
Canso	1	2	12	3,925	4,800		86,875	6,000	6,835		4,350	1,050	1,448
Middle Ground	23	48	341	723,131	1,397,429	117,037	1,117,482	220,810	19,883	400	198,558	1,903	9,652
Northeast Sable Island Bank	27	70	507	1,484,772	3,459,113	35,605	1,828,488	602,970	40,075	2,000	362,896	1,205	11,544
Southeast Sable Island Bank	14	18	114	258,919	593,285	680	406,190	253,144	14,366	3,100	94,928	4,502	7,111
Horseshoe Grounds	41	201	1,362	2,659,128	2,804,697	86,406	6,115,560	641,700	294,066	994	1,970,055	25,290	53,999
Southwest Sable Island Bank	37	112	877	4,111,474	4,573,019	94,860	4,395,769	431,936	59,370	9,193	1,388,691	3,639	55,548
Eastern Nova Scotia	3	4	22	35,750	39,950	226	16,428	3,708	2,910		21,120		243
Emerald Bank	39	183	1,075	2,250,907	3,222,975	77,381	7,094,563	761,597	109,380	281	2,097,093	23,844	38,677

La Have Bank (including Sambro Bank).....	7	8	32	36,269	69,366	2,720	234,048	26,580	6,760	28,853	1,490	2,027	
Southern Nova Scotia.....	18	54	261	73,615	84,595	1,780	111,970	47,030	20,270	1,450	59,370	220	
Browns Bank.....	40	267	1,697	1,430,423	2,180,306	44,826	11,089,319	2,815,783	111,423	5,467	1,564,427	37,239	
Western Nova Scotia.....	4	4	33	41,500	40,500		186,500	14,000	4,500	3,000	10,075	1,105	
Nova Scotia, unclassified.....	16	27	203	365,879	484,232	16,663	748,237	185,557	29,210		168,942	2,075	
Central Maine.....	1	1	1										
Western Maine.....	3	3	36	150,770	95,700	26,500	265,430		190	400	58,800	1,970	
Eastern Massachusetts.....	2	2	10								89,100		
Inner Grounds.....	11	30	145	37,840	46,180	220	160,346	69,400	16,490	939	165,763	4,094	
Western Side South Channel.....	33	238	1,352	542,560	1,236,956	38,649	2,855,149	3,925,243	435,889	3,053	744,443	46,695	
Eastern Side South Channel.....	33	217	1,169	609,552	973,340	36,813	3,353,154	2,076,859	467,432		1,240,890	26,423	
Northern edge of Georges.....	36	257	1,555	1,238,461	4,326,928	279,062	5,030,228	5,488,412	193,121	3,227	1,052,594	29,682	
Northeast peak of Georges.....	42	453	3,307	4,485,010	6,566,880	493,665	12,705,078	14,167,388	314,047	8,755	2,917,173	66,191	
Central Georges.....	31	98	553	412,013	527,440	42,605	2,064,947	2,483,975	42,972	845	1,907,877	4,042	
Southeast Georges.....	31	104	804	1,638,230	1,001,671	12,267	3,942,342	1,724,151	50,130	1,290	371,645	2,974	
Southwest Georges.....	11	13	73	52,498	59,282	210	453,772	196,480	9,504		23,765	40	
Lightship Grounds.....	6	6	40	14,964	42,672	1,564	89,167	128,374	5,875	1,512	4,401	225	
Nantucket Shoals.....	4	5	15	9,108	22,954	2,003	45,844	61,018	4,090	189	2,314	30	
Southern New England, unclassified.....	15	24	168	155,816	199,925	11,530	425,256	225,585	31,650		245,318	6,805	
Total.....	168	2,568	16,836	25,117,898	44,100,677	2,020,130	66,263,820	37,128,643	2,305,230	47,185	15,340,925	290,320	412,587
Otter trawls, medium:													
Southwest Sable Island Bank.....	1	1	9	3,455	1,935		44,150	10,080	500	290	410	20	
Emerald Bank.....	1	1	8	100	200		9,000	31,400					
Southern Nova Scotia.....	19	53	386	103,773	81,470	6,358	177,090	73,517	58,377	23,555	17,107	60,956	
Browns Bank.....	26	162	1,257	376,031	195,155	12,555	925,597	251,615	50,978	44,077	83,800	8,080	
Western Nova Scotia.....	1	2	12	3,870	4,325	520	9,045	1,690		3,910	925		
Eastern Maine.....	10	30	185	7,903	2,600	5	9,249	3,880	2,600	136,257	7,083	537	
Central Maine.....	13	40	194	18,170	8,718		24,692	8,175	141,695	13,060	29,380	8,995	
Western Maine.....	12	60	237	20,240	9,428	125	34,585	6,820	49,315	18,000	2,405	1,025	
Eastern Massachusetts.....	34	157	608	34,685	33,980	3,475	40,290	40,360	96,100	65,950	3,235,490	3,935	
Inner Grounds.....	33	125	675	64,312	43,622	1,190	75,947	27,481	33,145	75,450	202,545	40,188	
Western Side South Channel.....	43	332	2,127	405,865	501,857	13,267	1,513,440	1,090,637	204,915	160,764	191,453	29,836	
Eastern Side South Channel.....	30	181	1,181	263,179	308,973	1,275	3,004,029	1,237,527	169,202	17,497	142,138	6,168	
Northern Edge of Georges.....	15	43	239	77,890	137,425	50	585,765	544,093	2,906		13,596	1,527	
Northeast Peak of Georges.....	6	25	157	334,935	258,355		403,584	303,270	3,240		23,890	140	
Central Georges.....	15	87	593	399,343	300,195	7,880	1,281,895	1,123,310	7,105	1,100	77,855	4,198	
Southeast Georges.....	5	14	77	159,150	56,924		226,380	106,040	7,362		13,302	200	
Southwest Georges.....	9	28	179	20,380	72,267		718,355	276,430	1,500		6,270	150	
Lightship Grounds.....	7	7	27	2,950	14,370		137,310	17,620	9,575		3,400		
Nantucket Shoals.....	2	2	17	1,920	11,260	1,500	33,200	14,650	1,800		2,480		
Off No Man's Land.....	4	7	30		165			400	1,325				
Southern Massachusetts.....	1	1	3		65				100				
Southern New England, unclassified.....	6	7	37	10,555	25,975		67,645	56,050	1,330		1,566	88	
South.....	6	6	22	2,240	1,410		23,520	40,610	150		1,255		
Total.....	185	1,371	8,260	2,310,936	2,070,670	48,200	9,344,768	5,265,655	843,220	561,425	4,056,350	160,230	23,144

See footnotes at end of table.

Landings by fishing vessels at the three principal New England ports, 1938—Continued

BY GEAR AND AREA—Continued

Gear and area	Vessels fishing	Trips	Days absent	Cod			Haddock		Hake		Pollock	Cusk	Halibut
				Large	Market	Scrod	Large	Scrod	Large	Small			
	Number	Number	Number	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
Otter trawls, small:													
Misaine Bank	3	3	17	11,800	8,320		10,530	270		510	280		
Southern Nova Scotia	1	1	4						100				
Browns Bank	1	1	7	685	335		265			6,825	30	10,740	
Western Nova Scotia	1	1	3										
Northern Bay of Fundy	2	2	13	1,035	140		1,135	20		1,475	910		
Eastern Maine	12	77	451	26,005	14,272	195	39,439	7,690	36,490	233,266	5,440	3,290	29
Central Maine	18	142	622	80,575	51,827	1,295	100,888	8,565	67,030	134,995	1,295	16,776	312
Central Maine (occasional)							7		4,300	25			
Western Maine	38	459	1,010	91,527	70,784	11,185	106,299	17,210	80,615	216,301	6,960	7,196	514
Eastern Massachusetts	46	1,389	4,368	396,655	462,523	70,688	571,875	192,484	104,760	527,887	916,425	2,230	487
Inner Grounds	12	14	41	4,135	2,410	300	3,875	675	4,000	7,745	62,665	1,000	
Western Side South Channel	37	171	557	114,130	212,135	27,985	314,275	92,580	56,995	21,445	43,760	800	17
Eastern Side South Channel	7	8	45	2,885	10,100	540	44,490	9,125		160	725		264
Central Georges	3	4	29	714	5,200		7,600	100	5,900		280		70
Southwest Georges	4	4	17	3,200	2,475		22,450	8,550					
Lightship Grounds	4	6	28	1,056	4,445			400					
Nantucket Shoals	3	5	22		750	35	185		1,205	180	105		
Off No Man's Land	5	14	50	30	715		90	100	3,085		50		135
Southern Massachusetts	5	8	31	1,495	305		2,525	1,075	405		300		
Total	197	2,309	7,315	735,927	846,736	112,223	1,225,928	338,844	364,885	1,150,839	1,042,490	42,032	1,828
Sink gill nets:													
Browns Bank	1	1	6	725	175		115	500					
Eastern Maine	1	1	1	2,000						500			
Central Maine	13	552	554	480,619	64,354	3,620	61,282	2,285	66,243	225,452	1,071,781	3,283	39
Western Maine	15	1,480	1,482	911,973	164,035	25,715	342,944	6,730	190,293	321,069	1,632,994	14,508	152
Eastern Massachusetts	24	3,100	3,104	1,109,553	566,358	6,030	493,974	1,195	874,352	42,535	7,780,093	3,255	165
Inner Grounds	10	112	112	21,420	19,605		56,535	95	7,185	1,335	294,205	225	
Total	148	5,246	5,259	2,526,290	814,527	35,365	954,850	10,805	1,138,073	590,891	10,779,073	21,271	356
Drift gill nets:													
Western Maine	2	20	20	50	55	10			325				
Eastern Massachusetts	25	199	411		75				1,100		800		
Inner Grounds	1	1	3										
Western Side South Channel	4	5	14	100	100		300		1,500		200		

Off No Man's Land	3	3	10										
South	3	3	13										
Total	1 31	231	471	2 150	2 230	2 10	2 300		2 1,425	2 1,500	2 1,000		
Purse seines:													
Canso	2	2	16										
Eastern Nova Scotia	4	4	27										
Central Nova Scotia	4	4	21										
Eastern Maine	1	1	1										
Central Maine	8	25	69								186,429		
Western Maine	7	13	24								6,600		
Eastern Massachusetts	42	686	1,888		180						24,169		
Inner Grounds	2	2	6										
Western Side South Channel	34	223	796				400	200					300
Eastern Side South Channel	1	1	3										
Southwest Georges	1	1	3										
Lightship Grounds	2	2	6										
Off No Man's Land	29	81	289										
Rhode Island Shore	3	3	7										
South	31	80	351										
Total	1 71	1,128	3,507		2 180		2 400	2 200			2 217,198		2 300
Scallop drags:													
Western Side South Channel	6	10	94										
Eastern Side South Channel	14	23	223										
Northern Edge of Georges	10	23	212										
Northeast Peak of Georges	2	4	24										
Central Georges	1	1	3										
Southwest Georges	1	1	8										
Lightship Grounds	4	4	38										
Total	1 19	66	602										
Grand total	1 389	15,084	53,263	38,627,596	54,763,179	2,388,579	90,833,703	44,043,142	8,198,307	4,066,938	32,246,540	5,765,321	1,583,129

¹ Exclusive of duplication.

² Incidental catch.

NOTE.—The three principal New England ports are Boston and Gloucester, Mass., and Portland, Maine. Otter trawls are classified according to the size of the vessel. The weight of salted fish landed has been converted to the equivalent of fresh fish as landed. Only landings by vessels having a capacity of 5 net tons or greater are used in this tabula-

tion. "Occasional" after the name of a bank or area indicates that the vessels contributing to the catch as shown fished chiefly with another type of gear. In such cases the number of vessels fishing, number of trips, and number of days absent, are shown under the principal type of gear used. The statistics of landings shown in this bulletin do not correspond exactly with the total of the monthly bulletins since some of the monthly figures have been revised.

Landings by fishing vessels at the three principal New England ports, 1938—Continued

BY GEAR AND AREA—Continued

Gear and area	Mack- erel	Flounders						Sword- fish	Whit- ing	Woltfish	Rosefish	Other	Total
		Gray sole	Lemon sole	Yellow- tail	Black- back	Dab	Other						
	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
Line trawls:													
Treaty Coast.....													1,208,092
Magdalen Islands.....													2,831,069
Gulf of St. Lawrence, unclassified.....													122,745
Grand Bank.....													289,852
St. Pierre Bank.....													87,201
Newfoundland Banks, unclassified.....													20,729
Northeast Cape Breton.....													21,897
Misaine Bank.....													24,715
Banquereau.....								840					374,983
Canso.....													12,744
Middle Ground.....										400			86,582
Northeast Sable Island Bank.....										736			196,322
Horseshoe Ground.....													32,954
Southwest Sable Island Bank.....										35			53,376
Emerald Bank.....								382		1,858			629,302
Central Nova Scotia.....													52,304
La Have Bank (including Sambro Bank).....								3,728		3,264			735,309
Southern Nova Scotia.....								56		16,968			1,740,151
Browns Bank.....								1,504		54,380		525	12,410,316
Western Nova Scotia.....	1,500							68		13,150		6,032	3,086,572
Southern Bay of Fundy.....													170,913
Nova Scotia, unclassified.....										60			234,907
Eastern Maine.....		2,695		5,900	1,350	1,145	340			800		10	694,733
Central Maine.....					15	75				135		72	1,377,454
Western Maine.....	650	24,430			45	3,265				950	19,565	434	673,373
Eastern Massachusetts.....		300	500	9,300	3,000	5,180			9,000	16,775	345	3,308	2,003,463
Inner Grounds.....						172				1,182		258	3,845,852
Western Side South Channel.....										4,508			4,908,192
Eastern Side South Channel.....										279			2,038,364
Northern Edge of Georges.....										400			578,310
Northeast Peak of Georges.....									1,500	1,380			1,396,515
Off No Man's Land.....										90			87,664
Total.....	2,150	27,425	500	15,290	4,410	9,837	340	6,578	12,213	117,350	20,507	10,245	42,026,955
Hand Lines:													
Eastern Massachusetts.....													135
Northern Edge of Georges.....													48,050
Total.....													48,185

Harpoons:										
Newfoundland Banks, unclassified								547		547
Northeast Cape Breton								95,146		95,146
Banquereau (occasional)								546		546
La Have Bank (including Sambro Bank)								5,212		5,212
La Have Bank (including Sambro Bank, occasional)								2,313		2,313
Browns Bank								289,000		289,000
Browns Bank (occasional)								4,884		4,884
Western Nova Scotia								866		866
Western Maine									7,332	7,332
Eastern Massachusetts									849	849
Western Side South Channel								5,304		5,304
Western Side South Channel (occasional)								639		639
Eastern Side South Channel								2,650		2,650
Eastern Side South Channel (occasional)								503		503
Northern Edge of Georges								285,398		285,398
Northeast Peak of Georges								338,928		338,928
Northeast Peak of Georges (occasional)								182		182
Central Georges								5,119		5,119
Southeast Georges								88,316		88,316
Southwest Georges								110,985		110,985
Lightship Grounds								34,992		34,992
Off No Man's Land								1,510		1,510
Southern New England, unclassified								18,536		18,536
South								23,569		23,569
Total								1,315,145	8,181	1,323,326
Otter trawls, large:										
Newfoundland Banks, unclassified	1,500		4,053						406	401,216
Banquereau	1,870	10,674	4,655	129,048	5,360	21,150	3,028		23,558	15,222,629
Canso		54,750				250			1,450	70
Middle Ground		158,132	14,024	127,595		21,045	2,050		28,311	35,340
Northeast Sable Island Bank	40	43,934	10,129	47,465	750	22,155			56,140	20,460
Southeast Sable Island Bank		8,342	7,700	346		9,095			16,232	19,025
Horseshoe Grounds	2,000	2,484,371	60,864	195,038	1,770	34,059	53,832		151,736	94,207
Southwest Sable Island Bank		82,139	10,148	16,049	600	19,216	4,310		322,330	8,137
Eastern Nova Scotia		120,350				400			1,210	1,360
Emerald Bank	200	67,712	36,522	81,423	596	26,248	27,300		200,840	13,778
La Have Bank (including Sambro Bank)		18,204		10	15	1,390	50		7,184	12,500
Southern Nova Scotia		25,483	3,128	6,775	228	7,620	1,900	62,283	2,175	3,030,765
Browns Bank	170	92,648	34,386	25,576	6,091	88,129	4,165	62,552	350,256	3,858,328
Western Nova Scotia		32,000			400	100			4,100	135,545
Nova Scotia, unclassified	40	34,625	1,961	11,172		16,769	11,600		32,880	12,900
Central Maine										2,750
Western Maine		775							16,200	616,735
Eastern Massachusetts										89,100
Inner Grounds		14,234	3,940	2,112	2,785	3,423	1,720		999	1,780,067
Western Side South Channel	400	140,784	394,427	20,086	601,297	38,726	13,260	4,055	47,599	6,727,622
Eastern Side South Channel	80	196,414	138,975	22,655	50,498	485,545	13,125	6,910	69,395	4,861,125

* Incidental catch.

Landings by fishing vessels at the three principal New England ports, 1938—Continued

BY GEAR AND AREA—Continued

Gear and area	Mack- erel	Flounders						Sword- fish	Whit- ing	Wolffish	Rosefish	Other	Total
		Gray sole	Lemon sole	Yellow- tail	Black- back	Dab	Other						
Otter trawls, large—Continued.	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>
Northern Edge of Georges	632	65,209	336,956	76,366	62,408	150,423	16,690	.....	6,302	83,416	267,990	10,651	18,754,070
Northeast Peak of Georges	10,518	57,461	328,995	72,621	33,157	46,272	18,218	129	3,539	158,021	175,055	11,931	42,693,304
Central Georges	220	19,699	268,960	124,999	61,089	17,125	7,390	.....	600	18,290	36,074	1,924	6,325,300
Southeast Georges	25	33,330	47,933	26,380	1,577	22,527	4,835	.....	.....	28,949	8,350	7,676	8,949,115
Southwest Georges	.....	3,745	15,585	15,115	7,370	4,580	275	.....	45	4,410	16,811	608	865,386
Lightship Grounds	.....	80	18,245	550	49,373	.....	480	.....	.....	395	68,246	.....	426,123
Nantucket Shoals	.....	170	12,720	80	26,311	180	.....	.....	.....	165	6,150	.....	193,370
Southern New England, unclassified	.....	18,745	12,183	4,670	2,280	6,393	.....	.....	960	10,288	103,497	.....	1,463,335
Total	17,695	3,784,010	1,762,436	1,010,184	913,955	1,042,820	184,198	129	147,246	1,636,935	21,444,317	53,068	225,024,408

Gear and area	Mackerel	Flounders						Sword- fish	Whiting	Wolffish	Rosefish	Herring	Other	Total
		Gray sole	Lemon sole	Yellow- tail	Black- back	Dab	Other							
Otter trawls, medium:														
Southwest Sable Island Bank	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>
Emerald Bank	890	2,050	200	200	.....	540	.....	.....	565	.....	.....	.....	62,835
Southern Nova Scotia	51,748	2,475	950	400	8,627	995	193	585	1,643	2,486,163	.....	.....	43,150
Browns Bank	143,516	1,820	275	32	59,356	2,650	311	2,500	22,685	9,476,140	.....	.....	3,156,028
Western Nova Scotia	810	.....	.....	.....	735	.....	.....	.....	125	106,000	.....	.....	11,659,614
Eastern Maine	153,681	.....	195	.....	29,409	2,925	.....	.....	1,950	1,171,920	.....	.....	131,955
Central Maine	346,978	41,245	950	500	88,433	30,550	.....	22,800	94,120	335	.....	450	1,553,114
Western Maine	273,175	2,000	19,870	3,895	53,050	16,495	.....	.....	40,355	302,492	.....	450	1,159,038
Eastern Massachusetts	262	106,195	150	28,785	12,025	67,705	6,465	.....	2,530	467,375	.....	.....	3,833
Inner Grounds	72,354	3,995	970	3,654	26,826	2,050	.....	391,614	2,865	728,799	.....	.....	3,989
Western Side South Chan- nel	1,395	139,775	83,995	9,098	136,364	71,197	6,135	5,060	2,404	7,391,712	.....	460	1,025,563
Eastern Side South Chan- nel	71,195	130,058	38,247	43,465	164,788	7,530	.....	.....	.....	.....	.....	.....	3,833
Northern Edge of Georges	1,806	104,264	19,662	20,016	5,108	2,710	.....	141,369	45,152	3,787,019	.....	.....	980
Northeast Peak of Georges	1,570	24,803	4,550	3,800	4,275	250	.....	.....	5,091	110,600	.....	.....	1,633,479
Central Georges	88	7,698	209,975	75,080	69,318	9,105	5,800	.....	5,235	.....	.....	.....	1,373,235
Southeast Georges	700	15,125	3,210	1,786	600	.....	.....	350	3,030	.....	.....	.....	3,587,863
										1,680	.....	.....	.....	592,944

Southwest Georges	1,300	1,525	71,758	19,953	10,963	2,245	4,050	450	1,300	1,100		1,212,887	
Lightship Grounds		3,680	350	4,100	2,150		30		90	15,566		211,254	
Nantucket Shoals			2,040		4,490	2,170			1,155		300	76,965	
Off No Mans Land		175		176,900			95				12,800	191,860	
Southern Massachusetts				7,400	350						300	8,215	
Southern New England, unclassified		604	7,530	2,260	4,774	1,210	1,890		1,905		3,375	186,757	
South	295	440				3,155	680		3,240		20,045	97,685	
Total	2 3,340	1,378,515	703,633	412,460	318,375	598,514	91,300	2 873	759,958	120,985	40,664,949	60,570	69,798,070
Otter trawls, small:													
Missine Bank		15,065		1,215	1,900	2,625			335	125			52,975
Southern Nova Scotia	100			100			275	3,500	65		6,005		10,145
Browns Bank													18,880
Western Nova Scotia				18,500									18,500
Northern Bay of Fundy		12,765				1,422		3,900		40,000			62,802
Eastern Maine		220,048	9,010	10,060	5,730	34,955	7,190	56,195	2,615	576,870	215		1,289,004
Central Maine		306,732	14,265	19,420	15,050	115,110	17,837	207,750	3,540	447,406	2,851		1,616,784
Central Maine (occasional)		45				25							4,402
Western Maine	1,023	727,176	5,488	59,825	31,659	202,862	40,944	1,319,090	19,757	793,678	645	77,546	3,888,284
Eastern Massachusetts	995	795,700	4,505	897,965	327,790	561,088	29,373	7,480,936	45,710	460,699		47,187	13,897,962
Inner Grounds		12,110	600	10,175	2,805	6,850		4,200		2,425			125,970
Western Side South Chan- nel		156,655	7,445	124,330	34,655	56,110	7,405	1,022,595	31,645	226,538		4,100	2,555,600
Eastern Side South Chan- nel		48	23,320	9,750	3,655	500	500		100				106,162
Central Georges		3,350	25,585	3,175	3,775	500	720	2,500		9,300			68,769
Southwest Georges		47	11,950	1,900	1,925	500			100				53,097
Lightship Grounds			1,470	116,300	3,890		110						127,851
Nantucket Shoals			140	61,225	5,500				390				69,560
Off No Mans Land		340		273,000	100							3,020	285,665
Southern Massachusetts		350	25	106,700	815		735		625			4,837	120,192
Total	2 2,118	2,250,431	103,803	1,718,640	439,249	982,547	105,089	10,100,666	104,882	2,557,041	645	145,761	24,372,604
Sink gill nets:													
Browns Bank		135				30				13,900			15,580
Eastern Maine													2,500
Central Maine		340		350	147	947	62	5,229	345	705	12,238		1,999,321
Western Maine	148	239	30	20	1,880	1,178	255	723	1,138	2,740	11,893		3,630,667
Eastern Massachusetts	3,315			9,370	4,260	19,240	85	250	425	70	1,700	36,088	10,952,313
Inner Grounds					30	135			35	100		748	401,653
Total	2 3,463	714	30	9,740	6,317	21,530	402	6,202	1,943	17,515	1,700	60,967	17,002,024

² Incidental catch.

Landings by fishing vessels at the three principal New England ports, 1938—Continued

BY GEAR AND AREA—Continued

Gear and area	Mackerel	Flounders						Sword-fish	Whiting	Wolfish	Rosefish	Herring	Other	Total
		Gray sole	Lemon sole	Yellow-tail	Black-back	Dab	Other							
Drift gill nets:	<i>Pounds</i>	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
Western Maine	13,420				40				710				754	15,364
Western Maine (occasional)	90													90
Eastern Massachusetts	299,035								710				9,175	310,895
Eastern Massachusetts (occasional)	155													155
Inner Grounds	4,370													4,370
Western Side South Channel	31,565												350	34,115
Off No Mans Land	9,915												455	10,370
South	11,815												1,770	13,585
Total	370,365				240				2,140				12,504	388,944
Purse seines:														
Magdalen Islands (occasional)	67,230													67,230
Canso	89,650													89,650
Eastern Nova Scotia	122,960													122,960
Central Nova Scotia	143,640													143,640
Eastern Maine													2,700	2,700
Central Maine	175,455											12,000	13,845	387,729
Western Maine	14,415												5,700	26,715
Eastern Massachusetts	7,836,175	895											994,976	8,856,395
Inner Grounds	21,230													21,230
Western Side South Channel	5,735,335												1,850	5,738,085
Eastern Side South Channel													200	25,200
Southwest Georges	25,000													25,000
Lightship Grounds	52,000													52,000
Off No Mans Land	26,100													26,100
Rhode Island Shore	3,099,650												875	3,100,525
South	26,700												89,650	116,350
South	3,119,855												275	3,120,130
Total	20,555,395	2,895										12,000	1,110,071	21,896,639

Landings by fishing vessels at the three principal New England parts, 1938—Continued

SUMMARY: BY AREA—Continued

Area	Vessels fishing	Trips	Days absent	Cod			Haddock		Hake		Pollock	Cusk	Halibut
				Large	Market	Scrod	Large	Scrod	Large	Small			
Off Nova Scotia—Continued.													
La Have Bank (including Sambro Bank).....	Number	Number	Number	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
.....	13	29	278	144,961	170,601	13,906	413,858	45,855	60,276	5,705	37,754	113,402	130,112
Southern Nova Scotia.....	44	148	973	380,891	439,822	24,663	931,780	232,378	238,147	26,270	105,167	342,279	4,515
Browns Bank.....	69	661	5,338	3,680,308	4,200,933	108,696	17,417,816	3,674,703	941,761	98,454	1,845,260	1,442,215	254,298
Western Nova Scotia.....	24	73	613	409,566	580,552	10,510	1,197,851	210,489	364,780	36,528	61,674	504,191	15,146
Southern Bay of Fundy.....	3	4	43	13,675	12,545	.....	99,800	8,700	33,515	.....	400	2,100	178
Nova Scotia, unclassified.....	21	34	278	420,578	504,397	16,663	813,187	192,977	47,170	.....	170,742	21,835	55,074
Total.....	159	1,764	13,687	19,143,137	32,038,020	1,183,001	43,660,730	7,911,946	2,378,246	188,295	8,631,874	2,642,392	990,755
Off New England (area XXII):													
Northern Bay of Fundy.....	2	2	13	1,035	140	.....	1,135	20	1,475	.....	910	.....	.....
Eastern Maine.....	30	141	895	96,138	59,967	375	168,819	21,195	66,780	584,329	25,192	195,439	3,019
Central Maine.....	48	864	1,933	683,431	188,850	5,767	256,129	25,443	556,195	692,455	1,309,421	545,644	3,146
Western Maine.....	61	2,369	3,232	1,246,518	384,147	68,843	835,646	35,912	467,248	682,114	1,730,027	138,593	4,062
Eastern Massachusetts.....	80	6,219	11,754	1,854,603	1,462,631	141,418	1,455,384	238,634	1,132,162	1,270,432	12,092,707	99,600	1,590
Inner Grounds.....	70	553	1,944	431,151	400,217	9,765	1,253,930	142,426	718,413	415,671	805,006	1,211,446	9,407
Western Side South Channel.....	80	1,072	5,538	1,935,335	2,914,770	83,391	6,903,289	5,294,405	1,028,664	192,332	1,220,471	148,483	20,863
Eastern Side South Channel.....	67	476	2,878	1,013,993	1,434,568	38,878	7,206,353	3,347,341	1,069,699	17,657	1,417,823	492,547	21,116
Northern Edge of Georges.....	59	363	2,487	1,525,691	4,558,013	279,112	5,781,788	6,034,605	244,567	3,227	1,076,630	124,112	38,514
Northeast Peak of Georges.....	60	538	4,095	5,158,980	7,147,225	493,815	13,687,072	14,512,948	338,972	8,755	2,985,783	105,336	60,888
Central Georges.....	42	191	1,198	812,070	832,835	50,485	3,344,442	3,607,385	55,977	1,945	269,012	4,042	13,482
Southeast Georges.....	42	134	1,017	1,797,380	1,058,591	12,287	4,168,722	1,830,191	57,492	1,290	384,947	3,174	23,322
Southwest Georges.....	36	65	509	76,078	134,024	210	1,194,577	481,460	11,004	.....	30,035	190	4,182
Lightship Grounds.....	30	36	231	18,970	61,487	1,564	226,477	146,394	15,450	1,692	7,801	225	63
Nantucket Shoals.....	9	12	54	11,028	34,964	3,538	79,229	75,668	7,095	214	4,899	30	44
Off No Man's Land.....	38	109	406	4,610	5,180	50	22,485	2,645	6,310	3,120	3,375	45,268	626
Southern Massachusetts.....	6	9	34	1,495	370	.....	2,525	1,075	505	.....	300	.....	.....
Rhode Island Shore.....	3	3	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Southern New England unclassified.....	26	37	322	166,371	225,900	11,530	492,901	281,635	32,980	.....	216,884	6,805	2,522
Total.....	1386	13,193	38,547	16,834,877	20,903,879	1,201,008	47,080,903	36,079,382	5,800,513	3,876,708	23,611,223	3,118,934	206,846
Off Middle Atlantic States (area XXIII):													
South.....	56	96	502	2,240	1,410	.....	23,520	40,610	150	645	1,255	.....	.....
Grand total.....	1389	15,084	53,263	38,627,596	54,763,179	2,388,579	90,833,703	44,043,142	5,198,307	4,066,938	32,246,540	5,765,321	1,583,129

Area	Mackerel	Flounders						Swordfish	Whiting	Wolfish	Rosefish	Herring	Other	Total
		Gray sole	Lemon sole	Yellow-tail	Black-back	Dab	Other							
Gulf of St. Lawrence (area XIX):														
Treaty Coast														1,208,092
Magdalen Islands	67,230													2,898,299
Gulf of St. Lawrence, unclassified														122,745
Newfoundland Banks (area XX):														
Grand Bank														289,852
St. Pierre Bank														87,201
Newfoundland Banks, unclassified	1,500			4,053				547		406				422,492
Total	68,730			4,053				547		406				5,028,681
Off Nova Scotia (area XXI):														
Northeast Cape Breton								95,146						117,043
Misaine Bank		15,065		1,215	1,900	2,625				335	125			77,690
Banquereau	1,870	10,674	4,655	129,048	5,360	21,150	3,028	1,386		23,558	149,595		920	15,598,158
Canso	89,650	54,750				250				1,450			70	274,197
Middle Ground		158,132	14,024	127,595		21,045	2,050			28,711	35,340		70	4,279,434
Northeast Sable Island Bank	40	43,934	10,129	47,465	750	22,155				56,876	20,460		100	8,226,163
Southeast Sable Island Bank		8,342	7,700	346		9,095				16,232	19,025			1,696,965
Horseshoe Ground	2,000	2,484,371	60,864	195,038	1,770	34,059	53,832			151,736	94,207		2,290	17,765,016
Southwest Sable Island Bank		83,029	10,148	16,049	600	19,756	4,310			322,930	8,137		1,360	15,703,999
Eastern Nova Scotia	122,960	120,350				400				1,210				356,255
Emerald Bank	200	67,712	38,572	81,623	796	26,248	27,300	382		202,698	13,778		1,110	16,804,819
Central Nova Scotia	143,640													195,944
La Have Bank (including Sambro Bank)		18,204		10	15	1,390	50	11,253		10,448	12,500			1,190,300
Southern Nova Scotia	100	77,231	5,603	7,825	628	16,247	3,170	249	66,368	20,851	5,516,928		6,125	8,447,237
Browns Bank	170	236,299	36,206	25,851	6,123	147,515	6,815	295,699	65,052	427,321	13,348,893		668	48,261,056
Western Nova Scotia	1,600	32,810		18,500	400	835		934		17,375	241,545		6,032	3,711,218
Southern Bay of Fundy														170,913
Nova Scotia, unclassified	40	34,625	1,961	11,172		16,769	11,600			32,940	12,900			2,364,630
Total	362,170	3,445,528	189,862	661,737	18,342	339,539	112,155	405,049	131,420	1,314,671	19,473,433		18,745	145,241,037

¹ Exclusive of duplication.

Landings by fishing vessels at the three principal New England ports, 1938—Continued

SUMMARY: BY AREA—Continued

Area	Mackerel	Flounders						Swordfish	Whiting	Wolfish	Rosefish	Herring	Other	Total
		Gray sole	Lemon sole	Yellow-tail	Black-back	Dab	Other							
Off New England (area XXII):	<i>Pounds</i>	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
Northern Bay of Fundy.....	12,765					1,422			3,900		40,000			62,802
Eastern Maine.....	376,424		9,010	16,050	7,275	65,509	10,455		78,995	5,365	1,748,790		2,925	3,542,051
Central Maine.....	175,455	654,095	55,510	20,720	15,712	204,590	48,449		307,099	4,355	753,425	12,000	29,587	6,547,478
Western Maine.....	29,746	1,025,795	7,518	79,715	37,519	260,355	57,694		1,362,591	40,575	1,283,353	645	107,492	9,884,113
Eastern Massachusetts.....	8,139,937	903,090	5,155	945,420	347,075	653,213	35,923		7,882,510	65,775	1,189,913	1,700	1,095,572	41,014,444
Inner Grounds.....	25,600	98,698	8,535	13,257	9,274	37,406	3,770		9,260	4,620	9,174,304		1,466	14,783,622
Western Side South Channel.....	5,768,695	437,214	485,867	153,514	772,316	166,033	26,800	6,312	1,168,019	104,997	21,574,223		173,345	50,579,338
Eastern Side South Channel.....	25,080	267,657	292,628	70,652	97,618	650,813	21,155	3,153	64,425	114,926	8,648,144		353,151	26,669,977
Northern Edge of Georges.....	632	67,015	441,495	96,028	82,424	155,531	19,370	285,398	6,302	88,907	378,590		223,026	21,515,577
Northeast Peak of Georges.....	10,518	59,031	353,798	77,171	36,957	50,547	18,468	339,239	5,039	164,636	175,055		44,484	45,834,717
Central Georges.....	308	30,747	504,520	203,254	134,180	26,730	13,910	5,119	3,450	21,320	45,374		7,364	9,987,951
Southeast Georges.....	25	34,030	63,058	29,500	3,363	23,127	4,835	88,316		30,629	8,350		7,676	9,630,375
Southwest Georges.....	53,300	5,317	99,293	36,968	20,258	7,325	4,325	110,985	495	5,810	17,911		14,158	2,307,905
Lightship Grounds.....	26,100	3,760	20,065	120,950	55,613		620	3-,992		485	83,812		67,868	894,388
Nantucket Shoals.....		170	14,900	61,305	36,301	2,350				1,710	6,150		300	339,895
Off No Man's Land.....	3,109,565	515		454,900	100		95	1,510		90			17,150	3,677,594
Southern Massachusetts.....		350	25	114,100	1,165		735			625			5,137	128,407
Rhode Island Shore.....	26,700												89,650	116,350
Southern New England, unclassified.....		19,349	19,713	6,930	7,054	7,603	1,890	18,536	960	12,193	103,407		3,375	1,668,628
Total.....	17,391,661	3,996,022	2,381,090	2,500,524	1,664,204	2,312,554	268,494	893,560	10,893,045	667,018	45,230,896	14,345	2,248,726	249,185,412
Off Middle Atlantic States (area XXIII):														
South.....	3,131,965	440				3,155	680	23,569	3,240				22,090	3,254,969
Grand total.....	20,954,526	7,441,990	2,570,952	3,166,314	1,682,546	2,655,248	381,329	1,322,725	11,027,705	1,982,095	64,704,329	14,345	2,289,561	402,710,099

NOTE.—The weight of salted fish landed has been converted to the equivalent of fresh fish as landed. The roman numerals appearing in the stub of the above table refer to

the numbers given these regions by the North American Council on Fishery Investigations.

**SALES OF FISHERY PRODUCTS THROUGH THE NEW ENGLAND FISH EXCHANGE,
BOSTON, MASS.**

Fishery products landed at the Boston Fish Pier and sold through the New England Fish Exchange in Boston during 1939 aggregated 274,983,112 pounds. Sales through the Exchange reached a peak of 27,760,726 pounds in May, and their lowest level of 17,512,586 pounds in January. The average price for sales of all species of fish through the Exchange during 1939 amounted to \$2.79 per hundred pounds; the highest average price being \$3.34 per hundred pounds in October and the lowest \$2.05 in May.

The data covering sales through the New England Fish Exchange are collected through the Division's Fishery Market News Service and the figures vary from those shown for Boston in the section of this report entitled "Vessel Fisheries at the Principal New England Ports." The reason for this variation is that sales through the New England Fish Exchange include craft smaller than vessels, that is, craft of less than five net tons capacity, and further do not include landings elsewhere in Boston which are not sold through the Exchange.

Sales of fishery products through the New England Fish Exchange, Boston, Mass., 1939

VOLUME: BY SPECIES AND MONTHS

Month	Total farcas	Cod						Cusk			Flounders ³		
		Large ¹			Market ²			Offshore vessels	Inshore craft	Total	Offshore vessels	Inshore craft	Total
		Offshore vessels	Inshore craft	Total	Offshore vessels	Inshore craft	Total						
	<i>Number</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>
January	388	1,338,745	77,420	1,416,165	1,410,845	255,360	1,666,205	215,825	5,675	221,500	877,205	469,610	1,346,815
February	373	2,969,975	98,774	3,068,749	1,995,445	176,100	2,171,545	160,420	4,830	165,250	812,890	285,815	1,098,705
March	469	3,314,040	136,863	3,450,903	2,715,975	139,565	2,855,540	249,175	13,780	262,955	1,224,670	417,727	1,642,397
April	461	3,002,595	176,724	3,179,319	5,039,590	186,855	5,226,445	256,375	19,670	276,045	786,440	670,910	1,457,350
May	610	2,503,400	213,835	2,717,235	3,631,255	99,155	3,730,410	313,025	64,880	377,905	-----	813,275	813,275
June	646	1,318,500	133,505	1,452,005	3,613,645	94,573	3,708,218	85,575	45,035	130,610	-----	668,570	668,570
July	722	1,721,085	71,212	1,792,297	3,263,455	66,922	3,330,377	101,640	47,860	149,500	-----	645,325	645,325
August	780	1,362,500	27,420	1,389,920	2,783,975	42,735	2,826,710	248,140	43,740	291,880	-----	556,220	556,220
September	714	1,063,095	33,263	1,096,358	1,711,420	37,525	1,748,945	408,375	77,505	485,880	-----	697,985	697,985
October	623	1,360,505	45,708	1,406,213	1,949,825	62,975	2,012,800	596,420	55,255	651,675	-----	-----	-----
November	538	1,880,270	75,087	1,955,357	5,139,245	136,437	5,275,682	462,285	40,860	503,145	-----	-----	-----
December	532	1,857,405	125,465	1,982,870	2,642,290	263,230	2,905,520	532,425	21,465	553,890	-----	-----	-----
Total	6,856	23,692,115	1,215,276	24,907,391	35,896,965	1,561,432	37,458,397	3,629,680	440,555	4,070,235	3,701,205	5,225,437	8,926,642

Month	Blackbacks ⁴			Dabs ⁴			Sole ⁴						
	Offshore vessels	Inshore craft	Total	Offshore vessels	Inshore craft	Total	Gray			Lemon			
							Offshore vessels	Inshore craft	Total	Offshore vessels	Inshore craft	Total	
	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>
January	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
February	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
March	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
April	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
May	63,705	-----	63,705	135,362	-----	135,362	83,475	-----	83,475	435,425	-----	435,425	
June	56,095	-----	56,095	179,950	-----	179,950	29,030	-----	29,030	267,970	-----	267,970	
July	130,470	-----	130,470	27,200	-----	27,200	20,645	-----	20,645	228,470	-----	228,470	
August	207,455	-----	207,455	7,700	-----	7,700	9,860	-----	9,860	396,550	-----	396,550	
September	222,935	-----	222,935	13,200	-----	13,200	82,630	-----	82,630	246,085	-----	246,085	

October	171,760	32,230	203,990	39,170	172,530	211,700	127,735	123,525	251,260	278,760	18,605	297,365
November	33,965	45,060	79,025	27,700	48,255	75,955	66,485	33,900	100,385	146,650	4,885	151,535
December	19,495	32,220	51,715	54,325	72,000	126,325	129,550	75,640	205,190	116,785	150	116,935
Total	905,880	109,510	1,015,390	484,607	292,785	777,392	549,410	233,065	782,475	2,116,695	23,640	2,140,335

Month	Yellowtail ¹			Halibut			Haddock					
	Offshore vessels	Inshore craft	Total	Offshore vessels	Inshore craft	Total	Large			Scrod		
							Offshore vessels	Inshore craft	Total	Offshore vessels	Inshore craft	Total
	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>
January				28,994	68	29,062	5,135,550	42,770	5,178,320	1,959,745	25,320	1,985,065
February				75,610	116	75,726	6,491,665	85,260	6,576,825	2,805,650	16,995	2,822,645
March				172,093	87	172,180	9,934,415	95,360	10,029,775	3,514,995	13,655	3,528,650
April				183,767	539	184,306	7,629,650	108,765	7,738,415	3,065,240	40,815	3,106,055
May	186,645		186,645	154,472	937	155,409	8,537,175	266,335	8,803,510	3,810,235	158,035	3,968,270
June	150,490		150,490	147,589	82	147,671	5,354,900	354,495	5,709,395	3,163,450	372,175	3,535,625
July	25,650		25,650	161,059	101	161,160	5,976,460	472,138	6,448,598	4,773,505	308,550	5,082,055
August	39,720		39,720	106,782	406	107,188	5,925,355	282,680	6,208,035	6,385,225	154,460	6,539,685
September	40,625		40,625	78,181	123	78,304	5,094,500	214,910	5,309,410	4,745,525	164,140	4,909,665
October	53,975	556,565	610,540	54,898	138	55,036	4,829,950	257,166	5,087,116	4,188,310	226,340	4,414,650
November	148,117	197,640	345,757	11,769	309	12,078	3,205,135	271,415	3,476,550	2,147,145	205,855	2,353,000
December	184,735	176,150	360,885	17,826	133	17,959	5,163,665	155,760	5,319,425	2,821,460	100,925	2,922,385
Total	829,957	930,355	1,760,312	1,193,040	3,039	1,196,079	73,278,320	2,607,054	75,885,374	43,380,485	1,787,265	45,167,750

¹ Includes whale cod.

² Includes scrod cod.

³ Shown separately as blackbacks, dabs, gray sole, lemon sole, and yellowtails if taken by offshore vessels after April 1939 or by inshore craft after September 1939.

⁴ Included under flounders if taken before May 1939 by offshore vessels or before October 1939 by inshore craft.

Sales of fishery products through the New England Fish Exchange, Boston, Mass., 1939--Continued

VOLUME: BY SPECIES AND MONTHS--Continued

Month	Hake			Mackerel	Pollock			Rosefish		
	Offshore vessels	Inshore craft	Total	All craft ⁵	Offshore vessels	Inshore craft	Total	Offshore vessels	Inshore craft	Total
	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>
January	484,245	80,305	564,550	77,675	1,693,473	6,435	1,699,908	2,828,655	311,925	3,140,580
February	461,440	65,140	526,580		1,218,300	2,490	1,220,790	3,500,998	230,105	3,731,103
March	355,125	25,675	380,800		1,542,905	3,280	1,546,185	1,548,211	282,184	1,830,395
April	167,650	31,500	199,150		1,304,735	6,325	1,311,060	600,836	488,571	1,089,407
May	198,425	86,903	285,418	1,499,190	1,651,880	38,945	1,690,825	668,455	1,122,322	1,790,777
June	112,530	214,105	326,635	1,091,650	250,415	63,675	323,090	982,993	1,097,068	2,080,061
July	142,365	261,915	404,280	400,533	383,690	78,195	461,885	1,078,680	411,312	1,489,992
August	381,110	294,195	675,305	1,986,960	283,085	50,305	333,390	1,120,249	209,793	1,330,042
September	377,940	513,075	891,015	2,507,543	940,375	47,980	988,355	1,908,575	170,880	2,079,455
October	718,860	521,360	1,240,220	585,505	740,450	70,310	810,760	2,266,992	300,865	2,567,857
November	713,770	376,025	1,089,795	593,875	2,092,825	1,421,435	3,514,260	1,299,966	53,620	1,353,586
December	440,000	101,645	541,645	484,440	3,706,590	728,440	4,435,030	1,708,900	50,810	1,759,770
Total	4,553,460	2,571,933	7,125,393	9,227,371	15,817,723	2,517,815	18,335,538	19,513,570	4,729,455	24,243,025

Month	Swordfish	Whiting ⁶			Wolfish			Scallops, sea	Miscellaneous ⁷			Total		
	Offshore vessels	Offshore vessels	Inshore craft	Total	Offshore vessels	Inshore craft	Total	Offshore vessels	Offshore vessels	Inshore craft	Total	Offshore vessels	Inshore craft	Total
	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>
January		21,100	180	21,280	109,720	880	110,600	35,902	13,639	5,320	18,959	16,231,318	1,281,268	17,512,586
February					133,160	4,690	137,850	53,546	10,830	13,875	24,705	20,689,829	984,190	21,674,019
March		6,125	75	6,200	158,665	16,393	175,058	103,559	10,425	8,470	18,895	24,850,378	1,153,114	26,003,492
April		150	2,035	2,185	377,660	33,680	411,340	147,227	3,040	48,445	51,485	22,564,955	1,814,834	24,379,789
May		9,975	208,660	218,635	508,350	78,095	586,445	209,457	2,688	6,665	9,353	24,602,594	3,158,132	27,760,726
June	50,215	7,000	602,320	609,320	122,170	38,620	160,790	336,559	1,725	4,230	5,955	17,331,451	3,688,453	21,019,904
July	276,729	2,340	1,787,805	1,790,145	83,395	5,085	88,480	163,810	6,563	7,925	14,488	18,967,744	4,164,345	23,132,089
August	763,862	700	1,775,214	1,775,914	44,920	940	45,860	134,617	49,571	6,890	56,461	22,238,336	3,444,998	25,683,334
September	232,982		1,248,817	1,248,817	33,530	150	33,680	226,818	10,860	56,070	66,930	19,945,194	3,262,423	23,207,617
October	42,205	3,800	656,735	660,535	30,440	480	30,920	117,503	33,105	104,977	138,082	18,190,168	3,205,764	21,395,932
November			165,795	165,795	20,330	145	20,475	39,741	12,604	35,725	48,329	18,041,877	3,112,448	21,154,325
December		100	18,155	18,255	44,856	3,655	48,510	180,560	2,740	25,250	27,990	20,108,206	1,951,093	22,059,299
Total	1,365,993	51,290	6,466,791	6,517,081	1,667,195	182,813	1,850,008	1,749,299	157,790	323,842	481,632	243,762,050	31,221,062	274,983,112

PRICES: BY SPECIES AND MONTHS

Month	Total fares	Cod								Cusk			
		Large ¹				Market ²				Offshore vessels		Inshore craft	
		Offshore vessels		Inshore craft		Offshore vessels		Inshore craft					
		First sales prices	Average price	First sales prices	Average price	First sales prices	Average price	First sales prices	Average price	First sales prices	Average price	First sales prices	Average price
January.....	388	\$4.42-\$5.03	\$4.36	\$4.84-\$5.79	\$5.26	\$3.63-\$3.93	\$3.63	\$3.50-\$4.13	\$3.80	\$3.24	\$2.88	\$2.77-\$2.86	\$3.00
February.....	373	3.60- 3.79	2.92	3.64- 4.67	4.04	3.33- 3.59	3.14	3.02- 3.58	3.23	\$3.45- 3.52	2.92	3.96- 4.29	3.56
March.....	469	3.54- 3.70	3.13	3.92- 4.77	4.04	3.14- 3.34	3.03	3.28- 3.64	3.25	3.24	2.89	2.97- 3.34	3.38
April.....	461	2.02- 3.24	2.05	2.98- 4.20	3.51	1.81- 2.54	1.80	2.15- 2.93	2.80	2.21- 2.24	1.77	1.94- 2.04	1.74
May.....	610	2.04- 3.12	1.74	2.28- 3.27	2.47	1.74- 2.13	1.69	1.76- 2.49	2.20	1.30	1.16	1.00- 1.15	1.01
June.....	646	2.87- 3.95	2.55	2.83- 4.26	3.16	2.19- 2.65	1.92	2.26- 2.90	2.44	2.83- 2.86	2.10	1.90- 1.99	2.29
July.....	722	2.05- 2.89	2.12	2.20- 2.98	2.42	1.74- 2.08	1.74	1.88- 2.24	1.91	2.40- 2.55	1.77	1.50- 1.58	1.45
August.....	780	2.64- 3.59	2.65	2.74- 3.54	2.82	2.02- 2.67	1.98	2.21- 2.56	2.03	1.80- 1.84	1.44	1.48- 1.50	1.47
September.....	714	3.97- 5.06	4.12	3.88- 5.16	4.22	2.71- 3.59	2.76	3.00- 3.67	3.06	2.56- 2.62	2.18	2.18- 2.21	2.24
October.....	623	4.74- 5.97	4.64	3.96- 5.59	4.60	3.19- 4.12	3.42	3.19- 4.10	3.36	3.00- 3.04	2.71	2.56- 2.57	2.39
November.....	538	3.39- 5.15	3.17	3.79- 5.47	4.53	2.54- 3.94	2.69	3.20- 4.12	3.46	2.83- 2.88	2.60	2.81	2.62
December.....	532	3.40- 4.37	2.85	3.51- 4.83	3.69	3.04- 3.72	2.69	2.39- 3.52	3.10	2.73- 2.82	2.09	2.04- 2.09	2.26
Average.....	571	3.23- 4.15	2.87	3.35- 4.49	3.57	2.59- 3.18	2.38	2.65- 3.33	3.07	2.68- 2.72	2.25	2.02- 2.13	1.99

¹ Includes whale cod.

² Includes scrod cod.

³ Includes offshore vessels and inshore craft.

⁴ Includes dressed, round, and steak whiting.

⁷ Includes butterfish, sharks, skates, spawn, etc.

NOTE.—Quantities shown are weigh-outs of fishery products as landed. Each classification by variety includes all sizes unless otherwise noted.

Sales of fishery products through the New England Fish Exchange, Boston, Mass., 1939—Continued

PRICES: BY SPECIES AND MONTHS—Continued

Month	Flounders ³				Blackback ⁴				Dab ⁴			
	Offshore vessels		Inshore craft		Offshore vessels		Inshore craft		Offshore vessels		Inshore craft	
	First sales prices	Average price	First sales prices	Average price	First sales prices	Average price	First sales prices	Average price	First sales prices	Average price	First sales prices	Average price
January.....	\$2.75-\$11.85	\$3.81	\$2.02-\$5.91	\$3.32								
February.....	4.00-12.03	4.38	2.87-7.37	4.33								
March.....	3.32-8.49	4.16	2.30-6.56	3.70								
April.....	2.06-8.10	3.63	1.72-4.15	2.70								
May.....			1.27-4.14	2.42	\$1.84-\$1.92	\$1.28			\$1.13-\$1.25	\$0.97		
June.....			1.60-5.27	3.18	2.71-2.74	2.22			1.90-1.93	1.63		
July.....			2.43-5.30	3.17	2.82-2.96	2.52			2.55-2.92	2.42		
August.....			2.57-6.36	3.08	3.23-3.28	3.04			2.44	1.80		
September.....			2.35-6.78	2.88		3.83			2.50-2.55	2.02		
October.....					3.99-4.05	3.52	\$3.68-\$5.03	\$3.95	3.09-3.27	2.51	\$2.93-\$3.14	\$2.58
November.....					6.41-6.53	5.75	3.86-5.17	4.05	3.49-3.51	3.00	3.64-4.00	3.60
December.....					5.91-6.00	5.39	4.40-6.40	4.47	3.46-3.57	2.63	2.87-3.00	2.81
Average.....	3.03-10.04	4.01	2.12-5.74	3.06	3.71-3.78	3.20	3.92-5.41	4.15	2.50-2.59	1.77	3.14-3.37	2.81

Month	Sole ⁴								Yellowtail ⁴			
	Gray				Lemon				Offshore vessels		Inshore craft	
	Offshore vessels		Inshore craft		Offshore vessels		Inshore craft		First sales prices	Average price	First sales prices	Average price
	First sales prices	Average price	First sales prices	Average price	First sales prices	Average price	First sales prices	Average price	First sales prices	Average price	First sales prices	Average price
January.....												
February.....												
March.....												
April.....												
May.....	\$2.85-\$2.93	\$2.52			\$3.56-\$3.58	\$2.70			\$1.33-\$1.40	\$0.96		
June.....	4.12-4.17	3.62			5.66-6.74	4.63			1.86-1.94	1.78		
July.....	4.11-4.25	3.41			7.38	6.78			2.07-2.58	1.88		
August.....	5.56	3.69			6.19-6.21	5.34			3.14-3.21	2.22		

September.....	5.06- 5.09	3.89			7.61- 7.64	7.32			3.13- 3.20	2.57		
October.....	5.21- 5.55	4.73	\$4.32- \$8.33	\$6.21	7.14- 7.20	6.19	\$7.80	\$6.17	2.78- 3.05	2.32	\$2.91- \$3.69	\$1.63
November.....	7.99- 8.27	7.30	5.47- 10.78	7.47	10.61	9.68	10.00	8.28	3.19- 3.63	2.40	3.60- 4.19	2.77
December.....	7.61- 7.70	6.43	4.31- 9.22	5.99	12.10	10.70		2.00	2.70- 2.95	2.07	3.12- 3.44	2.15
Average.....	5.45- 5.59	4.85	4.66- 9.13	6.32	7.43- 7.46	5.79	8.43	6.58	2.52- 2.72	1.87	3.28- 3.86	1.97

Month	Halibut			Haddock							
	Offshore vessels		Inshore craft	Large				Scrod			
				Offshore vessels		Inshore craft		Offshore vessels		Inshore craft	
	First sales prices	Average price	Average price	First sales prices	Average price	First sales prices	Average price	First sales prices	Average price	First sales prices	Average price
January.....		\$20.78	\$22.65	\$4.22- \$4.86	\$3.93	\$4.50- \$5.09	\$5.66	\$2.99- \$3.06	\$2.80	\$2.20	\$2.60
February.....		16.58	28.78	3.97- 4.07	3.40	5.00- 5.42	5.60	2.65- 2.72	2.42	\$1.93- 1.98	1.94
March.....	\$13.00- \$20.00	15.65	23.90	3.57- 3.64	3.17	4.32- 5.05	5.05	2.89- 2.93	2.71	2.60	2.80
April.....	8.00- 13.25	12.54	16.78	2.90- 3.15	2.50	3.68- 4.45	3.88	2.14- 2.22	2.03	2.08- 2.21	2.10
May.....	8.50- 11.50	9.90	12.13	2.49- 2.66	2.14	3.22- 4.51	3.60	1.95- 2.01	1.74	1.75- 1.96	1.83
June.....	9.25- 13.75	10.77	13.44	3.27- 3.54	2.93	3.97- 5.05	4.16	2.16	2.02	2.11- 2.48	2.16
July.....	10.25- 14.25	11.46	15.00	2.41- 2.79	2.27	2.89- 3.72	3.16	1.94- 1.95	1.74	1.87- 2.10	1.93
August.....	10.50- 13.00	12.38	20.75	2.73- 3.18	2.50	3.44- 4.39	4.00	1.88- 1.89	1.74	1.91- 1.99	1.89
September.....	10.00- 15.50	12.38	18.37	3.26- 3.94	3.13	4.32- 5.31	4.83	2.26- 2.29	2.16	2.23- 2.43	2.28
October.....	10.00- 16.50	14.07	16.64	4.39- 5.11	3.98	4.53- 5.30	4.64	2.91- 3.01	2.79	2.15- 3.03	2.66
November.....		20.12	15.07	5.67- 6.12	5.11	5.43- 6.23	5.99	3.58- 3.86	3.18	2.42- 4.07	3.59
December.....		20.30	35.59	4.35- 4.65	3.76	4.83- 5.35	5.19	3.11- 3.23	2.67	2.72- 3.47	3.02
Average.....	9.90- 14.58	12.98	17.23	3.60- 3.96	3.09	4.04- 4.91	4.35	2.54- 2.60	2.23	2.15- 2.56	2.36

³ Shown separately as blackbacks, dabs, gray sole, lemon sole, and yellowtails if taken by offshore vessels after April 1939 or by inshore craft after September 1939.

⁴ Included under flounders if taken before May 1939 by offshore vessels or before October 1939 by inshore craft.

Sales of fishery products through the New England Fish Exchange, Boston, Mass., 1939—Continued

PRICES: BY SPECIES AND MONTHS—Continued

Month	Hake				Mackerel		Pollock			
	Offshore vessels		Inshore craft		All craft ^a		Offshore vessels		Inshore craft	
	First sales prices	Average price	First sales prices	Average price	First sales prices	Average price	First sales prices	Average price	First sales prices	Average price
January.....	\$3.63-\$4.34	\$3.58	\$3.66-\$3.96	\$3.64	\$1.50-\$2.50	\$2.02	\$1.48-\$1.60	\$1.37	\$1.34-\$1.48	\$1.68
February.....	3.60- 4.68	3.56	4.24- 4.69	3.44	-----	-----	2.30- 2.33	1.94	2.33- 2.50	1.79
March.....	4.86- 5.66	4.72	4.37- 5.25	4.34	-----	-----	2.47	2.18	2.12	1.95
April.....	4.03- 4.87	3.86	2.99- 3.21	2.76	-----	-----	1.94- 1.95	1.82	1.75- 1.94	1.78
May.....	2.19- 2.63	2.36	1.83- 2.28	2.18	3.54- 4.82	3.08	1.64- 1.70	1.50	1.52- 1.69	1.60
June.....	2.11- 2.29	2.14	2.07- 2.64	2.11	4.50- 5.30	3.82	2.56- 2.56	2.26	2.01- 2.42	2.14
July.....	1.65- 1.89	1.64	1.82- 2.13	1.85	4.90- 8.93	4.03	2.21- 2.24	1.87	1.90- 2.10	2.03
August.....	1.78- 1.99	1.78	1.82- 2.33	2.11	1.23- 6.91	2.60	2.56- 2.57	2.11	2.40- 2.55	2.38
September.....	2.28- 2.67	2.30	2.34- 2.95	2.83	1.69- 4.01	1.85	2.67	2.12	2.52- 2.63	2.59
October.....	2.65- 3.11	2.79	2.70- 3.09	2.83	4.75- 6.37	4.68	2.77- 2.84	2.55	2.46- 2.78	2.82
November.....	2.80- 3.07	2.81	2.73- 3.33	3.12	5.46- 7.40	3.14	2.16- 2.18	1.93	2.11- 2.13	1.96
December.....	3.33- 3.89	3.23	3.62- 3.99	3.37	4.92- 5.77	4.34	1.75- 1.77	1.64	1.79- 1.86	1.76
Average.....	2.90- 3.41	2.99	2.73- 3.22	2.68	3.55- 6.23	2.93	2.23- 2.26	1.82	2.08- 2.25	1.95

Month	Rosefish				Swordfish		Whiting ^a				
	Offshore vessels		Inshore craft		Offshore vessels		Offshore vessels		Inshore craft		
	First sales prices	Average price	First sales prices	Average price	First sales prices	Average price	First sales prices	Average price	First sales prices	Average price	
January.....	\$1.89-\$1.90	\$1.80	\$1.91-\$2.05	\$1.94	-----	-----	\$1.25	\$1.33	\$3.00	\$3.56	
February.....	1.83- 1.84	1.72	1.72- 2.34	1.78	-----	-----	-----	-----	-----	-----	
March.....	2.09	1.88	2.04	1.98	-----	-----	5.50	4.46	-----	5.00	
April.....	1.98	1.80	1.92- 1.93	1.90	-----	-----	-----	-----	6.00	5.50	
May.....	1.67- 1.77	1.36	1.62- 1.62	1.10	-----	-----	1.25	1.23	\$1.83- 2.29	1.55	
June.....	1.21	1.17	1.20- 1.23	1.17	\$28.78-\$37.22	\$30.44	-----	-----	.25	1.15- 1.67	1.20
July.....	1.34	1.32	1.12- 1.13	1.04	17.63- 27.61	24.47	-----	-----	.42	1.25- 1.29	1.25
August.....	1.22- 1.23	1.23	1.33- 1.36	1.12	12.73- 18.81	17.04	-----	-----	.50	1.24- 1.28	1.25
September.....	1.45	1.44	1.50- 1.51	1.44	15.71- 21.53	21.20	-----	-----	-----	1.30- 1.50	1.38

October.....	1.72- 1.73	1.70	1.54- 1.59	1.55	20.00- 27.33	25.17	2.00	.82	1.95- 2.42	2.12
November.....	1.91- 1.97	1.89	1.74- 1.84	1.56					2.12- 2.60	2.40
December.....	1.85- 1.91	1.69	1.73- 1.86	1.87				1.50	2.66- 2.86	2.46
Average.....	1.73- 1.75	1.64	1.59- 1.63	1.39	17.49- 25.00	20.00	2.08	1.46	1.63- 1.93	1.40

Month	Wolfish				Scallops, sea		Miscellaneous ⁷		All species		
	Offshore vessels		Inshore craft		Offshore vessels		Offshore vessels	Inshore craft	Offshore vessels	Inshore craft	All craft
	First sales prices	Average price	First sales prices	Average price	First sales prices	Average price	Average price	Average price	Average price	Average price	Average price
January.....	\$3.55-\$3.61	\$3.09	\$4.00-\$5.00	\$4.02	\$13.05	\$13.05	\$8.99	\$1.48	\$3.17	\$3.26	\$3.18
February.....	3.70- 3.72	3.40	3.81- 3.88	4.46	15.17	15.24	7.84	1.90	2.92	3.48	2.95
March.....	4.29- 4.32	3.83	4.22- 4.56	4.38	\$15.52-15.65	15.62	9.76	1.94	3.16	3.37	3.16
April.....	2.58- 2.59	2.26	2.38- 2.70	2.77	12.36-12.50	13.87	7.80	2.78	2.36	2.63	2.38
May.....	1.71- 1.75	1.70	1.56- 1.73	1.71	11.31	11.19	4.10	1.55	2.07	1.90	2.05
June.....	2.51	2.44	2.42- 2.60	2.48	11.01	10.95	4.70	1.62	2.76	2.13	2.65
July.....	2.82	2.64	2.56- 2.61	2.57	11.42	11.37	3.89	1.80	2.54	1.88	2.42
August.....	3.75	3.41		2.69	12.49	12.46	2.65	1.43	2.81	1.91	2.69
September.....	4.43	4.22		2.60	14.18	14.06	1.81	2.99	2.95	2.31	2.86
October.....	4.93	4.46		2.06	14.81	14.69	3.10	2.44	3.46	2.65	3.34
November.....	5.09- 5.16	4.75		5.17	16.88	16.72	2.30	1.81	3.22	2.89	3.17
December.....	4.28- 4.33	4.02	4.00	1.54	15.03-15.16	14.98	4.91	1.92	2.93	2.79	2.92
Average.....	3.54- 3.56	2.61	2.57- 2.78	2.42	13.18-13.22	13.03	4.27	2.36	2.84	2.40	2.79

⁵ Includes offshore vessels and inshore craft.

⁶ Includes dressed, round, and steak whiting.

⁷ Includes butterfish, sharks, skates, spawn, etc.

NOTE.—Prices are in dollars per hundredweight. First sales prices represent an un-weighted average. The average price always is weighted. Each classification by variety includes all sizes unless otherwise noted.

VESSEL LANDINGS OF FISHERY PRODUCTS AT NEW BEDFORD, MASS.

Landings of fishery products by fishing vessels (craft of 5 net tons capacity or greater) during 1939 amounted to 23,006,463 pounds, valued at \$1,343,048. The heaviest landings occurred in October, when 3,303,743 pounds were received, and the smallest landings occurred in April, when receipts amounted to 806,761 pounds. Sea scallops are particularly important in the landings at this port, being valued at \$609,570, or 45 percent of the total value of the landings of all species during the year.

Vessel landings of fishery products at New Bedford, Mass., 1939, by species and months

Month	Blackback		Butterfish		Cod		Dab		Eels		Fluke		Haddock	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
January	71, 229	\$6, 305	6, 150	\$377	101, 794	\$4, 169	1, 000	\$15			1, 000	\$155	189, 850	\$7, 305
February	69, 229	8, 279	17, 204	1, 432	79, 520	2, 852			1, 125	\$17	6, 985	788	76, 795	2, 670
March	252, 481	17, 540			145, 165	5, 125	2, 810	70	3, 620	112	1, 500	180	171, 125	5, 066
April	191, 959	7, 602	625	38	15, 915	410					16	1	31, 630	1, 253
May	628, 640	11, 229			73, 180	1, 832	1, 660	16	35	1	1, 974	164	68, 310	1, 574
June	623, 975	20, 941	300	9	19, 285	387	360	3			1, 261	132	120, 830	3, 021
July	520, 955	25, 112	9, 580	325	101, 565	2, 177	1, 040	24			3, 182	317	160, 810	3, 524
August	277, 291	19, 325	1, 825	49	60, 545	1, 311	315	6			12, 721	1, 242	123, 335	2, 596
September	242, 263	13, 217	3, 355	52	123, 915	3, 557			100	1	14, 477	1, 425	54, 800	1, 379
October	492, 998	29, 748	21, 170	654	300, 282	11, 065	375	7	165	5	35, 916	3, 566	142, 105	5, 226
November	205, 250	12, 752	63, 767	2, 069	311, 500	11, 452			3, 955	70	1, 591	152	247, 749	8, 782
December	146, 065	9, 609	65, 040	2, 621	176, 208	5, 992			140	2	108	6	167, 035	5, 316
Total	3, 422, 335	181, 659	189, 016	7, 626	1, 508, 874	50, 329	7, 560	141	9, 140	208	80, 731	8, 128	1, 554, 374	47, 712

Month	Hake		Halibut		Mackerel		Pollock		Rosefish		Scup		Sole, gray	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
January	1, 090	\$33			269, 330	\$12, 178	1, 200	\$12	33, 200	\$544			90	\$4
February	31, 105	646					115	3			720	\$12	155	9
March	50	2	105	\$12							4, 000	220	590	17
April	285	6	90	11							125	8	145	3
May	10, 905	181	275	28	642, 050	18, 597	6, 120	96	100	1			4, 795	125
June	6, 945	142	637	68	622, 305	19, 994	50	2					560	13
July	3, 450	66	58	8	101, 780	5, 281	125	1					770	27
August	2, 940	52			112, 750	5, 239							275	8
September	5, 305	119			438, 525	18, 048	3, 350	48			275	3		
October	13, 019	224			331, 150	15, 480	2, 235	36			3, 390	56		
November	3, 620	89	288	56	327, 013	9, 712	61, 595	1, 229			3, 730	109		
December	745	18	142	28	410, 780	13, 191	74, 265	1, 447			1, 795	68		
Total	79, 459	1, 568	1, 595	211	3, 255, 683	117, 720	149, 055	2, 874	33, 300	545	16, 180	604	7, 380	206

Vessel landings of fishery products at New Bedford, Mass., 1939, by species and months—Continued

Month	Sole, lemon		Swordfish		Tilefish		Tuna		Whiting		Wolffish		Yellowtail	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
January	114,000	\$14,320									100	\$3	1,071,520	\$23,887
February	30,664	3,437			10,225	\$465							1,074,125	32,118
March	39,800	2,895			38,725	2,095			4,000	\$100			1,074,980	27,493
April	54,220	3,199							200	3			488,110	13,855
May	119,810	4,236	1,600	\$444					1,200	24	3,130	24	431,020	4,805
June	18,125	890	11,512	3,899							250	3	241,661	3,388
July	31,640	2,717	55,328	12,503									421,178	5,460
August	56,135	4,874	55,088	10,313									581,780	9,190
September	47,715	3,931	1,508	262			10,700	\$1,242					1,329,800	18,553
October	257,740	24,850							5,480	73			1,615,753	20,871
November	127,225	12,957	330	12					3,605	41			1,054,222	17,997
December	35,200	3,280	3,000	105					2,375	24			1,335,820	22,941
Total	932,274	81,586	128,366	27,538	48,950	2,560	10,700	1,242	16,860	265	3,480	30	10,719,969	200,558

Month	Spawn		Miscellaneous ¹		Total fish		Scallops, sea		Squid		Total shellfish		Grand total	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
January			100	\$8	1,861,653	\$69,315	41,308	\$49,144			41,308	\$49,144	1,902,961	\$118,459
February	585	\$29	483	17	1,399,035	52,774	26,814	27,572	220	\$5	27,034	27,577	1,426,069	80,351
March			685	12	1,739,636	60,939	41,723	53,872			41,723	53,872	1,781,369	114,811
April			45	1	783,365	26,390	23,276	25,403	120	4	23,396	25,407	806,761	51,797
May			925	26	1,995,729	43,403	49,208	46,527			49,208	46,527	2,044,937	89,930
June			85	3	1,668,141	52,895	36,863	34,458			36,863	34,458	1,705,004	87,353
July					1,411,461	57,532	37,106	35,515	40	1	37,146	35,516	1,448,607	93,048
August					1,285,275	54,208	49,111	50,768			49,111	50,768	1,334,386	104,976
September					2,279,203	61,890	60,081	74,785			60,081	74,785	2,339,284	136,675
October			43	3	3,222,161	111,917	80,837	103,498	745	22	81,582	103,520	3,303,743	215,437
November			105	8	2,413,610	77,446	42,004	59,619	880	19	42,884	59,638	2,456,494	137,084
December			130	8	2,419,198	64,716	37,540	48,409	120	2	37,660	48,411	2,456,858	113,127
Total	585	29	2,601	86	22,478,467	733,425	525,871	609,570	2,125	53	527,996	609,623	23,006,463	1,343,048

¹ Includes rays, sea bass, gray sea trout, or weakfish, shad, sharks, and skates.

NOTE.—Volume of catch is shown in weights as landed which may be in the round or dressed condition. Data for sea scallops are shown in pounds of meats.

MACKEREL FISHERY OF THE ATLANTIC COAST ⁷

The mackerel season of 1938 extended from March 26, 1938, to January 24, 1939. One hundred and two vessels landed 29,844,100 pounds, an increase of 113 percent as compared with corresponding landings of the preceding year.

In this analysis, vessels include United States craft of 5 net tons capacity or over. Most of them are registered in Massachusetts. Purse seiners are classed as "regular" or "irregular" on the basis of their effort throughout the whole mackerel season. Regular seiners fished in all three major areas, and were active for more than two-thirds the duration of the Gulf of Maine fishery. Irregular seiners did not fish in the southern area, or ceased seining activity for 3 months or more during the time of the Gulf of Maine fishery. Vessels using purse seines may change gear and crew and engage in netting for a portion of the season, and during this time they are classed as netters. Allowance for such duplication has been made in the summary "Operating Units and Catch."

Mackerel fishery of the Atlantic coast, 1938 ¹

CATCH: BY AREAS IN 5-DAY PERIODS

Date	South (area XXIII)		Block Island (area XXII west of Nantucket Shoals)		Gulf of Maine (area XXII north of Nantucket Shoals)		Nova Scotia (area XXI)	Total
	Seiners	Netters	Seiners	Netters	Seiners	Netters	Seiners	
SPRING								
	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>
Mar. 26-31	11,800							11,800
Apr. 1-5	36,900							36,900
Apr. 6-10	26,600							26,600
Apr. 11-15	15,400	31,800						47,200
Apr. 16-20	284,600	156,500						441,100
Apr. 21-25	914,000	46,400						960,400
Apr. 26-30	1,003,100	8,100						1,011,200
May 1-5	1,261,700	57,300	39,600					1,358,600
May 6-10	2,060,000	51,800	102,000	9,700				2,223,500
May 11-15	460,300	106,600	435,200	14,300				1,016,400
May 16-20	365,300	20,900	544,500	5,900		500		937,100
May 21-25	118,600	12,400	1,380,400	3,800				1,515,200
May 26-31		1,300	924,900				60,000	986,200
June 1-5			351,400	5,600	8,700	200	29,700	395,600
June 6-10		1,700	9,000	600	54,900	8,400	250,100	324,700
June 11-15					1,391,200	2,900	16,700	1,410,800
June 16-20					1,222,200	2,200		1,224,400
June 21-25					345,800	3,400		349,200
June 26-30					110,200	100		110,300
SUMMER								
July 1-5					1,384,300			1,384,300
July 6-10					401,900			401,900
July 11-15					277,600			277,600
July 16-20					1,033,500			1,033,500
July 21-25					2,209,000			2,209,000
July 26-31					374,700			374,700
Aug. 1-5					583,000			583,000
Aug. 6-10					164,500			164,500
Aug. 11-15					163,400			163,400
Aug. 16-20					555,900			555,900

¹ Includes the catch made during the mackerel season, which extended from Mar. 26, 1938, to Jan. 24, 1939.

⁷ This section, prepared by J. R. Webster of the Division of Scientific Inquiry, includes landings at Cape May, Wildwood, and Atlantic City, N. J.; New York City, N. Y.; Newport and Block Island, R. I.; New Bedford, Woods Hole, Nantucket, Provincetown, Plymouth, Scituate, Boston, and Gloucester, Mass.; Portland, Rockland, New Harbor, Vinal Haven, Boothbay, and Monhegan, Maine, by purse seine vessels or "seiners" and drift-gill-net vessels or "netters." It does not include incidental catches by other vessels such as menhaden steamers, otter trawlers, line trawlers, etc., or by traps. The figures will differ somewhat from statistics published elsewhere in this document, due to different methods of collecting and tabulating the material.

Mackerel fishery of the Atlantic coast, 1938—Continued

CATCH: BY AREAS IN 5-DAY PERIODS—Continued

Date	South (area XXIII)		Block Island (area XXII west of Nantucket Shoals)		Gulf of Maine (area XXII north of Nantucket Shoals)		Nova Scotia (area XXI)	Total
	Seiners	Netters	Seiners	Netters	Seiners	Netters	Seiners	
SUMMER—continued	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
Aug. 21-25					611,700			611,700
Aug. 26-31					850,600			850,600
Sept. 1-5					138,000			138,000
Sept. 6-10					81,800	3,600		85,400
Sept. 11-15					638,900	3,100		642,000
Sept. 16-20					129,700			129,700
Sept. 21-25					9,300			9,300
Sept. 26-30					6,700	1,300		8,000
FALL AND WINTER								
Oct. 1-5					2,100	100		2,200
Oct. 6-10						300		300
Oct. 11-15			91,200		3,400			94,600
Oct. 16-20			1,187,100		800	400		1,188,300
Oct. 21-25	520,200		372,800			500		893,500
Oct. 26-31			128,700		2,000			130,700
Nov. 1-5	90,600					24,900		115,500
Nov. 6-10						70,600		70,600
Nov. 11-15	20,200		75,400			28,600		124,200
Nov. 16-20	1,100		35,400		61,600	4,300		102,400
Nov. 21-25	299,100		63,300		22,700	12,000		397,100
Nov. 26-30			500			2,400		2,900
Dec. 1-5			111,400			62,500		173,900
Dec. 6-10						32,300		32,300
Dec. 11-15		2,400			1,116,500	71,500		1,190,400
Dec. 16-20					803,900	24,800		828,700
Jan. 16-20			149,100					149,100
Jan. 21-25	28,000		309,700					337,700
Total	7,517,500	497,200	6,311,600	39,900	14,760,500	360,900	356,500	29,844,100

NOTE.—The roman numerals appearing in the box heads of the above table refer to the numbers given these areas by the North American Council on Fishery Investigations.

OPERATING UNITS AND CATCH: BY GEAR CLASSIFICATION AND GROUNDS

[Vessels of 5 net tons and over]

Designation	Vessels	Tonnage	Crew	Trips	Catch	
SPRING PERIOD						
South (area XXIII)						
Seiners:	Number	Net tons	Number	Number	Pounds	Value
Regular	30	1,263	392	212	5,166,200	\$129,816
Irregular	15	590	195	70	1,392,100	31,422
Netters	22	340	134	138	494,800	20,917
Block Island (area XXII—West of Nantucket Shoals)						
Seiners:						
Regular	30	1,263	392	98	2,944,500	63,442
Irregular	14	545	183	37	842,500	18,642
Netters	8	125	49	16	39,900	760
Gulf of Maine (area XXII—East of Nantucket Shoals)						
Seiners:						
Regular	29	1,198	378	113	2,433,100	49,969
Irregular	22	572	218	59	699,900	13,825
Netters	4	40	18	22	17,700	737
Nova Scotia (area XXI)						
Seiners:						
Regular	5	269	68	7	272,500	13,331

Mackerel fishery of the Atlantic coast, 1938—Continued

OPERATING UNITS AND CATCH: BY GEAR CLASSIFICATION AND GROUNDS

Designation	Vessels		Crew		Trips		Catch	
	Number	Net tons	Number	Number	Pounds	Value		
SPRING PERIOD—continued								
Nova Scotia—Continued								
Seiners—Continued								
Irregular.....	2	59	29	2	84,000		\$3,511	
Total by gear:								
Seiners:								
Regular.....	30	1,263	392	430	10,816,300		256,608	
Irregular.....	31	763	297	168	3,018,500		67,400	
Netters.....	26	388	151	176	552,400		22,414	
Total spring.....	184	12,373	1,823	774	14,387,200		346,422	
SUMMER PERIOD								
Gulf of Maine (area XXII—East of Nantucket Shoals)								
Seiners:								
Regular.....	30	1,263	392	515	7,712,000		205,497	
Irregular.....	31	763	297	229	1,902,500		51,620	
Netters.....	5	47	25	16	8,000		575	
Total summer.....	164	12,050	1,704	760	9,622,500		257,692	
FALL AND WINTER PERIOD								
South (area XXIII)								
Seiners:								
Regular.....	24	1,071	336	45	682,700		34,254	
Irregular.....	9	393	119	16	276,500		11,715	
Netters.....	1	15	7	1	2,400		170	
Block Island (area XXII)								
Seiners:								
Regular.....	29	1,244	405	107	2,147,900		98,884	
Irregular.....	8	340	112	21	376,700		15,971	
Gulf of Maine (area XXII—East of Nantucket Shoals)								
Seiners:								
Regular.....	25	1,071	346	51	1,426,200		70,337	
Irregular.....	13	388	131	24	586,800		26,146	
Netters.....	28	477	190	204	335,200		23,594	
Total by gear:								
Seiners:								
Regular.....	30	1,263	416	203	4,256,800		203,475	
Irregular.....	16	528	172	61	1,240,000		53,832	
Netters.....	28	477	190	205	337,600		23,764	
Total fall and winter.....	172	12,232	1,762	469	5,834,400		281,071	
SEASON OF 1938								
Seiners:								
Regular.....	30	1,263	392	1,148	22,785,100		665,580	
Irregular.....	37	1,008	375	458	6,161,000		172,852	
Netters.....	43	716	291	397	898,000		46,753	
Grand total.....	1102	12,846	1,006	2,003	29,844,100		885,185	

¹ Exclusive of duplication. Eight vessels engaged in both seining and netting during 1938.

NOTE.—The roman numerals appearing in the stub of the above table refer to the numbers given these regions by the North American Council on Fishery Investigations.

FISHERIES OF THE MIDDLE ATLANTIC STATES

(Area XXIII)⁸

The yield of the commercial fisheries of the Middle Atlantic States (New York, New Jersey, Pennsylvania, and Delaware) during 1938 amounted to 216,858,500 pounds valued at \$8,249,244 to the fishermen, representing a decrease of 18 percent in volume but an increase of 4 percent in value as compared with the catch in 1937. These fisheries gave employment to 7,549 fishermen, as compared with 7,720 in 1937.

There were 383 fishery wholesale and manufacturing establishments in these States in 1938, as compared with 419 in the previous year. In 1938 these establishments employed 6,196 persons, paid \$7,413,363 in salaries and wages, and produced manufactured products (canned, cured, packaged, and byproducts), valued at \$15,435,934. In 1937 the wholesale and manufacturing firms employed 6,839 persons, paid \$8,611,693 in salaries and wages, and produced manufactured products valued at \$18,658,605.

Fisheries of the Middle Atlantic States, 1938

SUMMARY OF CATCH

Product	New York		New Jersey		Pennsylvania	
	Pounds	Value	Pounds	Value	Pounds	Value
Fish.....	72,737,500	\$2,206,117	92,052,700	\$1,513,836	39,800	\$4,294
Shellfish, etc.....	18,479,500	2,986,716	16,042,200	1,394,425	-----	-----
Total.....	91,217,000	5,192,833	108,094,900	2,908,261	39,800	4,294

Product	Delaware		Total	
	Pounds	Value	Pounds	Value
Fish.....	16,984,100	\$103,239	181,814,100	\$3,827,486
Shellfish, etc.....	522,700	40,617	35,044,400	4,421,758
Total.....	17,506,800	143,856	216,858,500	8,249,244

OPERATING UNITS: BY STATES

Item	New York	New Jersey	Pennsylvania	Delaware	Total
Fishermen:					
On vessels.....	Number 1,032	Number 1,097	Number -----	Number 228	Number 2,357
On boats and shore:					
Regular.....	970	997	-----	31	1,998
Casual.....	1,367	1,517	31	279	3,194
Total.....	3,369	3,611	31	538	7,549
Vessels:					
Steam.....	1	-----	-----	6	7
Net tonnage.....	45	-----	-----	839	884
Motor.....	205	186	-----	7	398
Net tonnage.....	3,952	2,863	-----	136	6,951
Sail.....	1	3	-----	-----	4
Net tonnage.....	6	30	-----	-----	36
Total vessels.....	207	189	-----	13	409
Total net tonnage.....	4,003	2,893	-----	975	7,871

⁸ This is the number given to this area by the North American Council on Fishery Investigations. It should be explained that there are included in this area craft whose principal fishing ports are in the area but at times fish elsewhere. A notable example is the southern trawl fishery which extends into area XXIV. It should be observed that the persons engaged, gear and craft employed, and catch of the seed-oyster fishery are not included among the statistics of the fishery for market oysters and other species but are shown in separate tables in this section.

Fisheries of the Middle Atlantic States, 1938—Continued

OPERATING UNITS: BY STATES—Continued

Item	New York	New Jersey	Pennsylvania	Delaware	Total
Boats:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
Motor.....	717	889	—	25	1,631
Other.....	1,042	1,268	11	121	2,442
Accessory boats.....	50	55	—	6	111
Apparatus:					
Purse seines:					
Mackerel.....	4	—	—	—	4
Length, yards.....	1,390	—	—	—	1,390
Menhaden.....	8	4	—	6	18
Length, yards.....	3,130	1,150	—	3,666	7,946
Other.....	—	10	—	—	10
Length, yards.....	—	3,390	—	—	3,390
Haul seines.....	60	105	10	36	211
Length, yards.....	11,852	9,934	1,705	8,350	31,841
Gill nets:					
Anchor.....	—	40	—	—	40
Square yards.....	—	20,400	—	—	20,400
Drift.....	473	880	—	25	1,378
Square yards.....	808,651	558,407	—	44,540	1,411,598
Runaround.....	4	66	—	8	78
Square yards.....	13,640	244,510	—	3,760	261,910
Stake.....	709	1,371	—	18	2,098
Square yards.....	95,796	354,865	—	9,337	459,998
Lines:					
Hand.....	128	260	—	11	399
Hooks.....	132	425	—	22	579
Trawl.....	2,148	474	—	3	2,625
Hooks.....	153,750	274,300	—	8,400	436,450
Troll.....	—	340	—	—	340
Hooks.....	—	340	—	—	340
Trot with baits or snoods.....	59	24	—	—	83
Baits or snoods.....	31,400	21,150	—	—	52,550
Trot with hooks.....	19	—	—	—	19
Hooks.....	3,750	—	—	—	3,750
Pound nets.....	125	175	—	13	313
Weirs.....	—	99	—	—	99
Stop nets.....	—	61	—	7	68
Square yards.....	—	60,700	—	1,230	61,930
Fyke nets.....	396	814	—	206	1,416
Dip nets.....	91	106	—	64	261
Cast nets.....	—	3	—	—	3
Drag nets.....	20	—	—	—	20
Yards at mouth.....	40	—	—	—	40
Drop nets.....	—	1	—	—	1
Otter trawls:					
Fish.....	152	63	—	—	215
Yards at mouth.....	3,617	1,452	—	—	5,069
Wire baskets.....	—	3	—	—	3
Pots:					
Crab.....	—	10	—	—	10
Eel.....	2,014	1,244	—	271	3,529
Fish.....	1,210	9,505	—	—	10,715
Lobster.....	10,150	6,075	—	98	16,323
Harpoons.....	17	—	—	—	17
Spears.....	70	12	—	—	82
Dredges:					
Clam.....	32	65	—	8	105
Yards at mouth.....	52	68	—	10	130
Crab.....	2	64	—	8	74
Yards at mouth.....	4	98	—	9	111
Mussel.....	8	—	—	—	8
Yards at mouth.....	14	—	—	—	14
Oyster:					
Common.....	76	198	—	10	284
Yards at mouth.....	111	245	—	11	367
Suction.....	1	—	—	—	1
Yards at mouth.....	2	—	—	—	2
Scallop.....	52	4	—	—	56
Yards at mouth.....	187	14	—	—	201
Tongs:					
Oyster.....	180	166	—	—	346
Other.....	1,298	504	—	2	1,804
Rakes:					
Oyster.....	—	33	—	—	33
Other.....	325	768	—	—	1,093
Forks.....	369	1	—	—	370
Hoes.....	—	232	—	—	232

Fisheries of the Middle Atlantic States, 1938—Continued

CATCH: BY STATES

Species	New York		New Jersey		Pennsylvania		Delaware		Total	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
FISH										
Alewives.....	66,400	\$655	8,100	\$121			47,300	\$951	121,800	\$1,727
Amberjack.....			800	16					800	16
Anchovies.....	9,600	288							9,600	288
Bluefish.....	249,600	28,938	1,038,300	81,378			3,000	210	1,290,900	110,526
Bonito.....	111,300	5,551	693,900	25,357					805,200	30,908
Butterfish.....	4,495,200	170,512	4,103,500	135,512					8,598,700	306,024
Carp.....	205,300	10,387	383,700	29,271	2,800	\$189	35,800	2,860	627,600	42,707
Catfish and bullheads.....	36,100	5,348	120,600	5,595			25,100	757	181,800	11,700
Cod.....	8,538,600	393,401	2,252,400	74,358			57,300	1,732	10,848,300	469,491
Croaker.....	400	12	5,759,000	69,358			228,100	2,713	5,987,500	72,083
Cunner.....	2,300	46							2,300	46
Cusk.....	100	2							100	2
Drum:										
Black.....			1,500	21					1,500	21
Red or redfish.....			5,200	52					5,200	52
Eels:										
Common.....	219,400	13,316	129,300	13,941			27,200	3,899	375,900	31,156
Conger.....	11,400	216	26,500	309					37,900	525
Flounders:										
Gray sole.....	51,800	3,365	1,900	37					53,700	3,402
Lemon sole.....	613,300	47,980	26,600	1,548					639,900	49,528
Yellowtail and dab.....	3,010,000	66,695	301,800	5,139					3,312,400	71,834
Blackback.....	6,149,100	294,647	181,400	6,275					6,330,500	300,922
Fluke.....	2,452,100	208,809	2,083,100	167,632			3,100	208	4,538,300	376,649
Unclassified.....	33,500	1,665							33,500	1,665
Frigate mackerel.....	11,500	232	61,000	614					72,500	846
Gizzard shad.....							400	12	400	12
Goosefish.....			2,500	25					2,500	25
Grayfish.....	300	5	101,900	1,016					102,200	1,021
Groupers.....	4,500	225	12,600	370					17,100	595
Haddock.....	11,107,400	414,254	1,500	14					11,108,900	414,268
Hake.....	323,800	7,999	41,100	820					364,900	8,819
Halibut.....	47,800	5,977							47,800	5,977
Herring, sea.....	14,400	287	1,160,800	6,548					1,175,200	6,835
Hickory shad.....	2,300	40	27,000	198					29,300	238
Kingfish or "king mackerel".....	40,100	2,191	100,000	3,000					140,100	5,191
King whiting or "kingfish".....	2,300	65	102,500	4,147					104,800	4,202
Launce.....			100	3					100	3
Mackerel.....	1,786,200	65,368	2,136,400	83,133					3,922,600	148,496
Menhaden.....	22,632,600	102,597	48,101,000	164,246			16,207,000	72,990	86,940,600	339,833
Mullet.....			200	2			84,700	3,388	84,900	3,390
Pollock.....	805,700	5,746	101,200	2,152					406,900	7,898
Sand perch.....			1,100	12					1,100	12
Scup.....	2,491,900	61,814	4,950,300	60,829					7,442,200	122,643

Sea bass	284,700	22,163	1,964,400	104,187					2,249,100	126,350
Sea robin	11,700	231	73,200	754					84,900	985
Shad	1,071,300	59,039	2,492,000	222,480	13,900	2,978	14,400	2,385	3,591,600	286,882
Sharks	11,000	72	130,200	1,912					141,200	1,984
Silversides			1,500	15					1,500	15
Skates	31,000	512	107,800	607					138,800	1,119
Smelt	400	24							400	24
Snapper, red	3,800	190	28,200	1,808					32,000	1,998
Spanish mackerel	200	6	9,400	795					9,600	801
Spot			183,600	3,427			2,100	63	185,700	3,490
Squeteagues or "sea trout," gray	1,056,900	77,080	6,288,700	156,805			197,600	6,406	7,543,200	240,291
Squirrel hake			161,700	1,627					161,700	1,627
Striped bass	138,900	17,185	147,000	17,425			24,900	2,490	310,800	37,100
Sturgeon	5,000	1,474	5,100	652					10,100	2,126
Suckers	17,900	517	50,200	1,905	23,100	1,127			91,200	3,549
Sunfish	1,000	30							1,000	30
Swellfish	57,200	2,000	1,500	15					58,700	2,015
Swordfish	51,500	9,591							51,500	9,591
Tautog	11,600	459	30,600	697			1,400	42	43,600	1,198
Tilefish	807,600	24,445	100	4					807,700	24,449
Tomcod	4,700	198							4,700	198
Tuna	148,100	6,676	107,500	3,276					255,600	9,952
White perch	33,800	1,173	19,500	1,955			17,400	1,780	70,700	4,908
Whiting	3,955,900	64,255	6,228,500	50,135					10,184,400	114,390
Wolfish	6,200	169							6,200	169
Yellow perch	200	10	3,200	306			7,300	353	10,700	669
Total	72,737,500	2,206,117	92,052,700	1,513,836	39,800	4,294	16,984,100	103,239	181,814,100	3,827,486
SHELLFISH, ETC.										
Crabs:										
Hard	387,300	23,751	1,113,300	32,426			183,800	4,585	1,684,400	60,762
King			2,460,000	5,707			81,200	163	2,541,200	5,870
Soft and peelers	34,400	13,932	319,600	103,767			85,000	17,000	439,000	134,699
Lobsters	244,400	53,297	326,900	47,578			3,100	927	574,400	101,802
Shrimp	125,000	21,250							125,000	21,250
Clams:										
Hard, public ¹	2,008,500	352,407	2,710,700	348,510			4,400	559	4,723,600	701,476
Hard, private ¹	234,900	40,938	214,200	27,536			20,000	2,775	469,100	71,249
Soft, public ²	371,800	33,928	874,700	54,423					1,246,500	88,351
Surf or skimmer	808,800	51,537	804,900	20,301					1,613,700	71,838
Conchs	7,000	695							7,000	695
Mussels, sea	240,800	18,135					1,900	323	242,700	18,458
Oysters, market: ³										
Public, spring	210,000	49,344	20,900	2,729					230,900	52,073
Public, fall	200,300	47,109	114,300	11,464					314,600	58,573
Private, spring	5,153,900	884,391	2,745,900	342,930					7,899,800	1,227,321
Private, fall	4,642,400	976,385	2,916,700	367,830			139,700	14,001	7,698,800	1,358,216

¹ Statistics on hard clams are based on yields of 8 pounds of meats per standard bushel in New York, 9.49 pounds in New Jersey, and 9.52 pounds in Delaware.

² Statistics on soft clams are based on yields of 16 pounds of meat per standard bushel in New York and 19.04 pounds in New Jersey.

³ Statistics on oysters are based on yields of 7.5 pounds of meats per standard bushel in New York, 5.76 pounds in New Jersey, and 6.67 pounds in Delaware.

Fisheries of the Middle Atlantic States, 1938—Continued

CATCH: BY STATES—Continued

Species	New York		New Jersey		Pennsylvania		Delaware		Total	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
SHELLFISH, ETC.—continued										
Scallops:										
Bay.....	21,100	6,003							21,100	6,003
Sea.....	2,944,800	350,242	114,000	8,790					3,058,800	359,032
Squid.....	758,900	14,252	1,288,000	19,443					2,046,900	33,695
Turtles:										
Green.....			3,900	39					3,900	39
Loggerhead.....			5,500	55					5,500	55
Snapper.....	35,500	2,480	8,700	897			3,600	284	47,800	3,661
Bloodworms.....	22,900	21,620							22,900	21,620
Sandworms.....	26,800	25,020							26,800	25,020
Total.....	18,479,500	2,986,716	16,042,200	1,394,425			522,700	40,617	35,044,400	4,421,758
Grand total.....	91,217,000	5,192,833	108,094,900	2,908,261	39,800	4,294	17,506,800	143,856	216,858,500	8,249,244

Notes.—Data on the yield of shellfish meats per bushel are based on United States standard bushels of 2,150.4 cubic inches capacity. Prior to 1938 yields were based on bushels of the size prescribed by individual State regulations.

Statistics on the yield of fishery products for the Middle Atlantic States include the catch made by craft from this area in the southern trawl fishery as well as in other fisheries in the South Atlantic. The seed oyster fishery in the Middle Atlantic States was prosecuted in New York, New Jersey, and Delaware. In New York, 81 fishermen using 6 motor vessels, 19 motorboats, 32 other boats, 11 dredges, and 51 tongs, took 48,268 bushels of seed oysters, valued at \$51,232, from public beds, and 23,841 bushels, valued at \$27,346, from private beds. 47 of these fishermen are duplicated among those fishing for market oysters or other species. Similarly, the following craft and gear are duplicated: 1 motor vessel, 15 motorboats, 22 other boats, 2 dredges and 37 tongs. In New Jersey, 1,475 fish-

ermen, using 2 motor vessels, 117 sail vessels, 83 motorboats, 18 other boats, 238 dredges, and 106 tongs, took 1,548,110 bushels of seed oysters, valued at \$469,903 from public beds, and 1,500 bushels, valued at \$600, from private beds. Of the total number of persons fishing for seed oysters in New Jersey, 1,462 are duplicated among those fishing for market oysters or other species. Similarly, the following craft and gear are duplicated: 2 motor vessels, 72 sail vessels, 81 motorboats, 17 other boats, 144 dredges, and 103 tongs. In Delaware, 41 fishermen using 5 motor vessels, 1 sail vessel, and 6 dredges, took 52,300 bushels of seed oysters, valued at \$9,430, from public beds. Of the total number of persons fishing for seed oysters in Delaware, 18 are duplicated among those fishing for market oysters or other species. Similarly, the following craft and gear are duplicated: 2 motor vessels and 4 dredges.

Fisheries of the Middle Atlantic States, 1938—Continued

SUPPLEMENTARY TABLE SHOWING THE PRODUCTION OF CERTAIN SHELLFISH IN NUMBER AND BUSHELS

Product	New York		New Jersey		Delaware		Total	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Crabs:								
Hard.....number..	1,161,900	\$23,751	3,339,900	\$32,426	551,400	\$4,585	5,053,200	\$60,762
King.....do.....			615,000	5,707	20,300	163	685,300	5,870
Soft and peelers.....do.....	137,600	13,932	1,278,400	103,767	340,000	17,000	1,756,000	134,699
Clams:								
Hard, public.....bushels..	251,062	352,407	285,638	348,510	462	559	537,162	701,476
Hard, private.....do.....	29,362	40,938	22,571	27,536	2,101	2,775	54,034	71,249
Soft, public.....do.....	23,237	33,928	45,940	54,423			69,177	88,351
Surf or skimmer.....do.....	67,400	51,537	47,825	20,301			115,225	71,838
Conchs.....do.....	389	695					389	695
Mussels, sea.....do.....	24,080	18,135			166	323	24,246	18,458
Oysters, market:								
Public, spring.....do.....	28,000	49,344	3,628	2,729			31,628	52,073
Public, fall.....do.....	26,707	47,109	19,844	11,464			46,551	58,573
Private, spring.....do.....	687,187	884,391	476,719	342,930			1,163,906	1,227,321
Private, fall.....do.....	618,987	976,385	506,372	367,830	20,945	14,001	1,146,304	1,358,216
Scallops:								
Bay.....do.....	4,220	6,003					4,220	6,003
Sea.....do.....	490,800	350,242	26,573	8,790			517,373	359,032

NOTE.—Bushels represent U. S. Standard Bushels of 2,150.4 cubic inches capacity. Prior to 1938 data on bushels of shellfish were based on bushel measures of the size prescribed by individual State regulations. For more detailed information concerning shellfish measures the reader is referred to the section on conversion factors, p. 548 of this document.

Industries related to the fisheries of the Middle Atlantic States, 1938

OPERATING UNITS, SALARIES, AND WAGES

Item	New York	New Jersey	Pennsylvania	Delaware	Total
Transporting:					
Persons engaged:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
On vessels.....	110	24			134
On boats.....		104			104
Total.....	110	128			238
Vessels, motor.....	24	10			34
Net tonnage.....	431	137			568
Boats.....		82			82
Wholesale and manufacturing:					
Establishments.....	218	112	41	12	383
Persons engaged:					
Proprietors.....	44	89	37	9	179
Salaried employees.....	719	142	77	14	952
Average for season.....	2,997	1,436	330	302	5,065
Average for year.....	2,295	912	252	139	3,598
Paid to salaried employees.....	\$2,060,806	\$319,206	\$141,064	\$18,760	\$2,539,836
Paid to wage earners.....	\$3,575,952	\$865,637	\$312,667	\$119,271	\$4,873,527
Total salaries and wages.....	\$5,636,758	\$1,184,843	\$453,731	\$138,031	\$7,413,363
Fishermen manufacturing.....	234	53			287

Industries related to the fisheries of the Middle Atlantic States, 1938—Continued

PRODUCTS MANUFACTURED

Item	New York		New Jersey		Pennsylvania		Delaware	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
By manufacturing establishments:								
Buffalofish, smoked pounds	441,300	\$107,481						
Butterfish, smoked do	476,200	119,280	73,000	\$22,500	(1)	(1)		
Carp, smoked do	174,200	53,719	(1)	(1)				
Cisco, chubs, and tullibees, smoked pounds	3,001,200	889,781	(1)	(1)	(1)	(1)		
Cod, fresh fillets do	3,408,900	444,158	607,600	71,070				
Eels, smoked do	7,000	1,576						
Flounders, fresh fillets pounds	1,522,300	256,602	219,000	37,380				
Haddock, fresh fillets pounds	2,194,100	275,782	1,790,400	221,260				
Hake, fresh fillets pounds	105,500	10,550						
Herring, sea, smoked, bloaters pounds	92,300	22,098	(1)	(1)	356,200	\$40,769		
Lake trout, smoked pounds	136,400	45,336	(1)	(1)	(1)	(1)		
Mackerel, smoked pounds	543,500	97,312	(1)	(1)	(1)	(1)		
Pollock, fresh fillets pounds	45,500	5,130						
Paddlefish or spoonbill cat, smoked pounds	255,200	163,233						
Salmon:								
Smoked do	5,522,600	1,628,184	391,225	138,594	(1)	(1)		
Kippered do	159,500	47,906	(1)	(1)	(1)	(1)		
Caviar, canned standard cases	1,563	28,077						
Shad, smoked pounds	83,700	16,952			(1)	(1)		
Sturgeon:								
Smoked do	374,300	319,749	(1)	(1)	(1)	(1)		
Caviar, canned standard cases	2,491	307,298						
Whitefish:								
Smoked pounds	946,000	230,259	140,250	47,755	(1)	(1)		
Caviar, canned standard cases	325	6,660						
Clams:								
Hard:								
Fresh-shucked gallons					5,635	11,781		
Chowder, canned standard cases	(1)	(1)	179,133	648,776				
Soft, fresh-shucked gallons			12,470	12,470				
Marine-shell products:								
Buttons gross	1,254,224	688,604	1,495,932	1,153,457	(1)	(1)		
Novelties		76,200		78,604				
Oysters, fresh-shucked gallons	332,277	674,337	402,886	722,915	67,700	127,730	(1)	(1)
Oyster-shell products:								
Poultry feed tons	(1)	(1)	4,514	35,228	(1)	(1)	(1)	(1)
Lime do	(1)	(1)	1,480	6,567	(1)	(1)	(1)	(1)
Whale oil gallons	7,254,300	3,025,831						
Unclassified products:								
Smoked pounds			² 692,900	³ 308,576	³ 1,596,600	³ 488,324		
Canned standard cases	⁴ 18,375	⁴ 222,232	(⁵)	(⁵)			(⁵)	(⁵)
Byproducts	(⁵)	(⁵)		⁶ 416,223	(⁵)	(⁵)	(⁵)	(⁵)
Miscellaneous		⁷ 379,013		⁸ 195,648	⁹ 319,511	⁹ 100,805		¹⁰ \$406,162
Total		10,143,340		4,117,023		769,409		406,162

¹ The production of this item is included under "Unclassified products."

² Includes smoked bluefish, carp, cisco, chub, cod, finnan haddie, haddock fillets, sea herring bloaters, lake trout, mackerel, scup, sturgeon, tullibees; and kippered salmon.

³ Includes smoked butterfish, chub, cisco, haddock fillets, lake trout, mackerel, salmon, shad, sturgeon, tullibees, and whitefish; and kippered herring and salmon.

⁴ Includes canned pickled eels, pickled sea mussels, fish paste, clam products, and turtle and terrapin products.

⁵ This item has been included under "Miscellaneous."

⁶ Includes tuna and mixed liver oils, miscellaneous fish oil, king crab scrap, and menhaden products.

⁷ Includes fresh fillets of mackerel and halibut; halibut liver oil; menhaden products; crushed oyster-shell products; fresh-water mussel-shell buttons; and miscellaneous fish meal.

⁸ Includes salted boneless cod; and canned oysters, hard and soft clam products, shore dinners, fish chowder, and shellfish newberg.

⁹ Includes pickled sea herring, king crab and miscellaneous dry scrap, marine-shell buttons, and crushed oyster-shell products.

¹⁰ Includes fresh-shucked oysters; canned alewives and alewife roe; crushed oyster-shell products; king crab scrap; and menhaden products.

Industries related to the fisheries of the Middle Atlantic States, 1938—Continued

PRODUCTS MANUFACTURED—Continued

Item	New York		New Jersey		Pennsylvania		Delaware	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
By fishermen:								
Butterfish, smoked pounds	400	\$80						
Eels, smoked do	33,900	7,940	8,000	\$2,500				
Herring roe, salted pounds			2,100	357				
Whiting, smoked pounds	1,200	240						
Scallops:								
Bay, fresh-shucked gallons	2,361	5,903						
Sea, fresh-shucked gallons	303,509	317,751	12,661	10,634				
King crab meal tons			85	2,565				
Total		331,914		16,056				
Grand total		10,475,254		4,133,079		\$769,409		\$406,162

NOTE.—The total value of the manufactured products for the Middle Atlantic States was as follows: By manufacturing establishments, \$15,435,934, and by fishermen, \$347,970. Some of the above products may have been manufactured from fishery products imported from another State or a foreign country, therefore they cannot be correlated directly with the catch within the State. Of the total number of persons engaged on transporting craft, 212 have been included as fishermen, and among the total number of persons engaged in the preparation of fishermen's prepared products, all have been included as fishermen. The whale products shown above were manufactured on floating factory ships operating in the Southern Hemisphere.

NEW YORK

Fisheries of New York, 1938

OPERATING UNITS: BY GEAR

Item	Purse seines		Haul seines, common	Gill nets			Lines	
	Mackerel	Menhaden		Drift	Run-around	Stake	Hand	Trawl
Fishermen:								
On vessels	74	205		21	17		74	110
On boats and shore:								
Regular			47	44		86	48	64
Casual			118	417		170	6	
Total	74	205	165	482	17	256	128	174
Vessels:								
Steam		1						
Net tonnage		45						
Motor	4	7		3	4		15	13
Net tonnage	195	549		40	49		227	318
Total vessels	4	8		3	4		15	13
Total net tonnage	195	594		40	49		227	318
Boats:								
Motor			11			45	22	49
Other			52	228		97	6	
Accessory boats	7	17		1	2			16
Apparatus:								
Number	4	8	60	473	4	709	128	2,148
Length, yards	1,390	3,130	11,852					
Square yards				808,651	13,640	95,796		
Hooks, baits, or snoods							132	153,750

Fisheries of New York, 1938—Continued

OPERATING UNITS: BY GEAR—Continued

Item	Lines—Con.		Pound nets	Fyke nets	Dip nets	Drag nets	Otter trawls, fish	Pots, eel
	Trot with baits or snoods	Trot with hooks						
Fishermen	Number	Number	Number	Number	Number	Number	Number	Number
On vessels				2			426	2
On boats and shore:								
Regular	68	1	94	23	20	30	106	37
Casual	50	34		124	80	10		89
Total	118	35	94	149	100	40	532	128
Vessels, motor				1			99	1
Net tonnage				12			1,954	12
Boats:								
Motor	50		1	2		20	53	9
Other	61	18	10	82	91			62
Apparatus:								
Number	59	19	125	396	91	20	152	2,014
Yards at mouth						40	3,617	
Hooks, baits, or snoods	31,400	3,750						

Item	Pots—Con.				Dredges					
	Fish	Lob- ster	Har- poons	Spears	Clam	Crab	Mus- sel	Oyster		Seal- lop
	Number	Number	Number	Number	Number	Number	Number	Number	Number	Number
Fishermen										
On vessels		6	49		14		2	135	4	149
On boats and shore:										
Regular	24	99	10	22	20	2	6	14		
Casual	19	21		48						
Total	43	126	59	70	34	2	8	149	4	149
Vessels, motor		3	12		6		1	34	1	26
Net tonnage		21	288		64		13	594	20	596
Boats:										
Motor	20	56	5	10	10	1	3	7		
Other		5		35						
Accessory boats:			12							
Apparatus:										
Number	1,210	10,150	17	70	32	2	8	76	1	52
Yards at mouth					52	4	14	111	2	187

Fisheries of New York, 1938—Continued

OPERATING UNITS: BY GEAR—Continued

Item	Tongs		Rakes, other than for oysters	Forks	By hand, other than for oysters	Total, exclusive of dupli- cation
	Oyster	Other				
Fishermen:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
On vessels.....	7	54	1			1,032
On boats and shore:						
Regular.....	147	707	122	121		970
Casual.....	27	537	202	248	12	1,367
Total.....	181	1,298	325	369	12	3,369
Vessels:						
Steam.....						1
Net tonnage.....						45
Motor.....	5	34	1			205
Net tonnage.....	43	225	7			3,952
Sail.....		1				1
Net tonnage.....		6				6
Total vessels.....	5	35	1			207
Total net tonnage.....	43	231	7			4,003
Boats:						
Motor.....	147	707	54			717
Other.....	83	612	270		12	1,042
Accessory boats.....						50
Apparatus, number.....	180	1,298	325	369		

CATCH: BY GEAR

Species	Purse seines				Haul seines		Gill nets, drift	
	Mackerel		Menhaden		Pounds	Value	Pounds	Value
	Pounds	Value	Pounds	Value				
Alewives.....					9,200	\$82	8,200	\$83
Bluefish.....					1,900	287	5,000	600
Butterfish.....					200	6		
Carp.....					145,800	6,825	3,000	180
Catfish and bullheads.....					9,200	1,415		
Eels, common.....					100	6		
Flounders:								
Blackback.....					7,300	362		
Fluke.....					100	7		
Kingfish or "king mackerel".....					18,100	906		
Mackerel.....	385,600	\$12,944					105,300	4,620
Menhaden.....			22,100,000	\$99,934				
Scup.....					39,400	1,184		
Shad.....					11,600	620	946,000	52,554
Squeteagues or "sea trout," gray.....					300,700	21,049		
Striped bass.....					71,100	8,583	15,300	1,838
Sturgeon.....					100	15	2,800	1,030
Suckers.....					2,900	87		
White perch.....					2,600	79	1,600	50
Shrimp.....					25,000	4,250		
Total.....	385,600	12,944	22,100,000	99,934	645,300	45,763	1,087,200	60,955

Fisheries of New York, 1938—Continued

CATCH: BY GEAR—Continued

Species	Gill nets—Continued				Lines			
	Runaround		Stake		Hand		Trawl	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Alewives			3,700	\$37				
Bluefish	5,000	\$580	17,100	2,046	77,100	\$8,822		
Bonito					400	8		
Butterfish			3,900	150			100	\$3
Carp			45,000	2,696				
Catfish and bullheads			200	30				
Cod					182,000	5,963	1,759,500	79,189
Cusk							100	2
Eels:								
Common					1,200	72		
Conger							2,900	58
Groupers					4,500	225		
Haddock							29,800	1,235
Hake							78,500	1,734
Halibut							700	84
Kingfish or "king mackerel"			1,000	25				
King whiting or "kingfish"			2,000	40				
Mackerel	206,100	6,595	48,300	1,167	34,600	888		
Pollock					53,000	1,060	47,400	743
Scup			500	15	8,200	235	1,200	36
Sea bass			300	24	48,000	3,691		
Shad			14,900	815				
Sharks					100	2		
Skates							1,300	17
Snapper, red					3,800	190		
Squeteagues or "sea trout," gray	13,900	1,022	118,000	9,443	1,800	144	27,700	2,207
Striped bass			17,500	2,118	1,800	216		
Sturgeon			800	205				
Suckers			400	13				
Swordfish							200	19
Tilefish							805,100	24,339
Tuna					500	10		
White perch			20,600	702				
Whiting							400	6
Total	225,000	8,197	294,200	19,526	417,000	21,526	2,754,900	109,672

Species	Lines—Continued				Pound nets		Fyke nets	
	Trot with baits or snoods		Trot with hooks		Pounds	Value	Pounds	Value
	Pounds	Value	Pounds	Value				
Alewives							24,600	\$246
Bluefish					143,400	\$16,598		
Bonito					170,800	5,539		
Butterfish					2,719,500	106,296		
Carp			400	\$24			11,100	662
Catfish and bullheads			1,500	267			25,200	3,636
Cod					100	6		
Eels, common			1,800	107	14,300	858	21,700	1,305
Flounders:								
Blackback					32,200	1,369	91,000	4,670
Fluke					62,300	8,204		
Frigate mackerel					11,500	232		
Herring, sea					5,900	106		
Hickory shad					2,300	40		
Kingfish or "king mackerel"					21,000	1,260		
Mackerel					979,700	38,399		
Menhaden					532,600	2,663		
Pollock					21,400	435		
Scup					478,500	15,305		
Sea bass					44,000	2,382		
Sea robin					9,200	182		
Shad					98,800	5,050		
Sharks					7,900	39		
Skates					2,100	23		
Smelt							400	24
Spanish mackerel					200	6		
Squeteagues or "sea trout," gray					545,100	39,356		
Striped bass					32,300	4,325	100	14

Fisheries of New York, 1938—Continued

CATCH: BY GEAR—Continued

Species	Lines—Continued				Pound nets		Fyke nets	
	Trot with baits or snoods		Trot with hooks					
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Sturgeon.....					300	\$38		
Suckers.....							14,600	\$417
Sunfish.....							1,000	30
Swellfish.....					57,200	2,000		
Tautog.....					11,400	454		
Tomcod.....			400	\$20			4,300	178
Tuna.....					147,600	6,666		
White perch.....							9,000	342
Whiting.....					124,200	2,452		
Yellow perch.....							200	10
Crabs, hard.....	369,900	\$22,863						
Squid.....					80,500	1,610		
Turtles, snapper.....	35,500	2,480						
Total.....	405,400	25,343	4,100	418	6,296,300	281,893	203,200	11,534

Species	Dip nets		Drag nets		Otter trawls		Pots	
							Pounds	Value
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Alewives.....					20,700	\$207		
Anchovies.....					9,600	288		
Bluefish.....					100	5		
Bonito.....					100	4		
Butterfish.....					1,771,500	64,057		
Cod.....					6,597,000	308,243		
Croaker.....					400	12		
Cunner.....					2,300	46		
Eels:								
Common.....							158,500	\$9,660
Conger.....					8,500	158		
Flounders:								
Gray sole.....					51,800	3,365		
Lemon sole.....					613,300	47,980		
Yellowtail and dab.....					3,010,600	66,695		
Blackback.....					6,018,600	288,246		
Fluke.....					2,389,700	200,598		
Unclassified.....					33,500	1,665		
Grayfish.....					300	5		
Haddock.....					11,077,000	413,019		
Hake.....					245,300	6,265		
Halibut.....					47,100	5,893		
Herring, sea.....					8,500	181		
King whiting or "kingfish".....					300	15		
Mackerel.....					26,600	750		
Pollock.....					183,900	3,508		
Scup.....					1,964,100	45,039		
Sea bass.....					112,700	8,496		
Sea robin.....					2,500	49		
Sharks.....					3,000	31		
Skates.....					27,600	472		
Squeteagues or "sea trout,"								
gray.....					49,700	3,859		
Striped bass.....					800	91		
Sturgeon.....					1,000	186		
Tautog.....					200	5		
Tilefish.....					2,500	106		
Whiting.....					3,831,300	61,797		
Wolfish.....					6,200	169		
Crabs:								
Hard.....	11,200	\$618						
Soft and peelers.....	34,400	13,932						
Lobsters.....					17,300	3,305		
Shrimp.....			100,000	\$17,000				
Conchs.....					7,000	695		
Scallops, sea.....					2,300	262		
Squid.....					678,400	12,642		
Total.....	45,600	14,550	100,000	17,000	38,823,900	1,548,409	158,500	9,660

Fisheries of New York, 1938—Continued

CATCH: BY GEAR—Continued

Species	Pots—Continued				Harpoons	
	Fish		Lobster			
	Pounds	Value	Pounds	Value	Pounds	Value
Sea bass.....	79,700	\$7,570			51,300	\$9,572
Swordfish.....						
Lobsters.....			227,100	\$49,992		
Total.....	79,700	7,570	227,100	49,992	51,300	9,572

Species	Spears		Dredges		Tongs	
	Pounds	Value	Pounds	Value	Pounds	Value
Eels, common.....	21,800	\$1,308				
Crabs, hard.....			6,200	\$270		
Clams:						
Hard, public.....					2,008,500	\$352,407
Hard, private.....					234,900	40,938
Soft, public.....					3,000	285
Surf or skimmer.....			808,800	51,537		
Mussels, sea.....			113,300	8,566	114,300	8,581
Oysters, market:						
Public, spring.....			3,800	875	206,200	48,469
Public, fall.....			3,800	875	196,500	46,234
Private, spring.....			5,153,900	884,391		
Private, fall.....			4,642,400	976,385		
Scallops:						
Bay.....					21,100	6,003
Sea.....			2,942,500	349,980		
Total.....	21,800	1,308	13,674,700	2,272,879	2,784,500	502,917

Species	Rakes		Forks		By hand	
	Pounds	Value	Pounds	Value	Pounds	Value
Clams, soft, public.....	368,300	\$33,604			500	\$39
Mussels, sea.....					13,200	988
Bloodworms.....			22,900	\$21,620		
Sandworms.....			26,800	25,020		
Total.....	368,300	33,604	49,700	46,640	13,700	1,027

OPERATING UNITS: BY COUNTIES

Item	Albany	Colum- bia	Dutch- ess	Greene	Kings	Nassau	New York
Fishermen:	Number	Number	Number	Number	Number	Number	Number
On vessels.....					63	41	492
On boats and shore:							
Regular.....			5	2	74	135	
Casual.....	16	40	117	27	30	233	
Total.....	16	40	122	29	167	409	492
Vessels, motor.....					30	12	72
Net tonnage.....					312	206	1,933
Boats:							
Motor.....					37	49	
Other.....	8	18	60	17	7	261	
Accessory boats.....							29
Apparatus:							
Purse seines, mackerel.....							1,39
Length, yards.....							
Haul seines, common.....		4	6	4			
Length, yards.....		280	360	1,225			
Gill nets:							
Drift.....	1	7	38	3			240
Square yards.....	1,800	11,200	117,926	10,000			80,400
Runaround.....						1	1
Square yards.....						3,800	8,000
Stake.....			38	9		17	
Square yards.....			2,872	530		8,850	

Fisheries of New York, 1938—Continued

OPERATING UNITS: BY COUNTIES—Continued

Item	Albany	Colum- bia	Dutch- ess	Greene	Kings	Nassau	New York
Apparatus—Continued.							
Lines:	Number	Number	Number	Number	Number	Number	<i>Number</i>
Hand.....					16		57
Hooks and baits.....					16		57
Trawl.....					20	90	1,800
Hooks.....					4,000	4,800	97,950
Trot with baits or snoods.....						7	
Baits or snoods.....						1,400	
Trot with hooks.....			11	1			
Hooks.....			1,975	125			
Pound nets.....						5	
Fyke nets.....	19	58	82	16			
Dip nets.....						61	
Otter trawls, fish.....					41	10	53
Yards at mouth.....					942	169	1,613
Pots:							
Eel.....		4			195		
Fish.....						1,210	
Lobster.....					2,418	72	
Harpoons.....							10
Spears.....					4	16	
Dredges:							
Clam.....					22	10	
Yards at mouth.....					34	18	
Crab.....					2		
Yards at mouth.....					4		
Mussel.....						6	2
Yards at mouth.....						12	2
Oyster:							
Common.....						18	
Yards at mouth.....						26	
Suction.....						1	
Yards at mouth.....						2	
Scallop.....							52
Yards at mouth.....							187
Tones:							
Oyster.....						33	
Other.....						256	
Rakes, other than for oysters.....						124	
Forks.....					19	22	

Item	Orange	Put- nam	Rens- selaer	Rock- land	Suffolk	Ulster	West- chester
Fishermen:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
On vessels.....					436		
On boats and shore:							
Regular.....		2		7	710	10	25
Casual.....	35	12	8	165	375	155	154
Total.....	35	14	8	172	1,521	165	179
Vessels:							
Steam.....					1		
Net tonnage.....					45		
Motor.....					91		
Net tonnage.....					1,501		
Sail.....					1		
Net tonnage.....					6		
Total vessels.....					93		
Total net tonnage.....					1,552		
Boats:							
Motor.....					631		
Other.....	17	6	3	88	384	86	87
Accessory boats.....					21		
Apparatus:							
Purse seines, menhaden.....					8		
Length, yards.....					3,130		
Haul seines, common.....	2	2	2	4	26	2	8
Length, yards.....	200	220	300	570	7,200	466	1,031
Gill nets:							
Drift.....	9	4		48	1	69	53
Square yards.....	27,500	13,300		153,235	500	210,040	182,750
Runaround.....					2		
Square yards.....					1,840		
Stake.....	1	9		227	280	12	116
Square yards.....	166	100		4,330	72,000	5,081	1,867

Fisheries of New York, 1938—Continued

OPERATING UNITS: BY COUNTIES—Continued

Item	Orange	Putnam	Rensselaer	Rockland	Suffolk	Ulster	Westchester
Apparatus—Continued							
Lines:	Number	Number	Number	Number	Number	Number	<i>Number</i>
Hand.....					55		
Hooks and baits.....					59		
Trawl.....					238		
Hooks.....					47,000		
Trot with baits or snoods.....					52		
Baits or snoods.....					30,000		
Trot with hooks.....	5			2			
Hooks.....	1,150			500			
Pound nets.....					120		
Fyke nets.....	7	9	3	3	90	84	25
Dip nets.....					30		
Drag nets.....					20		
Yards at mouth.....					40		
Otter trawls, fish.....					48		
Yards at mouth.....					863		
Pots:							
Pel.....	15	60		676	520	33	511
Lobster.....					7,660		
Harpoons.....					7		
Spears.....					50		
Dredges, oyster, common.....					54		
Yards at mouth.....					85		
Tongs:							
Oyster.....					147		
Other.....					1,042		
Rakes, other than for oysters.....					201		
Forks.....					328		

CATCH: BY COUNTIES

Species	Albany		Columbia		Dutchess		Greene	
	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>
Alewives.....	2,600	\$26	6,800	\$68	12,100	\$121	1,700	\$17
Carp.....	1,000	60	7,300	438	21,600	1,313	35,600	2,136
Catfish and bullheads.....	2,000	240	3,600	444	8,500	1,563	6,700	1,018
Eels, common.....			400	24	1,200	72	400	24
Shad.....	2,800	112	55,400	2,770	140,000	7,057	17,600	880
Striped bass.....					900	110	200	28
Sturgeon.....					1,900	760		
Suckers.....	2,100	42	4,000	120	3,000	97	900	28
Sunfish.....					700	23		
Tomcod.....					400	20		
White perch.....	500	23	900	36	2,100	77	600	23
Total.....	11,000	503	78,400	3,900	192,400	11,213	62,700	4,154

Species	Kings		Nassau		New York		Orange	
	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>
Alewives.....							2,400	\$24
Bluefish.....	10,300	\$1,236	34,300	\$4,110	64,300	\$7,281		
Bonito.....			10,400	312	500	12		
Butterfish.....			130,300	4,957	1,614,100	58,635		
Carp.....							9,000	540
Catfish and bullheads.....							1,000	160
Cod.....	221,000	6,731	211,000	8,264	7,589,700	352,579		
Croaker.....					400	12		
Cunner.....					100	2		
Cusk.....					100	2		
Eels:								
Common.....	8,400	632	6,000	360			2,000	120
Conger.....					11,400	216		
Flounders:								
Gray sole.....					51,800	3,365		
Lemon sole.....					613,300	47,980		
Yellowtail and dab.....	4,300	98			2,412,600	54,773		
Blackback.....	319,900	15,995	5,700	285	5,069,600	240,797		
Fluke.....	629,800	53,298	173,900	15,612	1,351,700	111,774		
Unclassified.....					33,500	1,665		
Frigate mackerel.....			8,000	160				
Grayfish.....					300	5		

Fisheries of New York, 1938—Continued

CATCH: BY COUNTIES—Continued

Species	Kings		Nassau		New York		Orange	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Groupers					4,500	\$225		
Haddock					11,105,400	414,174		
Hake	9,900	\$217	1,900	\$39	312,000	7,743		
Halibut					47,800	5,977		
Herring, sea					700	13		
King whiting or "kingfish"			2,000	40				
Mackerel	9,200	186	165,600	4,686	721,200	24,847		
Pollock					218,400	3,993		
Scup	30,700	743	87,400	2,318	684,500	17,879		
Sea bass			80,500	7,634	103,200	6,511		
Sea robin	2,000	40	500	9				
Shad			2,500	150			29,500	\$1,475
Sharks	400	5			700	8		
Skates	17,000	257			11,900	232		
Snapper, red					3,800	190		
Spanish mackerel			100	3				
Squeteagues or "sea trout," gray			160,300	10,558	10,000	755		
Striped bass			7,400	850	800	91	400	60
Sturgeon					1,000	186		
Suckers							1,100	33
Swordfish					16,500	3,041		
Tautog					200	5		
Tilefish					807,600	24,445		
Tomcod							300	18
Tuna					500	10		
White perch							600	24
Whiting	2,678,200	43,403	498,100	8,081	350,100	5,902		
Wolfish					6,200	169		
Crabs:								
Hard	6,200	270	30,100	1,565				
Soft and peelers			22,400	8,442				
Lobsters	84,200	15,998	2,300	654	17,300	3,305		
Clams:								
Hard, public			252,300	45,119				
Soft, public			180,600	17,198				
Surf or skimmer	605,600	37,844	203,200	13,693				
Conchs	7,000	695						
Mussels, sea			94,500	7,091	53,300	4,066		
Oysters, market:								
Public, spring			10,400	2,348				
Public, fall			2,500	545				
Private, spring			1,460,000	336,023				
Private, fall			1,542,300	359,578				
Scallops, sea					2,944,800	350,242		
Squid	55,600	1,001	102,900	2,053	102,300	2,020		
Bloodworms	3,500	3,150	3,900	4,170				
Sandworms	4,400	4,060	8,100	8,805				
Total	4,707,600	185,859	5,501,400	875,712	36,338,100	1,755,127	46,300	2,454

Species	Putnam		Rensselaer		Rockland	
	Pounds	Value	Pounds	Value	Pounds	Value
Alewives	2,400	\$24	3,700	\$37	6,100	\$62
Carp	6,400	384	67,400	2,064	3,900	291
Catfish and bullheads	700	115	1,800	252	500	71
Eels, common	800	52			58,100	3,488
Shad	13,000	685	200	40	157,700	8,676
Smelt	400	24				
Striped bass					16,200	2,241
Suckers	300	9	500	15	500	15
White perch	900	28			10,500	319
Yellow perch			200	10		
Total	24,900	1,321	73,800	2,418	253,500	15,163

Fisheries of New York, 1938—Continued

CATCH: BY COUNTIES—Continued

Species	Suffolk		Ulster		Westchester	
	Pounds	Value	Pounds	Value	Pounds	Value
Alewives	22,700	\$217	3,300	\$33	2,600	\$26
Anchovies	9,600	288				
Bluefish	140,700	16,311				
Bonito	100,400	5,227				
Butterfish	2,750,800	106,920				
Carp			36,100	2,143	17,000	1,018
Catfish and bullheads			6,300	769	6,000	716
Cod	516,000	25,827				
Cunner	2,200	44				
Eels, common	93,600	5,616	1,700	104	46,800	2,824
Flounders:						
Yellowtail and dab	503,700	11,824				
Blackback	753,000	37,570				
Fluke	296,700	28,125				
Frigate mackerel	3,500	72				
Haddock	2,000	80				
Herring, sea	13,700	274				
Hickory shad	2,300	40				
Kingfish or "king mackerel"	40,100	2,191				
King whiting or "kingfish"	300	15				
Mackerel	890,200	35,644				
Menhaden	22,632,600	102,597				
Pollock	87,300	1,753				
Scup	1,680,300	40,874				
Sea bass	101,000	8,018				
Sea robin	9,200	182				
Shad	96,300	4,000	319,600	18,561	236,700	13,733
Sharks	9,000	59				
Skates	2,100	23				
Spanish mackerel	100	3				
Squeebones or "sea trout," gray	886,600	65,767				
Striped bass	100,700	12,473	700	98	11,600	1,234
Sturgeon	300	38	1,100	315	700	175
Suckers			2,500	68	3,000	90
Sunfish			100	2	200	5
Swallowfish	57,200	2,000				
Swordfish	35,000	6,550				
Tautog	11,400	454				
Tomcod					4,000	100
Tuna	147,600	6,666				
White perch			3,800	143	13,900	500
Whiting	429,500	6,869				
Crabs:						
Hard	351,000	21,916				
Soft and peelers	12,000	5,490				
Lobsters	140,600	33,340				
Shrimp	125,000	21,250				
Clams:						
Hard, public	1,756,200	307,288				
Hard, private	234,900	40,938				
Soft, public	191,200	16,730				
Mussels, sea	93,000	6,978				
Oysters, market:						
Public, spring	199,600	46,996				
Public, fall	197,800	46,564				
Private, spring	3,693,900	548,368				
Private, fall	3,100,100	616,807				
Scallops, bay	21,100	6,003				
Squid	498,100	9,178				
Turtle, snapper	35,500	2,480				
Bloodworms	15,500	14,300				
Sandworms	14,300	12,155				
Total	43,209,200	2,292,292	375,200	22,236	342,500	20,481

NEW JERSEY

Fisheries of New Jersey, 1938

OPERATING UNITS: BY GEAR

Item	Purse seines		Haul seines	Gill nets			
	Menhaden	Other		Anchor	Drift	Run-around	Stake
Fishermen:	Number	Number	Number	Number	Number	Number	<i>Number</i>
On vessels.....	85	113			10		2
On boats and shore:							
Regular.....			52	14	98	137	157
Casual.....			211	4	68	18	325
Total.....	85	113	263	18	176	155	484
Vessels, motor.....	4	10			3		1
Net tonnage.....	110	242			32		7
Boats:							
Motor.....				8	63	66	34
Other.....			105		20		184
Accessory boats.....	12	24			1		
Apparatus:							
Number.....	4	10	105	40	880	66	1,371
Length, yards.....	1,150	3,390	9,934				
Square yards.....				20,400	558,407	244,510	354,866

Item	Lines				Pound nets	Weirs	Stop nets	Fyke nets
	Hand	Trawl	Troll	Trot with baits or snoods				
Fishermen:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
On vessels.....	15	37	14		264			
On boats and shore:								
Regular.....	178	155	69	24	97		24	30
Casual.....	34	14	42	2	22	20	70	78
Total.....	227	206	125	26	383	20	94	108
Vessels, motor.....	4	15	3		38			
Net tonnage.....	50	141	42		234			
Boats:								
Motor.....	92	76	81	24	20	7	14	20
Other.....	6	4			11	1	37	42
Accessory boats.....	10	7	8					
Apparatus:								
Number.....	260	474	340	24	175	99	61	814
Square yards.....							60,700	
Hooks, baits, or snoods.....	425	274,300	340	21,150				

Item	Dip nets	Cast nets	Drop nets	Otter trawls, fish	Wire baskets	Pots		
						Crab	Eel	Fish
Fishermen:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
On vessels.....				118				
On boats and shore:								
Regular.....	94			62		2	20	63
Casual.....	12	3	1	2	1		23	2
Total.....	106	3	1	182	1	2	43	65
Vessels, motor.....				31				
Net tonnage.....				619				
Boats:								
Motor.....	2			32		1	17	41
Other.....	101	3	1		1		13	
Apparatus:								
Number.....	106	3	1	63	3	10	1,244	9,505
Yards at mouth.....				1,452				

Fisheries of New Jersey, 1938—Continued

OPERATING UNITS: BY GEAR—Continued

Item	Pots— Contd.	Spears	Dredges				Tongs	
	Lobster		Clam	Crab	Oyster	Scallop	Oyster	Other
	Number	Number	Number	Number	Number	Number	Number	Number
Fishermen:								
On vessels.....			42	21	480	14		
On boats and shore:								
Regular.....	56	3	14	13	22		168	306
Casual.....	13	9	3	2	9		17	198
Total.....	69	12	59	36	511	14	185	504
Vessels:								
Motor.....			15	9	83	2		
Net tonnage.....			167	96	1,559	58		
Sail.....			3		1			
Net tonnage.....			30		8			
Total vessels.....			18	9	84	2		
Total net tonnage.....			197	96	1,567	58		
Boats:								
Motor.....	34		10	8	15		93	265
Other.....		11					61	216
Apparatus:								
Number.....	6,075	12	65	64	198	4	166	504
Yards at mouth.....			68	98	245	14		

Item	Rakes		Forks	Hoes	By hand		Total, ex- clusive of dupli- cation
	Oyster	Other			Oyster	Other	
	Number	Number	Number	Number	Number	Number	Number
Fishermen:							
On vessels.....							1,097
On boats and shore:							
Regular.....	30	355		146	9	110	997
Casual.....	3	413	1	86	7	178	1,517
Total.....	33	768	1	232	16	288	3,611
Vessels:							
Motor.....							186
Net tonnage.....							2,863
Sail.....							3
Net tonnage.....							30
Total vessels.....							189
Total net tonnage.....							2,893
Boats:							
Motor.....	26	282	1	52	1	57	889
Other.....	5	468		175	13	211	1,268
Accessory boats.....							65
Apparatus, number.....	33	768	1	232			

Fisheries of New Jersey, 1938—Continued

CATCH: BY GEAR

Species	Purse seines				Haul seines	
	Menhaden		Other		Pounds	Value
	Pounds	Value	Pounds	Value		
Alewives					8,000	\$120
Bluefish			80,800	\$5,154		
Bonito			6,700	253		
Butterfish			37,000	1,128		
Carp					144,000	10,439
Catfish and bullheads					39,500	1,473
Cod			800	25		
Croaker			1,745,200	19,772	1,700	65
Eels:						
Common					9,900	1,582
Conger			1,200	18		
Flounders:						
Blackback					1,100	98
Fluke			33,500	3,084		
Frigate mackerel			400	8		
Hake			900	14		
Herring, sea			1,400	16		
Mackerel			52,500	1,945		
Menhaden	41,041,000	\$139,891	929,600	3,527		
Scup			1,171,500	15,564		
Sea bass			13,300	438		
Sea robin			1,300	15		
Shad					205,800	19,830
Squeteagues or "sea trout," gray			729,700	13,842	4,700	228
Striped bass			1,000	79	25,100	3,048
Suckers					49,900	1,887
White perch					12,700	1,186
Whiting			14,600	290		
Yellow perch					700	56
Crabs:						
Hard					4,300	221
Soft and peelers					16,900	5,315
Squid			3,600	41		
Total	41,041,000	139,891	4,825,000	65,213	524,300	45,548

Species	Gill nets							
	Anchor		Drift		Runaround		Stake	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Bluefish			12,100	\$724	140,600	\$11,090	1,000	\$240
Bonito			800	56				
Butterfish			600	24	100	2		
Carp							6,300	504
Croaker			19,200	391	2,500	25		
Flounders, blackback							600	18
Mackerel	1,600	\$119	368,400	17,607	10,700	477		
Scup					20,000	400		
Shad	5,800	1,167	146,900	17,462			1,531,300	127,253
Spot			10,000	200			7,000	140
Squeteagues or "sea trout," gray			13,500	811	499,400	20,121	2,500	60
Striped bass			500	75			87,200	9,925
White perch							3,600	404
Total	7,400	1,286	572,000	37,350	673,300	32,115	1,639,500	138,544

Fisheries of New Jersey, 1938—Continued

CATCH: BY GEAR—Continued

Species	Lines						Trot with bait or snoods	
	Hand		Trawl		Troll			
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Amberjack.....	800	\$16						
Bluefish.....	234,100	19,604			363,200	\$29,282		
Bonito.....	100	6			23,200	1,153		
Cod.....	15,100	612	1,910,400	\$63,982				
Croaker.....	18,400	691						
Eels:								
Common.....	1,800	180						
Conger.....	100	1						
Flounders, fluke.....	2,600	251	17,400	1,392				
Grayfish.....			300	4				
Groupers.....	12,500	368						
Kingfish or "king mackerel".....					100,000	3,000		
Mackerel.....					41,800	2,939		
Scup.....	18,500	285						
Sea bass.....	224,300	15,674						
Skates.....			2,400	20				
Snapper, red.....	28,200	1,808						
Squeteagues or "sea trout," gray.....	23,600	1,468			11,400	541		
Squirrel hake.....			9,000	98				
Striped bass.....	100	15			600	65		
Tautog.....	3,000	184						
Tuna.....					2,800	100		
Crabs, hard.....							269,800	\$5,875
Turtles, snapper.....							1,000	50
Total.....	583,200	41,163	1,939,500	65,496	543,000	37,080	270,800	5,925

Species	Pound nets		Weirs		Stop nets		Fyke nets	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Alewives.....	100	\$1						
Bluefish.....	199,500	14,636						
Bonito.....	663,000	23,885						
Butterfish.....	3,449,100	116,190						
Carp.....								
Catfish and bullheads.....					228,700	\$17,906		
Cod.....					34,200	1,983	46,900	\$2,159
Croaker.....	3,282,000	36,034						
Drum:								
Black.....	1,500	21						
Red or redfish.....	4,600	47						
Eels:								
Common.....	16,500	2,159					33,300	3,502
Conger.....	6,600	66						
Flounders:								
Blackback.....	19,900	553					71,800	2,644
Fluke.....	317,000	26,380						
Frigate mackerel.....	60,600	606						
Goosefish.....	2,500	25						
Grayfish.....	101,200	1,008						
Hake.....	4,600	53						
Herring, sea.....	1,153,900	6,478						
Hickory shad.....	27,000	198						
King whiting or "kingfish".....	92,200	3,764						
Mackerel.....	1,644,200	58,782						
Menhaden.....	6,129,000	20,822						
Mullet.....	200	2						
Pollock.....	100,600	2,142						
Sand perch.....	1,000	10						
Scup.....	2,403,100	23,807						
Sea bass.....	100,500	4,329						
Sea robin.....	62,100	621						
Shad.....	602,200	56,768						
Sharks.....	129,900	1,904						
Silversides.....	1,500	15						
Skates.....	97,400	517						
Spanish mackerel.....	9,400	795						
Spot.....	164,000	3,024						
Squeteagues or "sea trout," gray.....	4,724,900	112,853						
Squirrel hake.....	151,200	1,512						
Striped bass.....	4,900	506			2,500	375	16,400	1,898
Sturgeon.....	3,600	470						
Suckers.....					300	18		

Fisheries of New Jersey, 1938—Continued

CATCH: BY GEAR—Continued

Species	Pound nets		Weirs		Stop nets		Fyke nets	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Swellfish.....	1,500	\$15						
Tautog.....	21,300	397						
Tuna.....	104,700	3,176						
White perch.....					300	\$45	2,900	\$320
Whiting.....	5,909,800	45,097					2,500	250
Yellow perch.....								
Crabs:								
Hard.....	52,300	853						
King.....	1,276,000	2,871	1,176,000	\$2,806			8,000	30
Soft and peelers.....	300	100						
Lobsters.....	100	20						
Squid.....	1,105,000	16,187						
Turtles:								
Green.....	3,900	39						
Loggerhead.....	5,500	55						
Snapper.....							7,700	847
Total.....	34,418,400	595,666	1,176,000	2,806	266,000	20,307	189,500	11,650

Species	Dip nets		Cast nets		Drop nets		Otter trawls	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Bluefish.....							7,000	\$648
Bonito.....							100	4
Butterfish.....							616,700	18,168
Carp.....			4,700	\$422				
Cod.....							119,500	3,863
Croaker.....							690,000	12,380
Drum, red or reedfish.....							600	5
Eels, conger.....							17,800	216
Flounders:								
Gray sole.....							1,900	37
Lemon sole.....							26,600	1,548
Yellowtail and dab.....							301,800	5,139
Blackback.....							88,000	2,962
Fluke.....							1,712,600	136,525
Grayfish.....							400	4
Groupers.....							100	2
Haddock.....							1,500	14
Hake.....							35,200	748
Herring, sea.....							5,500	54
King whiting or "kingfish".....							10,300	383
Launce.....							100	3
Mackerel.....							17,200	1,264
Menhaden.....							1,400	6
Pollock.....							600	10
Sand perch.....							100	2
Scup.....							1,336,800	20,766
Sea bass.....							463,600	23,953
Sea robin.....							9,800	118
Sharks.....							300	8
Skates.....							8,000	70
Spot.....							2,600	63
Squeteagues or "sea trout," gray.....							279,000	6,881
Squirrel hake.....							600	8
Striped bass.....							8,700	1,439
Sturgeon.....							1,500	182
Tautog.....							1,200	21
Tilfish.....							100	4
Whiting.....							304,100	4,748
Crabs:								
Hard.....	134,500	\$15,520			1,600	\$162	400	25
Soft and peelers.....	296,400	97,227						
Lobsters.....							10,800	1,183
Scallops, sea.....							100	21
Squid.....							179,400	3,215
Total.....	430,900	112,747	4,700	422	1,600	162	6,262,000	246,690

Fisheries of New Jersey, 1938—Continued

CATCH: BY GEAR—Continued

Species	Wire baskets		Pots							
			Crab		Eel		Fish			
			Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Eels:					64,600	\$6,152				
Common.....								800		\$8
Conger.....								400		5
Hake.....								400		7
Scup.....								1,155,700		59,372
Sea bass.....								900		9
Squirrel hake.....								5,100		95
Tautog.....										
Crabs:										
Hard.....	300	\$25	12,000	\$750						
Soft and peelers.....			6,000	1,125						
Lobsters.....								68,600		13,304
Total.....	300	25	18,000	1,875	64,600	6,152		1,231,900		72,800

Species	Pots, lobster		Spears		Dredges		Tongs	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Cod.....	100	\$3						
Eels, common.....			3,200	\$366				
Sea bass.....	7,000	421						
Crabs, hard.....					574,300	\$8,381	800	\$40
Lobsters.....	247,400	33,071						
Clams:								
Hard, public.....					115,600	14,040	625,400	79,513
Hard, private.....					41,900	5,374	141,500	18,366
Surf or skimmer.....					804,900	20,301		
Oysters, market:								
Public, spring.....					8,000	1,000	2,000	434
Public, fall.....					14,200	1,421	90,100	8,770
Private, spring.....					2,651,500	323,280	73,700	15,474
Private, fall.....					2,818,000	347,368	73,600	15,272
Scallops, sea.....					113,900	8,769		
Total.....	254,500	33,495	3,200	366	7,142,300	729,934	1,007,100	137,869

Species	Rakes		Forks		Hoes		By hand	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Crabs, hard.....	63,000	\$574						
Clams:								
Hard, public.....	1,579,700	205,813					390,000	\$49,144
Hard, private.....	14,500	1,959					16,300	1,837
Soft, public.....			4,000	\$200	870,700	\$54,223		
Oysters, market:								
Public, spring.....	10,200	1,130					700	165
Public, fall.....	9,300	1,108					700	165
Private, spring.....	13,800	2,760					6,900	1,416
Private, fall.....	13,300	2,844					11,800	2,346
Total.....	1,703,800	216,188	4,000	200	870,700	54,223	426,400	55,073

OPERATING UNITS: BY COUNTIES

Item	Atlan- tic	Bergen	Bur- lington	Cam- den	Cape May	Cum- berland	Glou- cester
	Number	Number	Number	Number	Number	Number	Number
Fishermen:							
On vessels.....	53	2	8		313	457	
On boats and shore:							
Regular.....	173	2	25		141	9	2
Casual.....	172	152	59	20	207	59	29
Total.....	398	156	92	20	661	525	31
Vessels, motor.....	16	1	2		53	76	
Net tonnage.....	209	15	22		814	1,487	

Fisheries of New Jersey, 1938—Continued

OPERATING UNITS: BY COUNTIES—Continued

Item	Atlantic	Bergen	Burlington	Camden	Cape May	Cumberland	Gloucester
Boats:	<i>Number</i>	Number	Number	Number	Number	Number	Number
Motor.....	133	1	23		134	77	5
Other.....	197	44	32	10	198	83	13
Accessory boats.....	3				43		
Apparatus:							
Purse seines:							
Menhaden.....					1		
Length, yards.....					310		
Other.....	1				9		
Length, yards.....	360				3,030		
Haul seines.....	18		12	10	5	14	4
Length, yards.....	1,634		1,190	880	343	1,400	285
Gill nets:							
Anchor.....					25		
Square yards.....					10,700		
Drift.....	75	1	10		612	14	2
Square yards.....	30,620	1,360	12,660		271,867	27,800	7,200
Runaround.....					5		
Square yards.....					20,800		
Stake.....	104	36	17		12	151	
Square yards.....	27,550	60,280	3,520		2,400	15,100	
Lines:							
Hand.....	7				135	2	
Hooks.....	13				264	2	
Trawl.....	110				220		
Hooks.....	88,700				117,800		
Troll.....	6				199		
Hooks.....	6				199		
Trot with baits or snoods.....						23	
Baits or snoods.....						20,950	
Pound nets.....	2				63		
Weirs.....					74	25	
Stop nets.....			7	2		9	9
Yards at mouth.....			9,575	3,400		9,250	17,400
Fyke nets.....	57		77		19	67	174
Dip nets.....	15				1		
Cast nets.....							2
Drop nets.....					1		
Otter trawls, fish.....	14				44		
Yards at mouth.....	306				1,047		
Pots:							
Eel.....	37		25		105	55	
Fish.....	300				3,235		
Spears.....					2		
Dredges:							
Clam.....	1				13	2	
Yards at mouth.....	1				13	3	
Crab.....		2					
Yards at mouth.....		4					
Oyster.....	16		12			152	
Yards at mouth.....	18		14			189	
Scallop.....	4						
Yards at mouth.....	14						
Tongs:							
Oyster.....	26		9		12	103	
Other.....	161		24		136		
Rakes:							
Oyster.....	12				2	1	
Other.....	157				134	4	
Hoes.....	10						

Fisheries of New Jersey, 1938—Continued

OPERATING UNITS: BY COUNTIES—Continued

Item	Hudson	Hunterdon	Mercer	Middlesex	Monmouth	Ocean	Salem
	Number	Number	Number	Number	Number	Number	Number
Fishermen:							
On vessels.....	2			2	110	150	
On boats and shore:							
Regular.....				9	393	233	10
Casual.....		27	21	5	325	380	61
Total.....	2	27	21	16	828	763	71
Vessels:							
Motor.....	1				14	23	
Net tonnage.....	9				165	142	
Sail.....				1	2		
Net tonnage.....				8	22		
Total vessels.....	1			1	16	23	
Total net tonnage.....	9			8	187	142	
Boats:							
Motor.....				8	204	284	20
Other.....		6	4	6	427	224	24
Accessory boats.....					9		
Apparatus:							
Purse seines, menhaden					3		
Length, yards.....					840		
Haul seines.....		6	4	1	7	10	14
Length, yards.....		1, 111	600	30	259	672	1, 530
Gill nets:							
Anchor.....				3	12		
Square yards.....				2, 500	7, 200		
Drift.....					120	29	17
Square yards.....					70, 600	40, 900	95, 400
Runaround.....				6	34	21	
Square yards.....				16, 470	126, 640	80, 600	
Stake.....				14	80	927	30
Square yards.....				2, 800	91, 993	148, 822	2, 400
Lines:							
Hand.....					75	41	
Hooks.....					97	49	
Trawl.....					6	138	
Hooks.....					3, 000	64, 800	
Troll.....					68	67	
Hooks.....					68	67	
Trot with baits or snoods							1
Baits or snoods.....							200
Pound nets.....					43	67	
Stop nets.....							34
Square yards.....							21, 075
Fyke nets.....			30		50	196	144
Dip nets.....					87	3	
Cast nets.....							1
Otter trawls, fish	1				2	2	
Yards at mouth.....	27				24	48	
Wire baskets.....						3	
Pots:							
Crab.....							10
Eel.....				170	637	215	
Fish.....						5, 970	
Lobster.....					6, 075		
Spears.....					7	3	
Dredges:							
Clam.....				4	42	3	
Yards at mouth.....				5	42	4	
Crab.....					54	8	
Yards at mouth.....					80	14	
Oyster.....				2	2	14	
Yards at mouth.....				3	4	17	
Tongs:							
Oyster.....						16	
Other.....					1	182	
Rakes:							
Oyster.....					15	3	
Other.....				5	303	165	
Forks.....							1
Hoes.....					203	19	

Fisheries of New Jersey, 1938—Continued

CATCH: BY COUNTIES

Species	Atlantic		Bergen		Burlington		Camden	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Alewives	100	\$1						
Bluefish	6,100	327						
Bonito	500	40						
Butterfish	281,100	8,417						
Carp					39,200	\$2,504	20,600	\$1,648
Catfish and bullheads	15,500	465			4,600	205	10,000	200
Cod	286,100	9,278						
Croaker	124,900	2,076						
Drum:								
Black	100	1						
Red, or redfish	100	1						
Eels:								
Common	11,600	1,581			500	41		
Conger	3,600	36						
Flounders:								
Yellowtail and dabs	40,700	712						
Blackback	4,000	257						
Fluke	419,600	32,794						
Grayfish	200	3						
Hake	12,200	262						
Herring, sea	2,000	20						
Hickory shad	100	1						
King whiting or "kingfish"	5,700	185						
Mackerel	21,300	772						
Menhaden	409,100	1,533						
Mullet	200	2						
Pollock	400	6						
Scup	185,400	4,861						
Sea bass	110,200	3,242						
Sea robin	2,500	35						
Shad	10,300	1,322	783,900	\$60,185	1,800	332	30,600	4,080
Skates	5,600	55						
Spot	1,700	18						
Squeteagues or "sea trout," gray	124,100	2,314						
Squirrel hake	9,100	99						
Striped bass	47,300	4,913			24,000	2,880		
Sturgeon	300	31						
Suckers	1,100	110			1,500	117	400	16
Tautog	1,600	32						
White perch	9,800	1,022			1,000	95		
Whiting	18,700	286						
Crabs:								
Hard	19,200	670	6,700	168				
Soft and peelers	8,000	1,082						
Lobsters	15,100	2,838						
Clams:								
Hard, public	251,000	30,773			6,700	891		
Hard, private	61,800	7,985			15,300	2,854		
Soft, public	222,700	18,643						
Surf or skimmer	6,500	250						
Oysters, market:								
Public, fall	1,800	375						
Private, spring	64,000	14,329			14,800	1,850		
Private, fall	66,500	15,087			55,400	8,832		
Scallops, sea	113,900	8,769						
Squid	35,000	563						
Turtles:								
Green	100	1						
Snapper	1,400	112						
Total	3,039,900	180,587	790,600	60,353	164,800	20,601	61,600	5,944

Fisheries of New Jersey, 1938—Continued

CATCH: BY COUNTIES—Continued

Species	Cape May		Cumberland		Gloucester		Hudson	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Alewives			8,000	\$120				
Amberjack	800	\$16						
Bluefish	456,100	34,402						
Bonito	39,700	1,574						
Butterfish	1,141,300	44,075						
Carp			45,500	2,051	65,800	\$6,580		
Catfish and bullheads	400	1?	5,600	305	37,200	1,590		
Cod	1,221,600	44,509						
Croaker	3,814,400	46,203	1,000	30				
Drum:								
Black	600	6						
Red or redfish	5,100	51						
Eels:								
Common	22,300	3,447	5,400	568	100	15		
Conger	17,200	216						
Flounders:								
Gray sole	1,900	37						
Lemon sole	26,600	1,548						
Yellowtail and dabs	246,600	3,831						
Blackback	17,900	868					72,000	\$2,160
Fluke	1,335,000	106,997						
Frigate mackerel	1,400	18						
Grayfish	700	7						
Groupers	12,600	370						
Haddock	1,500	14						
Hake	24,900	511						
Herring, sea	29,900	300						
Hickory shad	500	5						
Kingfish or "king mackerel"	100,000	3,000						
King whiting or "kingfish"	46,600	1,995						
Mackerel	414,700	19,700						
Menhaden	5,629,300	21,747						
Pollock	200	4						
Sand perch	100	2						
Scup	2,684,500	35,185						
Sea bass	1,093,300	67,788						
Sea robin	16,500	177						
Shad	13,500	934	165,000	18,613	7,700	1,220		
Sharks	15,000	134						
Skates	25,000	156						
Snapper, red	28,200	1,808						
Spanish mackerel	1,900	121						
Spot	40,700	826	17,000	340				
Squeteagues or "sea trout,"								
gray	2,687,300	59,577	11,300	382				
Squirrel hake	3,600	36						
Striped bass	10,700	1,660	4,200	650				
Sturgeon	1,700	201						
Tautog	7,800	137						
Tilefish	100	4						
White perch	2,100	212	3,000	309				
Whiting	251,000	4,411					800	8
Crabs:								
Hard	6,700	442	267,800	5,750				
King	2,164,000	4,964	288,000	683				
Soft and peelers	900	405						
Lobsters	7,000	772						
Clams:								
Hard, public	282,300	42,154	12,100	1,828				
Hard, private	2,700	324	13,100	1,378				
Surf or skimmer	765,900	17,551						
Oysters, market:								
Public, spring	1,400	330						
Public, fall	1,800	360	86,100	7,988				
Private, spring	32,200	6,336	2,602,600	312,937				
Private, fall	35,600	6,954	2,730,800	330,642				
Scallops, sea	100	21						
Squid	445,900	7,574						
Turtles:								
Loggerhead	100	1						
Snapper			7,200	780	100	5		
Total	25,239,400	597,050	6,273,700	685,334	110,900	9,410	72,800	2,168

Fisheries of New Jersey, 1938—Continued

CATCH: BY COUNTIES—Continued

Species	Hunterdon		Mercer		Middlesex	
	Pounds	Value	Pounds	Value	Pounds	Value
Bluefish.....					45,200	\$2,696
Carp.....	2,700	\$216	13,000	\$520		
Catfish and bullheads.....			2,000	100		
Eels, common.....			3,000	240	4,600	268
Mackerel.....					200	8
Shad.....	45,600	4,398	11,000	1,262	4,900	887
Squeteagues or "sea trout," gray.....					73,500	3,138
Suckers.....	7,100	426	39,000	1,170		
Crabs, hard.....					2,000	60
Clams, hard, public.....					17,200	1,960
Oysters, market, public, fall.....					14,200	1,421
Total.....	55,400	5,040	68,000	3,292	161,800	10,438

Species	Monmouth		Ocean		Salem	
	Pounds	Value	Pounds	Value	Pounds	Value
Bluefish.....	320,000	\$23,117	210,900	\$15,836		
Bonito.....	107,100	3,706	546,600	20,037		
Butterfish.....	338,300	14,219	2,342,800	68,801		
Carp.....					196,900	\$15,752
Catfish and bullheads.....					45,300	2,718
Cod.....	47,500	1,552	697,200	19,019		
Croaker.....	150,600	2,630	1,668,100	18,419		
Drum, black.....	200	2	600	12		
Eels:						
Common.....	62,100	6,115	8,300	706	11,400	960
Conger.....	1,600	16	4,100	41		
Flounders:						
Yellowtail and dabs.....	13,000	551	1,500	45		
Blackback.....	47,100	1,260	40,400	1,730		
Fluke.....	49,000	2,632	279,500	25,209		
Frigate mackerel.....	14,400	144	45,200	452		
Goosefish.....			2,500	25		
Grayfish.....	21,400	210	79,600	796		
Hake.....	300	3	3,700	44		
Herring, sea.....	620,600	3,684	508,300	2,544		
Hickory shad.....	12,000	120	14,400	72		
King whiting or "kingfish".....	16,400	740	33,800	1,227		
Launce.....	100	3				
Mackerel.....	292,300	15,821	1,407,900	46,832		
Menhaden.....	41,697,800	140,051	364,800	915		
Pollock.....	70,800	1,593	29,800	549		
Sand perch.....	1,000	10				
Scup.....	763,000	7,609	1,317,400	13,174		
Sea bass.....	26,300	1,139	734,600	30,018		
Sea robin.....	4,400	44	49,800	498		
Shad.....	993,900	85,168	312,300	30,635	111,500	13,444
Sharks.....	9,500	92	105,700	1,686		
Silversides.....	1,500	15				
Skates.....	28,200	151	49,000	245		
Spanish mackerel.....	2,800	280	4,700	394		
Spot.....	64,300	1,522	59,900	721		
Squeteagues or "sea trout," gray.....	1,168,200	37,578	2,224,300	53,816		
Squirrel hake.....	23,700	239	125,300	1,253		
Striped bass.....	2,800	372	57,300	6,865	700	105
Sturgeon.....	1,300	260	1,800	160		
Suckers.....					1,100	66
Swellfish.....	1,500	15				
Tautog.....	6,900	262	14,300	266		
Tuna.....	76,000	2,272	31,500	1,004		
White perch.....			1,000	135	2,600	182
Whiting.....	2,888,000	21,459	3,070,000	23,971		
Yellow perch.....			2,500	250	700	56
Crabs:						
Hard.....	690,800	23,304	105,300	1,107	14,800	925
King.....	8,000	30				
Soft and peelers.....	293,300	97,565	11,400	3,590	6,000	1,125
Lobsters.....	247,600	33,118	57,200	10,850		

Fisheries of New Jersey, 1938—Continued

CATCH: BY COUNTIES—Continued

Species	Monmouth		Ocean		Salem	
	Pounds	Value	Pounds	Value	Pounds	Value
Clams:						
Hard, public.....	1,270,500	\$104,930	870,900	\$105,974		
Hard, private.....			121,300	14,995		
Soft, public.....	550,000	29,205	102,000	6,575		
Surf or skimmer.....			32,500	2,500		
Oysters, market:						
Public, spring.....	18,200	2,130	1,300	269		
Public, fall.....	9,000	1,051	1,400	269		
Private, spring.....			32,300	7,478		
Private, fall.....			28,400	6,315		
Squid.....	145,100	964	662,000	10,342		
Turtles:						
Green.....	3,800	38				
Loggerhead.....	4,300	43	1,100	11		
Total.....	53,186,500	734,034	18,478,500	558,677	391,000	\$25,333

PENNSYLVANIA

Fisheries of Pennsylvania, 1938¹

OPERATING UNITS: BY GEAR

Item	Haul seines	
	Number	
Fishermen on boats and shore, casual.....		31
Boats, other than motor.....		11
Apparatus:		
Number.....		10
Length, yards.....		1,705

CATCH: BY GEAR

Species	Haul seines	
	Pounds	Value
Carp.....	2,800	\$189
Shad.....	13,900	2,978
Suckers.....	23,100	1,127
Total.....	39,800	4,294

¹ The commercial fisheries of Pennsylvania are confined to Bucks County.

DELAWARE

Fisheries of Delaware, 1938

OPERATING UNITS: BY GEAR

Item	Purse seines, menhaden	Haul seines	Gill nets			Lines	
			Drift	Run-around	Stake	Hand	Trawl
Fishermen:							
On vessels.....	Number 186	Number	Number	Number	Number	Number	Number
On boats and shore:							
Regular.....		4		4	1		
Casual.....		120	38	12	18	11	6
Total.....	186	124	38	16	19	11	6
Vessels, steam.....	6						
Net tonnage.....	839						
Boats:							
Motor.....			10	4	1	3	3
Other.....		36	10	5	9	4	
Accessory boats.....		6					
Apparatus:							
Number.....	6	36	25	8	18	11	3
Length, yards.....	3,666	8,350					
Square yards.....			44,540	3,760	9,337		
Hooks, baits, or snoods.....						22	8,400

Fisheries of Delaware, 1938—Continued

OPERATING UNITS: BY GEAR—Continued

Item	Pound nets	Stop nets	Fyke nets	Dip nets	Pots	
					Eel	Lobster
Fishermen:						
On boats and shore:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
Regular.....				25	1	
Casual.....	4	3	25	39	9	4
Total.....	4	3	25	64	10	4
Boats:						
Motor.....			3	6	1	2
Other.....	3	2	13	55	7	
Apparatus:						
Number.....	13	7	206	64	271	98
Square yards.....		1,230				

Item	Dredges			Tongs, other than for oysters	By hand, other than for oysters	Total, exclusive of duplication
	Clam	Crab	Oyster			
Fishermen:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
On vessels.....	14	9	35			228
On boats and shore:						
Regular.....						31
Casual.....		2		2	19	279
Total.....	14	11	35	2	19	538
Vessels:						
Steam.....						6
Net tonnage.....						839
Motor.....	4	3	5			7
Net tonnage.....	84	49	103			136
Total vessels.....	4	3	5			13
Total Net tonnage.....	84	49	103			975
Boats:						
Motor.....		1				25
Other.....				2		121
Accessory boats.....						6
Apparatus:						
Number.....	8	8	10	2		
Yards at mouth.....	10	9	11			

CATCH: BY GEAR

Species	Purse seines		Haul seines		Gill nets			
					Drift		Runaround	
	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>
Alewives.....			44,300	\$887	1,700	\$38		
Bluefish.....			700	49	2,300	161		
Carp.....			16,200	1,296				
Catfish and bullheads.....			13,300	403				
Croaker.....			162,400	1,727	53,200	798		
Gizzard shad.....			100	3				
Menhaden.....	16,207,000	\$72,990						
Mullet.....			600	24	10,100	404	74,000	\$2,960
Shad.....			1,800	280	8,800	1,511		
Spot.....					1,900	57		
Squeteagues or "sea trout," gray.....			172,700	5,375	18,100	718		
Striped bass.....			11,100	1,110	300	30	1,000	100
White perch.....			9,100	950	100	10	300	30
Yellow perch.....			400	16				
Total.....	16,207,000	72,990	432,700	12,120	96,500	3,727	75,300	3,090

Fisheries of Delaware, 1938—Continued

CATCH: BY GEAR—Continued

Species	Gill nets—Con.		Lines				Pound nets	
	Stake		Hand		Trawl		Pounds	Value
	Pounds	Value	Pounds	Value	Pounds	Value		
Alewives.....							1,300	\$26
Carp.....	14,400	\$1,152					200	18
Catfish and bullheads.....							1,600	48
Cod.....					57,300	\$1,732		
Croaker.....			11,300	\$170				
Eels, common.....							600	97
Flounders, fluke.....	400	40						
Gizzard shad.....							300	9
Shad.....	3,800	594						
Spot.....			200	6				
Squeteagues or "sea trout," gray.....			5,700	225				
Striped bass.....	8,200	820						
Tautog.....			1,400	42				
White perch.....	300	30					2,100	210
Yellow perch.....							2,500	117
Total.....	27,100	2,636	18,600	443	57,300	1,732	8,600	523

Species	Stop nets		Fyke nets		Dip nets	
	Pounds	Value	Pounds	Value	Pounds	Value
Carp.....	5,000	\$396				
Catfish and bullheads.....			10,200	\$306		
Croaker.....			1,200	18		
Eels, common.....			13,100	1,649		
Flounders, fluke.....			2,700	168		
Squeteagues or "sea trout," gray.....			1,100	88		
Striped bass.....			4,300	430		
White perch.....			5,500	550		
Yellow perch.....			4,400	220		
Crabs:						
Hard.....			400	12	131,000	\$2,620
Soft and peelers.....					85,000	17,000
Turtles, snapper.....			3,600	284		
Total.....	5,000	396	46,500	3,725	216,000	19,620

Species	Pots				Dredges		Tongs		By hand	
	Eel		Lobster		Pounds	Value	Pounds	Value	Pounds	Value
	Pounds	Value	Pounds	Value						
Eels, common.....	13,500	\$2,153								
Crabs:										
Hard.....					52,400	\$1,953				
King.....									81,200	\$163
Lobsters.....			3,100	\$927						
Clams:										
Hard, public.....					4,400	559				
Hard, private.....					20,000	2,775				
Mussels, sea.....							1,900	\$323		
Oysters, market, private, fall.....					139,700	14,001				
Total.....	13,500	2,153	3,100	927	216,500	19,288	1,900	323	81,200	163

OPERATING UNITS: BY COUNTIES

Item	Kent	New Castle	Sussex
	Number	Number	Number
Fishermen:			
On vessels.....	42		186
On boats and shore:			
Regular.....		2	29
Casual.....	82	35	162
Total.....	124	37	377
Vessels:			
Steam.....			6
Net tonnage.....			839

Fisheries of Delaware, 1938—Continued

OPERATING UNITS: BY COUNTIES—Continued

Item	Kent	New Castle	Sussex
	Number	Number	Number
Vessels—Continued.			
Motor	7		
Net tonnage	136		
Total vessels	7		6
Total net tonnage	136		839
Boats:			
Motor	3	3	19
Other	19	15	87
Accessory boats			6
Apparatus:			
Purse seines, menhaden			6
Length, yards			3,666
Haul seines, common	11	9	16
Length, yards	2,570	1,395	4,385
Gill nets:			
Drift	2	6	17
Square yards	1,220	25,100	18,220
Runaround			8
Square yards			3,760
Stake	6	3	9
Square yards	7,340	1,000	997
Lines:			
Hand			11
Hooks			22
Trawl			3
Hooks			8,400
Pound nets		4	9
Stop nets	5	2	
Square yards	780	450	
Fyke nets	4	84	118
Dip nets			64
Pots:			
Eel	70	21	180
Lobster			98
Dredges:			
Clam	8		
Yards at mouth	10		
Crab	8		
Yards at mouth	9		
Oyster	10		
Yards at mouth	11		
Tongs, other than for oysters	2		

CATCH: BY COUNTIES

Species	Kent		New Castle		Sussex	
	Pounds	Value	Pounds	Value	Pounds	Value
Alewives			1,700	\$38	45,600	\$913
Bluefish					3,000	210
Carp	8,500	\$676	27,300	2,184		
Catfish and bullheads	2,300	69	22,400	672		
Cod					57,300	1,732
Croaker	65,800	762			162,300	1,951
Eels, common	3,300	521	5,300	458	18,600	2,920
Flounders, fluke					3,100	208
Gizzard shad			400	12		
Menhaden					16,207,000	72,990
Mullet					84,700	3,388
Shad	5,100	789	7,100	1,205	2,200	391
Spot					2,100	63
Squeteagues or "sea trout," gray	71,300	2,387			126,300	4,019
Striped bass	3,900	390			21,000	2,100
Tautog					1,400	42
White perch	3,800	380			13,600	1,400
Yellow perch			1,200	48	6,100	305
Crabs:						
Hard	52,400	1,953	400	12	131,000	2,620
King	81,200	163				
Soft and peelers					85,000	17,000
Lobsters					3,100	927
Clams:						
Hard, public	4,400	559				
Hard, private	20,000	2,775				
Mussels, sea	1,900	323				
Oysters, market, private, fall	139,700	14,001				
Turtles, snapper			3,600	284		
Total	463,600	25,748	69,400	4,913	16,973,800	113,195

RECEIPTS OF FISHERY PRODUCTS AT NEW YORK CITY

Receipts of fresh and frozen fishery products (excluding imports arriving by steamship and entered at New York City) at the salt-water market in New York City during 1939 totaled 228,293,329 pounds, with the largest receipts amounting to 23,517,566 pounds in May, and the smallest amounting to 15,650,541 pounds in February. The State of New York (including direct landings at the market) was the largest contributor to these receipts, furnishing 90,721,867 pounds. Next in order were Massachusetts, New Jersey, Florida, and Connecticut. Imports of fishery commodities entered at New York City during 1939 aggregated 7,710,619 pounds. Important among the countries of origin of these commodities were Japan, Union of South Africa, Portugal, and Morocco. Tabular statements which include detailed data collected and compiled by the Division's Fishery Market News Service on the receipts of fishery commodities at New York City during 1939 are included in the following tables. There also is included a statement of the landings of fishery commodities by fishing craft.

Receipts of fresh and frozen fishery products at the Salt-Water Market in New York City, 1939

BY SPECIES AND MONTHS

Species	January	February	March	April	May	June
	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
SALT-WATER FISH						
Albacore		200				
Alewives	31,205	7,279	23,711	62,632	3,985	2,275
Alewives, frozen	128	434	2,203			
Amberjack	4,380	1,900	1,000			
Anchovies, frozen	150					
Bluefish	495,054	122,367	157,195	350,821	96,157	162,363
Bluefish, frozen	3,861	14,850				
Blue runner	400	200	560			
Bonito					515	21,497
Bonito, frozen			300			
Butterfish	593,813	86,555	884,905	1,030,159	829,694	1,371,608
Butterfish, frozen	33,018	23,194	7,731			
Cod:						
Large	83,610	269,896	571,295	210,905	36,525	52,845
Market	581,491	598,957	622,410	555,930	509,037	543,036
Steak	872,366	1,184,156	1,176,567	1,116,866	1,157,729	1,056,000
Crevalle (jacks)		2,200	660	90		
Croaker	85,600	44,900	217,510	211,020	322,253	438,510
Croaker, frozen	25,506		100			
Cunner (bergall)	525	85	1,137	239	805	1,292
Cusk	2,665	165	475	285	335	185
Dabs, sea	2,175			23,750	8,525	2,788
Dogfish	14,865	739	540	2,467	3,926	3,461
Drum:						
Black				100		
Red (channel bass)	5,484		139		700	
Eels:						
Common	32,097	21,343	50,941	51,864	57,327	97,926
Common, frozen	150	560	125			
Conger (sea)	18,166	7,395	20,866	3,705	2,267	
Eel pout (conger eel)	3,032	1,379	3,250	1,010	67	425
Flounders	626,046	428,700	966,208	1,562,171	3,148,254	2,104,710
Flounders, frozen	700	630				
Fluke	177,415	315,257	360,251	141,011	336,950	658,833
Garfish			166	231	25	130
Goatfish (salmonete)	25	305	268			
Goosefish (bellyfish)	1,989	2,986	4,105	4,001	1,903	970
Groupers	1,842	460	1,398			
Haddock	975,482	661,842	1,116,636	1,524,422	1,991,790	1,634,520
Hake	163,542	75,658	63,879	108,392	124,512	234,643
Halibut	13,034	50,065	73,841	494,488	791,717	616,105
Halibut, frozen	276,376	348,811	327,416	58,100	28,000	10,050
Herring, sea (sardine)	45,425	26,970	141,557	86,035	85,170	101,050
Herring, sea (sardine) frozen	6,650		4,980			
Hickory shad	10,357	4,620	13,468	8,725	200	
Jewfish (warsaw)	9,689	6,279	5,866	6,097	5,617	1,350

NOTE.—Weights shown are for fishery products as received.

Receipts of fresh and frozen fishery products at the Salt-Water Market in New York City, 1939—Continued

BY SPECIES AND MONTHS—Continued

Species	January	February	March	April	May	June
	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
SALT-WATER FISH—continued						
John Dory			1,205	10		
Kingfish (king mackerel)	230,343	265,283	263,182	7,766	10	
King whiting (kingfish)	46,664	14,655	11,183	26,534	38,608	12,046
Launce (sand eel)	900	1,525	60	440	3,560	5,400
Mackerel	252,752	26,467	30,400	491,314	2,106,544	1,472,620
Mackerel, frozen	231,186	327,742	349,481	115,723		
Menhaden (bunker)			60	150		100
Mojarra (muttonfish)	1,184	6,616	2,854	1,665	410	
Mullet	40,208	13,571	1,750	9,620	1,900	1,875
Mullet, frozen		3,500				
Permit	2,040	255	2,296			
Pollock	289,030	97,939	132,323	127,743	117,556	92,202
Pollock, frozen		2,981				
Pompano	13,359	606	5,518	6,788	1,439	1,208
Pompano, frozen		3,109	1,314			
Rosefish	12,290	2,470	5,970	450		
Sablefish, frozen	8,000		25,000	15,000	22,000	8,000
Salmon:						
Atlantic	80				400	16,814
Atlantic, frozen	1,000			1,000	105	
Chinook (king)		1,560	3,425	41,292	233,254	277,593
Chinook (king), frozen	3,500	28,000	11,000	10,900		13,200
Chum (fall), frozen	7,000	13,277	13,050	10,000		
Silver					3,375	14,000
Silver, frozen	63,000	167,675	202,400	116,400	19,300	35,000
Scup (porgy)	484,832	554,475	949,279	1,327,779	987,538	1,046,732
Scup (porgy) frozen	31,852	28,215	10,029	100		
Sea bass	183,892	166,200	362,046	127,625	272,710	400,030
Sea robin	4,337	14,120	10,860	9,565	13,545	6,434
Sea trout (weakfish):						
Gray	27,496	5,156	11,442	88,580	384,845	273,367
Gray, frozen	34,085	32,077	22,188			
Spotted	55,775	29,782	41,589	27,275	13,424	33
Spotted, frozen			500			
Shad	16,895	87,548	264,760	1,968,128	1,364,300	73,520
Shad, frozen	74,614	6,800				
Sharks	3,355			920	2,309	6,345
Sheepshead	2,243	1,610	2,811	25	340	200
Silversides (spearing)	23,615	180	3,280	15,920	5,190	1,570
Skate wings	17,084	12,055	26,382	19,162	6,879	5,658
Skate wings, frozen		600	1,300			
Smelt	157,805	71,318	144,149	187,482	3,405	790
Smelt, frozen	834,866	671,255	223,160	14,400	8,200	
Snapper:						
Mangrove					104	
Red	11,373	8,135	18,625	19,561	54,183	2,975
Sole, gray	287,143	161,539	302,064	310,800	293,257	232,987
Spanish mackerel	452,309	133,513	56,376	42,189	1,126	1,015
Spanish mackerel, frozen		691	446	2,050	1,080	
Spot	400	2,100	400	1,170	7,735	6,648
Spot, frozen		10,500				
Steelhead trout	16,997	11,040	11,497	1,600		
Steelhead trout, frozen		3,000				
Striped bass	121,236	189,752	305,219	318,951	105,119	24,874
Striped bass, frozen		377				
Sturgeon	2,005	446	6,030	2,699	4,339	1,772
Swellfish (blowfish)				24	1,460	112
Swordfish						11,306
Tautog (blackfish)	1,854			294	15,797	3,405
Tilefish	104,832	97,699	141,186	150,580	161,898	142,145
Tomcod	2,390					
Tuna						3,825
Tuna, frozen		700	620			
Whitebait	3,525	1,994	1,326	1,510	8,215	1,620
White perch	12,366	21,477	69,646	59,942	3,532	1,377
Whiting	779,323	191,180	276,128	342,967	758,740	734,402
Whiting, frozen	15,081	130,037	72,316	12,233	10,000	
Wolffish (catfish)	2,435	605	1,455	420	255	1,405
Yellowtail (dabs)	2,237,442	2,473,766	2,119,704	1,114,249	455,780	381,203
Fillets, unclassified	16,200	165,670	257,630	199,300	179,185	185,675
Fillets, unclassified, frozen	145,920	61,635	118,632	32,200	60,116	16,700
Roe	8,839	16,662	9,252	8,117	4,554	932
Tongues and cheeks	92	850	50		150	
Unclassified	31,307	35,784	39,035	47,499	161,544	148,916
Total	12,606,664	10,688,734	13,767,919	15,053,627	17,443,608	14,784,653

Receipts of fresh and frozen fishery products at the Salt-Water Market in New York City, 1939—Continued

BY SPECIES AND MONTHS—Continued

Species	January	February	March	April	May	June
FRESH-WATER FISH						
	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>
Brook trout.....	2,330	2,885	2,898	3,942	5,781	7,955
Carp.....	17,175	16,914	35,072	30,437	6,387	1,437
Catfish and bullheads.....	13,592	14,054	10,342	14,052	12,402	900
Crapple.....	2,469	3,205	153	100	-----	-----
Pickereel (jacks).....	639	640	531	333	-----	-----
Rock bass.....	-----	-----	-----	-----	210	240
Sucker "mullet".....	300	216	50	400	-----	-----
Sunfish.....	200	-----	200	50	200	140
Yellow perch.....	2,821	4,381	7,580	845	770	-----
Unclassified.....	305	151	-----	-----	50	48
Total.....	39,831	42,446	56,826	50,159	25,800	10,720
SHELLFISH, ETC.						
Clams:						
Hard.....	1,999,200	2,093,760	2,100,400	1,846,640	2,104,320	2,178,960
Razor.....	105	840	1,155	105	-----	-----
Soft.....	136,845	159,455	180,180	152,235	138,375	191,655
Soft, shucked.....	-----	42	42	-----	-----	-----
Conchs.....	17,040	17,480	45,800	49,920	56,720	73,280
Crabs:						
Hard.....	106,575	111,090	99,925	102,431	56,815	170,565
King.....	-----	-----	-----	-----	1,500	30
Oyster.....	344	368	165	76	-----	-----
Soft.....	-----	-----	18,521	70,047	407,955	377,664
Crab meat.....	47,027	41,779	49,205	59,230	64,681	112,633
Frogs.....	-----	-----	-----	262	309	18
Frog legs.....	4,950	6,741	6,168	2,365	7,828	9,388
Frog legs, frozen.....	-----	-----	190	-----	-----	-----
Lobsters:						
Common.....	255,548	235,430	201,980	205,792	369,041	488,946
Spiny.....	149	119	227	200	150	-----
Lobster meat:						
Common.....	628	10	162	908	4,868	2,499
Common, frozen.....	984	1,174	-----	-----	-----	-----
Spiny.....	631	429	1,154	-----	785	775
Mussels.....	85,195	131,010	211,255	222,915	219,945	204,930
Octopus.....	3,294	496	531	77	210	-----
Oysters, shell.....	1,072,650	1,001,625	1,106,550	864,000	46,425	-----
Oysters, shucked.....	126,905	141,347	153,306	96,373	2,108	-----
Periwinkles.....	5,940	5,220	6,180	7,500	5,520	9,318
Scallops:						
Bay.....	22,673	17,771	12,138	3,320	624	512
Bay, frozen.....	180	1,953	6,162	3,150	-----	-----
Sea.....	262,017	154,575	313,641	241,434	393,228	428,652
Sea, frozen.....	5,076	1,188	2,250	1,800	270	-----
Sea urchins (sea eggs).....	10,950	6,400	6,725	2,725	-----	-----
Shrimp.....	1,194,370	643,945	723,909	810,531	1,363,127	1,411,131
Shrimp, frozen.....	-----	32,715	61,569	65,010	40,000	200
Squid.....	51,092	52,520	135,220	263,669	761,342	662,809
Squid, frozen.....	37,263	58,934	48,120	1,100	-----	-----
Terrapin.....	637	565	736	685	162	55
Turtles:						
Loggerhead.....	-----	-----	-----	-----	-----	465
Snapping.....	640	400	290	420	1,850	510
Total.....	5,448,908	4,919,361	5,491,856	5,074,920	6,048,158	6,324,995
Grand total.....	18,095,403	15,650,541	19,316,601	20,178,706	23,517,566	21,120,368

Species	July	August	Septem-ber	October	Novem-ber	Decem-ber	Total
SALT-WATER FISH							
	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	<i>Pounds</i>
Albacore.....	-----	9,428	40,658	10,604	-----	-----	60,890
Alewives.....	1,916	3,870	9,409	14,403	8,730	22,956	192,371
Alewives, frozen.....	-----	-----	-----	-----	-----	-----	2,765
Amberjack.....	-----	-----	-----	100	-----	200	7,580
Anchovies.....	2,320	7,945	7,275	4,155	-----	-----	21,695
Anchovies, frozen.....	-----	-----	-----	-----	-----	-----	150
Bluefish.....	145,164	298,547	338,564	298,117	92,193	646,410	3,202,952
Bluefish, frozen.....	1,800	-----	-----	-----	-----	-----	20,511
Blue runner.....	-----	75	-----	-----	-----	-----	1,235
Bonito.....	9,775	47,323	21,531	15,042	188	-----	115,871

Receipts of fresh and frozen fishery products at the Salt-Water Market in New York City, 1939—Continued

BY SPECIES AND MONTHS—Continued

Species	July	August	September	October	November	December	Total
SALT-WATER FISH—continued							
Bonito, frozen					932		1, 232
Butterfish	909, 795	1, 151, 595	949, 017	559, 998	284, 190	595, 094	9, 246, 423
Butterfish, frozen			167	6, 949	28, 923	19, 318	119, 300
Cod:							
Large	83, 305	32, 075	62, 865	50, 015	58, 374	71, 904	1, 583, 614
Market	583, 486	570, 327	621, 881	738, 202	892, 794	690, 990	7, 508, 541
Steak	744, 445	819, 875	587, 901	670, 166	943, 743	763, 842	11, 093, 656
Crevalle (jacks)							2, 950
Croaker	436, 054	302, 261	188, 910	244, 896	210, 385	162, 775	2, 865, 074
Croaker, frozen		8, 251	15, 753	10, 111	20, 137	20, 895	100, 753
Cunner (bergall)	2, 055	360	1, 218	2, 108	1, 864	1, 143	12, 831
Cusk	120	325	270	1, 070	155		6, 050
Dabs, sea	2, 785	1, 160	4, 900	2, 665	1, 965	1, 310	52, 023
Dogfish	2, 464	1, 610	1, 883	4, 579	24, 280	12, 647	73, 461
Dolphin		100					100
Drum:							
Black	200		2, 510	400			3, 210
Red (channel bass)				1, 980	550	4, 341	13, 194
Eels:							
Common	66, 302	53, 852	85, 934	90, 942	57, 240	228, 317	894, 085
Common, frozen				25, 850	25, 000	5, 225	56, 910
Conger (sea)			305	805	3, 298	1, 235	58, 042
Eel pout (conger eel)	150				40	1, 596	10, 949
Flounders	1, 372, 611	1, 098, 850	1, 089, 719	1, 968, 993	1, 503, 400	751, 561	16, 621, 223
Flounders, frozen					2, 000	3, 102	6, 432
Fluke	514, 170	529, 870	302, 006	80, 443	27, 853	138, 351	3, 582, 410
Garfish	115	403	47	1, 042	568		2, 727
Goatfish (salmonete)							598
Goosefish (bellyfish)	420			635	2, 088	3, 018	22, 115
Groupers	1, 000	200				1, 000	6, 208
Haddock	1, 562, 195	1, 378, 859	1, 381, 844	871, 641	917, 968	955, 428	14, 972, 627
Hake	194, 801	237, 328	335, 747	372, 155	297, 098	76, 347	2, 284, 102
Halibut	709, 899	549, 179	550, 221	654, 649	100, 477	3, 639	4, 607, 314
Halibut, frozen	23, 000	15, 100	85, 794	146, 390	263, 759	176, 009	1, 768, 805
Harvestfish (angelfish)				4, 100			4, 100
Herring, sea (sardine)	56, 375	77, 025	96, 900	50, 625	106, 890	140, 048	1, 014, 070
Herring, sea (sardine), frozen					50, 025	10, 737	72, 392
Hickory shad		186		13, 105	5, 677	8, 636	64, 974
Jack, yellow			10, 372	458			10, 830
Jewfish (warsaw)	846	605	2, 092	1, 055	1, 041	7, 110	47, 647
John Dory							1, 215
Kingfish (king mackerel)		100		940	2, 986	212, 316	982, 926
King whiting (kingfish)	7, 209	4, 917	10, 923	11, 904	37, 655	56, 099	278, 397
Launce (sand eel)	1, 780	625	3, 930	11, 680	28, 760	10, 085	68, 745
Mackerel	1, 126, 835	1, 274, 963	1, 819, 859	907, 660	733, 725	416, 221	10, 159, 360
Mackerel, frozen	2, 460	55, 000	12, 068	57, 552	99, 502	104, 146	1, 354, 860
Menhaden (bunker)		1, 435	1, 530	1, 247			4, 522
Mojarra (muttonfish)					500	120	13, 349
Mullet	15, 760	51, 913	95, 456	110, 547	118, 380	55, 178	516, 158
Mullet, frozen							3, 500
Permit					460	2, 643	7, 694
Pilotfish			2, 836	225			3, 061
Pollock	91, 853	112, 201	198, 283	247, 739	350, 313	245, 574	2, 102, 756
Pollock, frozen							2, 981
Pompano	2, 744	4, 154	6, 892	10, 780	4, 186	6, 930	64, 604
Pompano, frozen	100						4, 523
Rosefish			40	95	250	550	22, 115
Sablefish, frozen			38, 124	25, 000	27, 000	3, 049	171, 173
Salmon:							
Atlantic	5, 268	1, 056	880				24, 498
Atlantic, frozen			10, 000				12, 105
Chinook (king)	245, 880	185, 904	79, 295	57, 400	1, 400	4, 860	1, 131, 863
Chinook (king), frozen	2, 000	15, 700	38, 000	17, 601	7, 000	24, 907	171, 808
Chum (fall)			240	15, 500	3, 400		19, 140
Chum (fall), frozen		15, 000			3, 050		61, 377
Pink (humpback)			5, 340				5, 340
Red (sockeye), frozen						2, 054	2, 054
Silver	145, 725	133, 750	209, 941	228, 555	67, 600		802, 956
Silver, frozen		7, 000	31, 186	40, 792	76, 700	69, 500	828, 953
Scup (porgy)	1, 049, 393	799, 329	476, 180	730, 055	301, 520	362, 295	9, 069, 457
Scup (porgy), frozen		1, 488	6, 786	11, 743	35, 463	13, 793	139, 469
Sea bass	249, 794	119, 962	151, 184	133, 741	142, 794	105, 377	2, 415, 355
Sea bass, frozen			4, 343	7, 405	9, 638	7, 960	29, 346
Sea robin	8, 115	7, 167	5, 823	23, 018	9, 495	7, 083	119, 562
Sea trout (weakfish):							
Gray	286, 274	283, 931	429, 481	475, 077	197, 061	26, 905	2, 489, 615
Gray, frozen		1, 610	4, 781	1, 110	13, 093	7, 776	116, 720
Spotted	60	2, 546	4, 146	56, 305	98, 040	127, 282	456, 257
Spotted, frozen							500

Receipts of fresh and frozen fishery products at the Salt-Water Market in New York City, 1939—Continued

BY SPECIES AND MONTHS—Continued

Species	July	August	September	October	November	December	Total
SALT-WATER FISH—continued							
	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	<i>Pounds</i>
Shad.....	718	20	360	3,210	5,050	6,754	3,791,263
Shad, frozen.....			90,000			67,539	238,953
Sharks.....	5,209	10,579	2,791	7,119	8,564	4,072	51,263
Sheepshead.....	100		470	1,726	2,693	2,266	14,494
Silversides (spearing).....	540	7,830	21,280	33,050	40,190	57,555	210,200
Skate wings.....	4,463	3,531	6,834	8,911	32,192	22,524	165,675
Skate wings, frozen.....							1,900
Smelt.....			15,611	67,972	123,653	182,004	954,189
Smelt, frozen.....		175	3,225	119,775	224,577	325,535	2,425,168
Smelt, sea.....			1,000	450			1,450
Snapper:							
Mangrove.....							104
Red.....	4,065	1,844	2,736	1,185	4,515	70,930	200,127
Sole, gray.....	201,393	186,983	171,532	136,367	101,414	98,525	2,484,004
Spanish mackerel.....	200	100	1,828	15,241	32,063	269,956	1,005,916
Spanish mackerel, frozen.....	1,316		1,069				6,652
Spot.....	38,312	82,676	114,665	173,487	34,005	1,100	462,698
Spot, frozen.....						3,995	14,496
Steelhead trout.....	300		4,400			12,259	58,093
Steelhead trout, frozen.....							3,000
Striped bass.....	25,742	63,019	28,779	178,789	143,795	102,999	1,608,274
Striped bass, frozen.....							377
Sturgeon.....	1,345	1,290	566	1,681	2,485	935	25,593
Swellfish (blowfish).....				250	25		1,871
Swordfish.....	47,254	143,376	85,424	5,098			292,458
Swordfish, frozen.....					181		181
Tautog (blackfish).....	1,057	259	3,881	20,544	17,295	15,484	79,870
Thimble-eyed mackerel.....	25,925	21,365	11,194	41,780	2,650		102,914
Tilefish.....	4,550	20,070	630	19,760	52,445	61,170	956,965
Tomcod.....					100	2,960	5,450
Tuna.....	129,505	127,766	75,169	8,962			345,227
Tuna, frozen.....							1,320
Whitebait.....	80	200	5,535	4,145	13,511	8,708	50,369
White perch.....	100		908	3,574	14,576	13,552	201,050
Whiting.....	626,333	662,009	596,437	691,758	1,084,213	709,967	7,453,457
Whiting, frozen.....				3,403		4,286	247,356
Wolfish (catfish).....		120	40	55		105	6,895
Yellowtail (dabs).....	607,710	963,642	1,158,274	1,460,193	1,551,791	1,927,080	16,450,834
Fillets, unclassified.....	96,730	122,650	107,980	93,340	212,033	87,833	1,724,226
Fillets, unclassified, frozen.....	2,700	10,150	17,100	39,300	5,130	2,540	612,123
Roe.....	90		25	4,060	25,169	2,283	79,983
Tongues and cheeks.....					100	190	1,432
Unclassified.....	90,178	102,683	117,496	122,507	81,579	53,371	1,031,899
Total.....	12,584,733	12,808,672	12,590,479	13,369,821	12,119,790	11,516,364	159,335,064
FRESH-WATER FISH							
Brook trout.....	5,864	9,068	7,240	6,783	3,915	4,043	62,704
Carp.....	1,558	500	9,299	6,834	17,106	10,201	152,920
Catfish and bullheads.....			4,105	14,293	12,554	10,857	107,151
Crappie.....				3,700	6,090	4,042	19,759
Lake herring.....					1,050		1,050
Pickeral (jacks).....					126	12	2,281
Rock bass.....							450
Sucker "mullet".....							966
Sunfish.....	95			1,100	3,330	540	5,855
Yellow perch.....				431	2,544	2,790	22,162
Unclassified.....				400	125		1,079
Total.....	7,517	9,568	20,644	33,541	46,840	32,485	376,377
SHELLFISH, ETC.							
Clams:							
Hard.....	1,984,720	2,061,040	1,964,160	1,923,600	1,713,920	1,618,320	23,589,040
Razor.....				140		1,190	3,535
Soft.....	104,715	101,340	83,610	103,185	114,930	143,010	1,609,515
Soft, shucked.....	42		128	357	6,579	8,288	15,478
Surf.....						180	180
Conchs.....	82,800	77,520	92,400	88,400	54,640	52,400	708,400
Crabs:							
Hard.....	150,705	183,755	377,415	301,785	130,705	105,875	1,897,641
King.....							1,530
Oyster.....			112	292	630	184	2,171
Rock.....						210	210
Soft.....	309,381	312,375	183,567	26,772	207		1,704,489
Soft, frozen.....	60						60

Receipts of fresh and frozen fishery products at the Salt-Water Market in New York City, 1939—Continued

BY SPECIES AND MONTHS—Continued

Species	July	August	September	October	November	December	Total
SHELLFISH, ETC.—continued							
Crab meat.....	Pounds 89,691	Pounds 104,055	Pounds 70,186	Pounds 71,644	Pounds 52,868	Pounds 50,799	Pounds 813,798
Frogs.....		9					598
Frog legs.....	12,673	11,274	11,971	13,860	13,002	5,894	106,114
Frog legs, frozen.....							190
Lobsters:							
Common.....	445,976	454,679	396,327	359,649	295,752	306,495	4,015,615
Spiny.....	125			50		2,529	3,549
Spiny, frozen.....						200	200
Lobster meat:							
Common.....	5,244	15,560	6,731	7,148	67	199	44,024
Common, frozen.....	708					600	3,466
Spiny.....	2,385	1,974	490	3,681	3,197	6,575	22,076
Mussels.....	134,200	112,860	143,385	156,365	122,375	125,895	1,870,330
Octopus.....				205	446		5,747
Oysters, shell.....		11,625	990,450	1,205,925	1,236,675	1,247,400	8,783,325
Oysters, shucked.....		85	112,948	149,294	144,644	154,198	1,081,208
Periwinkles.....	3,435	2,150	2,175	5,979	5,989	3,113	62,519
Scallops:							
Bay.....	4,832	3,493	11,264	26,942	21,102	18,268	142,939
Bay, frozen.....							11,445
Sea.....	547,542	572,454	414,495	430,965	299,421	326,052	4,384,476
Sea, frozen.....							10,584
Sea urchins (sea eggs).....			175	3,650	2,800	11,250	44,675
Shrimp.....	1,272,557	1,263,727	1,506,380	1,852,475	1,424,670	1,088,239	14,555,061
Shrimp, frozen.....							201,094
Snails.....					1,350	1,550	2,900
Squid.....	213,804	124,289	48,796	128,509	62,052	12,667	2,516,169
Squid, frozen.....		4,303	44,835	20,026	39,770	92,986	347,337
Terrapin.....	30	15	220	252	2,862	756	6,975
Turtles:							
Green.....		1,910	1,200	1,500			4,610
Hawksbill.....			480	400			880
Loggerhead.....	280	150	340	60			1,295
Snapping.....	350	40	230	330	540	840	6,440
Total.....	5,366,255	5,420,682	6,464,470	6,883,440	5,751,193	5,387,650	68,581,888
Grand total.....	17,958,505	18,238,922	19,075,593	20,286,802	17,917,823	16,936,499	228,293,329

BY ORIGIN AND MONTHS

Origin	January	February	March	April	May	June
DOMESTIC						
Alabama.....	Pounds 2,175	Pounds 1,400	Pounds	Pounds 180	Pounds 1,650	Pounds
California.....		47,044	89,674	34,000	11,625	
Connecticut.....	421,957	399,283	530,096	481,971	600,682	859,847
Delaware.....	6,778	6,657	5,345	10,710	1,208	4,007
District of Columbia.....			1,100	3,400	350	
Florida.....	2,316,981	996,746	774,649	575,594	332,205	125,704
Georgia.....	31,684	49,235	32,404	136,684	330,247	422,359
Illinois.....				5,600	6,600	
Louisiana.....	196,262	251,065	411,519	405,384	445,262	410,014
Maine.....	317,921	139,652	424,735	427,965	394,957	571,048
Maryland.....	172,462	282,173	379,783	604,854	863,958	807,253
Massachusetts.....	3,987,388	3,661,846	4,660,044	3,956,359	4,947,425	4,900,624
Michigan.....		35	23,710	890	400	
Mississippi.....		6,408	41,775	1,510	550	400
New Jersey.....	1,092,232	1,154,232	579,655	1,816,725	2,818,161	1,260,737
New York.....	6,646,922	5,941,658	8,859,414	9,190,299	9,901,823	9,451,081
North Carolina.....	441,075	433,239	549,779	471,941	90,850	73,565
Oregon.....	7,475	56,135	4,300			
Pennsylvania.....	8,731	905	10,399	13,842	6,228	4,920
Rhode Island.....	284,880	142,395	149,311	158,715	719,101	482,295
South Carolina.....	27,992	11,405	14,413	37,788	359,606	492,810
Texas.....		6,000	40,000	55,000	51,750	9,375
Vermont.....	2,205	3,060	2,571	1,048	1,234	1,022
Virginia.....	663,894	723,002	712,760	887,245	494,820	244,045
Washington.....	189,898	127,513	182,022	277,897	431,836	423,567
Wisconsin.....	7,271	33,259	111,934	183,480	130	790
Alaska.....		80,000	61,000		28,100	6,400
Total.....	16,826,183	14,554,347	18,652,392	19,739,081	22,834,158	20,551,863

Receipts of fresh and frozen fishery products at the Salt-Water Market in New York City, 1939—Continued

BY ORIGIN AND MONTHS—Continued

Origin	January	February	March	April	May	June
IMPORTED ¹						
	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>
British Columbia ²	177,500	309,715	343,466	401,642	598,180	540,437
New Brunswick.....	824,299	588,137	188,275	37,123	3,320	5,290
Nova Scotia.....	120,891	91,457	87,547	-----	76,005	12,326
Ontario.....	-----	-----	-----	-----	275	-----
Prince Edward Island.....	83,255	38,165	41,275	60	-----	818
Quebec.....	36,900	68,120	3,535	800	1,808	8,758
Canada (unclassified).....	25,040	450	-----	-----	176	-----
Newfoundland.....	1,335	150	111	-----	3,644	876
Total.....	1,269,220	1,096,194	664,209	439,625	683,408	568,505
Grand total.....	18,095,403	15,650,541	19,316,601	20,178,706	23,517,566	21,120,368

Origin	July	August	September	October	November	December	Total
DOMESTIC							
	<i>Pounds</i>	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
Alabama.....	3,915	-----	2,586	4,300	7,958	24,095	48,259
California.....	32,775	-----	-----	-----	-----	3,700	218,818
Connecticut.....	588,333	440,900	435,925	529,956	663,139	744,816	6,696,905
Delaware.....	3,055	756	1,960	6,362	11,157	8,464	66,459
District of Columbia.....	-----	-----	600	780	1,415	3,200	10,845
Florida.....	189,172	330,201	240,242	393,470	531,845	1,985,666	8,792,475
Georgia.....	332,793	174,033	215,015	266,573	116,801	67,448	2,175,276
Illinois.....	-----	-----	-----	5,030	11,576	-----	22,206
Louisiana.....	611,264	570,171	500,257	263,061	181,339	195,192	4,440,790
Maine.....	462,925	480,722	386,279	360,023	275,083	232,114	4,473,424
Maryland.....	617,960	621,629	489,780	372,570	163,400	59,702	5,435,524
Massachusetts.....	4,600,142	5,393,684	5,456,477	6,051,862	5,500,606	4,265,033	57,381,490
Michigan.....	-----	-----	-----	-----	-----	-----	25,035
Mississippi.....	200	11,500	950	-----	-----	340	63,633
New Hampshire.....	-----	-----	-----	-----	59	-----	59
New Jersey.....	1,213,265	1,506,413	1,672,531	1,499,154	1,259,208	948,818	16,821,131
New York.....	7,499,949	6,979,042	7,204,892	6,849,869	6,245,049	5,951,869	90,721,867
North Carolina.....	59,081	209,408	610,652	1,049,107	1,141,694	740,516	5,870,907
Oregon.....	11,300	-----	66,900	121,110	15,000	9,900	292,120
Pennsylvania.....	2,195	2,220	10,660	4,720	2,965	3,715	71,500
Rhode Island.....	154,025	174,557	241,547	516,762	320,344	165,831	3,509,763
South Carolina.....	197,394	201,305	247,332	472,169	59,449	22,204	2,143,867
Texas.....	11,250	-----	-----	-----	21,250	-----	194,625
Vermont.....	29	20	9	135	161	60	11,554
Virginia.....	237,088	115,749	162,785	221,187	434,990	568,994	5,466,559
Washington.....	399,406	453,494	295,823	603,554	226,173	208,954	3,820,137
Wisconsin.....	-----	-----	-----	26,818	44,782	38,189	446,653
Alaska.....	92,200	7,700	-----	25,000	47,705	37,158	385,263
Total.....	17,319,716	17,673,504	18,243,202	19,643,572	17,283,148	16,285,978	219,607,144
IMPORTED ¹							
British Columbia ²	585,600	462,795	673,945	429,992	259,234	32,926	4,815,432
New Brunswick.....	3,366	12,632	79,352	41,454	144,067	307,780	2,235,095
Nova Scotia.....	46,095	89,151	37,612	38,656	37,594	52,262	689,596
Ontario.....	-----	-----	-----	-----	-----	270	545
Prince Edward Island.....	-----	-----	-----	61,055	135,617	235,842	596,087
Quebec.....	2,492	440	41,346	70,338	40,228	20,941	295,706
Canada (unclassified).....	1,236	-----	-----	-----	-----	-----	26,902
Newfoundland.....	-----	400	136	1,735	17,935	500	26,822
Total.....	638,789	565,418	832,391	643,230	634,675	650,521	8,686,185
Grand total.....	17,958,505	18,238,922	19,075,593	20,286,802	17,917,823	16,936,499	228,293,329

¹ Does not include imports arriving by steamship entered at New York City.² Includes catch taken by United States vessels and shipped in bond through British Columbia ports to New York.

Imports of fishery products entered at New York City, 1939, by species and origin

Species	Belgium	British West Indies	Canada	Costa Rica	Cuba	Denmark	France	Germany	Iceland
FISH	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>
Brook trout, frozen						22,704			
Eels:									
Frozen			47,883						
Live			140,000						
Halibut, frozen			2,060						
Mackerel			22,000						
Salmonete					1,400				
Smelt, frozen			8,050						
Sole, frozen	112								
Sturgeon, frozen							7,086		
Tuna			2,075						
Fillets, frozen:									
Cod			20,000						4,420
Haddock			60,000						700
Halibut			10,250						
Unclassified	1,000								7,500
Steaks, frozen:									
Halibut			7,500						
Swordfish			25,244						
Unclassified, frozen			100					66	
Total	1,112		345,162		1,400	22,704	7,086	66	12,620
SHELLFISH, ETC.									
Frog legs					7,788				
Lobster, spiny					21,632				
Lobster meat:									
Common			8,584						
Spiny					2,150				
Snails							1,440		
Turtles		700		291,037	573				
Total		700	8,584	291,037	32,143		1,440		
Grand total	1,112	700	353,746	291,037	33,543	22,704	8,526	66	12,620

Species	Italy	Jamaica	Japan	Mexico	Morocco	Netherlands	Newfoundland	Norway	Panama
FISH	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>
Herring, sea, frozen							56,425	11,000	
Plaice, frozen						300			
Smelt, frozen			93,100			1,470	190,750		
Sole, frozen						44,052			
Swordfish, frozen:									
Round			587,588						
Split			1,806,298						
Turbot, frozen						4,200			
Fillets, frozen:									
Halibut			12,500				100		
Unclassified								9,000	
Steaks, frozen:									
Halibut			10,000						
Swordfish			103,655						
Unclassified, frozen	259								
Total	259		2,613,141			50,022	247,275	20,000	
SHELLFISH, ETC.									
Frog legs, frozen			162,491						
Lobster tails, spiny, frozen	1,822								
Scallops, frozen			4,482						
Snails	47,520				706,545				
Turtles		154,500		72,849					7,500
Fulpi, frozen	10,000		4,301	20,551					
Sepia, frozen			16,927						
Unclassified				15,000					
Total	59,342	154,500	188,201	108,400	706,545				7,500
Grand total	59,601	154,500	2,801,342	108,400	706,545	50,022	247,275	20,000	7,500

NOTE.—Includes only imports arriving by steamship entered at New York City.

Imports of fishery products entered at New York City, 1939, by Species and Origin—Continued

Species	Peru	Portugal	Rumania	U.S.S.R. (Russia)	Spain	Tunisia	Union of South Africa	United Kingdom	Total
FISH									
Brook, trout, frozen									22,704
Eels:									
Frozen									47,883
Live									140,000
Halibut, frozen									2,060
Herring, sea, frozen		3,000							70,425
Mackerel									22,000
Plaice, frozen									300
Salmon, frozen				162,697					162,697
Salmonete									1,400
Sardine, frozen		14,200							14,200
Smelt, frozen									293,370
Sole, frozen								3,400	47,564
Sprat, frozen		2,000							2,000
Sturgeon, frozen			30,110	278,800					315,996
Swordfish, frozen:									
Round									587,588
Split									1,806,298
Tuna									2,075
Turbot, frozen									4,200
Fillets, frozen:									
Cod									24,420
Halibut									60,700
Unclassified									22,850
Steaks, frozen:									
Halibut									17,500
Swordfish									128,899
Unclassified		5,580		89,272				3,789	99,066
Total		24,780	30,110	530,769				7,189	3,913,695
SHELLFISH, ETC.									
Frog legs									7,788
Frog legs, frozen									162,491
Lobster, spiny									21,632
Lobster tails, spiny, frozen							1,413,300		1,415,122
Lobster meat:									
Common									8,584
Spiny									2,150
Scallops, frozen									4,482
Snails						4,425			759,930
Turtles	8,818								535,977
Pulpi, frozen		447,000			74,500				556,352
Pulpi and sepia, frozen		173,030							173,030
Sepia, frozen		70,930							87,857
Unclassified		46,529							61,529
Total	8,818	737,489			74,500	4,425	1,413,300		3,796,924
Grand total	8,818	762,269	30,110	530,769	74,500	4,425	1,413,300	7,189	7,710,619

Landings by fishing craft at New York City, 1939

BY SPECIES AND MONTHS

Species	January	February	March	April	May	June
FISH						
Bluefish	Pounds 10		Pounds 1,431	Pounds 243	Pounds 50	
Butterfish	556,936	60,105	884,505	931,045	110,227	12,620
Cod:						
Large	83,610	269,896	571,295	210,905	36,525	52,845
Market	110,365	153,350	213,240	185,000	216,030	342,715
Steak	10,740	13,245	8,515		48,555	112,755
Crouker			19,700			945
Cunner (bergall)		85				170
Cusk	2,320			270		
Dabs, sea	2,175					
Dogfish	215	100				

Landings by fishing craft at New York City, 1939—Continued

BY SPECIES AND MONTHS—Continued

Species	January	February	March	April	May	June
FISH—continued						
Eels:	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>
Common	100					
Conger (sea)	16,716	6,955	18,526	3,705	2,140	
Eel pout (conger eel)			1,735			
Flounders	123,695	106,940	173,421	160,255	557,799	329,526
Fluke	157,655	260,115	353,326	134,117	49,051	180
Goosefish (bellyfish)		670	1,690	1,010		
Haddock	727,287	437,400	808,910	1,381,782	1,901,300	1,514,965
Hake	64,011	14,273	20,492	33,755	29,180	12,440
Halibut	1,613	1,546	3,348	8,682	11,610	6,258
Herring, sea (sardine)	40		100	240		
John Dory			1,205	10		
Mackerel	17,262	26,467	30,245	273,885	562,944	18,000
Menhaden			60			
Pollock	134,130	11,455	18,280	47,165	14,680	14,850
Rosefish	12,290			410		
Scup (porgy)	435,498	454,675	919,688	1,221,130	214,780	112,370
Sea bass	81,717	82,749	303,216	94,180	15,987	4,025
Sea robin	2,190	1,710	5,860	2,410		
Sea trout, gray (weakfish)	3,719	3,576	6,872	7,165	4,006	2,125
Snad			1,130	71,446	45,022	
Sharks				350	40	
Skate wings	3,515	4,455	6,625	2,500		
Sole, gray	85,670	1,728	1,515	5,045	860	70
Striped bass				6	20	
Sturgeon				625	320	
Tilefish	73,512	84,494	76,456	125,130	159,720	131,195
Whiting	42,670	35,145	204,188	158,045	35,078	
Wolfish (catfish)	2,075	395	315	150		620
Yellowtail (dabs)	491,668	766,560	355,675	146,105	64,695	108,880
Roe	623	3,800	470			
Unclassified	406	800	1,675	160		20
Total	3,244,433	2,802,689	5,013,709	5,206,926	4,080,619	2,777,574
SHELLFISH						
Crabs:						
Hard	25,760	16,100	10,850			
King					1,500	
Lobsters, common	3,463	2,790	3,250	8,916	5,735	35
Mussels, sea ¹	11,550	18,150	17,050	21,450	29,150	29,150
Scallops, sea ²	79,153	28,278	93,276	89,199	236,673	291,357
Squid	33,209	27,645	116,245	78,056	7,730	557
Total	153,137	92,963	240,671	197,621	280,788	321,099
Grand total	3,397,570	2,895,652	5,254,380	5,404,547	4,361,407	3,098,673

Species	July	August	September	October	November	December	Total
FISH							
Albacore			1,253				1,253
Alewives			320	940			1,260
Bluefish	10,152	83,618	34,572	13,302	1,012		144,390
Bonito	20	39	1,013	1,701			2,773
Butterfish	64,653	54,120	81,316	76,980	43,495	273,677	3,149,679
Cod:							
Large	83,305	32,075	62,865	50,015	58,374	71,904	1,583,614
Market	431,420	373,735	348,315	269,330	240,353	179,870	3,063,723
Steak	85,790	186,470	75,120	10,000			551,190
Croaker	6,060		9,670	42,760			79,135
Cunner (bergall)	1,140			243			1,638
Cusk	85						2,675
Dabs, sea							2,175
Dogfish							315
Eels:							
Common							100
Conger (sea)				310	1,710	50	50,112
Eel pout (conger eel)							1,735
Flounders	159,165	238,730	336,180	579,283	220,583	160,925	3,146,502
Fluke	1,276	535	7,851	8,375	5,823	9,141	987,445
Goosefish (bellyfish)					280		3,650
Haddock	1,419,117	1,254,563	1,235,093	555,293	648,665	711,365	12,595,740
Hake	51,425	22,960	30,902	7,514	5,385	5,270	297,597
Halibut	1,896	961	555	50	523	739	37,781

See footnotes at end of table.

Landings by fishing craft at New York City, 1939—Continued

BY SPECIES AND MONTHS—Continued

Species	July	August	September	October	November	December	Total
FISH—continued	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	<i>Pounds</i>
Herring, sea (sardine)							380
John Dory							1,215
King whiting (kingfish)			80	110			190
Mackerel	903	2,912	3,185	9,783	5,405	13,595	964,586
Menhaden							60
Pollock	22,335	9,160	43,607	3,715	6,100	3,827	329,304
Rosefish							12,700
Scup (porcy)	225,955	104,695	145,349	414,825	261,475	280,940	4,791,380
Sea bass	3,485	12	323	6,320	2,047	1,303	595,364
Sea robin				330	3,615	3,360	19,475
Sea trout, gray (weakfish)	5,525		2,740	9,946	1,250		46,924
Shad	10	20					117,628
Sharks				1,065	450	240	2,145
Skate wings	280		260	1,130	5,175	3,205	27,145
Sole, gray	235					100	95,223
Spot			680	130			810
Striped bass						7	33
Sturgeon	255	500		215			1,915
Tautog (blackfish)	10		20				30
Tilefish		9,570	630		44,395	50,715	755,817
Tuna	32		728	97			857
Whiting	5,550		14,800	56,490	21,750	17,520	591,236
Wolfish (catfish)							3,555
Yellowtail (flabs)	152,525	294,240	292,050	229,045	347,990	475,890	3,725,323
Roe							4,893
Unclassified	40		110	2,676	190	440	6,517
Total	2,732,644	2,668,915	2,729,567	2,351,993	1,926,045	2,264,073	37,790,187
SHELLFISH							
Crabs							
Hard					875	1,260	54,845
King							1,500
Lobsters, common			48	60	790	754	25,841
Mussels, sea ¹	14,300	23,650	20,900	21,725	13,750	15,400	236,225
Scallops, sea ²	421,020	389,601	293,877	274,959	137,421	136,989	2,471,805
Squid	1,150	410	2,070	12,310	5,548	3,725	288,655
Total	436,470	413,661	316,895	309,054	158,384	158,128	3,078,871
Grand total	3,169,114	3,082,576	3,046,462	2,661,047	2,084,429	2,422,201	40,878,058

¹ Data for landings of sea mussels include the weights of the shells.

² Data for landings of sea scallops do not include the weight of the shells.

NOTE.—Includes landings by both vessels and boats. Landings are based on weighed-out weights.

SHAD FISHERY OF THE HUDSON RIVER

The shad fishery of the Hudson River in 1938 was prosecuted by 875 fishermen who used 375 boats, 18 haul seines, 233 drift gill nets, and 366 stake gill nets. The total commercial catch amounted to 711,799 shad, having a weight of 2,467,000 pounds, and a value to the fishermen of \$172,475. This is a decrease of 19 percent in the number of shad and also 19 percent in their value as compared with 1937. The average price per pound received by the fisherman was about 7 cents, compared with a price of approximately 8 cents in 1937.

Stake gill nets accounted for 61 percent of the weight of shad taken; drift gill nets, 38 percent; and haul seines, 1 percent.

Statistics of the catch of shad in the Hudson River also are included in the catch data for New York and New Jersey which are published elsewhere in this report.

Shad fishery of the Hudson River, 1938

Item	New York			New Jersey			Total		
OPERATING UNITS									
Fishermen:									
On boats and shore:	<i>Number</i>			<i>Number</i>			<i>Number</i>		
Regular.....	50			103			153		
Casual.....	569			153			722		
Total.....	619			256			875		
Boats:									
Motor.....				1			1		
Other.....	299			75			374		
Apparatus:									
Haul seines	18						18		
Length, yards..	2, 574						2, 574		
Gill nets:									
Drift.....	232			1			233		
Square yards..	727, 751			1, 360			729, 111		
Stake.....	301			65			366		
Square yards..	6, 993			144, 479			151, 472		
CATCH									
	<i>Number</i>	<i>Pounds</i>	<i>Value</i>	<i>Number</i>	<i>Pounds</i>	<i>Value</i>	<i>Number</i>	<i>Pounds</i>	<i>Value</i>
Haul seine.....	3, 480	11, 600	\$620				3, 480	11, 600	\$620
Drift gill nets.....	283, 700	946, 000	52, 554	70	200	\$12	283, 770	946, 200	52, 566
Stake gill nets.....	4, 470	14, 900	815	420, 079	1, 494, 300	118, 474	424, 549	1, 509, 200	119, 289
Total.....	291, 650	972, 500	53, 989	420, 149	1, 494, 500	118, 486	711, 799	2, 467, 000	172, 475

FISHERIES OF THE CHESAPEAKE BAY STATES(Area XXIII) ⁹

The yield of the commercial fisheries of the Chesapeake Bay States (Maryland and Virginia) during 1938 amounted to 294,593,900 pounds, valued at \$6,662,951 to the fishermen, representing an increase of 1 percent in volume and 5 percent in value as compared with the catch in the previous year. These fisheries gave employment to 15,297 fishermen, as compared with 16,529 in 1937.

There were 582 fishery wholesale and manufacturing establishments in the two States in 1938, as compared with 561 in 1937. In 1938 these establishments employed 12,844 persons, paid \$3,135,628 in salaries and wages, and produced manufactured products (canned, cured, packaged and byproducts), valued at \$9,224,417. In 1937 the wholesale and manufacturing firms employed 12,005 persons, paid \$3,068,069 in salaries and wages, and produced manufactured products valued at \$10,009,939.

⁹ This is the number given to this area by the North American Council on Fishery Investigations. It should be explained that there may be included under this area, craft whose principal fishing ports are in the area but at times fish elsewhere. Data on the operating units and catch of the fisheries of the Chesapeake Bay States have been taken largely from statistics collected by the State fishery agencies of Maryland and Virginia. Supplementary surveys, compilations, and analyses have been made by agents of this Bureau in order that the figures may be presented in a manner comparable with those of other sections. It should be observed that the persons engaged, gear and craft employed, and the catch of the seed oyster fishery are not included among the statistics of the fishery for market oysters and other species but are shown in separate tables in this section.

Fisheries of the Chesapeake Bay States, 1938

SUMMARY OF CATCH

Product	Maryland		Virginia		Total	
	Pounds	Value	Pounds	Value	Pounds	Value
Fish.....	14, 114, 100	\$437, 684	188, 708, 600	\$2, 152, 300	202, 822, 700	\$2, 589, 984
Shellfish, etc.....	43, 149, 100	1, 822, 104	48, 622, 100	2, 250, 863	91, 771, 200	4, 072, 967
Total.....	57, 263, 200	2, 250, 788	237, 330, 700	4, 403, 163	294, 593, 900	6, 662, 951

OPERATING UNITS: BY STATES

Item	Maryland	Virginia	Total
Fishermen:	<i>Number</i>	<i>Number</i>	<i>Number</i>
On vessels.....	748	1, 789	2, 537
On boats and shore:			
Regular.....	3, 591	4, 217	7, 808
Casual.....	2, 118	2, 834	4, 952
Total.....	6, 457	8, 840	15, 297
Vessels:			
Steam.....		25	25
Net tonnage.....		2, 890	2, 890
Motor.....	30	149	179
Net tonnage.....	207	2, 598	2, 805
Sail.....	137		137
Net tonnage.....	1, 703		1, 703
Total vessels.....	167	174	341
Total net tonnage.....	1, 910	5, 478	7, 388
Boats:			
Motor.....	2, 669	3, 324	5, 993
Other.....	1, 598	3, 687	5, 285
Accessory boats.....		99	99
Apparatus:			
Purse seines, menhaden.....		33	33
Length, yards.....		10, 890	10, 890
Haul seines.....	178	148	326
Length, yards.....	32, 018	63, 888	95, 906
Gill nets:			
Anchor.....	433		433
Square yards.....	77, 558		77, 558
Drift.....	251	234	485
Square yards.....	217, 592	206, 751	424, 343
Runaround.....		10	10
Square yards.....		5, 369	5, 369
Stake.....	3, 200	4, 863	8, 063
Square yards.....	271, 900	222, 870	494, 770
Lines:			
Hand.....	100	300	400
Hooks.....	120	400	520
Trot with baits or snoods.....	1, 766	1, 603	3, 369
Baits or snoods.....	1, 214, 800	928, 900	2, 143, 700
Trot with hooks.....		6	6
Hooks.....		1, 600	1, 600
Pound nets.....	548	1, 871	2, 419
Fyke nets:			
Crab ¹		408	408
Fish.....	1, 871	621	2, 492
Dip nets.....	670	954	1, 624
Otter trawls.....		28	28
Yards at mouth.....		776	776
Slat traps.....		5	5
Pots:			
Crab.....	55	740	795
Eel.....	14, 236	734	14, 970
Fish.....	200	245	445
Turtle.....		35	35
Scrapes.....	614	170	784
Yards at mouth.....	614	194	808
Dredges:			
Crab.....		296	296
Yards at mouth.....		485	485
Oyster.....	380	67	447
Yards at mouth.....	442	108	550
Tongs:			
Oyster.....	3, 975	2, 098	6, 073
Other.....	64	241	305
Rakes:			
Oyster.....	56	192	248
Other.....		241	241
Picks.....		100	100

¹ Formerly listed as crab pound nets.

Fisheries of the Chesapeake Bay States, 1938—Continued

CATCH: BY STATES

Species	Maryland		Virginia		Total	
	Pounds	Value	Pounds	Value	Pounds	Value
FISH						
Alewives.....	5,396,600	\$51,228	17,690,900	\$164,057	23,087,500	\$215,285
Black bass.....	93,400	9,577			93,400	9,577
Bluefish.....	51,200	4,711	303,100	17,414	354,300	22,125
Bonito.....	6,900	295	34,800	1,044	41,700	1,339
Butterfish.....	64,900	2,906	3,140,000	41,960	3,204,900	44,866
Cabio or crab eater.....	100	5	22,700	1,061	22,800	1,066
Carp.....	285,000	16,505	539,200	33,151	824,200	49,656
Catfish and bullheads.....	517,200	17,151	664,200	26,447	1,181,400	43,598
Cod.....			400	13	400	13
Crappie.....	2,500	136			2,500	136
Croaker.....	3,024,900	40,084	43,284,500	558,819	46,309,400	598,903
Drum:						
Black.....	9,000	99	116,800	1,024	125,800	1,123
Red or redfish.....	2,500	42	133,600	1,789	136,100	1,831
Eels:						
Common.....	133,700	10,448	161,700	16,998	295,400	27,446
Conger.....	200	2	3,700	45	3,900	47
Flounders.....	65,900	3,452	772,100	42,329	838,000	45,781
Gizzard shad.....	135,100	1,793	426,500	5,230	561,600	7,023
Hake.....			12,100	179	12,100	179
Harvestfish or "starfish".....	1,500	54	488,500	8,293	490,000	8,347
Hickory shad.....	26,100	541	140,400	2,651	166,500	3,192
Hogchoker.....	2,000	70			2,000	70
Hogfish.....			400	8	400	8
King whiting or "kingfish".....	3,700	195	261,000	10,922	264,700	11,117
Mackerel.....	2,500	250	17,400	859	19,900	1,139
Menhaden.....	62,800	328	95,020,500	360,948	95,083,300	361,276
Mullet.....	3,600	170	23,400	945	27,000	1,115
Pike or pickerel.....	43,900	6,540	2,200	370	46,100	6,910
Pollock.....			100	1	100	1
Sand perch.....			7,300	97	7,300	97
Scup or porgy.....	22,000	270	2,343,800	38,250	2,365,800	38,520
Sea bass.....	42,000	1,680	301,600	13,007	343,600	14,687
Sea robin.....			3,000	30	3,000	30
Shad.....	599,700	61,135	3,607,600	332,799	4,207,300	393,934
Shark.....			237,300	2,756	237,300	2,756
Skates.....			8,600	115	8,600	115
Spanish mackerel.....	20,400	1,278	437,000	29,536	457,400	30,814
Spot.....	59,900	1,643	3,865,800	71,874	3,925,700	73,517
Squeteague or "sea trout":						
Gray.....	1,069,100	35,147	12,547,400	225,865	13,616,500	261,012
Spotted.....	8,200	767	393,700	32,322	401,900	33,089
Striped bass.....	1,714,400	140,270	1,155,000	91,293	2,869,400	231,563
Sturgeon.....	100	14	15,700	2,236	15,800	2,250
Suckers.....	4,500	209			4,500	209
Sunfish.....	9,000	181			9,000	181
Swellfish.....			33,800	780	33,800	780
Tautog.....	500	17	1,100	18	1,600	35
Tomcod.....			7,400	79	7,400	79
White perch.....	436,600	17,097	290,200	8,817	726,800	25,914
Whiting.....			139,500	2,570	139,500	2,570
Yellow perch.....	192,500	11,394	52,600	3,269	245,100	14,663
Total.....	14,114,100	437,684	188,708,600	2,152,300	202,822,700	2,589,984
SHELLFISH, ETC.						
Crabs:						
Hard.....	20,699,100	385,230	28,690,400	486,098	49,389,500	871,328
Soft and peelers.....	2,898,400	224,760	2,782,600	211,179	5,681,000	435,939
Lobsters.....	100	20	1,400	157	1,500	177
Shrimp.....			8,000	980	8,000	980
Clams: 1						
Hard, public.....	53,400	10,020	2,757,800	370,048	2,811,200	380,068
Hard, private.....			52,200	5,000	52,200	5,000
Soft, public.....			2,500	1,000	2,500	1,000
Mussels, sea.....			30,000	900	30,000	900
Oysters, market: 2						
Public, spring.....	5,300,300	314,159	1,611,200	141,855	6,911,500	456,014
Public, fall.....	12,764,300	740,921	2,751,800	244,596	15,516,100	985,517
Private, spring.....	501,000	65,779	3,506,700	297,323	4,007,700	363,102
Private, fall.....	797,400	77,300	6,179,600	487,736	6,977,000	565,036

¹ Statistics on hard clams used in this table are based on yields of 6.14 pounds of meats per standard bushel in Maryland, and 5.73 pounds of meats in Virginia.

² Statistics on market oysters used in this table are based on yields of 4.67 pounds of meats per standard bushel in Maryland, and 4.24 pounds of meats in Virginia.

Fisheries of the Chesapeake Bay States, 1938—Continued

CATCH: BY STATES—Continued

Species	Maryland		Virginia		Total	
	Pounds	Value	Pounds	Value	Pounds	Value
SHELLFISH, ETC.—continued						
Squid.....	130,000	\$1,300	233,000	\$2,851	363,000	\$4,151
Terrapin, diamond-back.....	4,500	2,579	4,300	150	8,800	2,729
Turtles, snapper.....	600	36	10,600	990	11,200	1,026
Total.....	43,149,100	1,822,104	48,622,100	2,250,863	91,771,200	4,072,967
Grand total.....	57,263,200	2,259,788	237,330,700	4,403,163	294,593,900	6,662,951

NOTE.—Data on the yield of shellfish meats per bushel are based on U. S. Standard Bushels of 2,150.4 cubic inches capacity. Prior to 1938, yields were based on bushels of the size prescribed by individual State regulations. The seed-oyster fishery in the Chesapeake Bay States was prosecuted only in Virginia, where 1,440 fishermen, using 14 motor vessels, 542 motorboats, 162 other boats, 957 tongs, and 112 rakes, took 1,234,140 bushels of seed oysters valued at \$231,958 from public beds. Of the total number of persons fishing for seed oysters, 665 are duplicated among those fishing for market oysters or other species. Similarly, the following craft and gear are duplicated: 229 motorboats, 150 other boats, 341 tongs, and 112 rakes.

SUPPLEMENTARY TABLE SHOWING THE PRODUCTION OF CERTAIN SHELLFISH, IN NUMBER AND BUSHELS

Product	Maryland		Virginia		Total	
	Quantity	Value	Quantity	Value	Quantity	Value
Crabs:						
Hard.....number.....	62,097,300	\$385,230	86,071,200	\$486,098	148,168,500	\$871,328
Soft and peelers.....do.....	11,593,600	224,760	11,130,400	211,179	22,724,000	435,939
Clams:						
Hard, public.....bushels..	8,697	10,020	481,291	370,048	489,988	380,068
Hard, private.....do.....			9,110	5,000	9,110	5,000
Soft, public.....do.....			349	1,000	349	1,000
Mussels, sea.....do.....			4,190	900	4,190	900
Oysters, market:						
Public, spring.....do.....	1,134,968	314,159	380,000	141,855	1,514,968	456,014
Public, fall.....do.....	2,733,255	740,921	649,009	244,596	3,382,264	985,517
Private, spring.....do.....	107,281	65,779	827,052	297,323	934,333	363,102
Private, fall.....do.....	170,749	77,300	1,457,453	487,736	1,628,202	565,036

NOTE.—Bushels represent U. S. Standard Bushels of 2,150.4 cubic inches capacity. Prior to 1938, data on bushels of shellfish were based on bushel measures of the size prescribed by individual State regulations. For more detailed information concerning shellfish measures the reader is referred to the section on conversion factors published on p. 548 of this document.

Industries related to the fisheries of the Chesapeake Bay States, 1938

OPERATING UNITS, SALARIES, AND WAGES

Item	Maryland	Virginia	Total
Transporting:			
Persons engaged.....	276	911	1,187
Vessels, motor.....	141	452	593
Net tonnage.....	1,967	4,578	6,545
Wholesale and manufacturing:			
Establishments.....	321	261	582
Persons engaged:			
Proprietors.....	449	268	717
Salaried employees.....	190	189	379
Wage earners:			
Average for season.....	6,178	5,550	11,728
Average for year.....	2,732	2,338	5,070
Paid to salaried employees.....	\$182,185	\$281,876	\$464,061
Paid to wage earners.....	\$1,615,286	\$1,056,281	\$2,671,567
Total salaries and wages.....	\$1,797,471	\$1,338,157	\$3,135,628
Fishermen manufacturing.....	128		128

Industries related to the fisheries of the Chesapeake Bay States, 1938—Continued

PRODUCTS MANUFACTURED

Item	Maryland		Virginia	
	Quantity	Value	Quantity	Value
By manufacturing establishments:				
Alewives:				
Salted:				
Corned.....pounds.....	(¹)	(¹)	1,566,155	\$37,073
Pickled.....do.....	2,511,860	\$78,877	2,263,390	47,346
Tight-pack cut.....do.....			1,166,350	38,164
Canned.....standard cases.....	31,762	93,066	15,494	33,560
Roe, canned.....do.....	12,132	57,661	16,550	68,662
Oil.....gallons.....			12,681	2,277
Butterfish, smoked.....do.....	51,000	12,200		
Carp, smoked.....do.....	12,850	3,462		
Chub, cisco, and tullibee, smoked.....do.....	135,000	33,250		
Croaker:				
Fresh fillets.....do.....			140,000	13,950
Fresh pan-dressed.....do.....			280,000	21,000
Eels, smoked.....do.....	23,000	6,900		
Flounders, fresh fillets.....do.....			54,000	8,400
Herring, sea, smoked.....do.....	90,500	8,860		
Menhaden:				
Dry scrap.....tons.....			9,374	341,346
Oil.....gallons.....			1,087,503	319,065
Salmon, smoked.....pounds.....	221,000	67,300		
Sea bass:				
Fresh fillets.....do.....			94,000	13,880
Fresh pan-dressed.....do.....			95,000	9,900
Squeteague, gray:				
Fresh fillets.....do.....			262,000	34,120
Fresh pan-dressed.....do.....			365,000	25,800
Whitefish, smoked.....do.....	28,800	8,680		
Crab meat, packaged, fresh-cooked.....do.....	3,047,965	948,377	2,157,354	672,718
Oysters:				
Fresh-shucked.....gallons.....	2,415,064	2,589,081	1,579,493	1,825,255
Shell products:				
Poultry feed.....tons.....	32,200	145,800	21,569	123,071
Lime.....do.....	19,970	35,800	17,223	91,327
Lime, burned.....do.....			14,789	93,338
Unclassified products:				
Packaged, fresh and frozen fillets, and pan-dressed.....pounds.....			² 104,200	² 9,114
Smoked.....do.....	³ 46,500	³ 18,550		
Canned.....standard cases.....	⁴ 189,544	⁴ 344,259	(¹)	(¹)
Dry scrap and meal.....tons.....	(⁴)	(⁴)	⁶ 3,618	⁵ 114,994
Miscellaneous.....do.....		⁶ 812,217		⁷ 10,717
Total.....do.....		5,269,340		3,955,077
By fishermen:				
Alewives:				
Pickled.....pounds.....	283,800	4,290		
Smoked.....do.....	500	40		
Eels, salted.....do.....	132,854	12,179		
Hogchoker, salted.....do.....	11,000	500		
Total.....do.....	428,154	17,009		
Grand total.....do.....		5,286,349		3,955,077

¹ The production of this item is included under "Miscellaneous."

² Includes fresh fillets of scup, sea robin, Spanish mackerel, and swellfish; frozen fillets of croaker; fresh sticks of swellfish; and fresh pan-dressed king whiting, scup, and Spanish mackerel.

³ Includes smoked alewives, sablefish, shad, sturgeon, and lake trout.

⁴ Includes canned hard-clam chowder, oysters, oyster soup, shrimp soup, fish paste, terrapin products, and fish for animal food.

⁵ Includes menhaden, starfish, and miscellaneous fish meals; menhaden acid scrap; and alewife, blue-crab, and miscellaneous dry scrap.

⁶ Includes corned alewives, blue-crab dry scrap, and marine-shell buttons and novelties.

⁷ Includes fresh-shucked clams, salted tight-pack roe alewives, canned crab, and miscellaneous oil.

NOTE.—The total value of manufactured products in the Chesapeake Bay States was as follows: By manufacturing establishments, \$9,224,417, and by fishermen, \$17,009. Some of the above products may have been imported from another State or a foreign country; therefore, they cannot be correlated directly with the catch within the State. Of the total number of persons engaged on transporting vessels, 1,073 have been included as fishermen, and among the total number of persons engaged in the preparation of fishermen's prepared products, all have been included as fishermen.

MARYLAND

Fisheries of Maryland, 1938

OPERATING UNITS: BY GEAR

Item	Haul seines	Gill nets			Lines	
		Anchor	Drift	Stake	Hand	Trot with baits or snoods
Fishermen, on boats and shore:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
Regular.....	364	30	57	112	-----	1,249
Casual.....	182	33	223	117	40	222
Total.....	546	63	280	229	40	1,471
Boats:						
Motor.....	97	31	76	102	20	1,328
Other.....	159	13	91	59	-----	130
Apparatus:						
Number.....	178	433	251	3,200	100	1,766
Length, yards.....	32,018	-----	-----	-----	-----	-----
Square yards.....	-----	77,558	217,592	271,900	-----	-----
Hooks, baits, or snoods.....	-----	-----	-----	-----	120	1,214,800

Item	Pound nets	Fyke nets	Dip nets	Pots			Scrapes
				Crab	Eel	Fish	
Fishermen, on boats and shore:	Number	Number	Number	Number	Number	Number	<i>Number</i>
Regular.....	380	63	354	9	172	2	307
Casual.....	111	86	316	-----	35	-----	-----
Total.....	491	149	670	9	207	2	307
Boats:							
Motor.....	169	60	-----	9	113	1	-----
Other.....	115	68	670	-----	23	-----	307
Apparatus:							
Number.....	548	1,871	670	55	14,236	200	614
Yards at mouth.....	-----	-----	-----	-----	-----	-----	614

Item	Dredges, oyster	Tongs		Rakes, oyster	By hand, other than for oysters	Total, exclusive of duplication
		Oyster	Other			
Fishermen:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
On vessels.....	694	54	-----	-----	-----	748
On boats and shore:						
Regular.....	86	3,036	51	20	47	3,591
Casual.....	-----	885	13	36	13	2,118
Total.....	780	3,975	64	56	60	6,457
Vessels:						
Motor.....	3	27	-----	-----	-----	30
Net tonnage.....	28	179	-----	-----	-----	207
Sail.....	137	-----	-----	-----	-----	137
Net tonnage.....	1,703	-----	-----	-----	-----	1,703
Total vessels.....	140	27	-----	-----	-----	167
Total net tonnage.....	1,731	179	-----	-----	-----	1,910
Boats:						
Motor.....	33	1,852	21	10	-----	2,669
Other.....	33	121	62	19	11	1,598
Apparatus:						
Number.....	380	3,975	64	56	-----	-----
Yards at mouth.....	442	-----	-----	-----	-----	-----

Fisheries of Maryland, 1938—Continued

CATCH: BY GEAR

Species	Haul seines		Gill nets					
			Anchor		Drift		Stake	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Alewives	77,700	\$839	2,700	\$44	35,600	\$1,053	28,900	\$727
Black bass	57,300	5,804					200	16
Bluefish	8,200	753					3,700	296
Butterfish	500	20						
Carp	252,600	15,066			1,000	20	1,400	66
Catfish and bullheads	184,000	6,092			200	6	3,500	135
Crappie	1,500	73						
Croaker	510,500	10,523			2,300	57	5,500	78
Eels, common	1,300	115						
Flounders	2,500	120					1,500	60
Gizzard shad	54,000	761	500	10	600	30	7,200	79
Hickory shad					100	3		
Mullet							3,000	150
Pike or pickerel	18,600	2,927					500	80
Shad	4,800	311	3,200	280	72,700	7,896	38,600	3,886
Spot	26,800	700					1,000	50
Squeteagues or "sea trout":								
Gray	48,700	2,262	100	7	500	25	300	25
Spotted	1,900	200						
Striped bass	463,000	38,139	67,200	5,683	269,500	20,555	247,600	20,200
Sturgeon					160	14		
Suckers	700	33						
Sunfish	2,600	39						
White perch	76,700	2,872	200	16	4,800	360	27,000	1,488
Yellow perch	40,700	3,064					1,900	125
Crabs, soft and peelers	71,500	7,034						
Total	1,906,100	97,752	73,900	6,040	387,400	30,019	371,800	27,521

Species	Lines				Pound nets		Fyke nets	
	Hand		Trot with baits or snoods					
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Alewives					5,243,800	\$48,437	7,900	\$128
Black bass					2,200	185	33,700	3,572
Bluefish	20,000	\$2,000			19,300	1,657		
Bonito	5,000	200			1,900	95		
Butterfish					64,300	2,876	100	10
Cabio or crab eater					100	5		
Carp					17,300	575	12,700	778
Catfish and bullheads					101,000	2,800	225,500	8,028
Crappie					300	28	700	35
Croaker					2,505,200	29,393	1,400	33
Drum:								
Black					9,000	99		
Red or redfish					2,500	42		
Eels:								
Common					9,000	553	4,900	409
Conger	200	2						
Flounders					58,900	3,122	3,000	150
Gizzard shad					71,100	890	1,700	23
Harvestfish					1,500	54		
Hickory shad					26,000	538		
Hogchoker					2,000	70		
King whiting or "kingfish"					3,700	195		
Mackerel					2,500	250		
Menhaden					62,800	328		
Mullet					400	12	200	8
Pike or pickerel					1,700	242	23,100	3,291
Scup	10,000	100			12,000	170		
Sea bass	12,900	480						
Shad					478,100	48,429	100	10
Spanish mackerel					20,400	1,278		
Spot					32,100	893		
Squeteagues or "sea trout":								
Gray	3,000	240			1,016,500	32,588		
Spotted					6,300	567		
Striped bass					662,900	55,277	4,200	356
Suckers					300	9	3,500	167
Sunfish					400	19	6,000	123
Tautog	400	16						
White perch					217,700	7,827	110,200	4,534
Yellow perch					22,300	1,116	127,600	7,089
Crabs:								
Hard			20,529,100	\$381,830				
Soft and peelers			249,600	20,879	6,300	437	1,700	114
Squid					130,000	1,300		
Total	50,600	3,038	20,778,700	402,709	10,811,800	242,356	568,200	28,858

Fisheries of Maryland, 1938—Continued

CATCH: BY GEAR—Continued

Species	Dip nets		Pots					
			Crab		Eel		Fish	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Catfish.....					3,000	\$90		
Eels, common.....					118,500	9,371		
Sea bass.....							30,000	\$1,200
Shad.....	2,200	\$323						
Tautog.....							100	1
Crabs:								
Hard.....	50,000	1,000	20,000	\$400				
Soft and peelers.....	715,800	65,872	27,500	1,925				
Lobsters.....							109	20
Total.....	768,000	67,195	47,500	2,325	121,500	9,461	30,200	1,221

Species	Scrapes		Dredges		Tongs		Rakes		By hand	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Crabs:										
Hard.....	100,000	\$2,000								
Soft and peelers.....	1,826,000	128,499								
Clams, hard, public.....					42,700	\$8,010	8,000	\$1,500	2,700	\$610
Oysters, market:										
Public, spring.....			815,500	\$48,995	4,484,800	265,164				
Public, fall.....			2,718,400	164,820	10,045,900	576,101				
Private, spring.....			79,600	6,032	421,400	59,747				
Private, fall.....			199,200	14,696	598,200	62,604				
Terrapin, diamond-back.....									4,500	2,579
Turtle, snapper.....									600	36
Total.....	1,926,000	130,499	3,312,700	234,543	15,593,000	971,626	8,000	1,500	7,800	3,125

OPERATING UNITS: BY COUNTIES

Item	Anne Arundel	Baltimore	Calvert	Caroline	Cecil	Charles	Dorchester	Harford
	Number	Number	Number	Number	Number	Number	Number	Number
Fishermen:								
On vessels.....	24	35	27			4	227	
On boats and shore:								
Regular.....	387	8	197	6	30	102	476	14
Casual.....	131	53	127	50	77	136	266	37
Total.....	542	96	351	56	107	242	969	51
Vessels:								
Motor.....	10		8			1	9	
Net tonnage.....	70		57			12	56	
Sail.....	1	7	2				42	
Net tonnage.....	19	161	37				407	
Total vessels.....	11	7	10			1	51	
Total net tonnage.....	89	161	94			12	463	
Boats:								
Motor.....	253	25	156	16	36	123	467	17
Other.....	117	28	82	18	40	27	83	20
Apparatus:								
Haul seines.....	37	5	9	6	15	23	4	9
Length, yards.....	5,023	645	1,565	1,490	3,485	3,655	1,800	2,655
Gill nets:								
Anchor.....		12			156			11
Square yards.....		1,641			39,941			3,264
Drift.....	3		1	60	8	6	33	9
Square yards.....	4,800		200	31,682	17,655	14,132	36,164	11,110
Stake.....	33	40	2	50	25	1,271	138	185
Square yards.....	5,000	5,939	80	167	2,075	91,790	5,062	17,329
Lines, trot with baits or snoods.....	85	30	61			95	680	
Baits or snoods.....	46,500	15,000	27,900			68,000	434,900	
Pound nets.....	30	5	15	12	39	27	117	6
Fyke nets.....	12	44		51	932	30	18	370
Dip nets.....	69	20	61				35	
Pots, eel.....	530	450			1,085	89	3,150	425
Dredges, oyster.....	2	14	8			2	84	
Yards at mouth.....	3	18	10			2	105	
Tongs, oyster.....	394		346			153	711	

Fisheries of Maryland, 1938—Continued

OPERATING UNITS: BY COUNTIES—Continued

Item	Kent	Prince Georges	Queen Annes	St. Marys	Somer-set	Talbot	Wicom-ico	Worces-ter
	Number	Number	Number	Number	Number	Number	Number	Number
Fishermen:								
On vessels.....				5	376	44	6	
On boats and shore:								
Regular.....	312	1	331	429	475	468	201	154
Casual.....	178	26	181	254	178	78	173	173
Total.....	490	27	512	688	1,029	590	380	327
Vessels:								
Motor.....					2			
Net tonnage.....					12			
Sail.....				1	74	9	1	
Net tonnage.....				32	954	68	25	
Total vessels.....				1	76	9	1	
Total net tonnage.....				32	966	68	25	
Boats:								
Motor.....	267	5	209	269	161	391	131	143
Other.....	57	13	42	226	596	57	49	143
Apparatus:								
Haul seines.....	27	9	17	8	5	2	1	1
Length, yards.....	4,635	1,105	2,610	2,220	50	450	500	130
Gill nets:								
Anchor.....	254							
Square yards.....	32,712							
Drift.....	22	1	3		9	12	63	21
Square yards.....	39,231	2,500	2,000		3,972	9,183	39,083	5,880
Stake.....	1,026	2	3		88	11	225	101
Square yards.....	123,340	40	750		2,088	522	7,588	10,130
Lines:								
Hand.....								100
Hooks.....								120
Trot with baits or snoods.....	137		81	128	139	223	4	103
Baits or snoods.....	102,800		64,800	101,900	105,200	162,600	3,200	82,000
Pound nets.....	29		4	78	33	87	26	40
Fyke nets.....	238	60	45	11	11	27	6	27
Dip nets.....			32	135	256	19		43
Pots:								
Crab.....					55			
Eel.....	1,212	35	2,245	12	35	4,943	25	
Fish.....								200
Scrapes:								
Yards at mouth.....					614			
Dredges, oyster.....				2	190	18	2	58
Yards at mouth.....				3	235	21	3	42
Tongs:								
Oyster.....	334		492	581	162	468	303	31
Other.....								64
Rakes, oyster.....								56

CATCH: BY COUNTIES

Species	Anne Arundel		Baltimore		Calvert		Caroline	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Alewives.....	817,900	\$8,978	30,400	\$408	334,500	\$3,835	12,100	\$510
Black bass.....	100	15	200	21	100	10	1,000	105
Bluefish.....	5,300	370			700	56		
Butterfish.....	4,200	356						
Carp.....	5,300	306	2,300	99	5,100	236	7,700	500
Catfish and bullheads.....	15,200	481	20,600	574	13,000	391	14,300	429
Crappie.....	300	6					100	4
Croaker.....	264,300	6,224	100	4	37,500	523	2,500	75
Drum:								
Black.....					300	3		
Red or redfish.....	100	2			100	1		
Eels, common.....	12,100	917	7,200	591			200	12
Flounders.....	3,700	250	700	15	1,700	85		
Gizzard shad.....	11,200	158	9,200	142	600	14	3,700	110
Hickory shad.....	3,600	64			2,200	35		
Menhaden.....	2,800	28						

Fisheries of Maryland, 1938—Continued

CATCH: BY COUNTIES—Continued

Species	Anne Arundel		Baltimore		Calvert		Caroline	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Pike or pickerel.....	1,500	\$225	500	\$90	200	\$30	200	\$24
Shad.....	38,100	3,532	300	26	62,900	7,738	4,100	595
Spanish mackerel.....	4,200	374						
Spot.....	21,600	699	400	8	1,000	15		
Squeteagues or "sea trout":								
Gray.....	428,100	13,925	1,600	124	7,000	210	1,100	55
Spotted.....	300	30			400	38		
Striped bass.....	202,700	16,936	20,000	1,899	40,100	3,871	112,700	7,361
Suckers.....	100	3					800	33
Sunfish.....	100	3						
White perch.....	30,500	1,330	26,100	1,074	4,200	251	78,300	2,601
Yellow perch.....	5,300	504	12,000	605	2,900	175	13,700	732
Crabs:								
Hard.....	575,200	13,806	136,900	4,107	535,700	14,392		
Soft and peelers.....	29,300	3,674	10,500	1,306	62,500	8,649		
Oysters, market:								
Public, spring.....	564,200	37,616	74,400	4,340	237,500	15,701		
Public, fall.....	1,010,000	67,333	177,000	10,325	673,500	44,547		
Private, spring.....					67,700	4,583		
Private, fall.....					192,000	13,150		
Total.....	4,057,300	178,145	530,400	25,758	2,283,400	118,539	252,500	13,146

Species	Cecil		Charles		Dorchester		Harford	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Alewives.....	681,900	\$3,514	86,200	\$722	327,000	\$3,673	163,200	\$1,470
Black bass.....	64,200	6,016	8,300	806	500	44	16,700	2,334
Bluefish.....					12,900	1,187		
Butterfish.....					1,900	101		
Carp.....	29,900	1,696	93,300	5,411	7,500	217	53,200	3,767
Catfish and bullheads.....	89,500	3,152	110,900	3,632	32,800	969	49,300	1,553
Crappie.....	800	42	200	20	300	28	600	20
Croaker.....			3,700	119	207,300	3,797	600	18
Drum:								
Black.....					1,000	10		
Red or redfish.....					1,900	29		
Eels, common.....	18,500	1,379	1,000	86	33,300	2,164	6,600	595
Flounders.....					16,600	690		
Gizzard shad.....	5,300	37	74,400	774	7,900	92	2,000	20
Hickory shad.....	1,700	35	100	2	3,500	69	400	18
Menhaden.....					60,000	300		
Pike or pickerel.....	17,300	2,210	2,200	367	1,000	152	15,600	2,707
Shad.....	37,000	2,832	16,200	1,642	45,100	4,788	16,600	1,445
Spot.....					2,300	90		
Squeteagues or "sea trout":								
Gray.....					21,900	861		
Spotted.....					900	65		
Striped bass.....	45,400	3,607	95,300	7,114	328,400	24,652	47,300	4,015
Suckers.....	2,500	111						
Sunfish.....	3,500	92			300	16	5,100	70
White perch.....	32,800	1,156	17,100	614	76,900	2,601	13,000	579
Yellow perch.....	50,500	2,517	16,000	1,387	1,100	54	24,300	1,308
Crabs:								
Hard.....			833,200	21,629	7,655,800	130,151		
Soft and peelers.....			13,000	1,160	183,000	14,527		
Oysters, market:								
Public, spring.....			98,100	5,125	1,221,000	78,706		
Public, fall.....			227,000	11,754	2,407,400	156,438		
Private, spring.....			8,000	600				
Private, fall.....			64,400	4,836				
Terrapin, diamond-back.....					2,100	1,779		
Turtle snapper.....	600	36						
Total.....	1,081,400	28,432	1,768,600	67,800	12,661,600	428,250	414,500	19,919

Fisheries of Maryland, 1938—Continued

CATCH: BY COUNTIES—Continued

Species	Kent		Prince Georges		Queen Annes		St. Marys	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Alewives.....	206,400	\$2,299	200	\$10	11,000	\$178	641,600	\$7,066
Black bass.....	1,500	146	800	80				
Bluefish.....	3,100	310					1,800	144
Butterfish.....	2,500	250					600	59
Carp.....	4,100	155	55,100	3,193	10,800	569	4,400	137
Catfish and bullheads.....	37,900	1,325	49,400	1,718	26,600	1,088	9,700	286
Crappie.....			200	16				
Croaker.....	109,800	2,604	200	20	15,400	421	65,900	1,471
Drum:								
Black.....							700	11
Red or redfish.....							300	5
Eels, common.....	9,800	935	2,100	210	25,000	2,591	400	35
Flounders.....	1,100	65					4,800	308
Gizzard shad.....	7,100	191	800	10	1,800	34	5,000	105
Hickory shad.....	100	3					5,900	146
Mullet.....					200	8	100	3
Pike or pickerel.....	3,200	470	300	45			1,500	180
Shad.....	29,500	2,828	7,100	699			152,900	15,922
Spanish mackerel.....	4,300	194					100	10
Spot.....	19,300	404					3,300	107
Squeteagues or "sea trout":								
Gray.....	132,300	5,949					54,000	1,778
Spotted.....	3,300	340	300	30			900	70
Striped bass.....	359,100	32,512	3,100	310	35,100	3,162	107,300	8,828
Suckers.....			400	18	400	35		
White perch.....	61,200	2,352	6,300	225	24,100	1,113	16,500	655
Yellow perch.....	24,600	1,492	600	33	19,700	1,236	10,600	425
Crabs:								
Hard.....	472,300	14,168			866,200	21,654	1,117,500	27,937
Soft and peelers.....	13,400	2,155			34,200	4,384	95,100	13,597
Oysters, market:								
Public, spring.....	282,300	14,316			589,300	29,460	450,900	24,793
Public, fall.....	791,800	43,187			2,310,900	115,544	661,100	36,054
Private, spring.....							40,000	2,500
Private, fall.....							112,000	7,000
Total.....	2,580,000	128,650	126,900	6,617	3,970,700	181,477	3,564,900	149,632

Species	Somerset		Talbot		Wicomico		Worcester	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Alewives.....	80,400	\$389	1,943,800	\$17,032	59,300	\$631	700	\$13
Bluefish.....	2,700	197	2,100	192			22,600	2,255
Bonito.....							6,900	295
Butterfish.....	600	30	600	45	1,500	75	53,000	1,990
Cabio or crab eater.....							100	5
Carp.....	300	11	3,400	122	2,600	86		
Catfish and bullheads.....	5,900	285	18,300	524	23,800	744		
Croaker.....	128,200	1,484	185,100	2,561	114,100	1,853	1,890,200	18,910
Drum:								
Black.....			2,000	25			5,000	50
Red or redfish.....	100	5						
Eels:								
Common.....	1,800	93	10,800	502	1,900	138	3,000	200
Conger.....							200	2
Flounders.....	3,900	208	1,700	84	2,200	212	29,500	1,535
Gizzard shad.....	2,100	23	100	1	3,900	82		
Harvestfish.....					500	24	1,000	30
Hickory shad.....	200	4	7,300	141	100	4	1,000	20
Hogchoker.....	2,000	70						
King whiting or "kingfish".....					200	20	3,500	175
Mackerel.....							2,500	250
Mullet.....							3,300	159
Pike or pickerel.....			200	20	200	20		
Scup.....							22,000	270
Sea bass.....							42,000	1,680
Shad.....	16,300	1,986	133,500	12,452	29,400	3,411	10,700	1,239
Spanish mackerel.....			800	95			11,000	605
Spot.....			3,600	110	3,000	60	5,400	150
Squeteagues or "sea trout":								
Gray.....	16,600	366	217,200	7,280	15,800	738	173,500	3,861
Spotted.....	100	10	1,000	84	1,000	100		
Striped bass.....	15,300	1,216	198,400	15,379	96,600	8,636	7,600	772
Sturgeon.....							100	14
Suckers.....					300	9		
Tautog.....							500	17

Fisheries of Maryland, 1938—Continued

CATCH: BY COUNTIES—Continued

Species	Somerset		Talbot		Wicomico		Worcester	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
White perch.....	5,200	\$237	27,200	\$1,242	9,600	\$467	7,600	\$600
Yellow perch.....			10,000	861	1,200	65		
Crabs:								
Hard.....	2,717,800	\$52,106	3,957,400	\$53,318	32,800	\$492	1,798,300	\$31,470
Soft and peelers.....	2,346,400	164,923	23,800	2,338	1,200	96	86,000	7,961
Lobsters.....							100	20
Clams, hard, public.....							53,400	10,020
Oysters, market:								
Public, spring.....	997,800	58,205	675,900	39,547	108,900	6,350		
Public, fall.....	1,972,100	113,786	1,932,800	112,746	600,700	29,207		
Private, spring.....	40,000	3,002			15,400	1,158	329,900	53,936
Private, fall.....	86,400	6,470			84,600	6,339	258,000	39,505
Squid.....							130,000	1,300
Terrapin, diamond-back.....	2,400	800						
Total.....	8,444,600	406,408	9,357,000	266,701	1,210,900	61,031	4,958,500	179,285

VIRGINIA

Fisheries of Virginia, 1938

OPERATING UNITS: BY GEAR

Item	Purse seines menhaden	Haul seines	Gill nets			Lines, hand
			Drift	Run-around	Stake	
Fishermen:	Number	Number	Number	Number	Number	Number
On vessels.....	1,271					
On boats and shore:						
Regular.....		285	14	12	76	15
Casual.....		204	320	9	152	22
Total.....	1,271	489	334	21	228	37
Vessels:						
Steam.....	25					
Net tonnage.....	2,880					
Motor.....	8					
Net tonnage.....	765					
Total vessels.....	33					
Total net tonnage.....	3,645					
Boats:						
Motor.....		90	25	6	87	14
Other.....		198	199	6	139	2
Accessory boats.....		99				
Apparatus:						
Number.....		33	148	10	4,863	300
Length, yards.....		10,890	63,888			
Square yards.....			206,751	5,369	222,870	
Hooks, baits, or snoods.....						400

Item	Lines—Continued		Pound nets	Fyke nets		Dip nets	Otter trawls
	Trot with baits or snoods	Trot with hooks		Crab	Fish		
Fishermen:	Number	Number	Number	Number	Number	Number	Number
On vessels.....							132
On boats and shore:							
Regular.....	1,233	1	1,697	106	77	416	
Casual.....	373	5	306	31	102	538	
Total.....	1,606	6	2,003	137	179	954	132
Vessels, motor.....							28
Net tonnage.....							573
Boats:							
Motor.....	1,153		337	97	46	50	
Other.....	450	6	588	52	90	894	
Apparatus:							
Number.....	1,603	6	1,871	408	621	954	28
Yards at mouth.....							776
Hooks, baits, or snoods.....	928,900	1,600					

Fisheries of Virginia, 1938—Continued

OPERATING UNITS: BY GEAR—Continued

Item	Slat traps	Pots				Scrapes	Dredges	
		Crab	Eel	Fish	Turtle		Crab	Oyster
Fishermen:	Number	Number	Number	Number	Number	Number	Number	<i>Number</i>
On vessels.....							311	126
On boats and shore:								
Regular.....		35	9	6		127	100	10
Casual.....	5	6	11	13	3			
Total.....	5	41	20	19	3	127	411	136
Vessels, motor.....							98	29
Net tonnage.....							1,011	401
Boats:								
Motor.....		31	6	5		117	50	5
Other.....	4	11	13	11	3			
Apparatus:								
Number.....	5	740	734	245	35	170	296	67
Yards at mouth.....						194	485	108

Item	Tongs		Rakes		Picks	By hand		Total, exclusive of duplication
	Oyster	Other	Oyster	Other		Oyster	Other	
Fishermen:	Number	Number	Number	Number	Number	Number	Number	<i>Number</i>
On vessels.....	6							1,789
On boats and shore:								
Regular.....	1,772	227	172	241	100	204	666	4,217
Casual.....	638	19	20				177	2,834
Total.....	2,416	246	192	241	100	204	843	8,840
Vessels:								
Steam.....								25
Net tonnage.....								2,880
Motor.....	3							149
Total net tonnage.....	20							2,598
Total vessels.....	3							174
Total net tonnage.....	20							5,478
Boats:								
Motor.....	1,303	167	73	32	35	81	124	3,324
Other.....	304	95	152	241	100	204	427	3,687
Accessory boats.....								99
Apparatus, number.....	2,098	241	192	241	100			

CATCH: BY GEAR

Species	Purse seines		Haul seines		Gill nets			
	Pounds	Value	Pounds	Value	Drift		Runaround	
Alewives.....			100,700	\$1,289				
Bluefish.....			75,200	3,843	1,200	\$237	100	\$5
Butterfish.....			96,300	794				
Cabio or crab eater.....			200	10				
Carp.....			462,000	30,326	2,700	81		
Catfish and bullheads.....			106,200	4,470			700	35
Croaker.....			4,635,900	55,602	26,700	437	39,000	575
Drum, red or redfish.....			23,300	311				
Eels, common.....			25,300	2,502				
Flounders.....			28,900	1,147				
Gizzard shad.....			141,700	2,001	300	6	20,000	300
Harvestfish.....			40,000	600				
Hickory shad.....			200	6	1,200	50		
King whiting or "kingfish".....			59,200	2,390				
Menhaden.....	93,612,000	\$358,798						
Mullet.....			1,600	64	2,500	150	2,600	84

Fisheries of Virginia, 1938—Continued

CATCH: BY GEAR—Continued

Species	Purse seines		Haul seines		Gill nets			
	Pounds	Value	Pounds	Value	Drift		Runaround	
					Pounds	Value	Pounds	Value
Pike or pickerel.....			1,300	\$242				
Shad.....			5,300	495	205,500	\$19,335		
Sharks.....			86,400	864				
Skates.....			2,400	82				
Spanish mackerel.....			4,600	337				
Spot.....			2,188,000	40,760	27,000	918	5,300	\$106
Squeteagues or "sea trout":								
Gray.....			325,100	5,997	4,500	224	500	20
Spotted.....			356,500	29,313	100	10		
Striped bass.....			105,900	8,246	6,500	512		
Swellfish.....			2,200	25				
White perch.....			33,100	1,140			500	15
Yellow perch.....			11,200	472				
Crabs, soft and peelers.....			17,700	2,480				
Total.....	93,612,000	\$358,798	8,936,400	195,808	290,700	22,020	68,700	1,140

Species	Gill nets—Con.		Lines					
	Stake		Hand		Trot with baits or snoods		Trot with hooks	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Alewives.....	900	\$21						
Bluefish.....			30,000	\$3,000				
Cabio or crab eater.....			100	7				
Carp.....							2,300	\$69
Catfish and bullheads.....	500	20					2,000	70
Croaker.....			16,000	480				
Eels, common.....							200	14
Flounders.....			4,000	320				
King whiting or "kingfish".....			800	48				
Scup.....			30,000	600				
Sea bass.....			70,000	2,800				
Shad.....	125,100	13,864						
Spanish mackerel.....			2,000	160				
Squeteagues or "sea trout," gray.....			80,000	8,000				
Striped bass.....	205,100	18,076					500	50
White perch.....	1,600	128						
Crabs:								
Hard.....					22,434,000	\$324,614		
Soft and peelers.....					506,000	36,113		
Turtle, snapper.....			3,500	140				
Total.....	333,200	32,109	236,400	15,555	22,940,000	360,727	5,000	203

Species	Pound nets		Fyke nets				Dip nets	
	Pounds	Value	Crab		Fish		Pounds	Value
			Pounds	Value	Pounds	Value		
Alewives.....	17,504,900	\$161,386			58,500	\$856		
Bluefish.....	193,700	10,320			100	10		
Bonito.....	34,800	1,044						
Butterfish.....	2,850,900	36,216						
Cabio or crab eater.....	22,400	1,044						
Carp.....	27,500	730	2,100	\$48	41,100	1,849		
Catfish and bullheads.....	177,900	6,889	16,300	815	231,300	8,874		
Croaker.....	33,080,800	407,019			43,600	850		
Drum:								
Black.....	116,700	1,022						
Red or redfish.....	78,800	995			500	7		
Eels, common.....	78,300	9,166	300	27	3,600	282		
Flounders.....	298,200	12,293			2,600	133		
Gizzard shad.....	166,600	1,765	500	10	97,400	1,148		
Harvestfish.....	448,500	7,693						
Hickory shad.....	135,600	2,505			2,500	61		
King whiting or "kingfish".....	101,700	4,689						
Mackerel.....	12,300	438						
Menhaden.....	1,408,500	2,150						

Fisheries of Virginia, 1938—Continued

CATCH: BY GEAR—Continued

Species	Pound nets		Fyke nets				Dip nets	
			Crab		Fish			
			Pounds	Value	Pounds	Value		
Mullet.....	13,800	\$546						
Pike or pickerel.....	200	30			700	\$98		
Scup.....	12,500	200						
Sea bass.....	1,100	44						
Shad.....	3,242,100	296,598			29,400	2,496		
Sharks.....	10,700	105						
Skates.....	6,200	33						
Spanish mackerel.....	430,400	29,039						
Spot.....	1,601,200	29,218			900	21		
Squeteagues or "sea trout":								
Gray.....	10,577,400	169,890			25,700	747		
Spotted.....	36,900	2,985			100	9		
Striped bass.....	774,400	59,001	200	\$14	62,400	5,394		
Sturgeon.....	9,400	1,460						
Swellfish.....	21,600	478						
White perch.....	167,500	4,533	4,700	141	80,500	2,822		
Whiting.....	1,200	36						
Yellow perch.....	4,600	310	300	24	36,500	2,463		
Crabs:								
Hard.....	100,700	1,058	49,900	1,207			172,500	\$3,019
Soft and peelers.....			206,300	27,873			677,300	59,762
Shrimp.....	8,000	980						
Squid.....	165,900	1,842						
Total.....	73,923,900	1,265,750	280,600	30,159	717,400	28,120	849,800	62,781

Species	Otter trawls		Slat traps		Pots			
					Crab		Eel	
					Pounds	Value	Pounds	Value
Alewives.....	400	\$3	13,000	\$265				
Bluefish.....	2,800	176						
Butterfish.....	192,800	4,950						
Carp.....			1,500	48				
Catfish and bullheads.....			700	36				
Cod.....	400	13						
Croaker.....	5,442,500	93,856						
Drum:								
Black.....	100	2						
Red or redfish.....	31,000	476						
Eels:								
Common.....							48,700	\$4,726
Conger.....	3,700	45						
Flounders.....	438,400	28,436						
Hake.....	12,100	179						
Hickory shad.....	100	1	800	28				
Hogfish.....	400	8						
King whiting or "kingfish".....	99,300	3,795						
Mackerel.....	5,100	451						
Mullet.....	2,900	101						
Pollock.....	100	1						
Sand perch.....	7,300	97						
Scup.....	2,301,300	37,450						
Sea bass.....	230,500	10,163						
Sea robin.....	3,000	30						
Shad.....	200	11						
Sharks.....	140,200	1,787						
Spot.....	43,400	851						
Squeteagues or "sea trout":								
Gray.....	1,534,200	40,987						
Spotted.....	100	5						
Sturgeon.....	6,300	776						
Swellfish.....	10,000	277						
Tautog.....	1,100	18						
Tomcod.....	7,400	79						
White perch.....	2,100	26	200	12				
Whiting.....	138,300	2,534						
Crabs, hard.....					251,700	\$4,450		
Lobsters.....	1,400	157						
Squid.....	67,100	1,009						
Total.....	10,726,000	228,750	16,200	389	251,700	4,450	48,700	4,726

Fisheries of Virginia, 1938—Continued

CATCH: BY GEAR—Continued

Species	Pots—Continued				Scrapes		Dredges	
	Fish		Turtle					
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Catfish and bullheads.....	128,600	\$5,238						
Eels, common.....	5,300	281						
Crabs:								
Hard.....					280,000	\$3,820	5,391,600	\$147,780
Soft and peelers.....					542,300	34,971		
Oysters, market:								
Private, spring.....					46,000	4,500	1,482,600	127,719
Private, fall.....					48,200	4,580	2,992,800	225,280
Turtle, snapper.....			7,100	\$850				
Total.....	133,900	5,519	7,100	850	916,500	47,871	9,867,000	500,779

Species	Tongs		Rakes		Picks		By hand	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Crabs:								
Hard.....							10,000	\$150
Soft and peelers.....							833,000	49,980
Clams:								
Hard, public.....	984,500	\$92,548	344,000	\$47,080	420,000	\$78,750	1,009,300	151,670
Hard, private.....	52,200	5,000						
Soft, public.....							2,500	1,000
Mussels, sea.....							30,000	900
Oysters, market:								
Public, spring.....	1,562,700	138,645					48,500	3,210
Public, fall.....	2,684,800	238,856					67,000	5,740
Private, spring.....	1,157,300	102,780	618,500	47,525			202,300	14,799
Private, fall.....	1,722,800	156,041	1,093,100	74,815			322,700	27,020
Terrapin, diamond-back.....							4,300	150
Total.....	8,164,300	733,870	2,055,600	169,420	420,000	78,750	2,529,600	254,619

OPERATING UNITS: BY COUNTIES

Item	Acco- mac	Caro- line	Charles City	Ches- terfield	Din- widdie	Eliza- beth City	Essex	Fairfax
Fishermen:	Number	Number	Number	Number	Number	Number	Number	Number
On vessels.....	12					116		
On boats and shore:								
Regular.....	1,014		4	13		182	67	2
Casual.....	262	6	77	45	4	19	51	60
Total.....	1,288	6	81	58	4	317	118	62
Vessels, motor.....	3					26		
Net tonnage.....	52					443		
Boats:								
Motor.....	791		3	1		63	53	22
Other.....	741	3	58	26	3	30	28	26
Apparatus:								
Haul seines.....	14		5	11			6	8
Length, yards.....	8,770		1,600	4,750			1,250	1,800
Gill nets:								
Drift.....	2	3	57	13	1			15
Square yards.....	900	2,250	61,000	10,650	500			12,000
Stake.....	60						170	
Square yards.....	1,440						5,181	
Lines:								
Hand.....	100							
Hooks.....	200							
Trot with baits or snoods.....	394					30	7	
Baits or snoods.....	233,700					18,800	1,600	
Trot with hooks.....				2			1	
Hooks.....				600			300	
Pound nets.....	208					168	3	
Fyke nets, fish.....	5	1	13	1			3	232
Dip nets.....	198							
Otter trawls.....						10		
Yards at mouth.....						290		
Slat traps.....				2	3			

Fisheries of Virginia, 1938—Continued

OPERATING UNITS: BY COUNTIES—Continued

Item	Acco- mac	Caro- line	Charles City	Ches- terfield	Din- widdie	Eliza- beth City	Essex	Fairfax
Apparatus—Continued.	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
Pots, fish.....			80	5				
Scrapes.....	160						4	
Yards at mouth.....	181						5	
Dredges:								
Crab.....	46					28		
Yards at mouth.....	55					54		
Oyster.....						14		
Yards at mouth.....						21		
Tongs:								
Oyster.....	201					30	70	
Other.....	79					8		
Rakes:								
Oyster.....	80							
Other.....	41							
Picks.....	100							
Item	Gloucester	Henrico	Isle of Wight	James City	King and Queen	King George	King Wil- liam	Lan- caster
Fishermen:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
On vessels.....	55		2					517
On boats and shore:								
Regular.....	347	2	76	13		33	2	197
Casual.....	53	21	21	35	52	81	97	323
Total.....	455	23	99	48	52	114	99	1,037
Vessels:								
Steam.....								9
Net tonnage.....								956
Motor.....	17		1					5
Net tonnage.....	188		12					299
Total vessels.....	17		1					14
Total net tonnage.....	188		12					1,255
Boats:								
Motor.....	228	1	45	14	1	49	2	398
Other.....	116	14	80	38	39	47	56	294
Accessory boats.....								39
Apparatus:								
Purse seines, menhaden.....								13
Length, yards.....								4,090
Haul seines.....	1	3		1		2	2	4
Length, yards.....	500	1,150		600		1,000	230	1,513
Gill nets:								
Drift.....		11		20	13	3	49	1
Square yards.....		6,875		22,100	8,860	1,500	41,300	500
Runaround.....			1					
Square yards.....			167					
Stake.....	14		1,030	1,290	549	283	235	
Square yards.....	374		40,550	40,850	19,190	25,385	8,400	
Lines:								
Hand.....				200				
Hooks.....				200				
Trot with baits or snoods.....	43		85			42	6	154
Baits or snoods.....	30,800		33,900			15,000	1,800	170,000
Trot with hooks.....			1					
Hooks.....			100					
Pound nets.....	111			11		34		175
Fyke nets:								
Crab.....	4							62
Fish.....	4	1	75	22		26	5	
Dip nets.....								171
Pots:								
Eel.....	12		12					
Fish.....				60				
Turtle.....				35				
Dredges:								
Crab.....	28							
Yards at mouth.....	52							
Oyster.....	10		2					2
Yards at mouth.....	15		3					3
Tongs:								
Oyster.....	252			3	4			322
Other.....	33							

Fisheries of Virginia, 1938—Continued

OPERATING UNITS: BY COUNTIES—Continued

Item	Mathews	Middlesex	Nansemond	New Kent	Norfolk	Northampton	Northumberland	Prince George
Fishermen:	<i>Number</i>	Number	Number	Number	Number	Number	Number	<i>Number</i>
On vessels.....	79	5	4	-----	54	3	763	-----
On boats and shore:								
Regular.....	471	220	125	2	43	523	318	-----
Casual.....	300	208	8	36	66	80	352	27
Total.....	850	433	137	38	163	606	1,433	27
Vessels:								
Steam.....							16	-----
Net tonnage.....							1,924	-----
Motor.....	23	2	1	-----	9	1	6	-----
Net tonnage.....	279	35	8	-----	219	12	490	-----
Total vessels.....	23	2	1	-----	9	1	22	-----
Total net tonnage.....	279	35	8	-----	219	12	2,414	-----
Boats:								
Motor.....	207	261	60	4	16	160	354	2
Other.....	302	125	29	27	98	521	590	17
Accessory boats.....							60	-----
Apparatus:								
Purse seines, menhaden.....							20	-----
Length, yards.....							6,800	-----
Haul seines.....	7	8		2	3	4	10	2
Length, yards.....	5,625	6,625		425	1,600	1,300	475	1,000
Gill nets:								
Drift.....	3			19		2		17
Square yards.....	2,700			17,300		756		12,500
Runaround.....			4	1				
Square yards.....			1,422	180				
Stake.....			38	106				
Square yards.....			1,300	2,568				
Lines:								
Trot with baits or snoods.....	71	84	28	2	69	115	162	-----
Baits or snoods.....	31,400	40,700	9,000	700	20,100	51,500	106,200	-----
Trot with hooks.....				1				1
Hooks.....				300				300
Pound nets.....	544	14			32	121	291	-----
Fyke nets:								
Crab.....	62	16					227	-----
Fish.....	2		30	21				4
Dip nets.....	80	45			15	50	320	-----
Otter trawls.....	4				3			-----
Yards at mouth.....	115				90			-----
Pots:								
Crab.....							683	-----
Fish.....				15				45
Scrapes.....		6						-----
Yards at mouth.....		8						-----
Dredges:								
Crab.....	32	4			2	2	4	-----
Yards at mouth.....	59	7			3	4	8	-----
Oyster.....	10		2		16	5		-----
Yards at mouth.....	16		3		32	6		-----
Tongs:								
Oyster.....	134	383	112			32	155	-----
Other.....	20					5		-----
Rakes:								
Oyster.....						112		-----
Other.....						200		-----

Fisheries of Virginia, 1938—Continued

OPERATING UNITS: BY COUNTIES—Continued

Item	Princess Anne	Prince William	Richmond	Stafford	Surry	Warwick	Westmoreland	York
Fishermen:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
On vessels.....						9		170
On boats and shore:								
Regular.....	52		59	28		8	252	164
Casual.....	32	51	58	44	18	12	299	36
Total.....	84	51	117	72	18	29	551	370
Vessels, motor.....						2		53
Net tonnage.....						34		527
Boats:								
Motor.....	7	18	33	20	5	6	367	133
Other.....	54	25	52	26	9	19	140	56
Apparatus:								
Haul seines.....	8	11	1	11	3		8	13
Length, yards.....	1,775	3,050	200	3,050	900		2,600	12,100
Gill nets:								
Drift.....		3			2			
Square yards.....		2,560			2,500			
Runaround.....								3,600
Square yards.....								
Stake.....		284	712	64	20		8	
Square yards.....		13,680	26,720	35,632	800		800	
Lines:								
Trot with baits or snoods.....	37		5	9		12	201	47
Baits or snoods.....	11,100		1,500	3,800		4,300	103,400	39,600
Pound nets.....	4		40	7		16	58	34
Fyke nets:								
Crab.....								37
Fish.....		53	2	38	26	23	24	10
Dip nets.....						5	60	10
Otter trawls.....						1		10
Yards at mouth.....						25		256
Pots:								
Crab.....							57	
Eel.....		40		370			300	
Fish.....					40			
Dredges:								
Crab.....						2		148
Yards at mouth.....						4		239
Oyster.....								6
Yards at mouth.....								9
Tongs:								
Oyster.....	15		50				305	30
Other.....	2							94

CATCH: BY COUNTIES

Species	Accomac		Caroline		Charles City		Chesterfield	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Alewives.....	546,100	\$4,273			2,400	\$24	15,800	\$324
Bluefish.....	45,200	3,840						
Bonito.....	700	21						
Butterfish.....	535,100	8,438						
Cabio or crab eater.....	7,800	442						
Carp.....			300	\$18	52,200	1,566	91,000	2,730
Catfish and bullheads.....			500	25	83,200	3,328	9,300	372
Croaker.....	2,633,200	26,907						
Drum:								
Black.....	92,200	878						
Red or redfish.....	51,700	651						
Eels, common.....	10,400	1,224			2,500	116	400	16
Flounders.....	41,100	1,996						
Gizzard shad.....					6,500	97	8,300	166
Harvestfish.....	19,100	382						
Hickory shad.....	7,600	155					200	10
King whiting or "kingfish".....	11,400	578						
Mackerel.....	12,300	438						
Menhaden.....	33,000	109						
Scup.....	42,500	800						
Sea bass.....	70,000	2,800						
Shad.....	197,800	18,915	600	90	65,900	5,272	10,300	1,030
Sharks.....	500	5						
Skates.....	1,200	8						
Spanish mackerel.....	7,100	509						
Spot.....	123,700	3,098						

Fisheries of Virginia, 1938—Continued

CATCH: BY COUNTIES—Continued

Species	Accomac		Caroline		Charles City		Chesterfield	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Squeteagues or "sea trout":								
Gray	1,813,200	\$55,235						
Spotted	40,000	3,600						
Striped bass	31,700	2,536	100	\$15	3,600	\$432	9,400	\$752
Sturgeon	600	90						
White perch	16,200	314	300	45	2,300	115	4,000	160
Whiting	1,200	36						
Yellow perch					300	15		
Crabs:								
Hard	7,385,500	96,954						
Soft and peelers	1,567,300	100,122						
Clams, hard, public	1,226,000	224,050						
Mussels, sea	30,000	900						
Oysters, market:								
Public, spring	153,500	11,810						
Public, fall	336,500	24,515						
Private, spring	427,000	32,770						
Private, fall	919,600	61,380						
Squid	25,300	436						
Total	18,463,300	691,215	1,800	193	218,900	10,965	148,700	5,560

Species	Dinwiddie		Elizabeth City		Essex		Fairfax	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Alewives	1,600	\$37	865,500	\$6,924	2,400	\$51		
Bluefish			27,800	1,987				
Butterfish			253,700	3,640				
Cabio or crab eater			4,900	147				
Carp	300	12	400	4	3,600	144	64,200	\$6,196
Catfish and bullheads	400	24	14,500	447	5,200	208	115,100	4,709
Cod			200	4				
Croaker			7,250,200	103,903	10,000	500		
Drum:								
Black			3,800	39				
Red or redfish			11,900	160				
Eels:								
Common			2,600	194	200	20	25,700	2,570
Conger			2,200	27				
Flounders			235,600	13,519				
Gizzard shad			4,800	72	8,200	82		
Hake			6,000	74				
Harvestfish			117,100	1,758				
Hickory shad	800	28	9,000	179	200	8		
Hogfish			100	2				
King whiting or "kingfish"			67,600	2,641				
Mackerel			4,400	416				
Menhaden			235,800	472				
Mullet			2,900	101				
Pike or pickerel							300	42
Pollock			100	1				
Sand perch			3,300	44				
Scup			873,700	13,281				
Sea bass			60,100	2,615				
Sea robin			500	5				
Shad			270,400	29,731	3,200	395	37,400	3,900
Sharks			34,600	425				
Spanish mackerel			37,200	2,604				
Spot			193,200	2,860	800	24		
Squeteagues or "sea trout," gray			2,211,200	38,344	1,200	36		
Striped bass			134,400	12,096	2,400	240	8,500	595
Sturgeon			5,400	764				
Swellfish			13,500	408				
Tautog			800	10				
Tomcod			1,600	19				
White perch	200	12	52,100	1,442	4,300	298	42,200	1,266
Whiting			121,900	2,282				
Yellow perch					100	15	21,400	1,498
Crabs, hard			1,218,000	28,542	42,000	745		
Lobsters			600	61				
Shrimp			1,000	100				
Clams, hard, public			20,600	1,610				
Oysters, market:								
Public, spring					110,000	11,775		
Public, fall					110,000	11,775		
Private, spring			347,000	30,118	56,000	6,000		
Private, fall			730,500	57,512	98,000	10,500		
Squid			29,000	426				
Total	3,300	113	15,481,700	362,010	457,800	42,816	314,800	20,776

Fisheries of Virginia, 1938—Continued

CATCH: BY COUNTIES—Continued

Species	Gloucester		Henrico		Isle of Wight		James City	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Alewives	378,200	\$2,890	700	\$14	33,500	\$508	8,600	\$108
Bluefish	1,600	80					100	7
Butterfish	34,900	530						
Cabio or crab eater	1,300	60						
Carp			3,300	102	16,300	489	8,900	347
Catfish and bullheads	200	10	2,000	80	40,300	1,339	77,000	3,080
Croaker	6,044,900	75,306			13,000	260	700	14
Eels, common	2,500	250			2,200	132	3,200	202
Flounders	13,400	670			1,800	90	200	12
Gizzard shad	400	8	3,100	31	44,000	440	5,000	25
Harvestfish	17,900	267						
Hickory shad	3,500	70			900	27	1,200	24
King whiting or "kingfish"	1,400	70						
Menhaden	9,600	48						
Mullet					2,000	60		
Shad	92,600	8,667	3,700	300	42,500	4,539	47,200	4,910
Spanish mackerel	2,400	168						
Spot	43,000	651						
Squeteagues or "sea trout":								
Gray	719,400	10,760			7,000	210	200	12
Spotted	300	24						
Striped bass	16,700	1,340	2,100	168	35,700	2,901	18,500	1,480
White perch	1,600	33	2,300	92	9,800	392	3,100	116
Yellow perch					600	36	100	6
Crabs:								
Hard	2,477,000	38,924			633,000	12,660	800	16
Soft and peelers	26,700	2,200						
Clams:								
Hard, public	362,700	27,200						
Soft, public	2,500	1,000						
Oysters, market:								
Public, spring	10,000	800					2,400	180
Public, fall	33,000	2,600					1,200	90
Private, spring	94,100	8,242						
Private, fall	265,100	22,547			3,600	255		
Terrapin, diamond-back	4,300	150						
Turtle, snapper							10,600	990
Total	10,661,200	205,565	17,200	787	886,200	24,338	189,000	11,619

Species	King and Queen		King George		King William		Lancaster	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Alewives			16,300	\$163	25,700	\$288	4,811,000	\$48,110
Bluefish							8,100	405
Butterfish							8,600	94
Cabio or crab eater							2,100	86
Carp			3,700	111			500	15
Catfish and bullheads			30,700	1,228	500	15	200	8
Croaker							1,480,200	16,939
Drum:								
Black							3,700	20
Red or redfish							2,800	28
Eels, common			2,500	250			3,000	300
Flounders							17,700	708
Gizzard shad			54,100	541	1,200	12	5,300	35
Harvestfish							5,900	94
Hickory shad					200	6	13,200	260
King whiting or "kingfish"							700	21
Menhaden							33,576,000	128,966
Pike or pickerel			1,600	290				
Shad	17,800	\$2,136	2,500	246	31,900	3,482	397,100	31,768
Spanish mackerel							400	28
Spot							59,300	853
Squeteagues or "sea trout":								
Gray							1,027,400	15,507
Spotted							6,000	433
Striped bass	500	50	30,700	2,763	1,700	136	90,000	6,200
Sturgeon							200	25
White perch			20,800	1,040	200	10	13,500	282
Yellow perch			4,400	308	300	27	700	42
Crabs:								
Hard			294,000	7,350	40,000	800	2,652,500	46,419
Soft and peelers							247,800	19,570
Oysters, market:								
Public, spring							234,000	23,400
Public, fall	1,800	150					623,000	62,300
Private, spring							306,000	30,600
Private, fall							353,100	35,310
Total	20,100	2,336	461,300	14,290	101,700	4,776	45,950,000	468,826

Fisheries of Virginia, 1938—Continued

CATCH: BY COUNTIES—Continued

Species	Mathews		Middlesex		Nansemond		New Kent	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Alewives	2,968,000	\$30,776	44,600	\$565			63,300	\$1,166
Bluefish	49,100	2,461	12,700	716				
Butterfish	271,700	4,747						
Carp			10,200	304			200	6
Catfish and bullheads	500	15	9,000	240	2,400	\$103	23,100	753
Cod	100	6						
Croaker	15,921,900	201,731	356,400	3,481	24,000	480		
Drum:								
Black	900	6						
Red or redfish	2,000	13	600	36				
Eels:								
Common							600	30
Conger	1,000	11						
Flounders	153,500	8,803	1,390	68			400	29
Gizzard shad	11,200	102	21,900	345	51,000	765	7,800	65
Hake	800	12						
Harvestfish	151,100	3,022						
Hickory shad	34,700	634		8			200	6
King whiting or "kingfish"	4,800	208						
Mackerel	200	5						
Menhaden	372,000	465						
Mullet	14,300	572					600	24
Scup	181,400	4,578						
Sea bass	81,900	3,880						
Shad	1,387,100	124,839	6,200	680	7,100	819	18,800	1,986
Skates			2,400	82				
Spanish mackerel	164,300	10,008						
Spot	940,100	19,049	49,500	958				
Squeteagues or "sea trout":								
Gray	2,142,900	23,069	23,900	733	15,000	450	700	21
Spotted	31,200	2,733	20,100	1,400				
Striped bass	60,000	4,840	29,800	2,076	19,000	900	3,600	365
Sturgeon	4,800	759						
Tautog	100	2						
Tomcod	200	2						
White perch	5,000	147	3,500	58	8,000	250	2,500	100
Whiting	4,700	56						
Yellow perch			8,500	294			300	15
Crabs:								
Hard	1,988,700	36,673	1,181,000	16,040	235,000	3,525	12,000	240
Soft and peelers	160,800	25,697	75,500	7,046				
Lobsters	700	86						
Clams, hard, public	56,000	5,900						
Oysters, market:								
Public, spring	115,200	9,600	397,300	39,730	25,000	2,000		
Public, fall	203,800	18,496	436,300	43,630	150,900	12,000		
Private, spring	100,000	9,092	200,800	19,780	75,000	6,000		
Private, fall	217,800	19,808	230,600	22,620	124,000	9,800		
Squid	11,800	170						
Total	27,832,200	563,723	3,125,500	160,890	726,500	37,092	154,100	4,797

Species	Norfolk		Northampton		Northumberland		Prince George	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Alewives	245,400	\$1,841	203,900	\$1,526	6,833,700	\$68,437	3,100	\$62
Bluefish	37,900	1,903	25,200	1,260	20,700	1,030		
Bonito			34,100	1,023				
Butterfish	651,400	5,185	780,900	11,714	9,400	146		
Cabio or crab eater	1,000	60	1,700	85	2,400	106		
Carp					22,600	541	16,000	480
Catfish and bullheads					1,500	69	18,600	744
Croaker	1,829,300	26,653	888,800	8,888	436,400	6,099		
Drum:								
Black			11,000	55	5,200	26		
Red or redfish	16,700	271	14,300	143	3,900	28		
Eels:								
Common			32,400	4,860	12,900	1,032	300	9
Conger	300	4						
Flounders	77,100	4,184	12,000	483	30,100	1,108		
Gizzard shad			1,200	12	13,900	143		
Hake	3,200	69						
Harvestfish	112,500	1,691	800	16	6,900	138		
Hickory shad	26,500	400	2,500	38	33,300	563	1,000	40
Hogfish	100	3						
King whiting or "kingfish"	58,900	2,788	5,100	255	300	11		

Fisheries of Virginia, 1938—Continued

CATCH: BY COUNTIES—Continued

Species	Norfolk		Northampton		Northumberland		Prince George	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Mackerel	200	\$17						
Menhaden					60,794,100	\$230,888		
Mullet			3,000	\$170	600	18		
Scup	626,800	12,520						
Sea bass	64,400	2,476	1,100	44				
Sea robin	700	9						
Shad	102,000	9,680	33,300	3,500	618,600	56,555	24,100	\$1,928
Sharks	2,500	56	10,200	100				
Skates					5,000	25		
Spanish mackerel	86,500	6,525	80,000	5,600	2,700	146		
Spot	1,181,800	23,629	89,200	1,960	24,400	367		
Squeteagues or "sea trout":								
Gray	362,800	8,118	2,621,200	39,333	430,700	8,615		
Spotted	61,500	5,535	3,300	330	8,900	712		
Striped bass	1,700	136	42,000	3,360	254,600	17,822	800	64
Sturgeon	400	60	200	35	400	60		
Swellfish	10,000	150						
Tautog	100	5						
White perch			10,500	105	13,700	318	400	20
Whiting	3,500	60						
Yellow perch					300	24		
Crabs:								
Hard	628,400	9,795	1,208,000	15,689	3,188,300	55,709		
Soft and peelers	1,800	360	490,100	29,406	187,000	22,546		
Lobsters	100	10						
Shrimp	7,000	880						
Clams:								
Hard, public			698,600	80,500				
Hard, private			52,200	5,000				
Oysters, market:								
Public, spring			20,000	1,500	210,000	16,000		
Public, fall			60,000	5,250	325,200	24,400		
Private, spring	803,300	66,946	509,800	40,299	191,400	13,333		
Private, fall	1,572,100	112,255	648,200	54,155	315,200	24,423		
Squid	14,200	229	140,600	1,406				
Total	8,593,100	304,503	8,735,400	318,100	74,004,300	551,429	64,300	3,347

Species	Princess Anne		Prince William		Richmond		Stafford	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Alewives	2,700	\$18						
Bluefish	18,400	920						
Butterfish	516,900	5,714						
Cabio or crab eater	500	25						
Carp			149,200	12,908	5,000	150	71,500	\$5,800
Catfish and bullheads			14,900	745	20,600	824	126,400	5,096
Croaker	654,000	7,809			20,800	624		
Drum, red or redfish	15,500	238						
Eels, common			900	101	3,600	300	30,100	3,085
Flounders	6,300	189			600	30		
Gizzard shad			2,300	46	33,800	340	84,500	1,270
Harvest fish	40,000	600						
Hickory shad					400	12		
King whiting or "kingfish"	60,000	2,400						
Pike or pickerel							200	23
Shad	3,800	342	13,900	1,390	25,300	2,450	9,600	936
Spanish mackerel	53,100	3,717						
Spot	566,100	8,402			1,200	36		
Squeteagues or "sea trout":								
Gray	219,800	3,176			5,000	120		
Spotted	36,400	2,912			300	27		
Striped bass	5,700	456	40,600	3,248	17,700	1,720	155,200	13,997
White perch			9,100	273	12,900	463	5,400	233
Yellow perch			4,400	396	1,300	91	9,500	470
Crabs, hard	555,000	8,325			30,000	600	48,000	1,440
Clams, hard, public	300	42						
Oysters, market:								
Public, spring					58,800	5,800		
Public, fall					86,800	8,680		
Private, spring	35,000	4,000			49,000	4,900		
Private, fall	70,000	8,000			70,000	7,000		
Total	2,859,500	57,285	235,800	19,115	457,100	34,447	540,400	32,350

Fisheries of Virginia, 1938—Continued

CATCH: BY COUNTIES—Continued

Species	Surry		Warwick		Westmoreland		York	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Alewives	2,500	\$50	19,900	\$159	503,500	\$5,035	58,000	\$420
Bluefish	100	10	300	21	4,400	200	51,500	2,574
Butterfish			7,500	182	1,400	21	68,500	1,549
Cabio or crab eater							1,000	50
Carp	2,000	60	4,000	160	13,800	1,008		
Catfish and bullheads	29,600	1,327	6,300	192	32,200	1,475		
Cod							100	3
Croaker			255,400	5,464	49,600	720	5,415,700	73,041
Drum, red or redfish			2,500	40			11,700	181
Eels:								
Common					25,600	2,304	100	3
Conger			100	2			100	1
Flounders			17,300	982	1,200	60	162,500	9,407
Gizzard shad	4,000	60	3,000	43	45,000	530		
Hake			200	4			1,900	20
Harvestfish			2,200	25			15,000	300
Hickory shad	100	3	1,200	18	3,200	100	100	2
Hogfish							200	3
King whiting or "kingfish"			5,600	234	400	8	44,800	1,708
Mackerel							300	13
Pike or pickerel	100	15						
Sand perch			700	10			3,300	43
Scup			56,400	774			563,000	6,297
Sea bass			2,900	133			21,200	1,059
Sea robin			900	6			900	10
Shad	5,000	481	14,200	1,528	73,400	5,874	44,300	4,430
Sharks			33,200	387			156,300	1,783
Spanish mackerel					400	28	2,900	203
Spot			2,900	56	1,700	42	588,900	9,889
Squeteague or "sea trout":								
Gray	200	4	64,200	1,541	118,400	2,072	763,000	17,909
Spotted							182,700	14,616
Striped bass	10,100	874	28,100	2,529	80,400	5,621	19,700	1,591
Sturgeon							3,700	443
Swellfish			500	42			9,800	180
Tautog							100	1
Tomcod							5,600	58
White perch	2,900	116	5,200	104	36,100	983	2,100	30
Whiting			300	6			7,900	130
Yellow perch					400	32		
Crabs:								
Hard			82,200	1,546	1,485,900	26,071	3,305,100	78,035
Soft and peelers			300	55	24,100	4,017	1,200	160
Clams, hard, public							393,600	30,746
Oysters, market:								
Public, spring					272,000	19,040	3,000	220
Public, fall					380,000	30,400	4,200	310
Private, spring					84,000	5,880	227,400	19,363
Private, fall					54,000	4,320	506,800	37,851
Squid			1,200	18			10,900	166
Total	56,600	3,000	618,700	16,261	3,291,100	115,841	12,659,100	314,798

SHAD AND ALEWIFE FISHERIES OF THE POTOMAC RIVER

The catch of shad in the Potomac River in 1938 amounted to 192,560 in number, 519,635 pounds in weight, and their total value to the fishermen was \$47,385. The catch of alewives for the same season amounted to 9,248,000 in number, with a total weight of 3,695,200 pounds, and a value to the fishermen of \$36,990. These figures show an increase of 19 percent in weight and 17 percent in the value of shad as compared with 1937, and an increase of 22 percent in weight and 27 percent in the value of alewives.

Approximately 84 percent of the shad, in weight, were taken with pound nets, and 16 percent with gill nets. Over 99 percent of the alewives were taken with pound nets, the remainder being taken with gill nets.

Statistics of the catch of shad and alewives in the Potomac River are also included in the catch data for Maryland and Virginia which are published elsewhere in this report.

Shad and alewife fisheries of the Potomac River, 1938

Item	Maryland			Virginia			Total		
	Number	Pounds	Value	Number	Pounds	Value	Number	Pounds	Value
Fishermen on boats and shore:									
Regular.....	27			235			262		
Casual.....	49			128			177		
Total.....	76			363			439		
Boats:									
Motor.....	35			127			162		
Other.....	7			129			136		
Apparatus:									
Haul seines.....	2						2		
Length, yards.....	200						200		
Gill nets:									
Drift:	7			18			25		
S q u a r e									
yards.....	16,632			14,560			31,192		
Stake	1,022			639			1,661		
S q u a r e									
yards.....	73,436			75,497			148,933		
Pound nets.....	39			263			302		
Fyke nets.....				53			53		
Shad caught:									
With haul seines.....	207	600	\$39				207	600	\$39
With drift gill nets.....	4,475	14,300	1,331	12,845	39,700	\$4,130	17,320	54,000	5,461
With stake gill nets.....	2,160	6,500	758	8,467	22,800	2,262	10,627	29,300	3,020
With pound nets.....	10,136	29,835	3,058	154,137	405,600	35,777	164,273	435,435	38,835
With fyke nets.....				133	300	30	133	300	30
Total.....	16,978	51,235	5,186	175,582	468,400	42,199	192,560	519,635	47,385
Alewives caught:									
With drift gill nets.....	5,000	2,000	20				5,000	2,000	20
With stake gill nets.....	500	200	2	1,250	500	8	1,750	700	10
With pound nets.....	970,000	384,000	3,775	8,271,250	3,308,500	33,185	9,241,250	3,692,500	36,960
Total.....	975,500	386,200	3,797	8,272,500	3,309,000	33,193	9,248,000	3,695,200	36,990

TRADE IN FISHERY PRODUCTS IN WASHINGTON, D. C.

The municipal fish wharf and market in Washington, D. C., is located in the southwestern part of the city on an arm of the Potomac River. At the present time 15 firms have stalls in this market, 3 are located in the immediate vicinity of the market, 2 have stalls in the market located at Fifth and K Streets NW., and 1 is located in another part of the city. Altogether there are 21 firms which employ 179 persons who received \$206,071 in salaries and wages during 1938. These firms conduct mainly a wholesale business although some retail trade is carried on.

The facilities for handling fish and oysters from boats and vessels that may land at the wharf are good, but only a comparatively small quantity are brought into the city by this method. In the fall and winter, considerable quantities of shell oysters are landed, but most of the oysters handled in Washington are brought in already shucked from Maryland and Virginia by truck and other transportation facilities.

FISHERIES OF THE SOUTH ATLANTIC AND GULF STATES

(South Atlantic, Area XXIV; Gulf, Area XXV)¹⁰

The yield of the commercial fisheries of the marine areas of the South Atlantic and Gulf States (North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, and Texas) during 1938 amounted to 621,858,100 pounds, valued at \$13,073,403 to the fishermen, representing an increase of 14 percent in quantity but a decrease of 8 percent in value as compared with the catch of the previous year. These fisheries provided employment for 29,588 fishermen as compared with 30,244 in 1937.

There were 742 fishery wholesale and manufacturing establishments in these States in 1938, as compared with 725 in 1937. In 1938 these establishments employed 18,167 persons, paid \$3,452,182 in salaries and wages, and produced manufactured products (canned, cured, packaged, and byproducts) valued at \$11,762,783. In 1937 wholesale and manufacturing firms employed 18,534 persons, paid \$3,863,777 in salaries and wages, and produced manufactured products valued at \$15,110,653.

Fisheries of the South Atlantic and Gulf States, 1938

SUMMARY OF CATCH

Product	North Carolina		South Carolina		Georgia	
	Pounds	Value	Pounds	Value	Pounds	Value
Fish.....	188,428,900	\$1,587,299	1,578,700	\$80,104	7,390,800	\$41,335
Shellfish, etc.....	10,337,700	362,777	6,331,900	193,894	12,444,800	339,553
Total.....	198,766,600	1,950,076	7,910,600	273,998	19,835,600	380,888

Product	Florida		Alabama		Mississippi	
	Pounds	Value	Pounds	Value	Pounds	Value
Fish.....	222,349,800	\$3,318,000	5,402,200	\$224,236	1,099,600	\$62,090
Shellfish, etc.....	19,093,100	1,670,084	5,515,100	225,371	13,160,200	540,929
Total.....	241,442,900	4,988,084	10,917,300	449,607	14,259,800	603,019

Product	Louisiana		Texas		Total	
	Pounds	Value	Pounds	Value	Pounds	Value
Fish.....	1,496,100	\$104,746	6,152,200	\$403,949	433,896,300	\$5,821,759
Shellfish, etc.....	102,387,000	3,286,768	18,692,000	632,268	187,961,800	7,251,644
Total.....	103,883,100	3,391,514	24,844,200	1,036,217	621,858,100	13,073,403

OPERATING UNITS: BY STATES

Item	North Carolina	South Carolina	Georgia	Florida	Alabama	Mississippi	Louisiana	Texas	Total
Fishermen:									
On vessels.....	Number 1,091	Number 75	Number 205	Number 1,283	Number 235	Number 980	Number 468	Number 228	Number 4,565
On boats and shore:									
Regular.....	4,431	654	552	5,975	652	1,536	4,412	1,310	19,522
Casual.....	1,383	701	416	1,467	253	129	525	627	5,501
Total.....	6,905	1,430	1,173	8,725	1,140	2,645	5,405	2,165	29,588
Vessels:									
Motor.....	166	23	74	226	47	240	196	70	1,042
Net tonnage.....	2,064	191	662	4,025	527	2,889	1,580	718	12,656
Sail.....	64	1	-----	1	-----	7	-----	-----	73
Net tonnage.....	580	12	-----	9	-----	90	-----	-----	691
Total vessels.....	230	24	74	227	47	247	196	70	1,115
Total net tonnage.....	2,644	203	662	4,034	527	2,979	1,580	718	13,347

¹⁰ These are the numbers given to these areas by the North American Council on Fishery Investigations. The catch of the Mississippi River and tributaries is not included in this section.

Fisheries of the South Atlantic and Gulf States, 1938—Continued

OPERATING UNITS: BY STATES—Continued

Item	North Carolina	South Carolina	Georgia	Florida	Alabama	Mississippi	Louisiana	Texas	Total
Boats:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
Motor	1,298	48	188	2,562	252	444	1,734	606	7,132
Other	1,802	591	428	3,462	415	608	1,395	382	9,083
Accessory boats	152	10	6	51	10				229
Apparatus:									
Purse seines, menhaden	35		2	19					56
Length, yards	8,655		600	5,320					14,575
Haul seines:									
Common	394	38	10	238	6	6	74	45	811
Length, yards	84,255	6,185	898	124,315	3,600	2,400	29,400	15,135	266,188
Long	91								91
Length, yards	90,900								90,900
Gill nets:									
Anchor	1,755	106	16	18					1,895
Square yards	909,477	67,880	770	13,500					991,627
Drift	106	35	96	71					308
Square yards	140,100	49,710	43,110	88,700					321,620
Runaround	538	49	28	2,198				114	2,927
Square yards	377,945	22,770	8,480	2,325,660				26,850	2,761,705
Stake	4,647	16	142	4	10			343	5,162
Square yards	306,020	10,925	15,665	3,600	2,000			81,925	420,135
Trammel nets				621	167	60	30	107	985
Square yards				519,745	87,160	31,500	8,500	55,850	702,755
Lines:									
Hand	120	98	150	1,965	116	108	282	380	3,219
Hooks and baits	141	130	150	2,600	202	128	351	495	4,197
Trawl				35					35
Hooks				2,040					2,040
Troll	26	8		995		4		6	1,039
Hooks	26	8		995		4		6	1,039
Trots with baits or snoods	654	125	202	151	87	106	651	43	2,019
Baits or snoods	408,000	35,848	82,300	83,550	46,650	88,500	184,005	18,560	947,413
Trot with hooks	20		45	219	77			96	457
Hooks	1,950		5,325	76,155	23,100			66,000	172,530
Pound nets	2,738			24					2,762
Wheels	6								6
Fyke nets	527			8	130				665
Dip nets:									
Common	439	6		57			37	52	591
Drop				24		58	6,775		6,857
Cast nets		26		205		18			249
Other trawls, shrimp	169	40	229	319	149	580	1,545	432	3,463
Yards at mouth	2,902	814	4,657	6,124	2,089	9,245	21,492	6,391	53,714
Traps, brush							29,600		29,600
Pots:									
Sea crawfish				2,050					2,050
Crab			620	6,890				934	8,444
Eel	1,679			71					1,750
Fish	16	105	44	5,110	380				5,655
Spears	322	97		157	59	59		161	855
Dredges:									
Clam				1					1
Oyster	274	1		10	37	368	116	58	864
Yards at mouth	260	2		10	38	369	115	58	852
Scallop				54					54
Yards at mouth				50					50
Tongs, oyster	160		22	331	521	639	703	166	2,542
Rakes, other than for oysters	660								660
Forks				11					11
Grabs		176	30	21					227
Coquina scoops				4					4
Hooks:									
Sponge				292					292
Stone crab				10					10
Diving outfits				72					72

Fisheries of the South Atlantic and Gulf States, 1938—Continued

CATCH: BY STATES

Species	North Carolina		South Carolina		Georgia	
	Pounds	Value	Pounds	Value	Pounds	Value
FISH						
Alewives.....	11,219,100	\$112,211				
Bluefish.....	1,849,000	96,508	42,600	\$3,213		
Bonito.....	10,500	206	300	9		
Bowfin.....	5,000	54				
Butterfish.....	15,100	453				
Cabio or crab eater.....	200	8				
Carp.....	224,500	2,932				
Catfish and bullheads.....	717,900	21,392	73,000	2,490	39,100	\$1,726
Crappie.....	7,900	119				
Croaker.....	6,475,100	91,373	1,100	33	2,500	100
Drum:						
Black.....	74,700	2,988	28,000	1,060	5,000	200
Red or redfish.....	530,100	18,000	103,500	5,820	27,500	1,275
Eels, common.....	111,900	3,806			1,500	165
Flounders.....	501,400	25,000	65,500	5,140	8,000	385
Gizzard shad.....	63,200	913				
Grunts.....			2,500	75		
Harvestfish or "starfish".....	428,700	12,941				
Hickory shad.....	111,100	2,479	8,500	200	4,000	135
Hogfish.....	29,600	715				
King whiting or "kingfish".....	1,573,200	47,464	86,000	2,970	75,000	1,125
Menhaden.....	146,819,000	426,503			7,033,800	9,888
Mullet.....	3,276,100	127,959	587,000	22,785	17,000	415
Pigfish.....	21,400	424				
Pike or pickerel.....	800	12				
Pinfish or sailors choice.....	600	11				
Pompano.....	20,300	2,030				
Porgies.....	900	18	1,000	13		
Sea bass.....	66,400	3,320	111,500	6,265		
Sea catfish.....			100,000	3,000		
Shad.....	1,031,800	164,571	59,400	12,010	98,100	17,979
Sharks.....	581,400	1,744				
Sheepshead, salt-water.....	20,300	450	2,900	65	5,000	150
Snapper, red.....	1,200	60				
Spadefish.....	6,200	184				
Spanish mackerel.....	270,600	13,520				
Spot.....	5,737,800	88,677	195,800	4,636	4,000	80
Squeteagues or "sea trout":						
Gray.....	5,094,900	195,849	5,000	350		
Spotted.....	848,000	67,131	78,800	7,359	62,500	6,250
Striped bass.....	522,700	48,628	600	108		
Sturgeon.....	400	4	25,700	2,503	7,800	1,462
Suckers.....	1,800	32				
Tautog.....	900	45				
Tuna.....	600	18				
White perch.....	145,500	6,212				
Yellow perch.....	9,100	335				
Total.....	188,426,900	1,587,299	1,578,700	80,104	7,390,800	41,335
SHELLFISH, ETC.						
Crabs:						
Hard ¹	3,829,700	72,455	843,300	15,168	1,354,200	27,828
Soft and peelers.....	124,400	18,652	4,800	216		
Shrimp.....	4,569,100	137,469	3,722,800	111,807	10,425,700	302,261
Clams:						
Hard, public ²	342,500	26,570				
Hard, private ²	15,400	1,186				
Oysters, market: ³						
Public, spring.....	519,200	30,339				
Public, fall.....	894,700	67,269				
Private, spring.....	9,000	540	964,800	35,973	87,100	4,566
Private, fall.....	4,000	320	796,200	30,730	66,900	3,472
Scallops, bay.....	29,500	7,971				
Terrapin, diamond-back.....					10,900	1,426
Turtles, snapper.....	200	6				
Total.....	10,337,700	362,777	6,331,900	193,894	12,444,800	339,553
Grand total.....	198,764,600	1,950,076	7,910,600	273,998	19,835,600	380,888

See footnotes at end of table.

Fisheries of the South Atlantic and Gulf States, 1938—Continued

CATCH: BY STATES—Continued

Species	Florida		Alabama		Mississippi	
	Pounds	Value	Pounds	Value	Pounds	Value
FISH						
Alewives	391,600	\$1,959				
Amberjack	24,400	541				
Angelfish	1,200	32				
Barracuda	500	20				
Bluefish	4,480,000	205,316	21,200	\$1,075		
Blue runner or hardtail	731,700	9,080	17,700	356		
Buffalo fish			59,900	2,397		
Cabio or crab eater	7,400	198				
Catfish and bullheads	4,057,500	147,539	73,600	5,152		
Cigarfish	9,000	180				
Crappie	552,700	19,052				
Crevalle	190,500	3,516				
Croaker	13,000	254	53,100	1,066	13,700	\$411
Dolphin	2,600	123				
Drum:						
Black	63,700	1,682	5,000	221	7,900	237
Red or redfish	1,122,000	36,875	31,800	1,592	106,000	6,546
Eels, common	9,800	243				
Flounders	190,000	8,769	64,600	5,980	42,300	4,071
Groupers	4,396,300	138,412	222,300	6,812	157,600	4,370
Grunts	51,300	1,268				
Hickory shad	32,400	1,176				
Hogfish	15,800	590				
Jewfish	128,400	4,559				
Kingfish or "king mackerel"	3,665,200	136,377				
King whiting or "kingfish"	330,800	5,525	300	15	3,700	111
Menhaden	149,269,100	388,076				
Mojarra	333,500	7,809				
Moonfish	300	6				
Mullet	28,593,900	941,260	3,364,500	91,715	284,600	8,438
Muttonfish	282,900	17,559				
Paddlefish or "spoonbill cat"			40,100	3,558		
Permit	15,700	340				
Pigfish	49,200	775				
Pinfish or sailors choice	23,700	299				
Pompano	778,100	161,631	1,500	296	600	90
Porgies	57,900	1,965				
Sea bass	25,400	970				
Sea catfish	67,700	1,333	10,200	245	2,200	54
Shad	228,700	21,779				
Sharks	3,100,600	22,335				
Sheepshead:						
Fresh-water			4,700	235		
Salt-water	779,500	21,554	58,700	2,798	19,700	981
Snappers:						
Lane	2,200	110				
Mangrove	295,600	9,473				
Red	5,377,900	378,433	1,193,100	85,388	173,900	12,173
Snook or sergeantfish	610,100	20,994				
Spadefish	5,100	102				
Spanish mackerel	6,835,400	314,522	39,000	3,071	2,000	255
Spot	229,000	5,893	3,500	70	1,000	30
Squeteagues or "sea trout":						
Spotted	3,413,200	219,796	119,400	11,670	249,000	23,266
White	54,400	2,188	5,100	132	35,300	1,054
Sturgeon	36,000	3,220	2,330	181		
Sunfish	867,800	31,018				
Swellfish	1,000	80				
Tenpounder	359,200	6,854	10,600	211		
Tripletail	18,100	291			100	3
Turbot	1,800	36				
Yellowtail	169,000	14,013				
Total	222,349,800	3,318,000	5,402,200	224,236	1,099,600	62,090
SHELLFISH, ETC.						
Crabs:						
Hard ¹	5,594,900	76,270	510,700	7,630	1,016,400	17,296
Stone	54,500	11,998				
Sea crawfish or spiny lobster	328,400	23,377				
Shrimp	10,142,600	318,612	3,643,500	145,740	9,902,400	420,549
Clams:						
Coquina	16,000	300				
Hard, public ¹	747,000	72,144				
Conchs	7,800	624				

See footnotes at end of table.

Fisheries of the South Atlantic and Gulf States, 1938—Continued

CATCH: BY STATES—Continued

Species	Florida		Alabama		Mississippi	
	Pounds	Value	Pounds	Value	Pounds	Value
SHELLFISH, ETC.—continued						
Oysters, market: ³						
Public, spring	341, 500	\$22, 291	473, 300	\$23, 637	2, 042, 500	\$91, 793
Public, fall	558, 100	42, 538	788, 700	41, 812	198, 900	11, 291
Private, spring	130, 200	7, 287	55, 600	3, 340		
Private, fall	130, 700	7, 272	41, 100	2, 992		
Scallops, bay	137, 400	10, 593				
Terrapin, diamond-back			2, 200	220		
Turtles:						
Green	8, 200	310				
Loggerhead	800	16				
Soft-shell	289, 000	5, 604				
Sponges:						
Grass	16, 900	12, 603				
Sheepswool	472, 200	997, 338				
Wire	7, 900	6, 514				
Yellow	109, 000	54, 393				
Total	19, 093, 100	1, 670, 084	5, 515, 100	225, 371	13, 160, 200	540, 929
Grand total	241, 442, 900	4, 988, 084	10, 917, 300	449, 607	14, 259, 800	603, 019

Species	Louisiana		Texas		Total	
	Pounds	Value	Pounds	Value	Pounds	Value
FISH						
Alewives					11, 610, 700	\$114, 170
Amberjack					24, 400	541
Angelfish					1, 200	32
Barracuda					500	20
Bluefish					6, 392, 800	306, 112
Blue runner or hardtail					749, 400	9, 436
Bonito					10, 800	215
Bowfin					5, 000	54
Buffalofish					59, 900	2, 397
Butterfish					15, 100	453
Cabio or crab eater					7, 600	206
Carp					224, 500	2, 932
Catfish and bullheads					4, 961, 100	178, 299
Cigarfish					9, 000	180
Crappie					560, 600	19, 171
Crevalle					190, 500	3, 516
Croaker	78, 200	\$2, 647	55, 200	\$1, 534	6, 691, 900	97, 418
Dolphin					2, 600	123
Drum:						
Black	117, 200	4, 640	1, 557, 500	45, 250	1, 859, 000	56, 278
Red or redfish	522, 000	38, 054	859, 800	64, 907	3, 302, 700	173, 069
Eels, common					123, 200	4, 214
Flounders	36, 900	2, 722	126, 500	12, 143	1, 035, 200	64, 210
Gizzard shad					63, 200	913
Groupers	6, 000	180	31, 600	1, 002	4, 813, 800	150, 776
Grunts					53, 800	1, 343
Harvestfish or "starfish"					428, 700	12, 941
Hickory shad					156, 000	3, 990
Hogfish					45, 400	1, 305
Jewfish			7, 900	238	136, 300	4, 797
Kingfish or "king mackerel"			1, 900	76	3, 667, 100	136, 453
King whiting or "kingfish"	4, 000	151	11, 000	448	2, 084, 000	57, 809
Menhaden					303, 121, 900	824, 467
Mojarra					333, 500	7, 809
Moonfish					300	6
Mullet	11, 800	392	4, 300	155	36, 139, 200	1, 193, 119
Muttonfish					282, 900	17, 559
Paddlefish or "spoonbill cat"					40, 100	3, 558
Permit					15, 700	340
Pigfish					70, 600	1, 199
Pike or pickerel					800	12
Pinfish or sailors choice					24, 300	310
Pompano	500	90	5, 500	1, 058	806, 500	165, 195
Porgies					59, 800	1, 996
Sea bass					203, 300	10, 555
Sea catfish	5, 700	136	35, 100	1, 059	220, 900	5, 827
Shad					1, 418, 000	216, 339
Sharks					3, 682, 000	24, 079
Sheepshead:						
Fresh-water					4, 700	235
Salt-water	69, 000	3, 653	20, 800	1, 118	975, 900	30, 769

See footnotes at end of table.

Fisheries of the South Atlantic and Gulf States, 1938—Continued

CATCH: BY STATES—Continued

Species	Louisiana		Texas		Total	
	Pounds	Value	Pounds	Value	Pounds	Value
FISH—continued						
Snappers:						
Lane.....					2,200	\$110
Mangrove.....					295,600	9,473
Red.....	85,000	\$5,600	1,279,000	\$103,902	8,110,100	585,556
Snook or sergeantfish.....			6,800	422	616,900	21,416
Spadefish.....					11,300	286
Spanish mackerel.....	16,400	1,760	61,900	3,938	7,225,300	337,066
Spot.....	4,800	188	4,200	136	6,180,100	99,710
Squeteagues or "sea trout":						
Gray.....					5,099,900	196,199
Spotted.....	490,200	42,637	1,977,500	163,291	7,238,600	541,400
White.....	48,400	1,896	105,700	3,272	248,900	8,542
Striped bass.....					523,300	48,736
Sturgeon.....					72,200	7,370
Suckers.....					1,800	32
Sunfish.....					867,800	31,018
Swellfish.....					1,000	80
Tautog.....					900	45
Tenpounder.....					369,800	7,065
Tripletail.....					18,200	294
Tuna.....					600	18
Turbot.....					1,800	36
White perch.....					145,500	6,212
Yellow perch.....					9,100	335
Yellowtail.....					169,000	14,013
Total.....	1,496,100	104,746	6,152,200	403,949	433,896,300	5,821,759
SHELLFISH, ETC.						
Crabs:						
Hard ¹	10,533,200	106,464	971,400	23,850	25,153,800	346,961
Soft and peelers.....	247,700	36,899			376,900	55,767
Stone.....					54,500	11,998
Sea crawfish or spiny lobster.....					328,400	23,377
Shrimp.....	81,378,900	2,602,736	16,364,700	505,757	140,149,700	4,544,931
Clams:						
Coquina.....					16,000	300
Hard, public ²					1,089,500	98,714
Hard, private ²					15,400	1,186
Conchs.....					7,800	624
Oysters, market: ³						
Public, spring.....	4,440,300	187,847	555,100	41,724	8,371,900	397,631
Public, fall.....	1,651,800	74,309	614,000	45,888	4,706,200	283,107
Private, spring.....	3,079,900	200,443	79,000	6,344	4,405,600	258,493
Private, fall.....	1,050,300	77,135	107,800	8,705	2,197,000	130,626
Scallops, bay.....					166,900	18,564
Terrapin, diamond-back.....	4,900	935			18,000	2,581
Turtles:						
Green.....					8,200	310
Loggerhead.....					800	16
Snapper.....					200	6
Soft-shell.....					289,000	5,604
Sponges:						
Grass.....					16,900	12,603
Sheepswool.....					472,200	997,338
Wire.....					7,900	6,514
Yellow.....					109,000	54,393
Total.....	102,387,000	3,286,768	18,692,000	632,268	187,961,800	7,251,644
Grand total.....	103,883,100	3,391,514	24,844,200	1,036,217	621,858,100	13,073,403

¹ Statistics on hard crabs used in this table are based on weights of 4 pounds per dozen in North Carolina; 6 pounds in South Carolina and Georgia; 5.79 pounds in Florida; 5 pounds in Alabama; 5.75 pounds in Mississippi; 5.66 pounds in Louisiana; and 5.71 pounds in Texas.

² Statistics on hard clams used in this table are based on yields of 6.14 pounds of meats per standard bushel in North Carolina, and 5.04 pounds in Florida.

³ Statistics on oysters used in this table are based on yields of 4.27 pounds of meats per standard bushel in North Carolina; 3.16 pounds in South Carolina; 2.75 pounds in Georgia; 3.17 pounds in Florida; 3.81 pounds in Alabama; 4.03 pounds in Mississippi; 4.63 pounds in Louisiana; and 3.49 pounds in Texas.

NOTE.—Data on the yield of shellfish meats per bushel are based on U. S. standard bushels of 2,150.4 cubic inches capacity. Prior to 1938 yields were based on bushels of the size prescribed by individual State regulations.

The catch for Louisiana includes the following products taken by Mississippi craft in Louisiana waters: Shrimp, 7,403,400 pounds, valued at \$315,097; oysters, market, spring, 3,751,400 pounds of meats, valued at \$147,863; and oysters, market, fall, 1,462,700 pounds of meats, valued at \$61,626. Prior to 1938 similar catches were included with the catch for Mississippi.

Fisheries of the South Atlantic and Gulf States, 1938—Continued

SUPPLEMENTARY TABLE SHOWING THE PRODUCTION OF CERTAIN SHELLFISH
IN NUMBER AND BUSHELS

Product	North Carolina		South Carolina		Georgia	
	Quantity	Value	Quantity	Value	Quantity	Value
Crabs:						
Hard.....number.....	11,489, 100	\$72,455	1,686, 600	\$15,168	3,708, 400	\$27,828
Soft and peelers.....do.....	870, 800	18,652	33,600	216		
Clams:						
Hard, public.....bushels.....	55,782	26,570				
Hard, private.....do.....	2,508	1,186				
Oysters, market:						
Public, spring.....do.....	121,593	30,339				
Public, fall.....do.....	209,532	67,269				
Private, spring.....do.....	2,108	540	305,316	35,973	31,673	4,566
Private, fall.....do.....	937	320	251,962	30,730	24,327	3,472
Scallops, bay.....do.....	4,805	7,971				

Product	Florida		Alabama		Mississippi	
	Quantity	Value	Quantity	Value	Quantity	Value
Crabs:						
Hard.....number.....	11,595,648	\$76,270	1,225,680	\$7,630	2,119,416	\$17,296
Stone.....do.....	51,444	11,998				
Clams, hard, public.....bushels.....	148,214	72,144				
Oysters, market:						
Public, spring.....do.....	107,729	22,291	124,226	23,637	506,823	91,793
Public, fall.....do.....	176,057	42,538	207,008	41,812	49,355	11,291
Private, spring.....do.....	41,073	7,287	14,593	3,340		
Private, fall.....do.....	41,230	7,272	10,787	2,992		
Scallops, bay.....do.....	45,953	10,593				

Product	Louisiana		Texas		Total	
	Quantity	Value	Quantity	Value	Quantity	Value
Crabs:						
Hard.....number.....	22,404,803	\$106,464	2,041,248	\$23,850	56,270,965	\$346,961
Soft and peelers.....do.....	671,551	36,899			1,575,951	55,767
Stone.....do.....					51,444	11,998
Clams:						
Hard, public.....bushels.....					203,996	98,714
Hard, private.....do.....					2,508	1,186
Oysters, market:						
Public, spring.....do.....	959,028	187,847	159,054	41,724	1,978,453	397,631
Public, fall.....do.....	356,760	74,309	175,931	45,888	1,174,643	283,107
Private, spring.....do.....	665,205	200,443	22,636	6,344	1,082,604	258,493
Private, fall.....do.....	226,847	77,135	30,888	8,705	586,978	130,626
Scallops, bay.....do.....					50,758	18,564

NOTE.—Bushels represent U. S. Standard Bushels of 2,150.4 cubic inches capacity. Prior to 1938, data on bushels of shellfish were based on bushel measures of the size prescribed by individual State regulations. For more detailed information concerning shellfish measures the reader is referred to the section on conversion factors published on p. 548 of this document.

Industries related to the fisheries of the South Atlantic and Gulf States, 1938

OPERATING UNITS, SALARIES, AND WAGES

Item	North Carolina	South Carolina	Georgia	Florida	Alabama	Mississippi	Louisiana	Texas	Total
Transporting:									
Persons engaged:									
On vessels.....	77	117		42		7	82		325
On boats.....	12	2		84			90		188
Total.....	89	119		126		7	172		513
Vessels:									
Motor.....	41	13		24		3	40		121
Net tonnage.....	344	169		269		18	327		1,127
Sail.....	1	32		3					36
Net tonnage.....	6	313		40					359
Total ves-									
sels.....	42	45		27		3	40		157
Total net									
tonnage.....	350	482		309		18	327		1,496

Industries related to the fisheries of the South Atlantic and Gulf States, 1938—Con.

OPERATING UNITS, SALARIES, AND WAGES—Continued

Item	North Carolina	South Carolina	Georgia	Florida	Alabama	Mississippi	Louisiana	Texas	Total
	Number	Number	Number	Number	Number	Number	Number	Number	Number
Transporting—Con.	8	2		83			45		138
Boats.....									
Wholesale and manufacturing:									
Establishments.....	116	23	27	343	27	35	125	46	742
Persons engaged:									
Proprietors.....	130	16	21	379	30	23	118	53	770
Salaried employees.....	44	35	32	210	20	56	137	41	575
Wage earners:									
Average for season.....	1,847	1,299	1,462	2,168	501	2,416	5,735	1,394	16,822
Average for year.....	560	452	710	971	161	718	1,502	396	5,470
Paid to salaried employees.....	\$86,121	\$43,500	\$59,673	\$316,852	\$27,394	\$88,500	\$169,585	\$37,600	\$829,225
Paid to wage earners.....	\$284,232	\$117,108	\$194,002	\$615,522	\$91,525	\$353,274	\$773,644	\$193,650	\$2,622,957
Total salaries and wages.....	\$370,353	\$160,608	\$253,675	\$932,374	\$118,919	\$441,774	\$943,229	\$231,250	\$3,452,182
Fishermen manufacturing.....	582	27	17	343	97	128		129	1,323

PRODUCTS MANUFACTURED

Item	North Carolina		South Carolina		Georgia		Florida	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
By manufacturing establishments:								
Alewives:								
Corned..... pounds.....	3,191,250	\$62,625						
Corned with roe..... do.....	52,300	2,012						
Roe, canned..... standard cases.....	8,538	37,153						
Blue runner, salted..... pounds.....							325,800	\$12,962
Grouper:								
Fresh steaks..... do.....							401,130	66,261
Fresh fillets..... do.....							52,000	8,350
Menhaden products:								
Oil..... gallons.....	1,301,042	346,638			(1)	(1)	231,356	60,743
Meal..... tons.....	3,891	170,807					2,922	120,769
Acid scrap..... do.....	7,176	133,481			(1)	(1)	4,964	94,424
Dry scrap..... do.....	10,447	423,443					4,681	179,185
Mullet:								
Salted..... pounds.....	384,800	30,784					599,200	32,212
Roe, salted..... do.....							36,300	8,611
Spanish mackerel, salted..... pounds.....							88,000	4,973
Spot, salted..... do.....	96,600	6,209						
Crab meat, packaged, fresh-cooked..... pounds.....	422,476	124,954	63,912	\$20,154	159,230	\$47,597	631,050	202,108
Shrimp:								
Cooked and peeled..... do.....			(1)	(1)	(1)	(1)		
Canned..... standard cases.....					142,485	725,757	32,206	200,676
Marine-shell novelties.....								45,756
Oysters:								
Fresh-shucked..... gallons.....	100,017	87,189	36,732	28,678	10,104	12,080	43,322	59,498
Canned..... standard cases.....	(1)	(1)	79,811	297,818	(1)	(1)	(1)	(1)
Shell products:								
Poultry feed..... tons.....	(1)	(1)	(1)	(1)			(1)	(1)
Lime..... do.....	775	2,450	(1)	(1)				
Scallops, bay, fresh-shucked..... gallons.....	2,665	4,664					11,303	20,454
Unclassified products:								
Packaged, fresh and frozen..... pounds.....	(2)	(2)	(2)	(2)	(2)	(2)	\$ 69,000	\$ 22,730
Salted and smoked..... do.....	49,460	2,124	(2)	(2)	(2)	(2)	\$ 10,500	\$ 1,763
Canned..... standard cases.....	(2)	(2)	(2)	(2)	(2)	(2)	\$ 27,768	\$ 147,048
Miscellaneous.....		58,665		30,728		80,564		156,245
Total.....		1,493,200		377,378		865,998		1,444,771

See footnotes at end of table.

Industries related to the fisheries of the South Atlantic and Gulf States, 1938—Con.

PRODUCTS MANUFACTURED—Continued

Item	North Carolina		South Carolina		Georgia		Florida	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
By fishermen:								
Amberjack, smoked pounds							680	\$170
Alewives, corned do	871,750	\$16,795						
Bluefish, smoked do							200	16
Groupers:								
Smoked do							1,100	215
Fillets, salted do							9,000	900
King mackerel, smoked pounds							2,750	730
Mullet:								
Smoked do							41,600	8,105
Salted do	325,000	19,500	15,000	\$1,050			28,000	1,551
Roe, salted do							1,500	380
Sailfish, smoked do							12,040	2,206
Shark products:								
Hides do	5,750	672					141,770	16,883
Fins, dried do	1,070	434					40,800	16,814
Spanish mackerel, smoked pounds							950	178
Spot, salted do	100,000	4,000	5,000	350				
Squeteague or "sea trout," smoked pounds							1,150	257
Sturgeon, caviar, salted pounds			183	183	100	\$100		
Wahoo, salted do							600	40
Crab meat, packaged, fresh-cooked pounds			85	26			4,170	1,310
Shrimp, smoked do							375	113
Clams, hard, fresh-shucked gallons	7,400	12,250	102	130			255	500
Oysters, fresh-shucked do	3,900	4,650	3,182	4,471	5,826	4,961	48,031	45,184
Scallops, bay, fresh-shucked gallons	610	976					4,961	4,072
Total		59,277		6,210		5,061		99,624
Grand total		1,552,477		383,588		871,059		1,544,395

Item	Alabama		Mississippi		Louisiana		Texas	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
By manufacturing establishments:								
Groupers, fresh steaks pounds	(1)	(1)	(1)	(1)				
Mullet:								
Salted do	527,000	\$32,600						
Roe, salted do	6,500	2,200						
Squeteague, or "sea trout," salted pounds					13,300	\$1,995		
Crab meat, packaged, fresh-cooked pounds	80,752	17,625	146,722	\$32,543	1,237,248	330,047	37,550	\$9,543
Shrimp:								
Cooked and peeled pounds	(1)	(1)	287,117	71,536	583,903	166,665		
Frozen packaged do					2,128,325	290,384	1,220,175	167,325
Canned standard cases	(1)	(1)	227,106	947,746	565,064	2,534,256	(1)	(1)
Bran tons					1,426	29,763		
Sun-dried pounds					1,940,575	345,648		
Oysters:								
Fresh-shucked gallons	32,440	39,894	42,500	60,850	224,473	354,117	91,971	125,878
Canned standard cases	(1)	(1)	180,328	714,712	61,029	223,199		
Shell products:								
Poultry feed tons	(1)	(1)	17,584	64,335	(1)	(1)	(1)	(1)
Lime do	(1)	(1)	5,338	4,863	(1)	(1)	(1)	(1)
Unclassified products:								
Packaged, fresh and frozen pounds	(2)	(2)	(2)	(2)				
Canned standard cases	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Miscellaneous		11 276,111		12 1,890		13 338,865		14 396,846
Total		368,430		1,898,475		4,614,939		699,592

See footnotes at end of table.

Fisheries of North Carolina, 1938—Continued

OPERATING UNITS: BY GEAR—Continued

Item	Lines—Continued			Pound nets	Wheels	Fyke nets	Dip nets	Otter trawls, shrimp
	Troll	Trot with baits or snoods	Trot with hooks					
Fishermen:	Number	Number	Number	Number	Number	Number	Number	Number
On vessels.....								124
On boats and shore:								
Regular.....	26	902	4	486		23	284	244
Casual.....		142	28	172	6	23	155	8
Total.....	26	1,044	32	658	6	46	439	376
Vessels, motor.....								48
Net tonnage.....								300
Boats:								
Motor.....	18	112	10	272	1	21		120
Other.....		429	10	102	1	8	155	1
Apparatus:								
Number.....	26	654	20	2,738	6	527	439	169
Yards at mouth.....								2,902
Hooks, baits, or snoods.....	26	408,000	1,950					

Item	Pots		Spears	Dredges, oyster	Tongs, oyster	Rakes, other than for oysters	By hand, oyster	Total, exclusive of duplication
	Eel	Fish						
Fishermen:	Number	Number	Number	Number	Number	Number	Number	Number
On vessels.....				172	4			1,091
On boats and shore:								
Regular.....	62		128	153	141	379	37	4,431
Casual.....	3	2	194	8	15	281	55	1,383
Total.....	65	2	322	333	160	660	92	6,905
Vessels:								
Motor.....				1	1			166
Net tonnage.....				6	6			2,064
Sail.....				64				64
Net tonnage.....				580				580
Total vessels.....				65	1			230
Total net tonnage.....				586	6			2,644
Boats:								
Motor.....	46			60	6			1,298
Other.....	8	2	287	32	150	313	45	1,802
Accessory boats.....					2			152
Apparatus:								
Number.....	1,679	16	322	274	160	660		
Yards at mouth.....				260				

CATCH: BY GEAR

Species	Purse seines		Haul seines					
			Common		Long			
	Pounds	Value	Pounds	Value	Pounds	Value		
Alewives.....			2,030,300	\$20,309				
Bluefish.....			232,300	11,843	724,100	\$34,363		
Bonito.....			10,000	196	200	4		
Bowfin.....			1,200	12				
Butterfish.....			6,800	204	1,100	33		
Cabio or crab eater.....			100	5	100	3		
Carp.....			41,800	688				
Catfish and bullheads.....			112,300	3,302				
Crappie.....					7,900	119		
Croaker.....			418,900	6,035	2,629,200	35,864		

Fisheries of North Carolina, 1938—Continued

CATCH: BY GEAR—Continued

Species	Purse seines		Haul seines			
			Common		Long	
	Pounds	Value	Pounds	Value	Pounds	Value
Drum:						
Black			58,600	\$2,344	9,800	\$392
Red or redfish			413,700	15,781	100,800	1,923
Eels, common			800	32		
Flounders			63,000	3,030	29,700	1,535
Gizzard shad			31,400	335		
Harvestfish or "starfish"			78,800	2,414	15,400	462
Hickory shad			28,900	654	3,200	84
Hogfish			14,900	417	3,600	72
King whiting or "kingfish"			75,800	2,274	357,900	10,737
Menhaden	144,577,500	\$419,753	15,100	75	2,195,900	6,522
Mullet			1,547,700	60,891	22,600	759
Pigfish			15,600	309	200	3
Pinfish or sailors choice			400	7	200	4
Pompano			19,400	1,940	400	40
Porgies					900	18
Sea bass					200	10
Shad			46,500	7,440	500	80
Sheepshead, salt-water			18,100	402	1,700	38
Spadefish			2,100	84	4,100	100
Spanish mackerel			8,700	435	4,400	220
Spot			2,355,500	36,433	2,445,600	33,674
Squeteague or "sea trout":						
Gray			181,900	7,143	1,553,300	54,388
Spotted			246,400	19,712	355,800	27,915
Striped bass			156,400	14,489	56,000	5,390
Sturgeon					300	3
Tautog			800	45		
White perch			53,500	2,189		
Yellow perch			3,800	152		
Crabs, soft and peelers			27,300	4,087		
Turtles, snapper			200	6		
Total	144,577,500	419,753	8,819,100	225,714	10,525,100	214,755

Species	Gill nets							
	Anchor		Drift		Runaround		Stake	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Alewives	91,300	\$913	45,000	\$450			21,800	\$227
Bluefish	23,100	2,058			632,100	\$35,798	198,900	10,521
Bonito	300	6						
Bowfin	1,200	12					100	2
Carp	19,900	199	500	5			3,900	79
Catfish and bullheads	18,700	561					1,500	30
Croaker	1,266,200	17,189			21,400	294	309,600	4,643
Drum:								
Black							200	8
Red or redfish					10,600	212	400	8
Gizzard shad	16,500	319					100	2
Hickory shad	16,700	338	1,000	20			25,100	492
Hogfish					200	8		
King whiting or "kingfish"	401,600	12,048			576,100	17,283	2,700	81
Mullet	3,400	146			1,648,500	63,997	51,400	2,066
Pigfish					600	12		
Shad	128,300	20,126	21,400	3,402			480,200	76,832
Sharks	581,400	1,744						
Spanish mackerel					20,200	1,000		
Spot	50,500	744			646,400	11,228	209,300	6,293
Squeteagues or "sea trout":								
Gray	529,800	21,091			208,700	8,239	421,400	16,996
Spotted	20,500	1,640			149,900	11,832	29,400	2,352
Striped bass	73,400	6,051	1,100	104			10,200	956
Sturgeon							100	1
Suckers	100	1					100	1
Tuna	600	18						
White perch	15,600	674	4,500	180	400	16	20,700	1,018
Total	3,259,100	85,878	73,500	4,161	3,915,100	149,919	1,787,100	122,608

Fisheries of North Carolina, 1938—Continued

CATCH: BY GEAR—Continued

Species	Lines							
	Hand		Troll		Trot with baits or snoods		Trot with hooks	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Catfish and bullheads							32,000	\$920
Sea bass	66,200	\$3,310						
Snapper, red	1,200	60						
Spanish mackerel	35,000	1,750	148,500	\$7,425				
Crabs, hard					3,829,700	\$72,455		
Total	102,400	5,120	148,500	7,425	3,829,700	72,455	32,000	920

Species	Pound nets		Wheels		Fyke nets		Dip nets	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Alewives	8,958,100	\$89,586	10,000	\$100	52,600	\$526	10,000	\$100
Bluefish	38,500	1,925						
Bowfin	100	1			2,400	27		
Butterfish	7,200	216						
Carp	52,200	544			105,400	1,385		
Catfish and bullheads	376,100	11,260			162,300	4,869		
Croaker	1,809,800	27,148						
Drum:								
Black	6,100	244						
Red or redfish	4,600	76						
Eels, common	7,000	330			1,400	56		
Flounders	98,200	4,910						
Gizzard shad	12,400	198			2,800	59		
Harvestfish or "starfish"	334,500	10,065						
Hickory shad	34,600	859			1,600	32		
Hogfish	10,900	218						
King whiting or "kingfish"	12,800	384						
Menhaden	30,500	153						
Mullet	2,500	100						
Pigfish	5,000	100						
Pike or pickerel	400	4			400	8		
Pompano	500	50						
Shad	354,900	56,691						
Sheepshead, salt-water	500	10						
Spanish mackerel	53,800	2,690						
Spot	30,500	305						
Squeteagues or "sea trout":								
Gray	2,199,800	87,992						
Spotted	46,000	3,680						
Striped bass	205,900	19,777			19,700	1,861		
Suckers	300	4			1,300	26		
White perch	19,600	861	1,200	48	10,000	426		
Yellow perch	900	38			4,400	145		
Crabs, soft and peelers							97,100	14,565
Shrimp	15,000	450						
Total	14,729,200	320,869	11,200	148	364,300	9,420	107,100	14,665

Species	Otter trawls		Pots				Spears	
			Eel		Fish			
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Carp					800	\$32		
Catfish and bullheads					15,000	450		
Croaker	20,000	\$200						
Eels, common			102,700	\$3,388				
Flounders	152,800	7,640					157,700	\$7,885
King whiting or "kingfish"	146,300	4,657						
White perch					20,000	800		
Shrimp	4,554,100	137,019						
Total	4,873,200	149,516	102,700	3,388	35,800	1,282	157,700	7,885

Fisheries of North Carolina, 1938—Continued

CATCH: BY GEAR—Continued

Species	Dredges		Tongs		Rakes		By hand	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Clams:								
Hard, public					342,500	\$26,570		
Hard, private					15,400	1,186		
Oysters, market:								
Public, spring	448,600	\$26,156	55,300	\$3,258			15,300	\$925
Public, fall	742,900	55,932	120,500	8,921			31,300	2,416
Private, spring			9,000	540				
Private, fall			4,000	320				
Scallops, bay					29,500	7,971		
Total	1,191,500	82,088	188,800	13,039	387,400	35,727	46,600	3,341

OPERATING UNITS: BY COUNTIES

Item	Beaufort	Bertie	Brunswick	Camden	Carteret	Chowan	Craven
Fishermen:							
On vessels	117		73		762		
On boats and shore:							
Regular	198	60	403		1,428		32
Casual	80		178	15	420	121	18
Total	395	60	654	15	2,610	121	50
Vessels:							
Motor	3		23		107		
Net tonnage	53		206		1,600		
Sail	43				7		
Net tonnage	392				78		
Total vessels	46		23		114		
Total net tonnage	445		206		1,678		
Boats:							
Motor	71	19	55	13	274	40	13
Other	82	2	174		681	29	15
Accessory boats			2		130		
Apparatus:							
Purse seines, menhaden			1		34		
Length, yards			240		8,415		
Haul seines:							
Common	12	2	22		160	1	3
Length, yards	2,300	2,000	4,400		12,105	350	3,600
Long	3				47		
Length, yards	3,000				47,000		
Gill nets:							
Anchor			25	40	124	105	
Square yards			7,000	4,000	255,517	36,750	
Drift			9		3		
Square yards			3,600		6,900		
Runaround	41		99		88		10
Square yards	16,300		24,080		159,070		9,500
Stake	280			65	1,110		300
Square yards	15,120			5,200	63,600		15,000
Lines:							
Hand					38		
Hooks					55		
Troll					26		
Hooks					26		
Trot with baits or snoods	138		46		174		
Baits or snoods	69,000		20,000		174,000		
Pound nets	83	359			100	439	26
Fyke nets				24			
Dip nets					414		
Otter trawls, shrimp	3		47		103		
Yards at mouth	48		983		1,608		
Pots, eel	162						
Spears			95		42		
Dredges, oyster	106				17		
Yards at mouth	118				17		
Tongs, oyster					84		
Rakes, other than for oysters			8		642		

Fisheries of North Carolina, 1938—Continued

OPERATING UNITS: BY COUNTIES—Continued

Item	Curri- tuck	Dare	Gates	Hert- ford	Hyde	Martin	New Han- over	Onslow
Fishermen:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
On vessels.....		46			9			14
On boats and shore:								
Regular.....	186	764			167		320	268
Casual.....	9	57	16	36		88	140	58
Total.....	195	867	16	36	176	88	460	340
Vessels:								
Motor.....		16			1			4
Net tonnage.....		96			5			23
Sail.....					2			
Net tonnage.....					14			
Total vessels.....		16			3			4
Total net tonnage.....		96			19			23
Boats:								
Motor.....	74	279	3	4	59	19	82	48
Other.....	61	218	4	1	50	20	123	157
Accessory boats.....		6						2
Apparatus:								
Haul seines:								
Common.....	48	54	2	1	5	2	22	27
Length, yards.....	16,000	25,500	1,200	950	1,450	1,200	2,200	4,100
Long.....		19						
Length, yards.....		19,000						
Gill nets:								
Anchor.....	157	486	2		4			15
Square yards.....	25,220	197,120	400		8,600			29,200
Drift.....		1	2			7	78	
Square yards.....		3,300	400			7,000	109,200	
Runaround.....		45			18		95	93
Square yards.....		95,900			15,200		21,375	880
Stake.....	60	1,890			330		60	
Square yards.....	4,800	111,700			32,000		4,800	
Lines:								
Hand.....							16	62
Hooks.....							16	62
Trot with baits or snoods.....	5	8			33		60	100
Baits or snoods.....	2,500	8,000			16,500		30,000	40,000
Trot with hooks.....						18	2	
Hooks.....						950	1,000	
Pound nets.....	10	1,225	14	48	92			
Wheels.....						6		
Fyke nets.....	257							
Dip nets.....	5					20		
Otter trawls, shrimp.....		2						1
Yards at mouth.....		35						15
Pots:								
Eel.....	1,370	80						
Fish.....						16		
Spears.....		50			5		75	25
Dredges, oyster.....					24			
Yards at mouth.....					26			
Tongs, oyster.....					5			55
Rakes, other than for oysters.....							10	

Item	Pamlico	Pasquo- tank	Pender	Perqui- mins	Tyrrell	Wash- ington
Fishermen:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
On vessels.....	70					
On boats and shore:						
Regular.....	245	32	149	78	17	84
Casual.....		27	18	7	95	
Total.....	315	59	167	85	112	84
Vessels:						
Motor.....	12					
Net tonnage.....	76					
Sail.....	12					
Net tonnage.....	96					
Total vessels.....	24					
Total net tonnage.....	172					

Fisheries of North Carolina, 1938—Continued

OPERATING UNITS: BY COUNTIES—Continued

Item	Pamlico	Pasquo- tank	Pender	Perqui- mins	Tyrrell	Wash- ington
Boats:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
Motor.....	112	25	4	34	43	27
Other.....	64	5	49	28	33	15
Accessory boats.....	12					
Apparatus:						
Haul seines:						
Common.....	4	5	20	2		2
Length, yards.....	800	1, 100	3, 200	200		1, 600
Long.....	22					
Length, yards.....	21, 900					
Gill nets:						
Anchor.....		163		384	100	150
Square yards.....		47, 270		172, 000	60, 000	66, 400
Drift.....					3	3
Square yards.....					4, 500	5, 200
Runaround.....	23	2	24			
Square yards.....	27, 600	4, 200	3, 840			
Stake.....	280	30		12	250	
Square yards.....	22, 400	2, 600		1, 200	27, 600	
Lines:						
Hand.....			4			
Hooks.....			8			
Trot with baits or snoods.....	80		10			
Baits or snoods.....	43, 000		5, 000			
Pound nets.....	78	12		108	72	72
Fyke nets.....		40		56	150	
Otter trawls, shrimp.....	13					
Yards at mouth.....	213					
Pots, eel.....		12		25	10	20
Spears.....			30			
Dredges, oyster.....	127					
Yards at mouth.....	99					
Tongs, oyster.....	16					

CATCH: BY COUNTIES

Species	Beaufort		Bertie		Brunswick		Camden	
	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>
Alewives.....	1, 000	\$10	6, 030, 000	\$60, 300			10, 000	\$100
Bluefish.....	14, 200	710			80, 000	\$4, 010		
Bowfin.....							400	8
Cabio or crab eater.....	100	3						
Carp.....	3, 100	93					4, 400	44
Catfish and bullheads.....	13, 200	365	17, 500	525			5, 000	150
Croaker.....	140, 000	2, 000			35, 000	350		
Drum:								
Black.....	100	4						
Red or redfish.....	5, 400	134			7, 500	175		
Eels, common.....	14, 600	730						
Flounders.....	8, 300	415			38, 200	1, 910		
Gizzard shad.....							300	9
Harvestfish or "starfish".....	50, 000	1, 500						
Hickory shad.....	300	6					800	16
Hogfish.....	2, 400	48						
King whiting or "kingfish".....					25, 300	759		
Menhaden.....					7, 266, 000	21, 580		
Mullet.....	74, 900	2, 996			820, 000	32, 800	2, 000	100
Porgies.....	400	8						
Sea bass.....	200	10						
Shad.....	1, 800	288	5, 200	832	6, 200	980	2, 700	432
Sheepshead, salt-water.....	1, 100	24						
Spadefish.....	3, 500	82						
Spanish mackerel.....	8, 500	425						
Spot.....	10, 000	100			447, 500	8, 950		
Squeteagues or "sea trout":								
Gray.....	233, 000	9, 320						
Spotted.....	18, 000	1, 440			3, 800	304		
Striped bass.....	12, 300	1, 206	10, 600	954			4, 700	470
Suckers.....							200	2
White perch.....	1, 500	60	8, 100	334			400	12
Yellow perch.....	900	36					100	3
Crabs, hard.....	1, 159, 800	23, 196			145, 000	2, 700		
Shrimp.....	165, 900	4, 977			1, 977, 100	59, 709		
Clams, hard, public.....					2, 000	240		
Oysters, market:								
Public, spring.....	176, 800	10, 608						
Public, fall.....	407, 900	32, 632			5, 500	367		
Total.....	2, 529, 200	93, 427	6, 071, 400	62, 995	10, 859, 100	134, 834	31, 000	1, 346

Fisheries of North Carolina, 1938—Continued

CATCH: BY COUNTIES—Continued

Species	Carteret		Chowan		Craven		Currituck	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Alewives	700	\$7	3,492,500	\$34,925	2,800	\$42	5,000	\$56
Bluefish	1,255,300	66,988						
Bonito	6,900	134						
Bowfin							1,000	10
Butterfish	7,200	216						
Cabio or crab eater	100	5						
Carp	700	35	3,000	30	1,900	19	84,800	1,406
Catfish and bullheads			50,000	1,500	1,500	30	31,900	957
Crappie	7,900	119						
Croaker	1,488,700	20,676			144,500	2,168	3,000	47
Drum:								
Black	58,600	2,344						
Red or redfish	391,100	15,644						
Eels, common							80,000	2,275
Flounders	243,700	12,065					2,300	115
Gizzard shad							27,100	271
Harvestfish or "starfish"	31,200	936						
Hickory shad	10,700	214			5,400	108	300	10
King whiting or "kingfish"	1,359,600	41,056					12,500	375
Menhaden	139,507,400	404,695						
Mullet	1,120,700	41,801			35,000	1,400		
Piefish	6,600	128						
Pinfish or "sailors choice"	200	3						
Pompano	13,200	1,320						
Sea bass	7,800	390						
Shad	9,300	1,395	21,000	3,360			25,700	4,112
Sharks	581,400	1,744						
Sheepshead, salt-water	6,400	160						
Snapper, red	1,200	60						
Spanish mackerel	183,500	9,175						
Spot	2,693,200	44,528						
Squeteagues or "sea trout":								
Gray	1,232,500	49,443						
Spotted	233,400	18,512			16,700	1,336		
Striped bass	800	40	8,600	774	700	70	96,600	9,660
Tuna	600	18						
White perch	400	20	2,500	110			40,000	1,610
Yellow perch							4,500	180
Crabs:								
Hard	787,000	11,806					85,000	1,270
Soft and peelers	114,400	17,152					10,000	1,500
Shrimp	2,193,900	65,817						
Clams:								
Hard, public	336,500	26,010						
Hard, private	15,400	1,186						
Oysters, market:								
Public, spring	43,400	1,791						
Public, fall	138,800	6,836						
Scallops, bay	29,500	7,971						
Total	154,119,900	872,440	3,577,600	40,699	208,500	5,173	509,700	23,854

Species	Dare		Gates		Hertford		Hyde	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Alewives	15,900	\$159	225,000	\$2,250	900,000	\$9,000		
Bluefish	231,700	11,410					52,000	\$2,600
Bonito	3,600	72						
Bowfin	400	4						
Butterfish	3,900	117						
Carp	27,600	276						
Catfish and bullheads	19,200	576			7,500	225		
Croaker	2,251,400	33,765					507,200	7,616
Drum:								
Black	15,800	632						
Red or redfish	16,700	240					4,500	51
Eels, common	9,000	413						
Flounders	109,600	5,530					5,500	275
Gizzard shad	8,300	83						
Harvestfish or "starfish"	164,500	4,935					87,000	2,690
Hickory shad	51,300	1,399						
Hogfish	27,000	659						
King whiting or "kingfish"	94,300	2,829						

Fisheries of North Carolina, 1938—Continued

CATCH: BY COUNTIES—Continued

Species	Dare		Gates		Hertford		Hyde	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Menhaden	45,600	\$228						
Mullet	117,500	4,698					5,500	\$165
Pigfish	4,000	80						
Pinfish or sailors choice	400	8						
Pompano	1,800	180						
Porgies	500	10						
Shad	719,900	115,184	3,600	\$576	5,500	\$880	1,000	160
Sheepshead, salt-water	4,200	94						
Spadefish	2,700	102						
Spanish mackerel	44,300	2,215					24,200	1,200
Spot	422,900	4,701					75,000	750
Squeteagues or "sea trout":								
Gray	1,950,100	78,004					480,100	19,204
Spotted	285,600	22,848					12,500	1,000
Striped bass	278,400	26,568	2,200	198	3,000	270	900	90
Sturgeon	400	4						
Suckers	200	2						
Tautog	900	45						
White perch	21,700	868	1,200	54				
Yellow perch	100	4			500	22		
Crabs, hard	42,500	1,275					317,000	6,340
Shrimp	30,700	921					5,000	150
Oysters, market:								
Public, spring							34,400	2,064
Public, fall							55,800	4,464
Turtles, snapper	200	6						
Total	7,024,800	321,144	232,000	3,078	916,500	10,397	1,667,600	48,819

Species	Martin		New Hanover		Onslow	
	Pounds	Value	Pounds	Value	Pounds	Value
Alewives	225,000	\$2,250				
Bluefish			13,100	\$655	5,000	\$250
Carp	1,300	52				
Catfish and bullheads	43,000	1,290	4,000	80		
Croaker			10,000	100	33,900	339
Drum, red or redfish			5,100	102	3,000	60
Flounders			13,800	690	9,500	475
King whiting or "kingfish"					75,000	2,250
Mullet			467,800	18,712	224,000	8,939
Sea bass			8,400	420	40,000	2,000
Shad	1,000	150	18,000	2,880		
Spot			705,100	14,102	365,500	5,360
Squeteagues or "sea trout":						
Gray					28,000	840
Spotted			700	56	81,200	6,496
Striped bass	800	64	500	50		
White perch	26,100	1,048				
Crabs, hard			372,500	7,450	220,000	4,400
Shrimp					7,500	225
Clams, hard, public			4,000	320		
Oysters, market:						
Public, spring			9,900	594	45,300	2,718
Public, fall			19,300	1,544	68,400	5,472
Private, spring					9,000	540
Private, fall					4,000	320
Total	297,200	4,854	1,652,200	47,755	1,219,300	40,684

Fisheries of North Carolina, 1938—Continued

CATCH: BY COUNTIES—Continued

Species	Pamlico		Pasquotank		Pender	
	Pounds	Value	Pounds	Value	Pounds	Value
Alewives	2,500	\$25	700	\$7		
Bluefish	181,200	9,060			16,500	\$825
Bowfin			2,100	21		
Butterfish	4,000	120				
Carp			16,800	168		
Catfish and bullheads	6,000	120	226,300	6,789		
Croaker	1,861,400	24,312				
Drum:						
Black			200	8		
Red or redfish	83,900	1,336	400	8	12,500	250
Eels, common	5,000	250	1,700	68		
Flounders	43,200	2,160	1,000	50	25,500	1,275
Gizzard shad			17,100	342		
Harvestfish or "starfish"	96,000	2,880				
Hickory shad	12,000	120	10,900	218	2,500	50
Hogfish			200	8		
King whiting or "kingfish"	3,800	114	2,700	81		
Mullet	50,700	2,028	1,900	76	353,900	14,156
Pigfish			7,800	156		
Pike or pickerel			400	8		
Pompano	5,300	530				
Sea bass					10,000	500
Shad	23,000	3,680	84,100	13,054		
Sheepshead, salt-water	8,600	172				
Spanish mackerel	10,100	505				
Spot	555,500	5,555	16,300	163	446,800	4,468
Squeteagues or "sea trout":						
Gray	1,164,600	38,840	6,600	198		
Spotted	176,800	13,595	2,800	224	16,400	1,312
Striped bass	3,500	350	30,500	2,440		
Suckers			1,300	26		
White perch			1,900	76		
Crabs, hard	650,900	13,018			50,000	1,000
Shrimp	189,000	5,670				
Oysters, market:						
Public, spring	204,400	12,264			5,000	300
Public, fall	196,000	15,714			3,000	240
Total	5,537,400	152,418	433,700	24,189	942,100	24,376

Species	Perquimans		Tyrrell		Washington	
	Pounds	Value	Pounds	Value	Pounds	Value
Alewives	700	\$7	130,400	\$1,304	176,900	\$1,769
Bowfin	1,000	10	100	1		
Carp	15,400	154	52,500	525	13,000	130
Catfish and bullheads	169,500	5,085	76,900	2,307	46,400	1,392
Eels, common	1,300	52	100	6	200	12
Flounders	600	30	200	10		
Gizzard shad	10,200	204	200	4		
Hickory shad	8,700	174	200	4	8,000	160
Mullet	2,000	80	200	8		
Pigfish			3,000	60		
Pike or pickerel	300	3	100	1		
Shad	85,100	13,616	12,200	1,952	6,500	1,040
Squeteagues or "sea trout," spotted			100	8		
Striped bass	29,000	2,320	22,000	1,925	17,600	1,179
Suckers			100	2		
White perch	7,000	300	22,200	1,110	12,500	560
Yellow perch			3,000	90		
Total	330,800	22,035	323,500	9,317	281,100	6,242

SOUTH CAROLINA

Fisheries of South Carolina, 1938

OPERATING UNITS: BY GEAR

Item	Haul seines	Gill nets				Lines			Dip nets
		Anchor	Drift	Run-around	Stake	Hand	Troll	Trot with baits or snoods	
Fishermen:	Number	Number	Number	Number	Number	Number	Number	Number	Number
On vessels.....	-----	-----	-----	-----	-----	22	6	-----	-----
On boats and shore:	-----	-----	-----	-----	-----	-----	-----	-----	-----
Regular.....	82	-----	-----	58	-----	34	-----	115	-----
Casual.....	90	128	70	30	31	20	-----	64	12
Total.....	172	128	70	88	31	76	6	179	12
Vessels:	-----	-----	-----	-----	-----	-----	-----	-----	-----
Motor.....	-----	-----	-----	-----	-----	3	1	-----	-----
Net tonnage.....	-----	-----	-----	-----	-----	29	11	-----	-----
Sail.....	-----	-----	-----	-----	-----	1	-----	-----	-----
Net tonnage.....	-----	-----	-----	-----	-----	12	-----	-----	-----
Total vessels.....	-----	-----	-----	-----	-----	4	1	-----	-----
Total net tonnage.....	-----	-----	-----	-----	-----	41	11	-----	-----
Boats:	-----	-----	-----	-----	-----	-----	-----	-----	-----
Motor.....	-----	2	-----	14	-----	13	-----	-----	-----
Other.....	42	84	35	49	16	12	-----	93	6
Accessory boats.....	-----	-----	-----	-----	-----	10	-----	-----	-----
Apparatus:	-----	-----	-----	-----	-----	-----	-----	-----	-----
Number.....	38	106	35	49	16	98	8	125	6
Length, yards.....	6,185	-----	-----	-----	-----	-----	-----	-----	-----
Square yards.....	-----	67,880	49,710	22,770	10,925	-----	-----	-----	-----
Hooks, baits, or snoods.....	-----	-----	-----	-----	-----	130	8	35,848	-----

Item	Cast nets	Otter trawls, shrimp	Pots, fish	Spears	Dredges, oyster	Grabs	By hand		Total, exclusive of duplication
							Oyster	Other	
Fishermen:	Number	Number	Number	Number	Number	Number	Number	Number	Number
On vessels.....	-----	56	-----	-----	3	-----	-----	-----	75
On boats and shore:	-----	-----	-----	-----	-----	-----	-----	-----	-----
Regular.....	-----	40	-----	52	-----	146	179	47	654
Casual.....	26	-----	20	45	-----	30	70	65	701
Total.....	26	96	20	97	3	176	249	112	1,430
Vessels:	-----	-----	-----	-----	-----	-----	-----	-----	-----
Motor.....	-----	20	-----	-----	1	-----	-----	-----	23
Net tonnage.....	-----	165	-----	-----	6	-----	-----	-----	191
Sail.....	-----	-----	-----	-----	-----	-----	-----	-----	1
Net tonnage.....	-----	-----	-----	-----	-----	-----	-----	-----	12
Total vessels.....	-----	20	-----	-----	1	-----	-----	-----	24
Total net tonnage.....	-----	165	-----	-----	6	-----	-----	-----	203
Boats:	-----	-----	-----	-----	-----	-----	-----	-----	-----
Motor.....	-----	20	-----	-----	-----	-----	-----	-----	48
Other.....	19	-----	10	82	-----	146	105	24	591
Accessory boats.....	-----	-----	-----	-----	-----	-----	-----	-----	10
Apparatus:	-----	-----	-----	-----	-----	-----	-----	-----	-----
Number.....	26	40	105	97	1	176	-----	-----	-----
Yards at mouth.....	-----	814	-----	-----	2	-----	-----	-----	-----

Fisheries of South Carolina, 1938—Continued

CATCH: BY GEAR

Species	Haul seines		Gill nets					
			Anchor		Drift		Runaround	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Bluefish	1,500	\$90					6,000	\$315
Catfish and bullheads	1,000	30						
Croaker	1,000	30						
Drum:								
Black	22,500	825					5,500	235
Red or redfish	57,500	2,935					43,000	2,735
Flounders	14,000	1,100					2,500	175
Hickory shad			2,900	\$51	1,400	\$28		
King whiting or "kingfish"	55,000	1,600						
Mullet	413,000	15,855					174,000	6,930
Shad			16,300	3,260	24,500	5,058		
Sheepshead, salt-water	400	15					2,500	50
Spot	159,300	3,586					36,500	1,050
Squeteagues or "sea trout":								
Gray	2,500	175					2,500	175
Spotted	46,300	4,419					22,500	2,040
Sturgeon			16,400	1,476	9,300	1,027		
Total	774,000	30,660	35,600	4,787	35,200	6,113	295,000	13,705

Species	Gill nets—Con.		Lines					
	Stake		Hand		Troll		Trot, with baits or snoods	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Bluefish			28,100	\$2,248	7,000	\$560		
Bonito			300	9				
Croaker			100	3				
Drum, red or redfish			3,000	150				
Grunts			2,500	75				
Hickory shad	4,200	\$121						
King whiting or "kingfish"			25,000	1,250				
Porgies			1,000	13				
Sea bass			111,500	6,265				
Sea catfish			100,000	3,000				
Shad	18,000	3,590						
Squeteagues or "sea trout," spotted			10,000	900				
Striped bass	600	108						
Crabs, hard							714,800	\$13,213
Total	22,800	3,819	281,500	13,913	7,000	560	714,800	13,213

Species	Dip nets		Cast nets		Otter trawls		Pots, fish	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Catfish and bullheads							72,000	\$2,460
Flounders							2,500	175
King whiting or "kingfish"					6,000	\$120		
Shad	600	\$102						
Shrimp			70,900	\$2,127	3,651,900	109,680		
Total	600	102	70,900	2,127	3,657,900	109,800	74,500	2,635

Species	Spears		Dredges		Grabs		By hand	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Flounders	46,500	\$3,690						
Crabs:								
Hard							128,500	\$1,955
Soft and peelers							4,800	216
Oysters, market:								
Private, spring			2,500	\$125	443,600	\$16,786	518,700	19,062
Private, fall			2,500	115	472,300	18,427	321,400	12,188
Total	46,500	3,690	5,000	240	915,900	35,213	973,400	33,421

Fisheries of South Carolina, 1938—Continued

OPERATING UNITS: BY COUNTIES

Item	Beaufort	Charleston	Colleton	Georgetown	Horry	Jasper
Fishermen:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
On vessels.....	26	43		6		
On boats and shore:						
Regular.....	319	185		76	54	20
Casual.....	112	207	60	245	74	3
Total.....	457	435	60	327	128	23
Vessels:						
Motor.....	10	11		2		
Net tonnage.....	66	109		16		
Sail.....		1				
Net tonnage.....		12				
Total vessels.....	10	12		2		
Total net tonnage.....	66	121		16		
Boats:						
Motor.....	9	16		18	4	1
Other.....	232	171	30	114	35	9
Accessory boats.....		10				
Apparatus:						
Haul seines.....	2	3		19	14	
Length, yards.....	400	300		2,385	3,100	
Gill nets:						
Anchor.....	40		44	22		
Square yards.....	5,400		28,600	33,880		
Drift.....		6	6	23		
Square yards.....		3,350	3,460	42,900		
Runaround.....	3	4		31	10	1
Square yards.....	1,700	1,370		16,600	2,500	600
Stake.....				9	7	
Square yards.....				9,000	1,925	
Lines:						
Hand.....		76		10	12	
Hooks.....		108		10	12	
Troll.....		8				
Hooks.....		8				
Trot with baits or snoods.....	43	82				
Baits or snoods.....	25,800	10,048				
Dip nets.....				6		
Cast nets.....		26				
Otter trawls, shrimp.....	17	15		8		
Yards at mouth.....	353	321		140		
Pots, fish.....	60	10		35		
Spears.....	50			37	10	
Dredges, oyster.....		1				
Yards at mouth.....		2				
Grabs.....	66	110				

CATCH: BY COUNTIES

Species	Beaufort		Charleston		Colleton	
	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>
Bluefish.....			35,100	\$2,808		
Bonito.....			300	9		
Catfish and bullheads.....	10,000	\$600	1,000	30		
Croaker.....			1,100	33		
Drum:						
Black.....	15,000	450	2,500	100		
Red or redfish.....	42,500	2,125	25,500	1,775		
Flounders.....	33,000	2,640	5,500	380		
Grunts.....			2,500	75		
Hickory shad.....	500	10			1,400	\$28
King whiting or "kingfish".....	30,000	600	25,000	1,250		
Mullet.....	43,000	1,400	11,000	445		
Porgies.....			1,000	13		
Sea bass.....			96,000	4,875		
Sea catfish.....			100,000	3,000		
Shad.....	2,500	500	13,600	2,992	13,400	2,680
Sheepshead, salt-water.....			2,600	53		
Spot.....	10,500	210	3,000	60		
Squeteagues or "sea trout," spotted.....	46,500	4,295	15,000	1,400		
Sturgeon.....					9,300	1,027
Crabs:						
Hard.....	626,200	11,884	217,100	3,284		
Soft and peelers.....			4,800	216		
Shrimp.....	2,641,600	79,038	842,000	25,270		
Oysters, market:						
Private, spring.....	610,900	22,832	341,400	12,678		
Private, fall.....	393,800	15,231	379,800	14,621		
Total.....	4,506,000	141,815	2,125,800	75,367	24,100	3,735

Fisheries of South Carolina, 1938—Continued

CATCH: BY COUNTIES—Continued

Species	Georgetown		Horry		Jasper	
	Pounds	Value	Pounds	Value	Pounds	Value
Bluefish.....	7,500	\$405				
Catfish and bullheads.....	62,000	1,860				
Drum:						
Black.....	10,500	510				
Red or redfish.....	29,000	1,605		\$190	2,500	\$125
Flounders.....	20,000	1,600	4,000	520		
Hickory shad.....	2,900	49	3,700	113		
King whiting or "kingfish".....	6,000	120	25,000	1,000		
Mullet.....	383,000	14,990	145,000	5,750	5,000	200
Sea bass.....	7,500	750	8,000	640		
Shad.....	25,000	4,858	4,900	980		
Sheepshead, salt-water.....	300	12				
Spot.....	110,300	2,456	70,000	1,850	2,000	60
Squeteagues or "sea trout":						
Gray.....	5,000	350				
Spotted.....	13,300	1,264	3,000	300	1,000	100
Striped bass.....	600	108				
Sturgeon.....	16,400	1,476				
Shrimp.....	239,200	7,499				
Oysters, market:						
Private, spring.....	1,600	60			10,900	403
Private, fall.....	3,800	144			18,800	734
Total.....	943,900	40,116	270,600	11,343	40,200	1,622

GEORGIA

Fisheries of Georgia, 1938

OPERATING UNITS: BY GEAR

Item	Purse seines, men-haden	Haul seines	Gill nets				Lines		
			Anchor	Drift	Run-around	Stake	Hand	Trot with baits or snoods	Trot with hooks
Fishermen:	Number	Number	Number	Number	Number	Number	Number	Number	Number
On vessels.....	45								
On boats and shore:									
Regular.....		18		5	12		8	154	
Casual.....		2	8	180	16	68	22	52	26
Total.....	45	20	8	185	28	68	30	206	26
Vessels, motor.....	2								
Net tonnage.....	92								
Boats:									
Motor.....				10	6			16	
Other.....		10	4	86	20	38	12	152	25
Accessory boats.....	6								
Apparatus:									
Number.....	2	10	16	96	28	142	150	202	45
Length, yards.....	600	898							
Square yards.....			770	43,110	8,480	15,665			
Hooks, baits, or snoods.....							150	82,300	5,325

Fisheries of Georgia, 1938—Continued

OPERATING UNITS: BY GEAR—Continued

Item	Otter trawls, shrimp	Pots		Tongs, oyster	Grabs	By hand		Total, exclusive of duplication
		Crab	Fish			Oyster	Other	
	Number	Number	Number	Number	Number	Number	Number	Number
Fishermen:	160							205
On vessels								
On boats and shore:								
Regular	316	49		9	15	4		552
Casual	3	16	4	13	15	16	12	416
Total	479	65	4	22	30	20	12	1,173
Vessels, motor	72							74
Net tonnage	570							662
Boats:								
Motor	157	2						188
Other		56	2	22	30	20		428
Accessory boats								6
Apparatus:								
Number	229	620	44	22	30			
Yards at mouth	4,657							

CATCH: BY GEAR

Species	Purse seines		Haul seines		Gill nets			
					Anchor		Drift	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Flounders			500	\$10				
Hickory shad							2,900	\$92
Menhaden	7,033,800	\$9,888						
Mullet			1,500	30				
Shad					4,200	\$772	70,300	12,952
Spot			1,500	30				
Squeteagues or "sea trout," spotted			2,500	250				
Sturgeon							7,800	1,462
Terrapin, diamond-back			6,700	838				
Total	7,033,800	9,888	12,700	1,158	4,200	772	81,000	14,506

Species	Gill nets—Continued				Lines			
	Runaround		Stake		Hand		Trot with baits or snoods	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Croaker	2,500	\$100						
Drum:								
Black	5,000	200						
Red or redfish	27,500	1,275						
Hickory shad			1,100	\$43				
King whiting or "kingfish"	5,000	75						
Mullet	15,500	385						
Shad			23,600	4,255				
Sheepshead, salt-water	5,000	150						
Spot	2,500	50						
Squeteagues or "sea trout," spotted	60,000	6,000						
Crabs, hard					90,000	\$1,350	1,397,700	\$20,990
Total	123,000	8,235	24,700	4,298	90,000	1,350	1,397,700	20,990

Fisheries of Georgia, 1938—Continued

CATCH: BY GEAR—Continued

Species	Lines—Contd.		Otter trawls		Pots			
	Trot with hooks				Crab		Fish	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Catfish and bullheads.....	7,700	\$470					31,400	\$1,256
Eels, common.....							1,500	165
Flounders.....			7,500	\$375				
King whiting or "kingfish".....			70,000	1,050				
Crabs, hard.....			20,000	300	346,500	\$5,188		
Shrimp.....			10,425,700	302,261				
Total.....	7,700	470	10,523,200	303,986	346,500	5,188	32,900	1,421

Species	Tongs		Grabs		By hand	
	Pounds	Value	Pounds	Value	Pounds	Value
Oysters, market:						
Private, spring.....	20,000	\$1,051	42,500	\$2,341	24,600	\$1,174
Private, fall.....	13,400	674	30,500	1,708	23,000	1,090
Terrapin, diamond-back.....					4,200	588
Total.....	33,400	1,725	73,000	4,049	51,800	2,852

OPERATING UNITS: BY COUNTIES

Item	Bryan	Bullock	Camden	Charlton	Chatham	Effing- ham
	Number	Number	Number	Number	Number	Number
Fishermen:						
On vessels.....			70		37	
On boats and shore:						
Regular.....			57		94	
Casual.....	32	16	37	10	100	8
Total.....	32	16	164	10	231	8
Vessels, motor.....			13		15	
Net tonnage.....			185		166	
Boats:						
Motor.....			15		31	
Other.....	16	8	58	5	97	4
Accessory boats.....			6			
Apparatus:						
Purse seines, menhaden.....			2			
Length, yards.....			600			
Haul seines.....					6	
Length, yards.....					498	
Gill nets:						
Anchor.....						16
Square yards.....						770
Drift.....	12		7		23	
Square yards.....	5,400		4,150		8,020	
Runaround.....					12	
Square yards.....					6,000	
Stake.....	16	80	5	5		
Square yards.....	1,840	3,200	6,000	2,800		
Lines:						
Hand.....					150	
Hooks.....					150	
Trot with baits or snoods.....			45		25	
Baits or snoods.....			19,500		9,850	
Trot with hooks.....		6				
Hooks.....		600				
Otter trawls, shrimp.....			24		43	
Yards at mouth.....			474		890	
Pots, crab.....			40		370	
Tongs, oyster.....					12	

Fisheries of Georgia, 1938—Continued

OPERATING UNITS: BY COUNTIES—Continued

Item	Glynn	Liberty	Long	McIntosh	Screven	Tattnall	Wayne
Fishermen:	Number	Number	Number	Number	Number	Number	<i>Number</i>
On vessels.....	75			23			
On boats and shore:							
Regular.....	165	26		210			
Casual.....	55	25	8	70	8	34	13
Total.....	295	51	8	303	8	34	13
Vessels, motor.....	35			11			
Net tonnage.....	239			72			
Boats:							
Motor.....	71			64		5	2
Other.....	64	31	4	116	8	12	5
Apparatus:							
Haul seines.....	4						
Length, yards.....	400						
Gill nets:							
Drift.....	15		2	20		12	5
Square yards.....	9,300		260	11,500		4,080	400
Runaround.....	16						
Square yards.....	2,480						
Stake.....			8		16	10	2
Square yards.....			480		780	500	65
Lines:							
Trot with baits or snoods.....	44	35		53			
Baits or snoods.....	23,700	8,750		20,500			
Trot with hooks.....			8		5	16	10
Hooks.....			800		425	2,500	1,000
Otter trawls, shrimp.....	90			72			
Yards at mouth.....	1,894			1,399			
Pots:							
Crab.....	60	50		100			
Fish.....				44			
Tongs, oyster.....	6			4			
Grabs.....				30			

CATCH: BY COUNTIES

Species	Bryan		Bullock		Camden		Charlton	
	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>
Catfish and bullheads.....			1,500	\$90				
Hickory shad.....					500	\$20		
Menhaden.....					7,033,800	9,888		
Shad.....	18,900	\$3,308	2,200	440	15,900	2,703	4,800	\$816
Sturgeon.....					1,100	110		
Crabs, hard.....					250,000	3,750		
Shrimp.....					1,725,200	51,756		
Total.....	18,900	3,308	3,700	530	9,026,500	68,227	4,800	816

Species	Chatham		Effingham		Glynn		Liberty	
	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>
Croaker.....					2,500	\$100		
Drum:								
Black.....					5,000	200		
Red or redfish.....	7,500	\$375			20,000	900		
Flounders.....	7,500	375			500	10		
Hickory shad.....	500	15			1,300	34		
King whiting or "kingfish".....	50,000	750			25,000	375		
Mullet.....	7,500	225			9,500	190		
Shad.....	26,900	5,380	4,200	\$772	5,900	1,005		
Sheepshead, salt-water.....					5,000	150		
Spot.....	2,500	50			1,500	30		
Squeteagues or "sea trout," spotted.....	35,000	3,500			27,500	2,750		
Crabs, hard.....	448,000	6,720			560,700	8,410	150,000	\$2,250
Shrimp.....	2,739,700	83,591			2,540,800	76,194		
Oysters, market:								
Private, spring.....	32,400	1,620			700	41	5,100	199
Private, fall.....	32,400	1,620			500	29	3,500	115
Terrapin, diamond-back.....	8,400	1,176			2,500	250		
Total.....	3,398,300	105,397	4,200	772	3,208,900	90,668	158,600	2,564

Fisheries of Georgia, 1938—Continued

CATCH: BY COUNTIES—Continued

Species	Long		McIntosh		Screven		Tattnall		Wayne	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Catfish and bullheads	500	\$35	31,400	\$1,256	1,200	\$70	2,500	\$125	2,000	\$150
Eels, common			1,500	165						
Hickory shad	200	6	500	20					1,000	40
Shad	1,400	280	7,500	1,275	2,400	400	4,800	960	3,200	640
Sturgeon			6,500	1,300					200	52
Crabs, hard			445,500	6,698						
Shrimp			3,420,000	90,720						
Oysters, market:										
Private, spring			48,900	2,706						
Private, fall			30,500	1,708						
Total	2,100	321	3,992,300	105,848	3,600	470	7,300	1,085	6,400	882

FLORIDA

Fisheries of Florida, 1938

OPERATING UNITS: BY GEAR

Item	Purse seines, menhaden	Haul seines, common	Gill nets				Trammel nets
			Anchor	Drift	Run-around	Stake	
Fishermen:	Number	Number	Number	Number	Number	Number	Number
On vessels	373	8			21		18
On boats and shore:							
Regular		922	14	95	2,504	2	874
Casual		147	4	10	77	4	13
Total	373	1,077	18	105	2,602	6	905
Vessel, motor	19	1			7		6
Net tonnage	827	5			48		43
Boats:							
Motor		202	10	38	1,085	2	354
Other		317	7	64	1,898	2	446
Accessory boats	48				3		
Apparatus:							
Number	19	238	18	71	2,198	4	621
Length, yards	5,320	124,315					
Square yards			13,500	88,700	2,325,660	3,600	519,745

Item	Lines					Pound nets	Fyke nets
	Hand	Trawl	Troll	Trot with baits or snoods	Trot with hooks		
Fishermen:	Number	Number	Number	Number	Number	Number	Number
On vessels	503	2	2				
On boats and shore:							
Regular	857	28	583	160	185	12	2
Casual	605		261	25	45		
Total	1,965	30	846	185	230	12	2
Vessels:							
Motor	63	1	1				
Net tonnage	2,028	15	5				
Sail	1						
Net tonnage	9						
Total vessels	64	1	1				
Total net tonnage	2,037	15	5				
Boats:							
Motor	629	14	467	93	85	10	1
Other	370		14	68	110	1	
Apparatus:							
Number	1,965	35	995	151	219	24	8
Hooks, baits, or snoods	2,600	2,040	995	83,550	76,155		

Fisheries of Florida, 1938—Continued

OPERATING UNITS: BY GEAR—Continued

Item	Dip nets		Cast nets	Otter trawl, shrimp	Pots			
	Com-mon	Drop			Crab	Eel	Fish	Sea craw-fish
	Number	Number	Number	Number	Number	Number	Number	Number
Fishermen:				288				
On vessels.....								
On boats and shore:								
Regular.....	41		87	362	77	4	64	24
Casual.....	22	12	118	25	20		12	4
Total.....	63	12	205	675	97	4	76	28
Vessels, motor.....				123				
Net tonnage.....				972				
Boats:								
Motor.....	20		8	196	49	4	35	18
Other.....	14		107		22		58	
Apparatus:								
Number.....	57	24	205	319	6,890	71	5,110	2,050
Yards at mouth.....				6,124				

Item	Spears	Dredges			Tongs, oyster	Forks	Grabs	Co-quina scoops
		Clam	Oyster	Scallop				
	Number	Number	Number	Number	Number	Number	Number	Number
Fishermen:								
On vessels.....				6	6			
On boats and shore:								
Regular.....	66	12	9	53	277	4	17	
Casual.....	91				67	7	4	4
Total.....	157	12	15	53	350	11	21	4
Vessels, motor.....				2	2			
Net tonnage.....				14	11			
Boats:								
Motor.....			3	28	91		6	
Other.....	41	1			161		3	4
Apparatus:								
Number.....	157	1	10	54	331	11	21	4
Yards at mouth.....			10	50				

Item	Hooks		Diving outfits	By hand		Total, exclusive of duplication
	Sponge	Stone crab		Oyster	Other	
	Number	Number	Number	Number	Number	Number
Fishermen:						
On vessels.....			96			1,283
On boats and shore:						
Regular.....	410	13	413	44	32	5,975
Casual.....		3		27	25	1,467
Total.....	410	16	509	71	57	8,725
Vessels:						
Motor.....			13			226
Net tonnage.....			135			4,025
Sail.....						1
Net tonnage.....						9
Total vessels.....			13			227
Total net tonnage.....			135			4,034
Boats:						
Motor.....		6	59		4	2,562
Other.....	290	3		37	16	3,462
Accessory boats.....						51
Apparatus:						
Number.....	292	10	72			9
Hooks, baits, or snoods.....						8

Fisheries of Florida, 1938—Continued

CATCH: BY GEAR

Species	Purse seines		Haul seines		Gill nets			
	Pounds	Value	Pounds	Value	Anchor		Drift	
					Pounds	Value	Pounds	Value
Alewives			391,600	\$1,959				
Bluefish			520,700	18,276				
Blue runner or hardtail			581,400	5,997				
Cabio or crab eater			200	5				
Catfish and bullheads			2,245,800	77,043				
Cigarfish			9,000	180				
Crappie			209,400	7,284				
Crevalle			80,700	1,853				
Croaker			4,900	93				
Drum:								
Black			27,000	725				
Red or redfish			202,700	6,232				
Flounders			21,100	811				
Groupers			5,000	125				
Grunts			3,000	60				
Hickory shad			31,100	1,137			1,300	\$39
Hogfish			1,000	30				
Jewishfish			6,600	213				
Kingfish or "king mackerel"			32,600	865				
King whiting or "kingfish"			65,600	1,025				
Menhaden	149,085,700	\$385,032	183,000	3,040				
Mojarra			68,800	1,495				
Mullet			5,398,700	169,838				
Permit			3,000	60				
Pigfish			22,700	254				
Pinfish or sailors choice			1,500	23				
Pompano			77,100	16,596				
Porgies			10,900	15				
Sea catfish			10,100	182				
Shad			115,800	9,632	2,200	\$264	106,900	11,275
Sheepshead, salt-water			70,300	1,739				
Snapper, mangrove			26,800	1,177				
Snook or sergeant fish			107,600	3,880				
Spadefish			1,800	33				
Spanish mackerel			906,100	34,373				
Spot			38,200	781				
Squeteagues or "sea trout":								
Spotted			348,600	21,947				
White			6,500	220				
Sturgeon					8,500	850	25,500	2,210
Sunfish			695,200	25,317				
Tenpounder			352,400	6,673				
Tripletail			15,400	231				
Yellowtail			100	6				
Turtles:								
Green					8,200	310		
Loggerhead					800	16		
Soft-shell			80,100	1,591				
Total	149,085,700	385,032	12,970,100	422,516	19,700	1,440	133,700	13,524

Species	Gill nets—Continued				Trammel nets		Lines	
	Runaround		Stake				Hand	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Amberjack	100	\$2					21,800	\$477
Angelfish	100	4					200	4
Bluefish	3,763,900	177,561			400	\$14	63,400	2,801
Blue runner or hardtail	78,700	1,682			41,500	2,498	2,900	64
Cabio or crab eater	3,300	91			40,500	600	3,900	102
Catfish and bull heads							12,100	382
Crevalle	100,600	1,927					6,700	151
Croaker	8,100	161			2,500	85		
Dolphin							100	3
Drum:								
Black	32,900	843					3,800	114
Red or redfish	465,000	15,291			225,900	8,045	228,400	7,307
Flounders	36,200	1,208			23,200	1,012	6,300	228
Groupers	19,700	1,119					4,348,100	135,906
Grunts	9,300	371					26,000	577
Hogfish	5,000	150					5,800	290
Jewishfish	3,900	132					115,900	4,164

Fisheries of Florida, 1938—Continued

CATCH: BY GEAR—Continued

Species	Gill nets—Continued				Trammel nets		Lines	
	Runaround		Stake				Hand	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Kingfish or "king mackerel".....	154,200	\$5,397					2,000	\$70
King whiting or "kingfish".....	37,400	845			4,500	\$90		
Menhaden.....	400	4						
Mojarra.....	249,000	5,876			1,600	48	6,300	166
Moonfish.....							300	6
Mullet.....	20,895,400	606,172			2,186,900	70,891		
Muttonfish.....	72,800	4,878					208,100	12,581
Permit.....	3,300	81			8,400	178	1,000	21
Pigfish.....	24,600	459			1,400	52	500	10
Pinfish or sailors choice.....	22,200	276						
Pompano.....	144,600	30,937			548,600	112,588	7,800	1,510
Porgies.....	10,800	369					42,200	1,421
Sea bass.....	22,500	900					600	24
Sea catfish.....	2,000	40			5,400	107		
Shad.....			3,800	\$608				
Sheepshead, salt-water.....	528,100	14,131			77,200	2,685	100,500	2,890
Snapper:								
Lane.....							2,200	110
Mangrove.....	125,500	3,524			16,900	573	126,400	4,199
Red.....							5,359,600	377,701
Snook or sergeant fish.....	204,500	7,644			8,500	218	281,300	9,003
Spadefish.....	3,300	69						
Spanish mackerel.....	5,538,800	262,027			21,200	813	43,500	1,345
Spot.....	126,100	2,710			61,400	2,330	2,900	57
Squeteagues or "sea trout":								
Spotted.....	1,493,300	94,466			434,900	29,784	1,132,100	73,287
White.....	29,500	1,223			600	20	16,400	697
Sturgeon.....			2,000	160				
Swellfish.....							500	40
Tenpounder.....	2,400	54			2,400	57		
Tripletail.....	700	21					1,800	35
Turbot.....							1,800	36
Yellowtail.....	2,200	193					163,300	13,538
Sea crawfish or spiny lobster.....	31,300	1,507						
Total.....	34,251,700	1,334,345	5,800	768	3,713,900	232,688	12,346,500	651,317

Lines—Continued

Species	Trawl		Troll		Trot with baits or snoods		Trot with hooks	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Amberjack.....			2,500	\$62				
Barracuda.....			500	20				
Bluefish.....			86,500	3,860				
Catfish and bullheads.....							1,433,600	\$55,974
Dolphin.....			2,500	120				
Groupers.....			3,900	143				
Kingfish or "king mackerel".....			3,476,400	130,045				
King whiting or "kingfish".....			300	10				
Sea catfish.....							50,200	1,004
Sharks.....	3,100,600	\$22,335						
Snook or sergeantfish.....			7,000	195				
Spanish mackerel.....			318,800	15,719				
Spot.....			100	4				
Squeteagues or "sea trout," spotted.....			2,200	155				
Sunfish.....							400	14
Crabs, hard.....					3,996,000	\$49,279		
Turtles, soft-shell.....							119,800	2,361
Total.....	3,100,600	22,335	3,900,700	150,333	3,996,000	49,279	1,604,000	59,333

Fisheries of Florida, 1938—Continued

CATCH: BY GEAR—Continued

Species	Pound nets		Fyke nets		Dip nets			
					Common		Drop	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Bluefish	4,000	\$320						
Blue runner or hardtail	3,000	105						
Catfish and bullheads	82,200	3,288	12,000	\$480				
Jewish	2,000	50						
Spanish mackerel	7,000	245						
Squeteagues or "sea trout," spotted	1,000	80						
Tenpounder	2,000	70						
Crabs:								
Hard					16,500	\$495	5,300	\$245
Stone					7,700	1,386		
Sea crawfish or spiny lobster					44,600	2,428		
Shrimp					45,000	2,925		
Scallops, bay					5,300	391		
Total	101,200	4,158	12,000	480	119,100	7,625	5,300	245

Species	Cast nets		Otter trawls		Pots			
					Crab		Eel	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Blue runner or hardtail	200	\$7						
Eels, common							9,800	\$243
Flounders			29,300	\$1,278				
Groupers			1,600	39				
King whiting or "kingfish"			223,000	3,555				
Mojarra	7,800	224						
Mullet	112,900	4,359						
Sea bass			2,300	46				
Sheepshead, salt-water	1,400	49						
Snapper, red			18,300	732				
Spot	300	11						
Squeteagues or "sea trout":								
Spotted	1,100	77						
White			1,400	28				
Swellfish	500	40						
Crabs:								
Hard			20,000	300	1,557,100	\$25,951		
Stone					37,400	8,192		
Shrimp	157,300	7,733	9,940,300	307,954				
Total	281,500	12,500	10,236,200	313,932	1,594,500	34,143	9,800	243

Species	Pots—Continued				Spears		Dredges	
	Fish		Sea crawfish					
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Angelfish	500	\$10						
Blue runner or hardtail	25,000	625						
Catfish and bullheads	271,800	10,372						
Crappie	343,300	11,768						
Flounders					73,900	\$4,232		
Groupers			18,000	\$1,080				
Grunts	13,000	260						
Hogfish	1,000	30	3,000	90				
Muttonfish	2,000	100						
Porgies	4,000	160						
Sheepshead, salt-water	1,000	30	1,000	30				
Snook or sergeantfish					1,200	54		
Sunfish	172,200	5,687						
Tripletail	200	4						
Yellowtail	3,400	276						
Sea crawfish or spiny lobster			199,600	15,966				
Clams, hard, public							705,600	\$67,550
Oysters, market, public, spring							68,500	2,604
Scallops, bay							112,100	8,723
Turtles, soft-shell	19,100	392			70,000	1,260		
Total	856,500	29,714	221,600	17,166	145,100	5,546	886,200	78,877

Fisheries of Florida, 1938—Continued

CATCH: BY GEAR—Continued

Species	Tongs		Forks		Grabs		Coquina scoops	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Sea crawfish or spiny lobster					27,700	\$2,216		
Clams:								
Coquina							16,000	\$300
Hard, public			2,900	\$322	6,300	945		
Oysters, market:								
Public, spring	253,800	\$18,734						
Public, fall	546,100	41,966						
Private, spring	38,700	2,567						
Private, fall	51,900	3,207						
Total	890,500	66,474	2,900	322	34,000	3,161	16,000	300

Species	Hooks				Diving outfits		By hand	
	Sponge		Stone crab					
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Crabs, stone			3,600	\$1,260			5,800	\$1,160
Sea crawfish or spiny lobster			25,200	1,260				
Clams; hard, public							32,200	3,327
Conchs	7,800	\$624						
Oysters, market:								
Public, spring							19,200	953
Public, fall							12,000	572
Private, spring							91,500	4,720
Private, fall							78,800	4,065
Scallops, bay							20,000	1,479
Sponges:								
Grass	10,200	8,331			6,700	\$4,272		
Sheepswood	95,300	195,842			376,900	801,496		
Wire					7,900	6,514		
Yellow	18,500	8,745			90,500	45,648		
Total	131,800	213,542	28,800	2,520	482,000	857,930	259,500	16,276

OPERATING UNITS: BY COUNTIES

Item	Bay	Brevard	Broward	Charlotte	Citrus	Clay	Collier	Dade
	Number	Number	Number	Number	Number	Number	Number	Number
Fishermen:								
On vessels	109						18	
On boats and shore:								
Regular	238	113	29	180	135	43	294	235
Casual	44	11	21	60	51	4	97	41
Total	391	124	50	240	186	47	409	276
Vessels:								
Motor	15						6	
Net tonnage	239						43	
Sail	1							
Net tonnage	9							
Total vessels	16						6	
Total net tonnage	248						43	
Boats:								
Motor	55	59	25	79	75	18	174	153
Other	44	100	5	120	162	29	191	83
Accessory boats							3	
Apparatus:								
Haul seines, common	14			12		8	5	2
Length, yards	5,700			7,000		4,950	1,900	800
Gill nets, runaround	29	91	6	86	144		194	87
Square yards	103,800	77,280	7,000	96,000	95,100		209,900	182,700
Trammel nets	3			12	38		43	30
Square yards	2,000			25,750	22,800		84,800	33,000

Fisheries of Florida, 1938—Continued
OPERATING UNITS: BY COUNTIES—Continued

Item	Bay	Brevard	Broward	Charlotte	Citrus	Clay	Collier	Dade
Apparatus—Continued.								
Lines:	Number	Number	Number	Number	Number	Number	Number	<i>Number</i>
Hand.....	193	9	24	46	33		150	71
Hooks.....	316	9	24	46	33		150	71
Trawl.....							6	
Hooks.....							300	
Troll.....			6	18	3		73	70
Hooks.....			6	18	3		73	70
Trot with baits or snoods.		17		12				
Baits or snoods.....		15,100		6,000				
Trot with hooks.....						22		
Hooks.....						10,500		
Dip nets:								
Common.....	15	7						7
Drop.....	12							
Cast nets.....			2	31			9	
Pots:								
Crab.....		2,310				85		230
Fish.....								50
Sea crawfish.....			280					1,770
Spears.....	14							
Dredges:								
Clam.....							1	
Scallop.....	30							
Yards at mouth.....	30							
Tongs, oyster.....	43				14			
Grabs.....								13

Item	Dixie	Duval	Escambia	Franklin	Glades	Gulf	Henry	Hernando
Fishermen:	<i>Number</i>	Number	Number	Number	Number	Number	Number	Number
On vessels.....		135	248	64		56		
On boats and shore:								
Regular.....	59	368	91	379	42	43	13	6
Casual.....	24	62	23	42	16	6		
Total.....	83	565	362	485	58	105	13	6
Vessels, motor.....		29	27	15		2		
Net tonnage.....		359	1,584	97		93		
Boats:								
Motor.....	39	169	51	148	8	10	5	2
Other.....	76	199	34	90	58	26	12	6
Accessory boats.....		12				6		
Apparatus:								
Purse seines, menhaden.		4				2		
Length, yards.....		1,100				560		
Haul seines, common.		12	2	13	8	3	2	
Length, yards.....		6,100	800	5,700	6,750	1,900	1,900	
Gill nets:								
Anchor.....	7	3						
Square yards.....	2,100	6,500						
Drift.....	7	30		20				
Square yards.....	4,200	69,900		6,600				
Runaround.....	41	52	12	53		14		6
Square yards.....	18,880	36,510	28,800	43,400		11,000		3,000
Trammel nets.....	59		30	12				
Square yards.....	27,520		24,000	14,400				
Lines:								
Hand.....	59	34	268	92				
Hooks.....	59	34	536	141				
Trawl.....		12						
Hooks.....		600						
Troll.....		7	10					
Hooks.....		7	10					
Trot with baits or snoods.		21		21				
Baits or snoods.....		16,650		8,300				
Trot with hooks.....		93		17	9		1	
Hooks.....		30,225		2,500	1,800		500	
Dip nets, drop.....			12					
Cast nets.....		15						
Otter trawls, shrimp.		74	21	77		2		
Yards at mouth.....		1,431	210	1,262		36		
Pots:								
Crab.....		1,720						
Fish.....				120	2,310		515	
Spears.....			3	29	16	6		
Dredges, oyster.....				10				
Yards at mouth.....				10				
Tongs, oyster.....		6	12	162		24		

Fisheries of Florida, 1938—Continued
OPERATING UNITS: BY COUNTIES—Continued

Item	Hills-borough	Indian River	Lee	Levy	Manatee	Martin	Monroe	Nassau
Fishermen:	<i>Number</i>	Number	Number	Number	Number	Number	Number	Number
On vessels.....	55						5	297
On boats and shore:								
Regular.....	94	79	295	115	151	178	273	166
Casual.....	60	1	125	38	31	5	44	18
Total	209	80	420	153	182	183	322	481
Vessels, motor.....	8						2	39
Net tonnage.....	80						10	755
Boats:								
Motor.....	50	41	208	82	67	77	76	51
Other.....	105	46	244	108	125	70	202	61
Accessory boats.....								30
Apparatus:								
Purse seines, menhaden								13
Length, yards.....								3,660
Haul seines, common	2		7		17	15		2
Length, yards.....	900		2,550		7,350	14,500		500
Gill nets:								
Anchor.....				2			6	
Square yards.....				2,400			2,500	
Drift.....								10
Square yards.....								5,100
Runaround.....	76	52	244	87	100	43	39	4
Square yards.....	59,200	41,850	248,700	40,500	94,400	70,000	72,800	2,300
Stake.....								2
Square yards.....								2,000
Trammel nets.....	2		40	94	6	4	10	
Square yards.....	2,500		65,600	43,475	14,400	4,400	16,800	
Lines:								
Hand.....	96	18	81	60	24	33	78	3
Hooks.....	168	18	81	60	31	33	86	3
Trawl.....					6	8		1
Hooks.....					240	400	100	
Troll.....	4	2	47	77	22	27	68	
Hooks.....	4	2	47	77	22	27	68	
Trot with baits or snoods.....	15		6		2			25
Baits or snoods.....	13,900		3,000		2,000			5,200
Pound nets.....				1				
Dip nets, common.....	6				3		13	
Cast nets.....	20		49		10			
Otter trawls, shrimp.....								70
Yards at mouth.....								1,382
Pots:								
Crab.....		125			500			
Fish.....							10	
Dredges, scallop.....			12					
Yards at mouth.....			8					
Tongs, oyster.....	4	1	2	2	2			
Forks.....					4			
Coquina scoops.....			4					
Hooks:								
Sponge.....							170	
Stone crab.....							6	

Item	Oka-loosa	Okeechobee	Palm Beach	Pasco	Pin-ellas	Put-nam	St. Johns	St. Lucie
Fishermen:	Number	Number	Number	Number	Number	Number	Number	<i>Number</i>
On vessels.....	32				111		144	2
On boats and shore:								
Regular.....	190	32	292	73	902	124	54	157
Casual.....	8		131		188	8	13	
Total	230	32	423	73	1,201	132	211	159
Vessels, motor.....	4				15		61	1
Net tonnage.....	48				163		507	15
Boats:								
Motor.....	35	21	174	16	182	49	13	84
Other.....	30	30	114	73	331	76	37	24
Apparatus:								
Haul seines, common	14	6	3		16	30	6	
Length, yards.....	6,350	5,400	2,500		6,900	17,820	370	
Gill nets:								
Drift.....						4		
Square yards.....						2,900		

Fisheries of Florida, 1938—Continued

OPERATING UNITS: BY COUNTIES—Continued

Item	Oka- loosa	Okee- chobee	Palm Beach	Pasco	Pin- ellas	Put- nam	St. Johns	St. Lucie
Apparatus—Continued.								
Gill nets—Continued.	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
Runaround.....	2		59	73	194			63
Square yards.....	1, 200		141, 600	36, 500	221, 925			154, 015
Stake.....	2							
Square yards.....	1, 600							
Trammel nets.....	26				4			
Square yards.....	16, 000				5 800			
Lines:								
Hand.....	63		120		190		8	54
Hooks.....	126		120		227		8	54
Trawl.....								2
Hooks.....								400
Troll.....			274		151			24
Hooks.....			274		151			24
Trot with baits or snoods.....						14	10	
Baits or snoods.....						5, 900	3, 700	
Trot with hooks.....		17	3			29		
Hooks.....		10, 700	980			12, 650		
Pound nets.....						23		
Fyke nets.....						8		
Cast nets.....			31					4
Otter trawls, shrimp.....								69
Yards at mouth.....								1, 658
Pots:								
Crab.....					180			540
Eel.....						71		
Fish.....		1, 590	515					
Spears.....	9				39		4	
Dredges, scallop.....					12			
Yards at mouth.....					12			
Tongs, oyster.....	4				12		1	
Grabs.....					8			
Hooks, sponge.....					118			
Diving outfits.....					72			

Item	Santa Rosa	Sara- sota	Semi- nole	Taylor	Volusia	Wakul- la	Walton
Fishermen:	Number	Number	Number	Number	Number	Number	<i>Number</i>
On vessels.....					7		
On boats and shore:							
Regular.....	14	150	24	115	113	112	4
Casual.....	8	105	4	27	32	112	7
Total.....	22	255	28	142	152	224	11
Vessels, motor.....					2		
Net tonnage.....					32		
Boats:							
Motor.....	9	116	12	43	37	49	
Other.....	21	134	21	133	109	128	5
Apparatus:							
Haul seines, common.....		10			17	12	
Length, yards.....		3, 300			9, 525	2, 850	
Gill nets, runaround.....		107		109	26	105	
Square yards.....		113, 800		50, 600	21, 900	41, 000	
Trammel nets.....	16	14		86		90	2
Square yards.....	6, 400	33, 600		39, 300		36, 000	1, 200
Lines:							
Hand.....	9	56		39	32	22	
Hooks.....	9	64		39	32	22	
Troll.....		106		6			
Hooks.....		106		6			
Trot with baits or snoods.....					8		
Baits or snoods.....					3, 800		
Trot with hooks.....			28				
Hooks.....			6, 300				
Dip nets, common.....					6		
Cast nets.....		6			28		
Otter trawls, shrimp.....					6		
Yards at mouth.....					145		
Pots, crab.....						1, 200	
Spears.....	6				21	4	6
Tongs, oyster.....	10	4			14	11	3
Forks.....		7					
Hooks, stone crab.....		4					

Fisheries of Florida, 1938—Continued

CATCH: BY COUNTIES

Species	Bay		Brevard		Broward		Charlotte	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Bluefish	362,300	\$10,869	600	\$24	14,000	\$910	30,400	\$839
Blue runner or hardtail	328,600	3,408					5,200	104
Cabio or crab eater							700	14
Cigarfish	2,000	40						
Crevalle			20,400	510				
Croaker	300	9						
Drum:								
Black	1,100	17	3,800	110			900	18
Red or redfish	34,200	1,179	16,800	560			126,600	3,800
Flounders	7,100	395					6,300	126
Groupers	1,185,500	36,587			6,200	315	18,000	360
Grunts			7,800	312				
Jewfish					500	25	2,000	40
Kingfish or "king mackerel"	13,000	390			20,000	1,000	7,400	246
King whiting or "kingfish"	1,400	14	4,000	61			3,500	70
Menhaden	18,000	360						
Mojarra							90,600	1,812
Mullet	1,123,900	33,717	1,164,700	35,531	6,000	180	1,682,700	57,844
Muttonfish					1,200	105		
Permit							3,000	60
Pigfish							2,500	50
Pinfish or sailors choice			7,400	111				
Pompano	11,700	1,990	4,700	1,049	1,300	302	26,400	5,280
Porgies	5,000	150						
Sheepshead, salt-water	3,300	54	10,600	178			49,000	980
Snapper:								
Mangrove					2,000	114	46,800	936
Red	1,263,400	90,984			2,000	135		
Snook or sergeantfish			700	27			87,400	1,748
Spadefish	1,300	20						
Spanish mackerel	599,100	23,664			10,000	480	212,000	9,914
Spot	2,400	46	15,700	288			4,400	88
Squeteagues or "sea trout":								
Spotted	134,300	8,547	129,900	8,370			245,800	15,936
White	2,100	32					4,100	234
Tenpounder	212,000	4,240						
Crabs:								
Hard	1,800	70	773,000	13,190			213,400	4,268
Stone			12,700	1,763				
Sea crawfish or spiny lobster					71,400	5,718		
Oysters, market:								
Public, spring	19,400	1,803						
Public, fall	9,200	950						
Scallops, bay	60,200	4,275						
Total	5,402,600	223,810	2,172,800	62,084	134,600	9,284	2,869,100	104,767

Species	Citrus		Clay		Collier		Dade	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Amberjack							4,000	\$100
Angelfish							500	10
Bluefish	10,000	\$700			42,200	\$1,688	49,100	3,445
Blue runner or hardtail							42,000	1,060
Catfish and bullheads	2,000	80	303,100	\$13,641				
Crappie			5,600	225				
Crevalle					2,700	56	10,800	270
Dolphin							2,000	100
Drum:								
Black					3,800	78	2,300	69
Red or redfish	116,900	4,091			116,100	3,647	2,800	84
Flounders	3,500	123			1,700	46		
Groupers	5,200	182			71,800	2,154	117,200	8,832
Grunts							12,500	250
Hogfish							10,000	300
Jewfish					10,800	324	11,000	385
Kingfish or "king mackerel"					101,000	3,743	489,000	24,450
King whiting or "kingfish"					500	12		
Mojarra					54,600	1,092	3,700	111
Mullet	2,123,100	74,308	800	17	3,120,700	96,807	711,000	24,883
Muttonfish							140,900	10,568
Permit					8,600	171	1,500	45
Pigfish	800	28			300	6		
Pompano					222,800	44,429	98,100	23,583
Sharks					290,000	1,900		

Fisheries of Florida, 1938—Continued

CATCH: BY COUNTIES—Continued

Species	Citrus		Clay		Collier		Dade	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Sheepshead, salt-water	15,500	\$542			130,800	\$3,050	29,000	\$870
Snapper, mangrove	28,600	1,003			48,500	1,540	8,800	475
Snook or sergeantfish					139,200	4,951	54,000	2,160
Spadefish					1,000	20		
Spanish mackerel	3,800	136			583,600	24,331	583,500	36,875
Spot					800	20		
Squeteagues or "sea trout":								
Spotted	141,200	9,884			122,800	7,368	25,000	1,750
White					2,000	80		
Sunfish			46,700	\$1,868				
Tripletail							1,200	24
Yellowtail							61,100	5,634
Crabs:								
Hard			1,100	19				
Stone							7,500	2,550
Sea crawfish or spiny lobster							162,500	12,992
Clams, hard, public					705,600	67,550		
Oysters, market:								
Public, spring	6,600	347						
Public, fall	10,200	540						
Private, spring	2,600	135						
Private, fall	6,800	360						
Sponges:								
Grass							100	38
Sheepswool							800	1,869
Yellow							100	40
Total	2,476,800	92,459	357,300	15,770	5,781,900	265,063	2,672,000	163,822

Species	Dixie		Duval		Escambia		Franklin	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Bluefish	12,300	\$723	1,600	\$80	49,500	\$1,114	18,700	\$564
Blue runner or hardtail					34,700	347	24,300	486
Cabio or crab eater			100	5				
Catfish and bullheads	4,000	120	515,400	20,616			19,800	888
Croaker			10,100	606				
Crevalle	1,300	47	4,400	86				
Croaker			3,400	67				
Drum:								
Black			4,100	123			300	9
Red or redfish	54,500	1,907	20,100	803	2,400	72	32,400	820
Flounders	4,200	158	10,800	449	12,700	568	32,800	1,816
Groupers	200	7	600	18	972,900	34,653	500,000	12,558
Grunts							1,700	51
Hickory shad			1,300	39				
Jewfish			14,100	564			3,000	90
Kingfish or "king mackerel"					2,200	44		
King whiting or "kingfish"			98,000	1,630	4,500	90	2,400	49
Menhaden			39,041,100	102,881	60,000	900	26,900	538
Mullet	434,600	15,211	535,900	20,480	164,500	4,931	1,029,700	36,013
Pigfish	600	24						
Pompano	4,200	756	2,200	438	23,800	4,760	4,600	872
Porgies					6,700	214		
Sea catfish					8,200	164	55,200	1,104
Shad			80,100	8,214				
Sharks			154,600	1,237				
Sheepshead, salt-water	29,700	1,139	2,500	100	5,600	108	1,700	61
Snapper:								
Mangrove	1,100	38						
Red			12,700	762	2,313,500	169,401	431,600	29,991
Spanish mackerel	1,100	43	3,200	224	269,600	15,480	83,300	3,214
Spot	500	17	8,400	168	3,700	74	8,700	276
Squeteagues or "sea trout":								
Spotted	191,500	11,990	26,200	2,126	31,400	2,826	91,200	5,733
White					400	12	7,700	220
Sturgeon	17,000	1,700					17,000	1,360
Sunfish			27,700	1,524				
Tenpounder					75,000	1,125	14,500	290
Turbot			1,800	36				
Crabs, hard			2,894,100	35,792	3,500	175	458,000	4,580
Shrimp			2,281,100	69,306	357,600	16,090	918,100	32,075
Oysters, market:								
Public, spring			10,300	485	11,900	1,116	227,900	12,852
Public, fall			11,100	444	4,200	518	445,400	32,542
Private, spring			25,500	1,326				
Private, fall			37,600	2,444				
Total	756,800	33,880	145,840,100	273,073	14,409,500	254,182	4,447,900	179,052

Fisheries of Florida, 1938—Continued

CATCH: BY COUNTIES—Continued

Species	Glades		Gulf		Hendry		Hernando	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Bluefish			35,000	\$1,050			300	\$10
Blue runner or hardtail			3,800	38				
Catfish and bullheads	366,100	\$11,898			12,200	\$417		
Crappie	191,200	6,215			8,500	255		
Croaker			900	27				
Drum:								
Black			600	18				
Red or redfish			4,000	120			100	4
Flounders			2,100	124			100	4
King whiting or "kingfish"			500	12				
Menhaden			202,500	450				
Mullet			460,000	13,800			28,000	980
Pompano			6,400	1,152				
Sheepshead, salt-water			400	12				
Snapper, mangrove							100	4
Spanish mackerel			102,000	3,235				
Spot			300	9				
Squeteagues or "sea trout":								
Spotted			27,000	1,620			600	42
White			200	6				
Sunfish	187,300	6,087			13,900	346		
Shrimp			20,000	700				
Oysters, market:								
Public, spring			17,000	1,500				
Public, fall			51,000	5,400				
Turtles, soft-shell	116,000	2,087			3,800	76		
Total	860,600	26,287	933,700	29,303	38,400	1,094	29,200	1,044

Species	Hillsborough		Indian River		Lee		Levy	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Angelfish							500	\$18
Bluefish	3,800	\$155	89,300	\$4,465	22,200	\$1,332	21,400	1,681
Blue runner or hardtail	200	2					8,000	275
Cabio or crab eater					2,400	72		
Catfish and bullheads							5,000	150
Crevalle	9,200	92	9,100	164	11,100	333	1,100	38
Drum:								
Black	800	8	22,900	582	2,900	87		
Red or redfish	9,200	330	30,000	900	163,900	4,917	54,600	1,761
Flounders	2,900	115			4,900	147	1,300	45
Groupers	401,700	10,040	2,600	125	17,600	528	8,200	240
Jewfish			2,000	50	8,300	249	3,000	75
Kingfish or "king mackerel"	2,000	60			15,900	557	181,500	4,548
King whiting or "kingfish"			800	12	5,100	153		
Mojarra	16,700	224	16,000	240	92,000	2,760		
Mullet	486,300	17,982	535,700	11,393	2,916,600	102,081	959,400	32,315
Muttonfish			2,000	140				
Permit					1,100	33		
Pigfish			16,500	250	2,000	60		
Pinfish or sailors choice			14,800	165				
Pompano	2,100	420	9,000	2,124	94,900	18,980	6,400	1,152
Sea bass			22,500	900				
Sheepshead, salt-water	16,200	563	19,300	364	192,000	5,760	36,000	1,186
Snapper:								
Mangrove	1,000	38	16,600	333	77,800	2,334	4,400	138
Red	593,700	38,588	2,800	168				
Snook or sergeantfish	9,000	360	23,700	1,126	120,900	3,627		
Spanish mackerel	7,600	304	97,600	4,557	288,400	11,536	13,800	481
Spot	15,500	425	43,800	657	7,000	210	500	17
Squeteagues or "sea trout":								
Spotted	99,700	6,979	219,100	12,838	315,200	18,912	205,300	15,411
White	2,000	73			9,600	384		
Tenpounder							3,000	105
Crabs, hard	262,500	3,835	28,800	547	112,000	2,240		
Clams, coquina					16,000	300		
Oysters, market:								
Public, spring	1,000	150	400	8	600	100	100	10
Public, fall	400	55					500	50
Private, spring	2,700	540						
Private, fall	300	60						
Scallops, bay					28,000	2,667		
Turtles, green							5,000	150
Total	1,946,500	81,398	1,225,300	42,108	4,529,200	180,386	1,519,000	59,846

Fisheries of Florida, 1938—Continued

CATCH: BY COUNTIES—Continued

Species	Manatee		Martin		Monroe		Nassau	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Amberjack			100	\$2	1,000	\$20		
Bluefish	31,600	\$1,414	664,700	33,235	11,700	423	700	\$42
Blue runner or hardtail	300	3	200	5	1,800	36		
Cabio	1,300	33						
Crevalle	5,700	112	73,000	1,095				
Croaker	800	20	4,000	59				
Drum:								
Black			7,700	231	1,500	45	400	9
Red or redfish	81,100	2,895	17,100	342	3,000	105	700	35
Flounders	5,800	126					15,800	808
Groupers	20,800	548	2,300	138	75,400	3,010		
Grunts			3,000	60	19,500	390		
Hogfish					5,800	290		
Jewfish	2,000	50	2,400	72	40,700	1,812		
Kingfish or "king mackerel"	7,900	237	2,700	122	262,300	10,432		
King whiting or "kingfish"	600	6	5,700	86			17,000	300
Menhaden			32,000	320			109,842,100	281,671
Mojarra	19,700	492	6,500	130				
Mullet	1,807,600	62,765	884,700	17,694	352,200	10,566	10,500	336
Muttonfish			5,300	106	79,500	3,900		
Pigfish			20,000	200				
Pompano	24,900	4,684	84,000	19,532	52,200	10,440		
Porgies	3,200	68			18,500	740		
Shad							12,300	1,883
Sharks	600,000	3,800	1,596,000	12,768	60,000	230		
Sheepshead, salt-water	55,500	1,422	2,000	30	5,000	150	400	9
Snapper:								
Lane					2,200	110		
Mangrove	8,100	177	17,200	946	13,900	695		
Red			2,800	196				
Snook or sergeantfish	25,000	865	54,200	2,168	6,500	260		
Spadefish	2,800	62						
Spanish mackerel	222,300	9,232	131,600	6,580	422,200	16,888		
Spot	9,460	115	12,500	250			500	7
Squeteagues or "sea trout":								
Spotted	213,200	12,792	51,100	3,068	27,500	1,650	5,700	557
White	12,500	500						
Tripletail			15,400	231				
Yellowtail			100	6	103,800	8,293		
Crabs:								
Hard	53,000	707					200,000	3,000
Stone	7,500	1,875			5,800	1,160		
Sea crawfish or spiny lobster					63,200	3,160		
Shrimp							1,775,400	53,262
Clams, hard, public	1,600	192						
Conchs					7,800	624		
Oysters, market:								
Public, spring	500	80					5,800	278
Public, fall							1,800	112
Private, spring							83,900	4,325
Private, fall							70,500	3,521
Scallops, bay	300	36						
Turtles:								
Green					3,200	160		
Loggerhead					800	16		
Sponges:								
Grass					6,400	5,950		
Sheepswool					48,500	97,858		
Yellow					15,100	7,085		
Total	3,225,000	105,308	3,698,300	99,672	1,717,000	186,498	112,043,500	350,159

Species	Oskaloosa		Okeechobee		Palm Beach		Pasco	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Amberjack					2,300	\$58		
Angelfish					200	4		
Barracuda					500	20		
Bluefish	85,400	\$2,562			919,500	36,866	6,000	\$420
Blue runner or hardtail	249,100	2,491			14,300	297		
Cabio or crab eater					200	8		
Carfish and bullheads			732,800	\$29,314	138,700	6,242		
Cigarfish	7,000	140						
Crappie			209,100	7,417	29,800	1,042		

Fisheries of Florida, 1938—Continued

CATCH: BY COUNTIES—Continued

Species	Oskaloosa		Okeechobee		Palm Beach		Pasco	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Crevalle					7,200	\$164		
Croaker					1,600	32		
Dolphin					600	23		
Drum, red or redfish	1,800	\$50			3,000	124	7,300	\$256
Flounders	5,900	472					700	26
Groupers	383,500	11,505			35,700	1,218		
Grunts					3,300	65		
Jewfish					4,900	117		
Kingfish or "king mackerel"	19,600	475			2,258,800	78,883		
King whiting or "kingfish"					1,100	35		
Menhaden	46,100	922			400	4		
Mojarra					4,500	158		
Moonfish					300	6		
Mullet	902,000	24,830			29,700	948	561,900	19,666
Muttonfish					53,600	2,720		
Permit					1,000	21		
Pompano	7,700	1,540			15,200	2,961	300	54
Porgies	15,300	459					300	10
Sea bass					600	24		
Sea catfish	4,300	65						
Sheepshead, salt-water	2,300	57			4,600	148	5,400	19
Snapper:								
Mangrove					1,800	80	2,500	87
Red	634,600	44,422			1,000	72		
Snook or sergeantfish					7,700	327		
Spanish mackerel	186,100	5,533			385,700	15,486	5,200	208
Spot	200	3			600	22		
Squeteagues or "sea trout," spotted	21,900	1,533			2,900	205	18,100	1,267
Sturgeon	2,000	160						
Sunfish			137,300	\$4,805	22,800	798		
Swellfish					1,000	80		
Tenpounder	54,700	1,094						
Tripletail					800	15		
Yellowtail					4,000	80		
Sea crawfish or spiny lobster					31,200	1,500		
Oysters, market:								
Public, spring	800	80						
Public, fall	200	24						
Turtles, soft-shell			164,700	3,304	500	10		
Total	2,630,500	98,417	1,243,900	44,840	3,991,600	150,863	607,700	22,188

Species	Pinellas		Ft. DuRoi		St. Johns		St. Lucie	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Alewives			391,600	\$1,959				
Amberjack	17,000	\$361						
Bluefish	73,800	4,139			2,000	\$100	1,878,100	\$93,905
Blue runner or hardtail	700	21					8,700	218
Cabio or crab eater	500	10					2,200	56
Catfish and bullheads			1,618,000	50,069				
Crappie			65,400	1,986				
Crevalle							31,600	474
Croaker							2,000	40
Drum:								
Black					5,000	150		
Red or redfish	50,200	1,706	100	4	5,500	253	5,800	232
Eels, common			9,800	243				
Flounders	7,300	395			10,100	369	3,100	63
Groupers	474,300	14,246			1,600	39	7,600	228
Grunts							3,500	140
Hickory shad			31,100	1,137				
Jewfish							8,400	252
Kingfish or "king mackerel"	63,800	2,506					32,400	1,296
King whiting or "kingfish"	1,000	20			149,500	2,259	17,600	440
Mojarra	1,700	34					20,900	624
Mullet	2,624,400	88,322	2,100	73	10,500	265	262,500	7,876
Muttonfish							400	20
Pigfish	300	6					5,100	129
Pompano	16,300	3,256					21,200	4,241
Porgies	8,900	324						
Sea bass					2,300	46		
Shad			133,800	11,482				
Sharks							400,000	2,400

Fisheries of Florida, 1938—Continued

CATCH: BY COUNTIES—Continued

Species	Pinellas		Putnam		St. Johns		St. Lucie	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Sheepshead, salt-water	54,700	\$1,885					23,600	\$355
Snapper:								
Mangrove	6,000	228					3,400	153
Red	24,000	1,560			18,300	\$732	15,500	930
Snook or sergeantfish	67,500	3,013					3,800	152
Spanish mackerel	846,200	37,605					1,433,600	71,685
Spot	3,500	76					11,000	275
Squeteagues or "sea trout":								
Spotted	515,000	32,456			11,700	1,013	35,200	2,467
White	8,000	415						
Sunfish			258,900	\$6,930				
Tripletail							700	21
Crabs:								
Hard			248,700	3,109	170,000	2,550		
Stone	9,600	2,220						
Sea crawfish or spiny lobster							100	7
Shrimp					4,423,800	132,464		
Clams, hard, public	8,400	1,260			30,100	3,012		
Oysters, market:								
Public, spring	7,200	648			3,600	173		
Public, fall					2,100	101		
Private, spring	3,600	324			800	38		
Private, fall	1,900	171			800	41		
Scallops, bay	47,600	3,495						
Turtles, soft-shell			3,100	64				
Sponges:								
Grass	10,400	6,615						
Sheepswool	422,900	897,611						
Wire	7,900	6,514						
Yellow	93,800	47,268						
Total	5,478,400	1,158,710	2,762,600	77,056	4,847,700	143,605	4,238,000	188,679

Species	Santa Rosa		Sarasota		Seminole		Taylor	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Bluefish			26,200	\$1,048			9,700	\$636
Blue runner or hardtail			4,200	84			1,600	50
Catfish and bullheads					206,700	\$8,767	1,000	30
Crevalle							1,800	57
Drum, red or redfish	1,500	\$75	27,200	544			47,900	1,564
Flounders	800	32	4,300	86			9,300	296
Groupers			27,300	546			1,100	35
Jewfish			500	10				
Kingfish or "king mackerel"			177,700	7,108			8,000	280
Mojarra			6,600	132				
Mullet	67,400	2,020	1,180,400	41,302			834,000	26,440
Permit			500	10				
Pigfish			1,100	22				
Pompano			21,300	4,260			7,600	1,468
Sheepshead, salt-water	400	8	46,700	934			7,300	232
Snapper, mangrove			5,900	118			1,100	36
Snook or sergeantfish			10,500	210				
Spanish mackerel			319,200	15,960			16,200	531
Spot	100	2	5,900	118			2,700	85
Squeteagues or "sea trout":								
Spotted	5,500	440	93,300	5,598			267,400	17,144
White	100	4	5,700	228				
Crabs, stone			3,600	1,260				
Clams, hard, public			1,300	130				
Oysters, market:								
Public, spring	5,900	582	6,800	990				
Public, fall	2,200	266	700	100				
Scallops, bay			1,300	120				
Total	83,900	3,429	1,978,200	80,908	206,700	8,767	1,216,700	48,884

Fisheries of Florida, 1938—Continued

CATCH: BY COUNTIES—Continued

Species	Volusia		Wakulla		Walton	
	Pounds	Value	Pounds	Value	Pounds	Value
Bluefish	8,300	\$385	8,600	\$492		
Blue runner or hardtail			3,200	128		
Catfish and bullheads	132,700	5,307				
Crappie	33,000	1,306				
Crevalle	1,100	18				
Drum:						
Black	5,600	128				
Red or redfish	7,700	236	86,400	3,456	100	\$3
Flounders	28,000	1,574	7,200	298	1,300	118
Groupers	24,000	725	5,000	175		
Jewfish	14,800	444				
King whiting or "kingfish"	17,600	276				
Mullet	298,300	10,256	1,276,100	47,818	46,000	1,610
Pinfish or sailors choice	1,500	23				
Pompano	8,000	1,754	800	144		
Shad	2,500	200				
Sheepshead, salt-water	1,500	24	28,400	1,136	100	3
Snapper, red	62,000	492				
Spanish mackerel			8,500	340		
Spot	7,600	113	53,300	2,532		
Squeteagues or "sea trout," spotted	43,600	3,068	94,100	6,150	800	56
Sunfish	173,200	8,660				
Crabs:						
Hard	175,000	2,188				
Stone			7,800	1,170		
Shrimp	366,600	14,715				
Oysters, market:						
Public, spring	11,200	585	4,300	490	200	24
Public, fall	13,500	705	5,500	717	100	14
Private, spring	11,100	599				
Private, fall	12,800	671				
Turtles, soft-shell	900	63				
Total	1,462,100	54,525	1,559,200	65,036	48,600	1,828

CATCH: BY DISTRICTS

Species	East Coast		West Coast		Lake Okeechobee	
	Pounds	Value	Pounds	Value	Pounds	Value
Alewives	391,600	\$1,959				
Amberjack	6,400	160	18,000	\$381		
Angelfish	700	14	500	18		
Barracuda	500	20				
Bluefish	3,627,900	173,457	852,100	31,859		
Blue runner or hardtail	65,200	1,580	666,500	7,500		
Cabo or crab eater	2,500	69	4,900	129		
Catfish and bullheads	2,775,900	98,400	31,800	1,268	1,249,800	\$47,871
Cigarfish			9,000	180		
Crappie	114,100	4,123			438,600	14,929
Crevalle	157,600	2,781	32,900	735		
Croaker	11,000	198	2,000	56		
Dolphin	2,600	123				
Drum:						
Black	51,800	1,402	11,900	280		
Red or redfish	109,600	3,573	1,012,400	33,302		
Eels, common	9,800	243				
Flounders	67,800	3,263	122,200	5,506		
Groupers	227,800	11,638	4,168,500	126,774		
Grunts	30,100	827	21,200	441		
Hickory shad	32,400	1,176				
Hogfish	10,000	300	5,800	290		
Jewfish	58,100	1,909	70,300	2,650		
Kingfish or "king mackerel"	2,862,900	105,751	862,300	30,626		
King whiting or "kingfish"	311,300	5,099	19,500	426		
Menhaden	148,915,600	384,876	353,500	3,200		
Mojarra	51,600	1,263	281,900	6,546		
Moonfish	300	6				
Mullet	4,452,400	129,932	24,141,500	811,328		
Muttonfish	203,400	13,659	79,500	3,900		
Permit	2,500	66	13,200	274		
Pigfish	41,600	579	7,600	196		
Pinfish or sailors choice	23,700	299				

Fisheries of Florida, 1938—Continued

CATCH: BY DISTRICTS—Continued

Species	East Coast		West Coast		Lake Okeechobee	
	Pounds	Value	Pounds	Value	Pounds	Value
Pompano.....	243, 700	\$55, 994	534, 400	\$105, 637		
Porgies.....			57, 900	1, 965		
Sea bass.....	25, 400	970				
Sea catfish.....			67, 700	1, 333		
Sbad.....	228, 700	21, 779				
Sharks.....	2, 150, 600	16, 405	950, 000	5, 930		
Sheepshead, salt-water.....	93, 500	2, 078	686, 000	19, 476		
Snapper:						
Lane.....			2, 200	110		
Mangrove.....	49, 800	2, 101	245, 800	7, 372		
Red.....	117, 100	3, 487	5, 260, 800	374, 946		
Snook or sergeantfish.....	144, 100	5, 960	466, 000	15, 034		
Spadefish.....			5, 100	102		
Spanish mackerel.....	2, 645, 200	135, 887	4, 190, 200	178, 635		
Spot.....	100, 100	1, 780	128, 900	4, 113		
Squeteagues or "sea trout":						
Spotted.....	550, 400	35, 462	2, 862, 800	184, 334		
White.....			54, 400	2, 188		
Sturgeon.....			36, 000	3, 220		
Sunfish.....	506, 500	18, 982			361, 300	\$12, 036
Swellfish.....	1, 000	80				
Tenpounder.....			359, 200	6, 854		
Tripletail.....	18, 100	291				
Turbot.....	1, 800	36				
Yellowtail.....	65, 200	5, 720	103, 800	8, 293		
Crabs:						
Hard.....	4, 490, 700	60, 395	1, 104, 200	15, 875		
Stone.....	20, 200	4, 313	34, 300	7, 685		
Sea crawfish or spiny lobster.....	265, 200	20, 217	63, 200	3, 160		
Shrimp.....	8, 846, 900	269, 747	1, 295, 700	48, 865		
Clams:						
Coquina.....			16, 000	300		
Hard, public.....	30, 100	3, 012	716, 900	69, 132		
Conchs.....			7, 800	624		
Oysters, market:						
Public, spring.....	31, 300	1, 529	310, 200	20, 762		
Public, fall.....	28, 500	1, 362	529, 600	41, 176		
Private, spring.....	121, 300	6, 288	8, 900	999		
Private, fall.....	121, 700	6, 681	9, 000	591		
Scallops, bay.....			137, 400	10, 593		
Turtles:						
Green.....			8, 200	310		
Loggerhead.....			800	16		
Soft-shell.....	4, 000	127			285, 000	5, 477
Sponges:						
Grass.....	100	38	16, 800	12, 565		
Sheepswool.....	800	1, 869	471, 400	995, 469		
Wire.....			7, 900	6, 514		
Yellow.....	100	40	108, 900	54, 353		
Total.....	185, 460, 800	1, 631, 375	53, 647, 400	3, 276, 396	2, 334, 700	80, 313

Sponge fishery of Florida, 1938

OPERATING UNITS: BY GEAR

Item	Sponge hooks	Diving outfits	Total
Fishermen:	Number	Number	Number
On vessels.....		96	96
On boats and shore, regular.....	410	413	823
Total.....	410	509	919
Vessels, motor.....		13	13
Net tonnage.....		135	135
Boats:			
Motor.....		59	59
Other.....	290		290
Apparatus, number.....	292	72	

Sponge fishery of Florida, 1938—Continued

CATCH: BY GEAR

Sponges	Sponge hooks		Diving outfits		Total	
	Pounds	Value	Pounds	Value	Pounds	Value
Grass.....	10,200	\$8,331	6,700	\$4,272	16,900	\$12,603
Sheepswool.....	95,300	195,842	376,900	801,496	472,200	997,338
Wire.....			7,900	6,514	7,900	6,514
Yellow.....	18,500	8,745	90,500	45,648	109,000	54,393
Total.....	124,000	212,918	482,000	857,930	606,000	1,070,848

SPONGES SOLD ON THE EXCHANGE, TARPON SPRINGS, FLA.

During 1938 sponges sold on the exchange at Tarpon Springs, Fla., amounted to 530,183 pounds, valued at \$952,258. This is a decrease of 6 percent in quantity and of 13 percent in value as compared with the transactions during 1937. Of the total sponges sold on the exchange during 1938, 27,860 pounds, valued at \$78,667, were large wool; 29,660 pounds, valued at \$63,418, were medium and small wool; 363,118 pounds, valued at \$751,176, were wool rags; 92,146 pounds, valued at \$46,460, were yellow; 9,755 pounds, valued at \$6,229, were grass; and 7,644 pounds, valued at \$6,308, were wire. It is estimated that sponges valued at \$2,750 were sold outside of the exchange.

ALABAMA

Fisheries of Alabama, 1938

OPERATING UNITS: BY GEAR

Item	Haul seines	Gill nets, stake	Trammel nets	Lines			Fyke nets
				Hand	Trot with baits or snoods	Trot with hooks	
Fishermen:	Number	Number	Number	Number	Number	Number	Number
On vessels.....	5		9	80			
On boats and shore:							
Regular.....	24	2	145	29	83	28	9
Casual.....	6		13	7	12	13	1
Total.....	35	2	167	116	95	41	10
Vessels, motor.....	1		3	11			
Net tonnage.....	17		27	200			
Boats:							
Motor.....	5	1	55	13	52	4	4
Other.....	5		157	10	35	37	6
Accessory boats.....	1		9				
Apparatus:							
Number.....	6	10	167	116	87	77	130
Length, yards.....	3,600						
Square yards.....		2,000	87,160				
Hooks, baits, or snoods.....				202	46,650	23,100	

Fisheries of Alabama, 1938—Continued

OPERATING UNITS: BY GEAR—Continued

Item	Otter trawls, shrimp	Pots, fish	Spears	Dredges, oyster	Tongs, oyster	By hand, other than for oysters	Total, exclusive of duplication
Fishermen:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
On vessels.....	47			46	88		235
On boat and shore:							
Regular.....	269	15	38	28	276	4	652
Casual.....		23	21		157	3	253
Total.....	316	38	59	74	521	7	1,140
Vessels, motor.....	23			14	13		47
Net tonnage.....	206			132	110		527
Boats:							
Motor.....	126	3		13	104		252
Other.....		35			167		415
Accessory boats.....							10
Apparatus:							
Number.....	149	380	59	37	521		
Yards at mouth.....	2,089			38			

CATCH: BY GEAR

Species	Haul seines		Gill nets, stake		Trammel nets		Lines, hand	
	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>
Bluefish.....	8,200	\$396			13,000	\$679		
Blue runner or hardtail.....	6,800	137			10,900	219		
Buffalofish.....					10,200	409		
Catfish and bullheads.....					900	63		
Croaker.....	9,400	188			43,700	878		
Drum:								
Black.....	1,100	42			3,900	179		
Red or redfish.....	9,200	462			20,000	1,005	2,600	\$125
Flounders.....	6,500	635			34,000	3,205		
Groupers.....							222,300	6,812
King whiting or "kingfish".....					309	15		
Mullet.....	818,800	21,721			2,545,700	69,994		
Pompano.....	100	16			1,400	280		
Sea catfish.....					9,200	215		
Sheepshead, salt-water.....	15,500	710			43,100	2,083	100	5
Snapper, red.....							1,193,100	85,388
Spanish mackerel.....	23,700	1,871			15,300	1,200		
Spot.....	300	6			3,200	64		
Squeteagues or "sea trout":								
Spotted.....	21,800	2,104			81,100	7,956	16,500	1,610
White.....	200	4			4,200	109	700	19
Sturgeon.....			1,700	\$136				
Tenpounder.....	6,700	133			3,900	78		
Total.....	928,300	28,425	1,700	136	2,844,000	88,631	1,435,300	93,959

Species	Lines—Continued									
	Trot with baits or snoods				Trot with hooks		Fyke nets		Otter trawls	
	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>		
Buffalofish.....			3,500	\$140	46,200	\$1,848				
Catfish and bullheads.....			34,800	2,436	4,300	301				
Paddlefish or spoonbill cat.....			40,100	3,558						
Sea catfish.....			1,000	30						
Sheepshead, fresh-water.....					4,700	235				
Sturgeon.....										
Crabs, hard.....	510,700	\$7,630								
Shrimp.....									3,643,500	\$145,740
Total.....	510,700	7,630	80,000	6,209	55,200	2,384	3,643,500	145,740		

Fisheries of Alabama, 1938—Continued

CATCH: BY GEAR—Continued

Species	Pots		Spears		Dredges		Tongs		By hand	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Catfish and bullheads	33,600	\$2,352								
Flounders			24,100	\$2,140						
Oysters, market:										
Public, spring							473,300	\$23,637		
Public, fall					610,900	\$29,737	177,800	12,075		
Private, spring							55,600	3,340		
Private, fall							41,100	2,992		
Terrapin, diamond-back									2,200	\$220
Total	33,600	2,352	24,100	2,140	610,900	29,737	747,800	42,044	2,200	220

OPERATING UNITS: BY COUNTIES

Item	Baldwin	Mobile
	Number	Number
Fishermen:		
On vessels	27	208
On boats and shore:		
Regular	95	557
Casual	36	217
Total	158	982
Vessels, motor	5	42
Net tonnage	42	485
Boats:		
Motor	26	226
Other	92	323
Accessory boats		10
Apparatus:		
Haul seines	2	4
Length, yards	1,200	2,400
Gill nets, stake	10	
Square yards	2,000	
Trammel nets	49	118
Square yards	24,500	62,660
Lines:		
Hand	11	105
Hooks	16	186
Trot with baits or snoods		87
Baits or snoods		46,650
Trot with hooks	48	29
Hooks	14,400	8,700
Fyke nets	25	105
Otter trawls, shrimp	6	143
Yards at mouth	82	2,007
Pots, fish	100	280
Spears	26	33
Dredges, oyster	5	32
Yards at mouth	5	33
Tongs, oyster	67	454

CATCH: BY COUNTIES

Species	Baldwin		Mobile	
	Pounds	Value	Pounds	Value
Bluefish	3,200	\$160	18,000	\$915
Blue runner or hardtail	700	14	17,000	342
Buffalofish	14,300	572	45,600	1,825
Catfish and bullheads	15,600	1,092	58,000	4,060
Croaker	18,500	370	34,600	696
Drum:				
Black	500	25	4,500	196
Red or redfish	6,700	335	25,100	1,257
Flounders	18,100	1,479	46,500	4,501
Groupers	12,000	290	210,300	6,522
King whiting or "kingfish"	100	5	200	10
Mullet	789,100	20,523	2,575,400	71,192
Paddlefish or spoonbill cat	9,000	900	31,100	2,658
Pompano	100	20	1,400	276
Sea catfish	1,500	30	8,700	215

Fisheries of Alabama, 1938—Continued

CATCH: BY COUNTIES—Continued

Species	Baldwin		Mobile	
	Pounds	Value	Pounds	Value
Sheepshead:				
Fresh-water	1,000	\$50	3,700	\$185
Salt-water	5,800	290	52,900	2,508
Snapper, red	15,000	1,069	1,178,100	84,319
Spanish mackerel	9,900	792	29,100	2,279
Spot	300	6	3,200	64
Squeteagues or "sea trout":				
Spotted	24,500	2,246	94,900	9,424
White	1,400	42	3,700	90
Sturgeon	2,000	157	300	24
Tenpounder	2,900	58	7,700	153
Crabs, hard			510,700	7,630
Shrimp	99,400	3,976	3,544,100	141,764
Oysters, market:				
Public, spring	27,300	1,496	446,000	22,141
Public, fall	69,500	4,612	719,200	37,200
Private, spring	31,000	1,800	24,600	1,540
Private, fall	27,500	2,000	13,600	992
Terrapin, diamond-back	300	30	1,900	190
Total	1,207,200	44,439	9,710,100	405,168

MISSISSIPPI

Fisheries of Mississippi, 1938

OPERATING UNITS: BY GEAR

Item	Haul seines	Trammel nets	Lines			Dip nets, drop
			Hand	Troll	Trot with baits or snoods	
Fishermen:	Number	Number	Number	Number	Number	Number
On vessels	40		10			
On boats and shore:						
Regular	8	78	53	4	110	
Casual			41			8
Total	48	78	104	4	110	8
Vessels, motor	5		2			
Net tonnage	92		15			
Boats:						
Motor	1	31	23	2	59	
Other		58	49		47	
Apparatus:						
Number	6	60	108	4	106	58
Length, yards	2,400					
Square yards		31,500				
Hooks, baits, or snoods			128	4	88,500	
Item	Cast nets	Otter trawls, shrimp	Spears	Dredges, oyster	Tongs, oyster	Total, exclusive of duplication
Fishermen:	Number	Number	Number	Number	Number	Number
On vessels		468		759	5	980
On boats and shore:						
Regular	4	849	23	121	604	1,536
Casual	14		36		30	129
Total	18	1,317	59	880	639	2,645
Vessels:						
Motor		192		149	1	240
Net tonnage		2,067		2,051	15	2,889
Sail				7		7
Net tonnage				90		90
Total vessels		192		156	1	247
Total net tonnage		2,067		2,141	15	2,979
Boats:						
Motor		388		28	47	444
Other					485	608
Apparatus:						
Number	18	580	59	368	639	
Yards at mouth		9,245		369		

Fisheries of Mississippi, 1938—Continued

CATCH: BY GEAR

Species	Trammel nets		Lines					
			Hand		Troll		Trot with baits or snoods	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Croaker.....	13,700	\$411						
Drum:								
Black.....	6,200	186	1,700	\$51				
Red or redfish.....	90,200	5,460	15,800	1,086				
Flounders.....	6,500	635						
Groupers.....			157,600	4,370				
King whiting or "kingfish".....	3,700	111						
Mullet.....	278,600	8,258						
Pompano.....	600	90						
Sea catfish.....	1,200	29	1,000	25				
Sheepshead, salt-water.....	14,900	741						
Snapper, red.....			173,900	12,173				
Spanish mackerel.....	1,500	180			500	\$75		
Spot.....	1,000	30						
Squeteagues or "sea trout":								
Spotted.....	173,900	16,118	75,100	7,148				
White.....	14,100	420	21,200	634				
Tripletail.....	100	3						
Crabs, hard.....							1,009,000	\$17,163
Total.....	606,200	32,672	451,100	25,727	500	75	1,009,000	17,163

Species	Dip nets, drop		Cast nets		Otter trawls	
	Pounds	Value	Pounds	Value	Pounds	Value
Mullet.....			6,000	\$180		
Crabs, hard.....	7,400	\$133				
Shrimp.....					9,902,400	\$420,549
Total.....	7,400	133	6,000	180	9,902,400	420,549

Species	Spears		Dredges		Tongs	
	Pounds	Value	Pounds	Value	Pounds	Value
Flounders.....	35,800	\$3,436				
Oysters, market:						
Public, spring.....			998,000	\$40,173	1,044,500	\$51,620
Public, fall.....			21,400	909	177,500	10,382
Total.....	35,800	3,436	1,019,400	41,082	1,222,000	62,002

NOTE.—The production of fishery products by Mississippi craft in Louisiana waters has been included with the catch for Louisiana. These catches were as follows: Haul seines, shrimp, 30,000 pounds, valued at \$1,277; oyster dredges, spring oysters, 3,626,100 pounds, valued at \$141,423, and fall oysters, 1,453,000 pounds, valued at \$61,068; oyster tongs, spring oysters, 125,300 pounds, valued at \$6,440, and fall oysters, 9,700 pounds, valued at \$558; and shrimp trawls, shrimp, 7,373,400 pounds, valued at \$313,820. The entire catch by haul seines was made in Louisiana waters.

OPERATING UNITS: BY COUNTIES

Item	Hancock	Harrison	Jackson
Fishermen:			
On vessels.....	Number 32	Number 920	Number 28
On boats and shore:			
Regular.....	143	1,219	174
Casual.....	28	64	37
Total.....	203	2,203	239
Vessels:			
Motor.....	8	225	7
Net tonnage.....	90	2,703	96
Sail.....	2	5	
Net tonnage.....	24	66	
Total vessels.....	10	230	7
Total net tonnage.....	114	2,769	96

Fisheries of Mississippi, 1938—Continued

OPERATING UNITS: BY COUNTIES—Continued

Item	Hancock	Harrison	Jackson
Boats:	<i>Number</i>	<i>Number</i>	<i>Number</i>
Motor.....	50	343	51
Other.....	62	421	125
Apparatus:			
Haul seines.....		6	
Length, yards.....		2,400	
Trammel nets.....	13	22	25
Square yards.....	7,500	11,500	12,500
Lines:			
Hand.....	23	47	38
Hooks.....	23	57	48
Troll.....	4		
Hooks.....	4		
Trot with baits or snoods.....	2	73	31
Baits or snoods.....	1,500	70,200	16,800
Dip nets, drop.....	16	42	
Cast nets.....		14	4
Otter trawls, shrimp.....	46	498	36
Yards at mouth.....	725	7,951	569
Spears.....	16	27	16
Dredges, oyster.....	10	350	8
Yards at mouth.....	10	351	8
Tongs, oyster.....	50	506	83

CATCH BY COUNTIES

Species	Hancock		Harrison		Jackson	
	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>
Croaker.....	5,200	\$156	5,300	\$159	3,200	\$96
Drum:						
Black.....	2,100	72	5,000	150	500	15
Red or redbfish.....	46,200	3,696	50,600	2,700	3,200	150
Flounders.....	9,400	940	19,400	1,940	13,500	1,191
Grouper.....			78,800	2,006	78,800	2,364
King whiting or "kingfish".....	900	27	2,000	60	800	24
Mullet.....	30,000	900	59,200	1,776	195,400	5,762
Pompano.....			400	60	200	30
Sea catfish.....			2,000	50	200	4
Sheepshead, salt-water.....	3,900	195	5,000	295	9,900	491
Snapper, red.....			87,000	6,090	80,900	6,083
Spanish mackerel.....	500	75			1,500	150
Spot.....					1,000	30
Squeteagues or "sea trout":						
Spotted.....	64,800	6,480	81,300	7,461	103,100	9,325
White.....	7,400	222	21,000	630	6,900	202
Tripletail.....			100	3		
Crabs, hard.....	5,600	112	783,800	13,716	227,700	3,465
Shrimp.....	424,000	18,220	8,524,000	361,916	954,400	40,413
Oysters, market:						
Public spring.....	117,500	5,788	1,834,700	\$1,786	90,300	4,219
Public, fall.....	17,000	983	123,600	6,900	58,300	3,408
Total.....	734,800	37,866	11,689,900	487,698	1,835,100	77,455

NOTE.—The catch of fishery products by Mississippi craft in Louisiana waters has been included with the catch for Louisiana.

LOUISIANA

Fisheries of Louisiana, 1938

OPERATING UNITS: BY GEAR

Item	Haul seines	Tramme nets	Lines		Dip nets	
			Hand	Trot with baits or snoods	Common	Drop
	Number	Number	Number	Number	Number	Number
Fishermen:			5			
On vessels						
On boats and shore:						
Regular	224	44	132	477	20	77
Casual	25	10	145	218	17	83
Total	249	54	282	695	37	160
Vessels, motor			1			
Net tonnage			14			
Boats:						
Motor	37	18	75	75	1	17
Other	70	12	130	576	34	133
Apparatus:						
Number	74	30	282	651	37	6,775
Length, yards	29,400					
Square yards		8,500				
Hooks, baits, or snoods			351	184,005		

Item	Otter trawls, shrimp	Brush traps	Dredges, oyster	Tongs, oyster	By hand, other than for oysters	Total, exclusive of duplication
	Number	Number	Number	Number	Number	Number
Fishermen:						
On vessels	391		86			468
On boats and shore:						
Regular	2,775	141	152	615	15	4,412
Casual				88		525
Total	3,166	141	238	703	15	5,405
Vessels, motor	181		21			196
Net tonnage	1,459		169			1,580
Boats:						
Motor	1,364	25	37	145		1,734
Other		116		375		1,395
Apparatus:						
Number	1,545	29,600	116	703		
Yards at mouth	21,492		115			

CATCH: BY GEAR

Species	Haul seines		Trammel nets		Lines			
	Pounds	Value	Pounds	Value	Hand		Trot with baits or snoods	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Croaker	43,400	\$1,431	19,400	\$697	15,400	\$519		
Drum:								
Black	63,100	2,616	16,800	652	37,300	1,372		
Red or redfish	307,600	22,729	70,200	5,283	144,200	10,042		
Flounders	25,100	1,820	5,600	438	3,000	208		
Groupers					6,000	180		
King whiting or "kingfish"	2,000	66	1,100	51	300	10		
Mullet	10,600	354	1,200	38				
Pompano			500	90				
Sea catfish	1,500	37	1,100	25	3,100	74		
Sheepshead, salt-water	40,700	2,242	13,600	698	14,700	713		
Snapper, red					85,000	5,600		
Spanish mackerel	9,000	990	5,400	540	2,000	230		
Spot	3,200	124	900	33	700	31		
Squeteagues or "sea trout":								
Spotted	263,300	23,678	102,400	8,571	124,500	10,388		
White	20,300	865	11,700	412	16,400	619		
Crabs:								
Hard	208,000	2,200					9,767,500	\$98,687
Soft and peelers	91,000	13,650						
Shrimp	833,000	26,170						
Total	1,921,800	98,972	249,900	17,528	452,600	29,986	9,767,500	98,687

Fisheries of Louisiana, 1938—Continued

CATCH: BY GEAR—Continued

Species	Dip nets				Otter trawls		Brush traps	
	Common		Drop		Pounds	Value	Pounds	Value
	Pounds	Value	Pounds	Value				
Flounders					3,200	\$256		
King whiting or "kingfish"					600	24		
Crabs:								
Hard	49,300	\$493	508,400	\$5,084				
Soft and peelers	13,500	2,015	62,200	9,234			81,000	\$12,000
Shrimp					80,545,900	2,576,566		
Total	62,800	2,508	570,600	14,318	80,549,700	2,576,846	81,000	12,000

Species	Dredges		Tongs		By hand	
	Pounds	Value	Pounds	Value	Pounds	Value
Oysters, market:						
Public, spring	4,231,300	\$176,603	209,000	\$11,244		
Public, fall	1,616,600	72,201	35,200	2,108		
Private, spring	809,100	47,887	2,270,800	152,556		
Private, fall	108,300	6,600	942,000	70,535		
Terrapin, diamond-back					4,900	\$935
Total	6,765,300	303,291	3,457,000	236,443	4,900	935

NOTE.—The catch as shown above for Louisiana includes the following products which were taken by Mississippi craft in Louisiana waters: Shrimp, 7,403,400 pounds, valued at \$315,097; oysters, market, spring, 3,751,400 pounds, valued at \$147,863; and oysters, market, fall, 1,462,700 pounds, valued at \$61,626. Prior to 1938 similar catches by Mississippi craft were included with the catch for Mississippi.

OPERATING UNITS: BY PARISHES

Item	As-sump-tion	Calca-sieu	Cam-eron	Iberia	Jefferson	La-Four-che	Orle-ans	Plaque-mines
Fishermen:	Number	Number	Number	Number	Number	Number	Number	Number
On vessels			22		50	70	34	40
On boats and shore:								
Regular	20	7	213	10	946	357	171	524
Casual	60	5	8	9	28	1	60	121
Total	80	12	243	19	1,024	428	265	685
Vessels, motor			11		21	34	10	16
Net tonnage			102		195	236	79	118
Boats:								
Motor	10		102	3	354	169	40	167
Other	70	11	17	12	241	23	124	315
Apparatus:								
Haul seines			1	3	6	2	10	5
Length, yards			350	750	2,400	650	3,200	2,150
Trammel nets				4	3	1		6
Square yards				1,200	600	100		1,500
Lines:								
Hand			14	5	41	2	34	31
Hooks			32	10	46	2	36	33
Trot with baits or snoods	80	11	5	3	115		11	164
Baits or snoods	1,600	4,300	1,200	900	36,000		5,550	61,455
Dip nets:								
Common							7	
Drop							4,005	
Otter trawls, shrimp			109		332	194	5	129
Yards at mouth			1,626		4,357	2,567	73	1,826
Brush traps					29,600			
Dredges, oyster					4		20	18
Yards at mouth					4		20	18
Tongs, oyster			7	3		40	101	209

Fisheries of Louisiana, 1938—Continued

OPERATING UNITS: BY PARISHES—Continued

Item	St. Bernard	St. Charles	St. Mary	St. Tammany	Tangipahoa	Terrebonne	Vermillion
Fishermen:	Number	Number	Number	Number	Number	Number	<i>Number</i>
On vessels.....	24		105			117	6
On boats and shore:							
Regular.....	259	40	743	35	10	1,007	70
Casual.....	91	20	12	32	12	32	34
Total	374	60	860	67	22	1,156	110
Vessels, motor	7		45			50	2
Net tonnage.....	48		427			357	18
Boats:							
Motor.....	78	10	347	9	4	422	19
Other.....	205	50	71	52	18	143	43
Apparatus:							
Haul seines.....	30		1	2		6	8
Length, yards.....	11,400		350	450		1,800	5,900
Trammel nets.....	6					5	5
Square yards.....	1,700					800	2,600
Lines:							
Hand.....	56		5	17		52	25
Hooks.....	70		10	20		62	30
Trot with baits or snoods.....	99	60	80			3	20
Baits or snoods.....	27,200	21,000	16,000			300	8,500
Dip nets:							
Common.....				20	10		
Drop.....	670			1,500	600		
Otter trawls, shrimp.....	41		357	3		368	7
Yards at mouth.....	573		5,462	44		4,866	98
Dredges, oyster.....	12		4	4		36	18
Yards at mouth.....	12		4	4		36	17
Tongs, oyster.....	5		34	3		289	12

CATCH: BY PARISHES

Species	Assumption		Calcasieu		Cameron		Iberia	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Croaker.....					2,300	\$69	2,100	\$84
Drum:								
Black.....					200	8	600	30
Red or redfish.....					2,600	208	7,400	563
Flounders.....							2,600	130
Sheepshead, salt-water.....					1,000	50	2,100	105
Squeteagues or "sea trout":								
Spotted.....					12,300	1,230	8,700	\$71
White.....					700	35	600	22
Crabs, hard.....	62,000	\$930	72,000	\$800	30,400	456	36,000	360
Shrimp.....					3,324,700	103,069		
Oysters, market:								
Public, spring.....							2,600	200
Public, fall.....					5,100	414	2,500	220
Total	62,000	930	72,000	800	3,379,300	105,539	65,200	2,585

Species	Jefferson		Lafourche		Orleans		Plaquemines	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Croaker.....	6,000	\$180			7,000	\$268	1,300	\$49
Drum:								
Black.....	15,000	450	200	\$8	14,200	502	4,000	140
Red or redfish.....	21,000	1,260	900	54	37,500	2,470	34,600	2,112
Flounders.....	800	64			1,000	80	3,600	288
Groupers.....	6,000	180						
King whiting or "kingfish".....	1,200	48					200	14
Mullet.....					3,000	90		
Pompano.....	500	90						
Sea catfish.....	2,500	50						
Sheepshead, salt-water.....	4,000	160			17,200	983	2,700	164
Snapper, red.....	45,000	3,200						
Spanish mackerel.....	5,000	500					2,400	270
Spot.....	200	6			900	39		
Squeteagues or "sea trout":								
Spotted.....	66,000	5,130	1,200	96	45,000	3,670	37,500	3,620
White.....	10,000	300	200	8	3,300	158	3,300	149

Fisheries of Louisiana, 1938—Continued

CATCH: BY PARISHES—Continued

Species	Jefferson		Lafourche		Orleans		Plaquemines	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Crabs:								
Hard	2,958,200	\$29,582			668,400	\$6,684	578,000	\$5,780
Soft and peelers	81,000	12,000						
Shrimp	16,565,300	513,530	9,680,000	\$24,000	237,800	7,395	5,193,600	160,996
Oysters, market:								
Public, spring					101,700	8,208	7,800	360
Public, fall					63,100	5,260	47,400	2,240
Private, spring	78,200	6,250	67,100	4,680	886,300	67,000	910,500	55,812
Private, fall			51,500	4,600	339,300	28,275	422,100	25,390
Total	19,865,900	572,980	9,804,100	303,536	2,425,700	131,082	7,249,000	257,384

Species	St. Bernard		St. Charles		St. Mary		St. Tammany	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Croaker	14,500	\$1,460					1,000	\$48
Drum:								
Black	56,800	2,456						
Red or redfish	293,790	23,796			25,900	\$1,554	5,400	394
Flounders	25,100	1,857					500	39
King whiting or "kingfish"	2,600	80						
Mullet	8,800	302						
Sea catfish	1,400	32						
Sheepshead, salt-water	27,300	1,418					2,500	125
Snapper, red					40,000	2,400		
Spanish mackerel	9,000	990						
Spot	2,900	111						
Squeteagues or "sea trout":								
Spotted	211,900	18,970			1,200	96	14,200	1,169
White	15,400	660					1,000	30
Crabs:								
Hard	3,140,000	31,700	640,500	\$6,405	2,035,800	20,358	163,200	1,632
Soft and peelers	88,200	13,234					63,200	9,470
Shrimp	9,630,000	384,122			19,042,300	590,396	10,200	316
Oysters, market:								
Public, spring	3,816,100	151,532			26,400	1,760	38,500	1,984
Public, fall	1,462,700	61,626			27,400	2,070	8,800	496
Private, spring	800	77			73,300	5,600		
Private, fall	400	40			50,500	5,000		
Terrapin, diamond-back	2,000	500						
Total	18,839,600	694,972	640,500	6,405	21,322,800	629,234	308,500	15,703

Species	Tangipahoa		Terrebonne		Vermilion	
	Pounds	Value	Pounds	Value	Pounds	Value
Croaker			7,200	\$285	6,800	\$204
Drum:						
Black			24,200	963	2,000	83
Red or redfish			86,700	5,202	6,300	441
Flounders			3,300	264		
Sea catfish			1,800	54		
Sheepshead, salt-water			3,500	140	8,700	508
Spot			800	32		
Squeteagues or "sea trout":						
Spotted			60,600	5,257	31,600	2,528
White			11,300	430	2,600	104
Crabs:						
Hard	15,500	\$155	11,300	146	121,900	1,476
Soft and peelers	15,300	2,195				
Shrimp			17,393,800	539,474	301,200	9,348
Oysters, market:						
Public, spring			144,900	8,183	302,300	15,620
Public, fall			14,300	890	20,500	1,093
Private, spring			738,100	42,418	325,600	18,606
Private, fall			171,500	13,130	12,000	700
Terrapin, diamond-back			2,900	435		
Total	30,800	2,350	18,676,200	617,303	1,141,500	50,711

NOTE.—The catch as shown above for St. Bernard Parish includes the following products which were taken by Mississippi craft in Louisiana waters: Shrimp, 7,403,400 pounds, valued at \$315,097; oysters, market, spring, 3,751,400 pounds, valued at \$147,863; and oysters, market, fall, 1,462,700 pounds, valued at \$61,626. Prior to 1938 similar catches by Mississippi craft were included with the catch for Mississippi.

TEXAS

Fisheries of Texas, 1938

OPERATING UNITS: BY GEAR

Item	Haul seines	Gill nets		Trammel nets	Lines			
		Run-around	Stake		Hand	Troll	Trot with baits or snoods	Trot with hooks
	Number	Number	Number	Number	Number	Number	Number	Number
Fishermen:								
On vessels.....					95			
On boats and shore:								
Regular.....	72	70	135	112	67	1	7	36
Casual.....	48	14	5	115	218	5	36	79
Total.....	120	84	140	227	380	6	43	115
Vessels, motor.....					13			
Net tonnage.....					188			
Boats:								
Motor.....	12	16	34	103	72	4	6	42
Other.....	12	5	55	8	176		37	53
Apparatus:								
Number.....	45	114	343	107	380	6	43	96
Length, yards.....	15,135							
Square yards.....		26,850	81,925	55,850				
Hooks, baits, or snoods.....					495	6	18,560	66,000

Item	Dip nets	Otter trawls, shrimp	Pots, crab	Spears	Dredges, oyster	Tongs, oyster	By hand, oyster	Total, exclusive of duplication
	Number	Number	Number	Number	Number	Number	Number	Number
Fishermen:								
On vessels.....		127			20			228
On boats and shore:								
Regular.....	15	780	15	16	118	42		1,310
Casual.....	37	12	25	145	36	124	5	627
Total.....	52	919	40	161	174	166	5	2,165
Vessels, motor.....		59			5			70
Net tonnage.....		543			48			718
Boats:								
Motor.....		373	9		48	26		606
Other.....	32		15	23		122		382
Apparatus:								
Number.....	52	432	934	161	58	166		
Yards at mouth.....		6,391			58			

CATCH: BY GEAR

Species	Haul seines		Gill nets				Trammel nets	
			Runaround		Stake			
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Croaker.....	2,000	\$60	4,200	\$114	14,500	\$318	22,800	\$705
Drum:								
Black.....	170,900	6,836	443,000	9,774	458,100	9,918	142,700	5,708
Red or redfish.....	102,600	7,712	108,400	8,222	179,200	12,909	236,200	21,968
Flounders.....	2,600	253	2,300	230	1,100	110	9,600	949
King whiting or "kingfish".....							3,800	160
Mullet.....	300	9	1,300	52	500	20	2,200	74
Pompano.....	500	90					3,400	680
Sea catfish.....	200	6	7,600	228	600	18	11,300	345
Sheepshead, salt-water.....	3,700	201	1,700	85	2,000	100	11,600	640
Snook or sergeantfish.....	1,300	91	700	28	1,100	44	1,100	77
Spanish mackerel.....			2,800	181	1,300	85	10,300	725
Spot.....			400	12			3,500	115
Squeteagues or "sea trout":								
Spotted.....	194,300	16,308	487,000	39,399	690,600	55,594	437,800	37,958
White.....	4,300	130	14,200	443	2,600	85	13,500	467
Total.....	482,700	31,696	1,073,600	58,768	1,351,600	79,201	959,800	70,571

Fisheries of Texas, 1938—Continued

CATCH: BY GEAR—Continued

Species	Lines							
	Hand		Troll		Trot with baits or snoods		Trot with hooks	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Croaker.....	9,200	\$260					2,500	\$77
Drum:								
Black.....	103,000	3,422					239,800	9,592
Red or redfish.....	74,600	5,653					108,800	8,443
Flounders.....	1,300	124					1,200	120
Groupers.....	31,600	1,002						
Jewfish.....	7,600	230						
Kingfish or "king mackerel"			1,900	\$76				
King whiting or "kingfish"	7,200	288						
Pompano.....	1,600	288						
Sea catfish.....	2,400	72					13,000	390
Sheepshead, salt-water.....	1,800	92						
Snapper, red.....	1,279,000	103,902						
Snook or sergeantfish.....	2,600	182						
Spanish mackerel.....	45,800	2,862	1,700	85				
Spot.....	300	9						
Squeteagues or "sea trout":								
Spotted.....	121,500	10,147					46,300	3,885
White.....	52,600	1,590					18,500	557
Crabs, hard.....					331,300	\$6,768		
Total.....	1,742,100	130,123	3,600	161	331,300	6,768	430,100	23,064

Species	Dip nets		Otter trawls		Pots, crab		Spears	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Flounders.....							108,400	\$10,357
Jewfish.....			300	\$8				
Crabs, hard.....	255,000	\$6,559			385,100	\$10,523		
Shrimp.....			16,364,700	505,757				
Total.....	255,000	6,559	16,365,000	505,765	385,100	10,523	108,400	10,357

Species	Dredges		Tongs		By hand	
	Pounds	Value	Pounds	Value	Pounds	Value
Oysters, market:						
Public, spring.....	428,800	\$30,973	122,900	\$10,440	3,400	\$306
Public, fall.....	486,100	34,904	125,800	10,795	2,100	189
Private, spring.....	30,000	2,180	49,000	4,164		
Private, fall.....	48,700	3,682	59,100	5,023		
Total.....	993,600	71,744	356,800	30,422	5,500	495

OPERATING UNITS: BY COUNTIES

Item	Aransas	Brazoria	Calhoun	Cameron	Galves-ton	Harris
	Number	Number	Number	Number	Number	Number
Fishermen:						
On vessels.....	2		6	14	142	
On boats and shore:						
Regular.....	165	51	211	147	199	13
Casual.....	68	23	52	60	105	25
Total.....	235	77	269	221	446	38
Vessels, motor.....	1		3	2	41	
Net tonnage.....	13		19	20	481	
Boats:						
Motor.....	79	29	91	48	109	11
Other.....	20	15	28	83	50	17
Apparatus:						
Haul seines.....			5		6	
Length, yards.....			550		1,560	
Gill nets:						
Runaround.....	30			65		
Square yards.....	6,200			15,250		
Stake.....	18			264		
Square yards.....	2,900			63,660		

Fisheries of Texas, 1938—Continued

OPERATING UNITS: BY COUNTIES—Continued

Item	Aransas	Brazoria	Calhoun	Cameron	Galveston	Harris
Apparatus—Continued	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
Trammel nets.....	29		24		18	8
Square yards.....	20,600		11,950		3,700	2,600
Lines:						
Hand.....	27	16	9	68	98	
Hooks.....	27	16	9	82	179	
Troll.....				6		
Hooks.....				6		
Trot with baits or snoods.....					24	16
Baits or snoods.....					12,800	4,800
Trot with hooks.....		11	21			3
Hooks.....		3,700	6,100			900
Dip nets.....	36				5	
Otter trawls, shrimp.....	28	24	68	24	115	
Yards at mouth.....	409	335	1,003	350	1,735	
Pots, crab.....			710		224	
Spears.....	24	4	19	3	9	
Dredges, oyster.....	19		7		2	
Yards at mouth.....	19		7		2	
Tongs, oyster.....	19	6	16	7	26	12

Item	Jefferson	Kleberg	Mata-gorda	Nueces	San Patricio	Wallacy
Fishermen:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
On vessels.....	16		26	2	20	
On boats and shore:						
Regular.....	51	10	147	176	132	5
Casual.....	3	18	48	135	74	16
Total.....	70	28	221	313	226	21
Vessels, motor.....	4		8	1	10	
Net tonnage.....	33		71	7	74	
Boats:						
Motor.....	22	16	70	47	80	4
Other.....	3	14	20	100	19	13
Apparatus:						
Haul seines.....			1	30	3	
Length, yards.....			175	12,500	350	
Gill nets:						
Runaround.....			2	17		
Square yards.....			1,300	4,100		
Stake.....				53	8	
Square yards.....				13,800	1,565	
Trammel nets.....			13		15	
Square yards.....			6,800		10,200	
Lines:						
Hand.....	12	17		78	39	16
Hooks.....	24	17		78	47	16
Trot with baits or snoods.....	3					
Baits or snoods.....	960					
Trot with hooks.....		20		20	12	9
Hooks.....		18,300		19,400	5,400	12,200
Dip nets.....				4	7	
Otter trawls, shrimp.....	24		55	21	73	
Yards at mouth.....	367		790	302	1,100	
Spears.....			21	66	15	
Dredges, oyster.....			27	3		
Yards at mouth.....			27	3		
Tongs, oyster.....			31	43	6	

CATCH: BY COUNTIES

Species	Aransas		Brazoria		Calhoun		Cameron	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Croaker.....	3,800	\$114	800	\$32	4,800	\$144	15,600	\$312
Drum:								
Black.....	64,100	2,564	1,600	64	41,900	1,676	852,000	17,040
Red or redbfish.....	68,200	5,456	13,900	973	63,100	4,504	195,600	13,692
Flounders.....	29,400	2,940	500	50	18,200	1,820	1,700	170
Groupers.....			600	24			1,200	38
Jewfish.....			200	7			1,100	36
Kingfish or "king mackerel".....							1,900	76

Fisheries of Texas, 1938—Continued

CATCH: BY COUNTIES—Continued

Species	Aransas		Brazoria		Calhoun		Cameron	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Mullet.....								
Pompano.....					3,400	\$680		
Sea catfish.....	9,400	282			18,900	567		
Sheepshead, salt-water.....					3,100	155	2,700	\$135
Snapper, red.....			21,000	\$1,680			98,300	7,064
Snook or sergeantfish.....					2,400	168	1,800	72
Spanish mackerel.....	7,600	532			5,900	440	3,900	185
Spot.....							700	21
Squeteagues or "sea trout":								
Spotted.....	145,600	13,104	1,200	96	114,200	9,902	1,105,700	88,456
White.....	2,000	87	300	12	3,100	119	2,600	104
Crabs, hard.....	213,000	5,538			282,100	8,463		
Shrimp.....	1,087,100	33,699	600,000	18,460	1,386,400	42,978	451,500	13,982
Oysters, market:								
Public, spring.....	148,000	11,925	3,800	200	5,500	495	6,600	594
Public, fall.....	200,700	16,092	4,100	424	8,000	714	4,000	360
Private, spring.....					79,000	6,344		
Private, fall.....					167,800	8,705		
Total.....	1,981,300	92,361	708,000	22,112	2,148,000	87,874	2,746,200	142,347

Species	Galveston		Harris		Jefferson		Kleberg	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Croaker.....	5,000	\$150	1,500	\$40				
Drum:								
Black.....	22,900	916	7,800	312			118,800	\$4,752
Red or redfish.....	126,600	10,128	16,500	1,230			49,100	3,208
Flounders.....	4,900	411	400	40			1,000	100
Groupers.....	27,500	859			1,100	\$33		
Jewfish.....	2,900	86			700	19		
King whiting or "kingfish".....	3,200	128						
Mullet.....	2,100	63						
Sea catfish.....	500	16	500	20				
Sheepshead, salt-water.....	7,800	468						
Snapper, red.....	975,300	80,444			172,000	13,760		
Spanish mackerel.....	2,100	189						
Spot.....	2,000	70						
Squeteagues or "sea trout":								
Spotted.....	178,700	16,001	41,200	2,876			30,000	2,400
White.....	5,900	177					900	27
Crabs, hard.....	267,500	5,390	181,000	3,620	6,800	238		
Shrimp.....	4,171,700	129,323			1,109,400	35,391		
Oysters, market:								
Public, spring.....	37,300	3,034	18,000	1,763				
Public, fall.....	20,000	1,774	9,000	915				
Total.....	5,863,900	249,657	275,700	10,816	1,290,000	49,441	190,800	10,487

Species	Matagorda		Nueces		San Patricio		Wallacy	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Croaker.....	6,000	\$180	1,100	\$33	16,800	\$529		
Drum:								
Black.....	49,900	1,996	374,000	10,950	65,500	2,620	59,000	\$2,360
Red or redfish.....	73,500	5,514	188,700	14,851	54,100	3,791	19,500	1,560
Flounders.....	18,000	1,800	39,300	3,594	12,900	1,168	200	20
Groupers.....			900	36	300	12		
Jewfish.....			3,000	90				
King whiting or "kingfish".....	800	40	7,000	280				
Mullet.....			1,600	64				
Pompano.....			2,100	378				
Sea catfish.....			900	27	3,900	117	1,000	30
Sheepshead, salt-water.....	3,400	170	3,100	155	700	35		
Snapper, red.....			7,800	678	4,600	276		
Snook or sergeantfish.....					2,600	182		
Spanish mackerel.....	2,200	154	32,500	1,960	7,600	456	200	12
Spot.....	1,500	45						
Squeteagues or "sea trout":								
Spotted.....	89,000	8,010	142,300	11,384	128,800	10,990	800	72
White.....	5,500	220	79,700	2,391	4,500	135		
Crabs, hard.....			17,500	525	3,500	76		
Shrimp.....	2,886,500	89,484	644,500	19,979	3,967,600	122,461		
Oysters, market:								
Public, spring.....	303,000	21,085	28,000	2,255	4,000	283		
Public, fall.....	296,300	19,762	70,100	5,723	1,800	124		
Total.....	3,735,600	148,460	1,544,100	75,353	4,279,200	143,255	80,700	4,054

FISHERIES OF THE PACIFIC COAST STATES ¹¹

The yield of the commercial fisheries of the Pacific Coast States (Washington, Oregon, and California) during 1938 amounted to 1,525,884,600 pounds, valued at \$26,086,301 to the fishermen, representing a decrease of 3 percent in volume and 9 percent in value as compared with the catch in the previous year. These fisheries gave employment to 23,635 fishermen as compared with 21,555 in 1937.

There were 341 fishery wholesale and manufacturing establishments in the 3 States in 1938 as compared with 330 in 1937. During 1938 these establishments employed 18,115 persons, paid \$10,282,514 in salaries and wages, and produced manufactured products (canned, cured, packaged, and byproducts) valued at \$48,621,239. In 1937 the wholesale and manufacturing firms employed 19,792 persons, paid \$10,669,409 in salaries and wages, and produced manufactured products valued at \$56,149,695.

Fisheries of the Pacific Coast States, 1938

SUMMARY OF CATCH

Product	Washington		Oregon	
	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>
Fish	146,254,300	\$5,542,490	64,825,700	\$2,054,579
Shellfish, etc.	13,376,700	1,089,688	6,902,300	345,006
Total	159,631,000	6,632,178	71,728,000	2,399,585

Product	California		Total	
	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>
Fish	1,285,239,500	\$16,389,719	1,496,319,500	\$23,986,788
Shellfish, etc.	9,286,100	664,819	29,565,100	2,099,513
Total	1,294,525,600	17,054,538	1,525,884,600	26,086,301

OPERATING UNITS: BY STATES

Item	Washington				Oregon		
	Puget Sound district	Coastal district	Columbia River district	Total	Columbia River district	Coastal district	Total
Fishermen:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
On vessels	3,547	103	21	3,671	110	91	201
On boats and shore	2,130	5,134	1,015	8,279	1,900	1,440	3,340
Total	5,677	5,237	1,036	11,950	2,010	1,531	3,541
Vessels:							
Motor	573	72	13	658	58	30	88
Net tonnage	12,002	565	92	12,659	523	381	904
Sail	3			3			
Net tonnage	1,421			1,421			
Total vessels	576	72	13	661	58	30	88
Total net tonnage	13,423	565	92	14,080	523	381	904
Boats:							
Motor	769	466	721	1,956	1,023	947	1,970
Other	444	243	33	720	74	114	188
Accessory boats	321			321	1	1	2

¹¹ Data on the operating units and catch of the fisheries of the Pacific Coast States have been taken largely from statistics collected by the various State agencies. Supplementary surveys, compilations, and analyses have been made by agents of this Bureau in order that the figures may be presented in a manner comparable with those of other sections. While statistics of the fisheries of California are for the calendar year, those for Oregon and Washington are for the fiscal year ending Mar. 31, 1939, except that statistics of the halibut fishery in these latter States are for the calendar year.

Fisheries of the Pacific Coast States, 1938—Continued

OPERATING UNITS: BY STATES—Continued

Item	Washington				Oregon		
	Puget Sound district	Coastal district	Columbia River district	Total	Columbia River district	Coastal district	Total
Apparatus:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
Purse seines:							
Salmon.....	229			229			
Length, yards.....	125,950			125,950			
Pilchard or sardine ¹ :	46			46	1	1	2
Length, yards.....	18,390			18,390	460	470	930
Haul seines.....	177	4	3	184	31	8	39
Length, yards.....	13,008	280	500	13,788	17,393	1,336	18,729
Gill nets:							
Drift.....	452	217	474	1,143	719	437	1,156
Square yards.....	682,520	418,376	1,312,032	2,412,928	2,291,094	615,733	2,906,827
Set.....	25	120		125	153	859	1,012
Square yards.....	1,200	26,500		27,700	42,840	309,240	352,080
Lines:							
Trawl, set, and hand.....	26,655		369	27,024	1,153	361	1,514
Hooks.....	587,283		28,290	615,573	28,790	9,860	38,650
Troll.....	1,245	1,045	400	2,690	965	650	1,615
Hooks.....	5,503	4,702	1,768	11,973	4,265	2,815	7,080
Pound nets.....	2			2	32		32
Brush weirs.....	4			4			
Dip nets.....	14	76	287	377	144		144
Reef nets.....	74			74			
Beam trawls.....	8			8			
Yards at mouth.....	53			53			
Otter trawls.....	61			61		1	1
Yards at mouth.....	915			915		20	20
Traps:							
Crab.....	2,673	3,185		5,858		19,825	19,825
Crawfish, fresh-water.....					1,395		1,395
Octopus.....	270			270			
Dredges, oyster.....		2		2			
Yards at mouth.....		4		4			
Tongs and rakes.....	149	220		369		23	23
Shovels.....	476	4,453		4,929		276	276

Item	California						Grand total
	North-ern district	San Fran-cisco district	Mon-te-rey district	San Pedro district	San Diego district	Total	
Fishermen:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
On vessels.....	40	1,197	627	2,290	1,209	5,363	9,235
On boats and shore.....	265	838	423	993	262	2,781	14,400
Total.....	305	2,035	1,050	3,283	1,471	8,144	23,635
Vessels:							
Steam.....		1				1	1
Net tonnage.....		32				32	32
Motor.....	21	124	66	263	121	595	1,341
Net tonnage.....	185	5,201	2,740	9,724	7,712	25,562	39,125
Sail.....							3
Net tonnage.....							1,421
Total vessels.....	21	125	66	263	121	596	1,345
Total net tonnage.....	185	5,233	2,740	9,724	7,712	25,594	40,578

¹ Used in the pilchard fishery of the Washington and Oregon coasts by Puget Sound purse-seine vessels. See separate sections for catch statistics.

² Fished only on Indian reservations.

NOTE.—Statistics on the operating units for Washington include 50 motor vessels having a total capacity of 2,344 net tons and a total crew of 512 men, which also fished in California water and contributed to the catch in that State. The following gear was operated by these craft: 46 pilchard or sardine purse seines and 124 set and hand lines. Operating units for Oregon include 26 motor vessels, having a total capacity of 348 net tons, 18 motor boats, and 68 fishermen, which also operated in California waters and contributed to the catch in that State. These craft operated the following gear: 2 pilchard or sardine purse seines, and 192 troll lines. Statistics on the operating units for California include 32 motor vessels having a total capacity of 2,073 net tons, and a total crew of 360 men, which also operated pilchard or sardine purse seines in Washington and Oregon waters and contributed to the catch in those States. Thirteen of these vessels operated in Washington, 11 in Oregon, and 8 in both States.

Fisheries of the Pacific Coast States, 1938—Continued

OPERATING UNITS: BY STATES—Continued

Item	California						Grand total
	North- ern district	San Fran- cisco district	Mon- terey district	San Pedro district	San Diego district	Total	
Vessels—Continued.							
Boats:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
Motor.....	211	524	214	588	120	1,657	5,583
Other.....	3	41	9	27	1	81	989
Accessory boats.....		101	68	294	138	601	924
Apparatus:							
Purse seines:							
Mackerel.....			2	16		18	18
Length, yards.....			850	7,129		7,979	7,979
Salmon.....							229
Length, yards.....							125,950
Pilchard or sardine.....		87	44	94		225	273
Length, yards.....		34,245	16,458	37,618		88,321	107,641
Tuna.....		4	10	79		93	93
Length, yards.....		1,080	6,075	47,480		54,635	54,635
Lampara and ring nets:							
Mackerel.....		1		51	14	66	66
Length, yards.....		550		29,138	4,970	34,658	34,658
Pilchard or sardine.....		12	13	64	18	107	107
Length, yards.....		3,451	3,628	33,323	4,680	45,082	45,082
Tuna.....				17	2	19	19
Length, yards.....				9,775	640	10,415	10,415
Other.....			15	25	1	41	41
Length, yards.....			3,895	6,671	200	10,766	10,766
Haul seines.....		3				3	226
Length, yards.....		400				400	32,917
Gill nets:							
Drift:							
Barracuda.....				17	7	24	24
Square yards.....				106,012	29,626	135,638	135,638
Salmon.....		144				144	2,443
Square yards.....		465,332				465,332	5,785,087
Sea bass.....		6	19			25	25
Square yards.....		12,800	35,720			48,520	48,520
Shad.....		137				137	137
Square yards.....		389,113				389,113	389,113
Set:							
"California halibut".....			18			18	18
Square yards.....			55,392			55,392	55,392
Crab.....			33			33	33
Square yards.....			55,994			55,994	55,994
Salmon.....							1,137
Square yards.....							379,780
Sea bass.....				22	10	32	32
Square yards.....				73,040	41,703	114,743	114,743
Miscellaneous.....	12	55	32	26	6	131	131
Square yards.....	9,600	86,075	37,110	28,798	8,318	169,901	169,901
Trammel nets.....				24	10	34	34
Square yards.....				121,733	96,613	218,346	218,346
Lines:							
Trawl, set, and hand.....	316	1,600	764	2,837	1,387	6,904	35,442
Hooks.....	24,159	140,596	58,564	496,379	31,257	750,995	1,405,178
Troll.....	1,299	992	1,362	2,792	608	7,053	11,358
Hooks.....	5,436	2,855	3,682	2,842	608	15,423	34,476
Pound nets.....							34
Brush weirs.....							4
Fyke nets.....		1,660				1,660	1,660
Dip nets.....	29	4				33	554
Bag nets, shrimp.....		9				9	9
Length, yards.....		6,496				6,496	6,496
Reef nets.....							74
Paranzella nets.....		9		3		12	12
Yards at mouth.....		150		50		200	200
Beam trawls.....		13				13	21
Yards at mouth.....		87				87	140
Otter trawls.....		3	9			12	74
Yards at mouth.....		35	105			140	1,075
Traps:							
Crab.....	963	4,950	68			5,981	31,664
Crawfish, fresh-water.....							1,395
Octopus.....			94			94	364
Sea crawfish.....				4,498	963	5,461	5,461
Harpoons, swordfish.....				47	25	72	72
Dredges, oyster.....							2
Yards at mouth.....							4
Tongs and rakes.....	3	54	4	4		65	457
Shovels.....	10	78	30	66		184	5,389
Abalone outfits.....			13	5		18	18

Fisheries of the Pacific Coast States, 1938—Continued

CATCH: BY STATES

Species	Washington		Oregon	
	Pounds	Value	Pounds	Value
FISH				
Carp.....	90,800	\$2,724		
Cod.....	10,351,800	141,666		
Flournders:				
"Sole".....	4,476,700	130,935	32,800	\$1,187
Other.....	606,500	14,384	185,200	1,963
Halibut.....	23,084,600	1,875,944	409,300	27,326
Herring.....	341,400	3,824	25,500	383
"Lingcod".....	2,893,700	71,147	270,300	7,047
Perch.....	152,800	4,966	4,200	92
Pilchard or sardine.....	52,976,100	291,894	34,035,700	187,196
Rockfishes.....	722,800	30,071	139,700	3,018
Sablefish.....	2,768,900	113,607	124,400	3,778
Salmon:				
Blueback, red, or sockeye.....	10,598,700	809,933	292,700	35,124
Chinook or king.....	9,488,600	934,667	11,038,600	963,561
Chum or keta.....	10,353,000	241,439	1,977,700	23,996
Humpback or pink.....	39,500	1,185		
Silver or coho.....	9,101,900	567,928	7,512,500	362,053
Shad.....	52,700	1,749	406,700	16,034
Sharks, including grayfish.....	578,100	4,153		
Smelts:				
Eulachon.....	2,536,900	65,920	527,300	35,856
Other.....	438,600	21,055	1,000	35
Steelhead trout.....	403,800	25,668	1,860,200	114,199
Striped bass.....			44,100	2,192
Sturgeon.....	43,600	1,655	68,600	1,255
Tuna, albacore.....	4,132,800	185,976	5,868,900	268,284
Total.....	146,254,300	5,542,490	64,825,700	2,054,579
SHELLFISH, ETC.				
Crabs.....	2,612,600	116,676	6,408,800	291,311
Crawfish, fresh-water.....			93,700	8,435
Shrimp.....	25,100	3,622		
Clams:				
Hard.....	862,600	66,680		
Razor.....	1,125,100	187,512	103,300	24,595
Mixed.....			92,700	7,961
Octopus.....	64,200	3,097		
Oysters, market:				
Pacific.....	8,378,300	523,217	195,100	8,240
Western or native.....	262,200	182,299	8,700	4,464
Scallops, bay.....	20,400	5,147		
Squid.....	15,600	988		
Trepang.....	10,600	530		
Total.....	13,376,700	1,089,688	6,902,300	345,006
Grand total.....	159,631,000	6,632,178	71,728,000	2,399,585

Species	California ¹		Total	
	Pounds	Value	Pounds	Value
FISH				
Anchovies.....	735,200	\$9,306	735,200	\$9,306
Barracuda.....	2,529,500	158,677	2,529,500	158,677
Cabrilla.....	145,100	7,337	145,100	7,337
Carp.....	38,900	847	129,700	3,571
Catfish.....	312,300	40,537	312,300	40,537
Cod.....			10,351,800	141,666
Flournders:				
"California halibut".....	1,094,400	87,521	1,094,400	87,521
"Sole".....	7,737,600	444,442	12,247,100	576,564
Other.....	1,268,000	58,009	2,059,700	74,356
Flyingfish.....	62,900	2,337	62,900	2,337
Groupers.....	68,000	3,499	68,000	3,499
Hake.....	36,400	368	36,400	368
Halibut.....	405,800	27,952	23,899,700	1,931,222
Hardhead.....	12,900	1,401	12,900	1,401
Herring.....	504,900	2,759	871,800	6,966
Horse mackerel.....	4,133,900	45,651	4,133,900	45,651
Kingfish.....	493,200	13,014	493,200	13,014
"Lingcod".....	646,000	26,808	3,810,000	105,002
Mackerel.....	79,848,000	858,865	79,848,000	858,865

¹ Includes the catch taken off Latin America.

Fisheries of the Pacific Coast States, 1938—Continued

CATCH: BY STATES—Continued

Species	California		Total	
	Pounds	Value	Pounds	Value
FISH—continued				
Mullet.....	3,800	\$295	3,800	\$295
Perch.....	155,800	7,028	312,800	12,086
Pilchard or sardine.....	1,023,389,500	5,832,273	1,110,401,300	6,311,363
Pompano.....	1,200	356	1,200	356
Rock bass.....	286,100	16,112	286,100	16,112
Rockfishes.....	3,643,100	157,331	4,505,600	190,420
Rudderfish.....	27,600	1,482	27,600	1,482
Sablefish.....	415,800	19,400	3,309,100	136,785
Salmon:				
Blueback, red, or sockeye.....			10,891,400	845,057
Chinook or king.....	3,831,700	285,583	24,358,900	2,183,811
Chum or keta.....			12,330,700	265,435
Humpback or pink.....			39,500	1,185
Silver or coho.....			16,614,700	929,981
Sculpin.....	155,400	9,411	155,400	9,411
Sea bass:				
Black.....	407,500	23,937	407,500	23,937
White.....	628,900	54,393	628,900	54,393
Shad.....	1,338,700	50,646	1,798,100	68,429
Sharks, including grayfish.....	7,513,800	137,343	8,091,900	141,496
Sheepshead.....	72,000	2,787	72,000	2,787
Skates.....	528,300	5,006	528,300	5,006
Smelts:				
Eulachon.....			3,084,200	101,776
Other.....	567,900	26,911	1,007,500	48,001
Spanish mackerel.....	12,300	716	12,300	716
Splittail.....	11,100	398	11,100	398
Squawfish.....	1,000	37	1,000	37
Steelhead trout.....			2,264,000	139,867
Striped bass.....			44,100	2,192
Sturgeon.....			112,200	2,910
Suckers.....	500	17	500	17
Swordfish.....	722,500	80,802	722,500	80,802
Tomcod.....	3,100	49	3,100	49
Tuna and tunalike fishes:				
Albacore.....	7,724,600	511,819	17,726,300	966,079
Bluefin.....	17,728,000	983,051	17,728,000	983,051
Bonito.....	7,753,000	285,615	7,753,000	285,615
Skipjack or striped tuna.....	22,653,600	1,132,680	22,653,600	1,132,680
Yellowfin.....	78,317,800	4,705,092	78,317,800	4,705,092
Whitebait.....	106,700	6,909	106,700	6,909
Whitefish.....	68,000	3,493	68,000	3,493
Yellowtail.....	6,812,300	253,225	6,812,300	253,225
Other fish.....	284,900	6,192	284,900	6,192
Total.....	1,285,239,500	16,389,719	1,496,319,500	23,986,788
SHELLFISH, ETC.				
Crabs.....	3,877,500	249,835	12,898,900	657,822
Crawfish, fresh-water.....			93,700	8,435
Sea crawfish or spiny lobster.....	1,198,000	178,634	1,198,000	178,634
Shrimp.....	1,847,400	36,841	1,872,500	40,463
Abalone.....	424,300	91,979	424,300	91,979
Clams:				
Hard.....	12,400	2,705	875,000	69,385
Pismo.....	53,600	11,391	53,600	11,391
Razor.....			1,228,400	212,107
Soft.....	27,900	5,835	27,900	5,835
Mixed.....			92,700	7,961
Octopus.....	32,600	2,103	96,800	5,110
Oysters, market:				
Eastern.....	48,200	17,677	48,200	17,677
Pacific.....	161,000	30,688	8,734,400	562,145
Western or native.....	3,900	1,288	274,800	188,051
Scallops, bay.....			20,400	5,147
Squid.....	1,599,300	35,843	1,614,900	36,841
Trepang.....			10,600	530
Total.....	9,286,100	664,819	29,565,100	2,099,513
Grand total.....	1,294,525,600	17,054,538	1,525,884,600	26,086,301

Industries related to the fisheries of the Pacific Coast States, 1938

OPERATING UNITS, SALARIES, AND WAGES

Item	Washington	Oregon	California	Total
Transporting:				
Persons engaged:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
On vessels.....	134	41	15	190
On boats.....	1			1
Total.....	135	41	15	191
Vessels, motor.....	51	20	3	74
Net tonnage.....	1,227	257	55	1,539
Boats.....	1			1
Wholesale and manufacturing:				
Establishments.....	117	50	174	341
Persons engaged:				
Proprietors.....	67	33	215	315
Salaried employees.....	275	108	772	1,155
Wage earners:				
Average for season.....	3,007	1,449	12,189	16,645
Average for year.....	1,237	718	4,110	6,065
Paid to salaried employees.....	\$636,310	\$266,757	\$2,122,430	\$3,025,497
Paid to wage earners.....	\$1,318,575	\$735,704	\$5,202,738	\$7,257,017
Total salaries and wages.....	\$1,954,885	\$1,002,461	\$7,325,168	\$10,282,514
Fishermen manufacturing.....	60	32	41	133

PRODUCTS MANUFACTURED

Item	Washington		Oregon		California	
	<i>Quantity</i>	<i>Value</i>	<i>Quantity</i>	<i>Value</i>	<i>Quantity</i>	<i>Value</i>
By manufacturing firms:						
Barracuda, fresh fillets..... pounds.					300,000	\$44,575
Cabrilla, fresh fillets..... do.					85,000	16,300
Cod:						
Fresh fillets..... do.	118,635	\$11,946				
Salted:						
Dry, partly boned..... do.	1,714,005	109,660			(¹)	(¹)
Boneless and absolutely boneless..... pounds.	837,497	126,258			(¹)	(¹)
Flounders:						
Fresh fillets..... do.	829,977	98,447	(¹)	(¹)	1,564,000	243,445
Fresh steaks..... do.					420,000	86,500
Halibut, frozen steaks..... do.	33,147	4,770				
"Lingcod," fresh fillets..... do.	117,992	9,505	(¹)	(¹)	140,000	22,500
Mackerel:						
Canned..... standard cases					949,736	2,757,004
Meal..... tons					1,574	58,580
Oil..... gallons					86,364	25,878
Pilchard or sardine:						
Canned..... standard cases					2,261,678	7,102,358
Meal..... tons	4,633	161,752	2,941	\$102,602	82,353	3,173,538
Oil..... gallons	1,213,639	360,896	718,830	213,525	15,607,098	4,630,916
Rockfishes, fresh fillets..... pounds.	(¹)	(¹)	(¹)	(¹)	1,145,000	179,850
Sablefish:						
Salted..... do.	182,740	10,107				
Kippered..... do.	450,149	33,558			238,875	48,122
Salmon:						
Frozen steaks..... do.	7,386	1,025	(¹)	(¹)		
Salted, mild-cured ² do.	3,211,825	671,480	1,233,310	254,923	1,377,675	242,471
Kippered..... do.	2,002,805	252,500	(¹)	(¹)		
Smoked..... do.	336,394	57,191	52,671	15,505	187,522	70,724
Canned:						
Blueback, red, or sockeye standard cases	138,232	1,903,772	11,931	220,158		
Chinook, or king..... do.	29,953	404,756	141,102	2,042,511		
Chum or keta..... do.	25,058	95,299	33,542	125,827		
Humpback or pink..... do.	380	2,376				
Silver or coho..... do.	13,495	123,141	63,772	638,850		
Steelhead trout..... do.	1,611	15,996	13,645	156,206		
Eggs for bait..... do.	4,454	80,436	(¹)	(¹)		
Oil..... gallons			24,287	34,904		

¹ The production of this item has been included under "Unclassified products."² This item is usually an intermediate product and although included in the total, may be shown in its final stage of processing in this or another State.³ Includes the production of both edible and industrial salmon oils.

Industries related to the fisheries of the Pacific Coast States, 1938—Continued

PRODUCTS MANUFACTURED—Continued

Item	Washington		Oregon		California	
	Quantity	Value	Quantity	Value	Quantity	Value
By manufacturing firms—Continued.						
Sea bass:						
Black, fresh steaks	pounds				210,000	\$33,600
White, fresh filets	do				143,000	28,600
Shad:						
Canned	standard cases	(1)	2,290	\$6,840	7,655	20,390
Roe, canned	do	60	895	29,330	2,051	64,853
Sharks, including grayfish, fresh filets	pounds				50,000	5,000
Sheepshead, fresh filets	do				25,000	3,750
Swordfish, fresh steaks	do				116,400	28,280
Totouava, fresh steaks	do				1,790,000	358,000
Tuna and tunalike fishes:						
Canned:						
Albacore	standard cases	(1)	43,834	281,247	324,184	1,928,656
Bluefin	do				312,748	1,590,114
Bonito	do				157,970	676,595
Striped	do				348,254	1,729,108
Tonno	do				140,400	946,725
Yellowfin	do				1,306,132	7,461,671
Yellowtail	do				83,819	363,908
Meal	tons		(1)	(1)	9,553	347,296
Oil	gallons		(1)	(1)	178,334	52,109
Crabs:						
Meat, packaged, fresh-cooked	pounds	136,038	52,230	806,975	266,725	
Canned	standard cases	(1)	(1)	3,138	68,949	
Abalone steaks	pounds				429,343	151,666
Clams, hard:						
Fresh-shucked	gallons	3,493	4,473			
Canned:						
Whole	standard cases	16,551	66,080			
Minced	do	12,948	60,356			
Juice	do	2,507	5,876			
Shells crushed for poultry feed	tons	3,019	23,524			
Clams, razor, canned, whole and minced	standard cases	53,439	438,041	(1)	(1)	
Oysters:						
Pacific:						
Fresh-shucked	gallons	306,365	339,753	69,398	70,678	(1)
Canned	standard cases	105,672	437,157	(1)	(1)	(1)
Western or native, fresh-shucked	gallons	18,391	143,633	7,082	55,809	(1)
Shell products:						
Poultry feed	tons	5,336	49,459	(1)	(1)	11,696
Lime	do	3,304	21,293			(1)
Unclassified:						
Packaged	pounds	156,225	15,523	(1)	(1)	(1)
Salted	do	138,885	13,375	(1)	(1)	662,906
Canned:						
Cat and dog food	standard cases					183,006
Other	do	18,015	127,563	9,790	68,897	12,118
Meal	tons	798	39,855	(1)	(1)	2,427
Oil	gallons	151,927	777,269	(1)	(1)	138,878
Miscellaneous			13,771	71,696		808,514
Total			7,165,828		4,728,182	36,727,229

¹ The production of this item has been included under "Unclassified products."

² Includes frozen filets of flounders, halibut, and "lingcod"; fresh filets of rockfishes; and fresh-shucked bay scallops.

³ This item has been included with "Miscellaneous."

⁴ Includes salted cod tongues, salmon bellies, and salmon eggs for caviar; and spiced sea herring.

⁵ Includes dry salted barracuda, bonito, cod, mackerel, pilchards, black and white sea bass, tuna and yellowtail; salted, boneless, and absolutely boneless cod; and mild-cured shad.

⁶ Includes canned albacore tuna, shad, crabs, hard clam chowder, and smoked Pacific oysters.

⁷ Includes canned salmon eggs for bait, kippered sturgeon, razor clams, razor clam juice, Pacific oysters, and cat and dog food.

⁸ Includes canned swordfish, tuna roe, squid, shore dinners, and salted cod.

⁹ Includes salmon, salmon egg and shark meal.

¹⁰ Includes shrimp, shark and miscellaneous fish meals; and miscellaneous green scrap.

¹¹ Includes salmon, shark, shark liver, tuna liver, halibut viscera, and miscellaneous liver oils.

¹² Includes shark body, shark liver, tuna liver, miscellaneous fish and miscellaneous fish liver oils.

¹³ Includes smoked sea herring blotters, and clam-shell lime.

¹⁴ Includes fresh filets of flounders, "lingcod", and rockfishes; frozen filets of salmon; frozen steaks of salmon; kippered salmon and sturgeon; salmon, salmon egg and tuna meals; tuna oil, and oyster-shell poultry feed.

¹⁵ Includes fresh filets of sablefish; fresh-shucked Pacific and native oysters; smoked barracuda, chubs, sea herring blotters, mackerel, bonito, and yellowtail; sun-dried shrimp; marine-shell novelties; oyster-shell lime; kelp products, and liquid glue.

Industries related to the fisheries of the Pacific Coast States, 1938—Continued

PRODUCTS MANUFACTURED—Continued

Item	Washington		Oregon		California	
	Quantity	Value	Quantity	Value	Quantity	Value
By fishermen:						
Cod, green salted ² pounds	3,065,450	\$129,480				
Cod tongues, salted..... do	14,325	1,340				
Crab meat, packaged, fresh-cooked pounds			8,735	\$2,621		
Shrimp:						
Sun-dried..... do					86,634	\$12,129
Bran..... tons					80	1,600
Clams, mixed, fresh-shucked gallons			1,392	1,740		
Scallops, bay, fresh-shucked do	872	1,962				
Total.....		132,782		4,361		13,729
Grand total.....		7,298,610		4,732,543		36,740,958

² This item is usually an intermediate product and although included in the total, may be shown in its final stage of processing in this or another State.

NOTE.—The total value of manufactured products in the Pacific Coast States was as follows: By manufacturing establishments, \$48,621,239; and by fishermen, \$150,872. Some of the above products may have been imported from another State or foreign country; therefore, they cannot be correlated directly with the catch within the State. All of the persons engaged in the preparation of fishermen's manufactured products have also been included as fishermen.

WASHINGTON

Fisheries of Washington, 1938

CATCH: BY DISTRICTS

Species	Puget Sound district		Coastal district		Columbia River district	
	Pounds	Value	Pounds	Value	Pounds	Value
FISH						
Carp.....					90,800	\$2,724
Cod ¹	10,351,800	\$141,666				
Flounders:						
" Sole".....	4,470,600	130,718	4,700	\$189	1,400	28
Other.....	556,300	13,982			40,200	402
Grayfish.....	578,100	4,153				
Halibut.....	23,068,800	1,874,949	7,200	440	8,600	555
Herring.....	341,400	3,824				
" Lingcod".....	2,816,900	69,933	74,100	1,152	2,700	62
Perch.....	152,800	4,966				
Pilchard or sardine.....	10,300	582	52,965,800	291,312		
Rockfishes.....	704,500	29,745	7,100	124	11,200	202
Sablefish.....	2,715,200	111,960	700	14	53,000	1,633
Salmon:						
Blueback, red, or sockeye.....	9,865,300	723,127	601,000	70,918	132,400	15,888
Chinook or king.....	4,339,900	478,501	1,827,500	165,227	3,321,200	290,939
Chum or keta.....	8,248,200	206,204	1,323,200	27,419	781,600	7,816
Humpback or pink.....	39,500	1,185				
Silver or coho.....	5,798,500	392,067	1,691,600	89,207	1,611,800	86,654
Shad.....					52,700	1,749
Smelt:						
Eulachon.....					2,556,900	65,920
Surf or silver.....	180,500	12,039	258,100	9,016		
Steelhead trout.....			36,000	3,600	367,800	22,068
Sturgeon.....			12,000	1,080	31,600	575
Tuna, albacore.....	1,192,100	53,559	2,251,600	101,132	689,100	31,285
Total.....	75,440,700	4,253,160	61,060,600	760,830	9,753,000	528,500
SHELLFISH, ETC.						
Crabs.....	512,400	15,026	2,100,200	101,650		
Shrimp.....	25,100	3,622				
Clams:						
Hard:						
Butter.....	421,300	26,963				
Little neck.....	441,300	39,717				
Razor.....			1,125,100	187,512		
Octopus.....	64,200	3,007				
Oysters, market:						
Pacific.....	894,000	67,052	7,484,300	456,165		
Western or native.....	261,300	181,804	900	495		
Scallops, bay.....	20,400	5,147				
Squid.....	15,600	998				
Trepang.....	10,600	530				
Total.....	2,666,200	343,866	10,710,500	745,822		
Grand total.....	78,106,900	4,597,026	71,771,100	1,506,652	9,753,000	528,500

¹ Nearly all of the cod were taken off Alaska.

Fisheries of the Puget Sound district of Washington, 1938

OPERATING UNITS: BY GEAR

Item	Purse seines		Haul seines	Gill nets		Lines		Pound nets ²	Brush weirs
	Salmon	Pilchard or sardine ¹		Drift	Set ²	Trawl, set, and hand	Troll		
Fishermen:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
On vessels.....	1,724	485	44	-----	-----	1,227	312	-----	-----
On boats and shore.....	52	-----	408	484	5	305	124	4	4
Total.....	1,776	485	452	484	5	1,532	436	4	4
Vessels:									
Motor.....	216	46	11	-----	-----	147	166	-----	-----
Net tonnage.....	4,732	2,263	68	-----	-----	4,272	1,264	-----	-----
Sail.....	-----	-----	-----	-----	-----	3	-----	-----	-----
Net tonnage.....	-----	-----	-----	-----	-----	1,421	-----	-----	-----
Total vessels.....	216	46	11	-----	-----	150	166	-----	-----
Total net tonnage.....	4,732	2,763	68	-----	-----	5,693	1,264	-----	-----
Boats:									
Motor.....	13	-----	114	452	5	80	83	2	2
Other.....	-----	-----	63	-----	-----	141	-----	-----	2
Accessory boats.....	229	46	-----	-----	-----	62	-----	-----	-----
Apparatus:									
Number.....	229	46	177	452	5	26,655	1,245	2	4
Length, yards.....	125,950	18,390	13,008	-----	-----	-----	-----	-----	-----
Square yards.....	-----	-----	-----	682,520	1,200	-----	-----	-----	-----
Hooks.....	-----	-----	-----	-----	-----	587,283	5,503	-----	-----

Item	Dip nets	Reef nets	Beam trawls	Otter trawls	Traps		Tongs and rakes, oyster	Shovels	Total, exclusive of duplication
					Crab	Octopus			
Fishermen:	<i>Number</i>	<i>Number</i>	Number	Number	Number	Number	Number	Number	<i>Number</i>
On vessels.....	-----	-----	15	190	2	-----	-----	-----	3,547
On boats and shore.....	14	296	9	9	81	15	149	476	2,130
Total.....	14	296	24	199	83	15	149	476	5,677
Vessels:									
Motor.....	-----	-----	5	58	1	-----	-----	-----	573
Net tonnage.....	-----	-----	43	1,057	9	-----	-----	-----	12,002
Sail.....	-----	-----	-----	-----	-----	-----	-----	-----	3
Net tonnage.....	-----	-----	-----	-----	-----	-----	-----	-----	1,421
Total vessels.....	-----	-----	5	58	1	-----	-----	-----	576
Total net tonnage.....	-----	-----	43	1,057	9	-----	-----	-----	13,423
Boats:									
Motor.....	14	-----	3	3	67	10	37	-----	769
Other.....	-----	148	-----	-----	14	5	105	-----	444
Accessory boats.....	-----	-----	-----	-----	-----	-----	-----	-----	321
Apparatus:									
Number.....	14	74	8	61	2,673	270	149	476	-----
Yards at mouth.....	-----	-----	53	915	-----	-----	-----	-----	-----

¹ Operated in the Washington coast, Oregon, and California pilchard or sardine fishery. See separate sections for catch statistics. Of the total vessels, 15 operated in the pilchard or sardine fishery exclusively in California. These vessels also engaged in the halibut and salmon fisheries from Puget Sound earlier in the year. The remaining vessels operated in the Northwest pilchard or sardine fishery, as well as in California.

² Fished only on Indian reservations.

Fisheries of the Puget Sound district of Washington, 1938—Continued

CATCH: BY GEAR

Species	Purse seines		Haul seines ¹		Gill nets			
					Drift		Set ²	
FISH	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Cod.....			2,100	\$55				
Flounders, "sole".....	1,000	\$29	50,200	1,466				
Herring.....	46,600	522	48,200	540				
"Lingcod".....	1,100	19	7,500	133	400	\$7		
Perch.....			139,500	4,534				
Pilchard or sardine.....			10,300	582				
Rockfishes.....	700	17	19,600	470				
Salmon: ⁶								
Blueback, red, or sockeye.....	9,152,700	670,893	300	22	540,700	39,633		
Chinook or king.....	382,600	22,191	6,800	476	924,100	64,687	9,400	\$658
Chum or keta.....	7,030,000	175,750	10,000	250	712,700	17,818	400,100	10,002
Humpback or pink.....	17,400	522			21,700	651		
Silver or coho.....	1,500,300	82,516	4,700	282	1,418,000	85,080	10,100	606
Smelt, surf or silver.....			177,300	11,826				
Total.....	18,132,400	952,459	476,500	20,636	3,617,600	207,876	419,600	11,266
SHELLFISH, ETC.								
Octopus.....			100	4				
Squid.....			15,600	998				
Trepang.....			10,600	530				
Total.....			26,300	1,532				
Grand total.....	18,132,400	952,459	502,800	22,168	3,617,600	207,876	419,600	11,266

Species	Lines				Pound nets ²		Brush weirs	
	Trawl, set and hand ³		Troll					
FISH	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Cod.....	9,888,500	\$129,480						
Flounders, "sole".....	100	3						
Grayfish.....	558,900	3,980						
Halibut.....	22,931,200	1,866,144	114,500	\$7,607				
Herring.....							245,100	\$2,745
"Lingcod".....	2,319,800	57,743	173,200	3,389				
Rockfishes.....	403,900	20,775	1,100	23				
Sablefish.....	2,685,100	111,391						
Salmon: ⁶								
Blueback, red, or sockeye.....			600	45				
Chinook or king.....			2,896,300	382,312	98,000	\$6,860		
Chum or keta.....			100	2	18,000	450		
Silver or coho.....			2,595,100	208,392	64,900	3,894		
Tuna, albacore.....			1,192,100	53,559				
Total.....	38,787,500	2,189,516	6,973,000	655,329	180,900	11,204	245,100	2,745

See footnotes at end of table.

Fisheries of the Puget Sound district of Washington, 1938—Continued

CATCH: BY GEAR—Continued

Species	Dip nets		Reef nets		Beam trawls		Otter trawls	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
FISH								
Cod.....							461,200	\$12,131
Flounders:								
"Sole".....							4,419,300	129,220
Other.....							566,300	13,982
Grayfish.....							19,200	173
Halibut.....							23,100	1,198
Herring.....	1,500	\$17						
"Lingcod".....							314,900	8,642
Perch.....							13,300	432
Rockfishes.....							279,200	8,460
Sablefish.....							30,100	569
Salmon: ¹								
Blueback, red, or sockeye.....			171,000	\$12,534				
Chinook or king.....			22,700	1,317				
Chum or keta.....			77,300	1,932				
Humpback or pink.....			400	12				
Silver or coho.....			205,400	11,297				
Smelt, surf or silver.....	3,200	213						
Total	4,700	230	476,800	27,092			6,128,600	174,807
SHELLFISH, ETC.								
Shrimp.....					25,100	\$3,622		
Octopus.....							2,200	88
Scallops, bay ¹⁰					20,400	5,147		
Total					45,500	8,769	2,200	88
Grand total	4,700	230	476,800	27,092	45,500	8,769	6,128,800	174,895

SPECIES	Traps				Tongs and rakes		Shovels	
	Crab		Octopus		Pounds	Value	Pounds	Value
SHELLFISH, ETC.								
Crabs ⁷	512,400	\$15,026						
Clams, hard: ⁸								
Butter.....							421,300	\$26,963
Little neck.....							441,300	39,717
Octopus.....			61,900	\$2,915				
Oysters, market: ⁹								
Pacific.....					894,000	\$67,052		
Western or native.....					261,300	181,804		
Total	512,400	15,026	61,900	2,915	1,155,300	248,856	862,600	66,680

¹ Includes the catch of smelt by drag bag nets.

² Fished only on Indian reservations.

³ In addition, vessels in the Pacific coast halibut fleet landed approximately 540,000 pounds of halibut, sablefish, and "lingcod" livers at Seattle, valued at \$250,600. Vessels of the halibut fleet also landed 606,164 pounds of halibut and sablefish viscera, valued at \$60,616.

⁴ Most of the cod were taken off Alaska.

⁵ Caught almost entirely for the utilization of the livers for dogfish oil. Most of the fish carcasses were discarded.

⁶ Statistics on the catch of salmon except those taken by troll lines, are reported to the State in number rather than pounds. The factors used in the above table for converting number of salmon to weight in pounds were as follows: Blueback, red, or sockeye, 7 pounds; chinook or king, 24.9 pounds; chum or keta, 10 pounds; humpback or pink, 5 pounds; and silver or coho, 9.9 pounds.

⁷ The weight of crabs shown is based on an average of 20 pounds per dozen.

⁸ Statistics on hard clams are based on yields of 28 percent edible meats for butter clams and 24 percent for little neck clams.

⁹ Statistics on oysters shown are based on yields of 18 percent edible meats for native oysters and 10 percent for Pacific oysters.

¹⁰ The weight of bay scallops is based on a yield of 17 percent edible meat.

NOTE.—The catch of salmon by haul seines was made by Indians on their reservations.

Fisheries of the coastal district of Washington, 1938

OPERATING UNITS: BY GEAR¹

Item	Haul seines	Gill nets		Lines, troll	Dip nets	Traps, crab	Tongs and rakes, oyster	Dredges, oyster	Shovels	Total, exclusive of duplication
		Drift	Set ²							
Fishermen:	Number	Number	Number	Number	Number	Number	Number	Number	Number	Number
On vessels.....				95		6		8		103
On boats and shore.....	22	263	120	162	76	58	253		4,453	5,134
Total.....	22	263	120	257	76	64	253	8	4,453	5,237
Vessels, motor.....				70		3		2		72
Net tonnage.....				552		29		13		565
Boats:										
Motor.....		217	35	139		46	71			466
Other.....	4		80		14		157	2		243
Apparatus:										
Number.....	4	217	120	1,045	76	3,185	220	4	4,453	
Length, yards.....	280									
Square yards.....		418,376	26,500							
Yards at mouth.....								8		
Hooks.....				4,702						

¹ In addition a combined fleet of 48 Puget Sound, Oregon, and California purse seine vessels operated in the Washington coast pilchard fishery. These vessels were manned by a total of 491 fishermen and had an aggregate capacity of 2,954 net tons. Of the total vessels 26 were from Puget Sound, 1 from Oregon, and 21 from California. Twenty-one of these vessels were duplicated in the Oregon coast pilchard fishery. For detailed statistics regarding the operating units in this fishery, refer to the gear tables in the Puget Sound, Oregon and California sections of this report.

² Fished by Indians on reservations.

CATCH: BY GEAR

Species	Purse seines		Haul seines		Gill nets			
	Pounds	Value	Pounds	Value	Drift		Set ¹	
FISH	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Pilchard or sardine.....	52,965,800	\$291,312						
Salmon: ²								
Blueback, red, or sockeye.....							601,000	\$70,918
Chinook or king.....					652,800	\$30,029	159,900	4,797
Chum or keta.....					955,400	20,063	367,800	7,356
Silver or coho.....					582,600	29,130	440,200	17,608
Smelt, surf or silver.....			26,200	\$1,572				
Steelhead trout ³							36,000	3,600
Sturgeon.....					12,000	1,080		
Total.....	52,965,800	291,312	26,200	1,572	2,202,800	80,302	1,604,900	104,279

Species	Lines, troll		Dip nets		Otter trawls	
	Pounds	Value	Pounds	Value	Pounds	Value
FISH						
Flounders, "sole".....	100	\$4			4,600	\$185
Halibut.....	7,200	440				
"Lingcod".....	74,100	1,152				
Rockfishes.....	7,100	124				
Sablefish.....					700	14
Salmon: ²						
Chinook or king.....	1,014,800	130,401				
Silver or coho.....	668,800	42,469				
Smelt, surf or silver.....			231,900	\$7,444		
Tuna, albacore.....						
Total.....	4,023,700	275,722	231,900	7,444	5,300	199

¹ Fished by Indians on their reservations.

² Statistics on the catch of salmon except those taken by troll lines are reported to the State in number rather than pounds. The factors used in the above table for converting number of salmon to weight in pounds were as follows: Blueback, red, or sockeye, 5 pounds; chinook or king, 22.53 pounds; chum or keta, 11.13 pounds; silver or coho, 11.06 pounds; and steelhead trout, 9 pounds.

³ Steelhead trout shown in this table were taken on Indian reservations.

Fisheries of the coastal district of Washington, 1938—Continued

CATCH: BY GEAR—Continued

Species	Traps		Dredges, tongs, and rakes		Shovels	
	Pounds	Value	Pounds	Value	Pounds	Value
SHELLFISH						
Crabs ⁴	2, 100, 200	\$101, 650				
Clams, razor ⁵					1, 125, 100	\$187, 512
Oysters, market: ⁶						
Pacific.....			7, 484, 300	\$456, 165		
Western or native.....			900	495		
Total	2, 100, 200	101, 650	7, 485, 200	456, 660	1, 125, 100	187, 512

⁴ The weight of crabs shown is based on an average of 22 pounds per dozen.

⁵ The weight of razor clams shown is in pounds of edible meats, based on a yield of 42 percent of the round weight.

⁶ The statistics on oysters used in this table are based on a yield of 12 percent of edible meats from Pacific and native oysters.

NOTE.—The catch by otter trawls was made by fishermen from the Puget Sound district.

Fisheries of the Columbia River district of Washington, 1938

OPERATING UNITS: BY GEAR

Item	Haul seines	Gill nets, drift	Lines		Dip nets	Total, ex- clusive of du- plication
			Trawl and set	Troll		
Fishermen:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
On vessels.....			4	17		21
On boats and shore.....	9	633	106	90	287	1, 015
Total	9	633	110	107	287	1, 036
Vessels, motor			1	12		13
Net tonnage.....			7	85		92
Boats:						
Motor.....	3	474	85	68	143	721
Other.....	3		21		9	33
Apparatus:						
Number.....	3	474	369	400	287	
Length, yards.....	500					
Square yards.....		1, 312, 032				
Hooks.....			28, 290	1, 768		

CATCH: BY GEAR

Species	Haul seines		Gill nets, drift		Lines				Dip nets	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Carp.....	90, 800	\$2, 724								
Flounders:										
" Sole ".....					1, 400	\$28				
Other.....			40, 200	\$402						
Halibut.....					8, 600	555				
" Lingcod ".....					2, 700	62				
Rockfishes.....			5, 200	52	6, 000	150				
Sablefish.....					53, 000	1, 633				
Salmon:										
Blueback, red, or sockeye.....			92, 200	11, 064					40, 200	\$4, 824
Chinook or king.....			2, 995, 000	260, 565			116, 700	\$12, 148	209, 500	18, 226
Chum or keta.....			781, 600	7, 816						
Silver or coho.....			741, 800	30, 191			870, 000	56, 463		
Shad.....			51, 000	1, 693					1, 700	56
Smelt, eulachon.....			184, 400	12, 539					2, 372, 500	53, 381
Steelhead trout.....			324, 200	19, 452			100	6	43, 500	2, 610
Sturgeon.....			13, 300	242	18, 300	333				
Tuna, albacore.....							689, 100	31, 285		
Total	90, 800	2, 724.5	5, 228, 900	344, 016	90, 000	2, 761	1, 675, 900	99, 902	2, 267, 400	79, 097

OREGON

Fisheries of Oregon, 1938

CATCH: BY DISTRICTS

Species	Columbia River district		Coastal district	
	Pounds	Value	Pounds	Value
FISH				
Flounders:				
"Sole".....	19, 100	\$473	13, 700	\$714
Other.....	177, 800	1, 778	7, 400	185
Halibut.....	317, 900	21, 795	91, 400	5, 531
Herring.....			25, 500	383
"Lingcod".....	177, 700	4, 703	92, 600	2, 344
Perch.....			4, 200	92
Pilchard or sardine.....			34, 035, 700	187, 196
Rockfishes.....	130, 400	2, 772	9, 300	246
Sablefish.....	124, 300	3, 776	100	2
Salmon:				
Blueback, red, or sockeye.....	292, 700	35, 124		
Chinook or king.....	9, 468, 000	828, 918	1, 570, 600	136, 645
Chum or keta.....	1, 133, 900	11, 339	843, 800	12, 657
Silver or coho.....	2, 907, 000	150, 849	4, 605, 800	211, 204
Shad.....	118, 600	3, 934	288, 100	12, 100
Smelt:				
Eulachon.....	527, 300	35, 856		
Other.....			1, 000	35
Steelhead trout.....	1, 639, 700	98, 323	220, 500	15, 876
Striped bass.....			44, 100	2, 192
Sturgeon.....	65, 800	1, 199	2, 800	56
Tuna, albacore.....	5, 162, 600	234, 382	706, 300	33, 902
Total.....	22, 262, 800	1, 433, 219	42, 562, 900	621, 360
SHELLFISH				
Crabs.....			6, 408, 800	291, 311
Crawfish, fresh-water.....	93, 700	8, 435		
Clams:				
Razor.....			103, 300	24, 595
Mixed.....			92, 700	7, 961
Oysters, market:				
Pacific.....			195, 100	8, 240
Western or native.....			8, 700	4, 464
Total.....	93, 700	8, 435	6, 808, 800	336, 571
Grand total.....	22, 356, 500	1, 441, 654	49, 371, 500	957, 931

Fisheries of the Columbia River district of Oregon, 1938

OPERATING UNITS: BY GEAR

Item	Purse seines, pilchard	Haul seines	Gill nets		Lines		Pound nets	Dip nets	Traps, crawfish	Total, exclusive of duplication
			Drift, salmon	Set, salmon	Trawl and set	Troll				
Fishermen:	Number	Number	Number	Number	Number	Number	Number	Number	Number	Number
On vessels.....	10				36	84				110
On boats and shore.....		360	1, 037	87	86	192	53	144	31	1, 900
Total.....	10	360	1, 037	87	122	276	53	144	31	2, 010
Vessels, motor.....	1				9	53				58
Net tonnage.....	71				103	393				523
Boats:										
Motor.....		16	719	78	74	140	25		21	1, 023
Other.....		31		9	8		25		9	74
Accessory boats.....	1									1
Apparatus:										
Number.....	1	31	719	153	1, 153	965	32	144	1, 395	
Length, yards.....	460	17, 393								
Square yards.....			2,291,094	42, 840						
Hooks.....					28, 790	4, 265				

Fisheries of the Columbia River district of Oregon, 1938—Continued

CATCH: BY GEAR¹

Species	Haul seines		Gill nets				Lines	
			Drift		Set		Trawl and set	
			Pounds	Value	Pounds	Value			Pounds	Value
FISH								
Flounders:								
" Sole".....							19,000	\$471
Other.....			166,400	\$1,664				
Halibut.....							314,400	21,569
"Lingcod".....							137,900	4,132
Rockfishes.....							53,800	1,684
Sablefish.....							124,300	3,776
Salmon:								
Blueback, red, or sockeye.....	46,700	\$5,604	179,100	21,492	8,100	\$972		
Chinook or king.....	1,784,400	155,243	5,971,100	519,486	31,500	2,740	100	10
Chum or keta.....	124,000	1,240	941,500	9,415	6,100	61		
Silver or coho.....	154,500	6,288	1,192,100	48,518	4,400	179		
Shad.....	43,700	1,451	74,500	2,473	100	3		
Smelt, eulachon.....			527,300	35,856				
Steelhead trout.....	514,700	30,882	698,000	41,880	10,800	648		
Sturgeon.....	1,200	22	32,500	592	9,100	166	22,400	408
Total.....	2,669,200	200,730	9,782,500	681,376	70,100	4,769	671,900	32,050

Species	Lines		Pound nets		Dip nets		Traps	
	Troll							
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
FISH								
Flounders:								
" Sole".....	100	\$2						
Other.....	700	7	10,700	\$107				
Halibut.....	3,500	226						
"Lingcod".....	39,800	571						
Rockfishes.....	44,400	551	32,200	537				
Salmon:								
Blueback, red, or sockeye.....			12,400	1,488	46,400	\$5,568		
Chinook or king.....	187,000	19,467	391,400	34,052	1,102,500	95,918		
Chum or keta.....			57,200	572	5,100	51		
Silver or coho.....	1,342,200	87,162	213,800	8,762				
Shad.....			300	7				
Steelhead trout.....	500	30	196,100	11,707	219,600	13,176		
Sturgeon.....			400	7	200	4		
Tuna, albacore.....	5,162,600	234,382						
Total.....	6,780,800	342,398	914,500	57,179	1,373,800	114,717		
SHELLFISH								
Crawfish, fresh-water.....							93,700	\$8,435
Grand total.....	6,780,800	342,398	914,500	57,179	1,373,800	114,717	93,700	8,435

¹ Of the above species the following were taken off the Oregon and Washington coasts but landed in the Columbia River district: "Sole," halibut, "lingcod", rockfishes, sablefish, and tuna. Most of the troll-caught salmon were also taken in coastal waters.

Fisheries of the coastal district of Oregon, 1938

OPERATING UNITS: BY GEAR

Item	Purse seines, pilchard or sardine	Haul seines	Gill nets		Lines		Otter trawls	Traps, crab	Tongs and rakes, oyster	Shovels	Total, exclusive of duplication
			Drift	Set	Trawl and set	Troll					
Fishermen:	Number	Number	Number	Number	Number	Number	Number	Number	Number	Number	Number
On vessels	12				8	55	3	38			91
On boats and shore		24	502	296	39	117		292	23	276	1,440
Total	12	24	502	296	47	172	3	330	23	276	1,531
Vessels, motor	1				2	21	1	19			30
Net tonnage	104				24	198	15	173			381
Boats:											
Motor		8	437	189	35	108		286	6		947
Other		8		77					9	28	114
Accessory boats	1										1
Apparatus:											
Number	1	8	437	859	361	650	1	19,825	23	276	
Length, yards	470	1,336									
Square yards			615,733	309,240							
Yards at month							20				
Hooks					9,860	2,815					

¹ In addition there was a combined fleet of 37 Washington, Columbia River district of Oregon, and California purse seine vessels operated in the Oregon Coast pilchard or sardine fishery. These vessels were manned by a total crew of 357 fishermen and had an aggregate tonnage of 2,274 net tons. Of the total vessels, 1 was from the Columbia River district of Oregon, 16 from Washington, and 20 from California. 21 of these craft were duplicated in the Washington Coast pilchard fishery. For detailed statistics regarding the operating units in this fishery, refer to the gear tables in the Oregon Columbia River, Washington, and California sections of this report.

CATCH: BY GEAR

Species	Purse seines, pilchard ¹		Haul seines		Gill nets, drift and set		Lines	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
FISH								
Flounders:								
"Solé"							700	\$21
Other			4,500	\$112	2,900	\$73		
Halibut							81,000	4,908
Herring			25,500	383				
"Lingcod"							34,500	925
Perch					4,200	92		
Pilchard or sardine	34,035,700	\$187,196						
Rockfishes							8,380	217
Sablefish							100	2
Salmon:								
Chinook or king					1,019,300	73,797		
Chum or keta					843,800	12,657		
Silver or coho					3,257,200	130,288		
Shad					288,100	12,100		
Smelts					1,000	35		
Steelhead trout					220,500	15,876		
Striped bass					44,100	2,192		
Sturgeon					2,800	56		
Total	34,035,700	187,196	34,200	587	5,679,700	247,074	124,600	6,073

¹ The Oregon coast pilchard fishery was prosecuted almost entirely by Washington and California purse-seine vessels. See separate sections for data on operating units in this fishery.

Fisheries of the coastal district of Oregon, 1938—Continued

CATCH: BY GEAR—Continued

Species	Lines—Contd.		Otter trawls		Traps		Tongs and rakes		Shovels	
	Troll									
FISH	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Flounders, "sole".....			13,000	\$693						
Halibut.....	10,400	\$623								
"Lingcod".....	58,100	1,419								
Rockfishes.....	1,000	29								
Salmon:										
Chinook or king.....	551,300	62,848								
Silver or coho.....	1,348,600	80,916								
Tuna, albacore.....	706,300	33,902								
Total	2,675,700	179,737	13,000	693						
SHELLFISH										
Crabs.....					6,408,800	\$291,311				
Clams:										
Razor ¹									103,300	\$24,595
Mixed ²									92,700	7,961
Oysters, market: ⁴										
Pacific.....							195,100	\$8,240		
Western or native.....							8,700	4,464		
Total					6,408,800	291,131	203,800	12,704	196,000	32,556
Grand total	2,675,700	179,737	13,000	693	6,408,800	291,311	203,800	12,704	196,000	32,556

¹ The weight of razor clams is that of edible meats, based on a yield of 42 percent of the round weight.

² Mixed clams consist principally of Eastern soft-shell clams. The weight shown is that of edible meats, based on a yield of 21 percent of the round weight.

⁴ Statistics on oysters used in this table are based on yields of 12 percent of edible meats for both Pacific and native oysters.

CALIFORNIA

Fisheries of California, 1938

CATCH: BY DISTRICTS

Species	Northern district		San Francisco district		Monterey district	
	Pounds	Value	Pounds	Value	Pounds	Value
FISH						
Anchovies.....			251,800	\$3,776	34,100	\$719
Carp.....			37,000	762	1,400	55
Catfish.....			312,200	40,530	100	7
Flounders:						
"California halibut".....	3,100	\$248	14,600	1,836	39,600	3,299
"Sole".....	3,883,300	228,840	3,192,700	190,390	452,800	18,859
Other.....	505,900	22,537	686,200	30,751	69,400	3,425
Hake.....	1,700	17	18,000	180	16,400	164
Halibut.....	405,500	27,923	300	29		
Hardhead.....			12,900	1,401		
Herring.....	5,100	39	495,600	2,645	800	19
Horse mackerel.....					98,600	7,682
Kingfish.....			6,200	249	146,800	5,516
"Lingcod".....	384,900	15,675	173,900	6,472	85,300	4,558
Mackerel.....			1,000	30	1,482,200	38,309
Perch.....	8,900	290	69,300	2,243	15,700	743
Pilchard or sardines.....			446,631,600	2,501,136	311,385,700	1,755,299
Rockfishes.....	548,400	21,321	560,400	29,948	1,852,600	75,204
Sablefish.....	217,400	11,129	8,500	199	38,400	939
Salmon.....	1,853,700	158,274	1,778,300	106,430	199,500	20,861
Sea bass, white.....			11,100	997	23,900	2,450
Shad.....			1,338,700	50,646		
Sharks, including grayfish.....	140,400	2,092	4,318,800	69,517	1,769,800	33,330
Skates.....	60,000	601	329,400	3,294	92,600	490
Smelt.....	13,200	473	256,000	12,189	92,800	4,180
Splittail.....			11,100	398		
Squawfish.....			1,000	37		
Suckers.....			500	17		

Fisheries of California, 1938—Continued

CATCH: BY DISTRICTS—Continued

Species	Northern district		San Francisco district		Monterey district	
	Pounds	Value	Pounds	Value	Pounds	Value
FISH—continued						
Tomcod	2,200	\$32	900	\$17		
Tuna, albacore	22,300	1,539	7,000	407	2,591,400	\$142,068
Whitebait	96,100	6,076	8,100	592	2,500	241
Other fish	85,400	1,704	76,600	1,512	9,000	344
Total	8,237,500	498,810	460,588,700	3,058,630	320,501,400	2,118,761
SHELLFISH						
Crabs	534,500	30,322	3,171,100	210,778	168,000	8,612
Shrimp			1,844,100	36,170	3,300	671
Abalone					240,800	56,586
Clams:						
Hard	5,000	787	1,600	381	200	40
Pismo					5,000	1,221
Soft	200	53	27,700	5,782		
Octopus	1,900	110	6,200	337	24,400	1,647
Oysters, market:						
Eastern	5,100	1,702	43,100	15,975		
Pacific			156,800	29,400	1,100	160
Western or native			3,900	1,288		
Squid					1,472,000	31,521
Total	546,700	32,974	5,254,500	300,111	1,914,800	100,458
Grand total	8,784,200	531,784	465,843,200	3,358,741	322,416,200	2,219,219

Species	San Pedro district					
	Off California		Off Latin America		Total	
	Pounds	Value	Pounds	Value	Pounds	Value
FISH						
Anchovies	449,300	\$4,811			449,300	\$4,811
Barracuda	897,800	54,519	774,500	\$58,629	1,672,300	113,148
Cabrilla			84,000	4,575	84,000	4,575
Carp	500	30			500	30
Flounders:						
"California halibut"	606,500	50,623	8,500	909	615,000	51,532
"Sole"	208,700	6,349			208,700	6,349
Other	6,500	1,296			6,500	1,296
Flyingfish	62,900	2,337			62,900	2,337
Groupers			21,500	1,374	21,500	1,374
Hake	300	7			300	7
Herring	100	2			100	2
Horse mackerel	3,954,000	36,891			3,954,000	36,891
Kingfish	339,500	7,234			339,500	7,234
"Lingcod"	1,900	103			1,900	103
Mackerel	74,007,500	775,182	300	5	74,007,800	775,187
Mullet	300	26			300	26
Perch	61,200	3,738			61,200	3,738
Pilchard or sardines	259,859,200	1,550,300			259,859,200	1,550,300
Pompano	600	273			600	273
Rock bass	132,100	9,072	7,300	435	139,400	9,507
Rockfishes	438,400	19,486	8,600	415	447,000	19,901
Rudderfishes	27,600	1,482			27,600	1,482
Sablefish	151,500	7,133			151,500	7,133
Salmon	200	18			200	18
Sculpin	94,100	7,221			94,100	7,221
Sea bass:						
Black	31,000	1,695	217,800	13,360	248,800	15,055
White	186,200	19,325	47,600	3,875	233,800	23,200
Sharks, including grayfish	1,221,500	31,129	1,400	52	1,222,900	31,181
Sheepshead	58,300	2,284	800	29	59,100	2,313
Skates	45,500	612			45,500	612
Smelt	220,200	9,794			220,200	9,794
Spanish mackerel			7,000	552	7,000	552
Swordfish	266,700	33,461	38,400	4,022	305,100	37,483
Tuna and tunalike fishes:						
Albacore	4,160,900	299,511			4,160,900	299,511
Bluefin	14,541,700	805,575	527,400	28,009	15,069,100	833,584
Bonito	2,997,400	112,290	2,651,900	96,558	5,649,300	208,848
Skipjack or striped tuna	100	3	7,783,200	389,163	7,783,300	389,166
Yellowfin	3,400	207	19,513,400	1,172,047	19,516,800	1,172,254
Whitefish	23,200	1,314	2,600	142	25,800	1,456
Yellowtail	55,600	2,817	2,288,900	81,583	2,344,500	84,400
Other fish	113,000	2,518	1,500	97	114,500	2,615
Total	365,225,400	3,860,668	33,986,600	1,855,831	399,212,000	5,716,499

Fisheries of California, 1938—Continued

CATCH: BY DISTRICTS—Continued

Species	San Pedro district					
	Off California		Off Latin America		Total	
	Pounds	Value	Pounds	Value	Pounds	Value
SHELLFISH						
Crabs.....	3,900	\$123			3,900	\$123
Sea crawfish or spiny lobsters.....	253,200	50,559			253,200	50,559
Abalone.....	183,500	35,393			183,500	35,393
Clams:						
Hard.....	5,600	1,497			5,600	1,497
Pismo.....	48,600	10,170			48,600	10,170
Octopus.....	100	9			100	9
Oysters, market, Pacific.....	3,100	1,128			3,100	1,128
Squid.....	122,400	4,146			122,400	4,146
Total.....	620,400	103,025			620,400	103,025
Grand total.....	365,845,800	3,963,693	33,986,600	\$1,855,831	399,832,400	5,819,524

Species	San Diego district					
	Off California		Off Latin America		Total	
	Pounds	Value	Pounds	Value	Pounds	Value
FISH						
Barracuda.....	363,000	\$15,085	494,200	\$30,444	857,200	\$45,529
Cabrilla.....			61,100	2,762	61,100	2,762
Flounders:						
"California halibut".....	174,800	14,568	247,300	16,038	422,100	30,606
"Sole".....	100	4			100	4
Groupers.....			46,500	2,125	46,500	2,125
Herring.....	3,300	54			3,300	54
Horse mackerel.....	81,300	1,078			81,300	1,078
Kingfish.....	700	15			700	15
Mackerel.....	4,356,000	45,320	1,000	19	4,357,000	45,339
Mullet.....	3,500	269			3,500	269
Perch.....	700	14			700	14
Pilchard or sardines.....	5,512,900	25,537	100	1	5,513,000	25,538
Pompano.....	600	83			600	83
Rock bass.....	123,500	5,322	23,200	1,283	146,700	6,605
Rockfishes.....	74,500	3,532	160,200	7,425	234,700	10,957
Sculpin.....	61,200	2,185	100	5	61,300	2,190
Sea bass:						
Black.....	3,800	167	154,900	8,715	158,700	8,882
White.....	51,100	4,794	309,000	22,952	360,100	27,746
Sharks, including grayfish.....	51,200	1,033	10,700	190	61,900	1,223
Sheepshead.....	2,800	95	10,100	379	12,900	474
Skates.....	700	8	100	1	800	9
Smelt.....	4,800	218	900	57	5,700	275
Spanish mackerel.....			5,300	164	5,300	164
Swordfish.....	53,900	6,831	363,500	36,488	417,400	43,319
Tuna and tunalike fishes:						
Albacore.....	913,100	65,342	29,900	2,952	943,000	68,294
Bluefin.....	1,970,500	111,334	688,400	38,133	2,658,900	149,467
Bonito.....	1,600,200	58,238	503,500	18,529	2,103,700	76,767
Skipjack or striped tuna.....	2,700	136	14,867,600	743,378	14,870,300	743,514
Yellowfin.....	7,200	429	58,793,800	3,532,409	58,801,000	3,532,838
Whitefish.....	900	42	41,300	1,995	42,200	2,037
Yellowtail.....	190,600	7,688	4,277,200	161,137	4,467,800	168,825
Other fish.....	100	3	300	14	400	17
Total.....	15,609,700	369,424	81,090,200	4,627,595	96,699,900	4,997,019
SHELLFISH						
Sea crawfish or spiny lobster.....	55,200	10,357	889,600	117,718	944,800	128,075
Squid.....	4,700	165	200	11	4,900	176
Total.....	59,900	10,522	889,800	117,729	949,700	128,251
Grand total.....	15,669,600	379,946	81,980,000	4,745,324	97,649,600	5,125,270

Fisheries of California, 1938—Continued

CATCH: BY WATERS

Species	Off California		Off Latin America	
	Pounds	Value	Pounds	Value
FISH				
Anchovies	735, 200	\$9, 306		
Barracuda	1, 260, 800	69, 604	1, 268, 700	\$89, 073
Cabrilla			145, 100	7, 337
Carp	38, 900	847		
Catfish	312, 300	40, 537		
Flounders:				
"California halibut"	838, 600	70, 574	255, 800	16, 947
"Sole"	7, 737, 600	444, 442		
Other	1, 268, 000	58, 009		
Flyingfish	62, 900	2, 337		
Groupers			68, 000	3, 499
Hake	36, 400	368		
Halibut	405, 800	27, 952		
Hardhead	12, 900	1, 401		
Herring	504, 900	2, 759		
Horse mackerel	4, 133, 900	45, 651		
Kingfish	493, 200	13, 014		
"Lingcod"	646, 000	26, 808		
Mackerel	79, 846, 700	858, 841	1, 300	24
Mullet	3, 800	295		
Perch	155, 800	7, 028		
Pilchard or sardines	1, 023, 389, 400	5, 832, 272	100	1
Pompano	1, 200	356		
Rock bass	255, 600	14, 394	30, 500	1, 718
Rockfishes	3, 474, 300	149, 491	168, 800	7, 840
Rudderfishes	27, 600	1, 482		
Sablefish	415, 800	19, 400		
Salmon	3, 831, 700	235, 583		
Sculpin	155, 300	9, 406	100	5
Sea bass:				
Black	34, 800	1, 862	372, 700	22, 075
White	272, 300	27, 566	356, 600	26, 827
Shad	1, 338, 700	50, 646		
Sharks, including grayfish	7, 501, 700	137, 101	12, 100	242
Sheepshead	61, 100	2, 379	10, 900	408
Skates	528, 200	5, 005	100	1
Smelt	567, 000	26, 854	900	57
Spanish mackerel			12, 300	716
Splittail	11, 100	398		
Squawfish	1, 000	37		
Suckers	500	17		
Swordfish	320, 600	40, 292	401, 900	40, 510
Tomcod	3, 100	49		
Tuna and tunalike fishes:				
Albacore	7, 694, 700	508, 867	29, 900	2, 952
Bluefin	16, 512, 200	916, 909	1, 215, 800	66, 142
Bonito	4, 597, 600	170, 528	3, 155, 400	115, 087
Skipjack or striped tuna	2, 800	139	22, 650, 800	1, 132, 541
Yellowfin	10, 600	636	78, 307, 200	4, 704, 456
Whitebait	106, 700	6, 909		
Whitefish	24, 100	1, 356	43, 900	2, 137
Yellowtail	246, 200	10, 505	6, 566, 100	242, 720
Other fish	283, 100	6, 081	1, 800	111
Total	1, 170, 162, 700	9, 906, 293	115, 076, 800	6, 483, 426
SHELLFISH				
Crabs	3, 877, 500	249, 835		
Sea crawfish or spiny lobster	308, 400	60, 916	889, 600	117, 718
Shrimp	1, 847, 400	36, 841		
Abalone	424, 300	91, 979		
Clams:				
Hard	12, 400	2, 705		
Pismo	53, 600	11, 391		
Soft	27, 900	5, 835		
Octopus	32, 600	2, 103		
Oysters, market:				
Eastern	48, 200	17, 677		
Pacific	161, 000	30, 688		
Western or native	3, 900	1, 288		
Squid	1, 599, 100	35, 832	200	11
Total	8, 396, 300	547, 090	889, 800	117, 729
Grand total	1, 178, 559, 000	10, 453, 383	115, 966, 600	6, 601, 155

Fisheries of the northern district of California, 1938

OPERATING UNITS: BY GEAR

Item	Gill nets	Lines		Dip nets	Traps, crab	Rakes and tongs, oyster	Shovels	Total, exclusive of duplication
		Set and hand	Troll					
Fishermen:	Number	Number	Number	Number	Number	Number	Number	Number
On vessels.....	10	21	40	29	4	3	10	40
On boats and shore.....	10	78	210	29	56	3	10	265
Total.....	10	99	250	29	60	3	10	305
Vessels, motor		9	21		2			21
Net tonnage.....		73	185		19			185
Boats:								
Motor.....	9	64	201		52		9	211
Other.....						3		3
Apparatus:								
Number.....	12	316	1,299	29	963	3	10	
Square yards.....	9,600							
Hooks.....		24,159	5,436					

CATCH: BY GEAR

Species	Gill nets		Lines				Paranzella nets and otter trawls	
			Set and hand		Troll			
FISH	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Flounders:								
California halibut.....							3,100	\$248
Sole.....			1,700	\$60			881,600	228,780
Other.....	2,000	\$81					503,900	22,456
Hake.....							1,700	17
Halibut.....			208,800	14,378	7,300	\$503	189,400	13,042
Herring.....	5,100	39						
Lingcod.....			157,300	6,406	38,100	1,552	189,500	7,717
Perch.....	8,500	277						
Rockfishes.....			143,100	5,627	11,200	440	394,100	15,254
Sablefish.....			211,600	10,832			5,800	297
Salmon.....					1,853,700	158,274		
Sharks, including grayfish.....			17,300	831	1,200	37	121,900	1,224
Skates.....							60,000	601
Smelt.....	4,800	172						
Tomcod.....							2,200	32
Tuna, albacore.....					22,300	1,539		
Other fish.....							85,400	1,704
Total.....	20,400	569	739,800	38,134	1,933,800	162,345	5,438,600	291,372
SHELLFISH								
Crabs.....							85,500	4,850
Octopus.....			800	46			100	6
Total.....			800	46			85,600	4,856
Grand total.....	20,400	569	740,600	38,180	1,933,800	162,345	5,524,200	296,228

Species	Dip nets		Traps		Rakes and tongs		Shovels	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
FISH								
Perch.....	400	\$13						
Smelt.....	8,400	301						
Whitebait.....	96,100	6,076						
Total.....	104,900	6,390						
SHELLFISH								
Crabs.....			449,000	\$25,472				
Clams:								
Hard.....							5,000	\$787
Soft.....							200	53
Octopus.....			1,000	58				
Oysters, market, eastern.....					5,100	\$1,702		
Total.....			450,000	25,530	5,100	1,702	5,200	840
Grand total.....	104,900	6,390	450,000	25,530	5,100	1,702	5,200	840

NOTE.—The catch by paranzella nets was made by fishermen from the San Francisco district.

Fisheries of the San Francisco district of California, 1938

OPERATING UNITS: BY GEAR

Item	Purse seines		Lampara and ring nets		Haul seines	Gill nets	
	Pilchard or sardine ¹	Tuna	Mackerel	Pilchard or sardine		Drift, salmon	Drift, sea bass
Fishermen:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
On vessels.....	946	45	12	110			
On boats and shore.....				14	11	272	10
Total.....	946	45	12	124	11	272	10
Vessels, motor.....	87	4	1	10			
Net tonnage.....	4,769	269	12	102			
Boats:							
Motor.....				2	3	142	6
Other.....					1	2	
Accessory boats.....	87	4	1	12			
Apparatus:							
Number.....	87	4	1	12	3	144	6
Length, yards.....	34,245	1,080	550	3,451	400		
Square yards.....						465,332	12,900

Item	Gill nets—Cont.		Lines		Fyke nets	Dip nets	Bag nets, shrimp
	Drift, shad	Other	Set and hand	Troll			
Fishermen:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
On vessels.....		2	14	40			36
On boats and shore.....	271	54	178	174	68	4	6
Total.....	271	56	192	214	68	4	41
Vessels:							
Steam.....				1			
Net tonnage.....				32			
Motor.....		1	4	13			8
Net tonnage.....		6	41	182			48
Total vessels.....		1	4	14			8
Total net tonnage.....		6	41	214			48
Boats:							
Motor.....	136	31	119	164	43	2	1
Other.....	1	1	7		9		
Accessory boats.....							4
Apparatus:							
Number.....	137	55	1,600	992	1,660	4	6
Length, yards.....							6,499
Square yards.....	389,113	86,075					
Hooks.....			140,596	2,855			

Item	Paranzella nets	Beam trawls	Otter trawls	Traps, crab	Rakes and tongs, oyster	Shovels	Total, exclusive of duplication
							<i>Number</i>
Fishermen:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
On vessels.....	95		15				1,197
On boats and shore.....		13		264	54	78	838
Total.....	95	13	15	264	54	78	2,035
Vessels:							
Steam.....	1						1
Net tonnage.....	32						32
Motor.....	17		3				124
Net tonnage.....	235		60				5,201
Total vessels.....	18		3				125
Total net tonnage.....	267		60				5,233
Boats:							
Motor.....		13		252	19	3	524
Other.....					26		41
Accessory boats.....							101
Apparatus:							
Number.....	9	13	3	4,950	54	78	
Yards at mouth.....	150	87	35				

¹ Includes 17 motor vessels, having a total capacity of 1,105 net tons, and a crew of 188 men, which also operated pilchard or sardine purse seines in Washington and Oregon waters, and contributed to the catch in those States. Seven of the vessels operated in Oregon, 6 in Washington, and 4 in both States.

Fisheries of the San Francisco district of California, 1938—Continued

CATCH: BY GEAR

Species	Purse seines		Lampara and ring nets		Haul seines		Gill nets	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
FISH								
Anchovies	30,000	\$450	219,800	\$3,297	2,000	\$29	7,600	\$164
Carp					5,400	80		
Flounders, "California halibut"							100	12
Hardhead					2,500	200		
Herring			1,700	17	302,200	1,511	191,700	1,117
Kingfish			5,400	216				
Mackerel			1,000	30				
Perch					37,600	1,433	31,700	810
Pilchard or sardines	433,395,700	2,423,199	13,227,100	77,760			8,800	177
Salmon							1,668,400	97,357
Sea bass, white	100	6	200	14	800	72	10,000	905
Shad							1,338,700	50,646
Sharks, including grayfish	1,900	30	4,900	90			400	4
Smelt			8,300	431	11,800	605	208,600	10,764
Spittail					2,200	22		
Squawfish							300	11
Whitebait			100	6				
Total	433,427,700	2,423,685	13,468,500	81,861	364,500	3,952	3,466,300	161,967

Species	Lines				Fyke nets		Paranzella nets and other trawls	
	Set and hand		Troll		Pounds	Value	Pounds	Value
FISH								
Carp					24,000	\$518		
Catfish	17,100	\$2,220			295,100	38,310		
Flounders:								
"California halibut"	1,500	187					13,000	\$1,637
"Sole"	1,900	96					3,190,800	190,294
Other	1,200	48					682,700	30,629
Hake							18,000	180
Halibut	300	29						
Hardhead					10,400	1,201		
Kingfish							800	33
"Lingcod"	128,600	4,788	1,000	\$35			44,300	1,649
Rockfishes	308,800	16,866	400	24			251,200	13,058
Sablefish	7,400	173					1,100	26
Salmon			109,900	9,073				
Sharks, including grayfish	3,312,900	59,405					998,700	9,988
Skates							329,400	3,294
Spittail					8,900	376		
Squawfish					700	26		
Suckers					500	17		
Tomcod							900	17
Tuna, albacore			7,000	407				
Other fish	700	14					74,900	1,498
Total	3,780,400	83,826	118,300	9,539	339,600	40,448	5,605,800	252,303
SHELLFISH								
Crabs							90,200	5,992
Octopus	6,200	337						
Total	6,200	337					90,200	5,992
Grand total	3,786,600	84,163	118,300	9,539	339,600	40,448	5,696,000	258,295

Species	Beam trawls		Dip nets		Bag nets	
	Pounds	Value	Pounds	Value	Pounds	Value
FISH						
Flounders, other than "sole"	2,300	\$74				
Smelt			7,300	\$389		
Whitebait			8,000	586		
Total	2,300	74	15,300	975		
SHELLFISH						
Shrimp	392,500	7,850			1,451,600	\$28,320
Grand total	394,800	7,924	15,300	975	1,451,600	28,320

Fisheries of the San Francisco district of California, 1938—Continued

CATCH: BY GEAR—Continued

Species	Traps		Rakes and tongs		Shovels	
	Pounds	Value	Pounds	Value	Pounds	Value
SHELLFISH						
Crabs.....	3,080,000	\$204,786				
Clams:						
Hard.....					1,600	\$381
Soft.....					27,700	5,782
Oysters, market:						
Eastern.....			43,100	\$15,975		
Pacific.....			156,900	29,400		
Western or native.....			3,900	1,288		
Total.....	3,080,900	204,786	203,800	46,663	29,300	6,163

Fisheries of the Monterey district of California, 1938

OPERATING UNITS: BY GEAR

Item	Purse seines			Lampara and ring nets		Gill nets			
	Mack-erel	Pil-chard or sar-dine ¹	Tuna	Pil-chard or sar-dine	Other	Set, "Cali-fornia halibut"	Set, crab	Drift, sea bass	Other
Fishermen:	Number	Number	Number	Number	Number	Number	Number	Number	Number
On vessels.....	23	500	113	70	36		2	2	2
On boats and shore.....				82	70	30	48	31	33
Total.....	23	500	113	152	106	30	50	33	35
Vessels, motor.....	2	44	10	6	5		1	1	1
Net tonnage.....	138	2,543	609	42	32		7	8	7
Boats:									
Motor.....				7	10	16	31	18	16
Other.....						2	1		6
Accessory boats.....	2	44	10	13					
Apparatus:									
Number.....	2	44	10	13	15	18	33	19	32
Length, yards.....	850	16,458	6,075	3,628	3,895				
Square yards.....						55,392	55,994	35,720	37,110

Item	Lines		Otter trawls	Traps		Rakes and tongs, oyster	Shovels	Aba-lone outfits	Total, exclu-sive of dupli-cation
	Set and hand	Troll		Crab	Octo-pus				
Fishermen:	Number	Number	Number	Number	Number	Number	Number	Number	Number
On vessels.....	6	27	24					50	627
On boats and shore.....	207	246	15	7	7	4	30	16	423
Total.....	213	273	39	7	7	4	30	66	1,050
Vessels, motor.....	3	14	5					10	66
Net tonnage.....	29	133	38					115	2,740
Boats:									
Motor.....	152	190	4	5	5	1	5	3	214
Other.....	6						1		9
Accessory boats.....								13	68
Apparatus:									
Number.....	764	1,362	9	68	94	4	30	13	
Yards at mouth.....			105						
Hooks.....	58,564	3,682							

¹ Includes 5 motor vessels having a total capacity of 347 net tons, and a crew of 61 men which also operated pilchard or sardine purse seines in Washington and Oregon waters and contributed to the catch in those States. Four of the vessels operated in Oregon and 1 in Washington.

Fisheries of the Monterey district of California, 1938—Continued

CATCH: BY GEAR

Species	Purse seines		Lampara and ring nets		Gill nets	
	Pounds	Value	Pounds	Value	Pounds	Value
FISH						
Anchovies.....			34,100	\$719		
Carp.....					1,400	\$55
Catfish.....					100	7
Flounders:						
"California halibut".....	200	\$15	700	60	22,100	1,839
"Sole".....					10,000	475
Other.....					4,600	162
Herring.....			400	9	400	10
Horse mackerel.....			95,800	7,466	800	66
Kingfish.....			38,200	1,437	67,200	2,528
"Lingcod".....					3,100	168
Mackerel.....	149,700	3,742	802,400	20,060	2,000	55
Perch.....			2,700	139	11,100	508
Pilchard or sardines.....	296,484,000	1,630,662	14,899,500	124,593	2,200	44
Rockfishes.....					6,500	318
Sablefish.....					200	4
Seabass, white.....	2,900	300	190	13	19,800	2,028
Sharks, including grayfish.....	65,900	1,213	47,300	1,020	830,200	15,838
Skates.....					11,400	57
Smelt.....	300	12	30,600	1,375	58,300	2,629
Whitebait.....			2,200	213	300	28
Total.....	296,703,000	1,635,944	15,954,000	157,104	1,051,700	26,819
SHELLFISH						
Crabs.....					166,100	8,517
Octopus.....					100	5
Squid.....			1,471,800	31,511	200	10
Total.....			1,471,800	31,511	166,400	8,532
Grand total.....	296,703,000	1,635,944	17,425,800	188,615	1,218,100	35,351

Species	Lines				Paranzella nets, and otter trawls	
	Set and hand		Troll			
FISH	Pounds	Value	Pounds	Value	Pounds	Value
Flounders:						
"California halibut".....	3,900	\$327	100	\$5	12,600	\$1,053
"Sole".....	9,500	455			433,300	17,929
Other.....	10,700	599			54,100	2,664
Hake.....					16,400	164
Horse mackerel.....	2,000	150				
Kingfish.....	34,900	1,312			6,500	239
"Lingcod".....	76,100	4,066	500	27	5,600	297
Mackerel.....	528,100	14,452				
Perch.....					1,900	96
Rockfishes.....	1,829,000	74,933	400	20	16,700	833
Sablefish.....	37,100	907			1,100	28
Salmon.....			199,500	20,861		
Sea bass, white.....	1,000	103			100	6
Sharks, including grayfish.....	728,500	13,781	29,600	355	68,300	1,123
Skates.....	3,300	27			77,900	406
Smelt.....	3,600	164				
Tuna, albacore.....			2,591,400	142,068		
Other fish.....	4,200	160			4,800	184
Total.....	3,271,900	110,536	2,821,500	163,336	699,300	25,022
SHELLFISH						
Crabs.....					1,200	60
Octopus.....	4,800	329			200	12
Total.....	4,800	329			1,400	72
Grand total.....	3,276,700	110,865	2,821,500	163,336	700,700	25,094

Fisheries of the Monterey district of California, 1938—Continued

CATCH: BY GEAR—Continued

Species	Traps		Rakes and tongs		Shovels		Abalone outfits	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
SHELLFISH								
Crabs.....	700	\$35						
Shrimp.....	3,300	671						
Abalone.....							240,800	\$56,586
Clams:								
Hard.....					200	\$40		
Pismo.....					5,000	1,221		
Octopus.....	19,300	1,301						
Oysters, market, Pacific.....			1,100	\$160				
Total.....	23,300	2,007	1,100	160	5,200	1,261	240,800	56,586

NOTE.—The catch by paranzella nets was made by fishermen from the San Francisco district.

Fisheries of the San Pedro district of California, 1938

OPERATING UNITS: BY GEAR

Item	Purse seines			Lampara and ring nets			
	Mack- erel	Pilchard or sardine ¹	Tuna	Mack- erel	Pilchard or sardine	Tuna	Other
Fishermen:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
On vessels.....	166	1,029	867	632	771	219	7
On boats and shore.....							82
Total.....	166	1,029	867	632	771	219	89
Vessels, motor.....	16	94	79	51	64	17	3
Net tonnage.....	474	4,785	4,203	1,723	2,019	492	17
Boats, motor.....							22
Accessory boats.....	16	94	79	51	64	17	3
Apparatus:							
Number.....	16	94	79	51	64	17	25
Length, yards.....	7,129	37,618	47,480	29,138	33,323	9,775	6,671

Item	Gill nets			Trammel nets	Lines		Paran- zella nets
	Drift, bar- racuda	Set, sea bass	Other		Set and hand	Troll	
Fishermen:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
On vessels.....		4	3	11	469	36	8
On boats and shore.....	42	50	31	53	779	571	12
Total.....	42	54	34	64	1,248	607	20
Vessels, motor.....		2	2	4	97	17	2
Net tonnage.....		14	14	43	2,714	116	26
Boats:							
Motor.....	17	19	19	20	455	418	4
Other.....		1	1		16		
Accessory.....					137		
Apparatus:							
Number.....	17	22	26	24	2,837	2,792	3
Square yards.....	106,012	73,040	28,798	121,733			
Yards at mouth.....							50
Hooks.....					496,379	2,842	

¹ Includes 10 motor vessels, having a total capacity of 621 net tons, and a crew of 111 men, which also operated pilchard or sardine purse seines in Washington and Oregon waters, and contributed to the catch in those States. All of the vessels operated in Washington, and 4 also operated in Oregon.

Fisheries of the San Pedro district of California, 1938--Continued

OPERATING UNITS: BY GEAR--Continued

Item	Traps, sea craw- fish	Har- poons, sword- fish	Rakes and longs	Shovels	Abalone outfits	Total, exclusive of dupli- cation
	Number	Number	Number	Number	Number	Number
Fishermen:						
On vessels	6	19				2,300
On boats and shore	155	95	4	66	11	983
Total	161	114	4	66	11	3,283
Vessels, motor	3	7				261
Net tonnage	32	54				9,724
Boats:						
Motor	91	60	1	6	4	566
Other	17		2		1	27
Accessory boats						284
Apparatus, number	4,098	47	4	66	5	

CATCH OFF CALIFORNIA BY GEAR

Species	Purse seines		Lampara and ring nets		Gill nets		Trawl net	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
FISH								
Anchovies			449,000	\$4,811				
Barracuda	77,100	\$5,027	107,300	6,436	260,300	\$14,628		
Carp					500	50		
Flounders:								
"California halibut"			500	48	600	50	281,600	\$38,038
"Sole"							2,300	116
Other							500	10
Flyingfish			100	5	62,800	2,332		
Herring					100	2		
Horse mackerel	2,782,000	25,981	1,169,700	10,911	1,300	75		
Kingfish			240,700	6,194	8,600	175	100	2
"Lingcod"							300	5
Mackerel	13,682,300	143,369	38,726,000	606,278	29,600	580	1,100	2
Mullet					80	25		
Perch			47,600	3,018	12,500	650		
Pilchard or sardines	152,349,000	969,480	107,504,000	640,746	6,000	74		
Pompano			600	270				
Rock bass			3,600	270	7,600	580	2,400	138
Rock fishes			600	25	1,100	32		
Rudderfishes			27,500	1,482				
Sculpin					300	19	800	61
Sea bass								
Black	300	8	1,300	75	2,300	119	1,600	65
White	7,000	822	32,000	3,327	107,500	51,750	1,500	150
Sharks, including cray fish	2,700	87	1,000	79	194,600	4,744	182,000	3,781
Sheepshead							1,600	112
Skates							7,500	160
Smelt			159,500	7,246	14,700	2,287		
Swordfish	700	94						
Tuna and tunalike fishes								
Albacore	9,000	675	7,600	694	900	75		
Bluefin	9,681,100	126,330	4,847,900	268,538	600	45		
Bonito	1,025,300	38,427	1,321,100	49,569	7,800	600	4,300	152
Skipjack or striped tuna			100	75				
Yellowfin	100	8	1,300	75			200	15
Whitefish							300	10
Yellow tail	2,000	129	31,200	1,587	3,100	150		
Other fish			91,500	1,018	1,300	87	4,800	136
Total	179,630,300	1,662,315	154,889,600	1,112,632	279,800	69,679	412,500	61,166
HELLFISH								
Sea craw fish or spiny lobster							8,300	656
Squid	51,300	1,744	70,600	2,300			300	22
Total	51,300	1,744	70,600	2,300			8,600	678
Grand total	179,681,600	1,664,059	154,960,200	1,114,932	279,800	69,679	421,100	61,844

Fisheries of the San Pedro district of California, 1938—Continued

CATCH OFF CALIFORNIA: BY GEAR—Continued

Species	Lines				Paranzella nets		Traps	
	Set and hand		Troll		Pounds	Value	Pounds	Value
FISH	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>
Barracuda.....	137,000	\$8,239	336,200	\$20,189				
Flounders:								
"California halibut".....	53,000	5,096	600	58	266,600	\$7,350		
"Sole".....	1,900	101			204,500	6,132		
Other.....	6,200	1,286						
Hake.....	300	7						
Horse mackerel.....	500	10						
Kingfish.....	40,200	858			100	2		
"Lingcod".....	1,700	95						
Mackerel.....	21,499,200	225,007	300	6				
Perch.....	700	47					200	\$14
Rock bass.....	81,500	5,714	400	26			37,100	2,554
Rockfishes.....	434,300	19,320			2,200	87	200	11
Sablefish.....	151,500	7,133						
Salmon.....			200	18				
Sculpin.....	89,000	6,844			200	7	3,800	288
Sea bass:								
Black.....	25,000	1,376			700	36		
White.....	11,300	1,173	2,400	254				
Sharks, including grayfish.....	787,500	20,400	1,900	61	94,500	2,017		
Sheepshead.....	28,000	1,095					26,900	1,057
Skates.....	4,800	115			35,000	357		
Smelt.....	5,800	255			200	9		
Tuna and tunalike fishes:								
Albacore.....	3,000,500	218,107	1,145,700	80,334				
Bluefin.....	10,000	555	2,400	133				
Bonito.....	108,900	4,079	520,200	19,485				
Yellowfin.....	1,900	114						
Whitefish.....	19,800	1,132					3,200	172
Yellowtail.....	12,200	620	6,400	322				
Other fish.....	15,000	1,021	200	17	300	21		
Total.....	26,527,700	529,799	2,016,900	120,903	604,300	16,018	71,400	4,096
SHELLFISH								
Crabs.....							3,900	123
Sea crawfish or spiny lobster.....							244,900	50,101
Octopus.....	100	9						
Total.....	100	9					248,800	50,224
Grand total.....	26,527,800	529,808	2,016,900	120,903	604,300	16,018	320,200	54,320

Species	Harpoons		Rakes and tongs		Shovels		Abalone outfits	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
FISH								
Swordfish.....	266,000	\$33,367						
SHELLFISH								
Abalone.....							183,500	\$35,393
Clams:								
Hard.....					5,600	\$1,497		
Pismo.....					48,600	10,170		
Oysters, market, Pacific.....			3,100	\$1,128				
Total.....			3,100	1,128	54,200	11,667	183,500	35,393
Grand total.....	266,000	33,367	3,100	1,128	54,200	11,667	183,500	35,593

Fisheries of the San Pedro district of California, 1938—Continued

CATCH OFF LATIN AMERICA: BY GEAR

Species	Purse seines		Gill nets		Trammel nets		Lines, set and hand		Harpoons	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Barracuda.....	691,800	\$52,369					82,700	\$6,260		
Cabrilla.....							84,000	4,575		
Flounders, "California halibut".....	100	9			7,800	\$835	600	65		
Groupers.....							21,500	1,374		
Mackerel.....							300	5		
Rock bass.....							7,300	435		
Rockfishes.....							8,600	415		
Sea bass:										
Black.....	800	52	900	\$54			216,100	13,254		
White.....	3,100	254	20,800	1,695			23,700	1,926		
Sharks, including grayfish.....							1,400	52		
Sheepshead.....							300	29		
Spanish mackerel.....							7,000	552		
Swordfish.....									38,400	\$4,022
Tuna and tunalike fishes:										
Bluefin.....	526,500	27,961					900	48		
Bonito.....	2,581,500	93,967					70,400	2,591		
Skipjack or striped tuna.....	1,394,800	69,740					6,388,400	319,423		
Yellowfin.....	3,917,200	235,032					15,596,200	937,015		
Whitefish.....							2,600	142		
Yellowtail.....	1,585,000	56,493	600	24			703,300	25,066		
Other fish.....							1,500	97		
Total.....	10,700,800	535,877	22,300	1,773	7,800	835	23,217,300	1,313,324	38,400	4,022

Fisheries of the San Diego district of California, 1938

OPERATING UNITS: BY GEAR

Item	Lampara and ring nets				Gill nets		
	Mackerel	Pilchard or sardine	Tuna	Other	Drift, barracuda	Set, sea bass	Other
Fishermen:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
On vessels.....	148	190	11			4	
On boats and shore.....	13	13	11	5	22	26	11
Total.....	161	203	22	5	22	30	11
Vessels, motor.....	13	17	1			1	
Net tonnage.....	129	183	12			19	
Boats, motor.....	1	1	1	1	7	9	6
Accessory boats.....	13	17	1				
Apparatus:							
Number.....	14	18	2	1	7	10	6
Length, yards.....	4,970	4,680	640	200			
Square yards.....					29,626	41,703	8,318

Item	Trammel nets	Lines		Traps, sea crawfish	Harpoons, swordfish	Total, exclusive of duplication
		Set and hand	Troll			
Fishermen:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
On vessels.....	5	1,090	9	2	33	1,209
On boats and shore.....	28	158	139	26	43	262
Total.....	33	1,248	148	28	76	1,471
Vessels, motor.....	1	115	3	1	9	121
Net tonnage.....	11	7,650	24	9	76	7,712
Boats:						
Motor.....	9	66	90	21	16	120
Other.....				1		1
Accessory boats.....		135				138
Apparatus:						
Number.....	10	1,387	608	963	25	
Square yards.....	96,613					
Hooks.....		31,257	608			

Fisheries of the San Diego district of California, 1938—Continued

CATCH OFF CALIFORNIA: BY GEAR

Species	Purse seines		Lampara and ring nets		Gill nets		Trammel nets	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
FISH								
Barracuda.....			61,200	\$2,546	150,900	\$6,270	200	\$7
Flounders, "California halibut".....			600	51			172,400	14,367
Herring.....					3,300	54		
Horse mackerel.....			80,800	1,068	500	10		
Kingfish.....					400	8		
Mackerel.....			3,901,900	40,405	22,500	450		
Mullet.....					3,500	269		
Perch.....			700	14				
Pilchard or sardines.....			5,512,900	25,537				
Pompano.....			600	83				
Rock bass.....			2,100	91	100	6		
Rockfishes.....							300	14
Sea bass:								
Black.....					100	7	800	35
White.....			10,500	1,555	19,400	1,820	1,500	138
Sharks, including grayfish.....			600	13	3,000	61	26,500	535
Sheepshead.....							500	17
Skates.....							500	5
Smelt.....			1,000	45	3,800	173		
Tuna and tunalike fishes:								
Bluefin.....	156,100	\$8,818	1,451,500	82,011	100	7		
Bonito.....	37,500	1,366	823,500	29,967	4,200	153	3,800	139
Yellowfin.....			500	28				
Whitefish.....							500	22
Yellowtail.....			102,000	4,112	100	4	400	15
Total.....	193,600	10,184	11,956,400	187,526	211,900	9,292	207,400	15,294
SHELLFISH								
Sea crawfish or spiny lobster.....							800	145
Squid.....			4,700	165				
Total.....			4,700	165			800	145
Grand total.....	193,600	10,184	11,961,100	187,691	211,900	9,292	208,200	15,439

Species	Lines				Traps		Harpoons	
	Set and hand		Troll		Pounds	Value	Pounds	Value
FISH								
Barracuda.....	135,000	\$5,611	15,700	\$651				
Flounders:								
"California halibut".....	1,800	150						
"Sole".....	100	4						
Kingfish.....	300	7						
Mackerel.....	431,600	4,465						
Rock bass.....	97,800	4,212			23,500	\$1,013		
Rockfishes.....	74,200	3,518						
Sculpin.....	61,200	2,185						
Sea bass:								
Black.....	2,900	125						
White.....	13,400	1,256	300	25				
Sharks, including grayfish.....	21,100	424						
Sheepshead.....	1,500	52			800	26		
Skates.....	200	3						
Swordfish.....							53,900	\$6,831
Tuna and tunalike fishes:								
Albacore.....	781,700	52,205	131,400	13,137				
Bluefin.....	362,800	20,498						
Bonito.....	239,700	8,727	491,500	17,886				
Skipjack or striped tuna.....	2,700	136						
Yellowfin.....	5,500	327	1,200	74				
Whitefish.....	400	20						
Yellowtail.....	82,800	3,344	5,300	213				
Other fish.....	100	3						
Total.....	2,316,800	107,272	645,400	31,986	24,300	1,039	53,900	6,831
SHELLFISH								
Sea crawfish or spiny lobster.....					54,400	10,212		
Grand total.....	2,316,800	107,272	645,400	31,986	78,700	11,251	53,900	6,831

NOTE.—The catch by purse seines was made by fishermen from the San Pedro district.

Fisheries of the San Diego district of California, 1938—Continued

CATCH OFF LATIN AMERICA: BY GEAR

Species	Purse seines		Lampara and ring nets		Gill nets		Trammel nets	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
FISH								
Barracuda.....					43,800	\$2,698		
Flounders, "California halibut".....							243,200	\$15,771
Pilchard or sardines.....			100	\$1				
Rock bass.....			900	48	600	36		
Rockfishes.....					400	18	700	31
Sea bass:								
Black.....					1,400	78	1,300	73
White.....			2,900	216	150,700	11,191	400	28
Sharks, including grayfish.....					1,000	18		
Sheepshead.....							200	7
Skates.....							100	1
Smelt.....			600	35	300	22		
Tuna and tunalike fishes:								
Bluefin.....	103,500	\$5,694	481,500	26,674				
Bonito.....			48,700	1,793			1,500	62
Skipjack or striped tuna.....	47,400	2,370						
Yellowfin.....	94,000	5,642						
Whitefish.....							500	23
Yellowtail.....	24,600	922	17,000	636	900	38		
Other fish.....							100	4
Total.....	269,500	14,628	551,700	29,403	199,100	14,099	248,000	16,000
SHELLFISH								
Squid.....			200	11				
Grand total.....	269,500	14,628	551,900	29,414	199,100	14,099	248,000	16,000

Species	Lines				Traps		Harpoons	
	Set and hand		Troll		Pounds	Value	Pounds	Value
FISH								
Barracuda.....	340,200	\$20,957	110,200	\$6,789				
Cabrilla.....	61,100	2,762						
Flounders, "California halibut".....	4,100	267						
Groupers.....	46,500	2,125						
Mackerel.....	1,000	19						
Rock bass.....	21,700	1,199						
Rockfishes.....	159,100	7,376						
Sculpin.....	100	5						
Sea bass:								
Black.....	152,200	8,564						
White.....	154,200	11,455	800	62				
Sharks, including grayfish.....	9,700	172						
Sheepshead.....	9,900	372						
Spanish mackerel.....	5,300	164						
Swordfish.....							363,500	\$36,488
Tuna and tunalike fishes:								
Albacore.....	21,100	2,069	8,800	883				
Bluefin.....	103,400	5,765						
Bonito.....	444,300	16,343	9,000	331				
Skipjack or striped tuna.....	14,820,200	741,008						
Yellowfin.....	58,699,800	3,526,767						
Whitefish.....	40,800	1,972						
Yellowtail.....	4,230,500	159,374	4,200	167				
Other fish.....	200	10						
Total.....	79,325,400	4,508,745	133,000	8,232			363,500	36,488
SHELLFISH								
Sea crawfish or spiny lobster.....					889,600	\$117,718		
Grand total.....	79,325,400	4,508,745	133,000	8,232	889,600	117,718	363,500	36,488

NOTE.—The catch by purse seines was made by fishermen from the San Pedro district.

HALIBUT FISHERY OF THE PACIFIC COAST¹²

The halibut fishery of the Pacific coast, which is prosecuted by United States (including Alaska) and Canadian vessels, ranks as one of the foremost fisheries of that section. During 1938 the total catch of halibut by vessels of both nationalities amounted to 48,549,000 pounds, valued at \$3,487,000. This is a decrease of less than 1 percent in volume and 9 percent in value as compared with the catch and value in 1937. Of the total catch in 1938, 75 percent was taken by United States craft and 25 percent by Canadian craft. Considered according to ports of landing, 43 percent was landed at Seattle, Wash.; 40 percent at Canadian ports; and 17 percent at ports in Alaska.

Halibut fishery of the Pacific coast, 1938

UNITED STATES OPERATING UNITS: BY FLEET CLASSIFICATION

Item	Washington fleet	Alaska fleet	Total
Regular halibut vessels:			
Number.....	135	110	245
Net tonnage.....	4,009	1,570	5,579
Crew.....	1,049	514	1,563
Skates of lines.....	4,084	2,212	6,296
Vessels in other fisheries but landing one or more fares of halibut:			
Number.....	7	28	35
Net tonnage.....	227	266	493
Crew.....	53	98	151
Skates of lines.....	199	400	599
Regular halibut boats:			
Number.....		28	28
Crew.....		63	63
Skates of lines.....		298	298
Boats in other fisheries but landing one or more fares of halibut:			
Number.....		64	64
Crew.....		128	128
Skates of lines.....		512	512

CATCH OF ALL SPECIES: BY UNITED STATES VESSELS AND BOATS

Fleet classification	Landed in—						Total	
	Seattle, Wash.		British Columbia		Alaska		Pounds	Value
WASHINGTON FLEET								
Regular vessels:	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>
Halibut.....	19,703,208	\$1,641,989	2,254,633	\$160,177	338,832	\$20,897	22,296,673	\$1,823,063
Sablefish.....	2,608,475	109,273	11,014	326	877	20	2,620,366	109,619
"Lingcod".....	1,228,062	43,975					1,228,062	43,975
Rockfishes.....	378,878	20,029					378,878	20,029
Total.....	23,918,623	1,815,266	2,265,647	160,503	339,709	20,917	26,523,979	1,996,686
Other vessels and boats:								
Halibut.....	390,847	28,503	68,729	4,406	31,723	2,053	491,299	34,962
Sablefish.....	14,342	573					14,342	573
"Lingcod".....	18,388	584					18,388	584
Rockfishes.....	708	30					708	30
Total.....	424,285	29,690	68,729	4,406	31,723	2,053	524,737	36,149

¹² These statistics are compiled from data collected by the International Fisheries Commission for Washington and British Columbia and by Bureau agents for Alaska. The weights shown represent the poundage of fish landed after evisceration and removal of heads.

Halibut fishery of the Pacific coast, 1938—Continued

CATCH OF ALL SPECIES: BY UNITED STATES VESSELS AND BOATS--Continued

Fleet classification	Landed in—						Total	
	Seattle, Wash.		British Columbia		Alaska			
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
ALASKA FLEET								
Regular vessels:								
Halibut.....	633, 899	\$54, 882	4, 889, 314	\$351, 442	5, 560, 009	\$333, 750	11, 083, 222	\$740, 074
Sablefish.....	111, 210	4, 414	526, 539	14, 902	819, 604	20, 147	1, 457, 353	39, 463
"Lingcod".....	68, 816	3, 188			7, 655	191	76, 471	3, 379
Rockfishes.....	54, 523	2, 840			8, 573	196	63, 096	3, 036
Total.....	868, 448	65, 324	5, 415, 853	366, 344	6, 395, 841	354, 284	12, 680, 142	785, 952
Other vessels and boats:								
Halibut.....	16, 201	1, 146	116, 589	8, 309	2, 340, 343	140, 772	2, 473, 133	150, 227
Sablefish.....					98, 708	2, 421	98, 708	2, 421
"Lingcod".....	508	15			33, 123	828	33, 631	843
Rockfishes.....					16, 229	365	16, 229	365
Total.....	16, 709	1, 161	116, 589	8, 309	2, 488, 403	144, 386	2, 621, 701	153, 856
COMBINED FLEETS								
Regular vessels:								
Halibut.....	20, 337, 107	1, 696, 871	7, 143, 947	511, 619	5, 898, 841	354, 647	33, 379, 895	2, 563, 137
Sablefish.....	2, 719, 685	113, 687	537, 553	15, 228	820, 481	20, 167	4, 077, 719	149, 082
"Lingcod".....	1, 296, 873	47, 163			7, 655	191	1, 304, 533	47, 354
Rockfishes.....	433, 401	22, 869			8, 573	196	441, 974	23, 065
Total.....	24, 787, 071	1, 880, 590	7, 681, 500	526, 847	6, 735, 550	375, 201	39, 204, 121	2, 782, 638
Other vessels and boats:								
Halibut.....	407, 048	29, 649	185, 318	12, 715	2, 372, 066	142, 825	2, 964, 432	185, 189
Sablefish.....	14, 342	573			98, 708	2, 421	113, 050	2, 994
"Lingcod".....	18, 896	599			33, 123	828	52, 019	1, 427
Rockfishes.....	708	30			16, 229	365	16, 937	395
Total.....	440, 994	30, 851	185, 318	12, 715	2, 520, 126	146, 439	3, 146, 438	190, 005
All vessels and boats:								
Halibut.....	20, 744, 155	1, 726, 520	7, 329, 265	524, 334	8, 270, 907	497, 472	36, 344, 327	2, 748, 326
Sablefish.....	2, 734, 027	114, 260	537, 553	15, 228	919, 189	22, 588	4, 190, 769	152, 076
"Lingcod".....	1, 315, 774	47, 762			40, 778	1, 019	1, 356, 552	48, 781
Rockfishes.....	434, 109	22, 899			24, 802	561	458, 911	23, 460
Grand total.....	25, 228, 065	1, 911, 441	7, 866, 818	539, 562	9, 255, 676	521, 640	42, 350, 559	2, 972, 643

Halibut fishery of the Pacific coast, 1938—Continued

CATCH OF HALIBUT: BY UNITED STATES AND CANADIAN VESSELS AND BOATS

[Expressed in thousands of pounds and thousands of dollars; that is, 000 omitted]

Fleet classification	Landed in—						Total	
	Seattle, Wash.		British Columbia		Alaska			
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
WASHINGTON FLEET								
Regular halibut vessels.....	19,703	\$1,642	2,254	\$160	339	\$21	22,296	\$1,823
Other vessels and boats.....	391	28	69	4	32	2	492	34
Total.....	20,094	1,670	2,323	164	371	23	22,788	1,857
ALASKA FLEET								
Regular halibut vessels.....	634	55	4,889	352	5,560	334	11,083	741
Other vessels and boats.....	16	1	117	8	2,340	141	2,473	150
Total.....	650	56	5,006	360	7,900	475	13,556	891
COMBINED FLEETS								
Regular halibut vessels.....	20,337	1,696	7,144	511	5,899	355	33,380	2,562
Other vessels and boats.....	407	30	185	13	2,372	143	2,964	186
Total.....	20,744	1,726	7,329	524	8,271	498	36,344	2,748
British Columbia fleet.....	166	13	12,013	724	26	2	12,205	739
Grand total.....	20,910	1,739	19,342	1,248	8,297	500	48,549	3,487

NOTE.—In addition to the above, there were 1,091,261 pounds of halibut, sablefish, "lingcod" and rockfish livers valued at \$514,169, landed by the combined fleets at Pacific coast ports during 1938. Halibut vessels in the combined fleets also landed 1,236,124 pounds of halibut and sablefish viscera valued at \$123,513 during the same period.

The tabulation does not include landings at ports south of Seattle, Wash., which are normally less than 4 percent of the annual Pacific coast catch.

VESSEL FISHERIES AT SEATTLE, WASH.

A total of 52,086,890 pounds of fishery products, valued at \$3,329,227, were handled by Seattle wholesale dealers during 1938, exclusive of quantities received by transporting vessels or by rail from Alaska or Canada. This represents a decrease of one-half of 1 percent in volume and 9 percent in value as compared with the quantity and value of the products handled during the preceding year. Of the total quantity handled, 25,228,065 pounds, valued at \$1,911,441, were landed by halibut vessels—a decrease of less than one-half of 1 percent in volume and 10 percent in value as compared with the previous year. Receipts by wholesale dealers from sources other than Alaska or Canada, or from vessels in the halibut fleet, amounted to 26,858,825 pounds, valued at \$1,417,786, which is a decrease of 1 percent in volume and 8 percent in value.

*Fishery products landed by United States vessels at Seattle, Wash., 1938*¹

BY FISHING GROUNDS

Fishing grounds	Trips	Halibut				Sablefish		"Lingcod"		Rockfishes		Total	
		No. 1		No. 2		Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
		Number	Pounds	Value	Pounds									Value
West of Cape Spencer.....	416	9,085,493	\$808,820	5,540,967	\$466,581	27,581	\$1,096	3,329	\$98	5,959	\$181	14,663,329	\$1,276,776
South of Cape Spencer.....	754	2,494,147	213,961	3,623,548	237,158	2,706,446	113,164	1,312,445	47,664	428,150	22,718	10,564,736	634,665
Total.....	1,170	11,579,640	1,022,781	9,164,515	703,739	2,734,027	114,260	1,315,774	47,762	434,109	22,899	25,228,065	1,911,441

BY MONTHS

Months	Trips	Halibut				Sablefish		"Lingcod"		Rockfishes		Total	
		No. 1		No. 2		Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
		Number	Pounds	Value	Pounds									Value
January.....	39					20,217	\$716	150,042	\$9,247	62,492	\$4,070	232,751	\$14,033
February.....	46					51,766	2,007	276,546	12,103	90,440	4,476	418,752	18,586
March.....	35					57,662	2,443	257,310	5,944	107,317	4,418	422,289	12,805
April.....	147	2,047,707	\$158,019	1,133,863	\$74,346	6,001	182	98,360	3,442	5,745	209	3,291,676	236,198
May.....	136	1,605,575	132,696	1,277,256	79,482	6,288	339	106,604	3,224	9,155	279	3,004,878	216,020
June.....	172	1,876,066	145,244	1,792,187	116,271	147,101	7,031	125,322	2,970	11,901	345	3,952,577	271,861
July.....	160	1,823,944	149,539	1,673,876	124,565	180,196	7,238	45,564	1,365	11,624	387	3,735,204	283,094
August.....	118	1,487,250	139,633	1,121,923	94,700	437,266	18,096	54,658	1,529	33,994	1,354	3,135,091	255,312
September.....	133	1,454,355	152,141	1,015,616	96,152	801,632	33,114	66,765	2,080	18,093	639	3,356,461	284,126
October.....	131	890,865	101,899	774,005	80,394	775,858	32,620	97,825	3,889	30,144	4,124	2,568,697	222,926
November.....	53	393,878	43,610	375,789	37,829	250,040	10,474	36,778	1,969	53,204	2,598	1,109,689	96,480
Total.....	1,170	11,579,640	1,022,781	9,164,515	703,739	2,734,027	114,260	1,315,774	47,762	434,109	22,899	25,228,065	1,911,441

¹ Halibut fleet.

NOTE.—There were no landings by the fleet in December due to a fishermen's strike.

The statistics in this table are compiled from reports collected by the Bureau of Fisheries and the International Fisheries Commission.

Fishery products received by Seattle wholesale dealers, 1938; by months ¹

Species	January		February		March		April		May		June	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Cod.....	132,384	\$3,694	65,995	\$2,612	67,517	\$1,802	51,245	\$1,291	3,687	\$45	6,640	\$87
Flounders:												
"Sole".....	229,131	9,165	210,978	8,461	156,095	6,327	256,756	9,462	491,345	13,420	335,332	8,561
Other.....	218,020	5,451	110,622	2,803	54,106	1,402	20,221	541	795	12	1,509	20
Halibut.....							32,142	2,840	42,272	2,540	87,132	4,332
Herring.....	24,600	294	259,711	4,470	393,653	4,056	46,200	347				
"Lingcod".....	26,188	903	48,959	1,922	43,792	1,486	148,670	3,214	148,263	1,951	227,234	2,338
Perch.....	12,370	434	13,482	501	15,802	513	25,859	758	10,851	268	2,941	74
Rockfishes.....	14,417	447	17,588	484	14,651	230	40,255	750	15,465	276	23,214	707
Sablefish.....											5,665	133
Salmon:												
Chinook or king.....			15,808	2,667	126,339	17,730	316,131	40,438	316,444	37,665	416,752	46,281
Silver or coho.....							127	12	34,789	2,365	68,450	5,803
Smelt.....	8,068	663	5,603	391	350	21	350	11	16,892	1,539	43,098	1,724
Crabs.....	108,588	7,054	157,118	8,426	168,205	9,189	167,185	6,250	172,523	6,347	107,985	5,026
Shrimp.....							3,868	638	1,486	266	796	144
Clams, hard, in shell (meats).....	42,047	3,670	33,308	2,984	40,660	4,784	50,333	4,910	2,864	296		
Scallops, bay (meats).....	1,580	397	1,803	395	1,903	485	1,844	464	1,569	392	1,425	356
Octopus.....	5,383	289	4,375	215	5,123	188	4,910	229	7,627	397	2,966	119
Total.....	822,776	32,461	945,350	36,331	1,094,205	48,193	1,166,096	72,155	1,266,872	67,779	1,331,139	75,705

Species	July		August		September		October		November		December		Total	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Cod.....	1,352	\$18	2,252	\$24	5,048	\$56	14,677	\$194	20,631	\$428	60,798	\$1,676	432,226	\$11,927
Flounders:														
"Sole".....	495,861	12,437	543,112	13,574	516,938	12,923	155,748	4,136	81,319	2,514	116,077	4,558	3,588,692	105,538
Other.....	140	2	178	2	366	3	442	7	19,092	380	34,405	831	459,896	11,454
Halibut.....	95,825	5,675	28,892	1,807	1,049	105	755	65					288,067	17,364
Herring.....											3,265	63	727,429	9,230
"Lingcod".....	271,865	3,187	293,282	3,035	102,084	2,202	45,223	766	31,623	700	44,537	1,352	1,431,720	23,056
Perch.....	90	2	4,518	132	9,110	274	6,449	193	7,272	235	13,187	476	121,931	3,860
Rockfishes.....	6,962	207	4,555	103	5,288	109	8,250	306	4,812	172	19,326	764	174,782	4,555
Sablefish.....	21,889	453	35,847	822	11,236	238	6,505	136					81,142	1,782
Salmon:														
Blueback, red, or sockeye.....	192	19	184,855	13,129	12,898	954							197,945	14,102
Chinook or king.....	726,570	82,443	1,117,169	139,322	1,668,599	115,806	351,535	38,360	34,799	3,904	37	2	5,090,183	524,618
Chum or keta.....			2,508	130	9,202	231	3,966,473	99,162	1,718,097	59,892	200	4	5,696,480	159,419
Humpback or pink.....			159	5									159	5
Silver or coho.....	212,339	19,169	1,025,055	78,045	1,390,381	97,358	1,996,919	129,282	124,054	7,784	17,105	1,284	4,869,219	341,102

Smelt	48,160	1,796	88,674	3,166	39,745	1,790	32,632	1,958	22,298	1,769	14,929	1,194	320,794	16,011
Tuna, albacore			245,783	11,674	626,289	27,743	320,023	14,142					1,192,096	53,559
Crabs	152,460	6,998	107,604	4,890	67,384	3,370	157,844	6,354	194,294	7,982	191,782	7,182	1,752,912	79,068
Shrimp	563	48	116	21	250	20			1,813	196	7,485	1,028	16,377	2,361
Clams, hard, in shell (meats)					38,025	3,418	42,650	3,822	39,200	3,512	36,575	3,290	331,671	30,066
Scallops, bay (meats)	1,949	487	2,395	596	1,140	292	1,603	408	996	250	1,401	356	19,608	4,880
Octopus	2,672	134	3,163	155	3,364	168	5,848	268	5,067	219	9,061	477	60,169	2,888
Squid									1,390	110	3,948	261	5,338	371
Total	2,038,889	133,074	3,690,117	270,634	4,508,396	267,060	7,113,576	299,559	2,306,692	90,037	574,717	24,798	26,868,826	1,417,786

¹ This tabulation does not include fish received from Alaska or Canada or vessels in the halibut fleet.

² 81,444 dozen.

NOTE. - The yields of bivalve mollusks have been converted from weights in the shell to weight of meats on the following bases: Hard clams, 25 percent, and bay scallops, 17 percent.*

LAKE FISHERIES ¹³

In 1938 the yield of the fisheries of the Great Lakes, including those of the international lakes of northern Minnesota, in the United States and Canada amounted to 112,633,700 pounds, representing a decrease of 3 percent as compared with the catch in the preceding year.

Considering the fishery of United States craft only, the catch amounted to 81,524,500 pounds, valued at \$6,083,212, which is a decrease of 3 percent in volume but an increase of 1 percent in value as compared with the catch in the previous year. These fisheries gave employment to 6,976 fishermen, as compared with 6,418 in the previous year.

Lake fisheries of the United States and Canada, 1938

CATCH: BY LAKES

Species	Lake Ontario			Lake Erie		
	United States	Canada	Total	United States	Canada	Total
	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>
Blue pike.....	58,500	59,500	118,000	8,659,400	7,157,700	15,817,100
Bowfin.....	1,700	(¹)	1,700	2,800	(¹)	2,800
Burbot.....	19,000	(¹)	19,000	262,600	(¹)	262,600
Carp.....	134,700	144,200	278,900	2,209,500	373,900	2,583,400
Catfish and bullheads.....	52,200	191,200	243,400	463,800	78,300	542,100
Cisco.....	36,100	(¹)	36,100	809,700	1,374,500	2,184,200
Eels, common.....	44,300	42,300	86,600			
Garfish.....				5,900	(¹)	5,900
Goldfish.....				214,700	(¹)	214,700
Lake herring.....	6,200	1,230,600	1,236,800			
Lake trout.....	16,900	275,800	292,700			
Mooneye.....				100	(¹)	100
Pike or pickerel (jacks).....	10,900	104,600	115,500	11,300	(¹)	11,300
Rock bass.....	4,400	(¹)	4,400	3,200	20,200	23,400
Sauger.....				3,400	(¹)	3,400
Sheepshead.....				844,400	(¹)	844,400
Sturgeon.....	10,500	5,300	15,800	3,392,300	(¹)	3,392,300
Sucker "mullet".....	128,600	(¹)	128,600	20,300	16,500	36,800
Sunfish.....	44,100	(¹)	44,100	756,000	(¹)	756,000
White bass.....	5,000	(¹)	5,000			
Whitefish, common.....	55,800	602,300	658,100	727,300	(¹)	727,300
Yellow perch.....	58,400	169,400	227,800	910,900	1,001,800	1,912,700
Yellow pike.....	2,200	15,000	17,200	5,186,900	2,595,500	7,782,400
Miscellaneous.....		245,800	245,800	3,134,600	509,500	3,644,100
Total.....	689,500	3,086,000	3,775,500	27,619,100	14,501,000	42,120,100

¹ Where there has been a Canadian catch of these species it is included under "Miscellaneous."

¹³ The statistics of the catch presented herewith were obtained principally from records of the various State fishery agencies. The data for the operating units (fishermen, vessels, boats, and gear) of the United States were obtained largely by Bureau agents in a special canvass; although State records in several instances were very helpful in this work. In all cases the statistics collected are for the calendar year, except for Lake of the Woods, Rainy Lake, and Lake Namakan in Minnesota, which are for 2 seasons. For Lake of the Woods, the seasons are from June 1 to November 1 and December 1 to April 1, and for Rainy and Namakan Lakes from May 15 to November 1 and December 1 to April 1. The catches for these 2 seasons, in the order named, have been combined to constitute a year. The quantity of fish taken in these lakes between January 1 and April 1 is estimated at less than 3 percent of the total catch.

Lake fisheries of the United States and Canada, 1938—Continued

CATCH: BY LAKES—Continued

Species	Lake Huron			Lake Michigan	Lake Superior		
	United States	Canada	Total	United States	United States	Canada	Total
	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>
Blue pike.....		2,000	2,000			14,200	14,200
Bowfin.....	1,100	(¹)	1,100				
Burbot.....	12,000	(¹)	12,000	34,300	8,500	(¹)	8,500
Carp.....	631,100	49,100	680,200	1,873,000	300	600	900
Catfish and bullheads.....	165,700	10,600	176,300	67,600			
Chubs.....	192,100	452,000	644,100	5,404,100	256,300	61,900	318,200
Lake herring.....	5,428,800	235,700	5,664,500	4,477,300	10,593,700	1,855,500	12,449,200
Lake trout.....	1,270,100	3,800,300	5,070,400	4,905,600	3,166,900	1,667,800	4,834,700
Pike or pickerel (jacks).....	25,500	128,700	154,200	18,400	5,100	8,200	13,300
Rock bass.....	27,900	(¹)	27,900	2,600			
Sauger.....	2,100	(¹)	2,100	400			
Sheepshead.....	19,800	(¹)	19,800	4,600			
Smelt.....	100	(¹)	100	1,841,400	4,300	(¹)	4,300
Steelhead trout.....				1,200			
Sturgeon.....		12,500	12,500			2,600	2,600
Sucker "mullet".....	1,788,200	(¹)	1,788,200	1,858,100	288,700	(¹)	288,700
White bass.....				3,400			
Whitefish:							
Common.....	558,000	1,587,100	2,145,100	1,258,900	455,400	311,700	767,100
Menominee.....	54,200	(¹)	54,200	75,700	23,500	(¹)	23,500
Yellow perch.....	500,400	151,800	652,200	2,203,600	7,900	700	8,600
Yellow pike.....	1,356,100	358,500	1,714,600	49,600	45,400	75,500	120,900
Crawfish.....				6,000			
Mussel shells.....	5,500	(¹)	5,500	293,500			
Miscellaneous.....		469,000	469,000			58,500	58,500
Total.....	12,038,700	7,257,300	19,296,000	24,379,300	14,856,000	4,057,200	18,913,200

Species	Namakan Lake			Rainy Lake		
	United States	Canada	Total	United States	Canada	Total
	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>
Blue pike.....					700	700
Burbot.....				1,700	(¹)	1,700
Chubs.....					14,700	14,700
Lake herring.....				14,000	(¹)	14,000
Pike or pickerel (jacks).....	2,500	3,800	6,300	27,600	101,100	128,700
Sturgeon.....		500	500	100	700	800
Sucker "mullet".....				2,000	(¹)	2,000
Whitefish, common.....	30,500	9,300	39,800	29,300	66,100	95,400
Yellow perch.....				6,000	10,700	16,700
Yellow pike.....	9,500	5,900	15,400	38,900	182,800	221,700
Miscellaneous.....					90,900	90,900
Total.....	42,500	19,500	62,000	119,600	467,700	587,300

¹ Where there has been a Canadian catch of these species it is included under "Miscellaneous."

Lake fisheries of the United States and Canada, 1938—Continued

CATCH: BY LAKES—Continued

Species	Lake of the Woods			Total, all lakes		
	United States	Canada	Total	United States	Canada	Total
	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
Blue pike.....				8,717,900	7,234,100	15,952,000
Bowfin.....				5,600	(1)	5,600
Burbot.....	19,800	(1)	19,800	357,900	(1)	357,900
Carp.....	11,000	1,300	12,300	4,859,600	569,100	5,428,700
Catfish and bullheads.....	41,300	3,400	49,700	790,600	288,500	1,079,100
Chubs.....				5,852,500	528,600	6,381,100
Cisco.....				845,800	1,374,500	2,220,300
Crappie.....	400	(1)	400	400	(1)	400
Eels, common.....				44,300	42,300	86,600
Garfish.....				5,900	(1)	5,900
Goldfish.....				214,700	(1)	214,700
Lake herring.....	2,900	(1)	2,900	20,522,900	3,321,800	23,844,700
Lake trout.....		6,300	6,300	9,359,600	5,750,200	15,109,800
Mooneye.....				11,300	(1)	11,300
Pike or pickerel (jacks).....	137,900	425,200	563,100	231,100	791,800	1,022,900
Rock bass.....				38,300	(1)	38,300
Sauger.....	87,900	43,900	131,800	934,800	43,900	978,700
Sheepshead.....				3,416,700	(1)	3,416,700
Smelt.....				1,845,800	(1)	1,845,800
Steelhead trout.....				1,200	(1)	1,200
Sturgeon.....				30,900	38,100	69,000
Sucker "mullet".....	180,300	300	180,600	5,001,900	300	5,002,200
Sunfish.....				44,100	(1)	44,100
Tullibees.....	873,400	112,200	990,600	878,400	112,200	990,600
White bass.....				735,700	(1)	735,700
Whitefish:						
Common.....	3,700	192,400	196,100	3,302,500	3,770,700	7,073,200
Menominee.....				153,400	(1)	153,400
Yellow perch.....	53,600	25,800	79,400	8,016,800	2,953,900	10,970,700
Yellow pike.....	362,600	651,500	1,014,100	4,998,900	1,798,700	6,797,600
Crawfish.....				6,000	(1)	6,000
Mussel shells.....				299,000	(1)	299,000
Miscellaneous.....		253,200	253,200		2,490,500	2,490,500
Total.....	1,779,800	1,720,500	3,500,300	81,524,500	31,109,200	112,633,700

¹ Where there has been a Canadian catch of these species it is included under "Miscellaneous."

Lake fisheries of the United States, 1938

OPERATING UNITS: BY LAKES

Item	Lake Ontario	Lake Erie	Lake Huron	Lake Michigan	Lake Superior	Lake of the Woods, Rainy Lake, and Namanan Lake	Total
	Number	Number	Number	Number	Number	Number	Number
Fishermen:							
On vessels.....	11	264	121	1,031	189		1,616
On boats and shore:							
Regular.....	36	787	699	918	853	120	3,413
Casual.....	120	420	134	953	318	2	1,947
Total.....	167	1,471	954	2,902	1,360	122	6,976
Vessels:							
Steam.....		13	5	22	4		44
Net tonnage.....		305	31	499	134		1,019
Motor.....	3	39	28	296	59		425
Net tonnage.....	33	433	448	3,499	590		5,003
Total vessels.....	3	52	33	318	63		469
Total net tonnage.....	33	738	529	3,998	724		6,022
Boats:							
Motor.....	44	304	260	447	512	95	1,662
Other.....	72	383	253	545	379	27	1,659

Lake fisheries of the United States, 1938—Continued

OPERATING UNITS: BY LAKES—Continued

Item	Lake Ontario	Lake Erie	Lake Huron	Lake Michigan	Lake Superior	Lake of the Woods, Rainy Lake, and Naman Lake	Total
Apparatus:	Number	Number	Number	Number	Number	Number	Number
Haul seines.....	7	173	69	59	17	-----	325
Length, yards.....	583	74, 416	33, 605	27, 233	3, 404	-----	139, 241
Gill nets:							
"Shoal," 2¼ to 3¾ inches.....	1, 337	21, 740	2, 870	64, 588	11, 939	-----	102, 474
Square yards.....	218, 070	3, 435, 000	574, 000	12, 859, 300	3, 147, 600	-----	20, 233, 970
"Shoal," 4 to 6 inches.....	483	11, 286	5, 975	43, 972	12, 669	266	74, 651
Square yards.....	90, 330	2, 246, 850	1, 337, 500	9, 584, 000	3, 702, 010	S4, 384	17, 045, 074
"Shoal," 10 to 14 inches.....	34	8	-----	-----	-----	-----	42
Square yards.....	10, 200	2, 400	-----	-----	-----	-----	12, 600
Bar nets.....	-----	110	-----	-----	-----	-----	110
Square yards.....	-----	16, 500	-----	-----	-----	-----	16, 500
Trammel nets.....	-----	-----	-----	6	-----	-----	6
Square yards.....	-----	-----	-----	600	-----	-----	600
Lines:							
Troll.....	-----	-----	-----	-----	75	-----	75
Hooks.....	-----	-----	-----	-----	525	-----	525
Trot.....	83	116	636	7, 907	5, 202	-----	13, 944
Hooks.....	16, 600	25, 200	189, 900	2, 403, 450	1, 049, 575	-----	3, 684, 725
Pound nets.....	-----	45	449	1, 093	232	69	1, 888
Trap nets.....	140	6, 105	3, 066	-----	-----	-----	9, 311
Fyke nets.....	145	794	276	1, 564	53	93	2, 905
Crawfishpots.....	-----	-----	-----	740	-----	-----	740
Crowfoot bars.....	-----	-----	-----	62	-----	-----	62
Picks.....	-----	-----	-----	19	-----	-----	19

OPERATING UNITS: BY STATES AND LAKES

Item	New York			Pennsylvania	Ohio
	Lake Ontario	Lake Erie	Total	Lake Erie	Lake Erie
Fishermen:	Number	Number	Number	Number	Number
On vessels.....	11	49	60	133	82
On boats and shore:					
Regular.....	36	47	83	35	616
Casual.....	120	94	214	15	255
Total.....	167	190	357	183	953
Vessels:					
Steam.....	-----	1	1	9	3
Net tonnage.....	-----	24	24	185	96
Motor.....	3	9	12	16	14
Net tonnage.....	33	68	101	189	176
Total vessels.....	3	10	13	25	17
Total net tonnage.....	33	92	125	374	272
Boats:					
Motor.....	44	26	70	16	242
Other.....	72	44	116	1	291
Apparatus:					
Haul seines.....	7	6	13	-----	133
Length, yards.....	583	516	1, 099	-----	64, 300
Gill nets:					
"Shoal," 2¼ to 3¾ inches.....	1, 337	6, 300	7, 637	9, 060	6, 175
Square yards.....	218, 070	1, 160, 000	1, 378, 070	1, 395, 000	839, 000
"Shoal," 4 to 6 inches.....	483	3, 218	3, 701	6, 150	1, 763
Square yards.....	90, 330	643, 600	733, 930	1, 230, 000	342, 250
"Shoal," 10 to 14 inches.....	34	8	42	-----	-----
Square yards.....	10, 200	2, 400	12, 600	-----	-----
Bar nets.....	-----	-----	-----	-----	110
Square yards.....	-----	-----	-----	-----	16, 500
Lines:					
Trot.....	83	96	179	-----	-----
Hooks.....	16, 600	19, 200	35, 800	-----	-----
Pound nets.....	-----	-----	-----	45	-----
Trap nets.....	140	16	156	-----	5, 900
Fyke nets.....	145	-----	145	-----	509

Lake fisheries of the United States, 1938—Continued

OPERATING UNITS: BY STATES AND LAKES—Continued

Item	Michigan					Indiana
	Lake Erie	Lake Huron	Lake Michigan	Lake Superior	Total	Lake Michigan
Fishermen:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
On vessels.....		121	370	107	598	29
On boats and shore:						
Regular.....	89	699	403	325	1,516	16
Casual.....	56	134	275	162	627	12
Total.....	145	954	1,048	594	2,741	57
Vessels:						
Steam.....		5	8	4	17	1
Net tonnage.....		81	111	134	326	22
Motor.....		28	96	25	149	8
Net tonnage.....		448	1,060	323	1,861	87
Total vessels.....		33	104	29	166	9
Total net tonnage.....		529	1,201	457	2,187	109
Boats:						
Motor.....	20	260	207	222	709	6
Other.....	47	253	169	90	559	5
Apparatus:						
Haul seines.....	34	69	1	15	119	1
Length, yards.....	9,600	33,605	65	2,904	46,174	300
Gill nets:						
"Shoal," 2¼ to 3¾ inches.....	205	2,870	17,682	4,850	25,607	1,575
Square yards.....	41,000	571,000	3,469,900	863,000	4,947,900	315,000
"Shoal," 4 to 6 inches.....	155	5,975	21,189	7,365	34,684	925
Square yards.....	31,000	1,337,500	4,604,900	2,129,500	8,102,900	185,000
Lines:						
Trotl.....				75	75	
Hooks.....				525	525	
Trot.....	20	636	510	3,247	4,413	
Hooks.....	6,000	189,900	155,400	729,100	1,080,400	
Pound nets.....		440	744	136	1,329	4
Trap nets.....	189	3,066			3,255	
Fyke nets.....	285	276	100	6	667	
Crowfoot bars.....			47		47	
Picks.....			19		19	

Lake fisheries of the United States, 1938—Continued

OPERATING UNITS: BY STATES AND LAKES—Continued

Item	Illinois	Wisconsin			Minnesota		
	Lake Michigan	Lake Michigan	Lake Superior	Total	Lake Superior	Lake of the Woods, Rainy Lake, and Namakan Lake	Total
Fishermen:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
On vessels.....	69	563	76	639	6		6
On boats and shore:							
Regular.....	2	497	141	638	387	120	507
Casual.....	3	663	65	728	91	2	93
Total.....	74	1,723	282	2,005	484	122	606
Vessels:							
Steam.....		13		13			
Net tonnage.....		366		366			
Motor.....	21	171	32	203	2		2
Net tonnage.....	300	2,022	255	2,277	12		12
Total vessels.....	21	184	32	216	2		2
Total net tonnage.....	300	2,388	255	2,643	12		12
Boats:							
Motor.....	2	232	70	302	220	95	315
Other.....	1	370	81	451	208	27	235
Apparatus:							
Haul seines.....		57	2	59			
Length, yards.....		26,868	500	27,368			
Gill nets:							
"Shoal," 2¼ to 3¾ inches.....	2,825	42,506	2,993	45,499	4,096		4,096
Square yards.....	565,000	8,509,400	769,300	9,278,700	1,515,300		1,515,300
"Shoal," 4 to 6 inches.....	1,675	20,183	3,195	23,378	2,109	266	2,375
Square yards.....	325,000	4,469,100	968,500	5,437,600	604,010	84,384	688,394
Trammel nets.....		6		6			
Square yards.....		600		600			
Lines:							
Trot.....		7,397	1,095	8,492	860		860
Hooks.....		2,248,050	278,800	2,526,850	41,675		41,675
Pound nets.....		345	96	441		69	69
Fyke nets.....		1,464	27	1,491		93	93
Crawfish pots.....		740		740			
Crowfoot bars.....		15		15			

OPERATING UNITS OF LAKE ONTARIO: BY GEAR¹

Item	Haul seines	Gill nets			Trot lines	Trap nets	Fyke nets	Total, exclusive of duplication
		"Shoal" 2¼ to 3¾ inches	"Shoal" 4 to 6 inches	"Shoal" 10 to 14 inches				
Fishermen:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
On vessels.....		11	4					11
On boats and shore:								
Regular.....		30	16	6	3	16	5	36
Casual.....	19	19	9	7	50	28	14	120
Total.....	19	60	29	13	53	44	19	167
Vessels, motor.....		3	1					3
Net tonnage.....		33	7					33
Boats:								
Motor.....	4	21	13	5	10	18	6	44
Other.....	5	9	3	6	39	9	10	72
Apparatus:								
Number.....	7	1,337	483	34	83	140	145	
Length, yards.....	583							
Square yards.....		218,070	90,330	10,200				
Hooks.....					16,600			

¹ Includes Niagara River below the Falls, and the St. Lawrence River.

Lake fisheries of the United States, 1938—Continued

OPERATING UNITS OF LAKE ERIE: BY GEAR¹

Item	Haul seines	Gill nets			Bar nets	Trot lines	Pound nets	Trap nets	Fyke nets	Total, exclusive of duplication
		"Shoal" 2¼ to 3¾ inches	"Shoal" 4 to 6 inches	"Shoal" 10 to 14 inches						
Fishermen:	Number	Number	Number	Number	Number	Number	Number	Number	Number	Number
On vessels.....		264	241							264
On boats and shore:										
Regular.....	146	79	47	1	12	6	20	524	94	737
Casual.....	222	65	30	1	7	43	7	76	45	420
Total.....	368	408	318	2	19	49	27	600	139	1,471
Vessels:										
Steam.....		13	12							13
Net tonnage.....		305	273							305
Motor.....		39	35							39
Net tonnage.....		433	363							433
Total vessels.....		52	47							52
Total net tonnage.....		738	636							738
Boats:										
Motor.....	42	42	30	1	5	5	10	203	34	304
Other.....	167	12	3		7	42		146	68	383
Apparatus:										
Number.....	173	21,740	11,286	8	110	116	45	6,105	794	
Length, yards.....	74,416									
Square yards.....		3,435,000	2,246,850	2,400	16,500					
Hooks.....						25,200				

¹ Includes Niagara River above the falls.

OPERATING UNITS OF LAKE HURON: BY GEAR

Item	Haul seines	Gill nets		Trot lines	Pound nets	Trap nets	Fyke nets	Total, exclusive of duplication
		"Shoal" 2¼ to 3¾ inches	"Shoal" 4 to 6 inches					
Fishermen:	Number	Number	Number	Number	Number	Number	Number	Number
On vessels.....		48	66	53	8	27		121
On boats and shore:								
Regular.....	90	99	126	28	200	523	47	699
Casual.....	48	35	36	8	16	42	9	134
Total.....	138	182	228	89	224	592	56	954
Vessels:								
Steam.....		3	4	2				5
Net tonnage.....		53	55	41				81
Motor.....		8	15	11	2	8		28
Net tonnage.....		146	231	232	18	89		448
Total vessels.....		11	19	13	2	8		33
Total net tonnage.....		199	286	273	18	89		529
Boats:								
Motor.....	34	50	53	10	78	180	18	260
Other.....	29	36	33	8	64	120	31	253
Apparatus:								
Number.....	69	2,870	5,975	636	449	3,066	276	
Length, yards.....	33,605							
Square yards.....		574,000	1,337,500					
Hooks.....				189,900				

Lake fisheries of the United States, 1938—Continued

OPERATING UNITS OF LAKE MICHIGAN: BY GEAR

Item	Haul seines	Gill nets		Trammel nets	Trot lines	Pound nets
		"Shoal" 2¼ to 3⅞ inches	"Shoal" 4 to 6 inches			
Fishermen:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
On vessels.....		842	724		176	78
On boats and shore:						
Regular.....	61	560	395	4	74	326
Casual.....	105	507	313	5	33	136
Total	166	1,909	1,432	9	283	540
Vessels:						
Steam.....		17	10		6	2
Net tonnage.....		349	227		167	28
Motor.....		246	206		46	26
Net tonnage.....		2,855	2,528		664	195
Total vessels		263	216		52	28
Total net tonnage		3,204	2,755		831	223
Boats:						
Motor.....	26	254	168	2	30	137
Other.....	57	257	123	6	44	137
Apparatus:						
Number.....	59	64,588	43,972	6	7,907	1,093
Length, yards.....	27,233					
Square yards.....		12,859,300	9,584,000	600		
Hooks.....					2,403,450	

Item	Fyke nets	Crawfish pots	Crowfoot bars	Picks	By hand	Total, exclusive of duplication
Fishermen:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
On vessels.....	53					1,031
On boats and shore:						
Regular.....	193					918
Casual.....	60	5	55	19	11	953
Total	306	5	55	19	11	2,902
Vessels:						
Steam.....	1					22
Net tonnage.....	13					499
Motor.....	20					296
Net tonnage.....	161					3,499
Total vessels	21					318
Total net tonnage	174					3,998
Boats:						
Motor.....	78	2	45	10		447
Other.....	109	5	17	6	11	545
Apparatus, number	1,564	740	62	19		

Lake fisheries of the United States, 1938—Continued

OPERATING UNITS OF LAKE SUPERIOR: BY GEAR

Item	Haul seines	Gill nets		Lines		Pound nets	Fyke nets	Total, exclusive of duplication
		"Shoal" 2¼ to 3¾ inches	"Shoal" 4 to 6 inches	Troll	Trot			
Fishermen:	Number	Number	Number	Number	Number	Number	Number	Number
On vessels.....		107	120		110	21	8	189
On boats and shore:								
Regular.....	26	685	437	18	308	97	2	853
Casual.....	20	224	182	14	78	28	6	318
Total.....	46	1,016	739	32	496	146	16	1,360
Vessels:								
Steam.....		1	4		3	1		4
Net tonnage.....		24	134		108	24		134
Motor.....		37	34		28	7	4	59
Net tonnage.....		334	331		306	59	22	590
Total vessels.....		38	38		31	8	4	63
Total net tonnage.....		358	465		414	83	22	724
Boats:								
Motor.....	10	396	291	10	189	44	2	512
Other.....	10	312	155		58	33	3	379
Apparatus:								
Number.....	17	11,939	12,669	75	5,202	232	33	
Length, yards.....	3,404							
Square yards.....		3,147,600	3,702,010					
Hooks.....				525	1,049,575			

OPERATING UNITS OF LAKE OF THE WOODS, RAINY LAKE, AND NAMAKAN LAKE: BY GEAR

Item	Gill nets, "shoal," 4 to 6 inches	Pound nets	Fyke nets	Total, exclusive of duplication
	Number	Number	Number	Number
Fishermen, on boats and shore:				
Regular.....	90	34	29	120
Casual.....	2			2
Total.....	92	34	29	122
Boats:				
Motor.....	74	21	23	95
Other.....	14	7	11	27
Apparatus:				
Number.....	266	69	93	
Square yards.....	84,384			

CATCH: BY GEAR

Species	New York							
	Haul seines		Gill nets		Trot lines		Trap nets	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Blue pike.....			1,117,300	\$78,211			4,900	\$343
Bowfin.....			100	2			1,600	32
Burbot.....			13,000	130			6,100	61
Carp.....	158,200	\$9,492	1,400	84			12,200	732
Catfish and bullheads.....	700	49	700	49	200	\$14	35,700	2,499
Cisco.....			427,700	51,324			3,700	444
Eels, common.....							39,800	2,388
Garfish.....	5,900	59						
Lake herring.....			6,200	620				
Lake trout.....	8,500	1,760	6,300	1,260			2,100	420
Pike or pickerel (jacks).....			300	30			8,200	820
Rock bass.....							4,400	264
Sauger.....			200	14				
Sheepshead.....							100	2
Sturgeon.....	500	175	3,300	1,155	14,500	5,075	500	175
Sucker "mullet".....	17,100	513	105,200	3,156	600	18	22,600	678
Sunfish.....							40,200	2,412
White bass.....			600	36			5,000	300
Whitefish, common.....			112,900	27,135			34,000	6,800
Yellow perch.....	200	14	86,100	6,027	100	7	16,800	1,176
Yellow pike.....			2,900	290			5,400	540
Total.....	191,100	12,062	1,884,200	169,523	15,400	5,114	243,300	20,086

Lake fisheries of the United States, 1938—Continued

CATCH: BY GEAR—Continued

Species	New York—Continued				Pennsylvania	
	Fyke nets		Total		Gill nets	
	Pounds	Value	Pounds	Value	Pounds	Value
Blue pike			1,122,200	\$78,554	1,260,900	\$88,256
Howfin			1,700	34		
Burbot			19,100	191	18,800	168
Carp	1,300	\$78	174,100	10,386		
Catfish and bullheads	15,800	1,085	52,800	3,666		
Cisco	1,300	156	432,700	51,924	370,100	44,412
Eels, common	4,500	270	44,300	2,658		
Garfish			5,900	59		
Lake herring			6,200	620		
Lake trout			16,900	3,440	100	20
Pike or pickerel (jacks)	2,400	240	10,900	1,090		
Rock bass			4,400	264		
Sauger			200	14		
Sheepshead			100	2	4,000	92
Sturgeon			18,800	6,580		
Sucker "mullet"	8,400	252	153,900	4,617	6,000	132
Sunfish	3,900	234	44,100	2,646		
White bass			9,000	346	7,500	300
Whitefish, common			116,800	12,935	466,500	51,290
Yellow perch	4,800	336	108,000	7,560	128,700	7,602
Yellow pike			8,500	850	100	10
Total	42,100	2,651	2,376,100	209,436	2,561,600	234,272

Species	Pennsylvania—Continued				Ohio			
	Pound nets		Total		Horn seines		Gill nets	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Blue pike	181,100	\$12,677	1,441,900	\$100,934	200	\$12	919,700	\$57,182
Burbot	9,300	93	28,100	281			14,100	282
Carp	4,000	80	4,000	80	1,094,100	2,282	7,500	225
Catfish and bullheads	1,800	108	1,800	108	154,700	12,356	1,200	24
Cisco	1,800	216	371,900	44,628			30,700	5,955
Goldfish					199,700	7,980		
Lake trout			100	20				
Mooneye					6,000	240		
Sauger					21,300	2,130	20,300	2,030
Sheepshead	15,700	314	20,300	406	675,000	21,268	9,300	276
Sturgeon	300	81	300	81			8,800	1,680
Sucker "mullet"	8,600	172	15,200	304	20,500	940	12,900	492
White bass	28,100	1,124	35,600	1,424	98,000	3,916	7,000	280
Whitefish, common	50,000	11,980	526,200	105,240			81,500	16,800
Yellow perch	73,200	4,392	199,900	11,994	2,100	168	1,085,400	8,832
Yellow pike	28,100	2,810	28,200	2,820	18,800	1,880	24,000	2,400
Total	411,900	34,047	2,673,500	268,319	2,291,000	81,733	2,426,000	192,702

Species	Ohio—Continued							
	Bar nets		Trap nets		Fyke nets		Total	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Blue pike	200	\$12	5,215,900	\$38,482	17,800	\$1,068	6,153,900	\$41,552
Burbot			219,400	4,388	6,000	12	225,400	4,400
Carp	161,200	4,836	149,500	4,182	45,200	1,156	355,900	10,174
Catfish and bullheads	400	32	228,000	18,080	28,000	2,270	496,400	12,382
Cisco			1,500	225			43,200	5,280
Goldfish	2,100	84	5,000	250	4,100	164	11,200	8,428
Mooneye			5,300	212			21,800	472
Sauger			564,800	28,240	71,500	3,170	636,300	31,410
Sheepshead	1,800	54	2,421,000	72,642	130,900	3,927	2,552,900	76,569
Sturgeon			2,000	80			11,500	230
Sucker "mullet"	100	4	607,000	24,280	3,000	120	610,000	24,400
White bass			445,000	17,800	110,000	6,024	555,000	23,824
Whitefish, common			207,100	4,139	500	10	207,600	4,149
Yellow perch	100	8	3,814,000	30,512	1,000	80	3,815,000	30,592
Yellow pike	200	20	2,786,000	27,860	30,000	3,000	2,816,000	27,860
Total	166,100	5,050	16,670,500	1,142,302	488,000	28,967	17,158,500	1,171,269

Lake fisheries of the United States, 1938—Continued

CATCH: BY GEAR—Continued

Species	Michigan							
	Haul seines		Gill nets		Lines			
	Pounds	Value	Pounds	Value	Troll		Trot	
	700	\$14			Pounds	Value	Pounds	Value
Bowfin.....							100	\$2
Burbot.....			6,400	\$64			14,600	146
Carp.....	835,800	25,074	19,100	673			1,700	51
Catfish and bullheads.....	46,700	3,269					12,600	702
Chubs.....			1,678,500	201,420				
Goldfish.....	3,600	144						
Lake herring.....	63,200	1,896	3,859,600	117,434				
Lake trout.....			4,055,300	608,295	46,400	\$6,960	1,542,400	231,160
Pike or pickerel (jacks).....	2,100	210	2,600	260				
Rock bass.....	5,800	348	400	24				
Sauger.....	100	10	700	70				
Sheepshead.....	18,300	366	100	2			3,300	66
Smelt.....			267,400	8,022				
Sucker "mullet".....	87,600	2,625	351,900	10,554				
White bass.....	600	36						
Whitefish:								
Common.....			898,200	179,640				
Menominee.....			91,200	9,120				
Yellow perch.....	16,800	1,344	643,200	51,456			2,300	184
Yellow pike.....	106,400	10,640	56,600	5,660			400	40
Total.....	1,187,600	45,976	11,931,100	1,192,694	46,400	6,960	1,577,400	232,351

Species	Michigan—Continued							
	Pound nets		Trap nets		Fyke nets		Crowfoot bars	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Bowfin.....			700	\$14	2,400	\$48		
Burbot.....	800	\$8	200	2	600	6		
Carp.....	37,200	916	173,200	5,196	314,600	9,435		
Catfish and bullheads.....	2,500	175	103,600	7,252	54,700	3,836		
Goldfish.....					400	16		
Lake herring.....	4,179,700	125,391	2,055,000	61,650	2,500	75		
Lake trout.....	143,900	21,585	144,500	21,675	1,400	210		
Pike or pickerel (jacks).....	8,400	840	20,000	2,000	15,300	1,530		
Rock bass.....	1,700	102	11,500	690	14,500	870		
Sauger.....			3,600	360	40,200	4,020		
Sheepshead.....	7,100	142	24,700	494	103,700	2,074		
Smelt.....	405,900	12,177						
Sucker "mullet".....	1,095,300	32,859	1,557,200	46,726	251,000	7,530		
White bass.....					22,100	1,326		
Whitefish:								
Common.....	656,500	131,300	443,500	88,700	5,500	1,100		
Menominee.....	6,500	650	17,200	1,720				
Yellow perch.....	79,100	6,328	371,200	29,696	123,700	9,896		
Yellow pike.....	73,600	7,360	1,178,300	117,830	172,300	17,230		
Mussel shells ¹							125,000	\$3,150
Pearls and slugs ¹								50
Total.....	6,698,200	339,733	6,104,400	384,005	1,124,800	59,202	125,000	3,200

¹ From tributary streams.

Lake fisheries of the United States, 1938—Continued

CATCH: BY GEAR—Continued

Species	Michigan—Continued						Indiana	
	Picks		By hand		Total		Haul seines	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Bowfin.....					3,900	\$78		
Burbot.....					22,600	228		
Carp.....					1,381,500	41,245	4,000	\$160
Catfish and bullheads.....					220,100	15,234		
Chubs.....					1,678,500	201,420		
Goldfish.....					4,000	160		
Lake herring.....					10,160,000	306,446		
Lake trout.....					5,933,900	889,885		
Pike or pickerel (jacks).....					48,400	4,840		
Rock bass.....					33,900	2,034		
Sauger.....					44,600	4,460		
Sheepshead.....					157,200	3,144		
Smelt.....					673,300	20,199		
Sucker "mullet".....					3,342,800	100,294		
White bass.....					22,700	1,362		
Whitefish:								
Common.....					2,003,700	400,740		
Menominee.....					114,900	11,490		
Yellow perch.....					1,236,300	98,904		
Yellow pike.....					1,587,600	158,760		
Mussel shells ¹	30,000	\$750	13,500	\$278	168,500	4,178		
Pearls and slugs ¹		20		9		79		
Total.....	30,000	770	13,500	287	28,838,400	2,265,178	4,000	160

Species	Indiana—Continued						Illinois	
	Gill nets		Pound nets		Total		Gill nets	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Burbot.....	1,200	\$24			1,200	\$24	5,000	\$100
Carp.....					4,000	160		
Chubs.....	277,000	22,157			277,000	22,157	524,900	78,730
Lake herring.....	219,100	10,956	8,500	\$425	227,600	11,381	145,800	7,289
Lake trout.....	174,200	27,834			174,200	27,834	311,400	62,277
Steelhead trout.....	1,200	240			1,200	240		
Sucker "mullet".....	1,500	45	3,500	105	5,000	150		
Yellow perch.....	73,000	3,650			73,000	3,650	168,400	8,420
Total.....	747,200	64,906	12,000	530	763,200	65,596	1,155,500	156,816

Species	Wisconsin							
	Haul seines		Gill nets		Trammel nets		Trot lines	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Burbot.....	4,200	\$42	9,900	\$99			3,800	\$38
Carp.....	1,644,500	69,155	76,200	2,286	1,000	\$30	100	3
Catfish and bullheads.....			3,600	252			100	7
Chubs.....			3,234,400	385,226				
Lake herring.....			3,541,200	153,276				
Lake trout.....			1,562,400	295,060			566,800	108,935
Pike or pickerel (jacks).....			1,700	170			100	10
Sheepshead.....			100	2				
Smelt.....	4,700	141	1,041,900	31,257				
Sucker "mullet".....	30,500	905	349,500	10,395			300	9
White bass.....			200	12				
Whitefish:								
Common.....	200	40	91,900	17,412			100	22
Menominee.....			28,200	2,820				
Yellow perch.....	123,600	7,353	386,800	23,208			800	48
Yellow pike.....			8,900	890			100	10
Total.....	1,807,700	77,636	10,336,900	922,365	1,000	30	572,200	109,082

¹ From tributary streams.

Lake fisheries of the United States, 1938—Continued

CATCH: BY GEAR—Continued

Species	Wisconsin—Continued							
	Pound nets		Fyke nets		Crawfish pots		Crowfoot bars	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Burbot	4, 800	\$48	3, 600	\$36				
Carp	400	12	106, 300	3, 189				
Catfish and bullheads			61, 500	4, 305				
Chubs	60, 500	7, 248	13, 400	1, 608				
Lake herring	696, 100	37, 468	14, 100	705				
Lake trout	330, 100	62, 040	1, 000	185				
Pike or pickerel (jacks)	400	40	1, 200	110				
Sheepshead			100	2				
Smelt	88, 500	2, 655	37, 400	1, 122				
Sucker "mullet"	77, 400	2, 322	161, 900	4, 857				
White bass			3, 200	192				
Whitefish:								
Common	171, 500	36, 104	800	176				
Menominee	6, 700	670						
Yellow perch	21, 800	1, 308	726, 600	43, 536				
Yellow pike	30, 000	3, 000	1, 400	140				
Crawfish					6, 000	\$450		
Mussel shells ¹							100, 400	\$1, 400
Total	1, 488, 200	152, 915	1, 132, 500	60, 163	6, 000	450	100, 400	1, 400

Species	Wisconsin—Continued				Minnesota			
	By hand		Total		Gill nets		Trot lines	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Burbot			26, 300	\$263	7, 300	\$73		
Carp			1, 828, 500	74, 675	400	8		
Catfish and bullheads			65, 200	4, 564	3, 300	165		
Chubs			3, 308, 300	394, 082	63, 800	6, 380		
Lake herring			4, 251, 400	191, 449	5, 729, 000	117, 460		
Lake trout			2, 460, 300	466, 220	342, 000	35, 889	120, 800	\$11, 306
Pike or pickerel (jacks)			3, 400	330	82, 200	6, 640		
Sauger					68, 600	5, 134		
Sheepshead			200	4				
Smelt			1, 172, 500	35, 175				
Sucker "mullet"			619, 600	18, 488	86, 200	1, 792		
Tullibees					841, 400	42, 070		
White bass			3, 400	204				
Whitefish:								
Common			264, 500	53, 754	53, 800	5, 532		
Menominee			34, 900	3, 490	3, 600	190		
Yellow perch			1, 259, 600	75, 453	46, 200	2, 312		
Yellow pike			40, 400	4, 040	203, 300	19, 465		
Crawfish			6, 000	450				
Mussel shells ¹	30, 100	\$425	130, 500	1, 825				
Total	30, 100	425	15, 475, 000	1, 324, 466	7, 531, 100	243, 110	120, 800	11, 306

Species	Minnesota—Continued					
	Pound nets		Fyke nets		Total	
	Pounds	Value	Pounds	Value	Pounds	Value
Burbot	4, 900	\$50	9, 300	\$100	21, 500	\$223
Carp	9, 200	185	1, 400	28	11, 000	221
Catfish and bullheads	13, 300	667	24, 700	1, 232	41, 300	2, 064
Chubs					63, 800	6, 380
Crappie	100	4	300	12	400	16
Lake herring	2, 900	50			5, 731, 900	117, 510
Lake trout					462, 800	47, 195
Pike or pickerel (jacks)	61, 900	4, 948	24, 300	1, 143	168, 400	12, 731
Sauger	13, 800	827	5, 500	329	87, 900	6, 290
Sturgeon	100	25			100	25
Sucker "mullet"	79, 400	1, 587	26, 100	521	191, 700	3, 900
Tullibees	26, 900	1, 342	10, 100	503	878, 400	43, 915
Whitefish:						
Common	15, 100	1, 500	400	37	69, 300	7, 069
Menominee					3, 600	190
Yellow perch	7, 500	375	5, 900	297	59, 600	2, 984
Yellow pike	171, 100	16, 941	36, 600	3, 658	411, 000	40, 064
Total	406, 200	28, 501	144, 600	7, 860	8, 202, 700	290, 777

¹ From tributary streams.

Lake fisheries of the United States, 1938—Continued

CATCH: BY LAKES

Species	Lake Ontario		Lake Erie			
	New York		New York		Pennsylvania	
	Pounds	Value	Pounds	Value	Pounds	Value
Blue pike.....	58,500	\$4,095	1,063,700	\$74,459	1,441,900	\$100,933
Bowfin.....	1,700	34				
Burbot.....	19,000	190	100	1	28,100	281
Carp.....	134,700	8,082	38,400	2,304	4,000	80
Catfish and bullheads.....	52,200	3,654	600	42	1,800	108
Cisco.....	36,100	4,332	396,600	47,592	371,900	44,628
Eels, common.....	44,300	2,658				
Garfish.....			5,900	59		
Lake herring.....	6,200	620				
Lake trout.....	16,900	3,440			100	20
Pike or pickerel (jacks).....	10,900	1,090				
Rock bass.....	4,400	264				
Sauger.....			200	14		
Sheepshead.....			100	2	20,300	406
Sturgeon.....	10,500	3,675	8,300	2,905	300	81
Sucker, "mullet".....	128,600	3,858	25,300	759	15,200	304
Sunfish.....	44,100	2,646				
White bass.....	5,000	300	600	36	35,600	1,424
Whitefish, common.....	55,800	11,160	91,100	22,775	526,200	105,240
Yellow perch.....	58,400	4,088	49,600	3,472	199,900	11,994
Yellow pike.....	2,200	220	6,100	610	28,200	2,820
Total.....	689,500	54,406	1,686,600	155,030	2,673,500	268,319

Species	Lake Erie—Continued					
	Ohio		Michigan		Total	
	Pounds	Value	Pounds	Value	Pounds	Value
Blue pike.....	6,153,800	\$414,756			8,659,400	\$590,148
Bowfin.....			2,800	\$56	2,800	56
Burbot.....	234,100	4,682	300	3	262,600	4,967
Carp.....	1,457,500	43,725	709,600	21,288	2,209,500	67,397
Catfish and bullheads.....	409,400	32,782	52,000	3,640	463,800	36,572
Cisco.....	41,200	6,180			809,700	98,400
Garfish.....					5,900	59
Goldfish.....	210,700	8,428	4,000	160	214,700	8,588
Lake trout.....					100	20
Mooneye.....	11,300	452			11,300	452
Pike or pickerel (jacks).....			3,200	320	3,200	320
Rock bass.....			3,400	204	3,400	204
Sauger.....	802,100	80,210	42,100	4,210	844,400	84,434
Sheepshead.....	3,238,900	97,167	133,000	2,660	3,392,300	100,235
Sturgeon.....	11,700	3,510			20,300	6,496
Sucker, "mullet".....	673,700	26,948	41,800	1,264	756,000	29,275
White bass.....	668,400	40,104	22,700	1,362	727,300	42,926
Whitefish, common.....	291,900	58,380	1,700	340	910,900	186,735
Yellow perch.....	4,912,000	392,960	25,400	2,032	5,186,900	410,458
Yellow pike.....	2,923,400	292,340	176,900	17,690	3,134,600	313,460
Total.....	22,040,100	1,502,624	1,218,900	55,229	27,619,100	1,981,202

Lake fisheries of the United States, 1938—Continued

CATCH: BY LAKES—Continued

Species	Lake Huron		Lake Michigan			
	Michigan		Michigan		Indiana	
	Pounds	Value	Pounds	Value	Pounds	Value
Bowfin	1, 100	\$22				
Burbot	12, 000	120	7, 000	\$70	1, 200	\$24
Carp	631, 100	19, 033	40, 500	915	4, 000	160
Catfish and bullheads	165, 700	11, 419	2, 400	175		
Chubs	192, 100	23, 052	1, 439, 100	172, 692	277, 000	22, 157
Lake herring	5, 428, 800	164, 450	2, 337, 400	70, 132	227, 600	11, 381
Lake trout	1, 270, 100	190, 515	2, 479, 800	371, 970	174, 200	27, 834
Pike or pickerel (jacks)	25, 500	2, 550	18, 200	1, 820		
Rock bass	27, 900	1, 674	2, 600	156		
Sauger	2, 100	210	400	40		
Sheepshead	19, 800	396	4, 400	88		
Smelt	100	3	668, 900	20, 067		
Steelhead trout					1, 200	240
Sucker "mullet"	1, 788, 200	53, 646	1, 300, 800	39, 024	5, 000	150
Whitefish:						
Common	558, 000	111, 600	1, 117, 100	223, 420		
Menominee	54, 200	5, 420	53, 800	5, 380		
Yellow perch	500, 400	40, 032	704, 100	56, 328	73, 000	3, 650
Yellow pike	1, 356, 100	135, 610	49, 600	4, 960		
Mussel shells ¹	5, 500	78	163, 000	4, 100		
Pearls and slugs ¹				79		
Total	12, 038, 700	759, 830	10, 389, 100	971, 466	763, 200	65, 596

Species	Lake Michigan—Continued					
	Illinois		Wisconsin		Total	
	Pounds	Value	Pounds	Value	Pounds	Value
Burbot	5, 000	\$100	21, 100	\$211	34, 300	\$405
Carp			1, 828, 500	74, 675	1, 873, 000	75, 750
Catfish and bullheads			65, 200	4, 564	67, 600	4, 739
Chubs	524, 900	78, 730	3, 163, 100	379, 562	5, 404, 100	653, 141
Lake herring	145, 800	7, 289	1, 766, 500	92, 109	4, 477, 300	180, 961
Lake trout	311, 400	62, 277	1, 940, 200	388, 100	4, 905, 600	850, 181
Pike or pickerel (jacks)			200	20	18, 400	1, 840
Rock bass					2, 600	156
Sauger					400	40
Sheepshead			200	4	4, 600	92
Smelt			1, 172, 500	35, 175	1, 841, 400	55, 242
Steelhead trout					1, 200	240
Sucker "mullet"			552, 300	16, 459	1, 858, 100	55, 633
White bass			3, 400	204	3, 400	204
Whitefish:						
Common			141, 800	29, 196	1, 258, 900	252, 616
Menominee			21, 900	2, 190	75, 700	7, 570
Yellow perch	168, 400	8, 420	1, 258, 100	75, 363	2, 203, 600	143, 761
Yellow pike					49, 600	4, 960
Crawfish			6, 000	450	6, 000	450
Mussel shells ¹			130, 500	1, 825	293, 500	5, 925
Pearls and slugs ¹						79
Total	1, 155, 500	156, 816	12, 071, 500	1, 100, 107	24, 379, 300	2, 293, 935

Species	Lake Superior					
	Michigan		Wisconsin		Minnesota	
	Pounds	Value	Pounds	Value	Pounds	Value
Burbot	3, 300	\$33	5, 200	\$52		
Carp	300	9				
Chubs	47, 300	5, 676	145, 200	14, 520	63, 800	\$6, 330
Lake herring	2, 393, 800	71, 814	2, 484, 900	99, 340	5, 715, 000	117, 180
Lake trout	2, 184, 000	327, 400	520, 100	78, 120	462, 800	47, 195
Pike or pickerel (jacks)	1, 500	150	3, 200	310	400	44
Smelt	4, 300	129				
Sucker "mullet"	212, 000	6, 360	67, 300	2, 029	9, 400	258
Whitefish:						
Common	326, 900	65, 380	122, 700	24, 558	5, 800	754
Menominee	6, 900	690	13, 000	1, 300	3, 600	190
Yellow perch	6, 400	512	1, 500	90		
Yellow pike	5, 000	500	40, 400	4, 040		
Total	6, 191, 700	478, 653	3, 403, 500	224, 359	6, 260, 800	172, 001

¹ From tributary streams.

Lake fisheries of the United States, 1938—Continued

CATCH: BY LAKES—Continued

Species	Lake Superior— Continued		Lake of the Woods, Rainy Lake, and Namakan Lake		Total, all lakes	
	Total		Minnesota		Pounds	Value
	Pounds	Value	Pounds	Value		
Blue pike.....					8,717,900	\$594,243
Bowfin.....					5,600	112
Burbot.....	8,500	\$85	21,500	\$223	357,900	5,990
Carp.....	300	9	11,000	221	4,859,600	170,492
Catfish and bullheads.....			41,300	2,064	790,600	58,448
Chubs.....	256,300	26,576			5,852,500	702,769
Cisco.....					845,800	102,732
Crappie.....			400	16	400	16
Eels, common.....					44,300	2,658
Garfish.....					5,900	59
Goldfish.....					214,700	8,588
Lake herring.....	10,593,700	288,334	16,900	330	20,522,900	634,695
Lake trout.....	3,166,900	452,715			9,359,600	1,496,871
Mooneye.....					11,300	452
Pike or pickerel (jacks).....	5,100	504	168,000	12,687	231,100	18,991
Rock bass.....					38,300	2,298
Sauger.....			87,900	6,290	934,800	90,974
Sheepshead.....					3,416,700	100,723
Smelt.....	4,300	129			1,845,800	55,374
Steelhead trout.....					1,200	240
Sturgeon.....			100	25	30,900	10,196
Sucker "mullet".....	288,700	8,647	182,300	3,642	5,001,900	154,701
Sunfish.....					44,100	2,646
Tullibees.....			878,400	43,915	878,400	43,915
White bass.....					735,700	43,430
Whitefish:						
Common.....	455,400	90,892	63,500	6,315	3,302,500	659,118
Menominee.....	23,500	2,180			153,400	15,170
Yellow perch.....	7,900	602	59,600	2,984	8,016,800	601,925
Yellow pike.....	45,400	4,540	411,000	40,064	4,998,900	498,854
Crawfish.....					6,000	450
Mussel shells ¹					299,000	6,003
Pearls and slugs ¹						79
Total.....	14,856,000	875,013	1,941,900	118,776	81,524,500	6,083,212

¹ From tributary streams.

Industries related to the fisheries of the Lake States, 1938

OPERATING UNITS, SALARIES, AND WAGES

Item	New York	Penn- sylv- ania	Ohio	Michi- gan	Indi- ana	Illinois	Wis- consin	Minne- sota	Total
Transporting:									
Persons engaged, on vessels.....	Number	Number	Number 21	Number 9	Number	Number	Number	Number	Number 30
Vessels:									
Steam.....			2						2
Net tonnage.....			63						63
Motor.....			12	3					15
Net tonnage.....			154	21					175
Total vessels.....			14	3					17
Total net ton- nage.....			217	21					238
Wholesale and manu- facturing:									
Establishments.....	17	6	48	45	3	46	36	13	214
Persons engaged:									
Proprietors.....	21	5	44	24	3	16	28	5	146
Salaried employees.....	33	8	76	76	2	211	49	31	486
Wage earners:									
Average for season.....	116	56	289	381	5	626	536	131	2,140
Average for year.....	79	39	208	193	5	500	187	57	1,268
Paid to salaried em- ployees.....	\$42,832	\$15,825	\$168,475	\$146,364	\$1,920	\$568,974	\$196,830	\$40,955	\$1,182,175
Paid to wage earners.....	\$87,975	\$49,316	\$293,959	\$233,040	\$6,200	\$699,469	\$207,219	\$71,525	\$1,648,703
Total salaries and wages.....	\$130,807	\$65,141	\$462,434	\$379,404	\$8,120	\$1,268,443	\$404,049	\$112,480	\$2,830,878
Fishermen manufactur- ing.....			15	30		40	43	78	206

Industries related to the fisheries of the Lake States, 1938—Continued

PRODUCTS MANUFACTURED

Item	New York		Pennsylvania		Ohio		Indiana	
	Quantity (1)	Value (1)	Quantity (1)	Value (1)	Quantity (1)	Value (1)	Quantity (1)	Value (1)
By manufacturing establishments:								
Alewives, spiced... pounds..								
Blue pike:								
Fresh fillets.....do.....	401,042	\$82,828	231,920	\$43,663	1,106,219	\$239,866		
Frozen fillets.....do.....	30,550	5,204	21,870	4,145	261,053	54,924		
Chub, cisco and tullibees, smoked.....pounds.....	(1)	(1)			(1)	(1)	55,000	\$13,200
Herring, lake, smoked.do.....	(1)	(1)						
Lake trout:								
Fresh fillets.....do.....	2,509	697	(1)	(1)	(1)	(1)		
Smoked.....do.....							17,000	4,800
Sablefish, smoked.do.....					(1)	(1)		
Salmon:								
Kipperd.....do.....	(1)	(1)			(1)	(1)		
Smoked.....do.....	(1)	(1)			(1)	(1)		
Sauger:								
Fresh fillets.....do.....	57,226	13,201	20,100	3,987	152,100	36,393		
Frozen fillets.....do.....	35,132	5,973	(1)	(1)	61,000	14,100		
Sheepshead, smoked.do.....					11,900	1,438		
White bass, fresh fillets pounds.....	(1)	(1)	8,598	1,372	13,105	2,646		
Whitefish:								
Fresh fillets.....do.....	(1)	(1)	(1)	(1)	(1)	(1)		
Smoked.....do.....	34,000	11,900			(1)	(1)	(1)	(1)
Yellow perch:								
Fresh fillets.....do.....	35,613	7,218	25,052	4,686	367,396	83,000		
Frozen fillets.....do.....					42,705	9,989		
Yellow pike:								
Fresh fillets.....do.....	20,502	6,419	(1)	(1)	59,534	14,021		
Frozen fillets.....do.....	(1)	(1)			10,950	2,975		
Unclassified products:								
Fillets, fresh and frozen pounds.....	(2)	(2)	\$ 7,708	\$ 2,131	(2)	(2)	(2)	(2)
Smoked.....do.....	7 274,000	7 72,900			8 149,500	8 39,312	(2)	(2)
Miscellaneous.....do.....		12 26,809				13 39,805		
Total.....		233,149	315,248	59,984		538,469	72,000	18,000
By fishermen:								
Catfish and bullheads, smoked.....pounds.....					10,000	2,000		
Carp, smoked.....do.....					5,000	500		
Herring, lake, smoked.do.....					1,000	100		
Sheepshead, smoked.do.....					25,000	2,500		
Whitefish, smoked.do.....					2,000	600		
Yellow pike, smoked.do.....					2,000	400		
Total.....					45,000	6,100		
Grand total.....		233,149	315,248	59,984		544,569	72,000	18,000

Item	Illinois		Michigan		Wisconsin		Minnesota	
	Quantity (1)	Value (1)	Quantity (1)	Value (1)	Quantity (1)	Value (1)	Quantity (1)	Value (1)
By manufacturing establishments:								
Alewives, spiced pounds	1,660,000	\$308,000			456,300	\$62,900		
Blue pike:								
Fresh fillets.....do.....	433,514	92,802	(1)	(1)	(1)	(1)		
Frozen fillets.....do.....	(1)	(1)						
Chub, cisco and tullibees, smoked.....pounds.....	1,670,000	470,760	295,700	\$72,300	619,911	154,682	45,000	\$9,300
Herring, lake:								
Fresh fillets.....do.....	(1)	(1)	(1)	(1)	7,200	820		
Salted.....do.....			1,518,960	61,342	(1)	(1)	633,000	26,175
Smoked.....do.....	(1)	(1)	41,016	5,498	508,000	49,300	48,500	4,850
Lake trout:								
Fresh fillets.....do.....	4,029	1,016	(1)	(1)	(1)	(1)		
Smoked.....do.....	87,785	23,435	108,659	36,631	207,000	54,252	(1)	(1)
Sablefish, smoked.do.....	(1)	(1)	(1)	(1)	65,100	13,788		
Salmon:								
Kipperd.....do.....	69,700	22,855						
Smoked.....do.....	666,000	257,370	303,308	60,814	137,000	29,160	(1)	(1)

See footnotes at end of table.

Industries related to the fisheries of the Lake States, 1938—Continued

PRODUCTS MANUFACTURED—Continued

Item	Illinois		Michigan		Wisconsin		Minnesota	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
By manufacturing establishments—Continued.								
Sauger:								
Fresh fillets.....do.....	696,738	\$147,216			163,000	\$30,460		
Frozen fillets.....do.....	478,170	105,575	(1)	(1)	(1)	(1)		
Whitefish:								
Fresh fillets.....do.....	9,835	2,795			(1)	(1)		
Smoked.....do.....			46,589	\$10,661	(1)	(1)	(1)	(1)
Yellow perch:								
Fresh fillets.....do.....	214,918	49,650	(1)	(1)	189,500	42,365		
Frozen fillets.....do.....	50,107	11,760			(1)	(1)		
Yellow pike:								
Fresh fillets.....do.....	190,823	41,738			64,090	14,140		
Frozen fillets.....do.....	10,458	2,328			56,000	8,800		
Unclassified products:								
Fillets, fresh and frozen pounds.....	⁴ 34,127	⁴ 6,609	⁶ 215,260	⁵ 38,706	⁶ 69,300	⁶ 16,940		
Smoked.....do.....	¹⁰ 128,506	¹⁰ 34,395	(²)	(²)	¹¹ 40,000	¹¹ 6,420	(²)	(²)
Miscellaneous.....do.....	¹⁴ 211,447			¹⁵ 7,790		¹⁶ 68,566		¹⁷ \$34,730
Total.....		1,789,751		293,742		552,593		75,055
By fishermen:								
Chub, cisco, and tullibees, smoked.....pounds.....	110,000	33,000	13,000	3,900	90,000	27,000		
Herring, lake:								
Salted.....do.....			150,000	4,500	20,000	800	125,000	5,000
Smoked.....do.....			2,000	200	20,000	2,000		
Lake trout, smoked.....do.....	45,000	15,750	12,500	3,750	5,000	1,500		
Sturgeon roe, salted.....do.....							25	20
Suckers, smoked.....do.....			1,000	100				
Whitefish, smoked.....do.....			2,500	850				
Total.....	155,000	48,750	181,000	13,300	135,000	31,300	125,025	5,020
Grand total.....		1,838,501		307,042		583,893		80,075

¹ The production of this item has been included under "Unclassified products."

² This item has been included under "Miscellaneous."

³ Includes fresh fillets of lake trout, whitefish, and yellow pike; and frozen fillets of sauger.

⁴ Includes fresh fillets of halibut, lake herring, red snapper, sheepshead, and suckers; and frozen fillets of blue pike, lake herring, lake trout, red snapper, and whitefish.

⁵ Includes fresh fillets of blue pike, lake herring, lake trout, and yellow perch; and frozen fillets of lake herring and sauger.

⁶ Includes fresh fillets of blue pike, lake trout, and whitefish; and frozen fillets of sauger and yellow perch.

⁷ Includes smoked chub, cisco, eels, lake herring, salmon and tullibees; and kippered salmon.

⁸ Includes smoked chub, cisco, tullibees, mooneye, sablefish, suckers, whitefish, and kippered salmon.

⁹ Included with miscellaneous products in Illinois.

¹⁰ Includes smoked buffalo fish, carp, eels, lake herring, sea herring, sablefish, sturgeon, and shad.

¹¹ Includes smoked carp and whitefish.

¹² Includes fresh fillets of white bass, whitefish and whiting; frozen fillets of lake trout and yellow pike; and spiced alewives and sea herring.

¹³ Includes fresh fillets of lake trout, red snapper, sole, and whitefish; frozen fillets of white bass; and spiced alewives and sea herring.

¹⁴ Includes spiced sea herring, canned hard clam chowder, and a small production of smoked whitefish produced in Indiana.

¹⁵ Includes smoked carp and sablefish, and spiced sea herring.

¹⁶ Includes spiced chubs, lake herring, and sea herring; salted lake herring; canned whitefish caviar; burbot liver oil; and mussel-shell poultry feed and lime.

¹⁷ Includes smoked lake trout, salmon, and whitefish; spiced alewives, and sea herring; and burbot liver oil.

NOTE.—The total value of the manufactured products for the Lake States was as follows: By manufacturing establishments, \$3,560,743; and by fishermen, \$104,470. Some of the above products may have been manufactured from products imported from another State or a foreign country; therefore, they cannot be correlated directly with the catch within the State. All but 10 of the persons engaged in the preparation of fishermen's manufactured products also have been included as fishermen. This should be considered when computing the total number of persons in the fishery industries exclusive of duplication.

RECEIPTS OF FISHERY PRODUCTS AT CHICAGO, ILL.

Receipts of fishery products in the wholesale marketing area of Chicago, Ill., as collected and compiled by the Division's Fishery Market News Service, totaled 48,418,745 pounds during 1939; the largest receipts aggregating 5,658,461 pounds, occurring in October, and the smallest amounting to 2,553,876 pounds in February. Michigan, with shipments of 6,219,304 pounds, was the most important State supplying the Chicago market. Following in order were Wisconsin, Louisiana, Massachusetts, and Ohio. Among the Canadian Provinces, British Columbia, with 5,511,824 pounds, supplied the most fish to the Chicago market; however, 1,895,735 pounds of this quantity were captured by United States fishermen and shipped through British Columbia ports in bond. Second in importance among the Canadian Provinces was Manitoba with shipments of 4,917,324 pounds.

Receipts of fresh and frozen fishery products at Chicago, Ill., 1939

BY SPECIES AND MONTHS

Species	January	February	March	April	May	June
FRESH-WATER FISH						
Blue pike.....	<i>Pounds</i> 2, 240	<i>Pounds</i> 13, 460	<i>Pounds</i> 27, 631	<i>Pounds</i> 284, 133	<i>Pounds</i> 197, 692	<i>Pounds</i> 1, 485
Bowfin.....	504	1, 024	254	319	793	38, 673
Brook trout.....	290	70	487	380	793	16, 101
Buffalofish.....	49, 248	12, 332	57, 486	73, 199	69, 912	7
Bullheads.....	21, 205	11, 048	4, 920	11, 682	36, 485	130, 088
Burbot.....		407	149	229	54	36, 007
Carp.....	109, 280	98, 806	192, 425	174, 355	210, 266	87, 834
Catfish.....	7, 866	3, 649	5, 263	8, 682	30, 712	
Chubs.....	88, 940	50, 330	46, 755	59, 755	83, 022	
Cisco.....				3, 010		
Eels.....		150	5, 099	125	3, 552	324
Lake herring.....	188, 327	89, 166	257, 302	222, 760	224, 491	225, 881
Lake trout.....	246, 575	131, 686	224, 573	268, 535	557, 287	443, 818
Lake trout, frozen.....		1, 257	36, 119	3, 666	1, 345	
Menominee.....	305	228	625	5, 293	3, 172	2, 231
Pickeral (jacks).....	17, 821	6, 309	19, 195	35, 011	20, 044	17, 111
Pickeral (jacks), frozen.....		4, 370	6, 928	774		
Rock bass.....				2, 655	5, 083	3, 269
Sauger.....	744, 817	378, 763	465, 429	160, 959	28, 350	20, 703
Sauger, frozen.....	77, 607	96, 907	739, 274	68, 561		16, 855
Sheepshead.....	73, 165	27, 640	70, 567	30, 055	211, 295	119, 941
Smelt.....	7, 991	68, 604	179, 314	498, 287	29, 634	44, 061
Smelt, frozen.....	22, 380	4, 000				
Suckers.....	52, 568	46, 299	35, 983	111, 284	81, 342	108, 966
Tullibee fillets.....						270
Tullibee, frozen.....	5, 810	39, 899	182			
Whitefish.....	230, 797	86, 841	169, 601	75, 339	180, 886	269, 085
Whitefish, frozen.....	5, 690	61, 028	143, 664	6, 206	10, 521	2, 838
Yellow perch.....	213, 318	92, 599	157, 337	199, 922	241, 055	101, 751
Yellow perch, frozen.....	369	1, 784	5, 666	588		14, 393
Yellow pike.....	230, 089	86, 692	101, 712	272, 928	211, 073	112, 029
Yellow pike, frozen.....	6, 076	4, 045	23, 582	10, 195		3, 981
Unclassified.....	443	380	1, 170	805	910	
Total.....	2, 403, 721	1, 405, 289	2, 965, 291	2, 333, 123	2, 525, 736	2, 015, 384

NOTE.—Includes all rail arrivals as reported by freight and express terminals, and truck receipts as reported by wholesale dealers, including smokers. Local cold-storage withdrawals and direct truck shipments to hotels, restaurants, chain stores, and other retailers are not included. Weights shown are for fishery products as received.

Receipts of fresh and frozen fishery products at Chicago, Ill., 1939—Continued

BY SPECIES AND MONTHS—Continued

Species	July	August	September	October	November	December	Total
FRESH-WATER FISH							
	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	<i>Pounds</i>
Blue pike.....	54,094	122,740	44,895	94,703	195,012	63,872	1,100,472
Bowfin.....					180	150	2,431
Brook trout.....	70	100	788	858	484	110	5,915
Buffalofish.....	68,306	66,775	73,796	64,452	45,270	45,863	665,312
Bullheads.....	22,282	16,781	41,086	54,968	29,051	19,432	285,041
Burbot.....	60				383	328	1,617
Carp.....	91,060	117,293	161,961	132,240	129,299	110,254	1,657,327
Catfish.....	30,744	30,660	29,766	23,833	33,451	18,146	258,779
Chubs.....	130,392	138,629	119,677	124,233	127,804	122,248	1,179,619
Cisco.....		22,320		115	1,955	3,349	30,749
Crappie.....			786	2,029	2,139	3,160	8,114
Eels.....	3,014	6,032	8,788	54,051	33,199	10,492	124,826
Lake herring.....	186,531	82,279	59,492	253,176	289,856	212,187	2,291,448
Lake trout.....	426,751	425,045	453,204	595,193	965,118	347,697	5,085,482
Lake trout, frozen.....			30,200	13,700		73,875	160,162
Menominee.....	2,446	3,960	1,693	2,000	8,595	5,964	36,512
Pickeral (jacks).....	24,810	21,431	37,992	42,957	23,534	22,386	288,601
Pickeral (jacks), frozen.....					1,400		13,472
Rock bass.....	2,149	1,352	4,352	4,490	409	74	23,833
Sauger.....	3,560	1,936	64,923	229,081	26,579	85,242	2,210,342
Sauger, frozen.....	43,199	37,014	89,971	47,835	15,000	61,337	1,293,560
Sheepshead.....	49,609	21,617	28,216	58,336	27,084	31,506	749,031
Smelt.....	37,171	50,745	35,341	26,774	19,914	27,463	1,025,289
Smelt, frozen.....					1,880	684	28,944
Suckers.....	91,432	69,044	95,191	73,098	53,735	60,878	879,820
Sunfish.....	761	250	2,764	10,418	5,385	600	20,178
Tullibee.....		14,925	25,376	21,680	400	703	63,084
Tullibee filets.....	1,453	675	2,580	3,605	450		9,033
Tullibee, frozen.....					7,470		53,361
White bass.....	1,710	9,750	9,861	15,601	4,419	300	41,641
Whitefish.....	341,114	235,906	246,062	274,494	328,966	279,819	2,718,910
Whitefish, frozen.....		28,316		96,186			354,449
Yellow perch.....	158,326	191,966	204,348	308,971	262,812	327,309	2,459,714
Yellow perch, frozen.....				750			23,550
Yellow pike.....	76,253	77,957	155,014	145,637	103,340	77,544	1,650,286
Yellow pike, frozen.....				1,550	7,500		56,929
Unclassified.....	1,637	4,238	6,366	6,660	4,602	5,976	33,187
Total.....	1,848,934	1,799,736	2,034,489	2,783,674	2,756,675	2,018,948	26,891,000

Species	January	February	March	April	May	June
SALT-WATER FISH						
	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>
Bluefish.....			58	400	4,700	750
Butterfish.....	320				2,700	5,775
Cod.....	10,672	1,872	3,005	5,475	6,640	2,070
Cod filets, frozen.....	80,000	9,660	39,050	35,430	31,885	29,590
Croaker.....			19,915			
Flounders.....	1,927	2,704	3,265	11,795	11,765	7,885
Haddock.....	7,838	2,150	4,575	14,175	3,525	3,030
Haddock filets, frozen.....	34,750	30,885	19,885	30,830	31,000	23,310
Halibut.....				274,207	679,791	358,178
Halibut, frozen.....	372,715	394,065	576,915	45,100		82,538
Herring, sea (sardine).....	7,900	2,000		175		
Jewfish (warsaw).....	600	530		1,000	1,200	
Kingfish (king mackerel).....		1,200		100		
Mackerel.....	3,200		900	850	16,000	10,725
Mullet.....	100	200				
Pollock filets, frozen.....		53,605	31,350	52,560	21,620	25,305
Pompano.....	2,891			375	1,492	118
Rosefish filets, frozen.....	139,840	121,725	139,425	166,325	117,540	160,700
Sablefish, frozen.....	6,500	4,000	22,816			
Salmon:						
Chinook (king).....				2,009	45,503	58,175
Chinook (king), frozen.....		1,500				
Chum (fall), frozen.....	10,500	33,000	2,000			
Silver.....						4,950
Silver, frozen.....	8,000	9,500	17,000	7,800		
Unclassified, frozen.....	82,901	20,650	69,244	9,150		

Receipts of fresh and frozen fishery products at Chicago, Ill., 1939—Continued

BY SPECIES AND MONTHS—Continued

Species	January	February	March	April	May	June
SALT-WATER FISH—continued						
	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>
Scup (porgy).....	1,600	1,275	300	875	3,400	4,535
Sea bass.....	200	500	580	1,700	2,267	11,359
Shad.....			1,705	27,578	23,076	
Shad, frozen.....		700	25			
Snapper, red.....	16,470	11,400	4,426	16,875	35,950	1,561
Sole:						
Gray.....	2,226	150	100	1,043	100	
Lemon.....	100		1,186	1,577	75	100
Fillets.....				1,200	600	500
Fillets, frozen.....	17,555		5,660	200		
Spanish mackerel.....	3,200	1,000	50		500	
Swordfish, frozen.....				1,256	4,200	
Whiting.....	8,170	45,875	5,000	300	2,170	750
Whiting fillets, frozen.....			11,000	6,000	12,475	1,500
Wolfish (catfish).....		1,000				
Unclassified.....	9,770	1,702	2,425	4,285	5,175	3,710
Total.....	829,945	752,848	981,880	720,645	1,065,340	797,111
SHELLFISH, ETC.						
Bullfrogs.....		600	1,224	2,344	192	
Clams:						
Hard.....	5,200	7,200	6,940	5,300	12,300	1,200
Soft.....	150	370	150			
Crabs:						
Hard.....	720	734	1,138	8,020	2,040	725
Soft.....		206	1,325	6,171	10,332	11,676
Crab meat.....	3,457	1,615	1,988	5,644	11,765	5,560
Frog legs.....	434	97	248	406	802	1,270
Lobsters.....	9,572	7,150	8,050	9,415	19,076	10,109
Lobster meat.....			169	50	548	300
Oysters, shell.....	116,300	57,900	56,600	53,000		600
Oysters, shucked.....	99,204	199,556	65,301	21,657		18
Scallops, sea.....			1,545	6,000	22,788	250
Shrimp.....	244,425	108,223	113,215	234,572	895,700	779,070
Shrimp, frozen.....			20,000	91,780	30,000	
Spiny lobster tails.....		9,490	4,500	4,000	10,200	3,000
Squid, frozen.....			2,574	6,202	34,742	4,935
Turtle, snapping.....		2,495		1,793		588
Turtle meat.....		103		334	120	112
Unclassified.....	150		30			
Total.....	479,612	395,739	284,997	456,688	1,050,605	819,413
Grand total.....	3,713,278	2,553,876	4,232,148	3,510,456	4,641,690	3,631,908

Species	July	August	September	October	November	December	Total
SALT-WATER FISH							
	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	<i>Pounds</i>
Bluefish.....	525	900	494	910	2,555	15,070	26,362
Butterfish.....	6,490	2,400	1,202	1,150	800	1,400	22,237
Cod.....	1,825	5,640	5,900	11,380	3,641	4,295	62,415
Cod fillets, frozen.....	9,150	30,000	90,055	7,965	34,505	14,655	411,945
Croaker.....	9,000	1,500	1,500	15,360			47,275
Flounders.....	3,340	3,120	3,360	5,640	2,395	5,765	62,961
Haddock.....	16,155	3,275	5,031	5,625	3,881	13,105	82,365
Haddock fillets, frozen.....	66,300	59,500	92,765	17,250	19,000	75,870	501,345
Halibut.....	592,480	496,578	541,615	552,682	31,300		3,526,828
Halibut, frozen.....	30,000	64,792	228,988	339,191	628,447	435,334	3,198,085
Herring, sea (sardine).....	7,300		19,400		31,500	4,000	72,275
Jewfish (warsaw).....		800	1,310	1,575	1,000	2,170	10,185
Kingfish (king mackerel).....				600		600	2,500
Mackerel.....	5,950	7,325	21,684	19,365	15,715	8,510	110,224
Mackerel, frozen.....	6,000		10,000		485	9,625	26,210
Mullet.....			400	3,072	5,307	4,350	13,429
Pollock fillets, frozen.....	7,500	6,000		1,500	31,120	34,650	265,210
Pompano.....	1,158	2,521	2,303	5,951	5,265	17,148	39,222
Rosefish fillets, frozen.....	117,000	167,000	254,930	279,550	168,230	106,690	1,938,955
Sablefish, frozen.....				9,800	6,845		49,961

Receipts of fresh and frozen fishery products at Chicago, Ill., 1939—Continued

BY SPECIES AND MONTHS—Continued

Species	July	August	September	October	November	December	Total
SALT-WATER FISH—continued							
Salmon:	<i>Pounds</i>	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
Chinook (king).....	49,845	54,944	20,881	5,822			237,179
Chinook (king), frozen.....			700	38,750	19,300	25,000	85,250
Chum (fall).....				15,200			15,200
Chum (fall), frozen.....		15,000		41,600	53,850	39,325	195,275
Pink (humpback).....		7,500	21,000				28,500
Silver.....	28,200	41,880	62,329	129,888	38,397		305,644
Silver, frozen.....		10,000	1,000	43,000	39,897	47,738	183,935
Unclassified, frozen.....							181,945
Scup (porgy).....	3,200	1,000	1,250	7,396	3,575	5,225	33,631
Sea bass.....	5,705	1,300	700	1,900	6,819	1,983	35,013
Sea trout, gray (weakfish).....			1,800				1,800
Shad.....							52,359
Shad, frozen.....							725
Snapper, red.....	11,655	10,150	12,650	29,054	16,730	69,838	236,789
Sole:							
Gray.....		450		1,950	400	2,537	8,956
Lemon.....	2,800			650	300	150	6,938
Fillets.....	4,000						6,300
Fillets, frozen.....						21,594	45,009
Spanish mackerel.....				1,000		32,170	37,920
Swordfish, frozen.....					300	10,000	15,756
Whiting.....	3,300	24,500		4,780	200	12,120	107,165
Whiting fillets, frozen.....	7,000	12,061	15,395	1,500	9,500	12,000	88,431
Wolfish (catfish).....		1,500		5,130		5,140	12,770
Unclassified.....	5,566	9,374	12,461	14,130	7,882	6,860	83,340
Total.....	1,001,444	1,041,010	1,431,133	1,620,316	1,189,141	1,044,917	12,475,719
SHELLFISH, ETC.							
Bullfrogs.....				115			4,475
Clams:							
Hard.....	5,650	3,150	8,651	21,055	24,505	38,935	140,086
Soft.....				525	1,061	373	2,629
Crabs:							
Hard.....	1,200	990	3,632	4,022	1,068	1,453	25,742
Soft.....	3,221	11,067	5,644	1,760			51,402
Crab meat.....	6,152	5,250	7,347	11,706	8,718	10,382	79,584
Crawfish.....	925		4,656	875			6,456
Frog legs.....	3,418	2,939	1,166	4,710	392	1,893	17,775
Lobsters.....	11,850	10,139	25,494	31,930	33,078	29,586	205,749
Lobster meat.....		609					1,676
Oysters, shell.....		3,060	59,580	143,095	154,460	98,343	742,938
Oysters, shucked.....			98,959	188,418	183,033	229,056	1,085,202
Scallops, sea.....	8,643	1,000	10,228	18,308	22,810	14,004	103,576
Shrimp.....	528,422	412,750	409,892	707,874	749,045	744,516	5,927,704
Shrimp, frozen.....			29,500	113,540	93,220	92,724	470,764
Spiny lobster tails.....	2,600		50	5,200	19,080	26,315	84,435
Squid, frozen.....	21,200	2,000	4,351	400	11,800	2,000	90,204
Turtle, snapping.....	1,594		340	938	6	2,081	9,835
Turtle meat.....		750				195	1,614
Unclassified.....							180
Total.....	592,875	453,704	669,490	1,254,471	1,302,276	1,292,156	9,052,026
Grand total.....	3,443,253	3,294,450	4,135,112	5,658,461	5,248,092	4,356,021	48,418,745

BY ORIGIN AND MONTHS

Origin	January	February	March	April	May	June
DOMESTIC						
Alabama.....	<i>Pounds</i> 29,335	<i>Pounds</i> 14,530	<i>Pounds</i> 4,226	<i>Pounds</i> 11,500	<i>Pounds</i> 41,600	<i>Pounds</i>
Arkansas.....			700	104	24	
California.....	92	94		114	28,612	
Florida.....	10,237	5,433	4,133	8,575	31,562	2,241
Georgia.....						
Illinois.....	166,303	102,089	292,601	224,092	68,247	28,235
Indiana.....	18,405	17,022	35,035	14,660	4,771	4,952
Iowa.....	76,688	9,360	70,403	81,118	82,286	62,948
Louisiana.....	155,089	48,177	136,779	252,210	757,170	602,917
Maine.....	20,676		51,641	47,322	250	2,400
Maryland.....	44,239	105,249	13,757	29,654	23,096	11,716
Massachusetts.....	180,200	261,537	164,194	294,045	284,728	265,279

Receipts of fresh and frozen fishery products at Chicago, Ill., 1939—Continued

BY ORIGIN AND MONTHS—Continued

Origin	January	February	March	April	May	June
DOMESTIC—continued						
Michigan.....	Pounds 270,875	Pounds 99,011	Pounds 235,280	Pounds 664,619	Pounds 767,710	Pounds 621,697
Minnesota.....	167,811	23,690	9,412	53,646	53,936	113,787
Mississippi.....	14,208	14,395	1,050			688
Missouri.....	443	2,175	2,118	380	543	985
New Jersey.....	22,722	11,335	16,205	1,675	5,400	150
New York.....	102,750	47,990	76,590	70,670	61,272	42,412
North Carolina.....	2,880	934	2,017	4,722	2,895	
Ohio.....	2,500	300	32,030	398,180	767,495	358,071
Oregon.....	710	724	1,138	920	1,478	725
Pennsylvania.....				14,296	9,684	10,052
Rhode Island.....			600	1,000		
South Carolina.....		450		130	310	
Texas.....	67,690	45,648		88,025	150,345	181,282
Virginia.....	49,830	110,748	74,617	28,923	14,390	2,732
Washington.....	71,250	25,000	56,292	33,719	120,694	56,155
Wisconsin.....	264,494	329,292	506,208	810,466	609,824	535,771
Alaska.....	220,989	136,000	263,346	44,000	118,312	102,000
Total.....	1,960,416	1,411,173	2,050,372	3,078,765	3,996,634	3,006,995
IMPORTED						
Alberta.....	195,100	68,786	203,253	39,615		101,500
British Columbia.....	191,377	301,715	369,337	264,747	487,848	346,183
British Columbia (in bond) ¹	(²)	(³)	(²)	(³)	(³)	(³)
Manitoba.....	1,193,443	683,468	1,370,728	86,324	19,375	57,176
New Brunswick.....	24,982	2,150	1,500	150	360	1,200
Nova Scotia.....	133,840	23,885	46,400		198	
Ontario.....	5,933	14,064	21,452	40,855	137,275	118,854
Saskatchewan.....	8,187	48,635	169,106			
Total.....	1,752,862	1,142,703	2,181,776	431,691	645,056	624,913
Grand total.....	3,713,278	2,553,876	4,232,148	3,510,456	4,641,690	3,631,908

Origin	July	August	September	October	November	December	Total
DOMESTIC							
Alabama.....	Pounds 19,160	Pounds 10,050	Pounds 2,810	Pounds 55,580	Pounds 19,260	Pounds 51,019	Pounds 259,070
Arkansas.....					104		932
California.....							28,912
Colorado.....			114	196	96	30	436
Connecticut.....			5,845	2,735	7,308	1,406	17,294
Delaware.....				180			180
Florida.....	5,457	4,065	16,869	24,740	26,302	104,786	244,400
Georgia.....			128	9			137
Illinois.....	49,704	98,783	72,587	144,265	203,219	158,661	1,608,786
Indiana.....	5,252	1,510	10,597	2,338	31,697	23,717	169,956
Iowa.....	97,328	69,797	89,804	143,558	84,938	92,251	960,479
Louisiana.....	414,312	394,820	121,653	209,446	533,992	652,488	4,279,053
Maine.....	5,525	300	26,359	12,199	63,901	45,650	276,223
Maryland.....	2,131	11,567	12,887	10,833	16,855	9,123	291,107
Massachusetts.....	231,313	313,430	416,397	416,997	315,201	227,206	3,370,527
Michigan.....	467,263	455,049	559,046	609,938	910,614	658,302	6,219,304
Minnesota.....	156,502	186,134	213,453	430,123	167,836	164,597	1,740,927
Mississippi.....	21,085	64		2,136	1,111	1,332	55,969
Missouri.....	70	152	156	90	486	80	7,678
New Jersey.....			34,805	64,872	40,340	71,900	269,404
New York.....	43,895	10,311	87,616	163,787	178,230	102,375	987,888
North Carolina.....	295	400	1,052	1,909	12,259	7,561	36,924
Ohio.....	149,317	165,819	141,914	152,333	306,907	24,298	2,489,164
Oregon.....	1,200	720	240	60,756	26,630	684	95,925
Pennsylvania.....	628	14,963	18,850	16,988	18,086	17,950	121,497
Rhode Island.....			1,260	13,890		5,985	22,735
South Carolina.....							890

¹ Includes "in bond" shipment prior to September.² Consists of catch taken by United States vessels and shipped in bond through British Columbia ports to Chicago.³ Data not available.

Receipts of fresh and frozen fishery products at Chicago, Ill., 1939—Continued

BY ORIGIN AND MONTHS—Continued

Origin	July	August	September	October	November	December	Total
DOMESTIC—continued							
	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>
Texas.....	93,740	26,000	327,710	589,021	311,545	192,610	2,073,616
Virginia.....	15,550	5,580	53,234	127,960	142,971	192,948	819,483
Washington.....	66,800	80,483	191,147	199,172	134,093	81,503	1,116,308
Wisconsin.....	454,746	392,993	421,808	476,768	525,671	436,589	5,764,630
Alaska.....	101,000	75,000	35,698	80,917	90,000	57,253	1,324,515
Total.....	2,402,273	2,317,990	2,864,039	4,013,736	4,169,522	3,382,304	34,654,349
IMPORTED							
Alberta.....	111,850	112,850	135,150			73,875	1,041,979
British Columbia ¹	532,725	535,331	193,563	279,499	46,597	67,167	3,616,089
British Columbia (in bond) ²	(³)	(³)	456,297	556,986	522,159	360,293	1,895,735
Manitoba.....	245,734	188,519	269,265	462,022	87,008	254,262	4,917,324
New Brunswick.....	2,800	3,799	5,591	8,350	9,100	9,150	69,132
Nova Scotia.....	38,800	26,000	109,600		23,120	111,788	513,631
Ontario.....	104,236	104,683	93,584	258,548	360,514	86,925	1,346,923
Quebec.....	2,235	5,278	7,188	52,570	29,942	10,257	107,470
Saskatchewan.....	2,600		835	26,750			256,113
Total.....	1,040,980	976,460	1,271,073	1,644,725	1,078,440	973,717	13,764,396
Grand total.....	3,443,253	3,294,450	4,135,112	5,658,461	5,248,092	4,356,021	48,418,745

¹ Includes "in bond" shipments prior to September.² Consists of catch taken by United States vessels and shipped in bond through British Columbia ports to Chicago.³ Data not available.

FISHERIES OF THE MISSISSIPPI RIVER AND TRIBUTARIES

The most recent complete catch statistics of the fisheries for the States of the Mississippi River and tributaries are those collected for the year 1931. The yield of fishery products in that year amounted to 82,382,523 pounds, valued at \$2,897,357, which was a decrease of 22 percent in quantity and 36 percent in value as compared with the quantity and value of the catch in 1922, when the most recent preceding survey was made. Detailed statistics of the fisheries of the Mississippi River and tributaries for 1931 appear in "Fishery Industries of the United States, 1932," by R. H. Fiedler, Appendix III to the Report of the Commissioner of Fisheries for the fiscal year 1933.

A summary of these fisheries in 1931 has been published in the Bureau's annual reports entitled, "Fishery Industries of the United States," by R. H. Fiedler, for the years from 1933 to 1938 inclusive. Information regarding the production of cured manufactured products in the Mississippi River area in 1931 and of mussel-shell products for 1938 appear in the following table. Data on the fisheries of Lakes Pepin and Keokuk and the Mississippi River between the two Lakes for 1938 are shown in succeeding tables.

Industries related to the fisheries of the Mississippi River and tributaries

PRODUCTS MANUFACTURED

Item	Indiana		Illinois, Iowa, and Missouri		Louisiana	
	Quantity	Value	Quantity	Value	Quantity	Value
By manufacturing establishments:						
Salmon, smoked.....pounds			240,000	\$48,800		
Sturgeon, smoked.....do.			162,000	39,140		
Mussel-shell products:						
Buttons ².....gross			8,376,261	2,189,481		
Poultry feed ².....tons			4,083	23,282		
Lime ².....do.			1,064	998		
Unclassified ².....do.				³ 22,300		
Unclassified, smoked.....pounds			⁴ 83,000	⁴ 14,440		
Total.....				2,338,531		
By fishermen:						
Alligator hides.....pounds					88,356	\$7,363
Carp, smoked.....do.			667	67		
Paddlefish roe, salted.....do.	450	\$180	900	540		
Sheepshead, smoked.....do.			617	77		
Sturgeon:						
Smoked.....do.			1,333	400		
Roe, salted.....do.			35	32		
Total.....	450	180	3,552	1,116	88,356	7,363
Grand total.....	450	180	2,339,647	88,356	7,363	

Item	Minnesota and Nebraska		Mississippi		Ohio, Tennessee, and Pennsylvania	
	Quantity	Value	Quantity	Value	Quantity	Value
By manufacturing establishments:						
Chubs, smoked.....pounds					106,600	\$26,650
Salmon, smoked.....do.	(1)	(1)			(1)	(1)
Sturgeon, smoked.....do.	(1)	(1)				
Whitefish, smoked.....do.	255,000	\$47,200			(1)	(1)
Unclassified, smoked.....do.	⁵ 66,600	⁵ 19,793			⁶ 184,900	⁶ 50,555
Total.....	321,600	66,993			291,500	77,205
By fishermen:						
Paddlefish roe, salted.....pounds			245	\$92		
Grand total.....	321,600	66,993	245	92	291,500	77,205

¹ The production of this item is included under unclassified products.

² Data are for 1938.

³ Includes mussel-shell chips and novelties.

⁴ Includes smoked buffalofish and tullibees.

⁵ Includes smoked eels, salmon, and sturgeon.

⁶ Includes smoked buffalofish, butterfish, carp, lake trout, paddlefish, sablefish, salmon, tullibees, and whitefish.

NOTE.—Unless otherwise indicated, the data are for 1931. The total value of the manufactured products for the States of the Mississippi River and tributaries was as follows: By manufacturing establishments, \$2,482,729; and by fishermen, \$8,751. Some of the products may have been manufactured from fishery products imported from another State or a foreign country; therefore, they cannot be correlated directly with the catch within the State.

LAKE PEPIN

Fisheries of Lake Pepin, 1938

OPERATING UNITS: BY GEAR

Item	Haul seines	Stake gill nets	Trot lines	Total, exclusive of duplication
Fishermen:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
Regular.....	33	29		33
Casual.....	10	44	25	63
Total.....	43	73	25	96
Boats:				
Motor.....	15	31	12	35
Other.....	3	17	13	25
Apparatus:				
Number.....	15	560	25	
Length, yards.....	5, 832			
Square yards.....		57, 608		
Hooks.....			2, 500	

CATCH: BY GEAR

Species	Haul seines		Stake gill nets		Trot lines		Total	
	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>
Bowfin.....	3, 600	\$51					3, 600	\$51
Buffalofish.....	27, 900	1, 115	10, 100	\$505			38, 000	1, 620
Carp.....	321, 500	8, 035	264, 100	10, 142	2, 300	\$86	587, 900	18, 263
Catfish and bullheads.....	69, 500	5, 553	700	35	9, 500	760	79, 700	6, 348
Mooneye.....	1, 500	43					1, 500	43
Sheepshead.....	47, 000	1, 880	300	10	800	27	48, 100	1, 917
Sucker "mullet".....	26, 000	391					26, 000	391
Total.....	497, 000	17, 068	275, 200	10, 692	12, 600	873	784, 800	28, 633

OPERATING UNITS: BY STATES

Item	Minnesota	Wisconsin	Total for lake
Fishermen:	<i>Number</i>	<i>Number</i>	<i>Number</i>
Regular.....		33	33
Casual.....	9	54	63
Total.....	9	87	96
Boats:			
Motor.....	4	31	35
Other.....	5	20	25
Apparatus:			
Haul seines.....		15	15
Length, yards.....		5, 832	5, 832
Stake gill nets.....		560	560
Square yards.....		57, 608	57, 608
Trot lines.....	9	16	25
Hooks.....	900	1, 600	2, 500

CATCH: BY STATES

Species	Minnesota		Wisconsin		Total	
	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>
Bowfin.....			3, 600	\$51	3, 600	\$51
Buffalofish.....			38, 000	1, 620	38, 000	1, 620
Carp.....	1, 000	\$60	586, 900	18, 203	587, 900	18, 263
Catfish and bullheads.....	1, 500	150	78, 200	6, 198	79, 700	6, 348
Mooneye.....			1, 500	43	1, 500	43
Sheepshead.....			48, 100	1, 917	48, 100	1, 917
Sucker "mullet".....			26, 000	391	26, 000	391
Total.....	2, 500	210	782, 300	28, 423	784, 800	28, 633

LAKE KEOKUK

Fisheries of Lake Keokuk, 1938

OPERATING UNITS: BY GEAR

Item	Haul seines	Trammel nets	Trot lines	Fyke nets	Total, exclusive of duplication
Fishermen:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
Regular.....	7	7	1	19	22
Casual.....	13	21	8	34	60
Total.....	20	28	9	53	82
Boats:					
Motor.....	6	11	4	24	34
Other.....	7	11	5	18	29
Apparatus:					
Number.....	9	18	45	740	
Length, yards.....	1,598				
Square yards.....		3,928			
Hooks.....			4,500		

CATCH: BY GEAR

Species	Haul seines		Trammel nets		Trot lines		Fyke nets		Total	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
Bowfin.....							100	\$2	100	\$2
Buffalofish.....	31,500	\$1,260	8,000	\$340			72,900	2,228	112,400	3,828
Carp.....	100,000	2,000	91,000	1,820	1,700	\$40	156,000	3,120	348,700	6,980
Catfish and bullheads.....	5,000	419	1,500	140	6,000	500	57,700	5,670	70,200	6,729
Paddlefish or spoonbill cat.....	2,400	192							2,400	192
Sheepshead.....	42,000	2,100	5,000	250	1,200	60	29,100	1,455	77,300	3,865
Total.....	180,900	5,971	105,500	2,550	8,900	600	315,800	12,475	611,100	21,596

OPERATING UNITS: BY STATES

Item	Illinois	Iowa	Total for lake
Fishermen:	<i>Number</i>	<i>Number</i>	<i>Number</i>
Regular.....	12	10	22
Casual.....	29	31	60
Total.....	41	41	82
Boats:			
Motor.....	18	16	34
Other.....	12	17	29
Apparatus:			
Haul seines.....	1	8	9
Length, yards.....	333	1,265	1,598
Trammel nets.....		18	18
Square yards.....		3,928	3,928
Trot lines.....	35	10	45
Hooks.....	3,500	1,000	4,500
Fyke nets.....	540	200	740

CATCH: BY STATES

Species	Illinois		Iowa		Total	
	Pounds	Value	Pounds	Value	Pounds	Value
Bowfin.....	100	\$2			100	\$2
Buffalofish.....	64,900	1,906	47,500	\$1,922	112,400	3,828
Carp.....	149,700	2,995	199,000	3,985	348,700	6,980
Catfish and bullheads.....	46,700	4,520	23,500	2,209	70,200	6,729
Paddlefish or spoonbill cat.....			2,400	192	2,400	192
Sheepshead.....	46,300	2,315	31,000	1,550	77,300	3,865
Total.....	307,700	11,738	303,400	9,858	611,100	21,596

MISSISSIPPI RIVER BETWEEN LAKE PEPIN AND LAKE KEOKUK

Fisheries of the Mississippi River between Lake Pepin and Lake Keokuk, 1938

OPERATING UNITS: BY GEAR

Item	Haul seines	Stake gill nets	Trammel nets	Trot lines	Fyke nets	Total, exclusive of duplication
Fishermen:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
Regular.....	84	32	11	1	111	178
Casual.....	145	102	64	87	205	513
Total.....	229	134	75	88	316	691
Boats:						
Motor.....	82	34	42	12	172	282
Other.....	61	42	15	76	104	256
Apparatus:						
Number.....	93	982	58	204	4,170	
Length, yards.....	17,586					
Square yards.....		93,400	9,642			
Hooks.....				16,975		

CATCH: BY GEAR

Species	Haul seines		Stake gill nets		Trammel nets	
	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>
Bowfin.....	146,300	\$2,605	10,900	\$262		
Buffalofish.....	297,300	13,128	62,200	3,152	40,500	\$1,965
Carp.....	898,900	22,000	539,800	19,744	129,600	2,913
Catfish and bullheads.....	39,100	2,583	5,900	509	9,000	880
Garfish.....	3,100	20	800	6		
Mooneye.....	10,200	227			400	6
Paddlefish or spoonbill cat.....	500	48				
Pike or pickerel.....	2,900	170				
Sheepshead.....	185,200	9,044	8,800	383	13,800	665
Sturgeon, shovelnose.....					48,500	3,926
Sucker "mullet".....	20,600	381	4,500	89	600	12
Total.....	1,604,100	50,206	632,900	24,145	242,400	10,367

Species	Trot lines		Fyke nets		Total	
	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>
Bowfin.....	100	\$4	102,100	\$1,654	259,400	\$4,525
Buffalofish.....	800	35	567,700	26,271	968,500	44,551
Carp.....	13,700	477	696,200	15,149	2,278,200	60,283
Catfish and bullheads.....	35,800	3,483	460,500	32,291	550,300	39,746
Eels, common.....			1,000	91	1,000	91
Garfish.....	600	4			4,500	30
Mooneye.....			1,000	30	11,600	263
Paddlefish or spoonbill cat.....					500	48
Pike or pickerel.....			41,200	2,473	44,100	2,643
Sheepshead.....	8,800	465	205,500	9,419	422,100	19,976
Sturgeon, shovelnose.....	900	85	2,500	214	51,900	4,225
Sucker "mullet".....			48,200	985	73,900	1,467
Turtles, snapper.....			7,400	148	7,400	148
Total.....	60,700	4,553	2,133,300	88,725	4,673,400	177,996

Fisheries of the Mississippi River between Lake Pepin and Lake Keokuk, 1938—Con.

OPERATING UNITS: BY STATES

Item	Illinois	Iowa	Minnesota	Wisconsin	Total
Fishermen:	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
Regular.....	39	96	10	33	178
Casual.....	80	226	57	150	513
Total.....	119	322	67	183	691
Boats:					
Motor.....	58	160	9	55	282
Other.....	64	110	40	42	256
Apparatus:					
Haul seines.....	22	29	6	36	93
Length, yards.....	2,456	6,564	1,700	6,866	17,586
Stake gill nets.....			159	823	982
Square yards.....			15,900	77,500	93,400
Trammel nets.....		58			58
Square yards.....		9,642			9,642
Trot lines.....	76	89	39		204
Hooks.....	7,350	5,725	3,900		16,975
Fyke nets.....	887	2,519		764	4,170

CATCH: BY STATES

Species	Illinois		Iowa		Minnesota		Wisconsin		Total	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value	<i>Pounds</i>	<i>Value</i>
Bowfin.....	400	\$6	159,300	\$2,441	3,000	\$164	96,700	\$1,914	259,400	\$4,525
Buffalofish.....	197,200	8,540	598,400	27,790	20,700	937	152,200	7,284	968,500	44,551
Carp.....	359,400	7,927	1,135,800	23,614	113,400	4,049	669,600	24,693	2,278,200	60,283
Catfish and bullheads.....	94,100	8,942	431,900	28,490	17,200	1,651	7,100	663	550,300	39,746
Eels, common.....			1,000	91					1,000	91
Garfish.....					4,500	30			4,500	30
Mooneye.....	3,600	91	3,200	52			4,800	120	11,600	263
Paddlefish or spoon-bill cat.....			500	48					500	48
Pike or pickerel.....			44,100	2,643					44,100	2,643
Sheepshead.....	104,100	5,230	274,700	12,729	7,100	350	36,200	1,667	422,100	19,976
Sturgeon, shovelnose.....			51,000	4,140	900	85			51,900	4,225
Sucker "mullet".....	1,500	39	44,200	902	1,300	28	26,900	498	73,900	1,467
Turtles, snapper.....	200	4	7,200	144					7,400	148
Total.....	760,500	30,779	2,751,300	103,084	168,100	7,294	993,500	36,839	4,673,400	177,996

FISHERIES OF ALASKA ¹⁴

The commercial catch of fishery products in Alaska during 1938, exclusive of whales, amounted to 793,948,431 pounds valued at \$12,040,022, which is a decrease of 4 percent in quantity and 15 percent in value as compared with the catch in 1937. Of the total catch in 1938, 589,705,625 pounds, valued at \$9,943,090, consisted of salmon; 201,717,150 pounds, valued at \$1,937,902, consisted of other fish; and 2,525,656 pounds, valued at \$159,030, consisted of shellfish. In addition, 173 whales were taken. These fisheries gave employment to 11,007 fishermen, 1,923 persons on transporting craft, and 15,154 persons in fishery wholesale and manufacturing industries—a total of 28,084 persons, which is a decrease of 7 percent as compared with the number employed in 1937.

¹⁴ Statistics for the fisheries of Alaska are collected and compiled by the Alaska Division of this Bureau. A summary of these statistics appears in this section. For detailed figures the reader is referred to "Alaska Fishery and Fur-Seal Industries in 1938," by Ward T. Bower, Administrative Report No. 36, Appendix II to the report of the Commissioner of Fisheries for the year 1939.

SUMMARY: BY DISTRICTS

Item	Southeast Alaska		Central Alaska		Western Alaska		Total	
	<i>Number</i>	<i>Value</i>	<i>Number</i>	<i>Value</i>	<i>Number</i>	<i>Value</i>	<i>Number</i>	<i>Value</i>
PERSONS ENGAGED								
In fishing.....	4, 926		3, 030		3, 051		11, 007	
In transporting.....	833		661		429		1, 923	
In wholesale and manufacturing industries.....	6, 656		4, 698		3, 800		15, 154	
Total.....	12, 415		8, 389		7, 280		28, 084	
CRAFT EMPLOYED								
Vessels fishing.....	721		103		11		835	
Boats fishing.....	1, 988		1, 747		1, 350		5, 085	
Vessels transporting.....	191		130		80		401	
Scows, houseboats, pile drivers, etc.....	287		257		174		718	
Total.....	3, 187		2, 237		1, 615		7, 039	
CATCH								
Fish:	<i>Pounds</i>		<i>Pounds</i>		<i>Pounds</i>		<i>Pounds</i>	
Salmon.....	227, 791, 885	\$3, 529, 611	177, 194, 778	\$2, 692, 033	184, 718, 962	\$3, 721, 446	589, 705, 625	\$9, 943, 090
Other.....	65, 462, 581	1, 255, 804	134, 421, 844	672, 934	1, 832, 725	9, 164	201, 717, 150	1, 937, 902
Shellfish.....	1, 070, 300	58, 594	1, 454, 516	100, 401	840	35	2, 525, 656	159, 030
Total.....	294, 324, 766	4, 844, 009	313, 071, 138	3, 465, 368	186, 552, 527	3, 730, 645	793, 948, 431	12, 040, 022
	<i>Number</i>	<i>Value</i>	<i>Number</i>	<i>Value</i>	<i>Number</i>	<i>Value</i>	<i>Number</i>	<i>Value</i>
Whales.....					173		173	
WHOLESALE AND MANUFACTURING								
Establishments.....	95		97		38		230	
PRODUCTS AS PREPARED FOR MARKET								
Salmon.....	150, 657, 374	13, 841, 611	105, 332, 345	10, 556, 993	93, 866, 265	14, 593, 909	349, 855, 984	38, 992, 513
Herring.....	20, 178, 820	460, 842	53, 974, 156	1, 547, 601	900, 500	44, 641	75, 053, 476	2, 053, 084
Halibut.....	13, 930, 142	980, 880					13, 930, 142	980, 880
Cod.....			141, 845	7, 668	146, 696	8, 513	288, 541	16, 181
Trout.....	68, 257	6, 004	10, 475	887			78, 732	6, 891
Sablefish.....	909, 234	38, 882					909, 234	38, 882
Flounders.....	232, 145	7, 050					232, 145	7, 050
Rockfishes.....	4, 376	90					4, 376	90
"Lingcod".....	2, 154	628					2, 154	628
Clams.....	122, 580	59, 290	392, 394	193, 309	420	175	515, 394	252, 774
Shrimp.....	428, 101	165, 388	7, 700	3, 086			435, 801	168, 474
Crabs.....	147, 582	50, 391	335, 694	122, 247			483, 276	172, 638
Whale.....					4, 874, 250		4, 874, 250	179, 641
Total.....	186, 680, 765	15, 611, 056	160, 194, 609	12, 431, 791	99, 788, 131	14, 826, 879	446, 663, 505	42, 869, 726

Fisheries of Alaska, 1938—Continued

OPERATING UNITS: BY DISTRICTS

Item	Southeast Alaska	Central Alaska	Western Alaska	Total	Item	Southeast Alaska	Central Alaska	Western Alaska	Total
	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>		<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
Fishermen	4,926	3,030	3,051	11,007	Apparatus—Continued.				
Vessels fishing:					Beam trawls	6	1		7
Steam			5	5	Otter trawls			1	1
Net tonnage			417	417	Wheels			241	241
Motor	721	103	6	830	Lines:				
Net tonnage	8,602	2,520	242	11,364	Hand lines (cod fishery)		9	15	24
Boats fishing:					Trawl lines (cod fishery)		6	1	7
Motor	854	769	59	1,682	Troll lines (salmon fishery)	3,718	4		3,722
Other	1,134	978	1,291	3,403	Skates of lines (halibut fishery)	3,422			3,422
Apparatus:					Crab pots	639	1,554		2,193
Traps	286	170		456	Crab nets		100		100
Purse seines	458	257	7	722	Yards		3,000		3,000
Yards	155,504	61,510	3,000	220,014	Herring pounds	9			9
Haul seines	26	129		155	Herring pound seines	6			6
Yards	3,760	25,078		28,838					
Gill nets	427	2,074	2,218	4,719					
Yards	56,450	257,570	342,378	656,398					

CATCH: BY DISTRICTS

[Estimated round weight and value to fishermen]

Item	Southeast Alaska		Central Alaska		Western Alaska		Total	
	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>	<i>Pounds</i>	<i>Value</i>
FISH								
Salmon:								
Blueback, red, or sockeye	17,747,919	\$420,071	45,442,929	\$977,885	171,012,264	\$3,629,284	234,203,112	\$5,027,240
Chinook or king	15,142,340	405,127	1,634,240	41,686	1,777,220	18,916	18,553,800	465,729
Chum, or keta	41,007,546	447,907	23,894,937	234,017	11,867,454	72,625	76,769,937	754,549
Humpback or pink	136,297,080	1,881,842	99,631,608	1,311,549	7,744	67	235,936,432	3,193,458
Silver or coho	17,597,000	374,664	6,591,064	126,896	54,280	554	24,242,344	502,114
Herring	44,453,969	222,270	133,937,333	669,687	1,344,030	6,720	179,735,332	898,677
Halibut	19,366,221	980,880					19,366,221	980,880
Cod			471,417	2,360	488,695	2,444	960,112	4,804

Trout:									
Dolly Varden.....	77,560	5,751	13,094	887			90,654	6,638	
Steelhead.....	7,761	253					7,761	253	
Sablefish.....	1,289,984	38,882					1,289,984	38,882	
Flounders.....	257,939	7,050					257,939	7,050	
Rockfishes.....	6,732	90					6,732	90	
"Lingcod".....	2,415	628					2,415	628	
Total.....	293,254,466	4,785,415	311,616,622	3,364,967	186,551,687	3,730,610	791,422,775	11,880,992	
	SHELLFISH								
Crabs:									
Dungeness.....	276,419	24,971	609,984	56,475			886,403	81,446	
King.....	2,880	225	45,744	4,648			48,624	4,873	
Shrimp.....	777,801	33,078	14,000	617			791,801	33,695	
Clams:									
Butter.....	13,200	320	1,056	36			14,256	356	
Razor.....	(1)	(1)	783,732	38,625	840	35	784,572	38,660	
Total.....	1,070,300	58,594	1,454,516	100,401	840	35	2,525,656	159,030	
Grand total.....	294,324,766	4,844,009	313,071,138	3,465,368	186,552,527	3,730,645	793,948,431	12,040,022	

¹ Razor clams packed in Southeast Alaska were not taken in the Territory but were obtained from beaches at Massett, B. C. They are therefore not included in the catch statistics.

NOTE.—In addition to the above statistics, 173 whales were taken in Alaska waters. The round weight and value to fishermen cannot be determined, but the products amounted to 4,874,250 pounds, valued at \$179,641.

Industries related to the fisheries of Alaska, 1938

TRANSPORTING

Item	Southeast Alaska	Central Alaska	Western Alaska	Total	Item	Southeast Alaska	Central Alaska	Western Alaska	Total
Persons engaged.....	<i>Number</i> 833	<i>Number</i> 661	<i>Number</i> 429	<i>Number</i> 1,923	Vessels transporting—Continued.	<i>Number</i>	<i>Number</i>	<i>Number</i>	<i>Number</i>
Vessels transporting:					Motor.....	191	130	75	396
Steam.....			5	5	Net tonnage.....	5,927	4,168	3,894	13,989
Net tonnage.....			18,608	18,608	Scows, houseboats, pile drivers, etc.....	287	257	174	718

WHOLESALE AND MANUFACTURING

Item	Southeast Alaska	Central Alaska	Western Alaska	Total
	Number	Number	Number	Number
Persons engaged	6,656	4,698	3,800	15,154
Establishments:				
Handling fresh and frozen fish	52	5		57
Curing fish	22	43	22	87
Canning fish	45	53	18	116
Manufacturing byproducts	6	10	1	17
Total (exclusive of duplication)	95	97	38	230

PRODUCTS AS PREPARED FOR MARKET

Item	Southeast Alaska		Central Alaska		Western Alaska		Total	
	Pounds	Value	Pounds	Value	Pounds	Value	Pounds	Value
FRESH								
Salmon (for food)	3,817,042	\$291,335					3,817,042	\$291,335
Herring (for bait)	2,826,404	37,865	1,250	\$13			2,827,654	37,878
Halibut	6,794,439	429,448					6,794,439	429,448
Halibut livers	133,000	66,500					133,000	66,500
Halibut and sablefish viscera	240,787	24,079					240,787	24,079
Trout	50,962	4,534	1,500	195			52,462	4,729
Sablefish livers	32,045	11,216					32,045	11,216
Flounders	150,000	3,750					150,000	3,750
“Lingcod”	610	10					610	10
“Lingcod” and rockfish livers	1,544	618					1,544	618
Crabs:								
Meat	2,765	1,134	225	90			2,990	1,224
Whole in shell	15,865	990	15,660	944			31,525	1,934
Shrimp:								
Meat	424,200	164,000	7,700	3,086			431,900	167,086
Whole in shell	690	104					690	104
Total	14,490,353	1,035,583	26,335	4,328			14,516,688	1,039,911
FROZEN								
Salmon (for food)	7,183,446	530,891	1,600	60			7,185,046	530,951
Salmon (for bait)	720,652	7,241					720,652	7,241
Salmon (for fur farms)	61,420	2,500					61,420	2,500
Herring (for bait)	3,316,114	23,924					3,316,114	23,924
Halibut	6,761,916	460,853					6,761,916	460,853
Trout	17,295	1,470	8,975	692			26,270	2,162
Sablefish	776,825	23,499					776,825	23,499
Rockfishes	4,376	90					4,376	90
Flounders (for fur farms)	82,145	3,300					82,145	3,300
Shrimp	3,211	1,284					3,211	1,284
Total	18,927,400	1,055,052	10,575	752			18,937,975	1,055,804

CURED									
Salmon:									
Mild-cured	6,344,000	1,257,247	16,800	1,600	158,400	\$20,084	6,519,200	1,278,931	
Pickled	9,600	900	313,200	31,228	854,885	90,293	1,177,685	122,421	
Dry-salted	10,500	1,132	18,000	500	17,300	1,730	45,800	3,362	
Dried			4,025	140	998,000	71,200	1,002,025	71,340	
Eggs for fish food	7,300	365					7,300	365	
Herring:									
Pickled (for food):									
Scotch-cure			1,634,000	97,927	552,150	32,497	2,186,150	130,424	
Norwegian-cure					192,800	5,784	192,800	5,784	
Roused			261,350	6,395	155,550	6,360	416,900	12,755	
Cod:									
Dry-salted			135,119	6,797	146,019	8,421	281,138	15,218	
Stockfish			6,126	796	552	82	6,678	878	
Tongues			600	75	125	10	725	85	
Sablefish, pickled	100,364	4,167					100,364	4,167	
Total	6,471,764	1,263,811	2,389,220	145,458	3,075,781	236,461	11,936,765	1,645,730	
CANNED									
Salmon:									
Blueback, red, or sockeye	9,244,368	\$1,626,428	23,127,120	\$3,812,593	88,647,696	\$14,144,776	121,019,184	\$19,583,797	
Chinook or king	785,760	118,673	1,005,312	162,252	311,952	47,718	2,103,024	328,643	
Chum or keta	22,773,744	1,710,785	12,128,928	916,467	2,861,472	216,171	37,764,144	2,843,423	
Humpback or pink	90,564,912	7,345,054	64,613,232	5,136,669			155,178,144	12,481,723	
Silver or coho	6,900,720	910,863	3,754,128	486,511	16,560	1,937	10,671,408	1,399,311	
Clams	121,380	59,190	392,394	193,309	420	175	514,194	252,674	
Clam juice	1,200	100					1,200	100	
Crabs	128,952	48,267	319,809	121,213			448,761	169,480	
Total	130,521,036	11,819,360	105,340,923	10,829,014	91,838,100	14,410,777	327,700,059	37,059,151	
BYPRODUCTS									
Meal:									
Herring	7,279,394	132,032	24,911,116	417,582			32,190,510	549,614	
Salmon	1,832,000	27,480	242,000	3,933			2,074,000	31,413	
Whale:									
Meat meal					792,000	15,796	792,000	15,796	
Bone meal					432,000	5,618	432,000	5,618	
Oil:									
Salmon	401,910	10,717	180,000	5,040			509,910	15,757	
Herring	6,756,908	267,021	27,166,440	1,025,684			33,923,348	1,292,705	
Whale					2,286,000	103,657	2,286,000	103,657	
Sperm					1,364,250	54,570	1,364,250	54,570	
Total	16,270,212	437,250	52,427,556	1,452,239	4,874,250	179,641	73,572,018	2,069,130	
Grand total	186,680,765	15,611,056	160,194,609	12,431,791	99,788,131	14,826,879	446,663,505	42,869,726	

NOTE.—The output of fresh and frozen halibut includes all fares of the Alaska fleet, some of which were landed at other than Alaska ports. The amount of livers and viscera landed by the Alaska fleet has not been reported, and the quantity shown herein is the estimated amount landed in Alaska. The total landings of halibut, other than livers and viscera, in Alaska in 1938 amounted to 8,296,907 pounds, valued at \$499,472 (including 26,000 pounds, valued at \$2,000, landed by Canadian vessels).

The output of clams in Southeast Alaska includes 115,380 pounds, valued at \$57,690, which were packed from clams obtained at Massett, B. C.

Supplementary table showing the pack of canned products in "standard cases" ¹

Item	Southeast Alaska		Central Alaska		Western Alaska		Total	
	Cases	Value	Cases	Value	Cases	Value	Cases	Value
Salmon:								
Blueback, red, or sockeye.....	192, 591	\$1, 626, 428	481, 815	\$3, 812, 593	1, 846, 827	\$14, 144, 776	2, 521, 233	\$19, 583, 797
Chinook or king.....	16, 370	118, 673	20, 944	162, 252	6, 499	47, 718	43, 813	328, 643
Chum or keta.....	474, 453	1, 710, 785	252, 686	916, 467	59, 614	216, 171	786, 753	2, 843, 423
Humpback or pink.....	1, 886, 769	7, 345, 054	1, 346, 109	5, 136, 669			3, 232, 878	12, 481, 723
Silver or coho.....	143, 765	910, 863	78, 211	486, 511	345	1, 937	222, 321	1, 399, 311
Total.....	2, 713, 948	11, 711, 803	2, 179, 765	10, 514, 492	1, 913, 285	14, 410, 602	6, 806, 998	36, 636, 897
Clams.....	² 8, 092	59, 190	26, 160	193, 309	28	175	34, 280	252, 674
Clam juice.....	40	100					40	100
Crabs.....	2, 686	48, 267	6, 663	121, 213			9, 349	169, 480
Grand total.....	2, 724, 766	11, 819, 360	2, 212, 588	10, 829, 014	1, 913, 313	14, 410, 777	6, 850, 667	37, 059, 151

¹ The pack of salmon and crabs has been converted to "standard cases" of 48 1-pound cans, and clams and clam juice to "standard cases" of 48 No. 1 cans.

² Of this number, 7,692 cases, valued at \$57,690, were packed from clams obtained at Massett, B. C.

Supplementary table showing the output of byproducts in tons and gallons

Item	Southeast Alaska		Central Alaska		Western Alaska		Total	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Meal:								
Herring..... tons	3, 640	\$132, 032	12, 455	\$417, 582			16, 095	\$549, 614
Salmon..... do	916	27, 480	121	3, 933			1, 037	31, 413
Whale:								
Meat meal..... do					396	\$15, 796	396	15, 796
Bone meal..... do					216	5, 618	216	5, 618
Oil:								
Salmon..... gallons	53, 588	10, 717	14, 400	5, 040			67, 988	15, 757
Herring..... do	900, 921	267, 021	3, 622, 192	1, 025, 684			4, 523, 113	1, 292, 705
Whale..... do					304, 800	103, 657	304, 800	103, 657
Sperm..... do					181, 900	54, 570	181, 900	54, 570
Total.....		437, 250		1, 452, 239		179, 641		2, 069, 130

WHALING ¹⁵

A total of 2,196 whales were processed by United States firms during the 1938-39 whaling season. Of these, 173 were taken off Alaska during the months from June to October 1938; 917 were captured off West Australia during the same period; and 1,106 were taken in the Antarctic during the months from December 1938 to March 1939. Four companies were licensed by the United States to engage in whaling during the 1938-39 season; however, only three operated. These consisted of one shore station in Alaska and two factory ships, one of which operated off West Australia and the other in the Antarctic. A scarcity of whales, fewer operating units, and more stringent restrictions governing whaling contributed to a decreased catch during the 1938-39 season as compared with that of the previous year when 5,198 whales were processed.

Prior to December 20, 1938, under the joint regulations of the Secretary of the Treasury and the Secretary of Commerce, there was a 35-foot limit on humpback whales, a 50-foot limit on finback whales, and a 60-foot limit on blue whales. However, whaling regulations approved December 20, 1938, pursuant to the June 8, 1937, London Agreement, increased the size limit on blue whales to 70 feet, finback whales to 55 feet, and established a 35-foot limit on sperm whales. Only whaling in the Antarctic was affected by the new regulations, as the season had closed in Australia and Alaska before the adoption of these measures.

On June 24, 1938, representatives of several nations, including those of the United States, meeting in London, agreed to a Protocol to the Agreement of June 8, 1937. This Protocol, proclaimed by the President April 8, 1939, afforded further protection to whales, and at the same time permitted smaller size limits on blue, sperm, and finback whales processed at land stations, the products of which were to be used for local animal or human consumption.

Whaling, 1938-39 Season ¹

OPERATING UNITS: BY AREAS

Area	Shore stations		Factory ships		Killer boats		Total persons employed
	Number	Persons employed	Number	Crew	Number	Crew	
Alaska.....	1	78			5	58	136
Antarctic.....			1	214	8	106	320
West Australia.....			1	116	6	78	194
Total.....	2	78	2	330	19	242	650

¹ Includes the operations of shore stations, factory ships, and killer boats licensed by the United States.

NOTE.—One firm in California obtained a license in 1938, but did not operate.

¹⁵ This section was prepared by Esther E. Dodd, Law Enforcement Division. Additional information concerning the 1938-39 whaling season can be obtained from Bureau of Fisheries Memorandum entitled, "A History of Whaling with Résumé of the Whaling Industry of the United States, 1937-40."

Whaling, 1938-39 Seasons—Continued

CATCH: BY SPECIES AND AREAS

Area	Blue	Hump- back	Sperm	Finback	Total
	Number	Number	Number	Number	Number
Alaska.....	33	12	63	65	173
West Australia.....		917			917
Antarctic.....	554		4	548	1,106
Total.....	587	929	67	613	2,196

NOTE.—In addition to the above catch, 8 whales were harpooned but not recovered.

PRODUCTS MANUFACTURED: BY AREAS

Area	Oil		Meal	
	Body	Sperm	Meat	Bone
	Gallons	Gallons	Tons	Tons
Alaska.....	304,800	181,900	396	216
West Australia.....	2,096,579			
Antarctic.....	4,574,141			
Total.....	6,975,520	181,900	396	216

STATISTICAL SURVEY PROCEDURE

It is customary to include in the annual report of the Division, information in considerable detail on the procedure used in the collection of the fishery statistics published in this report. Due to the necessity for curtailing the cost of the report for 1939, it has been necessary to eliminate most of this type of material. Consequently, for information on procedure the reader is referred to Administrative Report No. 37, entitled "Fishery Industries of the United States, 1938," by R. H. Fiedler, published as Appendix III to the report of the Commissioner of Fisheries for the fiscal year 1939. It has been deemed necessary, however, to include in this report data on conversion factors used for computing the yield of certain commodities. These factors follow:

Measures and yields of oysters

State	Capacity of State bushel	Variation from U. S. standard bushel		Market oysters	
				Yield per State bushel	Yield per standard bushel
	Cubic inches	Cubic inches	Percent	Pounds of meats	Pounds of meats
Massachusetts.....	2,150.4			6.57	6.57
Rhode Island.....	2,150.4			7.00	7.00
Connecticut.....	2,150.4			7.63	7.63
New York.....	2,150.4			7.50	7.50
New Jersey.....	2,257.3	+106.9	+5.0	6.05	5.76
Delaware.....	2,257.3	+106.9	+5.0	7.00	6.67
Maryland.....	2,801.5	+651.1	+30.3	6.09	4.67
Virginia.....	3,003.4	+853.0	+39.7	5.92	4.24
North Carolina.....	2,801.9	+651.5	+30.3	5.56	4.27
South Carolina.....	4,071.5	+1,921.1	+89.3	5.98	3.16
Georgia.....	5,343.9	+3,193.5	+148.5	6.83	2.75
Florida.....	3,214.1	+1,063.7	+49.4	4.74	3.17
Alabama.....	2,826.2	+675.8	+31.4	5.01	3.81
Mississippi.....	2,826.2	+675.8	+31.4	5.30	4.03
Louisiana.....	2,148.4	-2.0	-0.1	4.63	4.63
Texas.....	2,700.0	+549.6	+25.6	4.38	3.49

Other mollusks.—The following table shows the conversion factors for various mollusks, other than oysters, used in this report.

*Average yields of certain mollusks in pounds of meats per standard bushel*¹

State	Clams, hard	Clams, soft	Clams, surf	Clams, razor	Mus-sels, sea	Peri-winkles and cockles	Scal-lops, bay	Scal-lops, sea	Lim-pets	Conchs
Maine.....	11.00	15.00	-----	-----	12.00	18.00	-----	6.00	-----	-----
New Hampshire.....	-----	15.00	-----	-----	-----	-----	-----	-----	-----	-----
Massachusetts.....	11.13	13.93	17.00	30.08	12.00	18.00	6.00	6.00	-----	-----
Rhode Island.....	15.81	20.00	12.00	-----	13.00	18.00	7.00	7.00	13.00	-----
Connecticut.....	12.04	20.00	-----	-----	-----	-----	6.50	-----	-----	19.75
New York.....	8.00	16.00	12.00	-----	10.00	-----	5.00	6.00	-----	18.00
New Jersey.....	9.49	19.04	16.83	-----	-----	-----	-----	4.29	-----	-----
Delaware.....	9.52	-----	-----	-----	11.43	-----	-----	-----	-----	-----
Maryland.....	6.14	-----	-----	-----	-----	-----	-----	-----	-----	-----
Virginia.....	5.73	7.16	-----	-----	7.16	-----	-----	-----	-----	-----
North Carolina.....	6.14	-----	-----	-----	-----	-----	6.14	-----	-----	-----
Florida.....	5.04	-----	-----	-----	-----	-----	2.99	-----	-----	-----

¹ Prior to 1938 data on the yields of meats were computed on the basis of State bushels of the size prescribed by the individual States, rather than on the basis of the U. S. standard bushel of 2,150.4 cubic inches capacity.

Other conversion factors.—The principal other conversion factors that have been used in this report are as follows:

Crustaceans:

- Crabs, soft and peelers (Connecticut Rhode Island, New Jersey, New York, Delaware, Maryland, and Virginia). To convert number of crabs to weight in pounds, divided by 4.
- Crabs, soft and peelers (North Carolina and South Carolina). To convert number of crabs to weight in pounds, divide by 7.
- Crabs, soft and peelers (Louisiana) .. To convert number of crabs to weight in pounds, divide by 2.71.
- Crabs, hard (Maine)..... To convert number of crabs to weight in pounds, divide by 3.32.
- Crabs, hard (Massachusetts)..... To convert number of crabs to weight in pounds, divide by 3.97.
- Crabs, hard (Connecticut)..... To convert number of crabs to weight in pounds, divide by 2.88.
- Crabs, hard (South Carolina)..... To convert number of crabs to weight in pounds, divide by 2.
- Crabs, hard (Florida)..... To convert number of crabs to weight in pounds, divide by 2.07.
- Crabs, hard (Alabama and Georgia) .. To convert number of crabs to weight in pounds, divide by 2.4.
- Crabs, hard (Mississippi)..... To convert number of crabs to weight in pounds, divide by 2.09.
- Crabs, hard (Louisiana)..... To convert number of crabs to weight in pounds, divide by 2.12.
- Crabs, hard (Texas)..... To convert number of crabs to weight in pounds, divide by 2.10.
- Crabs, hard (other Atlantic Coast States). To convert number of crabs to weight in pounds, divide by 3.
- Crabs, rock..... To convert number of crabs to weight in pounds, divide by 10.
- Crabs, stone..... To convert number of crabs to weight in pounds, multiply by 1.06.

Sponges, dried (Florida):

Large wool.....	To convert number of bunches to weight in pounds, multiply by 10.
Medium and small wool.....	To convert number of bunches to weight in pounds, multiply by 5.
Wool rags.....	To convert number of bunches to weight in pounds, multiply by 4.73.
Grass.....	To convert number of bunches to weight in pounds, multiply by 1.5.
Wire and yellow.....	To convert number of bunches to weight in pounds, multiply by 1.95.

COMMON AND SCIENTIFIC NAMES OF FISHERY PRODUCTS

In order to prevent misunderstanding in the use of common names employed in the tables and discussions, the following list of common and scientific names is given:

Common and scientific names of the commercial fishery products caught in the United States and Alaska

Common name as shown in Bureau reports	Other common names	Scientific names
Alewife.....	{Branch herring, wall-eyed or big-eyed herring.	<i>Pomolobus pseudoharengus.</i>
Amberjack.....	{Blueback, glut herring.....	<i>Pomolobus xestivalis.</i> <i>Seriola</i> species.
Anchovy.....		<i>Engraulis mordax.</i> <i>Anchoiella delicatissima.</i> <i>Anchoiella compressa.</i>
Angelfish.....		<i>Pomacanthus arcuatus.</i> <i>Holacanthus isabellia.</i>
Barracuda.....		<i>Sphyræna argentea.</i>
Black bass.....	{Smallmouth bass	<i>Micropterus dolomieu.</i>
	{Largemouth bass.....	<i>Micropterus salmoides.</i>
Bluefish.....	Tailor.....	<i>Pomatomus saltatrix.</i>
Blue pike.....	Pike perch, blue pickerel (Canada).....	<i>Stizostedion vitreum glaucum.</i>
Blue runner or hardtail.....	Runner.....	<i>Caranx crysos.</i>
Bonito.....		<i>Sarda sarda.</i> <i>Sarda chiliensis.</i>
Bowfin.....		<i>Amia calva.</i>
Buffalofish.....		<i>Ictiobus</i> species.
Butterfish.....		<i>Poronotus triacanthus.</i>
Burbot.....	Lawyer, ling.....	<i>Lota maculosa.</i>
Cabio.....	Coalfish, crab eater, cobia.....	<i>Rachycentron canadus.</i>
Cabrilla.....	Rock bass.....	<i>Epinephelus analogus</i> (Pacific coast).
Carp.....	German carp.....	<i>Cyprinus carpio.</i>
Catfish and bullheads.....		<i>Ameiurus</i> species. <i>Ictalurus</i> species.
Cero.....	Painted mackerel.....	<i>Leptops olivaris.</i>
Chub.....	Tullibee in Canada; longjaw, bluefin, blackfin in United States.....	<i>Scomberomorus regalis.</i> All <i>Leucichthys</i> except <i>artedi</i> (in Great Lakes).
Cigarfish.....	Scad.....	<i>Decapterus punctatus.</i>
Cisco.....	Herring in Canada.....	<i>Leucichthys artedi</i> (Lake Erie only).
Cod.....	Codfish.....	<i>Gadus macrocephalus</i> (Pacific coast). <i>Gadus callarias</i> (Atlantic coast).
Crappie.....	{White crappie	<i>Pomoxis annularis.</i>
	{Black crappie, strawberry bass, calico bass.....	<i>Pomoxis sparoides.</i>
Crevalle.....		<i>Caranx hippos.</i>
Croaker.....	Crocod, hardhead.....	<i>Micropogon undulatus.</i>
Cunner.....	Chogset, blue perch, bergall.....	<i>Tautoglabrus adspersus.</i>
Cusk.....		<i>Brosme brosme.</i>
Dolly Varden trout.....	Salmon trout, bull trout.....	<i>Salvelinus malma.</i>
Dolphin.....		<i>Coryphaena hippurus.</i>
Drum:		
Black.....		<i>Pogonias cromis.</i>
Red.....	Channel bass, redfish, spotted bass.....	<i>Sciaenops ocellatus.</i>
Eel:		
Common.....		<i>Anguilla rostrata.</i>
Conger.....		<i>Leptocephalus conger.</i>

Common and scientific names of the commercial fishery products caught in the United States and Alaska—Continued

Common name as shown in Bureau reports	Other common names	Scientific names
Flounder:		
Gray sole.....	.....	<i>Glyptocephalus cynoglossus.</i>
Lemon sole.....	.....	<i>Pseudopleuronectes dignabilis.</i>
Yellowtail and dab.....	.....	<i>Limanda ferruginea.</i>
Blackback.....	.....	<i>Hippoglossoides platessoides.</i>
Fluke.....	.....	<i>Pseudopleuronectes americanus.</i>
" Sole ".....	.....	<i>Paralichthys dentatus.</i>
California halibut.....	.....	<i>Pleuronectidae</i> species (Pacific coast).
Unclassified.....	.....	<i>Paralichthys californicus.</i>
Flyingfish.....	.....	<i>Pleuronectidae</i> species.
Frigate mackerel.....	"Boo Hoo".....	<i>Cypsilurus californicus.</i>
Garfish.....	.....	<i>Auxis thazard.</i>
Gizzard shad.....	Nanny shad, mud shad.....	<i>Tylosurus</i> species.
Goldfish.....	Sand perch.....	<i>Dorosoma cepedianum.</i>
Goosefish.....	Allmouth.....	<i>Carassius auratus.</i>
	{ Dogfish.....	<i>Lophius piscatorius.</i>
Grayfish.....	{ Spiny dog.....	<i>Squalus sucklii</i> (Pacific coast).
	{ Smooth dog.....	<i>Squalus acanthias.</i>
Groupers.....	"Sea bass".....	<i>Mustelus mustelus.</i>
Grunt.....	Margatefish, sailors choice (Key West).....	<i>Ephimophelus</i> species.
Haddock.....	.....	<i>Myceteroperca</i> species.
	{ Squirrel hake, Boston hake, ling, black hake, mud hake.....	<i>Haemulon</i> species.
	{ Merluccio.....	<i>Melanogrammus aeglefinus.</i>
Hake.....	.....	<i>Urophycis</i> species (Atlantic coast).
Halibut.....	.....	<i>Merluccius productus</i> (Pacific coast).
Hardhead.....	.....	<i>Hippoglossus hippoglossus.</i>
Harvestfish.....	Starfish, dollarfish, pappyfish, butterfish (N. C.).....	<i>Orthodon microlepidotus</i> (Pacific coast).
Herring:		
Lake.....	Herring.....	<i>Leucichthys artedi</i> (Great Lakes, except Erie).
Round.....	.....	<i>Etrumeus sadina.</i>
Sea.....	.....	<i>Clupea harengus</i> (Atlantic coast).
Herring smelt.....	Sea smelt.....	<i>Clupea pallasii</i> (Pacific coast).
Hickory shad.....	Tailor shad, skip.....	<i>Argentina silus.</i>
Hogchoker.....	.....	<i>Pomolobus mediocris.</i>
Hogfish.....	Capitaine, perro perro.....	<i>Achirus fasciatus.</i>
	{ Pacific.....	<i>Lachnolaimus maximus</i> (Florida).
Horse mackerel.....	{ Atlantic—(See tuna.).....	<i>Trachurus symmetricus.</i>
Jewfish.....	.....	<i>Promicrops itaiara.</i>
Kingfish.....	{ King mackerel, cerro.....	<i>Scomberomorus cavalla</i> (Atlantic coast).
	{ Little roncador, croaker.....	<i>Scomberomorus regalis</i> (Atlantic coast).
King whiting.....	Northern whiting, kingfish, sea mink.....	<i>Genyonemus lineatus</i> (California).
Lake trout.....	.....	<i>Menticirrhus</i> species.
Lamprey.....	.....	<i>Cristiomer mamaycush.</i>
Launce.....	Sand eel, lant, sand launce.....	<i>Petromyzon marinus.</i>
"Lingcod".....	Cultus cod, blue cod, buffalo cod, ling.....	<i>Ammodytes americanus.</i>
Mackerel.....	.....	<i>Ophiodon elongatus.</i>
Menhaden.....	Mossbunker, pogy, fatback.....	<i>Scomber scombrus</i> (Atlantic coast).
Minnow.....	.....	<i>Scomber diego</i> (Pacific coast).
Mojarra.....	.....	<i>Brevoortia tyrannus.</i>
Mooneye.....	Toothed herring.....	<i>Cyprinidae</i> species.
Moonfish.....	.....	<i>Gerridae</i> species.
	.....	<i>Hiodon</i> species.
Mullet.....	Jumping mullet.....	<i>Vomer setipinnis.</i>
Mummichog.....	Mayfish, killifish.....	<i>Selene vomer.</i>
Muttonfish.....	.....	<i>Mugil</i> species.
Paddlefish.....	Spoonbill cat.....	<i>Fundulus</i> species.
Perch (California).....	See surfishes.....	<i>Lutianus analis.</i>
Permit.....	See pompano.....	<i>Polyodon spathula.</i>
Pigfish.....	Hogfish (N. C.).....	.....
Pike or pickerel.....	Great Lakes pike.....	<i>Orthoprists chrysopterus</i>
	.....	<i>Esox reticulatus.</i>
Pilchard.....	Sardine.....	<i>Esox lucius.</i>
Pinfish.....	Bream, salt-water bream.....	<i>Sardina caerulea.</i>
Pollock.....	.....	<i>Lagodon rhomboides.</i>
	{ Permit, great pompano.....	<i>Pollachius virens.</i>
Pompano.....	.....	<i>Trachinotus goodei.</i>
	.....	<i>Trachinotus</i> species (Atlantic coast).
Porgy.....	Porgee.....	<i>Palometa similima</i> (Pacific coast).
Quillback.....	Spearfish or skimpfish.....	<i>Calamus</i> species.
Roach.....	Golden Shiner.....	<i>Carpiodes</i> species.
	{ Redeye, goggle-eye.....	<i>Notemigonus crysoleucas.</i>
Rock bass.....	{ Groupers.....	<i>Ambloplites rupestris</i> (Mississippi River to Atlantic seaboard).
	.....	<i>Paralabrax nebulifer</i> (Pacific coast).

Common and scientific names of the commercial fishery products caught in the United States and Alaska—Continued

Common name as shown in Bureau reports	Other common names	Scientific names
Rockfish	Rock cod	<i>Sebastes</i> species (Pacific coast).
Rosefish		<i>Sebastes marinus</i> .
Rudderfish	Blue bass, greenfish	<i>Girella nigricans</i> (Pacific coast).
Sablefish	Halfmoon	<i>Medialuna californiensis</i> (Pacific coast).
Salmon:	Black cod	<i>Anoplopoma fimbria</i> .
Atlantic		<i>Salmo salar</i> (Atlantic coast).
Pacific:		
Blueback, red or sockeye.		<i>Oncorhynchus nerka</i> .
Chinook or king	Tyee, spring	<i>Oncorhynchus tshawytscha</i> .
Chum or keta	Dog salmon	<i>Oncorhynchus keta</i> .
Humpback or pink.		<i>Oncorhynchus gorbuscha</i> .
Silver or coho		<i>Oncorhynchus kisutch</i> .
Steelhead	(See steelhead trout.)	
Sand perch		<i>Bairdiella chrysura</i> .
Sauger	Sand pike	<i>Stizostedion canadense</i> .
Sculpin		Cottidae species.
Scup	Paugy or porgy, fair maid	<i>Stenotomus</i> species.
Sea bass	Black jewfish or black sea bass	<i>Stereolepis gigas</i> (Pacific coast).
	Black sea bass, blackfish	<i>Centropristis striatus</i> (Atlantic coast).
	White sea bass	<i>Cynoscion nobilis</i> (Pacific coast).
Sea catfish	Gafftopsail	<i>Bagre marina</i> .
Sea robin		<i>Prionotus</i> species.
Shad	American shad	<i>Alosa sapidissima</i> .
Shark		<i>Carcharodon</i> species; <i>Mustelus</i> species; <i>Carcharhinus</i> species; <i>Sphyrna</i> species
Sheepshead		<i>Archosargus probatocephalus</i> (Atlantic coast).
		<i>Archosargus unimaculatus</i> (Florida).
Sheepshead, California	Drum, fresh water	<i>Aplocheilichthys grunniens</i> (fresh water).
Silver perch	Redfish, fathead	<i>Pimelometopon pulcher</i> .
Silverside	Sand perch	<i>Bairdiella chrysura</i> .
Skate	Spearing	<i>Merluccius</i> species.
Skipper		<i>Raja</i> species.
Smelt	Billfish	<i>Scomberomorus saurus</i> .
		<i>Osmerus mordax</i> (Atlantic coast and Great Lakes).
		Argentinidae species (Pacific coast).
	Eulachon	<i>Thaleichthys pacificus</i> .
Snapper:		
Lane	Schoolmaster	<i>Lutjanus apodus</i> .
Mangrove	Gray snapper	<i>Lutjanus griseus</i> .
Red		<i>Lutjanus blackfordii</i> .
Snook	Robalo, sergeantfish	<i>Centropomus undecimalis</i> .
Spadefish	Porgy (N. C.)	<i>Chaetodipterus faber</i> .
Spanish mackerel		<i>Scomberomorus maculatus</i> .
Splittail		<i>Pogonichthys macrolepidotus</i> .
Spot	Lafayette, goody	<i>Leiostomus xanthurus</i> .
Squawfish	Sacramento pike	<i>Ptychocheilus grandis</i> .
Squeteague:		
Gray	Gray trout, weakfish, trout	<i>Cynoscion regalis</i> .
Spotted	Spotted weakfish, spotted trout	<i>Cynoscion nebulosus</i> .
White	Sand trout	<i>Cynoscion arenarius</i> .
Squirrel hake	(See hake.)	
Steelhead trout	Salmon trout	<i>Salmo gairdnerii</i> .
Striped bass	Rockfish, rock	<i>Morone saxatilis</i> .
Sturgeon		<i>Acipenser</i> species.
Sturgeon, shovelnose		<i>Scaphirhynchus platyrhynchus</i> .
Sucker	Fresh-water mullet	Catostomidae species.
Sunfish	Bream, perch	Centrarchidae species.
Surfsh	Perch	Embiotocidae species.
Swellfish	Puffer, swell toad, balloonfish, globe-fish.	<i>Spheroides maculatus</i> .
Swordfish		<i>Xiphias gladius</i> .
Tautog	Blackfish, oysterfish	<i>Tautoga onitis</i> .
Tenpounder	Elops, big-eyed herring	<i>Elops saurus</i> .
Tilefish		<i>Lopholatilus chamaeleonticeps</i> .
Tomcod		<i>Microgadus tomcod</i> (Atlantic coast).
Tripletail		<i>Microgadus proximus</i> (Pacific coast).
Tullibee	(See chub.)	<i>Lobotes surinamensis</i> .

Common and scientific names of the commercial fishery products caught in the United States and Alaska—Continued

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Tuna and tunalike fishes:		
Albacore	Longfin tuna	<i>Germo alalunga</i> .
Bluefin	Tuna	{ <i>Thunnus saliens</i> .
Bonito		{ <i>Thunnus thynnus</i> .
Skipjack		{ <i>Thunnus secundodorsalis</i> .
Yellowfin	Striped tuna	{ <i>Sarda sarda</i> (Atlantic coast).
		{ <i>Sarda chiliensis</i> (Pacific coast).
		<i>Euthynnus pelayms</i> .
		<i>Neothunnus macropterus</i> .
		<i>Reinhardius hippoglossoides</i> (off New England.)
Turbot	{Greenland halibut	<i>Balistes carolinensis</i> (off Florida).
	{American turbot, triggerfish	<i>Acanthocybium solandri</i> .
Wahoo		<i>Roccus chrysoptus</i> .
White bass	White lake bass	
Whitebait	Small fry of several species.	
Whitefish:		
Common		{ <i>Coregonus clupeiformis</i> (Great Lakes).
Menominee		{ <i>Caulolatilus princeps</i> (Pacific coast).
White perch		<i>Prosopium quadrilaterale</i> .
Whiting	Silver hake	<i>Morone americana</i> (Atlantic coast).
Wolfish		<i>Merluccius bilinearis</i> .
Yellow perch		<i>Anarhichas lupus</i> .
Yellow pike	Wall-eyed pike, pike perch, dore	<i>Perca flavescens</i> .
Yellowtail		<i>Stizostedion vitreum vitreum</i> .
		{ <i>Ocyurus chrysurus</i> (Atlantic coast).
		{ <i>Seriola dorsalis</i> (Pacific coast).
Crab:		
Hard	{Hard-shell crab, blue crab	<i>Callinectes sapidus</i> .
	{Dungeness crab	<i>Cancer magister</i> (Pacific coast).
	{Rock crab, hard crab	<i>Cancer irroratus</i> (Atlantic coast).
Soft and peelers	Soft-shelled crab, blue crab	<i>Callinectes sapidus</i> .
King		<i>Paralithodes camtschatica</i> (Pacific coast)
King or horsehoe		<i>Limulus</i> (Atlantic coast).
Stone		<i>Menippe mercenaria</i> .
Crawfish:		
Fresh-water	Crayfish	{ <i>Cambarus</i> species (Atlantic coast).
		{ <i>Astacus</i> species (Pacific coast).
		{ <i>Panulirus argus</i> (Atlantic coast).
		{ <i>Panulirus interruptus</i> (Pacific coast).
Sea	Rock lobster, crayfish	
Lobster:		
Common		<i>Homarus americanus</i> (Atlantic coast).
Spiny	(See sea crawfish.)	
Shrimp		{ <i>Peneus setiferus</i> .
		{ <i>Peneus brasiliensis</i> (Atlantic and Gulf coasts).
		{ <i>Pandalus</i> species (Pacific coast).
		{ <i>Pandalopsis</i> species (Pacific coast).
		{ <i>Crangon</i> species (Pacific coast).
		<i>Halotis</i> species.
Abalone		
Clam:		
Cockle		<i>Cardium corbis</i> (Pacific coast).
		<i>Saxidomus nuttall</i> .
Hard	{Butter	{ <i>Tivela stultorum</i> (Pacific coast).
	{Round clam, cherrystone, quahog, little neck.	{ <i>Venus mercenaria</i> (Atlantic coast).
		{ <i>Venus mortoni</i> (Florida coast).
Pismo		<i>Tivela stultorum</i> (Pacific coast).
Razor		{ <i>Ensis</i> species (Atlantic coast).
Soft	Soft shell clam, sand clam, nannynose, maninose.	{ <i>Siliqua patula</i> (Pacific coast).
Surf	Skimmer	<i>Mya arenaria</i> .
Limpet		<i>Mactra solidissima</i> .
Conch		<i>Acmea testudinialis</i> .
Coquina		{ <i>Strombus</i> species.
Mussel:	Pompano shells	{ <i>Busycon</i> species.
Sea		<i>Donax variabilis</i> .
		{ <i>Mytilus californianus</i> (Pacific coast).
		{ <i>Mytilus edulis</i> .
		{ <i>Quadrula</i> species.
		{ <i>Lampsilis</i> species.
		{ <i>Unio</i> species.
		{ <i>Symphynota</i> species.
		<i>Octopus punctatus</i> (Pacific coast).
Octopus		
Oyster:		
Eastern		<i>Ostrea virginica</i> .
Pacific (introduced)	Japanese	<i>Ostrea gigas</i> .
Western	Olympia	<i>Ostrea lurida</i> (Pacific coast).
Periwinkle		<i>Littorina</i> species.

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Scallop:		
Bay		<i>(Pecten irradians</i> (Atlantic coast).
Sea		<i>(Pecten equisulcatus</i> (Pacific coast).
Squid		<i>Pecten magellanicus.</i>
Sea urchin		<i>(Loligo opalescens</i> (Pacific coast).
Starfish		<i>(Loligo pealei</i> (Atlantic coast).
Terrapin	Diamond-back terrapin.....	Echinodae class.
Turtle:		Asteroidae class.
Green		<i>Malaclemmys species.</i>
Loggerhead		<i>Chelonia mydas.</i>
Hawksbill		<i>Thalasseochelys caretta.</i>
Snapping	Hard shell, alligator turtle.....	<i>Chelonia inornata.</i>
Soft shell		<i>(Chelydra serpentina.</i>
Frog		<i>Trionyx species.</i>
Irish moss		<i>Rana species.</i>
Kelp		<i>Chironurus crispus.</i>
Blood worm		<i>Macrocystis species; Nerocystis species;</i>
Sand worm		<i>Pelagophycus species; Alaria species.</i>
Sponge:		<i>Glycera dibranchiata.</i>
Glove		<i>Nereis virens.</i>
Grass		<i>Spongia graminea</i> (Hyatt) <i>Enaspongia</i>
Sheepswool		<i>officinalis</i> (L.).
Yellow		<i>Hippospongia equina cerebriformis.</i>
Trepang	Sea cucumber	<i>Hippospongia canaliculata gossypina.</i>
		<i>Hippospongia equina elastica.</i>
		<i>(Cucumaria frondosa.</i>
		<i>Tayone beiratus</i>