



# RECENT FISHERY PUBLICATIONS

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

## FISH AND WILDLIFE SERVICE PUBLICATIONS

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

- CFS - CURRENT FISHERY STATISTICS OF THE UNITED STATES AND ALASKA.  
 SL - STATISTICAL SECTION LISTS OF DEALERS IN AND PRODUCERS OF FISHERY PRODUCTS AND BYPRODUCTS.  
 SEP.- SEPARATES (REPRINTS) FROM COMMERCIAL FISHERIES REVIEW.  
 SSR.-FISH - SPECIAL SCIENTIFIC REPORTS--FISHERIES (LIMITED DISTRIBUTION).

Number	Title
CFS-660	- Florida Landings, May 1951, 4 p.
CFS-663	- Frozen Fish Report, July 1951, 10 p.
CFS-665	- Texas Landings, June 1951, 4 p.
CFS-666	- Maine Landings, May 1951, 4 p.
CFS-667	- Fish Meal and Oil, June 1951, 4 p.
CFS-668	- Alabama Landings, June 1951, 4 p.
CFS-670	- Mississippi Landings, June 1951, 2 p.
CFS-678	- Alabama Landings, July 1951, 4 p.
SL -101 (Revised)	- Firms Canning Salmon, 1950, 3 p.

Number	Title
Sep. 288	- Experimental Testing of Fish Tags on Albacore in a Water Tunnel
SSR-Fish. No. 65	- A Fishway That Shad Ascend, by Gerald B. Collins, 19 p., illus., July 1951.
SSR-Fish. No. 66	- A Survey of Former Shad Streams in Maine, by Clyde C. Taylor, 33 p., illus., August 1951.

THE FOLLOWING SERVICE PUBLICATIONS ARE FOR SALE AND ARE AVAILABLE ONLY FROM THE SUPERINTENDENT OF DOCUMENTS, WASHINGTON 25, D. C.

Fish Processing Handbook for the Philippines, by Arthur C. Avery, Research Report No. 26, 149 p., illus., printed, 50 cents, 1950. This handbook, intended for both home and commercial processors of Philippine fish, covers the handling of fresh fish, the various methods of preserving fish--freezing, salting, drying, smoking, canning, and miscellaneous methods, such as pickling--and the spoilage of fishery products. It gives a step-

by-step description of Philippine fish-preserving methods with suggestions on improving them, and of methods used in other parts of the world which have been adapted for Philippine use by the Philippine Fishery Program of the U. S. Fish and Wildlife Service. Tables of data for fish processors and drawings of common Philippine fish species are included.

## MISCELLANEOUS PUBLICATIONS

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

The Common Fishes of Maryland--How to Tell Them Apart, by Harold J. Elser, Publication No. 88, 45 p., illus., printed. Chesapeake Biological Laboratory, Department of Research and Education, Board of Natural Resources, Solomons Island, Md., June 1950. This booklet explains by means of line drawings and brief notes the more obvious differences between those Maryland fish caught by hook and line which resemble each other to some degree. Fish found along the Maryland section of the Atlantic Ocean have been left out, but Chesapeake Bay ocean fish

have been included. A few fish have been included to complete a group even though they are not usually taken by hook and line. A brief discussion of the extent and importance of sports fishing in Maryland is included. Although the common names listed for many of the fish are those which have been recommended by the Committee on Common and Scientific Names of Fishes of the American Fisheries Society, local names are given wherever Maryland usage varies with the Committee's recommendations.

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Comparison of Methods of Tagging the Blue Crab, by L. Eugene Cronin, Publication No. 78, 7 p., printed (Reprinted from Ecology, vol. 30, no. 3, July 1949). Chesapeake Biological Laboratory, Department of Research and Education, Board of Natural Resources, Solomons Island, Md. This is a summary of the various tagging techniques employed in the past for tagging the blue crab (Callinectes sapidus Rathbun) in order that those who carry on future experiments can be guided by past results. Each type of tag and method of attachment is considered and compared with others, so that conclusions can be drawn as to the most effective procedures. In the summary, the author states that "the most satisfactory technique yet developed employs special Nesbit-type tags wired across the carapace by the method of Fiedler. These are brilliant red and carry full instructions and notice of \$1.00 reward. Improvement is needed in the pattern of release of tagged animals."

The General Anatomy of the Blue Crab (CALLINECTES SAPIDUS Rathbun), by Robert Pyle and Eugene Cronin, Publication No. 87, 40 p., illus., printed. Chesapeake Biological Laboratory, Department of Research and Education, Board of Natural Resources, Solomons Island, Md., August 1950. A presentation of the anatomy of the blue crab (Callinectes sapidus Rathbun) is found in this booklet. According to the authors, this report was published as a basis for specialized research, as a guide for use of the crab as an example in invertebrate studies, and for use in the intelligent planning of sound conservation practices. The results reported are based mostly upon what can be seen in a routine dissection of the crab.

"The Labrador Fishery," article, Trade News, September 1951, vol. 4, no. 3, pp. 8-10, illus., processed. Department of Fisheries, Ottawa, Canada. "The Labrador fishery, although one of the oldest on the continent, is limited almost exclusively to cod, salmon, and whales, and operations are carried out by three distinct groups of people, all to some extent migratory," according to this article. Prepared from a report of a survey made in 1950, this article presents methods of production, number of fishermen, type of gear used, a discussion by fishery, and means used to get the products to market.

The Maryland Crab Industry, 1949, by Lewis Eugene Cronin, Publication No. 84, 41 p., illus., printed. Chesapeake Biological Laboratory, Department of Research and Education, Board of Natural Resources, Solomons Island, Md., April 1950. The best available figures on Maryland crabbing for 1949 are presented in this booklet. Shown in this booklet are the amount and value of the crabs caught by trot-line, pot, and scrape in each part of the Chesapeake Bay and in each river or sound by months. The quantity and value of crabs imported from other states to be picked and sold by Maryland packers is also

included. A discussion of the most important recent development in Maryland crabbing--the crab pot--is presented. Pots were illegal in the State until 1943, but in 1949 a total of 19,650 pots were licensed. The discussion gives the background for the rapid increase, the various changes in the laws, and the new problems facing crabbers, packers, and State officials.

"Much Ado About the Sea Lamprey," by Dr. T. H. Langlois, article, illus., The Ohio Conservation Bulletin, May 1951, vol. 15, no. 5 pp. 29-32, illus., printed, 10 cents per copy. Division of Wildlife, Ohio Department of Natural Resources, Columbus, Ohio. In this article, Dr. Langlois briefly reviews scientific studies dating from 1922 on the existence of sea lampreys in the Great Lakes which tends, at least in part, to refute the common belief that lampreys were introduced into the Great Lakes through the Welland Canal which was not open to shipping until 1932. Furthermore, the appearance of sea lampreys in Lake Ontario as early as 1915 differed from the present species in that it was a dwarfed form. Literature indicates that larger species were later introduced into the Great Lakes by attaching themselves to the hulls of ocean vessels passing through the Welland Canal and delivering cargoes to Detroit, and possibly Duluth and lower Lake Michigan. Detroit, however, is suggested as the principal terminus for the hitchhiking sea lampreys. It is held that the Saginaw Bay fishery is not affected by the sea lamprey because it is a large shallow bay, fed by warm muddy streams similar to the geographic and water properties of the west end of Lake Erie. The scarcity of lampreys in this section of Lake Erie bear out the belief that lampreys thrive better in deeper cold waters. Spawning also usually occurs in clear cold-water tributaries, and the absence of such tributaries in western Lake Erie may further explain the scarcity of lampreys in this area. Dr. Langlois considers the present attempts to control the superabundant sea lampreys, and suggests that there may be a need for preventing the re-infection of the lakes by treating the hulls of ocean ships below the Welland Canal. The attempts to deplete the sea lamprey are logical on the basis of their increased depredations on lake trout, but the author is slow to attribute the entire lake trout disappearance to the lamprey attacks. As another factor which may have some influence on lake trout, it is suggested that there is a rather large viability for certain kinds of fish. It has been observed that samples of certain species lack viability during periods of abundance. In contrast, members of a particularly low fish population are extremely hardy and tend more easily to endure adverse circumstances. Thus, there tends to be a physiological rhythm with up and down phases in different generations. The fluctuating smelt fishery on the Great Lakes is suggested as perhaps one basis of this theory of rhythmic unviability. Furthermore, smelt have become lake trout competitors for an important source of food, namely lake shiners. Finally, the presence of the alewife in

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several of the Great Lakes might materialize into an important lake fish, just as smelt or the sea lamprey. Since it has been established that the alewife serves as forage for lake trout in Lake Ontario, an expansion of the alewife in these waters might prove to be of great value in the return of lake trout, the author points out.

Norges Fiskerier, 1947 (Norway's Fisheries Statistics, 1947), Norges Offisielle Statistikk, vol. XI, No. 32, 163 p., illus., printed in Norwegian, kr. 1.50 (about 25 U.S. cents). Fiskeridirektøren, H. Aschehoug and Co., Oslo, Norway, 1950. Detailed information of the quantity and values of commercial fisheries landings by species and municipalities are contained in this booklet. Statistics on number of craft, gear, fishermen, and shore facilities for processing are also given. A detailed discussion of the most important seasonal fisheries operations is found in the introduction.

Notice sur le Chalutage Francais en Indochine (Notice on French Trawling in Indo-China), Contribution No. 1 (Extrait du Bulletin Economique), 12 p., illus., printed in French. Institut Oceanographique de l'Indochine, 36 Rue Lucien-Mossard, Saigon, Indo-China. Part of the work of the Oceanographic Institute of Indo-China consists of studying trawling in local waters, and this publication gives the latest information on trawling efforts of commercial significance in Indo-Chinese waters. The first article contained in the publication ("Research of the Trawlable Banks") considers the means of making the investigation, and the condition of ocean bottoms and resources in the Tonkin Gulf, Bassac-Mekong Banks and Cape St. Jacques, Gulf of Siam, and the continental plateau of Annam. The results of three commercial trawling tests show that the operations of the bigger draggers are only possible when the more expensive fish will bring a more remunerative price, and that the larger trawlers are too expensive to buy and to operate. Future predictions point out that large trawlers are not too desirable for the Indo-Chinese waters because of overfishing. Coral bottoms also make some of the fishing areas inaccessible to large trawling operations. The abundance of mud and coral bottoms are not well suited for the use of large European-type gear. Two other types of gear in popular use in this area include a type of trawl (le chalut boeuf) used by the Chinese junks, and a type of trawl derived from the Vietnamese fishermen. Detailed tables are given for the exploratory voyages in each of the areas covered, and include information on the ship's position, nature of the bottom, and the average yield of fish taken from these areas.

Rapports et Proces-Verbaux Des Reunions (Contributions to Special Scientific Meetings, 1949), vol. CXXVII, illus., printed (in two parts), Part I, "Herring

Investigations," 74 p., US\$1.75; Part II, "Shellfish Investigations," 96 p., US\$2.20; both parts US\$3.95. Part I is entirely in English and Part II has articles in English and French. Conseil Permanent International Pour L'Exploration de La Mer (International Council for the Exploration of the Sea), Charlottenlund Slot, Denmark. (For sale by Andr. Fred. Høst & Fils, Copenhagen, Denmark.) This publication gives the papers presented regarding herring and shellfish investigations at the 1949 meeting of the International Council for the Exploration of the Sea. Some of the papers on herring investigations presented are: Spotting Shoals with the Recording Echo Sounder; Herring Tagging; Tagging Experiments on Herring; Towards a Programme of Herring Research; Contributions to the Study of Fluctuations in a Fish Stock; and Racial Analyses of Icelandic Herrings by Means of the Otoliths. Some of the English papers which appear in the part on shellfish investigations are: The British Oyster Industry and Its Problems; Scottish Research on Oyster Fisheries; Difficulties Encountered in Tank-Breeding of Oysters (*Ostrea edulis*); The Sanitary Control of Shellfish in England; Shellfish in the Netherlands; Some Problems in the Fishery for Deep Sea Prawns; Fluctuations in the Lobster (*Homarus vulgaris*) Population of the Scottish Coast; and Lobster and Oyster in Norway.

Regulation and Investigation of the Pacific Halibut Fishery in 1949, Report of the International Fisheries Commission No. 15, 24 p., illus., printed. International Fisheries Commission, Seattle, Wash., 1951. A brief review of the Commission's administrative and investigational activities in 1949 with reference to the Pacific Coast halibut fishery. Presented in the booklet are data on the 1949 fishery and the regulations for that year, and discussions on the problem of the short season, extending the length of the fishing season, changes in the yield and abundance of the stocks, changes in the composition of the stocks, and marking experiments.

(Scotland) Report on the Fisheries of Scotland, 1950, Scottish Home Department, Third Report, 76 p., illus., printed, 42 U.S. cents. His Majesty's Stationery Office, Edinburgh, Scotland. This is a report of Scotland's fisheries with statistical data for the various phases of this industry for the year ending December 31, 1950. Total production figures, both comparative and historical, are given by species and by port, including information on the number of boats, personnel, and methods of capture. Statistics are also available for the 1950 production of lobsters, crabs, oysters, whales, and fishery byproducts. Sections are also devoted to discussions of marine fisheries super-

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intendence, scientific investigations, and harbor maintenance.

"Scouring the Gulf of Mexico for Fishes of the Deep Sea," by L. P. Woods, article, The Bulletin, August 1951, vol. 22, no. 8, p. 3, illus., printed. Chicago Natural History Museum, Chicago 5, Illinois. The area between 100 and 300 fathoms below sea level is perhaps the least known fish fauna in the world since this region is generally too deep for ordinary commercial trawling operations. In this article, the author relates his experience aboard the U. S. Fish and Wildlife Service's exploratory fishing vessel, the Oregon, in its search for new shrimp fishing grounds in the Gulf of Mexico in depths of from 104 to 305 fathoms. Numerous varieties of commercially-important fish were taken in several drags by the Oregon at these depths. In addition to commercially-important species, several strange specimens were also taken in the catches. Many species from the deep-water collection are related to fish living in similar depths off the coasts of South Africa and Japan. Although the taxonomic studies of 900 specimens collected while on this cruise are not yet completed, more than 150 species have already been determined, and several others have been found to be undescribed species.

The South African Fishing Industry Handbook and Buyers' Guide, Editor: Norman Howell, 240 p., illus., printed. Published by the "South African Shipping News and Fishing Industry Review" (Available from S. A. Trade Newspapers Pty. Ltd., P. O. Box 2598, Cape Town, South Africa, June 1951). This is the first issue of this handbook designed to acquaint readers with the various aspects of the South African fishing industry. The book is divided into eight main sections: Resources; Organizations; Companies; Who's Who; Fish Products; Suppliers; Fishing Vessels; and Engines. The section on Resources includes a discussion of the following industries: pilchard, fish meal and oil, trawling, and rock lobster. Under Organizations, the Division of Fisheries, the Fisheries Development Corporation of South Africa Limited, the South African Fishing Industry Research Institute, and the South African Food Canners' Council are described and their functions analyzed. A guide to companies in the South and South-West African fishing industry composes the section on Companies. The name, address, directors, other officers, affiliations, capitalization, and factories of each firm are given. The Who's Who section gives brief biographical notes on the leading personalities professionally connected with the fishing industry of South and South-West Africa. A classified list of fish products, with brand and producers' names, is found in the section on Fish Products. The section on Suppliers consists of a buyers' guide (a classified list of the products offered to the fishing industry). The regulations governing the registration and licensing of fishing boats, seaworthiness of fishing boats, and a list of motor fishing vessels, trawlers, whale catchers, etc. are to be found in the section on

Fishing Vessels. Finally, the section on Engines gives a list of engines offered for installation in fishing vessels with specification of make, manufacturer, representatives in South Africa, and all relevant particulars for each model.

A Study of the Spawning Populations of Sockeye Salmon in the Harrison River System, with Special Reference to the Problem of Enumeration by Means of Marked Members, by Milner B. Schaefer, Bulletin IV, 212 p., illus., printed. International Pacific Salmon Fisheries Commission, New Westminster, B. C., Canada, 1951. The Sockeye Salmon Fisheries Convention, ratified by the United States and Canada in 1937, established the International Pacific Salmon Fisheries Commission for the purpose of restoring and maintaining the greatly reduced sockeye salmon fisheries of the Fraser River system. In 1938 the Commission's scientific staff commenced detailed studies of the natural history and population dynamics of the sockeye salmon runs upon which the fishery operates. In order to gain information on the structure and behavior of populations of migrating adult salmon, to examine into the validity of marking methods for making population estimates, and to lay a foundation for employing these methods in larger stream systems than Cultus Lake (in 1938 and 1939 experiments were conducted at this lake to examine the feasibility of employing marked members for estimating the adult sockeye population), and under more nearly "average" conditions than obtained there, experiments were conducted in 1939, 1940, and 1941 in the Harrison River System. This paper is an analysis of some of the data thus obtained with the following objects: (1) to trace the migrations of the important spawning populations within the Harrison River System; (2) to examine the nature of the spawning migration of representative runs, with particular regard to the amount of mixing en route to and on the spawning grounds, and the degree to which the populations are stratified; (3) to study the design of sampling procedure and statistical analysis in the determination of population numbers by means of marked members; (4) to detect and, if possible to measure, harmful effects of the marking procedure which would cause the marked fish to behave differently from the unmarked, and so give erroneous results in the population computations; (5) to determine whether estimation of spawning sockeye salmon populations by means of marked members is practicable in the Harrison River System, and presumably, therefore, in other similar systems, and to discover limitations of the applicability of the method. In his summary, the author states that it may be said that the estimation of sockeye salmon populations by means of marked members, following the methods developed in the report, "is practicable, but must be applied cautiously with careful consideration being given to the interpretation of the data in each instance. Given careful study and analysis of the results of every experiment, the tagging method is believed to offer a means of measuring salmon populations with a degree of accuracy not heretofore obtained except by counting weirs."

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(Sweden) Fiske År 1949 (Fishing Statistics for 1949), 40 p., printed in Swedish with a summary in French. Sveriges Officiella Statistik, Jordbruk Med Binaringer, Statistiska Centralbyran, Stockholm, Sweden. Following a royal decree of 1912, Sweden's fishing statistics are compiled by the local fishery administration, principally on the salt-water fishery. In 1949, Sweden's salt-water fishermen numbered 23,100, of which 14,390 were professional full-time fishermen, and the remainder part-time or secondary fishermen. The value of the gear and boats employed in the salt-water fisheries was 129 million kroner. More than 50 percent of Sweden's 21,012 boats were not equipped with motors in 1949. Salt-water fisheries production totaled 182,400 metric tons with a value of 104.3 million kroner in 1949. The 1,300 metric tons landed by foreign fishermen in Swedish ports during 1949 are not included in the total production figure above. Principal fish and shellfish taken include herring, cod, mackerel, salmon, eels, shrimp, haddock, sprats, and plaice. The most important species is herring and this includes the Baltic herring ("strömming"). Swedish herring are often characterized by their source of capture since these waters vary considerably in salinity ratios. Gothenborg and Bohus, the two main fishing ports, accounted for more than half of the total 1949 landings. Statistical tabulations in this report include the number of fishermen, gear, and boats; the quantity and value of the salt-water fish catch; production of salted and marinated herring; and foreign trade in fishery products. Production is given by ports and species for the Baltic Sea and the West Coast fisheries. Fresh-water fisheries data are given by area, and include information by gear, boats, and species in a latter section of this publication.

Summary of Japan's Fishing Industry, 1950, 21 p., illus., printed in English. Fisheries Agency, Ministry of Agriculture and Forestry, Japanese Government, Tokyo, Japan. A short discussion of the Japanese fisheries is contained in this booklet. A table showing Japan's fisheries production from 1936 through 1949 by major categories is included. Among the subjects discussed are fisheries administration, fisheries and fishing areas, democratization of the fishing industry, fishery facilities, export of marine products, and fishery aid facilities.

Trade with Ireland--A Businessman's Guide and Directory, 64 p., printed. Prepared by the Economic Cooperation Administration Special Mission to Ireland, Dublin, January 1951. (Copies available from the Department of Commerce Field Offices or from the Economic Cooperation Administration, Washington, D. C.) In addition to general information on Ireland, this booklet contains data on import regulations and purchasing procedures, sources of information in Ireland and the United States, preparing shipments for Ireland, exporting from Ireland to the United States, and a list of Irish importers of U. S. commodities. Included in the latter is about 30 names of importers of fish products.

Trade with Sweden--A Businessman's Guide and Directory, 103 p., illus., printed. Prepared by the Economic Cooperation Administration Special Mission to Sweden, 1951. (Copies available from the Department of Commerce Field Offices or from the Economic Cooperation Administration, Washington, D. C.) Among the subjects discussed in this booklet are the economy of Sweden, transportation and communication facilities, making contact with the Swedish businessman, what the American businessman should know about trading with Sweden, trade practice requirements under ECA, shipping to Sweden, and facts about importing from Sweden. A number of appendices include a Swedish directory of importers, Swedish imports and exports in 1949, and ECA procurement authorizations issued to Sweden from April 3, 1948, through November 30, 1950.

Transactions of the American Fisheries Society, 1950 (Eightieth Annual Meeting, Memphis, Tennessee, September 11, 12, 13, 1950), vol. 80, 417 p., illus., printed, \$4.00. American Fisheries Society, St. Paul, Minnesota. (Order from William C. Beckman, Librarian, American Fisheries Research Unit, Colorado A and M College, Fort Collins, Colorado.) Part I consists of the papers presented at the Eightieth Annual Meeting of the Society. The following are some of the papers presented: Fish Harvesting on Two TVA Mainstream Reservoirs; Is There a Harvestability Differential in Fish?; Considerations for an International Approach to Taxonomy of Marine Fish; Status of the Lake Trout Fishery in Lake Superior. Part II reports on the business sessions of the Society.

