

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

## FISH AND WILDLIFE SERVICE PUBLICATIONS

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

CFS - CURRENT FISHERY STATISTICS OF THE UNITED STATES AND ALASKA.

Sep. 225 - Fishery Exploration in the Western Pacific Sep. 226 - E Value Ratios for Some Commercial Vitamin A Oils

those interested.

CFS - CURRENT FISHERT STATISTICS OF THE CONTROL OF

CFS-447 - Massachusetts Landings, August 1948 CFS-448 - Maine Landings, October 1948 CFS-449 - Fish Meal and Oil, December 1948 CFS-452 - Massachusetts Landings, September 1948 CFS-453 - Frozen Fish Report, February 1949 CFS-455 - Fish Meal and Oil, January 1949 CFS-456 - Maine Landings, December 1948 CFS-459 - Frozen Fish Report, March 1949 FL-325 - The Nutrition of Fish in Hatcheries -- A Literature Review FL-326 - SS Pacific Explorer, Part IV--Personnel and the Movement of Materials FL-327 - The Fishing Industry and the Market for Fish in Sweden FL-328 - Fishing Industry of the Gulf of Aden (Arabia) FL-329 - Fishing Industry in Brazil FL-333 - Aquatic Resources of the Ryukyu Area FL-334 - The Effect of a Seafood Diet on the Red Cell Count, Hemoglobin Value, and Hematocrit of Human Blood SL-106 (Revised) - Firms Canning Shad or Shad Roe, 1947 SL-108 (Revised) - Firms Canning Salmon Eggs for Bait, 1 SL-118 (Revised) - Firms Canning Groundfish Flakes, 1947 SL-119 (Revised) - Firms Canning Squid, 1947 SL-156 (Revised) - Firms Manufacturing Pearl Essence, 1947

A Bibliography of Lobster Culture, by L. W. Scattergood, Special Scientific Report 64, 26 p., processed, January 1949. Limited distribution and for the official use of Federal, State, or cooperating agencies. In view of the interest shown in the artificial propagation of the lobsters (Homarus vulgaris and Homarus americanus), the author has assembled in this publication references pertaining to this activity and also the early life history of the genus. Reports issued by State and Federal Governments are included in this bibliography. Translations have been made of all references in foreign languages mentioned and they will be available in the future to

Conditions Affecting Shellfish Production in Lynnhaven Bay, Virginia, and the Possibilities of Improving Them by Increasing Tidal Flow, by W. A. Chipman, Jr., Special Scientific Report No. 61, 20 p., maps and graphs, processed, December 1948. Limited distribution and for the official use of Federal, State, or cooperating agencies. The purpose of the survey reported upon in this publication was to estimate the

shellfish production in Lynnhaven Bay and to consider what effect increased tidal flows produced by the suggested improvements would have on it. Besides a description and a discussion of the shellfish production, pollution, and suggested improvements of the area, the report gives the survey observations on water conditions, tide and tidal flow, exchange of water by tidal action, character and distribution of the oyster-growing bottoms, and a set of conclusions.

Growth of Cysters During Different Months of the Year, Bulletin No. 2, Vol. 13, February 15, 1949, 3 p., mimeographed, free. Available upon request from Fishery Biological Laboratory, Fish and Wildlife Service, Milford, Conn. Gives some additional observations on the growth of oysters in addition to those reported in Bulletin No. 1 of April 1947. The observations were made on individually marked adult oysters kept in Milford Harbor. On the basis of frequent comparisons, however, the report states that it is believed that they also reflect the general trend of the monthly growth of oysters in Long Island Sound proper. Included is a table showing percent of increase in length, width, and volume of oysters during each month of the year.

Investigations of the Cyster Reefs of Mississippi, Louisiana, Alabama Following the Hurricane of September 19, 1947, by James B. Engle, Special Scientific Report No. 59, 71 p., processed, November 1948. Limited distribution and for the official use of Federal, State, or cooperating agencies. This publication reports on the surveys and investigations which were carried out to determine the extent of the damage to the shellfish and the shellfish bottoms of Mississippi, Louisiana, and Alabama by the hurricane of September 19, 1947. The report is divided into three parts: Part I deals with the damage to the cyster reefs in the State of Mississippi caused by the hurricane; Part II is a report of the investigation of the cyster reefs of the State of Louisiana following the hurricane; and Part III is a report of the investigation of the cyster reefs of the State of Alabama following the hurricane. Each part concludes with a set of recommendations for the early rehabilitation of the reefs.

Ment of its Fishery Resources (2. Washington streams from the mouth of the Columbia River to and including the Klickitat River - Area I), by F. G. Bryant, Special Scientific Report No. 62, 110 p., illus., processed, January 1949. Limited distribution and for the official use of Federal, State, or cooperating agencies. This publication covers Area I of the Columbia River watershed, which for the purpose of the Columbia River Stream Survey has been divided into several survey areas. The survey has been conducted to provide data for the evaluation of each stream, or portion of stream, from the standpoint of its present and potential value in relation to the maintenance of the salmon resources of the Columbia River. Area I covered by this report includes all tributaries entering the Columbia River on the north, or Washington side, in the 180 miles from the mouth to and including the Klickitat River. The Cowlitz system is treated as a separate sub-area in Part 2 of this report. Besides a map of the stream-survey areas and an introduction, each of the two parts of the report consists of a map of the area surveyed, a list of streams, a discussion of the survey, a description of streams, and a table giving the obstructions and diversions.

## ARTICLES BY FISH AND WILDLIFE SERVICE AUTHORS IN OTHER PUBLICATIONS

"The Turbulent Oyster Trade, Part II: In the Twentieth Century," by James Wharton.

The Commonwealth, March 1949, Vol. XVI, No. 3, pp. 13-15, 34-35, illus. Virginia

State Chamber of Commerce, Richmond, Va., 15 cents per issue. In this article, which is part of a series dealing with Virginia's seafood resources, the author reviews the ramifications of the oyster industry in this State in the twentieth century. The first part of this article dealing with the oyster industry in the nine teenth century appeared in the November 1948 issue of the magazine.

## MISCELLANEOUS PUBLICATIONS

THE FOLLOWING PUBLICATIONS MAY BE OBTAINED, IN MOST INSTANCES, FROM THE AGENCIES ISSUING THEM.

- Annual Report of the Secretary of the Interior, Fiscal Year Ended June 30, 1948, 427 p., printed, indexed. U. S. Department of the Interior, Washington, D. C. For sale by the Superintendent of Documents, Washington, D. C., \$1.00. Part I of this report deals with some of the more critical problems in the field of this Nation's natural resources, and concludes with recommendations for action. Fish is listed among one of the critical fields and the Secretary states: "...that our fishery resources are renewable, if properly used. If overused, however, they can be destroyed, just as surely as our soil resources can be destroyed in the same way." Part II contains the annual reports of the Bureaus and Offices of the Department. It includes, among others, the annual report of the Director of the Fish and Wildlife Service to the Secretary. This latter report gives information on the Service's activities during the year in marine fishery research; the conservation of Alaska fisheries; salmon conservation in the United States; utilization of fishery resources (covers mostly the commercial fisheries activities of the Service); maintaining the inland fisheries; cooperation with American Republics; rehabilitation of the Philippine fisheries; proposed international treaties; polar expeditions; whaling; wildlife; etc.
- The Art of Fish Cookery, by Milo Miloradovich, 473 p., printed, indexed. Doubleday & Co., Inc., Garden City, N. Y., 1949, \$3.50. The first chapter of this book gives many strange facts about the use of fish in antiquity. It is a complete book of recipes, and contains rules for selecting, buying, storing, preparing, and cooking practically every kind of edible fish and shellfish sold in the United States. Part I gives names, seasons, forms, sizes, types, and producing areas for fresh and salt-water fish. This basic information is followed by general information on cooking with charts) showing the time required for various kinds of cooking, baking, broiling, boiling, pan frying, etc. Includes a large number of recipes with variations ranging from chowders and stews to puffs, salads, sandwiches, sauces, and recipes for smoked, salted, and canned fish. Part II is devoted to shellfish (clams, crabs, lobsters, scallops, shrimp, turtles, etc.) along the same lines as the first part of the book on fish.
- The Care of the Trawler's Fish, by G. A. Reay and J. M. Shewan, Food Investigation

  Leaflet No. 3 (Revised 1948), 12 p., printed. Department of Scientific and Industrial Research, Cambridge, England, 1949. (For sale by His Majesty's Stationery Office, London, England, 4d or approx. 7 cents U. S.) A leaflet intended to help owners, skippers, mates, and crews of trawlers and other types of vessels that catch "white" or demersal fish to care for their fish and to land it in the best possible condition. The treatment of pelagic species, e.g., herring, is not considered in this publication. First issued in 1933, this edition has been revised and extended. Contains data on the general scientific principles involved in the spoilage of fish, practical notes on the care of the trawler's fish, a chart giving the organoleptic characteristics of fresh and spoiled fish, and a suggested code of practice for officers and fishermen that might be kept continuously before them by display on board fishing vessels.
- Commercial Fishing in the Great Lakes Area (Hearings before the Subcommittee on the Fisheries and Wildlife Conservation of the Committee on Merchant Marine and Fisheries, House of Representatives, Eighty-First Congress, First Session, March 8-9, 1949), 100 p., printed. Available only from the House Committee on Merchant Marine and Fisheries until exhausted. This publication contains the statements on the commercial fishing of the Great Lakes by the various members of the fishery industries and the Fish and Wildlife Service. In addition, it gives a message from the President of the United States, transmitting a convention between the United States and Canada for the development, protection, and conservation of the fisheries of the Great Lakes, signed at Washington, April 2, 1946; the proposed international treaty, with Canada, to control the fisheries of the Great Lakes, with explanatory memorandum; a table showing the changes in United States rates of duty on fresh or frozen fresh-water fish and eels, and a table giving the imports of fresh-water fish, 1942-48, inclusive.

- Field Book of Marine Fishes of the Atlantic Coast from Labrador to Texas, by Charles M. Breder, Jr., 332 p., revised, printed, illus, with 8 plates and 403 line drawings. G. P. Putnam's Sons, New York, N. Y., 1948. A comprehensive guide to marine fishes from Labrador to the Gulf of Mexico. The general habits, range, and most prominent features of each species (within the offshore limit set at 25 fathoms and on the shoreward side as far as brackish water reaches) are fully described. This is a revision of a book issued in 1929, but the book is substantially the same as the previous edition. However, various minor modifications have been made throughout the book.
- First Annual Report of the Pacific Marine Fisheries Commission (To the Congress of the United States and to the Governors and Legislators of Washington, Oregon, and California) 29 p., printed. Pacific Marine Fisheries Commission, Portland, Oregon. This report contains the establishment, aims, progress, activities, and financial obligations of the Commission. Besides a list of the membership of the Commission and the Advisory Committee, it reports on the various meetings of the Commission giving a short resume of the discussions, gives the resolutions passed during 1948, and presents the financial statements for the year.
- "Fisheries," chapter, Department of Mines and Natural Resources--Manitoba--Annual Report for the Period Ending March 31, 1948, Winnipeg, Manitoba, Canada. This chapter is a complete report on the Manitoba fisheries for the fiscal year 1947-48. In addition to a discussion of the commercial fisheries, it contains numerous tables showing the total production and value of all species of fish produced, number of fishermen employed, and equipment used for Manitoba and individually for the Lakes Winnipeg, Winnipegosis, Manitoba, and northern Manitoba lakes; summer and winter production and value of fish taken from Manitoba waters; and summary showing data for the past 17 years. In addition, a list of lakes in which commercial fishing is carried on in northern Manitoba is included, as well as data on fish culture, whitefish surveys, and sport fishing.
- Foreign Commerce and Navigation of the United States, 1945, Volume I--United States

  Import and Export Statistics, 678 p., printed. Bureau of the Census, U. S. Department of Commerce, Washington, D. C., 1948, \$3.75. (For sale by the Superintendent of Documents, Washington 25, D. C.). Contains official statistical data on the foreign trade of the United States for 1945. Includes data on fresh, frozen, canned, salted, cured, and other miscellaneous fishery products and byproducts. The book also contains a table showing specified products of American fisheries received at ports of the United States.
- Fourteenth Biennial Report 1947-1948, 238 p., printed. Department of Conservation, Lansing, Mich. This report is a summary of the activities and progress of the Department for 1947 and 1948, including a report on the Fish Division. Included is a review of the commercial fisheries of Michigan waters of the Great Lakes mainly for 1946 and 1947. The statistical tables give data by lakes and gear; by lakes and species; by months, species, and lakes; and species by lakes. The tables are preceded by a discussion of the various Great Lakes fish. In addition, the publication contains an article on the sea lamprey investigations which has been excerpted and paraphrased from: "Report of the Great Lakes Sea Lamprey Committee," by John Van Oosten of the Fish and Wildlife Service.
- The Frozen Food Cook Book, by Jean I. Simpson and Demetria M. Taylor, 507 p., printed, indexed. Simon and Schuster, New York, N. Y., 1948, \$2.95. Written with the technical assistance and cooperation of the Frozen Food Foundation, the book is a complete guide to the preparation, cooking, and preservation of frozen foods, together with hundreds of recipes, charts, lists, and menus. Practically all quick-frozen types of food are considered including fish and shellfish. The chapter on quick-frozen fish and shellfish includes instructions on the preparation, and recipes and menus for all varieties of main dishes, soups, salads, chowders, and cocktails. A chapter on home freezing includes information on fish and shellfish. The book is divided into five sections. Section one deals with the advantages of frozen foods; section two, cooking with frozen foods; section three, frozen foods for special occasions; section four, zero storage cabinets and home freezers; and section five, home freezing.

- A Gloucester Cook Book, 18 p., printed, free. Gloucester Fisheries Association,
  Gloucester, Mass. This booklet contains fish recipes collected from the women
  of Gloucester. It gives a few facts concerning Gloucester fish and fish in
  general; and platter, casserole, tureen, salad bowl, and canape fish recipes.
  It concludes with a few recipes to serve 50 persons.
- The Life Story of the Fish (His Morals and Manners), by Brian Curtis, 284 p., illustrated with line drawings and plates, printed. Harcourt, Brace and Company, New York, N. Y., 1949, \$3.75. This book is a new and revised edition of one published 10 years ago. Much new material has been added to this particular edition which has been re-written and contains reference reading lists for those who wish to consult source material and an index. It is an attempt to set forth some of the outstanding facts known about fish which might be of interest to the general reader, angler, and aquarist. Discusses the characteristics of fish in general—their body covering, framework, the senses and nervous system, the air-bladder, internal workings, reproduction and growth, habits and adaptations—and deals individually with trout, salmon, and other game fish.
- (Maine) 15th Biennial Report (For period July 1, 1946 to June 30, 1948, plus additional information to December 30, 1948), 48 p., printed. Department of Sea and Shore Fisheries, Augusta, Maine. In addition to statistics on landings at Maine ports, by counties, for 1947, this report includes a discussion of the activities of the Division of Marketing and Development and the Division of Conservation and Propagation. The former Division's report includes its efforts to promote Maine's fishing industry, establishment of new industries, and advertising and publicity for the industry. The latter Division's report includes a discussion of the fishery research program and boat, seed lobsters, lobster rearing, clam flat pollution, clam cleansing plant, eastern Maine rearing station, groundfish, Schoodic lobster pound, herring studies, tuna fishing, sea moss, cormorant and gull control, shad restoration, oysters, economic and scientific research by the University of Maine, Atlantic salmon, exchange of lobsters for Dungeness crabs with the State of Washington, and seals. The U. S. Fish and Wildlife Service has cooperated with Maine on lobster rearing, shad propagation, bird control, clam pollution surveys, Atlantic salmon restoration, shellfish research and development, statistics and other activities. In addition, included are the following articles: "Progress in Fisheries Research," by C.C. Taylor and F. T. Baird; and "Shellfish Program," by Dana Wallace.
- Markets for Airborne Seafoods, by S. A. Larsen, W. Reitz, and K. K. Burgum, Wayne University Studies in Air Transport No. 5, 120 p., printed, \$2.00. Wayne University Press, Detroit, Mich., 1948. This book is a report on the study under the Air Cargo Research conducted by the School of Business Administration, Wayne University, under express authority of the Detroit Board of Education and sponsored by five corporations. This study seeks to point the way to a larger market for seafoods and to blueprint a plan for the achievement of this objective. The study should be of special interest to fish producers and distributors, transportation agencies, packaging concerns, home economists, and government officials—all of whom have a part to play in bringing about an improvement in the quality, and thereby strengthening the demand and increasing the consumption of fresh fish. (See the synopsis of this report which appears on page 26 of this issue.)
- "Pacific Fisheries," by Dr. J. L. Kask, an address, 10 p., processed. Food and Agriculture Organization of the United Nations, Washington, D. C. The author, chief biologist of the Fisheries Division of FAO, presented this address at a Symposium on Economic and Power Resources of the Pacific Area, Division of Social Sciences, Seventh Pacific Science Congress, held in Auckland and Christchurch, New Zealand, February 2-22, 1949. The purpose of the address is to point out that the Pacific Ocean can contribute much more toward helping to feed that part of the world's people who live on its shores than is now being harvested from, and that there are some indications that both the people and their governments are becoming increasingly aware of this fact. "About 95 percent of all fish caught in the Pacific are taken north of the equator," according to the author, "but even in this heavily fished hemisphere there are extensive shallow water areas that are not fully exploited as in the Bering and Okhotsk seas and there are many good edible species

that are not fully utilized." Also, the high seas and ocean depths may possibly contain resources ready for harvesting that are unknown today. The address stresses that investigation and wise regulation must go hand in hand with development and exploitation.

Planning a Frozen Food Business, by Lyle L. Davis and P. D. Rodgers, Bulletin 419, 18 p., illus., printed. Virginia Agricultural Experiment Station, Blacksburg, Virginia, October 1948. This booklet gives general information concerning the construction of locker plants and commercial freezing plants. Although fishery products are not mentioned specifically, the basic elements discussed in this publication for planning a locker plant and commercial freezing plant would also apply to a plant designed for storing fish. Included are examples on how two more or less typical designs may be utilized.

Wildlife Conservation of the Committee on Merchant Marine and Fisheries, House of Representatives, Eighty-First Congress, First Session, February 15-16, 1949), 226 p., printed. Available only from the House's Committee on Merchant Marine and Fisheries until exhausted. This report is a transcript of the hearings on the problems of the fishing industry before the House's Committee on Merchant Marine and Fisheries. It contains statements of the various members of the fishery industries made before the Committee and material presented by the Fish and Wildlife Service.

Provincial (British Columbia) Department of Fisheries Report (with appendices for the year ended December 31, 1947), 111 p., printed. Provincial Department of Fisheries, Province of British Columbia, Victoria, B. C., 1948. This report gives the species and value of fish caught in British Columbia as well as the amount of capital, equipment, and employees in the fisheries. The canned pack of salmon, pilchard, herring, and shellfish is also included as well as data on mild-cured and dry-salt salmon, dry-salt and pickled herring, halibut, and fish oil and meal production, and net fishing in non-tidal waters. There are several appendices which include the following: "Contributions to the Life-History of the Sockeye Salmon," by W. A. Clemens; "Results of the West Coast of Vancouver Island Herring Investigation, 1947-48," by A. L. Tester; "Records of Clam Production," by Ferris Neave; "Report on Investigation of the International Pacific Salmon Fisheries Commission for 1947," by B. M. Brennan; and "Salmon-Spawning Report, British Columbia, 1947," by A. J. Whitmore. The report concludes with a number of statistical tables on the British Columbia fisheries.

School Lunch Recipes Using Fish, PA-66, 8 p., processed, free. Bureau of Human Nutrition and Home Economics and Production and Marketing Administration, U. S. Department of Agriculture, Washington, D. C., December 1948. This publication developed in cooperation with the Fish and Wildlife Service contains recipes developed especially for the school lunch program. They conform to the protein-rich food requirement for Type-A meals set up by the Production and Marketing Administration. Recipes are arranged so that they can be cut apart and added to the card file, "School Lunch Recipes for 100." The introduction discusses the nutritive value of fish, frozen fish fillets, canned fish, precautions with fish mixtures, and garnishes for fish.

A Selected List of State Publications on the Natural Resources of Maryland, by W. H. Bayliff, 15 p., printed. Maryland Board of Natural Resources, Annapolis, Md., January
1949. This list contains only those publications issued by State agencies and considered most instructive to the general reader. Includes publications on the State's
commercial fisheries.

Processing -- Miscellaneous Service Division