



RECENT FISHERY PUBLICATIONS

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.
 FL - FISHERY LEAFLETS.
 SL - STATISTICAL SECTION LISTS OF DEALERS IN AND PRODUCERS OF FISHERY PRODUCTS AND BYPRODUCTS.
 SEP.- SEPARATES (REPRINTS) FROM COMMERCIAL FISHERIES REVIEW.

Number	Title
CFS-1049	- Massachusetts Landings, July 1954, 8 pp.
CFS-1051	- Manufactured Fishery Products, 1952 Annual Summary, 7 pp.
CFS-1052	- Florida Landings, July 1954, 6 pp.
CFS-1053	- Maine Landings, August 1954, 4 pp.
CFS-1054	- New Jersey Landings, August 1954, 2 pp.
CFS-1056	- Texas Landings, September 1954, 3 pp.
CFS-1058	- Fish Meal and Oil, September 1954, 2 pp.
CFS-1061	- Mississippi Landings, September 1954, 2 pp.
CFS-1062	- Maine Landings, September 1954, 4 pp.
CFS-1063	- New York Landings, August 1954, 4 pp.
CFS-1064	- Massachusetts Landings, August 1954, 8 pp.
CFS-1067	- New York Landings, September 1954, 4 pp.
CFS-1070	- Alabama Landings, September 1954, 2 pp.

WHOLESALE DEALERS IN FISHERY PRODUCTS:

- SL - 7 - New Jersey, 1954, 3 pp.
 SL - 8 - Pennsylvania, 1954, 3 pp.
 SL - 18 - Mississippi, 1954, 3 pp.
- FL- 41 - List of State-Owned Fish Hatcheries and Rearing Stations (revised September 1945), 24 pp., processed.
 FL-420 - Florida's Red-Tide Problem, by Edna N. Sater, 11 pp., illus., processed. This leaflet describes the destructiveness of the 1946-47 outbreak and the progress made on the red-tide problem since that time. The author states that "red tides," noted for their discolored water, are caused by a tiny marine organism so small that it cannot be seen by the naked eye. Gymnodinium brevis is the scientific name of this fish-killing plague which also produces a "gas" irritating to nostrils and throats of people. Rainfall, marsh drainage, salinity, wind, and temperature--in certain combinations--provide the physical conditions in which the red-tide organisms can get

started. These organisms multiply rapidly and derive nutrients from the fish that are killed, as well as from land drainage. Red-tide organisms are now being grown artificially in the Service's laboratory at Galveston, thus permitting the testing of different chemical compounds as control agents. Copper sulfate is the most promising to date. Federal and State research is coordinated and citizens' groups are organized to report the detection of new outbreaks and to assist in control measures in an emergency.

- Sep. No. 386 - The 1953 Japanese King-Crab Factoryship Expedition.
 Sep. No. 387 - Chemical Changes in Fish Protein During Freezing and Storage.
 Sep. No. 388 - A Comparative Study of Fish Meals Made from Haddock Offal.

THE FOLLOWING SERVICE PUBLICATION IS AVAILABLE ONLY FROM THE SPECIFIC OFFICE MENTIONED:

Receipts of Fresh and Frozen Fishery Products at Chicago - 1953, by G. A. Albano, 45 pp., processed, October 1954. (Available free from the Market News Service, U. S. Fish and Wildlife Service, 200 N. Jefferson St., Chicago 6, Ill.) This report presents an analysis of the marketing trends for fresh and frozen fishery products and statistical tables on the receipts of fresh and frozen fish and shellfish at Chicago during 1953. Statistics on arrivals of fishery products at Chicago are presented by species and by states and provinces of origin; states and provinces by species; species by months; states and provinces by months; totals by species; and totals by states and provinces. All arrivals are tabulated by methods of transportation (truck, express, and freight). A table shows the monthly range of wholesale prices of some of the leading varieties of fresh and frozen fishery products handled on the Chicago market. In the analysis of the marketing trends for fresh and frozen fishery products at Chicago, the author discusses the sources of the receipts, methods of transportation, months of greatest receipts, receipts by species and varieties, lake trout and whitefish receipts, U. S. Great Lakes fishery production, U. S. imports of fresh and frozen fish from Canada, U. S. imports of frozen fillets, and cold-storage inventories. Also included is a table giving the names, classifications, and approximate weights of certain fishery products sold in the Chicago market.

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Alaska Fishery and Fur-Seal Industries, 1952, by Seton H. Thompson, Statistical Digest No. 33, 71 pp., illus., printed, 35 cents, 1954. Detailed reports and statistical tables concerning the operation and yield of the various fishery indus-

tries are presented, with added data on certain related matters, particularly the condition of the fishery resources. Under the section on fishery industries, the following subjects are covered: court decisions; Alaska Department of Fisheries; research; exploratory fishing investigations; administration; management; and general statistics on salmon, herring, halibut, shellfish, and miscellaneous fishery products. The second section on the Pribilof Islands fur-seal industry covers administration, fur-seal population studies, and general statistics on the fur seals taken in 1952. A statement is also included on sealing privileges accorded aborigines.

Composition of Cooked Fish Dishes, by Charles F. Lee, Circular 29, 31 pp., processed, 25 cents, 1954. This report analyzes the nutritive value of cooked fish and shellfish dishes. It indicates the proteins, carbohydrates, food energy, and other beneficial elements found in a number of popular fish dishes in the "ready-to-serve" stage. This is a departure from most previous reports which have been based on studies of raw rather than cooked fish. In the course of answering the question "Why should fish be included in your Diet?" the publication discloses that the average fish contains at least five beneficial minerals and the same number of vitamins. Although the information in this report will be helpful to the general public, it will be particularly valuable for dietitians and nutritionists concerned with large quantity food preparation. Members of the fishing industry who deal with hospitals, restaurants, schools, and other institutional groups will find the publication especially useful. Some of the information can also be used in preparing factual advertising material featuring fishery products.

Stressing the high protein content of most cooked fish dishes, the publication shows that baked, fried, and broiled steaks or fillets with sauce or stuffing head the list. Next in protein content are kabobs (except those containing tomato). Stuffed fish and fillets are next in line, followed by kabobs with tomato, au gratin dishes, some casseroles and salads (especially those containing eggs), and fish cakes and loaves in which the proportion of crumbs, potato, or rice filler is not excessive.

Dishes containing 9 to 14 percent protein, but a higher percentage of carbohydrates, are: fish cakes and certain types of loaves, sandwiches, and canapes; most hors d'oeuvres; most casserole dishes; salads without eggs (except jellied salads); and most of the special dishes such as Newbergs, a la kings, and thermidors.

Still containing protein; but generally diluted with large proportions of other elements, are: nearly all the chowders, stews, soups, and bisques; salads with a gelatin base; creoles; curries; and jambalayas containing large quantities of rice.

Gulf of Mexico--Its Origin, Waters, and Marine Life, by 55 American scientists and coordinated by Paul S. Galtsoff, Fishery Bulletin 89 (From Fishery Bulletin of the Fish and Wildlife Service, vol. 55), 615 pp., illus., printed, \$3.25, 1954. This exhaustive treatise was prepared primarily as a guide for scientific research projects, a number of which are now being conducted in the Gulf by Federal, state, and private or-

ganizations. It discusses early explorations in the Gulf and summarizes all available information on its shorelines, geology, meteorology, physics, chemistry, and communities of plants and animals ranging from the bacteria through the marine mammals.

MISCELLANEOUS PUBLICATIONS

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"Age and Length Composition of the Sardine Catch off the Pacific Coast of the United States and Mexico in 1953-54," by Frances E. Felin, John MacGregor, Anita E. Daugherty, and Daniel J. Miller, article, California Fish and Game, vol. 40, no. 4, October 1954, pp. 423-431, printed. California Department of Fish and Game, 926 J Street, Sacramento 14, California.

"Antibiotics as Aids in Fish Preservation. I. Studies on Fish Fillets and Shrimp," by Lionel Farber, article, Food Technology, vol. 8, no. 11, November 1954, pp. 503-505, printed. The Garrard Press, 119 West Park Avenue, Champaign, Ill. (Single reprints may be obtained from the author at Fisheries Research Laboratory, George Williams Hooper Foundation, University of California, San Francisco, California). This report gives the effects of the antibiotics chlorotetracycline (Aureomycin), hydroxytetracycline (Terramycin) and Neomycin, and of the mixture of fumaric acid and sodium benzoate known as "Fran-Kem" on the storage life of fish fillets and of shrimp. A definite preservative action was noted for chlorotetracycline and hydroxytetracycline in the order named after immersion of fish in a 2 p.p.m. solution; with Fran-Kem immersion in a 1,000 p.p.m. solution some effect was noted but less than with either of the former. A similar treatment with a 2 p.p.m. Neomycin solution had no effect on the keeping quality of the fish or shellfish. The effects of the various substances were followed organoleptically and chemically, using the content of volatile reducing substances (VRS) and of volatile nitrogen compounds as indicators of the condition of the fish and shellfish. The VRS method was found to be more generally reliable than the determinations of either total volatile or of trimethylamine nitrogen.

"Aureomycin in Experimental Fish Preservation. II," by D. C. Gillespie, J. W. Boyd, H. M. Bissett, and H. L. A. Tarr, article, Progress Reports of the Pacific Coast Stations, No. 100, October 1954, pp. 12-15, printed. Fisheries Research Board of Canada, Ottawa, Canada. (Part I appeared in Progress Reports of the Pacific Coast Stations, No. 96, October 1953, pp. 25-28.)

"A Comparison of Japanese and Hawaiian Specimens of the Black Skipjack, Euthynnus yaito," by H. C. Godsil, article, California Fish and Game, vol. 40, no. 4, October 1954, pp. 411-413, printed. California Department of Fish

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and Game, 926 J Street, Sacramento 14, California.

Directory of Organizations and Officials Concerned with Wildlife Resources, 52 pp., printed, 25 cents. The National Wildlife Federation, 232 Carroll St. N.W., Washington 12, D. C. This Directory is designed as a convenient reference to sources of information of wildlife (including fisheries) and as a guide to agencies and organizations that are either directly or indirectly concerned with the perpetuation and management of wildlife and fisheries resources. Public agencies of national, state, and territorial governments of the United States are listed, as well as those of neighboring nations in North and South America. Most of the nongovernment organizations within the United States having a national or statewide scope of interest are included.

"English Sole in Holmes Harbor, Puget Sound," A. T. Pruter and R. VanCleve, Contribution No. 6, 16 pp., illus., printed. (Reprinted from Fisheries Research Papers, Washington Department of Fisheries, vol. 1, no. 2, March 1954.) School of Fisheries, University of Washington, Seattle, Washington.

"Factors Controlling the Distribution of Oysters in a Neutral Estuary," by Nelson Marshall, article, Ecology, vol. 35, no. 3, July 1954, pp. 322-327, illus., printed, single copy \$2.00. Duke University Press, Box 6697, College Station, Durham, N. C.

Fishery Products in the World Food Supply, by Mogens Jul, 12 pp., printed. (Reprinted from Food Science Abstracts, vol. 25, no. 4, July 1953, pp. 373-384.) Food and Agriculture Organization of the United Nations, Rome, Italy. This article discusses the potential increase in food production and wider utilization of aquatic resources; finding new fisheries resources; conservation of existing resources; creation of new resources; improvements in capture technique; improvements in handling of fresh fish; improvements in processing; action to develop the supplies of fishery products; and international collaboration in fisheries development.

"Food Habits of Tunas and Dolphins Based Upon the Examination of Their Stomach Contents," by Inocencio A. Ronquillo, article, The Philippine Journal of Fisheries, vol. 2, no. 1, January-June 1953, pp. 71-83, illus., printed. Department of Agriculture and Natural Resources, Manila, Philippines, 1954. A report on the feeding habits of Philippine tunas caught by trolling based on the examination of their stomach contents.

Journal du Conseil, vol. XX, no. 1, 134 pp., illus., printed, single copy Kr. 12 (US\$1.74). Messrs. Andr. Fred. Høst & Søn, Bredgade, Copenhagen, Denmark, July 1954. Among the articles presented in this journal are the following: "Mesh Selection in the Roundfish Seine," by C. E. Lucas, A. Ritchie, B. B. Parrish, and J. A. Pope; "A Note on Published Trawler/Seiner Comparisons," by M. Graham, R. J. H. Beverton, A. R. Margetts, and J. A. Gulland; "The Length-Girth Relationships in Haddock and Whiting and their Application to Mesh Selection," by A. R. Margetts;

"Trials of Mesh Selection in Trawls and Seines," by Michael Graham; and "The Efficiency of the Cornish Pot and the Scottish Creel in the Capture of Lobsters and Crabs," by H. J. Thomas.

"Marine Bait-Worms--A New Maritime Industry," article, Trade News, vol. 7, no. 4, October 1954, pp. 5-6, illus., printed. Department of Fisheries, Ottawa, Canada.

Marketing (The Yearbook of Agriculture, 1954), House Document No. 280, 83rd Congress, 2d Session, 520 p., illus., printed, \$1.75. Issued by the U. S. Department of Agriculture, Washington, D. C. (For sale by Superintendent of Documents, Government Printing Office, Washington 25, D. C.) Although concerned with marketing of agricultural products, many of the articles contained in the book will be of interest to those concerned with the marketing of fishery products and byproducts since many of the marketing principles discussed or presented in the book are equally applicable to the fishing and allied industries. In the Foreword, the Secretary of Agriculture points out: "All need to work together to improve the marketing process... So, I bespeak a continuing search for the facts needed for understanding fully our economic problems, especially the problems of marketing." The purpose of the book is to give information about the dynamic business that brings American farm products to their users. The information should help many persons: the farmer, to make more money; the housewife, to buy better; the wholesaler, retailer, and all the others who handle farm products, to give better service; the administrator and student of agriculture, to get a broader view of the structure of this large sector of our economy, within which so many agricultural problems come to focus; and to any one interested in the marketing of any perishable food product. Analyses and discussions of some controversial issues are to be found in the book because marketing involves competitions, tensions, and differences of opinion. The book is organized to give first a general view of the components of the marketing system and its importance, then a description of its major parts, and finally discussions of its many problems. An Atlas of Marketing pictures the handling of some of our main agricultural products. The subjects covered are: the basis of marketing, sale off farms, central markets, food retailers, trade abroad, transportation, storage, processing, grades and standards, facts for marketing, the consumer, industry, cooperatives, fair dealing, ownership, prices and pricing, and efficiency.

--J. Pileggi

Massachusetts Fishery Industries Today (A Report to the Department of Commerce of the Commonwealth of Massachusetts), by D. P. Norman and W. W. A. Johnson, 121 pp., processed, Massachusetts Department of Commerce, Boston, Mass., March 1954. The first half of this report brings together in some detail a considerable amount of information already available from other sources in the fields of fishery biology, technology, and economics. Such topics as the ocean's resources, commercially-important fish,

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fishing techniques, and fish preservation, chemistry, bacteriology, and spoilage are covered. The authors have abstracted and reproduced this material in an interesting manner, which should be especially useful for the layman. The second half of the report contains some new material and covers such items as insurance, cost and earnings, financing fishing boats, and future technological improvements. This part of the report makes valuable suggestions which might lead to improved conditions in the fishing industry. However, one important problem, namely, foreign competition is conspicuously absent from the report.

--W. H. Stolting

"New and Little Known Fishes of the Eastern Pacific," by Arthur D. Welander and Dayton L. Alverson, Contribution No. 5, 8 pp., illus., printed. (Reprinted from Fisheries Research Papers, Washington Department of Fisheries, vol. 1, no. 2, March 1954.) School of Fisheries, University of Washington, Seattle, Washington.

Oilseeds, Fats and Oils, and Their Products, 1909-53, by Antoine Banna, Statistical Bulletin No. 147, 234 pp., processed, \$1.25. U. S. Department of Agriculture, Agricultural Marketing Service, Washington, D. C. (for sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.), June 1954. This bulletin is the first comprehensive compilation of statistics dealing with fats and oils and related products to be published by the Department of Agriculture since 1937. Much of the data on which these series are based has been compiled from reports of the Bureau of the Census and other agencies, but extensive modifications have been made by the Agricultural Marketing Service. Sources of data and the way in which these data have been processed are discussed in detail in the text. The bulletin contains numerous tables covering the national and world production, marketing, supply and disposition, and prices of fats and oils (including fish oils, fish-liver oils, and marine-animal oils), oilseeds, and their products for the years from 1909 to 1953. The introduction explains the methods of obtaining and use of the data, and gives some background of the fats and oils industries.

Principles of General Ecology, by Angus M. Woodbury, 511 pp., illus, printed, \$6. The Blackiston Company, Inc., New York, Toronto, 1954. This book is one of several appearing in recent years on general ecology. While broad in scope, it is concerned primarily with the terrestrial ecology of western United States, particularly Utah. Examples illustrative of ecological principles are drawn from a variety of animals, both invertebrate and vertebrate; but oceanographers, ichthyologists, and limnologists may be disappointed that not more attention was given to the ocean and fresh-water environments. Fresh-water lakes, for example (page 78), are regarded as wide places in streams where storage occurs, the stream current is slowed, and silt is deposited; and streams are not shown in the diagram (page 48) illustrating the important types of habitat in North America.

The book is divided into three parts--a 48-page introduction defining ecology stating various approaches to the subject, presenting a historical perspective, and giving background data on organisms and environment; a 129-page section on the physical environment with chapters devoted to the Solid Earth--Soils, The Liquid Cover of the Earth--Water, Air and Its Constituents, Radiant Energy, Gravity and Periodicities, Climate, and Adaptations That Meet the Physical Environment; and a 269-page section devoted to Biotic Interrelationships.

This third part deals with biotic communities and their development, community analysis, conditions of existence, food relations, reproduction and species persistence, population problems, dispersal and evaluation, biotic rhythms and migrations, biotic adaptations, historical distribution, geographic distribution, consortism, including symbiosis, commensalism, parasitism, predation, etc.; social relations, societies, and ecology as related to human affairs.

In his preface the author indicates that the book can be of cultural value for everyone and can serve as a foundation for specialists in the fields of plant ecology, animal ecology, geography, limnology, oceanography, forestry, agriculture, wildlife management, conservation, and others. This reviewer was impressed with the amount of factual material relating to these various subjects which had been condensed into this relatively small volume. While no substitute for Durward Allen's recent book "Our Wildlife Legacy," or Aldo Leopold's "Game Management," as far as the wildlife conservationist or game manager is concerned, the book does provide excellent source material for these and other specialists. It would be valuable for example, to the Ph. D. candidate in reviewing for his general doctoral examination or to the student or research worker investigating social relations among animals or other topics treated by Dr. Woodbury. Detracting somewhat from its value as a source for references, however, is the omission in the Bibliography of numerous author references made in the text.

That Dr. Woodbury devoted much time and effort to assembling and compiling data and writing his book is obvious. Here, in condensed form, one finds an amazing array of facts and figures digested from numerous articles or books on such subjects as geology, climatology, soils, geography, paleontology, biochemistry, evolution, oceanography, botany, zoology, entomology, and herpetology. All too frequently, however, when confronted with the numerous definitions of ecological terms and the wealth of data on physical and biological environmental factors, the reader is left wondering how these factors operate or how they affect a given life form. Thus, although the author states in his introduction (page 7) that he uses the eco-system approach, "in which habitat, plants, and animals are all considered as one interacting unit, the materials and energies of one passing in and out of the others," he does not fully succeed in explaining these complex interactions.

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Numerous sketches and diagrams on the hydrologic, edaphic, nitrogen, carbon, and oxygen cycles, the food pyramid, and the like are helpful in explaining some of the relations. Extensive use is made of "tree-of-life" charts showing for example, modes of digestion, respiration, excretion, coordination, and reproduction in the major plant and animal groups. These latter charts provide useful information but their connection with why some fish live in the ocean and others in fresh water or why some plants live in the desert and others in a rain forest is not apparent.

Although the book is full of valuable information and one reads, perhaps for the first time, that one animal lives here and does this and another animal lives there and does that, the ecological basis for such animal distribution and behavior is not, and, very probably, cannot yet be explained. With the exception of the last chapter, "Ecology and Human Affairs," conveying a conservation message which should be of interest to all Americans, little is said about the application of ecological knowledge for the improvement of human society. In this chapter, however, the author stresses the importance of ecology in human affairs, pleads for the conservation of natural resources, and considers the problem of increasing human populations as related to resources, living standards, and wars.

Woodbury's "Principles of General Ecology" is a worthwhile addition to the growing lists of texts on this subject. The book is remarkably free of typographical errors. It is well bound, printed on good quality paper, and contains an excellent assortment of photographs. It should serve as a convenient reference to students and professionals alike.

--D. L. Leedy

"Proximate Chemical Composition of Various Species of Philippine Market Fishes," by Jose I. Sulit, Olympia B. Navarro, Regina C. San Juan, and Elisa B. Caldito, article, The Philippine Journal of Fisheries, vol. 2, no. 1, January-June 1953, pp. 109-123, illus., printed. Department of Agriculture and Natural Resources, Manila, Philippines.

"Refrigerated Sea Water Equipment for Fish Storage on Salmon Trollers," by J. S. M. Harrison and S. W. Roach, article, Progress Reports of the Pacific Coast Stations, No. 100, October 1954, pp. 3-5, illus., printed. Fisheries Research Board of Canada, Ottawa, Canada.

The Sea and World Food Supplies, by D. B. Finn, 10 pp., printed. (Reprinted from Nutrition Abstracts and Reviews, vol. 24, 1954, pp. 487-496.) Food and Agriculture Organization of the United Nations, Rome, Italy. Discusses the state of world food supplies and considers what contribution aquatic resources are making, and might make, to the solution of the food problem.

Streams, Lakes, Ponds, by Robert E. Coker, 345 p., illus., printed, \$6. The University of North Carolina Press, Chapel Hill, N. C., 1954. If

you are interested in inland waters and the life in them, you will want to read this book. It gives a better understanding of what goes on in the generally unseen realms beneath the "glimmering film topping the still water, the rippling surface of the brook, or the silent winding face of the broad river." The author in his introduction very aptly explains the purpose of the book as follows: "There are many good books on life in fresh water. The present volume intends no competition with standard works. Rather, it may, by its numerous references, lead the possibly interested reader to refer to more technical volumes or articles that he might not otherwise consult." Besides readers with specialized interests, the author has kept in mind the general reader. Although the story of life in water is complex, without sacrificing accuracy the author has portrayed it in plain terms and in condensed and readable form. Water and all its properties, the effects of light and heat, the chemical and biological relations of gases, stratification, and turbidity are described in the first part of the book. Running water and the problem of pollution are covered in the second portion. The third section deals with the life to be found in still water--the plants, lower animals, jointed-leg animals, and vertebrates of the lake; fish ponds and their residents; and pond productivity. Drawings of many plants and animals and photographs of the various types of water and life are included. The book also has a fairly comprehensive index. Besides the lay reader, the contents of this book will interest the student, the conservationist, the fish culturist, the sanitarian, the scientific agriculturist, the engineer, and the industrialist. Basic facts and principles concerning waters and the life in them are adequately covered in this book.

--J. Pileggi

Technical Report of Fishing Boat, No. 5, 198 pp., illus., printed in Japanese, with brief English abstracts. Fishing Boat Laboratory, Production Division, Fisheries Agency, Ministry of Agriculture and Forestry, 2-1 Kasumigaseki, Chiyodaku, Tokyo, Japan, August 1954. Contains reports on various studies in progress at the laboratory. An outline of the business of the fishing boat laboratory lists the following basic experiments and investigations under way since 1948: improvement of hull; improvement of engine; and improvements of nautical surveying instruments. Practical experiments and investigations include study on propulsion efficiency; study on insulation; improvement of small fishing boats; study on light and high-speed engine; improvement of performance of engine under fishing operations; study on nautical surveying instrument; study on remote control sea-water thermometer; study on an echo sounder and its installation; study on apparatus for netting boat; study on lightening of wooden fishing boat; study on a horizontal fish finder of rotating system; and study on betterment of apparatus for oceanographic observation.

Experiments reported on in some detail in this report, with very brief abstracts in English, are as follows: Tank Test Results of Fish Car-

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rier; Deflection of Japanese Type Wooden Fishing Boat; Rudder Torque Measurements of the Trawler "Shin-yo-maru;" Wearing Cylinder of Fishing Boat Engine; Study on Magnetic Compass Bowl; Automatic Net-Height Meter and Automatic Ground Rope Indicator for Two-Boat Trawler and Results of Experiments for These Apparatuses; Mounting of Transducer of the Echo-Sounder; Reliability of Record of Shape for Sloped Sea Bottom Obtained by Ultrasonic Echo-Sounder; Influence of D. S. L. on the Characteristics of Ultrasonic Wave Propagation; and Study on Detection of the Japanese Tang Field by an Ultrasonic Echo-Sounder. An appendix lists contents of reports published in the past, Nos. 1-4.

--D. E. Powell

(Texas) Annual Report of the Game and Fish Commission, State of Texas (For the Fiscal Year 1952-53), 46 pp., printed. Game and Fish Commission, Austin, Texas. This report summarizes the activities of the Commission for the fiscal year ending August 31, 1953. Among the subjects discussed are the activities of the Inland Fisheries Division, which is divided into two Branches--research and management of inland waters and fresh-water fish-hatchery operations. The work of the Marine Laboratory includes discussions of the Upper Laguna Madre survey; Baffin Bay survey; oyster investigations in Galveston Bay; industrial waste survey; and cooperation with other institutions and organizations. A report on pollution studies is included, together with statistical data on the production of fishery products.

"Tuna in the Gulf?" by Gordon Gunter, article, Texas Game and Fish, vol. XII, no. 12, November 1954, pp. 9, 22, 28, printed. Texas Game and Fish Commission, Walton Bldg., Austin, Texas.

Washington Department of Fisheries, 63rd Annual Report, 100 pp., illus., printed. Washington State Department of Fisheries, Seattle, Wash., 1954. Discusses the activities and objectives of the Department of Fisheries, with particular reference to the rehabilitation of the salmon fisheries--a program based on scientific research. The Department's research and management program for the State's marine food fish and shellfish resources and artificial propagation activities are discussed in considerable detail. The chapter on cooperative fisheries programs contains extracts from the 1953 reports of two important agencies in which the Washington Department of Fisheries has a partnership role, the International Pacific Fisheries Commission and tri-state Pacific Marine Fisheries Commission, together with a brief prologue on the work of the former. The report also contains information on the hatchery research and management program, the Department's enforcement program, and a summary of 1953 catch statistics.

FOOD AND AGRICULTURE ORGANIZATION

The Food and Agriculture Organization has published reports describing that Agency's activities under the Expanded Technical Assistance Program for developing the fisheries of many countries.

These reports have not been published on a sales basis, but have been processed only for limited distribution to governments, libraries, and universities. Food and Agriculture Organization, Viale delle Terme di Caracalla, Rome, Italy.

Report to the Government of Iraq on the Development of Inland Fisheries, FAO Report No. 270, 38 pp., map and chart, processed, April 1954. This is a report based on a survey and research work by an FAO inland fisheries specialist. It includes a description of the inland waters of Iraq and the fishes contained in them, the craft and gear used in fishing, the seasons of operation, the culture of fishes in these waters, and conclusions and recommendations.

Report to the Government of Chile on Increasing Fish Consumption, FAO Report No. 271, 53 pp., processed, April 1954. Discusses the production and consumption of fishery products in Chile, the development of technical assistance, governmental measures in support of the work, and recommendations for increasing the fish consumption in Chile. Appendices include questionnaires used in the work.

Report to the Government of Turkey on Fish Handling and Refrigeration, FAO Report No. 282, 42 pp., map and chart, illus., processed, June 1954. Covered by the report are: the construction program for fishery facilities, the fish supplies, plant utilization, operational procedures, equipment requirements and technical improvements, suggestions regarding design of future refrigerated constructions, training of refrigeration plant personnel, quality control and inspection service, distribution and marketing, and conclusions.

Report to the Government of Yugoslavia on the Processing of Fish, FAO Report No. 283, 21 pp., and 4 plates of photographs, processed, June 1954. Describes the objective of the assignment, problems encountered, utilization of papalina (sprat), smoke curing of fish, canning of miscellaneous products, miscellaneous processing methods, and general recommendations.

Report to the Government of Ceylon on the Mechanization of Fishing Operations, FAO Report Report No. 284, 24 pp., map and 9 plates of photographs, processed, July 1954. Discusses the problems and objectives of the inshore, beach-seine, and lagoon fisheries; a summary of the work accomplished; and conclusions and recommendations for the various areas. Photos show the various types of vessels, gear, and artificial baits used in Ceylonese fisheries.

Report to the Government of Turkey on the Establishment of a Fish Meal and Oil Industry, FAO Report No. 285, 42 pp., maps and diagrams, processed, September 1954. Objective of the assignment, the possibilities of establishing a fish-meal industry, the selection of location for the fish plant, a description of the Trabzon fish meal and oil plant project, and general observations and acknowledgements are included in the report.

THESE PUBLICATIONS ARE NOT AVAILABLE FROM THE FISH AND WILDLIFE SERVICE, BUT USUALLY MAY BE OBTAINED FROM THE ORGANIZATIONS ISSUING THEM.

Report to the Government of Liberia on the Handling, Processing and Marketing of Fish, FAO Report No. 286, 11 pp., and 2 plates of photographs, processed, July 1954. Describes the handling and fish-curing problems, distribution and marketing, and developments outside Monrovia. Recommendations are included.

Report to the Government of Italy as the Administering Authority for the Trust Territory of Somalia on the Exploratory Fishery Survey in Somalia - 1952/53, FAO Report No. 288, 83 pp., maps, charts, illustrations, and 1 plate of photographs, processed, August 1954. The objectives of the assignment and a description of the Somalia fisheries are presented. Also included are the fishing operations during the assignment; comparative data and statistics from the canneries; the nomenclature, feeding habits, methods of capture, and utilization of commercial fishes of Somalia; hydrological data; plankton; and recommendations.

Report on the International Training Center in Fishery Biology, Istanbul, Turkey, FAO Report No. 298, 9 pp., processed, September 1954. The report discusses briefly the courses and participants of the Center held at the Hydrobiological Institute of Istanbul University from September 21 to October 27, 1953.

Report to the Government of Yugoslavia on Investigations Concerning the Occurrence of Fish Diseases in Yugoslav Pond Farms, FAO Report No. 308, 17 pp., map, illustrations, and 1 plate of photographs, processed, August 1954. Reports on the results of a three-months mission to investigate the diseases of fish in artificial ponds of Yugoslavia.

TRADE LISTS

The Office of Intelligence and Services, Bureau of Foreign Commerce, U. S. Department of Commerce, Washington 25, D. C., has published the following mimeographed trade lists. Copies of these lists may be obtained by firms in the United States from that office or from Department of Commerce field offices at \$1.00 per list.

Canneries - France, 19 pp., (September 1954). Lists the names of canneries and addresses, size of firm, and type of products handled; also the U. S. representatives, if any. The report states that the French canning industry employs 42,000 people in 1,000 plants, most of which are small--22,000 in fish canning. Production is now at prewar level, with fish canning averaging 50,000 metric tons yearly. The canning industry is expanding in France and yearly output is expected to increase gradually with most of the production being absorbed by the domes-

tic market. Efforts to expand the export sale of better grade canned foods and fish, including exports to the dollar area, are going forward. High prices have been an impediment to the growth of exports. Consequently, an export association, the Groupement National d'Exportation de Conserves Agricoles, has been organized to develop production of lower cost products and to streamline export procedures and guarantee quality to foreign buyers. A yearly import-quota has been established for Portuguese sardines. Crabs from the Soviet Union are imported in variable amounts under a bilateral agreement. Small shipments of herring are being made from Norway and Germany and salmon is imported from Canada. Import licenses must be obtained from the French Exchange Control Office for imports of canned goods and are therefore limited by dollar availabilities.

Oils (Animal, Fish, and Vegetable) - Importers, Dealers, Refiners, Producers and Exporters - Sweden, 6 pp., (October 1954). Lists the names and addresses, size of firm, and type of business of each firm. The report states that only small quantities of fish oil are produced. Swedish imports consist chiefly of whale oil and other animal oil. Norway supplied practically all whale oil imported.

Importers in Jordan - 15 pp., (Nov. 12, 1954). Lists the names and addresses, size of firm, and type of product imported. The report states: "The majority of the importers in Amman deal in a wide variety of goods and products rather than specialize in a particular or specific commodity. Also, many of the business firms serve not only as importers and wholesalers, but also as retailers, depending upon the requirements of the customer."

Oils (Animal, Fish and Vegetable) - Producers, Refiners and Exporters - Argentina, 11 pp. (November 1954). Contains the names and addresses, size of firm, and type of product handled by each firm. The report states that the Argentine oil industry, which employs about 14,000 workers, normally produces most types of vegetable, animal, and fish oils, usually covering the needs of the local market for these products, although some medicinal oils and occasional supplies of edible oils are imported to make up for eventual declinations of local production. All raw materials utilized in the industry are available in the country. Estimated production during 1953 included 11,000 metric tons of marine oil.

