



FISH AND WILDLIFE SERVICE PUBLICATIONS

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- CFS - CURRENT FISHERY STATISTICS OF THE UNITED STATES AND ALASKA.
 SSR.- FISH. - SPECIAL SCIENTIFIC REPORTS - FISHERIES (LIMITED DISTRIBUTION).
 SEP.- SEPARATES (REPRINTS) FROM COMMERCIAL FISHERIES REVIEW.

- | Number | Title |
|-------------------|---|
| CFS-1437 | - South Atlantic Fisheries, 1955 Annual Summary, 10 pp. |
| CFS-1440 | - New Jersey Landings, September 1956, 4 pp. |
| CFS-1441 | - Florida Landings, August 1956, 6 pp. |
| CFS-1444 | - Ohio Landings, October 1956, 2 pp. |
| CFS-1445 | - Fish Meal and Oil, October 1956, 2 pp. |
| CFS-1446 | - Shrimp Landings, September 1956, 4 pp. |
| CFS-1447 | - North Carolina Landings, October 1956, 2 pp. |
| CFS-1448 | - Alabama Landings, September 1956, 2 pp. |
| CFS-1449 | - Florida Landings, September 1956, 6 pp. |
| CFS-1450 | - Georgia Landings, October 1956, 2 pp. |
| CFS-1452 | - Texas Landings, October 1956, 3 pp. |
| CFS-1453 | - New Jersey Landings, October 1956, 4 pp. |
| CFS-1454 | - Rhode Island Landings, July 1956, 3 pp. |
| CFS-1455 | - California Landings, August 1956, 4 pp. |
| CFS-1456 | - New York Landings, October 1956, 4 pp. |
| SSR-Fish. No. 169 | - Average Year's Fishing Condition of Tuna Longline Fisheries, 1952 Edition, edited by Nankai Regional Fisheries Research Laboratory and translated by W. G. Van Campen, 133 pp., illus., processed, January 1956. Observations of the albacore fishing conditions in the North Pacific area are presented. |
| SSR-Fish. No. 173 | - Central North Pacific Albacore Surveys, January 1954-February 1955, by Richard S. Shomura and Tamio Otsu, 34 pp., illus., processed, June 1956. Contains fishing results from 7 exploratory cruises in the North Pacific between January 1954 and February 1955, supplemented by Japanese commercial long-line catch data for the same period. Also included are discussions of the vertical distribution, sex composition, and tagging of albacore as well as data on the miscellaneous species of fish taken. |
| SSR-Fish. No. 178 | - Physical Oceanographic, Biological, and Chemical Data - South Atlantic |

Coast of the United States, M/V Theodore N. Gill Cruise 1, by William W. Anderson, Jack W. Gehringer, and Edward Cohen, 160 pp., illus., processed, August 1956.

SSR-Fish. No. 182 - Japanese Albacore and Bigeye Tuna Size Composition Studies, translated from the Japanese by W. G. Van Campen, 48 pp., illus., processed, June 1956.

SSR-Fish. No. 184 - Longline Fishing for Tuna in the Central Equatorial Pacific, 1954, by Edwin S. Iversen and Howard O. Yoshida, 33 pp., illus., processed, August 1956.

SSR-Fish. No. 185 - Blueback Salmon (*Oncorhynchus nerka*) Age and Length at Seaward Migration Past Bonneville Dam, by Raymond E. Anas and Joseph R. Gauley, 46 pp., processed, October 1956.

SSR-Fish. No. 190 - Saury Distribution and Abundance, Pacific Coast, 1950-55, by Elbert H. Ahlstrom and Harold D. Casey, 69 pp., processed, November 1956.

SSR-Fish. No. 191 - Shad Fishery of the Ogeechee River, Georgia, in 1954, by James E. Sykes, 11 pp., processed, November 1956.

Sep. No. 460 - Preliminary Results of Deep-Water Exploration for Shrimp in the Gulf of Mexico by the M/V Oregon (1950-1956).

Sep. No. 461 - Iron Sulfide Discoloration of Tuna Cans, No. 4 - Effect of Retorting and Cooling Canned Fish.

Sep. No. 462 - Pilot-Plant Fish-Meal Dryer.

Sep. No. 463 - Research in Service Laboratories (December 1956): Contains these articles---
 "Variation in Proximate Composition of Right and Left Fillets of Rockfish (*Sebastes pinniger*) and Dover Sole (*Microstomus pacificus*),"
 "Fish Composition Studies," "Antibiotics for Fishery Products Preservation," "Tech. Note No. 35 - Improved Workmen's Stand for Processing Plants."

Research and Activities Under the Saltonstall-Kennedy Act, Fiscal Year 1956, 194 pp., illus., processed. A generously illustrated annual report of the Secretary of Interior to Congress. Briefly discusses the Act and its history, the American Fisheries Advisory Committee, and programs and allocations for 1956/57. Gives a detailed account of activities and progress in fishery biological studies of: salmon and related species; Pacific sardine;

ocean research; North Atlantic trawl fishes; Atlantic herring; Gulf of Mexico fishes; striped bass investigations; menhaden research; culture of commercial mollusks; control of oyster predators and drills; Gulf of Mexico oyster drills; albacore research; and commercial propagation of channel catfish. Also lists contracts completed as of June 30, 1956, and gives abstracts and detailed reports on commercial fishery studies of: exploratory fishing and gear research (includes North Atlantic, South Atlantic, and Gulf of Mexico explorations; Maine sardine explorations; and gear development and research) and fishery technological studies (includes Middle Atlantic and Gulf research; development of voluntary standards; chemical index for nutritive value of fish meal, and new uses for and new products from fish meal; improvement in quality of skipjack tuna; and survey of Great Lakes and Mississippi Valley fresh-water fishery). Brief reports are included on commercial fishery economic studies and statistics, and fishery education, market development, and Market News Service. Thirteen appendixes list acts, minutes of meetings, and outlines referred to throughout the report.

THE FOLLOWING SERVICE PUBLICATIONS ARE AVAILABLE ONLY FROM THE SPECIFIC OFFICE MENTIONED.

Landings and Receipts of Fishery Products at Seattle, 1955, and Landings and Receipts of Fishery Products at Astoria, Oregon, 1955, by Charles M. Reardon, 37 pp., processed, 1956. (Available free from Market News Service, U.S. Fish and Wildlife Service, 421 Bell St. Terminal, Seattle 1, Wash.) The Pacific Northwest fisheries trends and their effect upon Seattle fishery products receipts for 1955 are discussed in the first part of this report. This section covers total receipts of fishery products at Seattle; sources of supply of frozen and fresh fishery products; trends in Seattle receipts of salmon, halibut, tuna, otter-trawl and long-line landings, shellfish, livers, liver oils, herring meal, and other miscellaneous fishery products. The tables present fishery landings and wholesale receipts (including approximate values) at Seattle for 1955 by species, source of origin, and by months; monthly index of receipts of certain fishery products at Seattle; carload shipments of fishery products from Seattle by months, and names, classifications, and approximate standards for fresh and frozen fishery products sold on the Seattle market. The Astoria Section includes a discussion of fisheries trends and fishery products receipts at Astoria, Ore., for 1955. This section covers the Columbia River gill-net fishery, troll and otter-trawl fisheries, and landings and wholesale receipts of fishery products at Astoria during 1955.

Boston Fishery Products Monthly Summary, November 1956, 15 pp.; Boston Fishery Products Monthly Summary, December 1956, 15 pp. (Market News Service, U.S. Fish and Wildlife Service, 10 Commonwealth Pier, Boston 10, Mass.) Landings and ex-vessel prices by species for fares landed at the Boston Fish Pier and sold through the New England Fish Exchange; and Boston frozen fishery products prices to primary wholesalers; for the months indicated.

California Fishery Products Monthly Summary, October 1956, 10 pp.; California Fishery Products Monthly Summary, November 1956, 10 pp. (Market News Service, U.S. Fish and Wildlife Service, Post Office Bldg., San Pedro, Calif.) California cannery receipts of raw tuna and tunalike fish, herring, mackerel, anchovies, and squid; pack of canned tuna, mackerel, herring, anchovies, and squid; market fish receipts at San Pedro, Santa Monica, San Diego, and Eureka areas; California imports; canned fish and frozen shrimp prices; for the months indicated.

Gulf Monthly Landings, Production, and Shipments of Fishery Products, November 1956, 5 pp. (Market News Service, U.S. Fish and Wildlife Service, 609-611 Federal Bldg., New Orleans 12, La.) Gulf States shrimp, oyster, finfish, and blue crab landings; crab meat production; LCL express shipments from New Orleans; and wholesale prices of fish and shellfish on the New Orleans French Market; for the month indicated.

Monthly Summary of Fishery Products Production in Selected Areas of Virginia, North Carolina, and Maryland, November 1956, 4 pp. (Market News Service, U.S. Fish and Wildlife Service, 18 S. King St., Hampton, Va.) Fishery production for the Virginia areas of Hampton Roads, Lower Northern Neck, and Eastern Shore; the Maryland areas of Crisfield, Ocean City, and Cambridge; and the North Carolina areas of Atlantic, Beaufort, and Morehead City; together with cumulative and comparative data; for the month indicated.

(Seattle) Monthly Summary - Fishery Products, November 1956, 6 pp.; (Seattle) Monthly Summary - Fishery Products, December 1956, 6 pp. (Market News Service, U.S. Fish and Wildlife Service, 421 Bell St. Terminal, Seattle, 1, Wash.) Includes landings and local receipts, with ex-vessel and wholesale prices in some instances, as reported by Seattle and Astoria (Oregon) wholesale dealers; also Northwest Pacific halibut landings; for months indicated.

MISCELLANEOUS PUBLICATIONS

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

ARCTIC:

The Plankton of the Beaufort and Chukchi Sea Areas of the Arctic and its Relation to the Hydrography, by Martin W. Johnson, Technical Paper no. 1, 32 pp., illus., printed, 50 Canadian cents. Arctic Institute of North America, 3485 University St., Montreal 2, Que., Canada, July 1956.

ALMANAC:

The American Ephemeris and Nautical Almanac for the Year 1958, 593 pp., printed, \$4. Nautical Almanac Office, U.S. Naval Observatory, Washington, D.C. (For sale by Superintendent of Documents, Government Printing Office, Washington 25, D.C.)

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BARBADOS:

Memorandum on the Barbados Fishing Industry for Consideration by the Marketing Committee, 29 pp., printed. Department of Science and Agriculture, Barbados, B.W.I., 1954.

CANADA:

Fisheries Statistics of Canada, 1954 (British Columbia), 14 pp., illus., printed in French and English, 25 Canadian cents. Department of Trade and Commerce, Dominion Bureau of Statistics, Ottawa, Canada. Contains tables giving the quantity and value of fishery products landed in British Columbia in 1951-54, by species and by fisheries districts; quantity and value of manufactured fishery products for 1953-54; capital equipment in the primary fisheries operations; and the number of fishermen engaged in the primary fisheries operations.

Fisheries Statistics of Canada - Newfoundland, 1954, 4 pp., illus., printed in French and English. Dominion Bureau of Statistics, Industry and Merchandising Division, Fisheries Section, Ottawa, Canada, 1956. Presents statistical data on the Newfoundland fishery. Tables show quantity and value of the principal species; capital equipment in the primary fishery operations; and number of persons engaged in the fisheries.

Fisheries Statistics of Canada, 1954 (Prince Edward Island), 22 pp., illus., printed in French and English, 25 Canadian cents. Department of Trade and Commerce, Dominion Bureau of Statistics, Ottawa, Canada. Contains tables giving the quantity and value of fishery products landed in Prince Edward Island in 1954-54, by species and by fisheries districts; quantity and value of manufactured fishery products for 1953-54; capital equipment in the primary fisheries operations; and the number of fishermen engaged in the primary fishery operations.

Progress Reports of the Atlantic Coast Stations, Atlantic Progress Reports no. 65, 26 pp., illus., printed in French and English. Fisheries Research Board of Canada, Ottawa, Canada, October 1956. Contains the following articles: "Oyster Mortalities, Old and New, in the Maritimes," by R. R. Logie; "Effect of Freezing on Coliform Bacteria and Method of Detection in Frozen Fish Fillets and Blocks," by H. P. Dussault; "Difficulties in Grading Smelt," by R. A. McKenzie; "The Bile Acids of Cod Bile," by L. C. Dugal and A. Laframboise; and "Acid Encilage from Cod and Haddock Offal," by H. C. Freeman and P. L. Hoogland.

COD:

Samples of Cod from the Convention Area 1952-55, Reported to the Commission, Length Distribution, by Erik M. Poulsen, Serial no. 426, 19 pp., processed. International Commission for the Northwest Atlantic Fisheries, Forest Bldg., Carleton St., Halifax, N. S., Canada, November 1956.

COOKERY:

Some Oyster Recipes, by Helen Evans Brown, 28 pp., illus., printed. Ampersand Press, Pasadena, Calif., 1951.

EELS:

"The Eel Fisheries of Virginia," by James Wharton, article, The Commonwealth, vol. XXIII, no. 11, November 1956, pp. 20-21, illus., printed, 25 cents. Virginia State Chamber of Commerce, 111 N. Fifth St., Richmond 19, Va. Briefly discussed are the apathy to Virginia eel in Virginia; methods of eel fishing; some reasons for the lack of eel on American menus; history of eel-eating; some misconceptions about eels; and suggestions for cooking eels.

ELECTRO-FISHING:

"Catches of Fish in New Brunswick Streams by Direct Current Electro-Fishing," by H. Godfrey, article, The Canadian Fish Culturist, issue nineteen, November 1956, pp. 1-8, printed. Department of Fisheries, Ottawa, Canada. Discusses investigations made with direct current electrical fishing gear; how fishing was carried out; and what fish were captured. Included are descriptions of tables that show differences in behaviour within the electrical field and in catchability of the more abundant species such as eels, salmon fry, "black-nosed" dace, sculpin, burbot, and others.

FISHERIES MANAGEMENT:

Concerning the Biological Basis of the Rate of Exploitation, and Means of Managing the Abundance of Fish Stocks, by G. V. Nikolsky, 16 pp., processed. (Preliminary translation by W. E. Ricker from Ocherki po Obshchim Voprosam Ikhtiologii (Essays on General Problems of Ichthyology), 1953, pp. 306-318). Fisheries Research Board of Canada, Biological Station, Nanaimo, B.C., Canada.

FISH SAUCES AND PASTES:

"Fish Sauces and Pastes Are Palatable and Nourishing," by H. S. McKee, article, SPC Quarterly Bulletin, vol. 6, no. 4, October 1956, pp. 16-17, illus., printed. South Pacific Commission, Box 5254, G. P. O., Sydney, Australia. Describes the manufacture of fish sauces and pastes utilizing supplies of fish that would otherwise be wasted. Fish sauces and pastes offer a simple way of reinforcing protein-deficient diets such as are often found in the South Pacific.

FISHWAYS AND FISH PROTECTION DEVICES:

Fish and Wildlife Appendix C of Report to the Water Project Authority of the State of California on Feasibility of Construction by the State of Barriers in the San Francisco Bay System, 59 pp., illus., printed. Department of Public Works, Division of Water Resources, P. O. Box 1079, Sacramento, Calif., June 1955. Discusses fish species that would be affected by a salinity barrier, probable effect of such a barrier on fisheries and wildlife together with problems of individual species, an economic evaluation of the fisheries and wildlife resources, and fishways and fish protection devices.

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FOOD AND AGRICULTURE ORGANIZATION:

Yearbook of Fishery Statistics (Annuaire Statistique des Pêches, Anuario Estadístico de Pesca)--Production and Fishing Craft (Production et Bateaux de Pêche, Producción y Embarcaciones de Pesca), 1954-55, vol. 5, 390 pp., illus., processed, US\$4. Food and Agriculture Organization of the United Nations, Rome, Italy, 1956. (Sold in the United States by Columbia University Press, International Documents Service, 2960 Broadway, New York 27, N.Y.) This latest edition of the FAO Yearbook includes statistics from more than 150 countries and territories, given in 72 tables and, for the first time, important summary data are shown in diagrammatic form. Detailed tables are given for 73 selected countries which land about 75 percent of the world catch. Data available from USSR are given, broken down by species and administrative units. If the Soviet Union is added to the 73 selected countries, the details cover about 84 percent of the world catch. The Yearbook is arranged in eight sections, A to H. The first four (A, B, C, and D) give details of catch and landings. Section E gives disposition of the catch and F shows production of preserved and processed commodities. Section G deals with fishing craft and section H with the whale catch. Notes and glossaries of English, French, and scientific names of fish provide interesting and valuable background and explanatory information. The Yearbook has been enlarged and contains more detailed information than was found in previous issues. The text throughout is printed in English and French, with the Introduction, Notes, and Section titles also given in Spanish. There are five new tables of statistics in this edition. The first, A-5, shows the world catch and landings by countries arranged by regions, thus providing comparable figures for the regions. B-2, which gives catch and landings in quantities by groups of species and by countries, is also a new table. (The continental totals have been summarized in table B-1.) F-1, a summary of production of preserved and processed commodities in selected countries, is another new table, and so are H-1 and 2, which provide statistics of the catch of whales by whaling areas and by countries and whaling areas. As the foreword states, the inclusion of more information "has been made possible partly by improvements in the basic data obtained, including previously unavailable official or semi-official figures for some countries, and partly by a more extended use of estimates in the calculation of totals."

GEAR:

"Mechanical Shellfish Digger Developed," by L. M. Dickie and J. S. McPhail, article, World Fishing, vol. 5, no. 11, November 1956, pp. 49-51, illus., printed. John Trundell Ltd., Temple Avenue, London, E.C.4, England. Describes the operation and trials of the mechanical shellfish digger and the prospects of using this method of gathering clams in Canada. At present it is illegal to use any but hand-tool methods for digging soft-shell clams in the Maritime Provinces and Quebec.

"The Newfoundland Cod Traps," by Mark Ronayne, article, Trade News, vol. 9, no. 4,

October 1956, pp. 3-7, illus., printed. Director of Information and Educational Service, Department of Fisheries, Ottawa, Canada. Describes in detail the evolution of the cod trap from its invention 91 years ago to its present day rating as one of the most efficient fishing devices. The author discusses the history of cod traps and cod fishing; the basic structure of the cod trap; sizes and uses of cod traps; the briefness of the cod trapping season; advantages in using the trap skiff; and others.

A New Mid-Water Trawl for Herring, by W. E. Barraclough and W. W. Johnson, Bulletin no. 104, 25 pp., illus., printed. Fisheries Research Board of Canada, Publications Office, Ottawa, Canada, 1956.

GENERAL:

"The Choice and Solution of Mathematical Models for Predicting and Maximizing the Yield of a Fishery," by Kenneth E. F. Watt, article, Journal of the Fisheries Research Board of Canada, vol. 13, no. 5, October 1956, pp. 613-645, printed. Queen's Printer, Hull, Que., Canada. The great expense of modern fisheries research programs necessitates, prior to data collection, careful consideration of the mathematical model to be used in analysis. The simplest type of model requires little information, but has poor predictive reliability. Progressively more complex models have higher information output, in the form of predictive reliability and insight into dynamics of the exploited population, but require higher information input, not only as amount of data, but array of types of data. The general form of the most complex type of model is derived by consideration of available information on the dynamics of fish populations. The specific form of the component terms and the values of the parameters must be derived in each instance through a combination of deduction and joint regression analysis. To solve the models, catch-effort data must be weighted to avoid gross errors, all readable scales must be aged, regardless of difficulty in interpretation, and various modifications of the theory and practice of tag-recapture programs are necessary. Schooling behavior and regenerated scale centers influence necessary minimum size of scale sample.

The Distribution of Fishes Found Below a Depth of 2000 Meters, by Marion Grey, Fieldiana: Zoology, vol. 36, no. 2, pp. 75-337, printed. Chicago Natural History Museum, Chicago, Ill., July 1956.

The Effect of Hydroelectric Developments on the Fishery Resources of Snake River; A Final Report, by Robert B. Irving and Paul Cuplin, 169 pp., illus., printed. Idaho Department of Fish and Game, 518 Front St., Boise, Idaho, 1956.

Tax Guide for Small Business, printed, 30 cents. Internal Revenue Service, Washington, D.C., 1956. (For sale by Superintendent of Documents, Government Printing Office, Washington 25, D.C.)

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GERMANY:

"Development of the West German Fishing Industry," by Gerhard Meseck, article, Progress, vol. 45, no. 251, Summer 1956, pp. 138-144, illus., printed. Associated Enterprises Limited, Unilever House, Blackfriars, London, E. C. 4, England. One of the most striking examples of the rebuilding of Germany's industrial strength is provided by the Federal Republic's fishing industry. The fleet has been largely replaced and a great advance made in equipment and techniques for the processing and marketing of catches. This is a survey of what has been achieved and is planned for the West German fishing industry.

INTERNATIONAL COMMISSIONS:

(International North Pacific Fisheries Commission) Annual Report, 1955, 67 pp., illus., printed. University of British Columbia, 209 Westbrook Bldg., Vancouver 8, B. C., Canada, 1956. A report in three parts containing summaries of research carried out for the Commission by research agencies of its three member nations, Canada, Japan, and the United States. Part I, Report of the 1955 Annual Meeting, covers only preliminary material since analysis of data from 1955 investigations was far from complete at the end of that year. Part II, Administrative Report, gives a very brief account of membership changes, publications, and fiscal status of the Commission. Part III, The Research Program, reports on the concentrated program to determine the continental origin of stocks of salmon on the high seas and whether there is a need for joint conservation measures for the king crab stock of the eastern Bering Sea.

JAPAN:

Bulletin of Tokai Regional Fisheries Research Laboratory, no. 13, 90 pp., illus., printed in Japanese with English summaries. Tokai Regional Fisheries Research Laboratory, Tsukishima, Chuo-ku, Tokyo, Japan, June 1956. Contains, among others, the following articles: "Report on Sampling Survey for 'Iwashi' Catch and Fishing Effort;" "Body Length Distribution of the Japanese Anchovy, *Engraulis japonica* in Ise Bay, Mikawa Bay and Ensyu-Nada - I. Body Length in 1951 and 1952;" "Effect of Supersonic Wave on Behavior of Fish;" "Studies on the Breaking Strength of Netting Cords Made with Various Twisting Machines;" and "Relationship Between Jelly Strength and Chemical Composition of Fish Meat Jelly."

Japanese Fisheries, 133 pp., illus., printed. Sangyo Keizai Shimbun, Tokyo, Japan, 1955.

MALTA:

A Report on the Fishing Industry of Malta, by T. W. Burdon, 79 pp., illus., printed. Government Printing Office, Malta, 1956.

MAURITANIA:

La peche d'outre mer - Mauritanie (Overseas Fishing - Mauritania), by R. Moal, Science et Peche, vol. 1, no. 28, September 1955, 6 pp. printed in French. Institut Scientifique et Technique des Peches Maritimes, 59 av. R. Poincare, Paris 16, France.

OCEANOGRAPHY:

NORPAC 1955, M/V "Brown Bear," August 1 to September 19, 1955, Preliminary Data Report, by Richard H. Fleming and staff, Special Report no. 22, 104 pp., processed. University of Washington, Department of Oceanography, Seattle 5, Wash., February 1956.

OYSTERS:

Effects of Two Parasites on the Growth of Oysters, by R. Winston Menzel and Sewell H. Hopkins, 3 pp., processed. (Reprinted from Proceedings of the National Shellfish Association, vol. 45, 1954, pp. 184-186.) Department of Biology, A. & M. College of Texas, College Station, Tex.

Factors Controlling the Distribution of Oysters in a Neutral Estuary, by Nelson Marshall, 6 pp., illus., printed. (Reprinted from Ecology, vol. 35, no. 3, July 1954, pp. 322-327.) Oceanographic Institute, Florida State University, Tallahassee, Fla.

"Oil and Oysters," by James N. McConnell, article, Louisiana Conservationist, vol. 8, no. 11, October 1956, pp. 4-6, illus., printed. Louisiana Conservationist, 126 Civil Courts Bldg., New Orleans 16, La. Discusses the problems of continuing oyster production in areas where mineral activity, especially oil drilling, is increasing.

Some Phases of the Biology of OSTREA EQUETRIS Say and a Comparison with CRASSOSTREA VIRGINICA (Gmelin), by R. Winston Menzel, no. 25, 83 pp., illus., printed. (Reprinted from Institute of Marine Science, vol. IV, no. 1, September 1955, pp. 70-153.) Oceanographic Institute, Florida State University, Tallahassee, Fla.

PAKISTAN:

The Mechanization of West Pakistan Fishing Boats, by H. Magnusson, C. S. Ohlsson, P. Gurtner and Jan-Olof Truang, FAO-ETAP Report no. 403, 82 pp., illus., processed. Food and Agriculture Organization of the United Nations, Rome, Italy, 1955.

"Preservation and Curing of Fish in East Pakistan," by Nazir Ahmed, article, Pakistan Journal of Science, vol. 5, no. 3, July 1953, pp. 117-122, printed in English. Pakistan Association for Advancement of Science, Lahore, Pakistan.

POND FISHERIES:

Barrages in Israel and their Utilization for Fish-Breeding, by Dr. A. Yashouv (Wirszubski), General Fisheries Council for the Mediterranean, Technical Paper no. 17, 10 pp., processed. Food and Agriculture Organization of the United Nations, Rome, Italy, October 1954. Barrages are natural seasonal ponds.

PRESERVATION:

"Icing Cod with Salt-Water Ice," by Paul Hansen, article, Industrial Refrigeration, vol. 131, no. 5, November 1956, pp. 20, 51, printed, single copy 25 cents. Nickerson &

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Collins Co., 433 N. Waller Ave., Chicago 44, Ill. Describes a pilot-scale investigation of the use of salt-water ice for the icing of "wet" cod. No systematic investigation was made on the raw fish, but the general impression was that the fish iced in "sea" water ice were less spoiled at the end of the experiment than those iced with ordinary ice. It seems that the over-all quality of sea-water iced fish gained more from the delay in spoilage than it lost through partial freezing and salt uptake. In the present experiment, however, the fish were iced with newly-prepared, homogeneous salt-water ice in proportions much above those used in practical icing of fish. Experiments on a more practical scale are therefore necessary before it can be seen whether salt-water ice may be of commercial value to the keeping quality of iced fish.

"The Radiation Preservation of Foods," article, Industrial Refrigeration, vol. 131, no. 5, November 1956, pp. 15-19, printed, single copy 25 cents. Nickerson & Collins Co., 433 N. Waller Ave., Chicago 44, Ill. Discusses the use of atomic radiation to preserve foods with a minimum of refrigeration by destroying insects and micro-organisms which promote decomposition and spoiling. Includes the following brief reports: "Nature of the Radiation Process," by Capt. Reuben Pomerantz; "Current State of Radiation," by Lt. Col. Truman F. Cook; "The Effect of Radiation Sterilization on Wholesomeness of Foods," by H. F. Kraybill; and "Future Potentialities for Radiation," by Colonel William D. Jackson.

REFRIGERATION AND FREEZING:

"Influence of Freezing-Rate on the Denaturation of Cold-Stored Fish," by R. M. Love, article, Nature, vol. 178, no. 4540, November 3, 1956, pp. 988-989, illus., printed. St. Martin's Press, Inc., 103 Park Ave., New York 17, N. Y. Briefly reports the results of testing denaturation of fish frozen at different temperatures and rates of time.

RED SNAPPER:

"Alabama's Artificial Snapper Banks," by George Kyle, article, Alabama Conservation, vol. 28, no. 2, September 1956, pp. 4-7, 15, 25, illus., printed. Alabama Department of Conservation, 711 High St., Montgomery, Ala. Reports on experiments in making artificial banks in deep water in the Gulf of Mexico by planting used car bodies and heaps of scrap metal. This project was initiated when it was discovered by fishermen throughout the years that sunken ships and other hulks on the bottom of the sea prove to be good fishing spots. The artificial banks concentrate bottom-feeding fish such as snapper, grouper, jewfish, and spadefish, in an area where they can be more easily harvested by fishermen.

SALMON:

Contribution to a Biological Foundation for the Salmon Fishing Industry of the Amur Basin, by G. V. Nikolsky, 10 pp., processed. (Preliminary translation by W. E. Ricker from Trudy Soveshchaniia po Voprosam Lososevovo Khoziaistva Dalnevo Vostoka (Proceedings of a Symposium

on Problems of the Salmon Industry of the Far East), 1953, pp. 160-168). Fisheries Research Board of Canada, Biological Section, Nanaimo, B. C., Canada, 1956.

SARDINES:

Les Sardinelles de la Region de Pointe-Noire-- Perspectives Economiques Qu'elles Offrent (Sardines from the Zone of Pointe-Noire-- Their Economic Prospects), Science et Peche, no. 31, December 1955, 6 pp., printed in French. Institut Scientifique et Technique des Peches Maritimes, 59 av. R. Poincare, Paris 16, France.

A Statistical Contribution to the Study in Ecology of Sardine (SARDINA PILCHARDUS) in the Central Adriatic, by Sime Zupanovic, Acta Adriatica, vol. VII, no. 10, 1955, 31 pp., illus., printed. Institute of Oceanography and Fisheries, Split, Yugoslavia.

SHARKS:

"Victory over the Shark," by Ralph N. Hill, article, Natural History, vol. LXV, no. 7, September 1956, pp. 352-356, illus., printed, single copy 50 cents. American Museum of Natural History, Central Park West at 79th St., New York 24, N. Y. Vividly describes the search for a repellent against sharks to protect men adrift in life belts or rafts. The author gives a detailed account of the scientific project and how it originated; experiments conducted in laboratory tanks with dog sharks; eventual discovery of copper sulphate, ammonium acetate, and other powerful repellents; search for a shark-infested ocean area suitable for further testing; experiments in the ocean and discovery of almost magical results with copper acetate; and effective methods of using copper acetate to repel sharks.

SHELLFISH:

Oyster and Mussel Culture, Rapports et Procès-Verbaux des Reunions (Reports and Verbal Proceedings of Meetings), vol. 140, part III, 61 pp., illus., printed in French and English, Kr. 17 (US\$3.28). Conseil Permanent International pour l'Exploration de la Mer (International Council for Exploration of the Sea), Charlottenlund Slot, Denmark, January 1956.

SOUTH CAROLINA:

Harvest from an Experimental One-Acre Salt-Water Pond at Bears Bluff Laboratories, South Carolina, by G. Robert Lunz, Contributions from Bears Bluff Laboratories No. 21, 2 pp., printed. (Reprinted from Progressive Fish Culturist, vol. 18, no. 2, April 1956, pp. 92, 93, 94.) Bears Bluff Laboratories, Wadmalaw Island, S. C.

Mosquito Fleet, by Francis B. Taylor, 4 pp., illus., printed. (Reprinted from Bulletin of the International Oceanographic Foundation, vol. 2, no. 1, March 1956.) The Marine Laboratory, University of Miami, 439 Anastasia Ave., Coral Gables 34, Fla. Briefly discusses the recent growth of marine fisheries in South Carolina and especially mentions that most fishing was formerly accomplished by the

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"mosquito fleet," crazily-rigged boats which are now being replaced with modern boats and equipment. Also discusses the need for research of near-shore and deep-sea fish and of shrimp, oysters, and crab. The author states that "under-utilization of the State's fishery resources could be even more a waste than over-fishing. How to strike a balance between the biological factors and the economics of fishing pressure calls for uninterrupted research of local conditions and enforcement of enlightened laws."

SWEDEN:

Fiske, 1954 (Fisheries, 1954), 78 pp., illus., printed in Swedish with summary in English. Central Bureau of Statistics, Stockholm, Sweden, 1956. An account of the fisheries in Sweden in 1954. Contains statistics mainly relating to salt-water fisheries. The decline observed for several years past in the total number of fishermen continued during 1954. The primary reason for this is apparently the decrease in the supply of fish in certain areas and the fishermen's consequent adoption of some other occupation. The coastal industries have frequently offered more regular and, above all, higher incomes. At the end of 1954 the total number of fishermen was 19,552, of whom 11,731 were professional fishermen. In addition to discussions of the salt-water fishery and the fresh-water fishery, statistics are given for the number of fishermen, fishing gear, and fishing craft in the salt-water fishery, by counties, in 1954; quantity and value of fishery products in different fishing areas and by counties; and the salmon and whitefish fisheries, etc., in certain rivers in 1954. A list of fish and shellfish in Swedish, Latin, and English is also presented.

TURTLES:

"Our Vanishing Sea Turtles," by Chapman Grant, article, The Scientific Monthly, vol. 83, no. 5, November 1956, pp. 257-258, printed, 75 cents single copy. The Scientific Monthly, 1515 Massachusetts Ave., N. W., Washington 5, D. C. Discusses briefly the need for uniform legislation

and conservation efforts to protect sea turtles from extinction.

TURKEY:

Balik ve Balikcilik (Fish and Fishery), vol. IV, no. 12, December 1956, 26 pp., illus., printed in Turkish with table of contents in English. Et ve Balik Kurumu, Istanbul, Turkey. Contains articles dealing with trawling in Turkish sea waters; methods of fish extraction by the use of vertical and horizontal boiler systems; biology of tuna and recommendations about new gear to the Turkish fishermen. A general survey of electricity-producing fish is also described. Recommendations about trawling methods in the Black Sea are given, and the future of Turkish fishing boats is discussed.

UNITED KINGDOM:

Sea Fisheries Statistical Tables, 1955, 38 pp., (mostly tables), printed, 4s. (56 U. S. cents). Ministry of Agriculture, Fisheries, and Food, London, England, 1956. (Available from Her Majesty's Stationery Office, London). Includes statistics on the quantity, total value, and average value of fish and shellfish production in Great Britain (mostly England and Wales) by species, region, and other categories for 1955. Breakdowns by first-class British vessels, demersal landings, and pelagic landings are presented. Data on imports and exports are included. Also given are the number of fishermen, number and gross tonnage of vessels, and number of first-class vessels by stations and type of gear.

U. S. CONGRESS:

Fisheries Legislation, Hearings before the Committee on Interstate and Foreign Commerce, United States Senate (Eighty-fourth Congress, second session on S. 2379, S. 3275, and S. 3339.), 299 pp., printed. Committee on Interstate and Foreign Commerce, Washington, D. C., 1956. (Available from Superintendent of Documents, Government Printing Office, Washington 25, D. C.)



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