



## FISH AND WILDLIFE SERVICE PUBLICATIONS

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

CFS - CURRENT FISHERY STATISTICS OF THE UNITED STATES AND ALASKA.  
SL - STATISTICAL SECTION LISTS OF DEALERS IN AND PRODUCERS OF FISHERY PRODUCTS AND BYPRODUCTS.  
FL - FISHERY LEAFLET.  
SEP. - SEPARATES (REPRINTS) FROM COMMERCIAL FISHERIES REVIEW.

Number	Title
CFS-1629	- Georgia Landings, July 1957, 2 pp.
CFS-1643	- Fish Meal and Oil, August 1957, 2 pp.
CFS-1649	- Frozen Fish Report, September 1957, 8 pp.
CFS-1657	- Fish Stick Report, July-September 1957, 2 pp.
CFS-1664	- Fish Meal and Oil, September 1957, 2 pp.
CFS-1678	- Ohio Landings, October 1957, 2 pp.
CFS-1680	- Alabama Landings, September 1957, 2 pp.
CFS-1681	- Mississippi Landings, September 1957, 2 pp.
CFS-1683	- Georgia Landings, October 1957, 2 pp.
CFS-1684	- Fish Meal and Oil, October 1957, 2 pp.
CFS-1685	- Texas Landings, September 1957, 3 pp.
CFS-1686	- New Jersey Landings, October 1957, 3 pp.
CFS-1687	- South Carolina Landings, October 1957, 2 pp.
CFS-1688	- Rhode Island Landings, October 1957, 3 pp.
CFS-1689	- Frozen Fish Report, November 1957, 8 pp.
CFS-1690	- Shrimp Landings, August 1957, 7 pp.
CFS-1691	- New York Landings, October 1957, 4 pp.
CFS-1692	- Florida Landings, October 1957, 6 pp.
CFS-1693	- Massachusetts Landings, June 1957, 5 pp.
CFS-1695	- Maine Landings, October 1957, 3 pp.
CFS-1696	- Louisiana Landings, September 1957, 2 pp.
CFS-1698	- North Carolina Landings, November 1957, 3 pp.
CFS-1699	- Mississippi Landings, October 1957, 2 pp.
CFS-1700	- Rhode Island Landings, November 1957, 3 pp.
CFS-1701	- South Carolina Landings, November 1957, 2 pp.
CFS-1702	- Louisiana Landings, October 1957, 2 pp.
CFS-1703	- Alabama Landings, October 1957, 2 pp.
CFS-1704	- Georgia Landings, November 1957, 2 pp.
CFS-1705	- Fish Meal and Oil, November 1957, 2 pp.

- CFS-1706 - New Jersey Landings, November 1957, 3 pp.  
CFS-1709 - New York Landings, November 1957, 4 pp.  
CFS-1713 - Florida Landings, November 1957, 6 pp.  
CFS-1715 - Maine Landings, November 1957, 3 pp.

Wholesale Dealers in Fishery Products (Revised):  
SL- 2 - New Hampshire, 1957.  
SL-26 - Illinois, 1956.  
SL-30 - Pennsylvania, 1957.  
SL-32 - Minnesota, 1957.  
SL-38 - Missouri, 1957.

FL - 440 - Marine Fishery Development in Liberia, 1952-54, by George C. Miller, 41 pp., illus., September 1957. A report covering the general pattern of investigation and progress of the Foreign Operations Administration's program for aiding the development of Liberian fisheries during 1952-54. During its inception, the fishery program--undertaken at the request of the Liberian government--was supervised by the U. S. Fish and Wildlife Service. The report describes the results of an extensive survey of the fisheries and fishery resources, providing details of the gear and methods used. An account of the development program includes marine fisheries and brackish-water river surveys; sport fishery observations; trials with commercial fishing gear in trolling, gill netting, and trawling; shellfish surveys; and net-making demonstrations. A section on current production and prospects of expansion includes speculation on the possibilities and future effects of increased production. An appendix to this report contains additional data summarizing major accomplishments in the development of Liberian fisheries during 1955.

FL - 446 - Pacific Coast Shrimp Recipes, by Thelma S. Rose, Helen H. Snyder, and Rose G. Kerr, 12 pp., October 1957.

Sep. No. 500 - Pacific Coast Fishing Ports.

Sep. No. 501 - Federal Specifications for Fishery Food Products and the Responsibility of the U. S. Bureau of Commercial Fisheries.

Sep. No. 502 - Correlation of Midwater Trawl Catches with Echo Recordings in the Northeastern Pacific.

Sep. No. 503 - Research in Service Laboratories (February 1958): Contains these articles--"Pacific Coast Program on the Irradiation Preservation of Fish--Phase Report;" "Technical Note No. 43 - Considerations on the Use of Refrigerated Brine for Chilling and Storing Fresh Fish."

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

Boston Fishery Products Monthly Summary, December 1957, 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 month indicated.

California Fishery Products Monthly Summary, November 1957, 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, herring, mackerel, anchovies, and squid; market fish receipts at San Pedro, Santa Monica, San Diego, and Eureka areas; California imports; canned fish and frozen fish prices; for the month indicated.

Chicago Monthly Summary of Chicago's Fresh and Frozen Fishery Products Receipts and Wholesale Market Prices, November 1957, 12 pp.; December 1957, 14 pp. (Market News Service, U. S. Fish and Wildlife Service, 565 W. Washington St., Chicago 6, Ill.) Receipts at Chicago by species and by states and provinces; fresh-water fish, shrimp, and frozen fillet wholesale market prices; for the months indicated. The December 1957 issue contains a preliminary review of 1957 fishery products receipts at Chicago.

Gulf Monthly Landings, Production, and Shipments of Fishery Products, December 1957, 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, December 1957, 4 pp. (Market News Service, U. S. Fish and Wildlife Service, 18 So. King St., Hampton, Va.) Fishery landings and 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.

## 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.

### AUSTRALIA:

Australian Journal of Marine and Freshwater Research, vol. 8, no. 4, November 1957, pp. 369-507, illus., printed. Commonwealth Scientific and Industrial Research Organization, 314

Albert St., East Melbourne, C.2, Victoria. Contains, among others, the following articles: "The Tasmanian Trout Fishery. I. Sources of Information and Treatment of Data," by A. G. Nicholls; and "Continuous Crayfishing Tests: Pelsart Group, Houtman Abrolhos, Western Australia, 1953," by R. W. George.

"Continuous Crayfishing Tests: Pelsart Group, Houtman Abrolhos, Western Australia, 1953," by R. W. George, article, Australian Journal of Marine and Freshwater Research, vol. 8, no. 4, November 1957, pp. 476-490, illus., printed. Commonwealth Scientific and Industrial Research Organization, 314 Albert St., East Melbourne, C.2, Victoria, Australia.

### CANADA:

Fisheries Statistics of Canada, 1955, vol. 1, part 3-A, 34 pp. (tables), printed in English and French, 25 Canadian cents. Dominion Bureau of Statistics, Ottawa, Canada, 1958. (For sale by Queen's Printer and Controller of Stationery, Ottawa, Canada.) This report provides a summary of the Canadian fisheries and the information is arranged to show separately the three main fisheries areas--Atlantic, Pacific, and Inland. It includes data on the quantity and value of the catch of selected fishery products for Canada, 1952-55; production of frozen, smoked, salted, and pickled fish, canned fish and shellfish, and fishery byproducts, 1954-55; landings by trawlers, draggers, etc.; capital equipment in the primary fisheries operations; and employment in fish processing establishments. Also contains data on the quantity and value of exports and imports of fishery products; quantity and value of Canada's fishery products and byproducts, by provinces, 1946-55; Canada's canned lobster pack by provinces, 1946-55; and fishing bounties paid to vessels and boats in 1955.

Journal of the Fisheries Research Board of Canada, vol. 14, no. 6, pp. 797-1008, illus., printed. Queen's Printer and Controller of Stationery, Ottawa, Canada, 1957. Contains, among others, the following articles: "Reactions of Juvenile Pacific Salmon to Light," by W. S. Hoar, M. H. A. Keenleyside, and R. G. Goodall; "Nematodes in the Fillets of Cod and Other Fishes in Newfoundland and Neighbouring Areas," by Wilfred Templeman, H. J. Squires, and A. M. Fleming; "The Redfish (*Sebastes marinus* L.) in the Western Gulf of St. Lawrence," by D. H. Steele; "Further Study of the Influence of Short Storage Periods, 3 days to 2 weeks at 15° F., on the Quality of Frozen Cod Stored at 0° F.," by W. J. Dyer, Doris I. Fraser, and W. A. MacCallum; and "Variation in the Incidence of Larval Nematodes in Atlantic Cod Fillet Along the Southern Canadian Mainland," by D. M. Scott and W. R. Martin.

### CLAMS:

Survival and Growth of VENUS MERCENARIA, VENUS CAMPECHIENSIS, and their Hybrids in Suspended Trays and on Natural Bottoms, by Dexter Haven and Jay D. Andrews, Contributions from the Virginia Fisheries Laboratory

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No. 74, 8 pp., illus., processed. Discusses the crossing of the southern hard-shell clam (*Venus campechiensis*) with the northern species (*Venus mercenaria*). (Reprinted from Proceedings of the National Shellfisheries Association, vol. 47, 1957.) Virginia Fisheries Laboratory, Gloucester Point, Va.

#### COMMISSIONS:

Inter-American Tropical Tuna Commission Annual Report for the Year 1956 (Comision Inter-americana del Atun Tropical Informe Anual Correspondiente el Ano 1956), 113 pp., illus., printed in English and Spanish. Inter-American Tropical Tuna Commission, La Jolla, Calif., 1957. This report includes the recommended program of investigations; progress on investigations; publication of research results; a short report on the Inter-American Conference on Conservation of Natural Resources; and a short resume of the Commission's regular annual meeting in San Diego, Calif., on July 30, 1956. An appendix to the report describes the investigations conducted by the Commission during 1956 including the following activities: compilation of current statistics of total catch, amount and success of fishing, and abundance of the fish populations; compilation and analysis of historical data on tunas; estimation of the relationship between fishing effort and equilibrium catch for yellowfin tuna; potential fishing power of the fishing fleets; compilation and analysis of historical data on the baitfishes; research on tuna population structure and migrations; other aspects of tuna life history and behavior; investigation of physical, chemical, and biological oceanography and tuna ecology; and investigations of the biology, ecology, and life history of bait fishes.

#### CULTURED PEARLS:

"Pearls Prove a Gem for Japan," article, Business Week, December 28, 1957, pp. 72-76, illus., printed, single copy 50 cents. McGraw-Hill Publishing Co., Inc., 99 N. Broadway, Albany 1, N. Y. Japan's pearl industry is described from its beginning about 65 years ago when a Japanese merchant turned to collecting oysters in his spare time on the theory that it might be possible to help nature produce the treasured pearl. Now the demand is so intense that Japan's cultured pearl exports for 1957 are expected to reach a record \$17 million and, according to the article, in 1958 may top \$20 million.

#### DIRECTORIES:

Scandinavian Fishing Year-Book, 1956-57 (Year-Book and Directory for the European Fish Trade), edited by Willy Rose, 312 pp. text, 16 colored plates, illus., printed, 50 kroner (US\$7.50). Jørgen Frimodt, 59-61 Nyhavn, Copenhagen K. Denmark. A useful handbook for the international fishing trade. Contains 16 colored plates showing the 62 most important species of fish and shellfish of Scandinavia--the names of which are given in Latin, Danish, Dutch, English, Faroe, Finnish, French, German, Icelandic, Italian, Norwegian, Polish, Portuguese, Russian, Spanish, and Swedish. Sections on each of the

countries of Denmark, Faroe Islands, Norway, Sweden, Iceland, Finland, The Netherlands, Germany, and France, contain articles on the fisheries, maps, addresses of embassies and legations, names of importing and exporting firms, and other trade data. Included also is a list of European importers and exporters covering Austria, Belgium, Bulgaria, Czechoslovakia, France, Great Britain, Greece, Hungary, Ireland, Italy, Malta, Poland, Portugal, Spain, Switzerland, and Yugoslavia. Also lists importers and exporters in Africa and Asia; Australia; New Zealand; Philippines; United States; Canada; and Central and South America. The book concludes with a main index for advertisers.

#### FISH MEAL:

"Biological Value of the Proteins of a Variety of Fish Meals," by A. E. Bender and S. Haizelden, article, British Journal of Nutrition, Proceedings of the Nutrition Society, vol. 11, 1957, pp. 42-43, printed. Cambridge University Press, 200 Euston Road, London N.W. 1, England.

#### FOOD:

Activities Report, vol. 9, no. 4, fourth quarter, January 1958, pp. 235-343, illus., printed. Research and Development Associates, 1849 W. Pershing Rd., Chicago 9, Ill. Relates to food and container research and development work of the Quartermaster Food and Container Institute for the armed forces together with related information pertinent to improving military rations; also relates to activities of other governmental, industrial, or institutional groups engaged in food and container research of direct or indirect applicability to national defense.

#### FOOD AND AGRICULTURE ORGANIZATION:

Canada: Amending the Small Fishing Vessel Inspection Regulations, Pursuant to the Canada Shipping Act (SOR/57-106. Order in Council P. G. 1957-391), Food and Agricultural Legislation, vol. VI, no. 2, XVI.4/57.1, 1 p., printed. Food and Agriculture Organization of the United Nations, Rome, Italy. (For sale by Columbia University Press, International Documents Service, 2960 Broadway, New York 27, N. Y.)

Canada: Pacific Halibut Fishery Regulations 1957, Pursuant to the Northern Pacific Halibut Fishery Convention Act (SOR/57-97. Order in Council 1957-372), Food and Agricultural Legislation, vol. VI, no. 2, XVI.1/57.1, 15 pp., printed. Food and Agriculture Organization of the United Nations, Rome, Italy. (For sale by Columbia University Press, International Documents Service, 2960 Broadway, New York 27, N. Y.)

Denmark: Order No. 68 Relating to the Use of Antibiotics, and Antibiotic Destroying Substances in Foodstuffs, Food and Agricultural Legislation, vol. VI, no. 2, XI.9/57.1, 2 pp., printed. Food and Agriculture Organization of the United Nations, Rome, Italy. (For sale by Columbia University Press, International Documents Service, 2960 Broadway, New York 27, N. Y.)



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Ecuador: Decree No. 391 Making the Prior Completion of Buildings and Installations on Ecuadorian Territory a Condition Governing Grant of Fisheries Contracts or Licences, Food and Agricultural Legislation, vol. VI, no. 2, XVI.3/57.1, 3 pp., printed. Food and Agriculture Organization of the United Nations, Rome, Italy. (For sale by Columbia University Press, International Documents Service, 2960 Broadway, New York 27, N. Y.)

El Salvador: Decree No. 77 Containing Regulations Made Under the Sea Fishing and Hunting Act, Food and Agricultural Legislation, vol. VI, no. 2, XVI.3/56.1, 14 pp., printed. Food and Agriculture Organization of the United Nations, Rome, Italy. (For sale by Columbia University Press, International Documents Service, 2960 Broadway, New York 27, N. Y.)

General Fisheries Council for the Mediterranean, Proceedings and Technical Papers No. 4, 438 pp., illus., printed in French and English, \$5. Food and Agriculture Organization of the United Nations, Rome, Italy, 1957. (Available from Columbia University Press, International Documents Service, New York 27, N. Y.)

#### FREEZING:

"Biochemical Change in Thaw Rigor in Relation to the Quality of Frozen Fish," by K. Amano, M. Bito, and M. Suyama, article, Proceedings of the 9th International Congress on Refrigeration, Paris, 1955, pp. 4066-4073, 4092-4095, printed. International Institute of Refrigeration, 177 Boulevard Maiesherbes, Paris 17<sup>o</sup>, France.

"Experiments on the Freezing of Fish in an Air-Blast Freezer," by J. Nagaoka, S. Takagi, and S. Hotani, article, Proceedings of the 9th International Congress on Refrigeration, Paris, 1955, pp. 4105-4110, printed. International Institute of Refrigeration, 177 Boulevard Maiesherbes, Paris 17<sup>o</sup>, France.

"Frozen Fish. Quality Aspects," by E. Heen, article, Proceedings of the 9th International Congress on Refrigeration, Paris, 1955, pp. 4046-4050, 4092-4095, printed. International Institute of Refrigeration, 177 Boulevard Maiesherbes, Paris 17<sup>o</sup>, France.

"Necessary Equipment for the Freezing of Fish," by W. A. MacCallum, article, Proceedings of the 9th International Congress on Refrigeration, Paris, 1955, pp. 4096-4104, printed. International Institute of Refrigeration, 177 Boulevard Maiesherbes, Paris 17<sup>o</sup>, France.

#### FREEZING FISH AT SEA:

"La Congelation Continue du Poisson a Bord," (Continuous Freezing of Fish on Board Ship) by M. Sadorge, article, Proceedings of the 9th International Congress on Refrigeration, Paris, 1955, pp. 4111-4115, printed in French with English summary. International Institute of Refrigeration, 177 Boulevard Maiesherbes, Paris 17<sup>o</sup>, France.

#### GENERAL:

"Look to the Sea," by Mark Ronayne, article, Trade News, vol. 10, no. 5, November 1957, pp. 3-13, illus., printed. Department of Fisheries of Canada, Ottawa, Canada. This article describes briefly the nature and significance of the work being done at the Fisheries Research Board's Technological Station in Halifax. Studies and experiments are constantly going on to find new ways of processing, preserving, and utilizing the teeming sea resources. The Halifax Station seeks by means of fundamental and practical research to find the answers to two over-all problems: (1) how best to utilize the fish resources--the popular food species, the leftovers from the food processing operations, and unexploited species of low commercial value--to manufacture a wider range of more valuable products than those now coming from the fisheries; and (2) how best to retain the fresh, flavorsome, nutritious qualities in the wide variety of food products that the Canadian fishing industry markets at home and abroad. The following subjects are covered briefly in this article: fish flour; residual products; utilizing the viscera; research on herring, herring oil, cod livers, quality, freezing, and engineering.

#### HAKE:

"Sobre Algunos Procesos Bioquimicos en la Decomposicion de la Merluza (*Merluccius merluccius*)," (Some Biochemical Processes in the Decomposition of European Hake.) by G. Varela and R. Wojciech, article, An. Bromatol., vol. 8, 1956, pp. 5-18, printed in Spanish with summary in English. (Chemical Abstracts, vol. 50, 1956, no. 14139.) American Chemical Society, 1155 16th St. NW., Washington 6, D. C.

#### HERRING:

Report of the Atlantic Herring Investigation Committee, by A. H. Leim, S. N. Tibbo, L. R. Day, L. Lauzier, R. W. Trites, H. B. Hachey, and W. B. Bailey, Fisheries Research Board of Canada, Bulletin No. 111, C\$3.50. Queen's Printer, Ottawa, Canada. Results of the Committee's work, which constitute an important step towards the development of the very great potential herring fisheries of the Gulf of St. Lawrence and the Atlantic Coast as a whole, are presented in great detail in this report. It is explained that the Committee attacked the problem of learning how to find and catch more and better herring on a broad front. "To provide background for the search the Committee contributed greatly to a study of the physical oceanography of the Gulf region, working in close cooperation with the Atlantic Oceanographic Group of the Fisheries Research Board. Against this background the Committee conducted explorations for herring with old and new methods. It made the first successful catches in the Bay of Islands area; its findings and its gear enabled the Fisheries Research Board to discover the abundant high-quality herring which can be caught with drift nets in the Gulf. The Committee showed that there are several more or less distinct herring populations in the Gulf and

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adjacent areas differing in growth rate and other characteristics but none of them fully exploited. The geographical and seasonal variations in quality, especially oil content, were explored."

#### DEPARTMENT OF THE INTERIOR:

1957 Annual Report of the Secretary of the Interior (For the Fiscal Year Ended June 30, 1957), 473 pp., illus., printed, \$1.50 (paper). U. S. Department of the Interior, Washington, D. C. (For sale by the Superintendent of Documents, Washington 25, D. C.) The activities of the Department's bureaus and offices, including the United States Fish and Wildlife Service, are summarized in this report. Specifically discussed are utilization of the commercial fishery resources (describes the activities of the Bureau of Commercial Fisheries): research in fishery biology (coastal, inland, and marine fisheries); conservation of Alaska commercial fisheries; Pribilof Islands fur-seal industry; and foreign activities. Summaries are also included of the various activities of the Bureau of Sport Fisheries and Wildlife.

#### IRRADIATION PRESERVATION:

"Effect of Ionizing Radiations on Southern Oysters," by E. A. Gardner and B. M. Watts, article, Food Technology, vol. 11, 1957, pp. 329-331, printed. Institute of Food Technologists, 176 W. Adams St., Chicago, Ill.

#### KENYA:

Report on Kenya Fisheries, 1956, 18 pp., printed. Ministry of Forest Development, Game and Fisheries, Fisheries Division, Nairobi, Kenya, 1957. A complete review of Kenya's fisheries for 1956. Reports on work at a tilapia culture farm and at a trout hatchery, and developments in the trout fisheries. A section on the marine fishing industry covers: general developments in progress, trade, exploratory work, demand, and fishery legislation; frozen, dried, and salted fish trade; sedentary fisheries; exploratory and experimental work in fishing gear and methods; sociological aspects of the industry; game fishing; and notable game fish catches made in 1956. A report on an inspection of coastal oyster beds is also included as well as several tables of catch statistics.

#### OYSTERS:

"Application of the Thiobarbituric Acid Test as a Quantitative Measure of Deterioration in Cooked Oysters," by M. G. Schwartz and B. M. Watts, article, Food Research, vol. 22, 1957, pp. 76-82, printed. Department of Food Technology, University of California, Davis, Calif.

"The Louisiana Oyster Story," by Ednard Waldo, article, Louisiana Conservationist, vol. 9, no. 10, November 1957, pp. 2-5, 22, illus., printed. Louisiana Wild Life and Fisheries Commission, 126 Civil Courts Bldg., New Orleans 16, La. Describes briefly the life history of the oyster, the various stages of its growth, the many enemies of the oyster, and cause of oyster mortalities. The author also discusses the food value of oysters, and the three classifications of the oysters produced from Louisiana reefs--steam-

canned, raw-shop (sold as raw shucked oysters), and counter stock (sold on the half-shell).

The Survival and Growth of South Carolina Seed Oysters in Virginia Waters, by Jay D. Andrews and J. L. McHugh, Contributions from the Virginia Fisheries Laboratory No. 73, 15 pp., illus., processed. (Reprinted from Proceedings of the National Shellfisheries Association, vol. 47, 1957.) Virginia Fisheries Laboratory, Gloucester Point, Va.

#### OYSTER DRILLS:

Some Effects of High-Frequency X-Rays on the Oyster Drill, UROSALPINX CINEREA, by William J. Hargis, Jr., Contributions from the Virginia Fisheries Laboratory No. 75, 5 pp., illus., processed. (Reprinted from Proceedings of the National Shellfisheries Association, vol. 47, 1957.) Virginia Fisheries Laboratory, Gloucester Point, Va.

Trapping Oyster Drills in Virginia--III. The Catch per Trap in Relation to Condition of Bait, by J. L. McHugh, Contributions from the Virginia Fisheries Laboratory No. 76, 19 pp., illus., processed. (Reprinted from Proceedings of the National Shellfisheries Association, vol. 47, 1957.) Virginia Fisheries Laboratory, Gloucester Point, Va.

#### PAKISTAN:

Fishing Craft of East Pakistan, by Nazir Ahmad, 9 pp., illus., printed. Government of East Pakistan, Directorate of Fisheries, Dacca, East Pakistan, 1955. Describes the different types of fishing craft used in East Pakistan for all phases of the fisheries.

Fishing Gear of East Pakistan, by Nazir Ahmed, 35 pp., illus., printed. Government of East Pakistan, Directorate of Fisheries, Dacca, East Pakistan, 1956. Provides brief descriptions of the different fishing nets (gill, seine, drag, trawl, clap, fixed-purse, stake, dip, and cast), fish traps, spears, harpoons, barricades, and other fishing implements used in East Pakistan fisheries. The text is substantiated by a large number of sketches.

#### PRESERVATION:

"Antibiotics in Food Preservation," by Henry Welch, article, Science, vol. 126, no. 3284, December 6, 1957, pp. 1159-1161, printed, single copy 35 cents. Science, 1515 Massachusetts Ave. NW., Washington 5, D. C. Describes the extensive experiments which have been conducted to explore the potentialities of antibiotics as food preservatives. Investigations of the usefulness, as well as the public health and regulatory aspects of antibiotics in the preservation of fish and other foods are discussed.

"Application of Refrigerated Sea-Water as a Medium for Storing Fresh Fish on Board Fishing Vessels," by S. W. Roach and J. S. M. Harrison, article, Proceedings of the 9th International Congress on Refrigeration, Paris, 1955, pp. 4116-4118, printed. International Institute of Refrigeration, 177 Boulevard Malesherbes,

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Paris 17<sup>0</sup>, France. Describes refrigerating equipment installed on a vessel consisting of three tanks of refrigerated seawater, 7 feet deep. Fish are collected in these tanks from various points along the coast and transported by sea to processing centers.

"Effect of Aureomycin Chlorotetracycline in the Processing and Storage of Freshly Shucked Oysters," by A. Abbey, A. R. Kohler, and S. D. Upham, article, Food Technology, vol. 11, 1957, pp. 265-271, printed. Institute of Food Technologists, 176 W. Adams St., Chicago, Ill.

"Evaluation of Chlorpactin WCS-50 as a Bactericidal Wash for Crab and Oyster Meats," by M. A. Benarde, article, Applied Microbiology, vol. 5, 1957, pp. 137-140, printed. William & Wilkins, Publishers, Mt. Royal and Guilford Aves., Baltimore 2, Md.

"Uptake of Aureomycin Chlorotetracycline by Fish and Its Heat Inactivation," by T. Tomiyama, Y. Yone, and K. Mikajiri, article Food Technology, vol. 11, 1957, pp. 290-293, printed. Institute of Food Technologists, 176 W. Adams St., Chicago, Ill.

#### RANCIDITY:

"2-Thiobarbituric Acid Method for the Measurement of Rancidity in Fishery Products. II. The Quantitative Determination of Malonaldehyde," by Russell O. Sinnhuber and T. C. Yu, article, Food Technology, vol. 12, no. 1, January 1958, pp. 9-12, printed, single copy: domestic \$1.50; foreign \$1.75. (Published monthly by the Institute of Food Technologists.) The Garrard Press, 510 North Hickory, Champaign, Ill. The present paper, although presenting a quantitative method for the determination of malonaldehyde, does not definitely establish that free malonaldehyde exists in rancid fishery products. The procedure presented in this report employs TEP as a standard for the TBA determination of malonaldehyde. Acid hydrolysis of TEP yields malonaldehyde which reacts quantitatively with TBA and affords a procedure for the determination of this carbonyl compound. By this method the malonaldehyde content of fishery products may be quantitatively measured and the degree of oxidative rancidity expressed in milligrams of malonaldehyde per 1000 g. of sample.

#### RESOURCES:

Land and Water Resources of the New England-New York Region, Senate Document No. 14, 85th Congress, 1st Session, 1957, 429 pp. with maps and illustrations, printed. U. S. Government Printing Office, Washington 25, D. C. This report is the result of a comprehensive survey of the resource problems of the New England-New York region. Its purpose is to provide an overall view of the developed and undeveloped resources of the region as a general framework within which the States, the Federal agencies, and the Congress may consider future recommendations for specific program developments. The individual comments of the governors of the States and the heads of the Federal agencies are included as a part of the report. Utilization of

the fish and wildlife resources is discussed in the report.

#### SABLEFISH:

"The Fishery for Sablefish, Anoplopoma fimbria," by J. B. Phillips, article, California Fish and Game, vol. 44, no. 1, January 1958, pp. 79-84, illus., printed, single copy 75 cents. California Department of Fish and Game, 722 Capitol Ave., Sacramento 14, Calif. Sablefish or black cod, Anoplopoma fimbria, are found in the ocean waters along the Pacific coast of North America from northern Baja California northward into the Bering Sea, but are not abundant south of Monterey, Calif. This species is the object of a moderately important commercial fishery, based primarily on the demand for the product smoked or kippered. Annual fluctuations in the catch are associated with demand. Since a large portion of the catch is placed in cold storage for future smoking, large holdings in one year are associated with a relatively low catch the ensuing year, and vice versa. Racial and tagging studies indicate that there are several stocks of sablefish along the Pacific Coast. Since intermingling of these stocks or subpopulations was determined to be negligible, any contemplated regulations would have to be applied on a regional basis. Although there has been an apparent decline in the stock of sablefish off Oregon and Washington, no evidence has been found to indicate a depleted condition of the stocks in the northern and central California regions.

#### SALMON:

"Predicting the Color of Canned Sockeye Salmon from the Color of the Raw Flesh," by P. J. Schmidt and D. R. Idler, article Food Technology, vol. 12, no. 1, January 1958, pp. 44-48, printed, single copy: domestic \$1.50; foreign \$1.75. (Published monthly by the Institute of Food Technologists.) The Garrard Press, 510 North Hickory, Champaign, Ill. Describes a project which was undertaken to determine a basis for indicating the visual color preference for canned sockeye salmon and to ascertain the feasibility of predicting the color of canned sockeye salmon from the color of the raw meat. Other aspects included in this study were: (a) a comparison between color measurements of raw and canned salmon made with the Beckman-DU spectrophotometer, the Lovibond-Schofield Tintometer, and the Gardner Color-Difference Meter; (b) the correlation between the oil content and color of canned sockeye salmon; (c) the effect of increased temperature and time of processing on the color of the canned product; (d) the effect of post-mortem storage on the color of canned salmon. This study has shown that the Gardner Color-Difference Meter is a suitable instrument for the color measurement of raw and canned sockeye salmon. It was found that the a reading alone is a suitable measure of the color of canned salmon and can be best predicted from the a/b ratio of the raw fish. Three grades with specifications in terms of color measurements of both raw and canned fish have been proposed. It was found that in general the canned salmon with the higher oil content had a more desirable color. Small increases in the time and temperature of processing resulted in slightly greater color



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losses. Color losses during processing were not significantly affected by the post-mortem storage of the fish in ice or refrigerated sea water prior to canning.

#### SHRIMP:

"Studies in the Nutritive Value of Bombay Prawns. I. Chemical Composition of Prawns," by F. Shaikhmahmud and N. G. Magar, article, Journal of Scientific and Industrial Research, India, vol. 16A, 1957, pp. 44-46, printed. Journal of Scientific and Industrial Research, Old Mill Road, New Delhi 2, India.

#### SOUTH CAROLINA:

(Bears Bluff Laboratories) Annual Report 1956-1957, Contribution No. 26, 14 pp., illus., printed. (Reprinted from Report of South Carolina Wildlife Resources Department, Fiscal Year July 1, 1956-June 30, 1957.) Bears Bluff Laboratories, Wadmalaw Island, S. C., January 1958. Covers the activities of the Laboratories for the fiscal year 1956-57. Perhaps the most outstanding work of the year, after seven years of cooperative studies with other state laboratories on the production of seed oysters, the Laboratory was able to promote a small commercial planting of seed oysters for export to northern waters. Research was also continued on shrimps, crabs, and finfishes. Offshore exploratory fishing was continued with moderate success.

#### SPECIALTY PRODUCTS:

"Studies on Fish Sausage. I. On Properties of Casing," by W. Shimizu, S. Ueno, and M. Fujita, and "II. Chemical Compositions and Effects of Storage," by W. Shimizu, S. Ueno, S. Hibiki, M. Fujita, Y. Shimizu, K. Endo, U. Shimizu, T. Ikeuti, I. Takagi, H. Terasima, and A. Nakagosi, articles, Bulletin of the Research Institute for Food Science, vol. 19, 1957, pp. 35-43, 44-51, printed in Japanese with summaries in English. Research Institute, Kyoto University, Kyoto, Japan.

#### SWORDFISH:

"On the Frozen Meat of Swordfish," by Y. Tsuchiya, article, Proceedings of the 9th International Congress on Refrigeration, Paris, 1955, pp. 4084-4095, printed. International Institute of Refrigeration, 177 Boulevard Malesherbes, Paris 17<sup>o</sup>, France.

#### TROUT:

"Rainbow' Trout Freezing in Japan," by S. Kato, article, Proceedings of the 9th International Congress on Refrigeration, Paris, 1955, pp. 4051-4057, 4092-4095, printed. International Institute of Refrigeration, 177 Boulevard Malesherbes, Paris 17<sup>o</sup>, France.

#### TUNA:

"Studies on the Quality Inspection of the Frozen Tunny in the Frozen State," by S. Hotani, article, Proceedings of the 9th International Congress on Refrigeration, Paris, 1955, pp. 4074-4077, 4092-4095, printed. International Institute of Refrigeration, 177 Boulevard Malesherbes, Paris 17<sup>o</sup>, France. Describes a useful method for determining the extent of deterioration or development of "jellied meat" of frozen tuna. The apparatus used consists of a thin, slender, steel plate which acts as a vibrator, and after insertion in the fish meat is oscillated electromagnetically.

#### UNITED KINGDOM:

Journal of the Marine Biological Association, vol. 36, no. 3, November 1957, pp. 445-723, illus., printed. Cambridge University Press, 32 East 57th St., New York 22, N. Y. Includes, among others, the following papers: "The Age and Growth of the Scallop, *Pecten maximus* (L.) in Manx Waters," by James Mason; "Vitamin A and Carotenoids in Certain Invertebrates. VI. Crustacea: Penaeidea," by L. R. Fisher, S. K. Kon, and S. Y. Thompson; and "Lernaeocera obtusa, n.sp., a Hitherto Undescribed Parasite of the Haddock (*Gadus aeglefinus* L.)," by Z. Kabata.

#### WHALING:

"Giant Killers of the California Coast," by John Wesley Noble, article, The Saturday Evening Post, vol. 230, no. 24, December 14, 1957, pp. 36, 37, 49, 50, illus., printed, single copy 15 cents. The Curtis Publishing Company, Independence Square, Philadelphia 5, Pa. A very interesting first-hand account of whaling operations in the Monterey-Farallon Grounds off San Francisco, Calif. The Del Monte Fish Company plant from which the operations are conducted is the only shore whaling station now operating in the United States. The author describes and presents photographs of the chase, killing, hauling, and subsequent butchering of humpback whales. The whale meat is used primarily in the manufacture of pet foods and milk feed.

"The Whalers are Sailing Again," article, Business Week, No. 1474, November 30, 1957, pp. 100-101, 103-104, 106-107, illus., printed, single copy 50 cents. McGraw-Hill Publishing Co., Inc., 99 N. Broadway, Albany 1, N. Y. A processor of agricultural products and fish oils in the United States, in partnership with Peruvian investors, is going after sperm whales off the coast of Peru to assure a supply of oil for its refineries. This article describes the old and new techniques of catching and processing whales.

