



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.
 SL - STATISTICAL SECTION LISTS OF DEALERS IN AND PRODUCERS OF FISHERY PRODUCTS AND BYPRODUCTS.
 FL - FISHERY LEAFLETS.
 SSR - FISH, - SPECIAL SCIENTIFIC REPORTS--FISHERIES (LIMITED DISTRIBUTION).
 SEP.- SEPARATES (REPRINTS) FROM COMMERCIAL FISHERIES REVIEW.

- | Number | Title |
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| CFS-1499 | - New Jersey Landings, 1956 Annual Summary, 4 pp. |
| CFS-1503 | - Texas Landings, January 1957, 3 pp. |
| CFS-1505 | - Massachusetts Landings, August 1956, 4 pp. |
| CFS-1513 | - California Landings, November 1956, 4 pp. |
| CFS-1514 | - New York Landings, January 1957, 4 pp. |
| CFS-1515 | - Lake Fisheries, 1955 Annual Summary, 11 pp. |
| CFS-1517 | - Canned Fish and Byproducts, 1956 Annual Summary, 20 pp. |
| CFS-1518 | - Packaged Fish, 1956 Annual Summary, 4 pp. |
| CFS-1519 | - Mississippi Landings, January 1957, 2 pp. |
| CFS-1520 | - California Landings, December 1956, 4 pp. |
| CFS-1521 | - Florida Landings, January 1957, 6 pp. |
| CFS-1522 | - Georgia Landings, February 1957, 2 pp. |
| CFS-1523 | - Alabama Landings, January 1957, 2 pp. |
| CFS-1524 | - Frozen Fish, 1956 Annual Summary, 13 pp. |
| CFS-1525 | - Texas Landings, February 1957, 2 pp. |
| CFS-1526 | - North Carolina Landings, February 1957, 2 pp. |
| CFS-1527 | - South Carolina Landings, February 1957, 2 pp. |
| CFS-1528 | - Frozen Fish Report, March 1957, 7 pp. |
| CFS-1529 | - Maine Landings, February 1957, 3 pp. |
| CFS-1530 | - New York Landings, February 1957, 4 pp. |
| CFS-1531 | - Rhode Island Landings, February 1957, 3 pp. |
| CFS-1532 | - New Jersey Landings, February 1957, 4 pp. |
| CFS-1533 | - Fish Stick Report, January - March, 1957, 2 pp. |
| CFS-1534 | - Mississippi Landings, February 1957, 2 pp. |
| CFS-1536 | - Alabama Landings, February 1957, 2 pp. |
| CFS-1546 | - Shrimp Landings, December 1956, 4 pp. |
| SL-25 | - Wisconsin 1957 (Lakes Area), Wholesale Dealers in Fishery Products (Revised), 2 pp. |

FL-336ff - Commercial Fisheries Outlook, April - June 1957, 43 pp., April 1957.

FL-393 - Fisheries of the United States and Alaska, 1956 (A Preliminary Review), by E.A. Power, 42 pp., April 1957. A preliminary review of commercial fishery activities in 1956. A record 5.2 billion pounds of fish and shellfish was taken by United States and Alaskan fishermen in 1956--a gain of 8 percent as compared with the previous year. It is estimated that the 1956 catch had an ex-vessel value of about \$363 million--about 27 million dollars more than the previous year. The record 1956 catch resulted from the largest menhaden production in the history of the fishery, and sharp increases in catches of tuna, Alaska and Maine herring, jack and Pacific mackerel, and industrial fish in New England. Small gains occurred in salmon, haddock, Pacific halibut, and anchovies while smaller catches were made of shrimp, Pacific sardines, and whiting. In 1956, about 150,000 commercial fishermen utilized 90,000 boats to fish. This leaflet points out that the commercial fishing industry was responsible for the employment of an estimated 300,000 workers in allied industries such as gear manufacture, making processing machinery, and boat construction; the employment of 101,000 shore workers in 4,024 shore establishments including processing plants and some wholesale units but not retailers; and the employment of 3,300 workers using 1,350 boats to transport fish from area of capture to handling and processing plants. The consuming public's response to this activity was to eat an average of 10.1 pounds (edible weight) of fish per person during the year; of this 5.7 pounds were fresh and frozen fish, 3.8 pounds were the canned product, and 0.6 pound was cured. In 1955 the consumption was 10.2 pounds per capita. While the total 1956 catch set an all-time record, the record-shattering portion of it was in industrial fish, with menhaden production setting the pace. The industrial catch, which is largely converted into oil and meal, totaled 2.4 billion pounds, 300 million pounds above the previous record set in 1955. The catch of edible fish was 2.8 billion pounds which is considerably below the record 3.4 billion pounds harvested in 1950. The total value of the catch, including both industrial and food fish, was \$363 million, or \$4 million below the high mark set in 1948. The average price of the catch dropped below 7 cents a pound for the first time since 1945. The 1956 average was 6.98 cents a pound as compared with the record of 8.17 cents in 1951. This decline is due largely to the big industrial catch which comprised a greater portion of the catch than ever before. This leaflet also contains information on the canned pack for 1956 and data by states on the quantity and value

of the 1955 catch and considerable data on imports and exports and world fisheries.

SSR-Fish. No. 197 - Nature of Green or Offcolor Condition in Precooked Yellowfin Tuna, by John J. Naughton, Michael M. Frodyma, and Harry Zeitlin, 12 pp., illus., December 1956. Preliminary results from the analytical use of spectral reflectance in the study of the "greening" condition in precooked yellowfin tuna are reported. It was found possible to predict tendency to greening from laboratory precooking. The preliminary conclusions were that color changes in tuna are the results of oxidative changes in the hemoglobin and myoglobin pigments of the meat, and that differences in color, including greening, result from differences in the concentration of these pigment derivatives. A relatively higher concentration of methemoglobin or metmyoglobin in raw fish meat seems to be indicative of a tendency to greening on precooking.

Sep. No. 476 - A Picture Study of an American Whaling Operation.

Sep. No. 477 - Bulk Handling of Alaska Herring Meal.

Sep. No. 478 - Research in Service Laboratories (May 1957): Contains these articles-- "Technical Note No. 37 - Use of Bacterial Culture to Aid Separation of Menhaden Oil in Gravity Tanks;" "Progress on Fish Meal Nutritive Value Studies;" and "Iron Sulfide Discoloration of Tuna Cans."

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

Receipts and Prices of Fresh and Frozen Fishery Products at Chicago, 1956, by G. A. Albano, 54 pp., processed, April 1957. (Available free from the Market News Service, U. S. Fish and Wildlife Service, 565 West Washington 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 1956. 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. Receipts 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. 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 wholesale market.

Boston Fishery Products Monthly Summary, February 1957, 15 pp.; Boston Fishery Products Monthly Summary, March 1957, 15 pp.; Boston Fishery Products Monthly Summary, April 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 months indicated.

California Fishery Products Monthly Summary, March 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) January 1957 Monthly Summary of Chicago's Fresh and Frozen Fishery Products Receipts and Wholesale Market Prices, 10 pp.; February 1957 Monthly Summary of Chicago's Fresh and Frozen Fishery Products Receipts and Wholesale Market Prices, 10 pp.; March 1957 Monthly Summary of Chicago's Fresh and Frozen Fishery Products Receipts and Wholesale Market Prices, 10 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.

Gulf Monthly Landings, Production, and Shipments of Fishery Products, April 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.

(New York) Monthly Summary - January 1957 - Receipts of Fishery Products at the New York City Wholesale Salt-Water Market, 4 pp. (Market News Service, U.S. Fish and Wildlife Service, 155 John St., New York 38, N.Y.) Receipts in the salt-water section of the Fulton Fish Market by species and by states and provinces for the months indicated.

(Seattle) Monthly Summary - Fishery Products, March 1957, 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 the month indicated.

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

Effects of Environment and Heredity on Growth of the Soft Clam (MYA ARENARIA), by Harlan S. Spear and John B. Glude, Fishery Bulletin 114 (From Fishery Bulletin of the Fish and Wildlife Service, vol. 57), 17 pp., illus., printed, 20 cents 1957. The objective of the experiment, described in this report, was to determine whether differences in growth rates of soft clams in two parts

of one bay were caused by environment or by heredity. The experiments demonstrated that environment, not heredity, is the important factor in growth. Clams from one origin may have highly significant differences in growth rate when planted in different areas. Clams of different origins assume similar growth rates when transplanted to the same area.

Laws and Regulations for Protection of the Commercial Fisheries of Alaska, 1957, Regulatory Announcement 51, 82 pp., printed, April 1957, 30 cents. This publication is divided into two sections. One section contains laws for the protection of the commercial fisheries of Alaska and related information, including the authority for regulation, rules regarding oyster culture, Bristol Bay residence requirements, regulation of salmon escapement, fishing gear restrictions, exceptions to weekly closed seasons, etc. The second section contains all the regulations for the commercial fisheries of Alaska amended to date and which became effective April 5, 1957. These 1957 regulations supersede the regulations published in Regulatory Announcement 48 which became effective April 21, 1956.

A Method of Estimating Abundance of Groundfish on Georges Bank, by George A. Rounsefell, Fishery Bulletin 113 (From Fishery Bulletin of the Fish and Wildlife Service, vol. 57), 16 pp., illus., printed, 15 cents, 1957.

Yellowfin Tuna Spawning in the Central Equatorial Pacific, by Heeny S.H. Yuen and Fred C. June, Fishery Bulletin 112 (From Fishery Bulletin of the Fish and Wildlife Service, vol. 57), 17 pp., illus., printed, 15 cents, 1957.

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.

AMBERGRIS:

Ambergris, Its Properties and Identification, Special Service Bulletin no. 2, 1 p., processed. Marine Laboratory, University of Miami, Coral Gables, Fla., revised June 1953.

CALIFORNIA:

"Report on California's Sacramento River Fisheries," article, 32 pp., processed. Department of Fish and Game, 722 Capitol Ave., Sacramento, Calif., March 29, 1957. There are seven parts to this paper: Part I--Problems of the Sacramento River Salmon, Striped Bass, and Shad Fisheries; Part II--Summary of Facts Relating to Sacramento River Migratory Fisheries; Part III--Conclusions; Part IV--Recommendations; Part V--Reasons for Recommendations; Part VI--Salmon Spawning Survey Results; and Part VII--Incidental Losses of Striped Bass in the Sacramento River Gill-Net Fisheries for Shad and Salmon.

CANADA:

Fisheries Statistics of British Columbia, 1956 (Preliminary), 11 pp., illus., processed. Canadian Department of Fisheries, Vancouver, B.C., Canada, April 5, 1957. A summary of fisheries statistics of British Columbia containing graphs and tables covering quantities and value of the most important species of fish for 1956; landed and marketed value of fish and fishery products for 1942-56; landings and manufactured products marketed in British Columbia for 1956; salmon pack; inventory of boats (10 tons and over), 1956; inventory of boats (less than 10 tons), 1956; and quantity and value of gear used in the primary fisheries, 1956.

Fisheries Statistics of Canada, 1954 (New Brunswick), 59 pp., printed in French and English, 50 Canadian cents. Queen's Printer and Controller of Stationery, Ottawa, Canada, 1957. Consists of tables giving the production and value of the principal species of fish and shellfish in New Brunswick in 1951-54; quantity and value of landings by species and fisheries districts, 1953-54; quantity and value of manufactured fishery products by species and fisheries districts, 1953-54; capital equipment in the primary fisheries operations; and the number of persons engaged in the fisheries.

Fisheries Statistics of Canada, 1954 (Ontario, Prairie Provinces and Northwest Territories), 71 pp., printed in French and English, 50 Canadian cents. Dominion Bureau of Statistics, Ottawa, Canada, 1957. Consists of tables giving the quantity and value of the principal species of inland fish landed in Ontario in 1951-54; quantity and value of landings by species and fisheries districts, Ontario, 1953-54; capital equipment in the primary fisheries operations; and the number of persons engaged in the fisheries. Similar data are also given of the Prairie Provinces (Manitoba, Saskatchewan, and Alberta) and the Northwest Territories.

CEYLON:

Food Regulations of Ceylon, World Trade Information Service Part 2, no. 57-35, 4 pp., printed, 10 cents. Bureau of Foreign Commerce, U.S. Department of Commerce, Washington, D.C. (For sale by the Superintendent of Documents, Government Printing Office, Washington 25, D.C.) The Food and Drugs Act, No. 25 of 1949, provides "for the regulation and control of the importation, sale and distribution of food and drugs and for matters connected therewith or incidental thereto," and gives the Government of Ceylon authority to issue regulations for administering and enforcing its provisions. This leaflet gives the sanitary requirements, special regulations, local regulations, and marking and labeling requirements of Ceylon's imported foods.

CROAKER:

Distribution, Growth, and Availability of Juvenile Croaker, MICROPOGON UNDULATUS, in Virginia, by Dexter S. Haven, Contributions from the Virginia Fisheries Laboratory, No. 68, 10 pp., illus., printed. (Reprinted from Ecology, vol. 38, no. 1, January 1957, pp. 88-97.) Virginia Fisheries Laboratory, Gloucester Point, Va.

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EXPORTS:

United States Exports of Domestic and Foreign Merchandise (Commodity by Country of Destination), Calendar Year 1956, Report No. FT 410, processed, Part I, 238 pp., 30 cents; Part II, 413 pp., \$2. Bureau of the Census, U.S. Department of Commerce, Washington, D.C., 1957. (For sale by the Superintendent of Documents, Washington 25, D.C.) The statistics in Part I cover exports of domestic and foreign merchandise (including fishery products and byproducts) under group 00 to group 5 from the United States to foreign countries. Part II covers merchandise under group 6 to 9 (some items of interest to the fishery and allied industries are included).

FLORIDA:

(Florida State Board of Conservation) Twelfth Biennial Report, 1955-56, 77 pp., illus., printed. Florida State Board of Conservation, Tallahassee, Fla., 1957. Describes the activities of the Florida State Board of Conservation during 1955-56, summarizing the goals attained and progress achieved in the betterment of salt-water conservation. Includes chapters on sport fishing, commercial fisheries, commercial fish landings, oyster cultivation and rehabilitation, research, licenses, administration, and trends. The chapter on commercial fisheries discusses the principal problem of the commercial fishing industry; the continued decline in demand for mullet. Several studies were concluded during the two-year period on the economic and marketing aspects, and other investigations, centered on new products that might be developed from mullet, provided technological know-how for producers. The chapter on commercial fisheries also discusses the second major commercial problem confronting the department, the persistent suspicion that the Tortugas shrimp fishery might be overexploited. The Board sponsored studies into possible preliminary measures to protect the shrimp fisheries' future. Following this research a rule was passed setting a minimum size for shrimp and prescribing certain mesh sizes for shrimp trawl nets.

FRANCE:

"Shell Fishing Methods in Brittany," by Dr. A. V. Brandt, article, World Fishing, vol. 6, no. 4, April 1957, pp. 48-49, illus., printed. John Trundell, Ltd., Temple Chambers, Temple Ave., London, E.C. 4, England. A brief article describing the different types of pots and creels used in taking lobsters and crabs along the French coast.

INTERNATIONAL LAW OF THE SEA:

La Utilizacion y Conservacion de las Riquezas del Mar (The Utilization and Conservation of the Resources of the Seas), by F. V. Garcia Amador, 250 pp., printed in Spanish. Editorial Lex, Amargura 259-261, Havana, Cuba, 1956. Discusses the utilization and conservation of the resources of the seas as one of the most pressing problems of contemporary international law. According to the author, abuse of the freedom of exploitation of the seas makes it necessary to formulate limitations on exploitation through close international cooperation. This book contains the five following chapters: (1) Introduction: Freedom of the Seas and Contemporary Problems;

(2) The Legal Control of the Seas and New Projections of State Authority; (3) Submarine Areas and the Right to Utilize Their Resources; (4) Conservation of the Living Resources of the Seas; and (5) Conclusion: The New International Law of the Sea.

JELLYFISH:

Some Inhabitants of Chesapeake Bay, Animals of Jelly, by Robert Bailey, Contributions from the Virginia Fisheries Laboratory, No. 66, 2 pp., illus., printed. (Reprinted from Virginia Wildlife, vol. XVII, no. 9, September 1956, pp. 12-13.) Virginia Fisheries Laboratory, Gloucester Point, Va.

LAWS AND REGULATIONS:

Conference on Co-ordination of Fisheries Regulations between Canada and the United States (Summary of Proceedings, Seattle, Washington--February 27-28, 1957), 15 pp., processed. U.S. Department of State, Washington 25, D.C. Discusses a meeting of representatives of Canada and the United States to discuss coordination of specific fisheries regulations for the Pacific area pertaining to offshore salmon net fishing, salmon troll fishing, and trawl fishing for petrale sole and black cod. The representatives of both Canada and the United States agreed that development of major offshore salmon net fisheries posed a serious problem and that regulations of such fishing in the eastern Pacific ocean was essential to the conservation of salmon stocks of North American origin. The United States Delegation stated that different regulations with regard to open season and size limit applied to the troll fisheries off the coast of continental United States, Canada, and Alaska and that in their view, such regulations were necessary to conserve the salmon stocks and thus it would be desirable to have these conform in the respective areas. The United States Delegation outlined certain recent developments in the troll fisheries which demonstrated in their view the necessity for further restrictions particularly with respect to the fishing season for petrale sole, a minimum size limit for black cod, and the mesh size authorized for trawlnets. The major agreements which were reached between the Canadian and United States Delegations during the Conference are presented, as well as a list of those attending the Conference. Reports of the various subcommittees on troll and trawl regulations and the location of the line delimiting offshore waters at the entrance to the Strait of San Juan de Fuca are also included.

Oregon Commercial Fisheries Code, 1955-1956, 158 pp., printed. Oregon Fish Commission, 307 State Office Bldg., Portland 1, Ore. A compilation of the laws of the State of Oregon relating to the protection and propagation of food fish and shellfish.

(Washington) Commercial Fishing Regulations, 1956 (Salmon and Bottomfish), 30 pp., printed. Department of Fisheries, Olympia, Wash., May 1956. This summary is condensed from regulations for the taking of food fish and shellfish for commercial purposes. Contains fishing gear definitions and general definitions and regulations

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The sections on Puget Sound salmon, Columbia River salmon, Grays Harbor, Willapa Harbor, Pacific Ocean waters, and coastal waters summarize regulations pertaining to areas, gear, and seasons.

MOLLUSKS:

Notes on Fungus Parasites of Bivalve Mollusks in Chesapeake Bay, by Jay D. Andrews, Contributions from the Virginia Fisheries Laboratory, No. 54, 7 pp., processed. (Reprinted from Proceedings of the National Shellfish Association, vol. 45, 1954, pp. 157-163.) Virginia Fisheries Laboratory, Gloucester Point, Va.

MULLET:

Interim Report on Mullet Research, by G. C. Broadhead and H. P. Mefford, Special Service Bulletin no. 8, 9 pp., processed. Marine Laboratory, University of Miami, Coral Gables, Fla., January 1954.

NAVIGATION:

Annual Report of the Director of the Coast and Geodetic Survey for the Fiscal Year Ended June 30, 1956, 75 pp., illus., printed, 40 cents. Coast and Geodetic Survey, U.S. Department of Commerce, Washington, D.C. Describes the activities and functions of the Coast and Geodetic Survey for 1956, including the preparation and issuance of nautical charts and coast pilots.

List of Lights and Other Marine Aids, Great Lakes, United States and Canada, Ninth Coast Guard District, Corrected to March 1, 1957, 235 pp., illus., processed, \$1.75. U.S. Coast Guard, Washington, D.C. (For sale by the Superintendent of Documents, Government Printing Office, Washington 25, D.C.) Lights and other marine aids to navigation maintained by or under authority of the United States Coast Guard and the Dominion of Canada on the Great Lakes and the St. Lawrence River above St. Regis River are contained in this list. This list is intended to furnish more complete information concerning aids to navigation than can be conveniently shown on charts. It is not intended to be used in navigation in the place of charts and the lake pilot and should not be so used. The charts should be consulted for the location of all aids to navigation.

Supplement to United States Coast Pilot 1, Atlantic Coast, Section A, St. Croix River to Cape Cod, Fifth (July 1, 1950) Edition, Serial 737/7, 39 pp., printed, February 2, 1957; Supplement to United States Coast Pilot 9, Alaska, Cape Spencer to Arctic Ocean, Sixth (November 6, 1954) Edition, Serial 779/2, 22 pp., printed, February 16, 1957; and Supplement to United States Coast Pilot 10, Hawaiian Islands, Third (January 1, 1950) Edition, Serial 735/7, 14 pp., printed, February 16, 1957. Coast and Geodetic Survey, U.S. Department of Commerce, Washington 25, D.C.

OYSTERS:

Changes in the Physiography of Oyster Bars in the James River, Virginia, by Nelson Marshall, Contribution No. 17 of the Oceanographic Institute, Florida State University, 9 pp., illus., printed. (Reprinted from The Virginia Journal of Science,

vol. 5, no. 3, July 1954, pp. 173-181.) The Oceanographic Institute, Florida State University, Tallahassee, Fla.

Cultivation of Oysters in Ponds at Bears Bluff

Laboratories, by G. Robert Lunz, 5 pp., processed. (Reprinted from Proceedings of the National Shellfisheries Association, vol. 46, pp. 83-87.) Bears Bluff Laboratories, Wadmalaw Island, S.C. One of the greatest drawbacks to good quality oyster production is "wrap-up," or the crowding of oysters on cultch. This is due to the long setting season, the intensity of setting, and the low mortality of the young. To control this intense setting, to practice water farming, and to utilize unproductive lands, cultivation of oysters in ponds was begun in 1944. This paper describes the construction of the ponds, the planting of seed oysters, and the results of the experiments.

Osmotic Behavior and Bleeding of the Oyster,

CRASSOSTREA VIRGINICA, by Milton Fingerman and Laurence D. Fairbanks, 19 pp., illus., printed. (Reprinted from Tulane Studies in Zoology, vol. 3, no. 9, April 12, 1956, pp. 151-168.) Department of Zoology, Tulane University, New Orleans, La. The present investigation was undertaken with a twofold purpose. The first aim was to obtain quantitative information concerning the weight changes and fluid losses that occur during the summer months in Southern oysters after the body has been removed from the shell. The second aim was to investigate in a detailed fashion the osmoregulatory ability of the American oyster, Crassostrea virginica. Results of these studies are presented.

Oyster Mortality Studies in Virginia--II. The Fungus Disease Caused by DERMOCYSTIDIUM MARINUM in Oysters of Chesapeake Bay, by Jay D. Andrews and Willis G. Hewatt, Contributions from the Virginia Fisheries Laboratory, No. 69, 25 pp., illus., printed. (Reprinted from Ecological Monographs, vol. 27, no. 1, January 1957, pp. 1-25.) Virginia Fisheries Laboratory, Gloucester Point, Va.

Setting of Oysters in Virginia, by Jay D. Andrews, Contributions from the Virginia Fisheries Laboratory, No. 53, 9 pp., processed. (Reprinted from Proceedings of the National Shellfish Association, vol. 45, 1954, pp. 38-46.) Virginia Fisheries Laboratory, Gloucester Point, Va.

Temperature Control Experiments on the Fungus Disease, DERMOCYSTIDIUM MARINUM, of Oysters, by Willis G. Hewatt and Jay D. Andrews, Contributions from the Virginia Fisheries Laboratory, No. 62, 5 pp., processed. (Reprinted from Proceedings of the National Shellfish Association, vol. 46, pp. 129-133.) Virginia Fisheries Laboratory, Gloucester Point, Va.

What Killed Your Oysters? by Jay D. Andrews, Contributions from the Virginia Fisheries Laboratory, No. 65, 2 pp., illus., printed. (Reprinted from Southern Fisherman, vol. XVI, no. 7, July 1956, pp. 22-23.) Virginia Fisheries Laboratory, Gloucester Point, Va.

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OYSTER DRILLS:

Trapping Oyster Drills in Virginia--I. The Effect of Migration and Other Factors on the Catch, by Jay D. Andrews, Contributions from the Virginia Fisheries Laboratory, No. 63, 15 pp., illus., processed; and II. The Time Factor in Relation to the Catch per Trap, by J. L. McHugh, Contributions from the Virginia Fisheries Laboratory, No. 64, 14 pp., illus., processed. (Reprinted from Proceedings of the National Shellfish Association, vol. 46, pp. 140-168.) Virginia Fisheries Laboratory, Gloucester Point, Va.

PHILIPPINES:

"Commercial Trawling in the Philippines," by Porfirio R. Manacop, article, The Philippine Journal of Fisheries, vol. 3, no. 2, July-December 1955, pp. 117-188, illus., printed. Department of Agriculture and Natural Resources, Manila, Philippines, 1956. Describes the trawl fishery which has developed to some magnitude in the Philippines over the last 30 years. Because of the increasing economic importance of the trawl industry, the author has written a detailed account of the nature and extent of the fishery as a whole and a study of the gear requirements and its operation. In addition to the excellent description and clear illustrations of the different types of trawling gear used in the Philippines, the author discusses the care and handling of the catch aboard the vessel; the species of fish, with their English and scientific names, taken by the commercial otter trawlers; marketing the catch; care and maintenance of fishing gear and accessories; and the outlook of the trawl fishery.

PRESERVATION:

"Aureomycin as an Ice Additive for Fresh Fish," by B. Albertson, article, Industrial Refrigeration, no. 3, September 1956, pp. 19-20, 52, printed. Nickerson and Collins Co., 435 North Waller Ave., Chicago 44, Ill.

"Organoleptic Studies of Irradiated Foods," by G. B. Pratt and O. F. Ecklund, article, Food Technology, October 1956, pp. 496-499, illus., printed. Institute of Food Technologists, 176 West Adams St., Chicago, Ill.

"Radiation Preservation of Foods: The Present Position," by R. S. Hannan, article, Bulletin de l'Institut International du Froid, vol. XXXVII, no. 1, 1957, pp. 179-209, illus., printed in English with a summary in French. Institut International du Froid, 177, Boulevard Malesherbes, Paris 17^e, France.

RED TIDE:

Irritant Gases Associated with Red Tide, by Robert M. Ingle, Special Service Bulletin no. 9, 4 pp., processed. Marine Laboratory, University of Miami, Coral Gables, Fla., March 1954.

A Tentative Method for the Prediction of the Florida Red Tide Outbreaks, by Frank Chew, Contribution No. 162, 13 pp., illus., printed. (Reprinted from Bulletin of Marine Science of the Gulf and Caribbean, vol. 6, no. 4, pp. 292-304, December 1956.) The Marine Laboratory, University of Miami, Coral Gables, Fla. Terrigenous

nutrient supply in a mass of water of estuarine origin as a significant parameter in red tide outbreak is further studied as part of an investigation for the Florida State Board of Conservation. A relationship between an estuarine mass, carrying the nutrient supply, and the ambient environment is suggested. This relationship is applied to the Florida red tide with the help of a new hypothesis of red tide outbreak.

REFRIGERATION AND FREEZING:

"Changes of Internal Temperature in Carps Subjected to Refrigeration by Means of Fresh-Water Ice" (Comportamento della temperatura in carpe sottoposte a refrigerazione con ghiaccio d'acqua comune), by P. Savi and G. Braccio, article, Il Freddo, vol. 10, no. 4, July-August 1956, pp. 51-54, illus., printed in Italian. Associazione Frigorifica Italiana, Via Donatello 8, Milano, Italy.

"The Cooling of Sea Perch on Board Freezer Ships" (Okhlazhdenje stavridy na refrizeratorakh), by Z.I. Vetrova, G.I. Ciplakova, and P.I. Kajokova, article, Rybnoe Khozjaistvo, no. 4, 1956, pp. 10-11, printed in Russian. Kotel 'nicheskaia Naberezhiaia D 1/15, Souizpechati Otdelu "Zhurnal-Pochtoi," Moscow, Zh-240, U.S.S.R.

"Fish Fillets and Fish Sticks," article, Quick Freezing, October 1956, pp. 280-282, illus., printed. Refrigeration House, Victoria Road, Woking, Surrey, England. Describes a new freezing line for consumer packs at Hull, Great Britain. After being filleted, graded, and weighed, then packaged, the fish is loaded into new type trolleys which contain 10 hollow aluminum shelves. These can be compressed over the packs by means of hydraulic pressure in order to avoid the kind of distortion that occurs when small rectangular packs are subjected to air blast freezing.

"Handling and Chilling of Fresh Fish on Vessels at Sea," by F. Bramsnaes, article, FAO Fisheries Bulletin, vol. X, no. 1, January-March 1957, pp. 25-41, illus., printed, single copy 30 U.S. cents. 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.) This report is intended to cover the scientific and industrial progress made since the FAO Meeting on Herring Technology, held in Bergen, Norway, in 1950, in the field of handling and chilling of fresh fish. It discusses the experimental work being conducted on the influence of temperatures on keeping time, handling of fish at sea, exposure on deck, gutting of fish, washing on board, ways of chilling, losses of protein in stowage, storage limits, bilgy odors, functions of ice, salt-water ice, storage in chilled sea water, and preservatives. A section on progress in the industry discusses washing fish on deck and hold construction.

"Refrigeration and Modern Storage Processes for Foodstuffs. III(1). Sterilization of Foodstuffs by Means of Irradiation" (El frio y los metodos modernos en la conservacion de alimentos. III.

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Esterilizacion de los alimentos por radiacion), by A. Santos Ruiz and J. Moreno Calvo, article, Revista del Frio, no. 3, July-September 1956, pp. 181-188, printed in Spanish. Centro Experimental del Frio, Serrano 150, Madrid, Spain. Discusses a study of the treatment of foods by radiant energy, which has been recommended in recent years for food sterilization. Also includes a general bibliography.

SCALLOPS:

"Scallops--and Scallop Dredges," and "New Type Dredge is Far More Effective," by James Mason and R.H. Baird, respectively, articles, World Fishing, vol. 6, no. 4, April 1957, pp. 35-39, illus., printed. John Trundell, Ltd., Temple Chambers, Temple Ave., London, E.C.4, England. The first article is abstracted from Scottish Fisheries Bulletin No. 6, January 1957, published by the Fisheries Division, Scottish Home Department. It describes the life history of the scallop in detail and discusses the existing fishery in Scotland and the Isle of Man. The second article is based on a paper from the Journal du Conseil International pour l'Exploration de la Mer, vol. XV, no. 3, 1955, from which the drawings were also taken. It describes the new, more efficient type of scallop dredge which was developed after careful research by the Ministry of Fisheries. In terms of catches, the gear described here has proved itself, after test hauls on various grounds, three times as efficient as the standard scallop dredge.

SEAWEEEDS:

How to Know the Seaweeds, by E. Yale Dawson, 203 pp., illus., printed, spiral bound \$2.25. Wm. C. Brown Co., Dubuque, Iowa, 1956.

SHAD:

The Shad in Virginia Waters, by W. H. Massmann and Robert S. Bailey, Contributions from the Virginia Fisheries Laboratory, No. 60, 4 pp., illus., printed. (Reprinted from Virginia Wildlife, April 1956, pp. 1-4.) Virginia Fisheries Laboratory, Gloucester Point, Va.

SHRIMP:

Protective Coloration and Habitat of the Shrimp TOZEUMA CAROLINENSIS Kingsley (Caridae: Hippolyttidae), by Gilbert L. Voss, Contribution No. 172 from The Marine Laboratory, University of Miami, 5 pp., illus., printed. (Reprinted from Bulletin of Marine Science of the Gulf and Caribbean, vol. 6, no. 4, December 1956, pp. 359-363.) The Marine Laboratory, University of Miami, Coral Gables 34, Fla.

SPINY LOBSTER:

A Prenaupliosoma Stage in the Larval Development of the Spiny Lobster, PANULIRUS ARGUS (Latreille), from Puerto Rico, by Carmelo Feliciano, Contribution No. 171 from The Marine Laboratory, University of Miami, 4 pp., illus., printed. (Reprinted from Bulletin of Marine Science of the Gulf and Caribbean, vol. 6, no. 4, December 1956, pp. 341-345.) The Marine Laboratory, University of Miami, Coral Gables 34, Fla.

SPONGES:

Sponge Cultivation, by F. G. Walton Smith, Special Service Bulletin no. 3, 5 pp., processed.

Marine Laboratory, University of Miami, Coral Gables, Fla., December 1948.

The Sponge Industry of Florida, by John F. Storr, Florida State Board of Conservation, Educational Series No. 9, 29 pp., illus., printed. Director of Conservation, State Board of Conservation, Tallahassee, Fla., 1957. A clearly written booklet which describes feeding and reproduction and other phases of the life of the sponge. Also discusses many parts of the sponge industry, including such topics as: where sponges are found and how they are gathered, cleaned, and sold; the value of the sponge industry; repopulation of sponge beds; and investigations to assist the sponge industry.

TILAPIA:

"The Tilapias and Their Culture, A Second Review and Bibliography," by Pierre Chimits, article, FAO Fisheries Bulletin, vol. X, no. 1, January-March 1957, pp. 1-24, illus., printed, single copy 30 U.S. cents. 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.) A supplement to the author's first article, "The Tilapias and Their Culture, A Preliminary Bibliography" (FAO Fisheries Bulletin, 1955, vol. 8, no. 1, pp. 1-33). Additional information is given on all three chapters of the original article, and there is a fourth chapter, concerning barrier-lakes and artificial reservoirs that have been stocked with tilapia, using a technique which is half-way between that used for open waters and that adopted for pond culture. There is also a brief fifth chapter on the use of tilapia for other purposes.

TRADE AGREEMENTS:

Trade Agreements Manual, second edition, 49 pp., processed. United States Tariff Commission, Washington 25, D.C., March 1957. A summary of selected data relating to the various trade agreements that the United States has entered into under the authority of the Trade Agreements Act of 1934 and the subsequent extensions of that authority. Part I of the manual considers United States trade-agreement obligations, past and present. This part includes, among other things, a list of the countries with which the United States had trade-agreement obligations in effect on March 1, 1957; a master list of all agreements that the United States has concluded under the Trade Agreements Act, whether or not those agreements are still in force; and a brief legislative history of the trade agreements program. Part II is devoted to information about the General Agreement on Tariffs and Trade. This part includes, among other things, a list of the countries that were contracting parties to the General Agreement on March 1, 1957; a master list of all accessions to, and withdrawals from, the General Agreement between October 30, 1947, and March 1, 1957, and a list of the conferences and sessions pertaining to the General Agreement that have been held since 1947.

TRADE LISTS:

The Office of Intelligence and Services, Bureau of Foreign Commerce, U.S. Department of Commerce, Washington 25, D.C., has published the

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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 \$2 each.

Oils (Animal, Fish, and Vegetable)--Importers, Dealers, Producers, Refiners, and Exporters, Belgium, 9 pp. (February 1957). Lists the name and address, size of firm, and type of product handled by each firm. Includes firms dealing in marine-animal oils.

Oils (Animal, Fish, and Vegetable)--Importers, Dealers, Producers, Refiners, and Exporters, Brazil, 35 pp. (February 1957). Lists the name and address, size of firm, and type of product handled by each firm. Includes firms dealing in fish and fish-liver oils.

Oils (Animal, Fish, and Vegetable)--Importers, Dealers, and Producers, Colombia, 16 pp. (February 1957). Lists the name and address, size of firm, and type of product handled by each firm. Includes a brief summary of Colombia's imports of marine-animal oils for 1955. Firms dealing in fish and marine-animal oils are listed.

UNITED KINGDOM:

Report on the British Fishing Industry, Distant Water Trawlers, 1956, 40 pp., illus., printed. The British Trawlers' Federation (Distant Water Section), Hull, England. A report on Britain's distant-water fleet in 1956, stating that "The past year has again been one of progress for the British Fishing Industry's Distant Water Fleets sailing from Hull, Grimsby and Fleetwood. Landings, human consumption, and earnings all increased in spite of atrocious weather on the Arctic fishing grounds during the last quarter of the year. Unfortunately, operating costs also rose very steeply and in view of this and of the scarce supplies due to bad weather at the end of the year, it was

a remarkable achievement in the public interest that the average over-all price at the quayside went up by less than a farthing (about 0.3 cents) a lb. The increased landings were achieved with fewer trawlers, great progress having been made in the modernization of the Fleet and the replacement of obsolete vessels by highly efficient new ships." The report also states that "Great progress was also made in achieving safety at sea. The year was notable for the fact that not a single trawlerman lost his life as a result of shipwrecks. The fact that only two ships were lost in spite of appalling weather may well have been due to a combination of more modern and efficient ships with more up-to-date navigational aids and the maintenance of extremely high standards of seamanship. The fact that no lives were lost in the two shipwrecks was undoubtedly due to the introduction of inflatable rubber liferafts, which were responsible for saving 57 lives. These have now been made compulsory and will replace lifeboats."

VIRGINIA:

History of Virginia's Commercial Fisheries, by J. L. McHugh and Robert S. Bailey, Contributions from the Virginia Fisheries Laboratory, No. 70, 23 pp., illus., printed. (Reprinted from The Virginia Journal of Science, vol. 8, no. 1, January 1957, pp. 42-64.) Virginia Fisheries Laboratory, Gloucester Point, Va.

Oyster Yields in Virginia, by J. L. McHugh and J. D. Andrews, Contributions from the Virginia Fisheries Laboratory, No. 55, 6 pp., illus., printed. (Reprinted from Southern Fisherman, August 1955.) Virginia Fisheries Laboratory, Gloucester Point, Va.

WHALES:

Here Come the Whales! by Alice E. Goudey, 94 pp., illus., printed, \$2.50. Charles Scribner's Sons, New York, N. Y., 1956.



FISH STICKS--A VERSATILE FOOD

When you want an economical, convenient, and versatile food to appease hot-weather appetites, golden-fried fish sticks are the answer. They may be served for breakfast with scrambled eggs; luncheon with a tossed salad; snack time with a glass of milk; dinner as the main dish of the meal; midnight supper with crisp potato chips and a tempting beverage; or as a hot appetizer for an easily prepared hors d'oeuvre tray.

These oblong sticks of skinned, boned, breaded, precooked, and frozen fish of several varieties are one of the most popular fish items on the market. This versatile food is also rated tops among the convenience foods as they are handy to store in the freezer, easy to prepare, and yet nutritious and delicious.