



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
CFS-1773	- Massachusetts Landings, 1957 Annual Summary by Ports, 15 pp.
CFS-1819	- Frozen Fish Report, May 1958, 8 pp.
CFS-1825	- Massachusetts Landings, 1957 Annual Summary by Gear and Subarea, 15 pp.
CFS-1831	- Massachusetts Landings, February 1958, 4 pp.
CFS-1833	- Fish Meal and Oil, May 1958, 2 pp.
CFS-1835	- Frozen Fish Report, June 1958, 8 pp.
CFS-1836	- Alaska Fisheries, 1957 Annual Summary, 8 pp.
CFS-1837	- Georgia Landings, May 1958, 2 pp.
CFS-1838	- South Carolina Landings, May 1958, 2 pp.
CFS-1839	- Imports and Exports of Fishery Products, 1953-1957, 12 pp.
CFS-1840	- Fish Stick Report, April-June 1958, 2 pp.
CFS-1841	- Maine Landings, May 1958, 3 pp.
CFS-1842	- Shrimp Landings, March 1958, 6 pp.
CFS-1843	- Florida Landings, May 1958, 7 pp.
CFS-1844	- New York Landings, May 1958, 4 pp.
CFS-1845	- Mississippi Landings, May 1958, 2 pp.
CFS-1846	- Fish Meal and Oil, June 1958, 2 pp.
CFS-1847	- Ohio Landings, May 1958, 2 pp.
CFS-1848	- Massachusetts Landings, March 1958, 4 pp.
CFS-1850	- Frozen Fish Report, July 1958, 8 pp.
CFS-1851	- Georgia Landings, June 1958, 2 pp.
CFS-1852	- South Carolina Landings, June 1958, 2 pp.
CFS-1853	- Shrimp Landings, April 1958, 6 pp.
CFS-1854	- Massachusetts Landings, April 1958, 4 pp.
CFS-1855	- Middle Atlantic Fisheries, 1957 Annual Summary, 6 pp.
CFS-1856	- South Atlantic Fisheries, 1957 Annual Summary, 6 pp.
CFS-1857	- New Jersey Landings, June 1958, 4 pp.
CFS-1858	- Massachusetts Landings, May 1958, 5 pp.
CFS-1859	- Maine Landings, June 1958, 4 pp.
CFS-1860	- Ohio Landings, June 1958, 2 pp.

- CFS-1861 - New York Landings, June 1958, 4 pp.
 CFS-1862 - Rhode Island Landings, April 1958, 3 pp.
 CFS-1863 - California Landings, March 1958, 4 pp.
 CFS-1864 - California Landings, April 1958, 4 pp.
 CFS-1865 - Florida Landings, June 1958, 7 pp.
 CFS-1866 - Rhode Island Landings, May 1958, 3 pp.
 CFS-1867 - Alabama Landings, May 1958, 2 pp.
 CFS-1873 - Ohio Landings, July 1958, 2 pp.
 CFS-1876 - Rhode Island Landings, June 1958, 3 pp.

Wholesale Dealers in Fishery Products (Revised):
 SL-8 - Pennsylvania, 1958
 SL-40 - Oklahoma, 1958.

- FL-147 - List of Federal Fish-Cultural Stations, 7 pp., revised January 1958.
- FL-448 - Some Publications on Fish Culture and Related Subjects, 11 pp., April 1958 (supersedes FL-6, August 1950).
- FL-453 - Infectious Pancreatic Necrosis of Salmonid Fishes (Acute Catarrhal Enteritis), by S. F. Snieszko and Ken Wolf, 3 pp., July 1958.
- FL-454 - Virus Disease of Sockeye Salmon, by Ken Wolf, 3 pp., July 1958.
- FL-455 - Blue-Sac Disease of Fish, by Ken Wolf, 3 pp., July 1958.
- FL-456 - White-Spot Disease of Fish Eggs and Fry, by Ken Wolf, 2 pp., July 1958.
- FL-457 - Soft-Egg Disease of Fishes, by Ken Wolf, 2 pp., July 1958.
- FL-458 - Lymphocystis Disease of Fish, by Ken Wolf, 4 pp., July 1958.
- FL-459 - Freshwater Fish Diseases Caused by Bacteria Belonging to the Genera Aeromonas and Pseudomonas, by S. F. Snieszko, 6 pp., July 1958.
- FL-461 - Columnaris Disease of Fishes, by S. F. Snieszko, 3 pp., July 1958.
- FL-462 - Fin Rot and Peduncle Disease of Salmonid Fishes, by S. F. Snieszko, 2 pp., July 1958.
- FL-463 - Nutritional (Dietary) Gill Disease (and Other Less Known Gill Diseases of Fresh-Water Fishes), by S. F. Snieszko, 2 pp., July 1958.
- FL-464 - Bacterial Gill Disease of Fresh-Water Fishes, by S. F. Snieszko, 4 pp., July 1958.
- FL-466 - Ulcer Disease in Trout, by Robert G. Piper, 3 pp., July 1958.

FL-467 - Fish Furunculosis, by S. F. Snieszko, 4 pp., July 1958.

FL-468 - Excise Tax Exemptions Granted to Fishermen, by Robert Hamlich, 2 pp., July 1958. Exemptions in the nature of tax relief are granted to fishermen from the payment of certain excise taxes under both Federal and State statutes.

SSR-Fish. No. 239 - Water Quality Studies in the Columbia River Basin, by Robert O. Sylvester, 138 pp., illus., May 1958.

SSR-Fish. No. 245 - Cod and Hydrography--A Review, by John P. Wise, 20 pp., illus., May 1958. The effect of hydrographic conditions on various parts of the life cycle of the cod has often been described in the literature. This paper is an attempt to correlate many reports and to compare them one with another. As a convenient method of handling the information and relating hydrography to the cod, the various phases in the biology of the fish are taken up in turn-- spawning, eggs and larvae, feeding and growth, distribution and abundance of mature fish, and mortality. Under each segment of the life history the appropriate hydrographic phenomena are considered.

SSR-Fish. No. 256 - Length-Weight Relation in the Common or White Shrimp, *Penaeus setiferus*, by William W. Anderson and Milton J. Lindner, 13 pp., illus., May 1958. In order to determine the size at which a species can be most profitably taken, the relation between increase in mass weight of a shrimp population through growth and recruitment and decrease through mortality must be known. Information about length and weight as attributes of growth are essential in understanding this relation. This paper covers the results of a study of the length-weight relations for common or white shrimp from Texas.

SSR-Fish. No. 258 - Progress Report on Alaska Fisheries Management and Research, 1957, 28 pp., illus., June 1958. The U. S. Fish and Wildlife Service operates in Alaska under the general authority provided in the Congressional Act of June 18, 1926, commonly called the White Act, to protect and conserve the fisheries of Alaska. In accordance with the purposes outlined in the White Act, the administration of the commercial fisheries of Alaska has three principal functions: (1) To investigate the status of the fisheries resources and determine by scientific means whether they are yielding the maximum harvest and, if they are not, how this might be done; (2) to translate the scientific findings into management measures and regulations in order to achieve the maximum sustained yield; and (3) to enforce the fishery laws and regulations which apply in Alaskan waters. This progress report contains a brief description of the trends in the major Alaskan fisheries and the preliminary results of the research being done.

Sep. No. 522 - A Practical Depth Telemeter for Midwater Trawls.

Sep. No. 523 - Color and Quality of Canned Gulf of Mexico Yellowfin Tuna as Related to Weight of Fish.

Sep. No. 524 - 1957: The Year of Warm Water and Southern Fish off California Coast.

Sep. No. 525 - Research in Service Laboratories (September 1958): Contains these articles-- "Enzymes in Fish Tissue Under Study," and "Improved Handling of Fish Aboard Massachusetts Fishing Vessels."

A Market Development Plan for the New England Groundfish Industry, Circular 53, 22 pp., July 1958. Presents background information which was secured from processors, distributors, and consumers of New England groundfish and reports the conclusions and recommendations developed largely from that background information. The report is based on a study made by a firm of marketing management consultants under contract to the U. S. Bureau of Commercial Fisheries with funds made available by the Saltonstall-Kennedy Act of 1954.

Regulations Governing Processed Fishery Products, July 1958 (First Issue), 26 pp.

United States Standards for Grades of Frozen Fish Blocks, July 1958 (First Issue), 6 pp.

United States Standards for Grades of Frozen Fried Fish Sticks, July 1958 (First Issue), 5 pp.

United States Standards for Grades of Frozen Raw Breaded Shrimp, July 1958 (First Issue), 5 pp.

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

Production of Fishery Products in Selected Areas of Alabama, Florida, Louisiana, Mississippi, and Texas, 1957, by Peter DiMarco, 35 pp., processed, July 1958. (Available free from the U. S. Fish and Wildlife Service, 609-611 Federal Bldg., 600 South St., New Orleans, La.) The first part reports on trends and conditions in Gulf Coast fisheries during 1957 and gives a resume of the individual fisheries. For the shrimp fishery, a detailed account is presented of general conditions, total landings by species and states, composition of the landings by species, total landings by sizes and species, consumption data, prices, canned shrimp, sun-dried shrimp, imports, and cold-storage data. Discusses production and market conditions for the oyster, blue crab, and finfish fisheries, as well as the Gulf tuna fishery and imports of fresh and frozen fish and shellfish. The second part includes shrimp closed seasons in effect in the Gulf States during 1957, minimum shrimp size regulations, conversion factors and container capacities, and shrimp sizes. The second part also contains statistical tables showing total fishery products landings by areas and species, by species and months by areas and species by months; crab meat production by areas and months; fishery imports through the New Orleans Customs District and Port Isabel and Brownsville, Tex.; and LCL express shipments from New Orleans for 1957 by months and destination. Also included are tables showing monthly range of wholesale prices of fishery products on the New Orleans French Market; Gulf States weekly oyster and shrimp packs, 1956/57 season;

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Gulf States canned shrimp pack by seasons for a 5-year period; summary of Gulf shrimp landings for selected areas, 1956-57 and 5-year averages; and fishery products market classifications in the Gulf area. The areas covered by the report are: Mobile and Bayou LaBatre, Ala.; Apalachicola, Fla.; Pascagoula and Biloxi, Miss.; New Orleans and Lower Mississippi River, Golden Meadow, Houma, Chauvin, Dulac, Morgan City, Berwick, Patterson, and Delcambre, La.; and Port Arthur, Sabine Pass, Galveston, Freeport, Port Lavaca, Palacios, Aransas Pass, Rockport, Corpus Christi, Port Isabel, and Brownsville, Tex.

Receipts of Fresh and Frozen Fishery Products at New York City's Fulton Fish Market, 1957 (Includes Statistics and Marketing Trends), by T. J. Risoli, 43 pp., processed. (Available free from the Market News Service, U. S. Bureau of Commercial Fisheries, 155 John St., New York 38, N. Y.) The first part of this annual summary of New York City's Fulton Market receipts of fresh and frozen salt-water fishery products discusses the marketing trends for 1957. The subjects covered are: a comparison of New York City's Fulton Market Salt-Water Section receipts of finfish and shellfish, leading finfish species, shad receipts and prices, general marketing trends and conditions that affected the marketing of fishery products, New York City wholesale oyster prices, annual summary and analysis of receipts of finfish on New York City's Wholesale Fresh-Water Market, and a number of other related subjects. The second part of this annual report consists of a series of statistical tables giving the receipts of fish and shellfish in the Salt-Water Section of New York City's Fulton Fish Market by months and method of transportation; by species, method of transportation and states and provinces; and by points of origin and methods of transportation. Also includes imports of selected fresh and frozen fishery products for 1957 as compared with 1956.

California Fishery Products Monthly Summary, May 1958; June 1958; July 1958; 12 pp. each. (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 shrimp prices; American Tuna Boat Association auction sales; for the months indicated.

(Chicago) Monthly Summary of Chicago's Fresh and Frozen Fishery Products Receipts and Wholesale Market Prices, July 1958, 12 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 prices; for the month indicated.

Gulf Monthly Landings, Production, and Shipments of Fishery Products, June 1958; July 1958, 6 pp. each. (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 months indicated.

Monthly Summary of Fishery Products in Selected Areas of Virginia, North Carolina, and Maryland, July 1958; August 1958; 4 pp. each. (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 months indicated.

New England Fisheries--Monthly Summary, June 1958; July 1958; 21 pp. each. (Market News Service, U. S. Fish and Wildlife Service, 10 Commonwealth Pier, Boston 10, Mass.) Reviews the principal New England fishery ports, presenting food fish landings by ports and species; industrial fish landings and ex-vessel prices; imports; cold-storage stocks of fishery products in New England warehouses; fishery landings and ex-vessel prices for ports in Massachusetts (Boston, Gloucester, New Bedford, Provincetown, and Woods Hole), Maine (Portland and Rockland), Rhode Island (Point Judith), and Connecticut (Stonington); frozen fishery products prices to primary wholesalers at Boston, Gloucester, and New Bedford; and landings and ex-vessel prices for fares landed at the Boston Fish Pier and sold through the New England Fish Exchange; for the months indicated.

(New York) Monthly Summary - Receipts of Fishery Products at the New York City Wholesale Salt-Water Market, June 1958, 15 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 month indicated.

(Seattle) Monthly Summary - Fishery Products, July 1958, 8 pp. (Market News Service, U. S. Fish and Wildlife Service, Pier 42 South, Seattle 4, 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.

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Fishery Statistics of the United States, 1956, by E. A. Power, Statistical Digest No. 43, 476 pp., illus., printed, \$2.25, 1958. This is the latest in a series of annual statistical reports on the fisheries of the United States and Alaska, which contains data on the catch and ex-vessel value of fishery products, employment in the fisheries, quantity of gear operated, the number of

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fishing craft employed in the capture of fishery products, and certain information on the production and value of manufactured fishery products and byproducts. The statistical surveys, conducted during 1957 for 1956 data, covered all sections of the United States. The catch of fishery products in all sections of the United States and Alaska during 1956 totaled approximately 5.25 billion pounds valued at \$369 million ex-vessel--an increase of 10 percent in quantity and 10 percent in value as compared with 1955. Menhaden landings continued to climb and soared above 2 billion pounds, establishing a new record as the greatest annual catch of a single species ever made by United States fishermen. Shrimp was again the most valuable single item taken by domestic fishermen. The catch of these shellfish totaled 224.2 million pounds valued at \$70.9 million ex-vessel. The Gulf of Mexico was again the major shrimp-producing area, yielding 88 percent of the value of the total 1956 landings; however, commercial quantities of cocktail-size shrimp from the Washington Coast became significant in 1956, thus assuring further expansion of this fishery. Several of the major food fish recorded noteworthy increases during the year: tuna and tunalike (up 59 million pounds); sea herring (up 129 million pounds); Alaska salmon (up 34.4 million pounds); jack mackerel (up 40 million pounds); and Pacific mackerel (up 27 million pounds). Increased landings were also made in the fisheries for Pacific halibut and haddock, and to a lesser extent, alewives, anchovies, catfish, bullheads, and flounder. Gains were also made in the landings of clams and crabs. The only major fisheries showing decreases in 1956 were Pacific sardines (which totaled less than half of the 1955 landings), ocean perch, oysters, and shrimp. Although landings of oysters and shrimp decreased, their value increased over that of 1955 due mainly to excellent consumer demand. The pack of canned fishery products in the United States, Alaska, Hawaii, Puerto Rico, and American Samoa in 1956 amounted to over 979 million pounds valued at \$350 million to the packers. Increased packs of tuna, Alaska salmon, Maine sardines, Pacific Coast mackerel, and fish packed for pet food were responsible for the gain in the total pack. Production of fresh and frozen packaged fish in the United States totaled nearly 163 million pounds valued at over \$47 million to the processors. This represented an increase of about 4 million pounds and \$3 million over the 1955 production. United States foreign trade in fishery products during 1956 was valued at \$321 million of which \$281 million represented imports and \$40 million the value of exports. The value of imported fishery products in 1956 established a new record over 1955, the former high year. Some of the most important imports during 1956 were fresh and frozen groundfish fillets and steaks (including blocks and slabs), shrimp, canned salmon, and canned tuna in brine. The value of exports in 1956 were almost the same as for 1955, but there were decreases in exports of canned salmon, canned sardines, cured fishery products, and fish and marine-animal oils. The economic data presented in this report are essential for use by

persons engaged in commercial fishery and by governmental agencies concerned with the regulation and protection of commercial fisheries. Biological information included, which is important to sound fishery management, provides detailed information of fluctuations in the commercial catch by species, locality, and gear, and type of craft operated. To assist persons interested in reviewing historical statistics of the domestic fisheries, this report contains a bibliography listing the sources of data on the fisheries of the various regions of the United States for the years 1880 to 1956.

Uptake and Accumulation of Radioactive Zinc by Marine Plankton, Fish, and Shellfish, by Walter A. Chipman, Theodore R. Rice, and Thomas J. Price, Fishery Bulletin 135 (From Fishery Bulletin of the Fish and Wildlife Service, vol. 58), 16 pp., illus., printed, 15 cents, 1958.

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.

ALASKA:

1956 Annual Report, Report No. 8, 118 pp., illus., printed. Alaska Department of Fisheries, Juneau, Alaska. This report covers the activities of the Alaska Fisheries Board and the Alaska Department of Fisheries for 1956. The statistical tables cover the preceding 10-year period, while the financial statement is based on the Territorial biennium from April 1, 1956, to March 31, 1957. The 1956 activities of the Biological Research Division continued the three field studies under way in 1955 on Taku River salmon, Kitoi Bay red salmon, and Kodiak king crab. A new research project was initiated on silver salmon in Southeast Alaska. This report also describes the education and information, engineering, inspection, marine predator control, sport fish, and watershed management programs. The statistical part of the report contains data on the comparative values of canned salmon by species, 1947-1956; number of canneries and salmon pack, 1947-1956; salmon catch by gear, species and district, 1947-1956; poundage and value of Alaska fisheries landings, 1947-1956; and poundage and value of Alaska fisheries products prepared for market, 1947-1956. In addition to a financial statement, the report concludes with a discussion of future plans of the Department.

ANGLERFISH:

A Deep Sea Ceratioid Anglerfish of the Genus GIGANTACTIS from Florida, by C. Richard Robins and Walter R. Courtenay, Jr., Contribution No. 201, 6 pp., illus., printed. (Reprinted from Bulletin of Marine Science of the Gulf and

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Caribbean, vol. 8, no. 2, June 1958, pp. 146-151.) The Marine Laboratory, University of Miami, Virginia Key, Miami 49, Fla.

ANIMAL FEEDING:

"Feeding of Whale Meat," by Dr. A. J. Wood, article, National Fur News, vol. 30, no. 4, May 1958, pp. 12, 61, printed, single copy 35 cents. Galen E. Boyles Co., Inc., 200 Clayton St., Denver 4, Colo. A discussion of the use of whale meat as a protein supplement in mink rations. Some recent analyses are presented of certain whale meats in comparison with various other protein supplements used in mink feeding. Another table compares the ration costs of two typical rations utilizing whale meat and horse meat. "To summarize," the author states, "it seems safe to conclude that whale meat may be canned to provide a completely safe and nutritionally valuable source of protein for mink feeding. The cost of this product when consideration is given to savings in storage costs and to protein quality will make it competitive with many of the other mink protein supplements."

"Fish Feeding Experiments," by W. S. Gunn and Ronald E. Howell, article, National Fur News, vol. 30, no. 4, May 1958, pp. 13, 62-63, printed, single copy 35 cents. Galen E. Boyles Co., Inc., 200 Clayton St., Denver 4, Colo. Describes mink-feeding experiments conducted at the Kellogg Research Farm, Michigan State University, during the past five years. Controlled experimental results support theoretical and practical evidence that certain fish can be used just as effectively as horse meat in commercial mink rations.

"Fishmeal and Fishflour in the Mink's Diet," by William L. Loeschke, article, National Fur News, vol. 30, no. 6, July 1958, pp. 10, 37, illus., printed. Galen E. Boyles Co., Inc., 200 Clayton Street, Denver 6, Colo. Reports on experimental studies of the nutritional value of fish meal and fish flour in mink diets. The primary purpose of these experiments is to establish standards for evaluating mink feed products.

"Know Your Atlantic Ocean Fish," by Dr. Kendall Dolge, article, National Fur News, vol. 30, no. 4, May 1958, pp. 10, 50-51, printed, single copy 35 cents. Galen E. Boyles Co., Inc., 200 Clayton St., Denver 4, Colo. The author discusses the major points in the use of Atlantic Ocean fish in the feeding of mink. He gives the following helpful suggestions to mink ranchers: (1) Avoid spoilage of fish by careful handling on your own ranch, and by careful selection of your supplier; (2) If you feed fish known to contain thiaminase, either cook the fish before feeding or feed only on alternate days; (3) Don't feed any single species at over 15-20 percent until you know by your own experience it is safe. Be especially careful not to feed too high a percentage of hake; (4) Use a variety of fish and fish products. There is safety in numbers; (5) Know the composition of the fish you are feeding and properly supplement it; and (6) Keep up with the research being conducted at universities throughout the country. Help whenever and however you can."

AUSTRALIA:

Fishing and Whaling, Australia, 1956-57, Statistical Bulletin No. 3, 18 pp., illus., processed. Commonwealth Bureau of Census and Statistics, Canberra, Australia. A statistical report in two parts. The first part covers fisheries for 1956-57 with comparative data for the previous four years, presenting details on the quantity and value of landings by states; total quantity and value of landings; vessels, gear, and number of persons engaged in the fisheries; fish processing; imports, exports, and consumption of fresh and processed fish; production of fresh fish; production of fish by species and states; total production of fish by species; production of major fish species; production of crustaceans and mollusks by states; and pearl and trochus shell production. The second part summarizes Australian whaling statistics for five seasons, 1953-57.

BAIT FISH:

"The Intestine as a Diagnostic Character in Identifying Certain Clupeoids (Engraulidae, Clupeidae, Dussumieriidae) and as a Morphometric Character for Comparing Anchoveta (Cetengraulis mysticetus) Populations," by Wilhelm Har-der, article, Inter-American Tropical Tuna Commission, Bulletin vol. II, no. 8, 1958, pp. 367-388, illus., printed in English and Spanish. Inter-American Tropical Tuna Commission, La Jolla, Calif.

BLUE RUNNER:

Early Development and Larval Distribution of the Carangid Fish, CARANX CRYSOS (Mitchell), by Thomas W. McKenney, Elizabeth C. Alexander, and Gilbert L. Voss, Contribution No. 207, 33 pp., illus., printed. (Reprinted from Bulletin of Marine Science of the Gulf and Caribbean, vol. 8, no. 2, June 1958, pp. 167-200.) The Marine Laboratory, University of Miami, Virginia Key, Miami 49, Fla. Describes and illustrates the early development of the blue runner, Caranx crysos. Also discusses distribution of the species, its food habits, spawning, growth, temperature, and the salinities and depths of water in which it is captured.

BRAZIL:

Jangadeiros (Raftsmen), by Luis da Camara Cas-cudo, Documentario da Vida Rural No. 11, 60 pp., illus., printed in Portuguese with summary in English. Ministerio da Agricultura, Servico de Informacao Agricola, Rio de Janeiro, Brazil, 1957. Presents an account of fishing rafts and raftsmen of Brazil. Raft fishing provides a large amount of the fish consumed in Brazil. The author gives details of the raft fishing and describes the methods used for preparing food fish in the north coast of Brazil.

BELGIUM:

Officiele Lijst der Belgische Vissersvaartuigen, 1958 (Official List of Belgian Motor Fishing Vessels, 1958), 75 pp., printed in Dutch. Ministerie van Verkeerswezen, Brussels, Belgium.

CALIFORNIA:

The Marine Fish Catch of California (For the Years 1955 and 1956), Fish Bulletin No. 105,

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104 pp., illus., printed. Department of Fish and Game, Sacramento, Calif., 1958. Tables published in this bulletin supply the complete available record of all fish, mollusks, and crustaceans landed in California by commercial fishing vessels or shipped into California for processing. Statistical data cover annual landings and shipments, 1916-1956; commercial fish landings and shipments, 1955 and 1956; value of commercial fish landings and shipments, 1955 and 1956; licensed commercial fishermen; registered commercial vessels; origin of shipments, 1955 and 1956; origin of commercial fish landings, 1955 and 1956; monthly landings and shipments, 1955 and 1956--statewide; monthly landings and shipments, 1955 and 1956--by regions; value and poundage, annual landings by regions, 1955 and 1956; value and poundage by ports and regions, 1955 and 1956; sport catch, 1947-1956; and live bait catch, 1952-1956. In addition to the statistical data, this bulletin includes an article entitled "Rockfish Review," by J. B. Phillips; a list of common and scientific names of fishes, crustaceans, and mollusks; and an explanation of the tables.

CANADA:

Fisheries Statistics of Canada, 1956 (Ontario, Prairie Provinces, and Northwest Territories), 71 pp., printed in French and English, 50 Canadian cents. Queen's Printer and Controller of Stationery, Ottawa, Ontario, Canada, 1958. Consists of tables giving the value of the principal species of inland fish landed, 1949-56; quantity and value of landings by species and fisheries districts, 1955-56; capital equipment used in the primary fisheries operations; and the number of persons engaged in the fisheries. This information is presented separately for the provinces of Ontario, Manitoba, Saskatchewan, and Alberta, and for the Northwest Territories.

Operations of Modern Longliners and Dragners, Atlantic Seaboard, 1957, by John Proskie, Primary Industry Series No. 1, vol. 7, Part 2, 62 pp., processed. Department of Fisheries of Canada, Economics Service, Ottawa, Ontario, Canada, 1958. A statistical report covering the operations of modern fishing vessels in the Canadian Atlantic provinces. Presents tables summarizing the description of vessels, capital cost, financing, and ownership; fishing activities; landings and landed values; prices, receipts, expenditures, and net returns; fishing effort and returns; geographic operational areas; and seasonal fishing effort and landings.

"Some Observations on the Schooling Movements of the Alewife in Lake Ontario," by Joseph J. Graham, article, The Canadian Field-Naturalist, vol. 71, no. 3, July-September 1957, pp. 115-116, printed. Ottawa Field Naturalists' Club, Science Service Building, Ottawa, Ontario, Canada.

CANNING:

"Beretning fra Hermetikkindustriens Laboratorium 1953, 1954, 1955" (Reports from the Canning Industry Laboratory, 1953, 1954, and 1955), by E. Mathiesen, articles, Tidsskrift for Hermetik-industri, vol. 40, 1954, pp. 560-564, 567-569; vol.

42, 1956, pp. 68-70, 73-79, 489-490, 492-494, 497-500, 503-505, printed in Norwegian. Hermetikkindustriens Laboratorium, Stavanger, Norway. Describes the work of the Norwegian Canning Industry Laboratory at Stavanger, Norway, during the years 1953, 1954, and 1955. Reports on raw materials, pretreatment of raw materials, auxiliary materials, containers used, canned products and their manufacture, other preserved products, machines and equipment, and other activities.

"The Formation of Magnesium Ammonium Phosphate Crystals in Canned Sea Foods--III. The Crystallizing State of Chemically Synthesized Crystals at Various Temperatures; IV. Formation of the Crystals of $MgNH_4PO_4 \cdot 6H_2O$ and its Minimum Ion Concentration; and V. The Growth of the Crystals of $MgNH_4PO_4 \cdot 6H_2O$ in Glass Vessel," by E. Tanikawa, Y. Nagasawa, and T. Sugiyama, articles, Bulletin of the Faculty of Fisheries, Hokkaido University, vol. 8, 1957, pp. 59-73, printed. Faculty of Fisheries, Hokkaido University, Hakodate, Japan.

CHEMICAL COMPOSITION:

The Biochemical Composition of Fish, by R. M. Love, Department of Scientific and Industrial Research, Memoir No. 1106, 17 pp., illus., printed. Department of Scientific and Industrial Research, Food Investigation Organization, Torry Research Station, Aberdeen, Scotland.

CHESAPEAKE BAY:

"The Fishing Craft of the Chesapeake Bay," by Robert H. Burgess, article, The Commonwealth, vol. 15, no. 7, July 1958, pp. 19-22, 36-37, illus., printed. The Virginia State Chamber of Commerce, 111 North Fifth St., Richmond 19, Va. Presents a historical review of the types of vessels used, past and present, in the fisheries of the Upper Chesapeake Bay. Discusses the designs of vessels--especially oyster dredgers--made to conform to the special demands of weather and local conditions.

COD:

"Aspectos Tecnologicos da Preparacao de Bacalhau desde a Captura a Secagem--Elementos Historicos" (Technological Aspects of the Processing of Cod from Its Landing to Drying--Historical Elements), by Dr. A. Torres Botelho, article, Boletim da Pesca, vol. 11, no. 59, June 1958, pp. 11-37, printed in Portuguese. Gabinete de Estudos das Pescas, R. S. Bento, 644, 4.º -Esq., Lisbon, Portugal.

Bear Island Cod--Prospect for 1958, Ministry of Agriculture, Fisheries and Food Laboratory Leaflet No. 19, 10 pp., illus., processed. Ministry of Agriculture Fisheries and Food, Fisheries Laboratory, Lowestoft, England, April 1958.

"Chemical Changes Occurring in Cod Muscle during Chill Storage and Their Possible Use as Objective Indices of Quality," by J. M. Shewan and N. R. Jones, article, Journal of the Science of Food and Agriculture, vol. 8, 1957, pp. 491-498, printed. Society of Chemical Industry, 14 Belgrave Square, London, SW1, England.

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

"Influence of Intermittent Short Storage Periods at 15° F., as Encountered during Refrigerator Car Transportation, on the Quality of Frozen Cod Stored at 0° F.," by W. J. Dyer, D. I. Fraser, D. G. Ellis, and W. A. MacCallum, article, Journal of the Fisheries Research Board of Canada, vol. 14, 1957, pp. 627-635, printed. Fisheries Research Board of Canada, Ottawa, Ontario, Canada.

COMMISSION:

Annual Report 1957, International Pacific Salmon Fisheries Commission, 44 pp., illus., printed. International Pacific Salmon Fisheries Commission, New Westminster, Canada, 1958. A report of the Commission, an international agency appointed under a convention between Canada and the United States for the protection, preservation, and extension of the sockeye salmon fisheries in the Fraser River system. The ratification of the Pink Salmon Protocol on July 3, 1957, transferred the primary responsibility for protecting, preserving, and extending the pink salmon fishery of the Fraser River system to the International Pacific Salmon Fisheries Commission. To permit the Commission to fulfill its new terms of reference in respect to the pink salmon, all of the responsibilities of the Commission relating to sockeye salmon including the right to regulate the fishery in Convention waters, were broadened, effective immediately, to include pink salmon. Since the pink salmon occur in significant numbers in Convention waters only on the odd-numbered years and the 1957 run was due to start in a few weeks after the ratification of the Protocol, only a cursory examination of the available historical data was possible prior to the formulation of the 1957 regulations. Discussed in this report are the various activities of the Commission during 1957 and the 1957 regulations. The sockeye salmon report discusses the United States fishery, the Canadian fishery, escapement, rehabilitation of barren areas, and general investigations. The pink salmon report discusses the 1957 pink salmon fishery, escapement, and the management research program.

CRAYFISH:

"Wisconsin Crayfish," by C. W. Threinen, article, Wisconsin Conservation Bulletin, vol. 23, no. 7, July 1958, pp. 13-15, illus., printed. Wisconsin Conservation Department, Madison 1, Wisc. Presents a brief report on the life history and edibility of five species of crayfish common in Wisconsin.

DEHYDRATION:

"The Effects of Dehydration on Actomyosin in Fish and Beef Muscle," by Sheila M. V. Hunt and N. A. Matheson, article, Food Technology, vol. 12, no. 8, August 1958, pp. 410-416, illus., printed, single copies of periodical--domestic US\$1.50, foreign US\$1.75. (Published by the Institute of Food Technologists.) The Garrard Press, 510 North Hickory, Champaign, Ill. Changes which occur in actomyosin of beef and cod muscle as a result of dehydration are discussed. On dehydration, cod actomyosin becomes insoluble and the muscle fibers may or may not lose their

power to contract, though about half the adenosine triphosphatase activity is not destroyed.

DENMARK:

Fiskeriberetning for Aret 1957 (The Ministry of Fisheries Annual Report for 1957), 147 pp., illus., printed in Danish with English summary. Fiskeriministeriet, I. Kommission Hos G. E. C. Gad, Copenhagen, Denmark. A report on the Danish fishing industry for the year 1957. Presents statistical data on the number of fishermen fishing vessels, gear, and nets; landings of fish and shellfish; trout produced in ponds; amount of fish used for filleting, smoking, and canning; fish meal and oil production; exports of fresh and processed fishery products; and imports of fish and shellfish.

FISHERY STATISTICS:

Purpose and Methods in Fishery Statistics (Report of the First International Meeting on Fishery Statistics held in Copenhagen, Denmark, 26th-30th May 1952), edited by G. M. Gerhardsen, 371 pp., printed in English with a few papers in French. (Available from United States Mission to the United Nations, 2 Park Avenue, New York 16, N. Y.) Food and Agriculture Organization of the United Nations, Rome, Italy. The purpose of this report is to give a detailed account of the First International Meeting on Fishery Statistics, which was organized by the Food and Agriculture Organization of the United Nations in Copenhagen, Denmark, on May 26-30, 1952. The report is based on papers which were written for the meeting on purposes and methods in fishery statistics. The discussions and papers have been grouped under the following chapters: (1) Introduction and Summary Report; (2) The Need for Fishery Statistics and the Degree of Accuracy Required; (3) Collection of Fishery Statistics; (4) Fishing Craft Statistics; (5) Statistics on Fish Processing, Marketing, and Distribution; (6) Fishery Products in External Trade Statistics; and (7) Presentation of Fishery Statistics with Special Reference in International Comparison. "The participants in the meeting came largely from Europe and North America, but many of the problems referred to are universal, and," states the editor, "it is hoped that this symposium on fishery statistics will be found useful in all progressive fishery countries of the world. Current interest in the development of fisheries which is likely to become even more marked in the years to come, points to the indispensable need for accurate statistics for which a thorough knowledge of the purpose and methods is an obvious prerequisite. It is for this reason that this report, though essentially a record of the proceedings of a meeting is being made available not only to participants but to all interested in its subject matter."

FISH MEAL:

"Sulla Determinazione dell'Azoto Proteico nelle Farine di Pesce" (The Determination of Protein Nitrogen in Fish Meal), by B. M. C. Ricotta and R. Sara, article, Conserva e Derivati Agrumari, vol. 5, 1956, pp. 194-198, printed in Italian. Centro Sperimentale per l'Industria delle Conserva Alimentari della Regione Siciliana, Palermo, Italy.

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FLORIDA:

A Survey of the Number of Anglers and of Their Fishing Effort and Expenditures in the Coastal Recreational Fishery of Florida, by Robert W. Ellis, Albert Rosen, and Alan W. Moffett, Technical Series No. 24, 50 pp., illus., printed. The Marine Laboratory, University of Miami, Virginia Key, Miami 49, Fla., May 1958. Report on a study of the sport fishing in the salt and brackish waters of Florida made to determine the importance of this fishery to the economy of the State, to focus public attention on its importance, and to obtain information which will aid in the formulation of wise management laws.

FREEZING:

"Changes in the Myosin Fraction of Fish Muscle due to Freezing, Storage, and Thawing," by Olavi E. Nikkila, article, Nordisk Kjølemote, 1957, pp. 3-7, printed in Swedish. Fiskeridirektoratet, Industriavdelingen, Postboks 188, Bergen, Norway.

FREEZING FISH AT SEA:

The Development of a Quick-Freezing Plant for Deep Sea Trawlers, by G. C. Eddie, R. T. Hales, and D. W. Higman, paper read before Institute of Refrigeration, London, March 1957, 9 fig., 6 ref. Institute of Refrigeration, London, England.

FROZEN FISH:

"The Basis of Fish Glazing," by A. Piskarev and S. Gakichko, article, Bulletin of the International Institute of Refrigeration, vol. 35, 1955, p. 560, printed. (Reprinted from Kholod. Tekh. (U. S. S. R.), vol. 31, no. 4, 1954, pp. 36-39.) International Institute of Refrigeration, 177 Boulevard Maiesherbes, Paris 17^e, France.

"Effect of Glazing on Quality, Preservation, and Extension of Storage Life of Frozen Fish," by A. Piskarev, article, Bulletin of the International Institute of Refrigeration, vol. 35, 1955, p. 130, printed. (Reprinted from Kholod Tekh. (U. S. S. R.), vol. 31, no. 3, 1954, pp. 51-54.) International Institute of Refrigeration, 177 Boulevard Maiesherbes, Paris 17^e, France.

"Esperimenti di Conservazione di Filetti di Pesce Mediante Congelamento" (Experiments on the Preservation of Fish Fillets by Freezing), by G. Botalla, O. Bruss, A. Daghetta, and A. Monzini, article Annali della Sperimentazione Agraria, vol. 10, 1956, pp. 1651-1661, printed in Italian with English summary. Ministero della Agricoltura e della Foreste, Rome, Italy.

"Handling Frozen Sea Food," by C. Butler, article, Refrigerating Engineering, vol. 64, no. 8, 1956, pp. 52-53, printed. American Society of Refrigerating Engineers, 234 Fifth Avenue, New York 1, N. Y.

"Method of Heat Calculation in the Process of Glazing Fish," by Ya. Shneider, article, Bulletin of the International Institute of Refrigeration, vol. 34, 1954, p. 472, printed. (Reprinted from Kholod. Tekh. (U. S. S. R.), vol. 30, no. 2, 1953, pp. 57-61.) International Institute of Refrigeration, 177 Boulevard Maiesherbes, Paris 17^e, France.

"Temperature Measurements on Frozen Fish during Road Transport," by D. L. Nichol and J. Lawrence, article, Modern Refrigeration, vol. 59, 1956, pp. 316-319, printed. Modern Refrigeration, Victoria Road, Woking, Surrey, England.

GENERAL:

"Egyptian Conservation," by Ednard Waldo, article, Louisiana Conservationist, vol. 10, no. 7-8, July-August 1958, pp. 14-15, 19-20, illus., printed. Louisiana Wild Life and Fisheries Commission, 126 Civil Courts Bldg., New Orleans, La. Discusses recent discoveries of ancient Egyptian bas reliefs and drawings which show that 5,000 years ago Egyptians were expert at the art of raising game and food fish--especially tilapia and Nile perch.

Journal du Conseil, vol. XXIII, no. 2, 169 pp., illus., printed. Conseil Permanent International pour l'Exploration de la Mer, Charlottenlund Slot, Denmark, April 1958. Contains, among others, the following articles: "The World's Southernmost Indigenous Cod," by John P. Wise; "Reactions of Fish to Artificial Light, With Special Reference to Large Herring and Spring Herring in Norway," by Olav Dragesund; "On the Shape of Herring Schools," by G. C. Bolster; and "Diet-Induced Variation in the Free Amino Acid Complex of Sardinops caerulea," by David A. Farris.

Living Resources of the Sea, by Lionel A. Walford, 336 pp., illus., printed, \$6. The Ronald Press Co., New York, 1958.

This unusual book, by the former Chief of the Branch of Fishery Biology of the U. S. Fish and Wildlife Service, is the report of a study made for The Conservation Foundation on the opportunities for research and for an expansion of the harvest from the sea.

The author recognizes the urgency of the need of increased and unending supplies of food from the sea for the rapidly growing world population and starts his study with three basic assumptions: (1) We have not yet learned how to exploit the food resources of the sea fully; (2) scientific research will show the way; (3) there are gaps in present research programs which need filling. He then proceeds for the next six chapters to review the gaps rather than the substance of our knowledge in the several sciences which contribute to fishery science. He explores the popular hope that the ultimate food source, the marine plankton, can be harvested and shows the difficulties of fish farming in brackish waters. He points out the need for improving old methods of discovery and capture of fish--the need of developing entirely new principles and methods.

Part II of the book is a condensed review of the character and suspected extent of the several classes of food sources, invertebrates, fishes, reptiles, mammals, and seaweeds. The last chapter is a summing up and a looking forward.

The author takes a properly cautious and conservative view of the prospects concluding

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that there are vast opportunities for research, too few researchers being trained, and, because of geographic, economic, and ethnic difficulties, little chance of a great or even an early increase (by more than a factor or two) of the world's food from the sea.

The book is very readable and entertaining as well as informing and stimulating for the thoughtful reader. The style is flowing, and the whole book is remarkably free of minor errors. It amply fulfills its principal aim of directing and encouraging marine fishery research by extending the horizons of present-day thinking.

--Elmer Higgins

GREAT LAKES:

Great Lakes Fauna, Flora, and Their Environment--A Bibliography, by John Van Oosten, 86 pp., processed. Great Lakes Commission, Ann Arbor, Mich., 1957. A bibliography on the fauna, flora, and limnology of the Great Lakes, compiled partly as a result of the international and national interest in the Great Lakes that has grown in recent years due to the havoc wrought by the sea lamprey on the fisheries. The publications listed are indexed under broad subjects. The section on fish covers biology; parasites and diseases; taxonomy, catalogs, and records; culture; and fisheries.

HERRING:

Luftfrysing av Sild--Undersokelse av Nodvendig Frysetid (Air-Blast Freezing of Herring--Research on Freezing Time Needed), by Gustav Lorentzen, Report on Technological Research Concerning Norwegian Fish Industry, vol. III, No. 9, 30 pp., illus., printed in Norwegian with summary in English. A. S. John Griegs Boktrykkeri, Bergen, Norway, 1958. The results of a study of the content of fat and fat-free dry material of the Norwegian winter herring, based upon industrial analysis of a great number of separate catches during the years 1930-56.

Vintersildas Innhold av Fett og Fettfritt Torrstoff i Arene 1930-1956 (Amount of Fat in Winter Herring and Fat-Free Dry Material in the Year 1930-1956), by Sivilingenior Einar Flood, Report on Technological Research Concerning Norwegian Fish Industry, vol. III, no. 5, 9 pp., illus., printed in Norwegian with summary in English. A. S. John Griegs Boktrykkeri, Bergen, Norway, 1958. The results of a study of the content of fat and fat-free dry material of the Norwegian winter herring, based upon industrial analysis of a great number of separate catches during the years 1930-56.

ILLINOIS:

What Fish is This? by Al Lopinot, 23 pp., illus., printed. Illinois Department of Conservation, Division of Fisheries, 121 State House, Springfield, Ill. Consists of identification charts to aid in identifying some of the fish caught in Illinois.

INDEXES:

Index to the Publications of the Fishing Industry Research Institute for the First Ten Years, 1947-1957, compiled by J. S. Dunn, 65 pp.,

printed. Fishing Industry Research Institute, Cape Town, South Africa, 1958. This index covers the publications issued during the first ten years of the Fishing Industry Research Institute's existence.

IRRADIATION PRESERVATION:

"Comportamento dei Filetti di Pesce Refrigerati dopo Irradiazione con Luce Ultravioletta" (Behavior of Refrigerated Fish Fillets after Irradiation with Ultraviolet Light), by A. Monzini and G. Botalla, article, Annali della Sperimentazione Agraria, vol. 10, 1956, pp. 1447-1455, printed in Italian with English summary. Ministero della Agricoltura e della Foreste, Rome, Italy. Describes experiments in which fish fillets of hake (Merluccius merluccius), sealed in cellophane bags, were irradiated for 1 or 2 hours and then stored at 1° C. (33.8° F.) for up to 240 hours. Reports on the changes in the external appearance and chemical composition of the fish.

"Food Preservation by Radiation as of 1958--A Report to Management," by Kevin G. Shea, article, Food Technology, vol. 12, no. 8, August 1958, pp. 6-16, printed, single copies of periodical--domestic US\$1.50, foreign US\$1.75. (Published by the Institute of Food Technologists.) The Garrard Press, 510 North Hickory, Campaign, Ill. Discusses the activities of the Interdepartmental Committee on Radiation Preservation of Food which was formed to coordinate the government effort in food irradiation and to bring radiation preservation into industrial use. Contains a report on the work being done on the preservation of food (including fishery products) by irradiation.

LABORATORIES:

"New Marine Research Lab," article, Louisiana Conservationist, vol. 10, no. 4, April 1958, pp. 4-5, 8, illus., printed. Louisiana Wild Life and Fisheries Commission, 126 Civil Courts Bldg., New Orleans, La. Describes the dedication of the U. S. Bureau of Commercial Fisheries' new fishery laboratory at Pascagoula, Miss., which will be a center of marine research in the Gulf of Mexico. The new building houses laboratories and offices for exploration and technological work. Two vessels, the Oregon and the Silver Bay, are also used to discover new fishery resources and to develop improvements for gear used by commercial fisheries. The basic purpose of this laboratory is to assist the commercial fishing industry in solving technical problems in the processing of marine products, in developing new products, and suggesting new uses for products now in production. An outline of the projects under way and plans for future operations are discussed.

LOBSTER:

"Quick Frozen Scampi," by J. L. Rogers, article, Food Trade Review, vol. 27, no. 8, 1957, pp. 15, 18, printed. Food Trade Review, Ltd., 7 Garrick St., London W. C. 2, England. Describes the harvesting, processing, and packing of scampi, Nephrops norvegicus.

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"Yellow Discoloration and Deterioration in Frozen Lobster Meat," by E. G. Bligh, W. J. Dyer, and D. C. Horne, article, Journal of the Fisheries Research Board of Canada, vol. 14, 1957, pp. 637-644, printed. Fisheries Research Board of Canada, Ottawa, Ontario, Canada.

MARITIME ACCIDENTS:

Convenio Internacional para la Unificacion de Ciertas Reglas Relativas a la Competencia Penal en Materia de Abordaje u Otros Accidentes de Navegacion (International Conference on Some Regulations Pertaining to Legal Competence in Relation to Maritime Accidents)--Brussels, May 10, 1952, 7 pp., printed in Spanish. Imprenta del Ministerio de Asuntos Exteriores, Madrid, Spain, 1953.

MENHADEN:

"The Bountiful Menhaden," by Bernard L. Gordon, article, Nature Magazine, June-July 1958, vol. 51, no. 6, pp. 322-323, 332, illus., printed, single copy 50 cents. American Nature Association, 1214 16th St., NW., Washington, D. C. A description of the menhaden, Brevoortia tyrannus, which is found in Atlantic waters from Nova Scotia to Brazil. The author gives a brief history of the menhaden fishery, habits of the menhaden, methods of capture, and manufacture of menhaden oil, scrap, and meal. The menhaden is the king of the industrial fish-processing industry and furnishes great quantities of oil that is used in products like paint, printing inks, soaps, and insect sprays.

"The Timourous Menhaden," by Anthony Higgins, article, Monsanto Magazine, vol. 37, no. 3, Summer 1958, pp. 26-29, illus., printed. Monsanto Chemical Company, St. Louis 24, Mo. A report on the menhaden fisheries of the South Atlantic and Gulf coasts, briefly covering their history, economic importance, and fishery methods.

MOISTURE CONTENT:

"A Rapid Method for the Determination of Moisture Content in Fish Meat--I. Relation Between Error of Estimation and Fat Content," by Y. Tsuchiya and Y. Sato, article, Tohoku Journal of Agricultural Research, vol. 7, 1957, pp. 273-276, printed. Tohoku University, Sendai, Japan.

MUSSELS:

"The Freezing and Cold Storage of Mussels," by A. Banks and C. T. House, article, Modern Refrigeration and Air Control, vol. 61, no. 724, July 1958, pp. 686-688, printed. Maclaren House, 131 Great Suffolk St., London, S. E. 1, England. Describes experiments made on the preservation of cooked mussel meats which have shown that by the use of certain methods of cooking, freezing, and cold storage, frozen mussel meats can be kept in a virtually unchanged condition for periods of 8-9 months.

NEW JERSEY:

Annual Report, New Jersey Department of Conservation and Economic Development, Division of Fish and Game (For the Fiscal Year Commencing July 1, 1956, and Ending June 30, 1957), 68 pp., illus., printed. Department of Conserva-

tion and Economic Development, Trenton, N. J. Reports on the activities of the Division of Fish and Game during the fiscal year 1956/57; lists the adopted regulations for the 1957 season, known as the Fish and Game Code; and includes a section on law enforcement. A section of the report discusses the fisheries management program, the propagation and distribution of fish, the development of the Pequest River Trout Rearing Station, research and experimentation, Dingell-Johnson projects, population manipulation, introduction of new forage species, licenses for commercial fishing, and miscellaneous projects. Also includes statistics on total pounds of fish by species reported taken by fish pounds, 1956; New Jersey landings by species for the calendar year 1956; Hudson River shad industry; and Delaware River shad industry. A section is also included on wildlife management.

NEW ZEALAND:

Report of the Marine Department for the Year Ended 31 March, 1958, 87 pp., printed. Government Printer, Wellington, New Zealand, 1958. This report contains, among others, a section on the fisheries of New Zealand in 1957 which covers crayfish, fishing vessels and personnel, fish landings, methods of capture, landings by ports, review of the principal fishing ports, exports and imports, big-game fishing, fish-liver oil, the 1957 whaling season, oysters, toheroa, whitebait fishery, mussels, fresh-water fisheries and research, marine research, activities of the Fishing Industry Advisory Council, legislation, and a list of the scientific and common names of New Zealand's most important species of fish and shellfish. The section concludes with a series of tables giving detailed data on the fisheries.

NIGERIA:

Annual Report of the Federal Fisheries Service for the Year 1956-57, 10 pp., illus., printed. Federation of Nigeria Federal Government Printer, Lagos, Nigeria, 1958. Reports on the work of the Nigerian Federal Fisheries Service. Describes proposals for future development of the Service and discusses the results of research projects in sea fishing and fish culture.

OCEANOGRAPHY:

An Oceanographic Description of the Eastern Tropical Pacific, by Warren S. Wooster and Townsend Cromwell, Contributions from the Scripps Institution of Oceanography No. 996, 116 pp., illus., printed, \$5.00 paper. (Reprinted from Bulletin of the Scripps Institution of Oceanography, vol. 7, no. 3, pp. 169-282.) University of California Press, Berkeley, Calif., 1958.

OREGON:

Report of the Special Legislative Interim Fisheries Committee for 1955-1957, to the Governor of the State of Oregon and the Forty-Ninth Legislative Assembly, 32 pp., processed. Oregon State Fish Commission, 307 State Office Bldg. Portland 1, Ore.

OYSTERS:

Oyster Culture in Florida by Robert M. Ingle and F. G. Walton Smith, Educational Series No. 5,

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26 pp., illus., printed. State Board of Conservation, Tallahassee, Fla. revised May 1956. The objective of this booklet is to provide the information necessary for the successful development of the oyster industry throughout the State of Florida. A section on the life history of oysters describes how they live, breed, and how fast they grow; the enemies of oysters; where oysters are found and how they are collected. Another section tells what the oyster industry is worth and how it may be improved. Other sections contain discussions of oyster cultivation and food value, and recipes for cooking oysters.

"Vitamin Content of Fresh, Frozen Oysters," by E. A. Fieger, article, Quick-Frozen Foods, vol. 19, no. 4, 1956, pp. 152, 155, printed E. W. Williams Publications, Inc., 82 Wall St., New York 5, N. Y.

QUALITY:

"Normes de Fraicheur du Poisson Frais--I. Appreciation de l'Alteration du Poisson Frais par un Examen Organoleptique Systematique; and II. Etat Moyen du Poisson Frais dans Quelques Grands Centres Urbains" (Standards of Freshness of Fresh Fish--I. Assessment of the Deterioration of Fresh Fish by a Systematic Organoleptic Examination; and II. Average State of Fresh Fish in some Large Urban Centers), by F. Soudan, A. Daknof, J. Bazin, G. Chapel, Daspert, and E. Seynave, articles, Annales de la Nutrition e de l'Alimentation, Memoires Originales, vol. 11 1957, pp. 1-24, printed in French. Centre Nationale de la Recherche Scientifique, 45 Rue d'Ulm, Paris 5^e, France.

ROCKFISHES:

"Rockfish Review," by J. B. Phillips, article, The Marine Fish Catch of California, Fish Bulletin No. 105, pp. 7-25, illus., printed. California Department of Fish and Game, Sacramento, Calif., 1958. This article describes the past developments in the catch of rockfish (family Scorpaenidae) and gives the total annual landings in the Northern, Central, and Southern California areas for 1916-1956; and total landings of rockfish along the Pacific Coast of North America, exclusive of Mexico, for 1936-1956. It also discusses the types of gear used in commercial rockfish fishery off California, areas of landing, importance of species, products, regulations, research, and catch statistics. A list of proposed standardized group names for reporting commercial rockfish landings is also included.

SALMON:

"Investigation and Management of Atlantic Salmon in 1957," article, Trade News, vol. 10, no. 12, June 1958, pp. 3-23, illus., printed. Department of Fisheries of Canada, Ottawa, Canada. A review of the progress made during 1957 in Canada's Atlantic salmon research and management program. Part I, by C. J. Kerswill, P. F. Elson, and M. H. A. Keenleyside, deals with the research program and covers Atlantic salmon statistics; Miramichi salmon runs; recoveries of salmon tags applied in 1957, Miramichi area, N. B.; the behavior of young salmon; smolt mark-

ing and recovery of marked adults; effects of DDT spraying on other fishes; changes in Miramichi River insect populations after DDT spraying; observed effects of DDT spraying on food of young salmon; effects of DDT spraying in New Brunswick on future runs of adult salmon; relative toxicity of DDT and Malathion to salmon; introduction of aquatic insect larvae to the North Branch Big Sevole River, N. B.; hydroelectric developments and St. John River salmon; and studies aimed at improving young salmon production. Part II, by E. W. Burrige, is a review of field projects included in the general management program to study and improve the salmon's fresh-water habitat. This part discusses the salmon river surveys; adult salmon enumeration; downstream migrant sampling; early-late run experiment; hatchery production; experimental predator bird control; and adult salmon transfer.

"Japanese, U. S. Agree on Salmon," article, Business Week, July 12, 1958, p. 127, illus., printed, single copy 50 cents. McGraw-Hill Publishing Co., Inc., 99 N. Broadway, Albany 1, N. Y. Japanese and United States salmon packers have agreed on new ground rules for the North Pacific salmon fishery. The Japanese industry agreed to move its limits 5 degrees of longitude toward the west and to reduce its catch of fish in the next 5 degrees westward. The interests of the Pacific Northwest and Alaska salmon have thus been protected with respect to the 1958 catch. In the fall, the United States, Canadian, and Japanese governments are scheduled to resume their interrupted effort to settle the matter on the diplomatic level. Meanwhile, a 1953 treaty among the three countries is still in effect, and the business pact is only as enforceable as a business "understanding."

"Relation of Adult Pink Salmon Size to Time of Migration and Freshwater Survival," by Bernard Einar Skud, article, Copeia, No. 3, August 28, 1958, pp. 170-176, illus., printed. American Society of Ichthyologists and Herpetologists, 34th St. and Girard Ave., Philadelphia 4, Pa.

SCOTLAND:

The Ecology of Scottish Inshore Fishing Grounds--1. The Bottom Fauna of East Coast Grounds, by A. D. McIntyre, Scottish Home Department Marine Research, 1958, No. 1, 24 pp., illus., printed. Her Majesty's Stationery Office, 13A Castle St., Edinburgh 2, Scotland.

SEALS:

"Mutiny on the Rand," article, The Alaska Sportsman, vol. XXIV, no. 9, September 1958, pp. 16-17, 26-37, illus., printed, single copy 35 cents. Alaska-Northwest Publishing Co., Juneau, Alaska. An account of the early days among the sealers, with special reference to the sealing schooner C. D. Rand.

SHRIMP:

"Biochemical Methods for Determining Shrimp Quality--1. Study of Analytical Methods and 2. Survey of Market Frozen Breaded Shrimp," by Marcel Gagnon and Carl R. Fellers, article, Food Technology, vol. 12, no. 7, July 1958, pp.

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340-346, printed. The Garrard Press, 510 Hickory, Champaign, Ill. The first part of this article reports on biochemical, organoleptic, and bacteriological methods studied in relation to developing an objective test for estimating the degree of freshness in frozen breaded shrimp. The second part describes a survey of 144 samples of frozen breaded shrimp at the retail level by means of bacteriological and chemical tests.

"Norwegian Prawns--Preparation, Packaging, Freezing," by A. E. Hammond, article, *Food*, vol. 26, October 1957, pp. 378-380, 5 figs., printed. Tothill Press Ltd., 33 Tothill St., Westminster, London, S. W. 1, England.

"Vitamin Content of Fresh, Processed Shrimp," by A. F. Novak, E. A. Fieger, and M. E. Bailey, article, *Quick-Frozen Foods*, vol. 18, no. 12, 1956, pp. 64-65, printed. E. W. Williams Publications, Inc., 82 Wall St., New York 5, N. Y.

"What Became of the White Shrimp?" by Percy Viosca, Jr., article, *Louisiana Conservationist*, vol. 10, no. 7-8, July-August 1958, pp. 17-18, illus., printed. Louisiana Wild Life and Fisheries Commission, 126 Civil Courts Bldg., New Orleans, La. Reports on the decline of white shrimp landings in Louisiana since 1954 and discusses research being conducted to determine the causes. A preliminary theory under investigation is that prevailing drought conditions of recent years may have caused the shrimp decline.

"Zur Borsaufreien Haltbarmachung von Frischen Speisegarnelen und Garnelenfleisch" (The Boric Acid-Free Preservation of Fresh Edible Shrimp and Shrimp Flesh), by W. Ludorff, C. Hennings, and K. E. Neb, article *Z. Lebensmitt. Untersuch. und -Forsch.*, vol. 106, 1957, pp. 96-105, printed in German. Verlag M. & H., Schaper Str. 20, Hannover, Germany. Reports on experiments showing that maintaining a sufficiently high temperature during the cooking of edible shrimp--mainly *Crangon vulgaris*--on board ship or on land, and adding certain commercial preservatives based on benzoic acid esters, makes it practicable to dispense with the use of boric acid for the preservation of shrimp.

SOUTH AFRICA:

Fishing Industry Research Institute, Eleventh Annual Report of the Director, 1st January 1957-31st December 1957, 54 pp., illus., printed. Fishing Industry Research Institute, Cape Town, South Africa. Includes functions and activities of the Institute and brief accounts of the progress in its program of research during 1957. Attention has been given to investigations covering fresh, frozen, smoked, salted, and dried fish; spiny lobster; fish canning; fish meal; fish flour; and routine inspections and analysis.

SPINY LOBSTER:

The Spiny Lobster Industry of Florida, by F. B. Walton Smith, *Educational Series No. 11*, 35 pp., illus., printed. State Board of Conservation, Tallahassee, Fla., June 1958. This paper con-

tains a description of the scientific research which has been conducted on the spiny lobster and gives a key for the identification of the western Atlantic spiny lobsters. A section on the biology of spiny lobsters covers their appearance, sexual characteristics, habitat, food and enemies, breeding habits and life history, migrations, measurements, moulting, and growth. The paper also describes experiments in the cultivation of spiny lobsters, the fishing methods used, and extent and value of the spiny lobster fishery. The section on spiny lobster fishery regulations covers methods and purposes of regulation, conservation of stocks, economic conservation, sociological considerations, enforcement of controls, and Florida regulations.

SPOILAGE:

"Changes in the Total Volatile Base, Volatile Reducing Substances and Bacterial Count as Indices of Fresh Water Fish Spoilage," by M. N. Moorjani, J. R. Iyengar, K. Visweswariah, D. S. Bhatia, and V. Subrahmanyam, article, *Food Technology*, vol. 12, no. 8, August 1958, pp. 385-386, illus., printed, single copies of periodical--domestic US\$1.50, foreign US\$1.75. (Published by the Institute of Food Technologists.) The Garrard Press, 510 North Hickory, Champaign, Ill. Contains the results of an investigation which was undertaken to assess the quality gradings of fresh-water fish by determining the changes in the volatile reducing substances and the total volatile base content.

SPONGES:

The Taxonomy of American Commercial Sponges, by M. W. deLaubenfels and John F. Storr, Contribution No. 193, 19 pp., illus., printed. (Reprinted from *Bulletin of Marine Science of the Gulf and Caribbean*, vol. 8, no. 2, June 1958, pp. 99-117.) The Marine Laboratory, University of Miami, Virginia Key, Miami 49, Fla. Presents a revised taxonomy of American commercial sponges. Describes four new species--including one from the Mediterranean Sea--and one new subspecies. Photographic plates of the species covered are included.

TERRITORIAL WATERS:

The Icelandic Fisheries' Limits, 16 pp., printed. Prentsmiojan Edda, Ltd., Reykjavik, Iceland, August 1958. Contains the historical background of Iceland's fishing industry, and discusses the main points in connection with the extension of the Icelandic fishery limits and the criticisms directed against it.

"The Law of the Sea? No! The Law of Survival," by H. S. Noel, and "Background to the Dispute" (As Expressed by the Ministry of Agriculture and Fisheries), articles, *World Fishing*, vol. 7, no. 7, July 1958, pp. 30-38, illus., printed. John Trundell, Ltd., St. Richards House, Eversholt St., London, N. W. 1, England. The first article is a report on the organization of the fishing industry in Iceland and opinions of the Icelanders on the need for a 12-mile fishing limit. This article describes the background of Iceland's fishing industry and fishing methods, and reviews the reasons underlying the proposal for

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the new fishing limit. The author cites some of the arguments for the 12-mile limit and states that "To summarize, Iceland regards an extension of her limits as an insurance for the future, and as a domestic rather than an international action. At the same time she is anxious to maintain good relations with other North Atlantic countries, and to avoid a swing of trade and dependence to the East." Catch comparisons in Icelandic waters give the figures for the three principal countries engaged in the fisheries around Iceland and show the changes that have taken place in their respective shares of the total catch. The second article gives the background to the current dispute.

TRAWL NETS:

"How to Match Trawl Size to Engine Power on Inshore Vessels," by W. Dickson, article, World Fishing, vol. 7, no. 7, July 1958, pp. 47-49, printed. John Trundell, Ltd., St. Richards House, Eversholt St., London, N. W. 1, England. This article gives instructions for using the correct size of trawl net in relation to the engine of a relatively small vessel.

TUNA:

"Vitaminer i Norsk Fisk--II. Vitaminer i Forskjellige Organer fra Makrellstørje (*Thunnus thynnus*) Fanget Untenfor Norges Vestkyst" (Vitamins in Norwegian Fish--II. Vitamins in Different Organs from Tuna (*Thunnus thynnus*) Caught off the West Coast of Norway), by O. R. Braekkan, K. Hansen, and T. Skogland, article, Fiskeridirektoratets Skrifter, Serie Tech. Undersøkelser, vol. 3, no. 3, 1955, pp. 1-18, printed in Norwegian with English summary. John Griegs Boktrykkeri, Bergen, Norway.

UNION OF SOUTH AFRICA:

Fisheries Development Corporation of South Africa--Thirteenth Annual Report (Covering Period 1st October, 1956 to 30th September, 1957), 16 pp., printed in English and Dutch. Fisheries Development Corporation of South Africa, Ltd., Sea-fare House, 68 Orange Street, Cape Town, Union of South Africa. Presents brief reports on the state of the fisheries industry; research and general activities of the Corporation, including oyster culture; and financial data.

UNITED KINGDOM:

Governmental Services to the Sea-Fish Industry of Great Britain, by F. M. G. Willson, FAO Fisheries Study No. 5, 127 pp., illus., printed, \$1.25. Food and Agriculture Organization of the United Nations, Viale delle Terme di Caracalla, Rome, Italy, 1957. (Purchase from Columbia University Press, International Documents Service, 2960 Broadway, New York 27, N. Y.) A complete report of the services performed for the marine fisheries industry of the United Kingdom by its Government. Part I of the report describes the structure and organization of the marine fishing industry as it is at present, the governmental authorities which deal with the industry and the State. Part II of the report discusses the governmental services in detail at each stage of the progress of the fish from the

sea to the consumer. Data are also presented on scientific and technological research in connection with marine fisheries and with the organization that collects and diffuses statistical and other economic information. This report covers what services the Government provides, how it provides them, and to some extent, why it provides them, but it makes no attempt to appraise the policies on which the services are based or the techniques employed in administering them.

White Fish Authority, Seventh Annual Report and Accounts for the Year Ended 31st March, 1958, 48 pp., printed. Her Majesty's Stationery Office, London, England. Presents a general description of the White Fish Authority, its functions, income, expenditures, and fishery loans. Also includes sections on production of fishery products, marketing and distribution, research and experiments, training courses, and investigations.

VESSELS:

"25-Foot Motor Fishing Boat for Pacific Waters," by H. van Pel, article, SPC Quarterly Bulletin, vol. 8, no. 2, April 1958, pp. 26-27, 51, illus., printed, single copy 30 U. S. cents. South Pacific Commission, Noumea, New Caledonia. Presents a description and diagram of a 25-foot fishing boat, rigged for both motor and sail, specially designed by a South Pacific Commission fisheries officer for use in the South Pacific. The fishing boat is designed to incorporate the following features: seaworthiness; adaptability for a variety of fishing methods; safety in case of mechanical breakdown, by having sail as well as motor rigging; dry storage space for food and personal effects of crew; facilities for storage for fairly long periods of time; and simplicity of structure and mechanism to facilitate local repairs and service.

Use of the Pleuger Active Rudder in Fishing Vessels, 4 pp., illus., printed. (Reprinted from World Fishing, December 1953--Translated from German and based on "Erster Einsatz eims Aktivruders in der Loggerfischerei," by F. Busmann, R. Ismer, and E. Masur, Hamburg, Germany, August 1952.) World Fishing, John Trundell Ltd., Temple Chambers, Temple Ave., London, E. C. 4, England.

WHALES:

"Antibiotic Preservation of Whale Carcasses," article, Chemistry and Industry, February 8, 1958, no. 6, pp. 167-168, printed. Chemistry and Industry, Society of Chemical Industry, 56 Victoria St., London, S. W. 1, England.

WEATHER CHARTS:

Coastal Warning Facilities Chart, 1958--Morgan City, La. to Apalachicola, Fla.; Morgan City, La. to Brownsville, Tex.; Eastern Florida; and Cape Hatteras to Brunswick, Ga., 4 charts, 2 pp. each, illus., processed, 5 cents each. Weather Bureau, U. S. Department of Commerce, Washington 25, D. C. (For sale by the Super-

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intendent of Documents, U. S. Government Printing Office, Washington 25, D. C.)

WHITEFISH:

"The Lake Whitefish," by F. A. Westerman, article, Michigan Conservation, vol. XXVII, no. 4, July-Aug. 1958, pp. 18-22, illus., printed. Michigan Department of Conservation, Lansing, Mich. Contains a description of the lake whitefish of the Great Lakes region, its life history, a brief account of the early whitefish fishery, and the early attempts at artificial propagation. In discussing the decline of the whitefish fishery, the author states that "Since the last peak of production was 1948, when Michigan fishermen produced nearly 8,000,000 pounds, the catch of whitefish has gone down progressively and alarmingly, reaching an all-time low of slightly over a quarter million pounds in 1957, nearly all from Lake Superior. The cause this time is undoubtedly the sea lamprey. Whether

this predator can be controlled to permit this wonderful fish to reestablish itself in the Great Lakes is a question only the future can answer."

WISCONSIN:

Wisconsin Conservation Bulletin, vol. 23, no. 6, June 1958, 31 pp., illus., printed. Wisconsin Conservation Department, State Office Bldg., Madison 1, Wis. Contains, among others, the following articles: "Improvements in Carp Fishing," by Lewellyn I. Peterson; and "What's New in Fish Management," by C. W. Threinen.

ZOOPLANKTON:

Zooplankton of East Australian Waters, 1945-1954, by Patricia Kott, Commonwealth Scientific and Industrial Research Organization, Division of Fisheries and Oceanography Report 14, 36 pp., illus., processed. Marine Biological Laboratory, Cronulla, Sydney, Australia, 1957.



WHALES DAMAGE SUBMARINE CABLES

Records of various cable companies show that at least 14 cases of damage to submarine cables caused by whales have been reported. Ten of them were off the Pacific coast of Central and South America, one was near Newfoundland, two off the Atlantic coast of South America, and one off the west coast of India. In six of the cases, the whales became entangled with the cables at a depth of about 500 fathoms, with 620 fathoms the maximum depth reported. All the whales identified were sperm whales; the cable was generally wrapped around the jaw and sometimes around the flukes and fins. (Trade News, December 1957, of Canada's Department of Fisheries.)



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