



FISH AND WILDLIFE SERVICE PUBLICATIONS

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

- CFS - CURRENT FISHERY STATISTICS OF THE UNITED STATES AND ALASKA.
 FL - FISHERY LEAFLET.
 SL - BRANCH OF STATISTICS LISTS OF DEALERS IN AND PRODUCERS OF FISHERY PRODUCTS AND BYPRODUCTS.
 SSR - FISH. - SPECIAL SCIENTIFIC REPORTS--FISHERIES (LIMITED DISTRIBUTION).
 SEP. - SEPARATES (REPRINTS) FROM COMMERCIAL FISHERIES REVIEW.

- | Number | Title |
|----------|---|
| CFS-2119 | - Ohio Landings, July 1959, 2 pp. |
| CFS-2120 | - New Jersey Landings, July 1959, 3 pp. |
| CFS-2129 | - Fish Meal and Oil, August 1959, 2 pp. |
| CFS-2130 | - North Carolina Landings, August 1959, 3 pp. |
| CFS-2132 | - Texas Landings, July 1959, 3 pp. |
| CFS-2137 | - Massachusetts Landings, July 1959, 5 pp. |
| CFS-2139 | - Rhode Island Landings, July 1959, 3 pp. |
| CFS-2141 | - Maine Landings, August 1959, 3 pp. |
| CFS-2142 | - Mississippi Landings, July 1959, 2 pp. |
| CFS-2145 | - New Jersey Landings, August 1959, 3 pp. |
| CFS-2146 | - Ohio Landings, August 1959, 2 pp. |
| CFS-2148 | - Frozen Fish Report, September 1959, 8 pp. |
| CFS-2150 | - South Carolina Landings, August 1959, 2 pp. |
| CFS-2151 | - Georgia Landings, August 1959, 2 pp. |
| CFS-2152 | - Florida Landings, August 1959, 7 pp. |
| CFS-2154 | - Shrimp Landings, June 1959, 6 pp. |
| CFS-2156 | - Alabama Landings, July 1959, 2 pp. |
| CFS-2157 | - Louisiana Landings, April 1959, 2 pp. |
| CFS-2160 | - Rhode Island Landings, August 1959, 3 pp. |
| CFS-2164 | - California Landings, May 1959, 4 pp. |
| CFS-2168 | - Louisiana Landings, May 1959, 2 pp. |
| CFS-2178 | - Fish Sticks and Portions, July-September 1959, 3 pp. |
| CFS-2196 | - Mississippi River Fisheries, 1958 Annual Summary, 7 pp. |
| CFS-2199 | - Lake Fisheries, 1958 Annual Summary, 11 pp. |
| FL-336pp | - Commercial Fisheries Outlook, October-December 1959, 46 pp., illus. |

Wholesale Dealers in Fishery Products (Revised):

- SL- 3 - Massachusetts, 1959.
 SL-25 - Wisconsin (Great Lakes Area), 1959.
 SL-28 - Michigan (Great Lakes Area), 1959.
 SL-30 - Pennsylvania (Great Lakes Area), 1959.
 SL-42 - Kentucky (Mississippi River and Tributaries), 1959.

Firms Canning, 1958 (Revised):

- SL-108 - Salmon Eggs for Bait.
 SL-109 - Caviar and Fish Roe.
 SL-110 - Oysters.
 SL-116 - Food for Animals, From Marine Animal Products.
 SL-117 - Pacific Sea Herring.
 SL-118 - Groundfish Flakes.
 SL-119 - Squid.
 SL-120 - Anchovies.

Firms Manufacturing, 1958 (Revised):

- SL-151A - Fish Solubles and Homogenized Condensed Fish.
 SL-152 - Oyster Shell Products.
 SL-153 - Fish Glue.
 SL-154 - Seaweed Products.
 SL-155 - Marine Pearl Shell Buttons.
 SL-156 - Pearl Essence.
 SL-159 - Fresh-Water Mussel-Shell Products.

SSR-Fish. No. 294 - Progress Report on Alaska Fishery Management and Research, 1958, 32 pp., illus., June 1959. A review of the work of the U. S. Bureau of Commercial Fisheries in assisting the Alaska fisheries during 1958. One section describes activities in the Alaska salmon fishery by regions. Another section summarizes progress in the marine fisheries, with details on the herring, crab, shrimp, and clam industries. The inside back cover shows statistical tables on the Alaska canned salmon pack for 1958. Principal mission of the Bureau in Alaska is to achieve maximum sustained production of fishery products by maintaining the presently-fished populations at highest levels and bringing into production species not now being utilized, say the authors in summary.

SSR-Fish. No. 308 - Survey of the United States Shrimp Industry, Volume II, 176 pp., illus., June 1959. Shrimp supplies for the anticipated increase in future consumption will depend on their continued abundance in waters presently fished, on the discovery of new fishing grounds, and on expanded imports, according to this report. Among the topics covered by volume II are trends in distribution of shrimp; market channels; market agents; a survey of wholesale and retail distribution; packaging, storage, transportation, and quality preservation and control of shrimp; market communications; consumption patterns; nutritive value; statistics on apparent consumption; and ex-vessel, wholesale, and retail prices. The final chapter presents conclusions and recommendations aimed at the future well-being of the industry. The first volume provides a comprehensive examination of shrimp grounds, vessel construction, fishing operations, processing plant efficiency, and processing costs (SSR-Fish. No. 277).

SSR-Fish. No. 310 - Northeastern Pacific Albacore Survey, Part I--Biological Observations, by Joseph J. Graham, 36 pp., illus., July 1959.

Sep. No. 570 - Second World Fishing Boat Congress: Part I - Observations of a United States Government Fishery Methods and Equipment Specialist; Part II - Observation of a United States Government Fishery Technologist; and Part III - Fish Quality Stressed.

Sep. No. 571 - An Economic and Financial Study of the Fluke Otter-Trawl Fishery of New Jersey.

Sep. No. 572 - A Report to the Shellfish Industry.

Sep. No. 573 - Equipment Note No. 2--Pacific Coast Drum Trawling.

Alaska Fisheries Briefs, Fish and Wildlife Circular 59, 21 pp., illus., processed, September 1959. A collection of articles intended to acquaint the fishing industry of Alaska and neighboring regions with some of the aspects and preliminary results of investigations which are being undertaken by the Bureau of Commercial Fisheries and its contractors in Alaska. Includes the following: "Pink Salmon Migrations Along the Alaska Peninsula," by Fredrik V. Thorsteinson; "Salmon Migrations in Southeastern Alaska," by Wallace H. Noerenberg; "The Unexpected Appearance of Pink Salmon in the Kvichak River," by Clarence D. Becker; "Gravel Removal and the Fisheries," by Robert McVey; and "Estimating Abundance of Salmon Fingerling," by Howard S. Sears.

Galveston Biological Laboratory Fishery Research (for the year ending June 30, 1959), Circular 62, 130 pp., illus., processed, September 1959. Summarizes the research work accomplished at the Galveston Biological Laboratory during the last fiscal year. Describes in detail investigations on the shrimp fishery, estuarine ecology, industrial fishery, and red tide; effects of engineering projects; and special projects such as the bait shrimp fishery of Galveston Bay, seasonal barnacle attachment in East Lagoon, and the Gulf V plankton sampler. Of particular interest is the assessment of the value and extent of the industrial fishery. The rapid expansion of this fishery will aid the industry by providing off-season raw material and employment to the menhaden fishery and by utilizing the fishing capacity of shrimp trawlers during periods of shrimp scarcity.

Progress in Sport Fishery Research, 1957-58, Circular 57, 92 pp., illus., processed. Sport fishery research is concerned with fish propagation research such as trout and salmon culture, and warm-water fish propagation; fishery management research on public waters, like those of the National Park Service which have been used as outdoor laboratories for studies of lake and stream productivity and experimental management techniques; and research on environmental influences which affect the welfare of the fish. This report discusses progress during 1957-58 on fish management research, fish disease research, fish nutrition research, and research on fish cultural methods.

THE FOLLOWING MARKET NEWS LEAFLETS ARE AVAILABLE FROM THE BRANCH OF MARKET NEWS, BUREAU OF COMMERCIAL FISHERIES, U. S. FISH AND WILDLIFE SERVICE, WASHINGTON 25, D. C.

Number	Title
MNL-1	Cuba's Fishing Industry, 1958, 10 pp.
MNL-2	List of Ship Owners and Operators in Peru's Fishing Industry, 5 pp.
MNL-3	Legislative Actions Affecting Commercial Fisheries, 86th Congress, 1st Session, 7 pp.

THE FOLLOWING ENGLISH TRANSLATIONS OF FOREIGN LANGUAGE ARTICLES ARE NOT FOR GENERAL DISTRIBUTION BUT ARE AVAILABLE FOR REFERENCE ONLY FROM THE U. S. FISH AND WILDLIFE SERVICE, BUREAU OF COMMERCIAL FISHERIES, P. O. BOX 3830, HONOLULU, HAWAII.

A Population Study on the So-Called Makajiki (Striped Marlin) of Both Northern and Southern Hemispheres of the Pacific. I--Comparison of External Characters, by Tadao Kamimura and Misao Honma, English translation, 6 pp., processed. (Translated from Report of the Nankai Regional Fisheries Research Laboratory, no. 8, March 1958, pp. 1-11.)

A Population Study on the So-Called Makajiki (Striped Marlin) of Both Northern and Southern Hemispheres of the Pacific. II--Fishing Conditions in the Southern Hemisphere, by Misao Honma and Tadao Kamimura, English translation, 12 pp., processed. (Translated from Report of the Nankai Regional Fisheries Research Laboratory, no. 8, March 1958, pp. 12-21.)

Studies on the Albacore. V--The Fishing Condition and Size of Albacore Taken in the South Pacific Ocean, by Misao Honma and Tadao Kamimura, English translation, 8 pp., processed. (Translated from Report of Nankai Regional Fisheries Research Laboratory, no. 6, March 1957, pp. 84-90.)

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

(Baltimore) Monthly Summary - Fishery Products, June, July, and August, 1959; 6, 6, and 7 pp., respectively. (Market News Service, U. S. Fish and Wildlife Service, 400 E. Lombard St., Baltimore 2, Md.) Receipts at Baltimore by species and by states and provinces for fresh- and salt-water fish and shellfish; and total receipts by species and comparisons with previous years; for the months indicated.

California Fishery Products Monthly Summary, August 1959; September 1959; 13 pp. each. (Market News Service, U. S. Fish and Wildlife Service, Post Office Bldg., San Pedro, Calif.) California cannery receipts of tuna and tunalike fish, mackerel, and anchovies; pack of canned tuna, mackerel, and anchovies; market fish receipts at San Pedro, Santa Monica, and Eureka areas; California imports; canned fish and frozen shrimp prices; ex-vessel prices for cannery fish; 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, August 1959, 15 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 for fresh- and salt-water fish and shellfish; wholesale prices for fresh and frozen fishery products; and United States Great Lakes production, 1958 for the month indicated.

Gulf Monthly Landings, Production, and Shipments of Fishery Products, September 1959, 6 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; wholesale prices of fish and shellfish on the New Orleans French Market; sponge sales; and fishing imports at Port Isabel and Brownsville, Tex., for the month indicated.

Monthly Summary of Fishery Products Production in Selected Areas of Virginia, North Carolina, and Maryland, September and October, 1959; 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, Cambridge, and Ocean City; 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, September 1959, 22 pp. (Market News Service, U. S. Fish and Wildlife Service, 10 Commonwealth Pier, Boston 10, Mass.) Reviews the principal New England fishery ports, and presents 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 month indicated.

New York City's Wholesale Fishery Trade--Monthly Summary for July and August 1959, 21 and 20 pp., respectively. (Market News Service, 155 John St., New York 38, N. Y.) Includes summaries and analyses of receipts and prices on wholesale Fulton Fish Market, imports entered at New York City, primary wholesaler prices for frozen products, and marketing trends; for the months indicated.

(Seattle) Washington, Oregon, and Alaska Receipts and Landings of Fishery Products for Selected Areas and Fisheries, Monthly Summary, September 1959, 9 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 (Oreg.) wholesale dealers; also Northwest Pacific halibut landings; and Washington shrimp landings; for the month indicated.

Shrimp Marketing at Chicago--Receipts, Wholesale Prices, and Trends, 1940-58, by G. A. Albano, 37 pp., processed. (Market News Service, U. S. Fish and Wildlife Service, 565 W. Washington St., Chicago 6, Ill.) A review of shrimp marketing at Chicago including receipts for the years 1940-58 and wholesale prices since 1948. An analysis of trends and developments in shrimp marketing prefaces the statistical part of the report. Data covering a 10-year period on cold-storage holdings, United States shrimp landings by areas, imports, availability and disposition of shrimp supplies, and other information are shown. The report also includes a reprint of the United States standards for grades of frozen raw breaded shrimp.

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

Age and Growth of the Redfish (SEBASTES MARINUS) in the Gulf of Maine, by George F. Kelly and Robert S. Wolf, Fishery Bulletin 156 (From Fishery Bulletin of the Fish and Wildlife Service, vol. 60), 35 pp., illus., printed, 30 cents, 1959. The primary objective of this paper is to present age-growth information on the redfish or ocean perch population of the Gulf of Maine. This information was needed for the intelligent planning of a research program concerned with determining how this valuable fishery should be managed. Validity of the use of the otolith in age-growth studies of the redfish is demonstrated. According to the report, otoliths accrue one opaque and one hyaline band a year. The opaque band begins to form in April, the hyaline band in September. Otoliths preserved in ethanol may be read whole, although those from larger fish are more easily read after they are sectioned. Otoliths stored dry must be sectioned for reading. Redfish larvae can be collected in surface waters throughout the period of spawning, April to September. The fry descend into mid-depths as they grow and first appear on the bottom in August. Redfish reach an average length of about 50 mm. in their first year of life. The sexes grow at virtually the same rate until the tenth year, after which the male grows more slowly than the female. Redfish of the Gulf of Maine grow more slowly than those of northern European waters. While dominant age classes appear in the collections of young fish, they are not obvious in samples of older, commercially available fish.

Effects of Fertilizing Bare Lake, Alaska, on Growth and Production of Red Salmon (O. NERKA), by Philip R. Nelson, Fishery Bulletin 159 (from Fishery Bulletin of the Fish and Wildlife Service, vol. 60), 31 pp., illus., printed, 25 cents, 1959.

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.

ALABAMA:

An Economic Evaluation of the Commercial Fishing Industry in the T. V. A. Lakes of Alabama

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

during 1956, by Paul Bryan and C. E. White, Jr., Contribution No. 116, 5 pp., printed. (Reprinted from Proceedings of the Twelfth Annual Conference, Southeastern Association of Game and Fish Commissioners, pp. 128-132.) Southeastern Association of Game and Fish Commissioners, Columbia, S. C., 1958.

ALGAE:

An Introductory Account of the Smaller Algae of British Coastal Waters: Part I--Introduction and Chlorophyceae, by R. W. Butcher, Fishery Investigations Series IV, 91 pp., illus., printed. £1 5s (about US\$3.51). Her Majesty's Stationery Office, York House, Kingsway, London W. C. 2, England, 1959. Covers methods of investigation, laboratory culture, taxonomic features, classification, ecology and distribution, and taxonomy of motile, unicellular algae found in in-shore waters of the British Isles. "Even a preliminary examination of the community of minute colored organisms has revealed new structures and new species of outstanding importance in the phylogeny of certain groups. Some have been shown to produce toxic compounds. . . others might be of value in the general nutrition of animals, . . ." states the author.

AMINO ACIDS:

"The Amino-Acid Composition of Some British Food Fishes," by J. J. Connell and P. F. Howgate, article, Journal of the Science of Food and Agriculture, vol. 10, April 1959, pp. 241-244, printed. The Society of Chemical Industry, 14 Belgrave Square, London S. W. 1, England.

ANGOLA:

Subsidio para um Catalogo dos Nomes Vernaculos dos Peixes Marinhos de Angola (Supplementary Catalogue of Common Names of Marine Fishes of Angola), by Pedro da Franca, Notas Mimeografadas de Centro de Biologia Piscatoria (Mimeographed Notes from the Fishery Biology Center) no. 5, 1959, 38 pp., processed in Portuguese. Ministerio do Ultramar, Rua Dr. Antonio Candido, 9, Lisbon, Portugal.

ANTIBIOTICS:

Experiments in the Use of Antibiotics in Fish Preservation, by J. M. Shewan and J. Stewart, D. S. I. R. Food Investigation Memoir No. 1203, 15 pp., printed. Department of Scientific and Industrial Research, Charles House, 5-11 Regent St., London S. W. 1, England, 1958.

"Inhibition of Bacteria from Marine Sources by Aureomycin," by N. K. Velankar, article, Proceedings of the Indian Academy of Sciences, vol. 47B, 1958, pp. 87-96, printed. Indian Academy of Sciences, Bangalore, India.

BACTERIOLOGY:

"Bacteriology," article, Food Investigations 1957 (Report of the Food Investigation Board--Great Britain), pp. 21-23, printed. Department of Scientific and Industrial Research, Charles House, 5-11 Regent St., London S. W. 1, England, 1958. Reports the results of bacteriological examination of fresh and spoiling iced fish, ice used in chilling of fish, fish after han-

ling, and fish fillets. The study covers young cod caught in the waters of the Faroes and the North Cape and discusses types of organisms found and their frequencies.

Studies of FLAVOBACTERIUM PISCICIDA Bein I--Growth, Toxicity, and Ecological Considerations, by Samuel P. Meyers, Morris H. Baslow, Selwyn J. Bein, and C. Edith Marks, 6 pp., illus., printed. (Reprinted from Journal of Bacteriology, vol. 78, no. 2, August 1959, pp. 225-230.) Journal of Bacteriology, Williams and Wilkins Co., 428 E. Preston St., Baltimore 2, Md.

BIBLIOGRAPHIES:

Bibliography of Theses on Fishery Biology, by Robert M. Jenkins, 83 pp., processed, \$1. Sport Fishing Institute, Bond Bldg., Washington, D. C. A compilation of graduate theses on fishery biology and related subjects. Includes a short section on commercial fisheries.

BIOCHEMISTRY:

Studies on pH of Fish Muscle--Variation in pH of Fresh Albacore Muscle on the Locality Examined (Studies on the Tuna Meat--I), by Toshiharu Kawabata and others, 9 pp., illus., printed in Japanese with English abstract. (Reprinted from Bulletin of the Japanese Society of Scientific Fisheries, vol. 18, no. 3, August 1952, pp. 124-132.) Japanese Society of Scientific Fisheries, c/o Tokyo Suisan Daigaku, Shiba-kaigandori 6-Chome, Tokyo, Japan.

BRAZIL:

Notas Sobre o Crescimento, o Tubo Digestivo e a Alimentacao da Gitubarana, SALMINUS HILARII Val., 1829 (Notes on the Growth, Digestive Tract, and Food of Salminus hilarii Val., 1829), by Melquiades Pinto Paiva, 23 pp., illus., printed in Portuguese. National Museum of the University of Brazil, Rio de Janeiro, D. F., Brazil.

BYPRODUCTS:

"Experience and Methods of Controlling Odors Associated with Fish Byproducts Plant at Gloucester," by Leonard D. Mandell, article, Journal of Boston Society of Civil Engineers, vol. 45, 1958, pp. 366-368, printed. Boston Society of Civil Engineers, 88 Tremont Temple, Boston, Mass.

"Fish Byproducts," article, Food Investigation 1957 (Report of the Food Investigation Board--Great Britain), pp. 21-22, printed. Department of Scientific and Industrial Research, Charles House, 5-11 Regent St., London S. W. 1, England, 1958. Discusses the value of fish meal as an ingredient in animal feed and some of the technological problems encountered in its production. Reports on the need for valid quality assessment tests; progress in the identification of chemical components of offensive odors; and results of experimental work done at a fish-meal pilot plant.

CALIFORNIA:

California Fish and Game, vol. 45, no. 4, October 1959, 141 pp., illus., printed. Department of Fish and Game, 722 Capitol Ave.,

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

Sacramento 14, Calif. Includes, among others, the following articles: "California Sturgeon Tagging Studies," by Harold K. Chadwick; "The Use of Probability Sampling for Estimating Annual Number of Angler Days," by Norman Abramson and Joyce Tolladay; and "Striped Bass Introduced into the Colorado River," by J. A. St. Amant.

CANADA:

Canadian Fisheries Annual, Vol. 8, 1959, 128 pp., illus., printed. National Business Publications, Ltd., Gardenvale, Quebec, Canada. Includes these feature articles: "Canada's Fisheries in 1958," by Mark Ronayne; "World Fisheries in 1958," by D. B. Finn; "Canadian Fisheries Research in 1958," by J. L. Kask; and "Trends and Developments in Fishery Package Design," by Leonard Arthur Wheeler. In addition, special sections contain complete statistics of Canada's commercial fisheries, a directory of fishing companies and their products, buyer's guide, and a list of Federal and Provincial Government fishery officials.

Fisheries Statistics of Canada (Nova Scotia), 1957, 65 pp., printed in French and English, C\$1. Queen's Printer and Controller of Stationery, Ottawa, Canada, September 1959. Consists of tables giving the quantity and value of fish and shellfish landed in Nova Scotia, 1939-1957; the quantity and value of fishery products by species and fisheries districts, 1956-1957; and capital equipment employed and number of persons engaged in the primary operations by fisheries districts, 1956-1957.

"The Freshwater Fisheries of Manitoba," by J. E. Steen, article, Trade News, vol. 12, no. 3, September 1959, pp. 8-10, illus., printed. Director of Information and Educational Service, Department of Fisheries, Ottawa, Canada. Although often considered an exclusively agricultural province, Manitoba possesses an important fresh-water fishery, with 5,000-6,000 fishermen landing about 30 million pounds of fish annually, valued at 5-7 million Canadian dollars. Of 75 different species inhabiting the province's lakes and rivers, 15 are of commercial importance. These include principally pickerel, whitefish, sauger, pike, and tullibee. Supervision and inspection of the fishery is maintained by Provincial and Federal agencies.

Progress Reports of the Pacific Coast Stations, no. 113, 18 pp., illus., printed. Fisheries Research Board of Canada, Ottawa, Canada, September 1959. Among the articles included are: "The Use of Condensed Herring Solubles in Turkey Poulter Rations," by B. E. March and others; "Observations on Adult Pink Salmon Behaviour" and "Note on the Behaviour of Pink Salmon Fry," by W. Percy Wickett; "The Occurrence of Lesser Lancet Fish (Anotopterus pharao Zugmayer) in the Northeast Pacific Ocean," by G. T. Taylor; and "The Primary Productivity and Fertility of the Northeast Pacific and the British Columbia Coastal Waters," by J. D. H. Strickland.

CANNED FISH:

Crystals in Canned Sea Foods and Fish, by C. A. Greenleaf and R. P. Farrow, Circular 18-L Revised, 4 pp., printed. Washington Research Laboratory, National Canners Association, 1133 20th St., N. W., Washington, D. C., September 1959. Discusses the occasional appearance in canned fishery products of crystals of magnesium ammonium phosphate hexahydrate, or struvite. These crystals are harmless, odorless, and tasteless and are formed after canning from substances naturally present in the fish. Identification can easily be made since the struvite crystals are soft and can be dissolved by boiling in vinegar or lemon juice.

CHILLING AND FREEZING:

"Research on Chilling and Freezing of Fish," by Af. F. Bramsnaes, article, Saetryk af Kulde Dansk Kølleteknisk Tidsskrift, vol. 12, no. 6, 1958, pp. 61-64 and vol. 13, no. 1, 1959, pp. 5-9, printed in Danish. Fiskeriministeriets Forsøgslaboratorium, Copenhagen, Denmark.

COD:

"Dos Brotes de Envenamiento por Consumo de Bacalao Salado en Puerto Rico" (Two Cases of Poisoning from Eating Salted Codfish in Puerto Rico), by A. T. Masi and others, article, Boletín de la Oficina Sanitaria Panamericana, vol. 46, no. 5, May 1959, pp. 465-471, printed in Spanish with English summary. Pan American Health Organization, 1501 New Hampshire Ave., N. W., Washington, D. C.

"The Technological Characteristics of the Baltic Sea Codfish," by P. M. Pozhagina, article, Izvestia Akademii Nauk Latvviskoi, no. 3, 1954, pp. 85-91, printed in Russian. Latvijas Padomju Socialistiskas Republikas Zinatnu Akademija, Riga, Latvia.

CONSERVATION:

Environmental Conservation, by Raymond F. Dasmann, 307 pp., illus., printed, \$6.50. John Wiley & Sons, Inc., 440 4th Ave., New York 16, N. Y., 1959.

The Status of Legal Restrictions in Fish Conservation, by R. W. Eschmeyer, 8 pp., printed. (Reprinted from Proceedings 38th Convention, International Association of Game, Fish and Conservation Commissioners, 1949.) Tennessee Valley Authority, Norris, Tenn., 1949.

DENMARK:

Fiskeriberetning for Året 1958 (The Ministry of Fisheries Annual Report for 1958), 151 pp., illus., printed in Danish with English summary. Fiskeriministeriet, 1 Kommission Hos G. E. C. Gad, Copenhagen, Denmark. A report on the Danish fishing industry for the year 1958. Includes data on number of fishermen employed; fishing vessels; gear and nets; landings of fish and shellfish; trout produced in ponds; production of canned, smoked, and filleted fish; production of fish meal and oil; and foreign trade in fishery products.

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DEODORIZATION:

Deodorization and Storage of Fish, Shellfish, and Meat, by Seiji Tada, Japanese Patent No. 1583, March 7, 1958, printed. Japanese Patent Office, Tokyo, Japan.

DIRECTORIES:

Scandinavian Fishing Year-Book, 1958-59 (Year-Book and Directory for the Fish Trade), edited by Jorgen Frimodt, 416 pp., illus., printed, 50 kroner (US\$7.50). Jorgen Frimodt, 59-61 Nyhavn, Copenhagen K, Denmark. A well-organized and useful handbook for the international fishing trade. Contains chapters on the world catch and production of fish and shellfish, European fishing in the Atlantic, fish names in various languages together with their scientific names, seal hunting in the Arctic, and world whaling. Sections on Denmark, Faroe Islands, Norway, Sweden, Finland, Iceland, Germany, Netherlands, Belgium, and United Kingdom contain articles on the fisheries, addresses of embassies and legations, names of importing and exporting firms, lists of builders and repair yards for fishing craft, and other trade data. Included are lists of importers and exporters throughout the world. The appendix contains a list of port-distinguishing letters of fishing vessels and a directory of individual vessels under registry of the above-mentioned countries, also contains a large map of fishing banks and ports of the North Atlantic.

ELECTRICAL FISHING:

"The Electric Mid-Water Trawl," by Jay Russell, article, Maine Coast Fisherman, vol. 13, June 1959, p. 12, printed. Maine Coast Fisherman, 22 Main St., Camden, Me.

ENZYMES:

"Enzymes Process Fish," article, Chemical and Engineering News, vol. 37, April 13, 1959, p. 27, printed. Chemical and Engineering News, American Chemical Society, 1801 K St., N. W., Washington 6, D. C.

FISH CULTURE:

"The Significance of Fish Culture as an Integral Part of Rural Economy in Indonesia," by M. Ahjar and R. Tasripin, paper, Proceedings Indo-Pacific Fisheries Council, 6th Session, September 30-October 14, 1955, Section II, pp. 303-306, printed. Food and Agriculture Organization of the United Nations, Regional Office for Asia and the Far East, Bangkok, Thailand, 1956.

FISH LIVER:

"A Comparative Study of Nucleotide Metabolism in Fish Liver," by R. J. Forrest and R. G. Hansen, article, Canadian Journal of Biochemistry and Physiology, vol. 37, June 1959, pp. 751-762, printed. Canadian Journal of Biochemistry and Physiology, Division of Administration, The National Research Council, Sussex St., Ottawa, Canada.

FISH LIVER OIL:

Deodorization of Fish-Liver Oil, by Masakuni Kanai, Japanese Patent No. 3632, May 12, 1958, printed. Japanese Patent Office, Tokyo, Japan.

FISH MEAL:

"The Effect of Prolonged Heating on Various Nutritive Factors in Fish Meal," by A. N. Rowan, article, Annual Report, Fishing Industry Research Institute, April-December 1956, no. 10, pp. 28-29, printed. Fishing Industry Research Institute, Cape Town, Union of South Africa, 1957.

"New Fish Meal Tested in Broiler Rations," by Elbert J. Day and James E. Hill, article, Poultry Science, vol. 38, May 1959, pp. 556-559, printed. Poultry Science Association, Kansas State College, Manhattan, Kans.

"The Origin and Elimination of Offensive Odors in Fish Meal Production," by Hans H. Kurmeier, article, The South African Shipping News and Fishing Industry Review, vol. 14, no. 9, September 1959, p. 53, printed. Odhams Press, South Africa (Pty.) Ltd., Box 2598, Cape Town, Union of South Africa. Discusses the causes of offensive odors produced during the manufacture of fish meal and the ineffectiveness of the present method of elimination by water scrubbing. The author describes a new process which involves precipitation of the undesirable substances by means of mixing with boiler fluegas.

FISH OILS:

"The Fungicidal Activity of the Unsaturated Fatty Acids and Quaternary Salts Prepared from Fish Oils," Boris Sokoloff and others, article, Journal of the American Oil Chemists' Society, vol. 36, June 1959, pp. 234-237, printed. The American Oil Chemists' Society, 35 E. Wacker Dr., Chicago 1, Ill.

FLORIDA:

Reconnaissance Survey of the Bathymetry of the Straits of Florida, by Violet B. Siegler, Technical Report no. 59-3, 12 pp., illus., processed. The Marine Laboratory, University of Miami, #1 Rickenbacker Causeway, Miami 49, Fla., 1959.

Straits of Florida Physical and Chemical Data, May 1957-November 1958, by M. P. Wennekens and others, Technical Report 58-5, 83 pp., illus., processed. The Marine Laboratory, University of Miami, #1 Rickenbacker Causeway, Miami 49, Fla., 1958.

FOOD AND AGRICULTURE ORGANIZATION:

Current Bibliography for Aquatic Sciences and Fisheries (Supplementary References to 1957 Publications Not Previously Included), 324 pp., processed. Food and Agriculture Organization of the United Nations, Viale delle Terme di Caracalla, Rome, Italy, 1959.

FAO Picture Sheet No. 9--Fishing Boats, 2 pp., illus., printed. Food and Agriculture Organization of the United Nations, Viale delle Terme di Caracalla, Rome, Italy. A poster-size sheet showing photos of fishing vessels in many countries. The theme of the text is "The Better the Boat, the Greater the Catch," and describes the technical problems met by FAO experts in efforts to improve the fisheries in a number of undeveloped nations.

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

Fishing Gear Used in Spanish Coastal Lagoons, by Fernando Lozano Cabo, General Fisheries Council for the Mediterranean, Studies and Reviews No. 9, November 1959, 35 pp., illus., processed. GFCM Secretariat, Food and Agriculture Organization of the United Nations, Rome, Italy. This study was originally presented at the Fifth Meeting of the General Fisheries Council for the Mediterranean, Rome, October 13-18, 1958, as technical paper no. 26. Describes fishing methods as practiced in fresh- and salt-water lagoons in Valencia, Murcia, Galicia, and other parts of Spain. The small section of text is followed by a large number of prints reproducing both contemporary photos and some quaint wood-cuts taken from Historical Dictionary of National Fishing Gear, by Antonio Sañer Reguart, published between 1791 and 1795 in Madrid. Types of gear include seines, sardine gill nets, trammel nets, cast nets, shrimp nets, eel spears, clam dredges, eel traps, permanently-installed traps made of reeds, and eel tanks.

Report of the Technical Meeting on Costs and Earnings of Fishing Enterprises, 8-13 September 1958, 195 pp., processed. Economics and Statistics Branch, Fisheries Division, Food and Agriculture Organization of the United Nations, Rome, Italy. Includes proceedings, papers presented, and discussions held under each of five agenda items covered during a meeting of qualified experts in fishery economics held in London. The agenda items consisted of: purposes of cost and earnings studies in fisheries--the point of view of government and other public authorities and those in the fishing industry; concepts, definitions, and conventions in different countries, and general conclusions; merits of different kinds of investigational methods; methods of analysis of collected accounts; and effect of regulation of the fisheries on costs and earnings of fishing enterprises.

FREEZING:

"Fish Freezing: Methods and Equipment in Commercial Use," by Joseph W. Slavin, article, Industrial Refrigeration, vol. 137, no. 3, September 1959, pp. 18-19, 22-24, illus., printed. Industrial Refrigeration, Nickerson & Collins Co., 433 N. Waller Ave., Chicago 44, Ill. Reviews current methods of freezing, handling, storage, and packaging of the 350 million pounds of frozen fishery products produced in the United States annually. "Differences in the composition of the various species of fish harvested in the United States, and the differences in marketing requirements have necessitated consideration of the specific individual product in the selection of packaging materials and in the design and application of equipment for freezing and cold storage," states the author in summary.

"Freezing and Cold-Storage," article, Food Investigation 1957, pp. 10-12, printed. Department of Scientific and Industrial Research, Charles House, 5-11 Regent St., London S. W. 1, England, 1958.

FRESH-WATER FISH:

"Some Young Fresh-Water Fishes of New York," by Edward C. Raney, article, The New York

State Conservationist, vol. 14, no. 1, Aug.-Sept. 1959, pp. 22-28, illus., printed, single copy 50 cents. The Conservationist, Room 335, State Campus, Albany, N. Y. Describes the early stages in the life history of some of New York's fresh-water fish: the pike family, eel, bullhead, sucker, white perch, carp, yellow perch, and pike perch. The bass family, smelt, shad, sheepshead, striped bass, salmon, and trout are also described.

GROUND FISH:

A Report on Dehydrated Ground Fish, by William A. Snyder, 2 pp., printed. (Reprinted from American Fur Breeder, April 1959, pp. 14, 44.) American Fur Breeder, Fur Farm Publications, 405 E. Superior St., Duluth, Minn.

HALIBUT:

Regulation and Investigation of the Pacific Halibut Fishery in 1958, no. 27, 20 pp., illus., printed. International Pacific Halibut Commission, Seattle, Wash., 1959. A brief report of the accomplishments of the Commission during 1958 covering its historical background, activities during the year, 1958 regulations, statistics of the fishery, catch per unit of fishing effort, composition of the catches, growth studies, tagging experiments, and studies of halibut below commercial size.

HERRING:

"Om Bestanden av Atlanto-Skandisk Sild" (On Ocean Supply of Atlantic and Scandinavian Herring), by J. J. Marti, article, Fiskets Gang, vol. 45, no. 38, September 17, 1959, pp. 522-525, illus., printed in Norwegian. Fiskets Gang, Postgiro Nr. 691 81, Bergen, Norway.

The Influence of Gibbing on the Ripening of Matjes Cured Herring, by A. F. M. G. Luijpen, 91 pp., printed in Dutch with English summary. Jacob Catslaan 28, Driehuis (Velsen), The Netherlands, 1959.

"Sammenliknende Undersøkelser Vintersild-Seasonen 1959 over Fangstresultatene ved Bruk an Snurpenøter av Kunstfibre (Nylon/Terylene) Kontra Snurpenøter av Bomull" (Comparison of Research on Winter Herring Catch 1959 Season with Use of Purse Seine of Synthetic Fiber Against Purse Seine of Cotton), article, Fiskets Gang, vol. 45, no. 40, October 1, 1959, pp. 550-558, printed in Norwegian. Fiskets Gang, Postgiro Nr. 691 81, Bergen, Norway.

"Vintersildfiskets Lønnsomhet 1958" (Production of Winter Herring Fishery 1958), by Georg Opedal, article, Fiskets Gang, vol. 45, no. 37, September 10, 1959, pp. 502-511, printed in Norwegian. Fiskets Gang, Postgiro Nr. 691 81, Bergen, Norway.

INTERNATIONAL GEOPHYSICAL YEAR:

The International Geophysical Year in Retrospect, by Wallace W. Atwood, Jr., Department of State Publication 6850, 8 pp., illus., printed, 10 cents. (Reprinted from the Department of State Bulletin, May 11, 1959.) Public Services Division, Bureau of Public Affairs, Department of State, Washington 25, D. C., July 1959. (For sale by

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

IRRADIATION PRESERVATION:

Experiments on the Irradiation of Fish with 4 Mev Cathode Rays and Cobalt Gamma Rays, by J. M. Shewan and J. Liston, D.S.I.R. Food Investigation Memoir No. 1204, 16 pp., printed, Department of Scientific and Industrial Research, Charles House, 5-11 Regent St., London S. W. 1, England. A paper presented at the Second United Nations International Conference on the Peaceful Uses of Atomic Energy, June 3, 1958.

"Production and Identification of a Green Pigment Formed During Irradiation of Meat Extracts," by J. B. Fox, Jr., Theodora Strehler, Carl Bernofsky, and B. S. Schweigert, article, Journal of Agricultural and Food Chemistry, vol. 6, September 1958, pp. 692-696, printed. Journal of Agricultural and Food Chemistry, American Chemical Society, 1801 K St., N. W., Washington 6, D. C.

JAPAN:

Bulletin of the Faculty of Fisheries, Hokkaido University, vol. 10, no. 1, May 1959, 84 pp., illus., printed in Japanese with summaries in English. Faculty of Fisheries, Hokkaido University, Hakodate, Japan. Contains, among others, the following papers: "An Experiment on a Mid-Water Trawl. VI--Practical Fishing Experiment," by Kiichiro Kobayashi and Naichi Inoue; "Studies on the Fishing Grounds," by Tatsuaki Maeda and others; "Biochemical Studies on Squid Meat Food Poisoning. III--The Effect of Amines of Squid Meat on the Activity of Human Serum Acetylcholinesterase," by Kiichi Murata and Atsushi Iida; "Studies on the Fishing Grounds," by Sakuzo Nishiyama and others; "Quality of Flatfish from Hakodate. Part 3--The Factors Deciding the Quality. 1--Relations Between the Quality and Features, Ecological and Morphological," by Keiichi Oishi; and "Chemical Studies on Marine Algae. XII--The Free Amino Acids in Several Species of Marine Algae," by Mitsuzo Takagi and Mitsuo Kuriyama.

Bulletin of the Faculty of Fisheries, Hokkaido University, vol. 10, no. 2, August 1959, 90 pp., illus., printed in Japanese with English abstracts. Faculty of Fisheries, Hokkaido University, Hakodate, Japan. Contains, among others, these articles: "Biochemical Studies on Squid Meat Food Poisoning. IV--The Inhibition of Human Serum Acetylcholinesterase by the Amines of Squid Meat, Beef, and Hog Flesh," by Kiichi Murata and Atsushi Iida; "Results of Fishing Experiments with Trinal Gill Nets," by Hideo Nakamura and Giichi Kawasaki; "Quality of Flatfish from Hakodate. Part 3--The Factors Deciding the Quality. (2) Relations Between the Quality and Ordinary Chemical Constituents," by Keiichi Oishi; and "Utilization Value of Fishes Caught Abundantly in Waters Around Hokkaido as Raw Material for Fish Jelly Products ('Kamaboko' or 'Chikuwa')--I," by Eiichi Tanikawa and Yutaka Fujii.

Statistic Tables of Fishing Vessels (as of the end of 1958), General Report No. 11, 239 pp., illus., printed in Japanese and English. Japanese Fisheries Agency, Tokyo, Japan. An annual report containing data on the various types of Japanese fishing craft, both powered and nonpowered, as obtained by a fishery registration system. Statistical tables are shown by type of engine, type of fishery, and prefecture. According to the report, "statistics seem to show that the Japanese fishing fleet has not only restored its prewar status but increased its capacity rapidly after the War."

Tokai Regional Fisheries Research Laboratory, 8 pp., illus., printed. Tokai Regional Fisheries Research Laboratory, Tsukishima, Chuo-ku, Tokyo, Japan, 1958.

KELP:

"Kelp, Giant Among the Algae," by Hazel Mohler, article, Nature Magazine, vol. 52, no. 8, October 1959, pp. 406-408, illus., printed. American Nature Association, 1214 16th St., N. W., Washington 6, D. C. A clear exposition of the natural history and practical uses for the Macrocystis, Nereocystis, and other common forms of kelp which grow so plentifully along our Pacific Coast. The Macrocystis is not only the longest of all known plants, sometimes attaining a length of 1,000 feet, but it also acts as a natural buoy to warn vessels of nearby shoal water. A reportedly succulent pickle can be made from the Nereocystis. Kelp of various types, formerly harvested for its iodine content, is now used in the manufacture of sodium alginate, a gelatinous binder and emulsifying agent, agricultural fertilizers and animal feeds. And in nature, kelp not only provides food for countless aquatic animals but also purifies the waters and enhances the oxygen supply.

KENTUCKY:

Annual Report, Department of Fish and Wildlife Resources, Fiscal Year 1952-53, 13 pp., processed, Department of Fish and Wildlife Resources, Frankfort, Ky.

KENYA:

Report on Kenya Fisheries, 1958, 20 pp., printed, 2s (about 28 U. S. cents). Ministry of Forest Development, Game and Fisheries, Fisheries Division, Nairobi, Kenya, 1959. Reviews the work done on inland fisheries development, a fish culture farm, a trout hatchery, and the trout rivers. The section on sea fisheries covers fresh, frozen, and chilled fish; marketing and cold storage; retail facilities; dried fish; green turtles; and crawfish. Fishing investigations and gear development are discussed and several tables on imports and catch statistics are included.

LAW OF THE SEA CONFERENCE:

United Nations Conference on the Law of the Sea, A/CONF.13/37, vol. I: Preparatory Documents (Geneva, Feb. 24-Apr. 27, 1958), 340 pp., printed, US\$3.50, Apr. 1959, (Sales No.: 58.V.4, Vol. I). United Nations, New York, N. Y. (For sale by International Documents Service, Columbia University Press, 2960 Broadway, New York 27,

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N. Y.) Includes information on economic development of fisheries; comments by governments on law of the sea; fishing methods; and territorial waters.

MARINE RESEARCH:

The Airplane as an Instrument in Marine Research. Part One: Dinoflagellate Blooms, by Robert M. Ingle, Robert F. Hutton, Harry E. Shafer, Jr., and Robert Goss, Special Scientific Report No. 3, 27 pp., illus., processed. Florida State Board of Conservation, Marine Laboratory, St. Petersburg, Fla., September 1959.

NEW ZEALAND:

Report on Fisheries for 1958, 41 pp., printed. Government Printer, Wellington, New Zealand, 1959. A comprehensive report on New Zealand's fisheries containing sections on spiny lobsters, fishing vessels and personnel, fish landings by ports and species, methods of capture, foreign trade, fish-liver oil, whaling, rock oysters, dredged oysters, whitebait fishery, and fresh-water fisheries. Also discusses fresh-water and marine research, Fishing Industry Advisory Council, and Legislation. A list of scientific names of fish and shellfish is included with a number of statistical tables giving detailed data on the fisheries.

NORTH ATLANTIC AREA:

Seefischerei und Fischereipolitik im Nordatlantischen Raum (Marine Fisheries and Governmental Fishery Policy in the North Atlantic Area), by Wilhelm Blanke, 232 pp., illus., printed in German, DM 45 (about US\$10.72). Verlag Krogers Buchdruckerei, Hamburg-Blankenese, Germany, 1959. After a brief reference to the extent of the commercial fisheries throughout the world, this book discusses the participation of various nations in prosecuting the fisheries in all areas of the North Atlantic. It describes quantities of fishery products harvested, trade in fishery products, and the nature of facilities used such as number of vessels, kinds and amounts of gear, harbor facilities, etc. The book also attempts to give some idea of governments' policy with respect to fisheries. It mentions aid given to the fishery industry in the form of research, subsidies, etc., and also mentions international treaty aspects of governments' relations in the North Atlantic Area. This picture and the extent of individual commercial fisheries in the North Atlantic is given for 22 nations, each in a separate section in Part II of the book. Many of these individual sections were written by contributors from the country concerned, which should help in providing a sound and accurate description on the subject for each country.

--W. H. Stolting

NUTRITION:

"Nutritive Value of Canned Meat," by P. L. Sawant and N. G. Magar, article, Journal of Scientific and Industrial Research (India), vol. 17C, 1958, pp. 189-191, printed. Journal of Scientific and Industrial Research, Old Mill Rd., New Delhi 2, India. Describes how canned fish was

packed in hot peanut oil and stored at 27°, 37°, and 43° C. for 4 to 12 months. Results showed that soluble protein, amino acids, thiamine, riboflavine, and niacin all decreased; the changes were greater with longer time and higher temperature. The peroxide number of the muscle fat and of the covering oil increased after 4 months' storage.

Nutritive Value of Fish from Michigan Waters, by Ruth L. Ingalls and others, Technical Bulletin 219, 24 pp., printed. Michigan State College, Agricultural Experiment Station, East Lansing, Mich., May 1950.

Studies on the Nutritive Value of Lipids X--Seborrhea Forming Activity of Esters of Fatty Acids with Higher Alcohols upon the Rats, by Takashi Kaneda and Kisae Sakurai, 9 pp., illus., printed in Japanese with English abstracts. (Reprinted from Bulletin of the Japanese Society of Scientific Fisheries, vol. 19, no. 12, April 1954, pp. 1168-1175.) Japanese Society of Scientific Fisheries, c/o Tokyo Suisan Daigaku, Shiba-kaigandori 6-Chome, Tokyo, Japan.

OCEANOGRAPHY:

The Floors of the Oceans I--The North Atlantic, by Bruce C. Heezen, Marie Tharp, and Maurice Ewing, Special Paper 65, 134 pp. of text and 11 charts, illus., printed. The Geological Society of America, 419 W. 117th St., New York 27, N. Y., April 11, 1959.

PARASITES:

Studies on Helminth Parasites from the Coast of Florida. III--Digenetic Trematodes of Marine Fishes from Tampa and Boca Ciega Bays, by Franklin Sogandares-Bernal and Robert F. Hutton, Contribution No. 19, 10 pp., illus., printed. (Reprinted from The Journal of Parasitology, vol. 45, no. 3, June 1959, pp. 337-346.) Florida State Board of Conservation Marine Laboratory, Maritime Base, Bayboro Harbor, St. Petersburg, Fla.

POISONOUS FISH:

Report of a Survey of the Fish Poisoning Problem in the Marshall Islands, by A. F. Bartsch, R. H. Drachman, and E. F. McFarren, 128 pp., illus., processed. Division of Sanitary Engineering Services and Communicable Disease Center, Bureau of State Services, Public Health Service, U. S. Department of Health, Education, and Welfare, Washington 25, D. C., January 1959.

PRESERVATION:

"Technical Aspects of the Commercial Use of Anti-Microbial Chemicals as Food Preservatives," by M. Ingram, article, Chemistry and Industry, no. 18, May 2, 1959, pp. 552-557, printed. Chemistry and Industry, 14 Belgrave Square, London S. W. 1, England.

Torry Research, 1958, on the Handling and Preservation of Fish and Fish Products (Report of the Director of the Torry Research Station), 39 pp., printed, 2s. 6d. (about 35 U. S. cents). Her Majesty's Stationery Office, 13a Castle St.,

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Edinburgh 2, Scotland, 1959. Describes accomplishments in research during 1958 on improvement in quality of iced fish, freezing and cold-storage, smoke curing, drying, canning, fishery byproducts, bacteriology, and biochemistry. Includes work on objective assessment of freshness, preservative ices, air-blast freezing, electrostatic smoking, "browning" of dehydrated fish, reduction of free liquor in herring packs, fish meal pilot plant, marine bacteriophages, fish muscle enzymes, and many others.

PROTEINS:

"Biological Value of the Protein in Some Seafoods Used in Spain," by A. Pujol and G. Varela, article, Anales de Bromatologia, vol. 10, 1958, pp. 437-478, printed in Spanish. Sociedad Espanola de Bromatologia, Ciudad Universitaria, Edificio Facultad de Farmacia, Madrid, Spain.

"Proteins in Fish Muscle. 15--Note on the Preparation of Actin From Cod Muscle with Potassium Iodide," by J. R. Dingle, article, Journal of the Fisheries Research Board of Canada, vol. 16, March 1959, pp. 243-245, printed. Journal of the Fisheries Research Board of Canada, Queen's Printer and Controller of Stationery, Ottawa, Canada.

RADIOACTIVITY:

"Studies of the Radioactive Materials in the Radiologically Contaminated Fishes. IV--Group Separation Analysis of the Radioelements in a Contaminated Bigeyed Tuna, Parathunnus mebachi," by Kazuo Shirai and Masamichi Saiki, article, Bulletin of the Japanese Society of Scientific Fisheries, vol. 23, no. 11, 1958, pp. 723-728, illus., printed in Japanese with English abstract. Japanese Society of Scientific Fisheries, c/o Tokyo Suisan Daigaku, Shiba-kaigandori 6-Chome, Tokyo, Japan.

RESEARCH VESSEL:

"The Design of a Research Stern Fishing Trawler--Part II," by J. C. Esteves Cardoso and C. R. Caldiera Saraiva, article, World Fishing, vol. 8, no. 10, October 1959, pp. 59-60, 63-64, illus., printed. World Fishing, John Trundell Ltd., St. Richards House, Eversholt St., London N. W. 1, England. Part II of a paper read at the meetings of the Institution of Naval Architects held in Lisbon in June 1959. Presents a detailed, critical description of the design and expected performance of a research vessel being built for the Portuguese Association of Trawler Owners. Discusses the main characteristics of the vessel--over-all length 186 feet, 3 inches; beam 35 feet; depth 15 feet/21 feet; displacement 1,300 metric tons; and hold capacity 4,340 cubic feet of frozen fish or 5,944 cubic feet of wet fish. The general arrangement includes a deckhouse with lateral passages to facilitate conveying the catch to the hold. The design features a large broad hanging stern with small immersion and a large breadth fore and aft at the waterline to ensure stability. Economy of weight is achieved by the extensive use of welding and the installation of a versatile high-speed power plant. The electrical installations are run by alternating current, except the winch

motor, which is run by direct current. A high-speed twin-engine Diesel plant provides propulsion, giving full power for trawling and towing. Drawings of the vessel's layout and propulsion system are shown.

SALMON:

Food of Salmonid Fishes of the Eastern North Pacific Ocean, by George H. Allen and William Aron, Reference 57-21, 27 pp., illus., processed. Department of Oceanography, University of Washington, Seattle 5, Wash., August 1957.

SALMON:

"The Salmon's Growing Problem in B. C.," article, Trade News, vol. 10, no. 4, October 1957, pp. 8-9, illus., printed. Director of Information and Educational Service, Department of Fisheries, Ottawa, Canada. Discusses the construction of fishways, pipelines, and control dams to solve the problems posed to the British Columbia salmon fisheries by the discharge of industrial wastes into waterways and the construction of hydroelectric dams.

SALMON EGGS:

"Egg Lipids of a Salmon, Oncorhynchus keta I--Fatty Oils from Salmon Eggs," by Kolchi Zama and others, article, Bulletin of the Japanese Society of Scientific Fisheries, vol. 24, nos. 6 and 7, 1958, pp. 569-572, illus., printed in Japanese with English abstract. Japanese Society of Scientific Fisheries, c/o Tokyo Suisan Daigaku, Shiba-kaigandori 6-Chome, Tokyo, Japan.

SARDINES:

"Experiments in Cooking Sardines--II," by R. Meesemaecker and Y. Sohler, article, Food Manufacture, vol. 34, May 1, 1959, pp. 193-196, 204, printed. Food Manufacture, Leonard Hill, Ltd., Eden St., London N. W. 1, England.

SCALLOPS:

A New Fishery for Scallops in Western Florida, by Harvey R. Bullis, Jr., and Robert M. Ingle, 4 pp., printed. (Reprinted from Proceedings of the Gulf and Caribbean Fisheries Institute, Eleventh Annual Session, November 1958, pp. 75-78.) Florida State Board of Conservation, Marine Laboratory, St. Petersburg, Fla.

Offshore and Newfoundland Scallop Explorations, by L. M. Dickie and L. P. Chiasson, General Series Circular No. 25, March 1955, 4 pp., illus., printed. Fisheries Research Board of Canada, Atlantic Biological Station, St. Andrews, New Brunswick, Canada. To assess the prospects of an offshore scallop fishery, the Fisheries Research Board of Canada in cooperation with the Department of Fisheries, began explorations on the banks off Nova Scotia and Newfoundland in 1953. Three vessels were chartered for this work and commercial fishermen were encouraged to fish these areas. Explorations continued for about one year, but results did not indicate any extensive scallop beds on the Newfoundland and Nova Scotia Banks.

SEAWEED:

"Chemical Studies on Volatile Constituents of Seaweed. On Volatile Constituents of Digenia

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simplex," by Teruhisa Katayama, article, Bulletin of the Japanese Society of Scientific Fisheries, vol. 24, no. 3, 1958, pp. 205-208, printed. Japanese Society of Scientific Fisheries, c/o Tokyo Suisan Daigaku, Shiba-kaigandori 6-Chome, Tokyo, Japan.

"Studies on the Bleaching and Utilization of the Seaweed 'Gulaman-Dagat' (Gracilaria confervoides), by J. I. Sulit, L. G. Salcedo, and P. C. Panganiban, paper, Proceedings Indo-Pacific Fisheries Council, 6th Session, September 30-October 14, 1955, section II, pp. 280-283, processed. Food and Agriculture Organization of the United Nations, Rome, Italy, 1956.

"Studies on the Vitamins of Seaweeds. I--Folic Acid and Folinic Acid," by Akio Kanazawa and Daiichi Kakimoto, article, Bulletin of the Japanese Society of Scientific Fisheries, vol. 24, nos. 6 and 7, 1958, pp. 573-577, illus., printed in Japanese with English abstract, figure, and tables. Japanese Society of Scientific Fisheries, c/o Tokyo Suisan Daigaku, Shiba-kaigandori 6-Chome, Tokyo, Japan.

SEINING:

"Danish Seining at Cheticamp," by G. J. Gillespie, article, Trade News, vol. 12, no. 3, September 1959, pp. 3-5, illus., printed. Director of Information and Educational Service, Department of Fisheries, Ottawa, Canada. The story of the fishermen of a small community on the west coast of Cape Breton Island who have worked together with a fishery cooperative to increase production fourfold within the past decade. With the development of Danish seining, the door has been opened to an ever-expanding diversified fishery. If this method of fishing can be utilized for catching cod and haddock, in addition to the usual flatfish, a secure future lies ahead for the Nova Scotia fishing industry.

SHARKS:

Shark Attack, by V. M. Coppleson, 281 pp., illus., printed. Angus and Robertson, Ltd., 89 Castle-reagh St., Sydney, Australia, 1958.

SHRIMP:

Notes on TRACHYPENEUS (TRACHYSALAMBRIA) SIMILIS (Smith), in the Tortugas Shrimp Fishery, by Bonnie Eldred, Contribution No. 26, 2 pp., printed. (Reprinted from the Quarterly Journal of the Florida Academy of Science, vol. 22, no. 1, 1959.) Florida State Board of Conservation, Marine Laboratory, St. Petersburg, Fla.

Preliminary Analysis of Tortugas Shrimp Sampling Data, 1957-58, by Robert M. Ingle and others, Technical Series No. 32, 43 pp., illus., printed. Florida State Board of Conservation, Marine Laboratory, St. Petersburg, Fla., September 1959. A report on surveys conducted in compliance with a Florida Statute passed in 1957, aimed at conservation of the pink spotted shrimp of Dry Tortugas. Twelve sampling stations were established in the controlled area off the Florida keys. When the results of sampling show that shrimp in the area are smaller than 50 to the pound (heads off), the area is

closed to commercial fishing. The greater part of this report consists of statistical tables showing detailed findings of this continuing survey.

SOUTH PACIFIC ISLANDS:

"Some Notes on Fisheries in American Samoa, Fiji, and New Caledonia," by H. Van Pel, article, SPC Quarterly Bulletin, vol. 9, no. 3, July 1959, pp. 26-27, illus., printed, single copy 30 U. S. cents. South Pacific Commission, Box 5354, G. P. O., Sydney, Australia.

SPOILAGE:

"Spoilage of Fish in the Vessels at Sea: 6--Variations in the Landed Quality of Trawler-Caught Atlantic Cod and Haddock During a Period of 13 Months," by C. H. Castell, Jacqueline Dale, and Maxine F. Greenough, article, Journal of the Fisheries Research Board of Canada, vol. 16, March 1959, pp. 223-233, printed. Journal of the Fisheries Research Board of Canada, Queen's Printer and Controller of Stationery, Ottawa, Canada.

TENNESSEE VALLEY AUTHORITY:

History of Fish and Fishing in Norris--A TVA Tributary Reservoir, by Charles J. Chance, Contribution No. 116, 12 pp., illus., printed. (Reprinted from Proceedings of the Twelfth Annual Conference, Southeastern Association of Game and Fish Commissioners, pp. 116-127.) Southeastern Association of Game and Fish Commissioners, Columbia, S. C., 1958. Norris Reservoir, the first TVA tributary reservoir, completed in 1936, has a spillway surface area of 34,200 acres. Earliest fish inventory records indicated the presence of 65 indigenous species. Although several species were unable to cope with the reservoir environment, game and commercial, species generally have prospered in the reservoir. Fish tagging studies conducted annually on Norris for 14 years indicate the relative rate of harvest and the degree of dispersion of each species within the reservoir.

THAILAND:

Fisheries Statistics of Thailand, 1958, 53 pp., illus., processed in Thai and English. Statistics Section, Department of Fisheries, Ministry of Agriculture, Bangkok, Thailand, September 1959. Contains statistical tables showing landings of marine and fresh-water fish and shellfish with comparative data from previous years; price data for fresh and salted fish; fish pond production; foreign trade in fishery products; registered Thai fishing vessels; fishing gear; revenue from fishing industry; maps of fishing grounds; and other pertinent data.

TRADE LIST:

The Bureau of Foreign Commerce, U. S. Department of Commerce, Washington 25, D. C., has published the following mimeographed trade list. Copies 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,

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Federal Republic of Germany and West Berlin, 20 pp. (September 1959). List the names and addresses, size of firms, and types of products handled by each firm. Includes firms dealing in fish oils, fish liver oils, sperm oils, and whale oils.

Oils (Animal, Fish, and Vegetable)--Importers, Dealers, Producers, Refiners, and Exporters, Japan, 24 pp. (August 1959). Lists the names and addresses, size of firms, and types of products handled by each firm. Includes firms dealing in fish liver oils, fish oils, and whale oil.

TRAWLING:

"Surface and Mid-Water Trawling," by A. F. Aalberg, article, *Kalomiehni Viesti*, nos. 1 and 2, February 6 and March 16, 1958, printed in Finnish. *Kalomiehni Viesti*, Kotka, Finland.

TUNA:

Biochemical Study on Tuna, 7 pp., illus., printed. Fisheries Agency, Ministry of Agriculture and Forestry, Tokyo, Japan, September 1959. A paper presented at the Tuna Conference between the United States and Japanese Governments.

Inter-American Tropical Tuna Commission, Annual Report for the Year 1958, 121 pp., illus., printed in Spanish and English. Inter-American Tropical Tuna Commission, Scripps Institution of Oceanography, La Jolla, Calif. Contains the annual report of the Commission, which discusses the program and progress of investigations and publication of research results and a report of the Director on investigations during the year 1958. The Director's report presents the compilation of current statistics of total catch, amount and success of fishing, and abundance of the fish populations; present status of the tuna populations; potential fishing power of the tuna fleets; and other studies of tuna catch statistics. It also covers research on tuna population structure, migrations, and vital statistics; other aspects of tuna biology and behavior; investigations of physical, chemical, and biological oceanography and tuna ecology; and investigations of biology, ecology, and life history of bait fishes.

Study on Green Flesh, 23 pp., illus., printed. Fisheries Agency, Ministry of Agriculture and Forestry, Tokyo, Japan, September 1959. A paper presented at the Tuna Conference between the United States and Japanese Governments.

"Study on the Green Meat of Tuna," by Shuichi Hirao and others, article, *Bulletin of the Japanese Society of Scientific Fisheries*, vol. 24, no. 8, 1958, pp. 671-675, illus., printed in Japanese with English abstract. Japanese Society of Scientific Fisheries, c/o Tokyo Suisan Daigaku, Shiba-kaigandori 6-Chome, Tokyo, Japan.

UGANDA:

Annual Report of the Game and Fisheries Department (For the Period 1st July 1957 to 30th June, 1958), 101 pp., illus., printed. Government Printer, P. O. Box 33, Entebbe, Uganda, 1959. Part III describes the work of the Fish-

eries Division during the financial year 1958, including general statistics and information on supplies of fishing gear; fish production, consumption, and exports for 1957; boat building and mechanization of craft; fisheries research; and the crocodile industry. A section on the fisheries of Uganda by regions contains information on the industry at Lakes Albert, George, Edward, and Kyoga. Accomplishments in fish farming are also discussed. Other parts of the report concern game conservation.

UNITED KINGDOM:

The White Fish Industry, 46 pp., illus., printed. The White Fish Authority, Lincoln's Inn Chambers, 2/3 Cursitor St., London E. C. 4, England. An informative booklet for pupils and teachers dealing not only with white (or demersal) fish proper, but also with pelagic fish (other than herring) and with shellfish. Describes the history and scope of the British fishing industry, the species and quantities caught, fishing methods, fishing vessels and grounds, fishery research, distribution, processing, storage, marketing, and nutritive value.

U. S. S. R.:

Fishes--Dnieper River, by Aleksandr Ivanovich Ambroz, 408 pp., illus., printed in Russian. (An individual may borrow the copy on deposit at the Central Library, Department of the Interior, Washington 25, D. C. through his local library.)

Fishes--Russia, by P. G. Borisov and N. S. Ovsianikov, 283 pp., illus., printed in Russian. (An individual may borrow the copy on deposit at the Central Library, Department of the Interior, Washington 25, D. C., through his local library.)

VENEZUELA:

The Marine Communities of Margarita Island, Venezuela, by Gilberto Rodriguez, Contribution No. 236, 44 pp., illus., printed. (Reprinted from *Bulletin of Marine Science of the Gulf and Caribbean*, vol. 9, no. 3, September 1959, pp. 237-280.) The Marine Laboratory, University of Miami, 1 Rickenbacker Causeway, Miami, Fla. An analysis of the composition and arrangement of the littoral and sublittoral communities in a representative area of the Caribbean. Includes a summary of the most common forms of marine plants and invertebrates of Margarita Island.

VESSELS:

British Trawlers, by H. M. Le Fleming, 64 pp., illus., printed, 2s. 6d. (about 35 U. S. cents). Ian Allan, Ltd., Craven House, Hampton Court, Surrey, England. A directory of trawler owners and vessels in the United Kingdom. A short introduction describes the three classes of trawlers, methods of fishing, and types of engines used in trawlers.

VIETNAM:

Selected Articles on Fishing Industry in North Vietnam, JPRS: 655-D, 8 pp., processed. U. S. Joint Publications Research Service, Suite 300, 205 E. 42nd St., New York 17, N. Y., April 14,

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1959. Photocopies may be purchased from the Photoduplication Service, Library of Congress, Washington 25, D. C.) Includes translations of the following articles from *Non Lam*, no. 1, January 1959: "How to Increase the Catch of Salt-Water Fish," by Hoang Xuan Hai; and "Fresh-Water Fish Breeding During Winter-Spring Season," by Nguyen Sung.

VIRGINIA:

Treasures from the Sea, The Virginia Seafood Industry, by Robert S. Bailey, Educational Series No. 10, 24 pp., illus., processed. Virginia Fisheries Laboratory, Gloucester Point, Va., 1959. Easy and informative reading for the layman, this booklet tells the story of Virginia's fisheries from colonial times until the present day. Information is given on changes in value and composition of the catch, details of finfish, shellfish, and sport fisheries; and the role of the public in conservation and proper utilization of fishery resources. Tables and drawings depict average annual values and catches of five species between 1931-55, 1956 landings by gear, and other statistical data concerning Virginia's fishing industry.

WHALES:

"Treating and Processing of Whale Meat to Meat Products," by Otto Roemmele, article, *Die Fleischwirtschaft*, vol. 10, 1958, pp. 833-835, printed in German. Die Fleischwirtschaft, Verlagshaus Sponholz GmbH, Kockstrasse 60-61, Berlin SW68, Germany

WHALING:

"Whaling Operations in the Antarctic, Season 1958/59," article, *Norsk Hvalfangst-Tidende*, vol. 48, no. 9, September 1959, pp. 452-464, 467-468, 471-476, illus., printed in Norwegian and English. Norsk Hvalfangst-Tidende, Sandefjord, Norway. A survey of the whaling operations in the Antarctic in the season 1958/59 prepared for and submitted at the meeting of the International Whaling Commission in London in June 1959. Covers the most important regulations governing pelagic whaling in the season 1958/59 and gives the number of factory-ships and catching boats which have been engaged in pelagic whaling since 1945/46 and average gross tonnage. The catch and oil production of the individual expeditions, the output of byproducts, and related statistics concerning the whaling operations in the Antarctic during the season 1958/59 are presented.



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