



## 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.  
 FL - FISHERY LEAFLETS.  
 SL - BRANCH OF STATISTICS LIST 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-2388	- Fish Meal and Oil, July 1960, 2 pp.
CFS-2388 (Supplement)	- U. S. Fish Meal and Scrap Production, 1929-1959 (HS No. 2), 4 pp.
CFS-2390	- Frozen Fish Report, August 1960, 8 pp.
CFS-2393	- New York Landings, July 1960, 4 pp.
CFS-2394	- Alabama Landings, May 1960, 2 pp.
CFS-2395	- Alabama Landings, June 1960, 2 pp.
CFS-2396	- Ohio Landings, July 1960, 2 pp.
CFS-2397	- Louisiana Landings, February and March 1960, 3 pp.
CFS-2399	- Shrimp Landings, July 1960, 6 pp.
CFS-2400	- North Carolina Landings, August 1960, 3 pp.
CFS-2401	- Texas Landings, July 1960, 3 pp.
CFS-2402	- Maine Landings, July 1960, 3 pp.
CFS-2403	- Maryland Landings, August 1960, 3 pp.
CFS-2404	- New Jersey Landings, July 1960, 3 pp.
CFS-2405	- Florida Landings, August 1960, 7 pp.
CFS-2407	- Georgia Landings, August 1960, 2 pp.
CFS-2408	- South Carolina Landings, August 1960, 2 pp.
CFS-2409	- Mississippi Landings, June 1960, 2 pp.
CFS-2410	- Texas Landings August 1960, 3 pp.

FL-432 (Revised) - Fishery Statistical Publications of the Bureau of Commercial Fisheries, by E. A. Power and Francis Riley, 31 pp., illus., processed. Contains a descriptive listing of all current fishery statistical publications released by the U. S. Fish and Wildlife Service. Also contains listings of fishery statistical reports released by other Federal agencies, International Commissions, Interstate Compact Commissions, and non-Government fishery agencies. The leaflet catalogs in detail publications in the Current Fishery Statistical series; daily, monthly, and annual Fishery Market News Service reports; Commercial Fisheries Review; and statistical digests. These contain data relating to the volume and value of the catch by area and species; the volume and value of processed products; freezings and cold-storage holdings; foreign-trade data; compilations of landings and distribution and marketing conditions; prices; current data on foreign fisheries; and other pertinent data.

FL-449 (Revised) - Organizations and Officials Concerned with the Commercial Fisheries, 1960, 17 pp., April 1960. Lists officials and organizations concerned with the commercial fisheries in the United States Government, interstate compact commissions, international and related commissions, foreign embassies and consulates with fisheries representation, and industry and related organizations interested in the fisheries. Also lists selected institutions offering courses in fisheries and related sciences, and congressional committees.

FL-492 - Sea Turtles of the United States, by David K. Caldwell, 20 pp., illus., March 1960.

FL-496 - The True Pikes, by John Van Oosten, 9 pp., illus., April 1960.

Wholesale Dealers in Fishery Products, 1959 (Revised):

SL- 8 - Pennsylvania.

SL-25 - Wisconsin (Great Lakes Area).

SL-34 - Wisconsin (Mississippi River and Tributaries).

SSR-Fish. No. 322 - Temperatures of Lake Michigan, 1930-32, by John Van Oosten, 36 pp., illus., March 1960.

SSR-Fish. No. 330 - A Photoelectric Current Meter, by H. C. Boyar and F. E. Schueler, 9 pp., illus., March 1960.

SSR-Fish. No. 334 - Limnological Survey of Eastern and Central Lake Erie, 1928-1929, 202 pp., illus., June 1960.

SSR-Fish. No. 345 - Physical, Chemical, and Biological Observations in the Eastern Tropical Pacific Ocean Scot Expedition, April-June 1958, by Robert W. Holmes and Maurice Blackburn, 109 pp., 1960.

Sep. No. 602 - A Review of the Atlantic Coast Whiting Fishery.

Sep. No. 603 - Rapid Objective Freshness Test for Blue-Crab Meat and Observations on Spoilage Characteristics.

Sep. No. 604 - Equipment Note No. 5 - Sink Gill-Net Fishing in New England.

Fishery Bulletin of the Fish and Wildlife Service, vol. 54, 1952 and 1954, Bulletins 75 to 88, 7 pp., printed. Title page, table of contents, and index to be used for binding a set of bulletins issued during 1953 and 1954.

Fishery Bulletin of the Fish and Wildlife Service, vol. 56, 1954-56, Bulletins 90 to 106, 7 pp., printed.

Title page, table of contents, and index to be used for binding a set of bulletins issued during 1954-56.

Fish and the Fishing Industry, by Andrew W. Anderson, 18 pp., illus., printed. (Reprinted from Agricultural Year Book, 1960, pp. 353-370.) This article discusses the chemical and nutritional attributes of fish and shellfish; adoption of standards and voluntary inspection by the fishing industry; statistical data available; Market News Service publications; market development and technological services of the Bureau; species of fish and shellfish available on the market; and an economic analysis of problems of the fishing industry. It also covers the Fish and Wildlife Act of 1956 and the Saltonstall-Kennedy Act; biological research work of the Bureau; work of the Division of Resource Management; and exploratory fishing investigations.

Who Buys Canned Tuna, and Why? Circular 88, 66 pp., illus., June 1960.

Who Buys Canned Salmon, and Why? Circular 89, 52 pp., illus., June 1960.

Who Buys Canned Sardines, and Why? Circular 90, 73 pp., illus., June 1960. This and the other two reports describe the results of surveys of the motivational factors which influence the buying habits of household consumers of canned tuna, canned salmon, and canned sardines. The prime objective of the studies is to aid the domestic canned fish industries to expand markets for their products. Results and findings of the studies are especially directed toward the improvement of promotional and merchandising techniques. However, they have also a direct bearing on other important aspects of canned fish marketing such as the adaptation of the product to meet specific consumer preferences.

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-33	- Marine Habitat Improvement in Japan.
MNL-34	- Greek Fisheries, 1959.
MNL-35	- Reduction Plants in Newfoundland.

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

Alaska Fur Seal Investigations, Pribilof Islands, Alaska (Report of Field Activities, June-September 1959), by Carl E. Abegglen, Alton Y. Roppel, and Ford Wilke, 139 pp., illus., processed, limited distribution. U. S. Fish and Wildlife Service, Bureau of Commercial Fisheries, Marine Mammal Research, Seattle, Wash.

(Baltimore) Monthly Summary - Fishery Products, May 1960, 8 pp. (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; total receipts by species and comparisons with previous years; and wholesale prices on the Baltimore market; for the month indicated.

California Fishery Market News Monthly Summary, Part II - Fishing Information, August and Septem-

ber 1960, 13 and 7 pp., respectively, illus. (U. S. Bureau of Commercial Fisheries, Biological Laboratory, P. O. Box 6121, Pt. Loma Station, San Diego 6, Calif.) Topographic chart; sea-surface temperature charts, Eastern Pacific Ocean; and other pertinent data; for the months indicated.

(Chicago) Monthly Summary of Chicago's Fresh and Frozen Fishery Products Receipts and Wholesale Market Prices, September 1960, 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; and wholesale prices for fresh and frozen fishery products; for the month indicated.

Monthly Summary of Fishery Products Production in Selected Areas of Virginia, North Carolina, and Maryland, September 1960, 4 pp. (Market News Service, U. S. Fish and Wildlife Service, 18 So. King St., Hampton, Va.) Fishery landings and production for the Virginia areas of Hampton Roads, Lower Northern Neck, and Eastern Shore; the Maryland areas of Crisfield, Cambridge, and Ocean City; and the North Carolina areas of Atlantic, Beaufort, and Morehead City; together with cumulative and comparative data; for the month indicated.

New England Fisheries--Monthly Summary, August 1960, 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 August 1960; September 1960; 18 and 19 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.

Pelagic Fur Seal Investigations, California, Oregon, and Washington, 1959, by Karl Niggol, Clifford H. Fiscus, Jr., and Ford Wilke, 100 pp., illus., processed, limited distribution. (U. S. Fish and Wildlife Service, Bureau of Commercial Fisheries, Marine Mammal Research, Seattle, Wash.)

(Seattle) Washington, Oregon, and Alaska Receipts and Landings of Fishery Products for Selected Areas and Fisheries, Monthly Summary, September 1960. 10 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 (Ore.) wholesale dealers; receipts and vessel prices of troll salmon; also

Northwest Pacific halibut landings; and Washington shrimp landings; for the month indicated.

THE FOLLOWING ENGLISH TRANSLATIONS OF FOREIGN LANGUAGE ARTICLES ARE AVAILABLE ONLY FROM THE OFFICE INDICATED:

U. S. FISH AND WILDLIFE SERVICE, BUREAU OF COMMERCIAL FISHERIES, P. O. BOX 3830, HONOLULU, HAWAII.

On the Difference of the Stomach Contents of Tuna and Black Marlin in the South Equatorial Pacific Ocean, by Sigeyuki Koga, 11 pp., processed. (Translated from Bulletin of the Faculty of Fisheries, Nagasaki University, no. 7, 1958, pp. 31-40.)

On the Stomach Contents of Tuna in the West Indian Ocean, by Sigeyuki Koga, 11 pp., processed. (Translated from Bulletin of the Faculty of Fisheries, Nagasaki University, no. 6, 1958, pp. 85-92.)

BIOLOGICAL LABORATORY, U. S. BUREAU OF COMMERCIAL FISHERIES, SEATTLE, WASHINGTON.

Soviet Russian Discontent and the Japanese Fishery Today, by Yoshinosuke Yamazaki, 1 p., processed. (Translated from Suisan Keizai Shimibun, no 2419, March 19, 1959.)

Third Japan-Soviet Fishery Conference - Protect the Salmon Resources from Predation - The Catch Phrase of the Japanese Representatives, 16 pp., processed, March 1959. (Translated from The Fishing Industry Weekly, no. 232, January 15, 1959.)

BUREAU OF COMMERCIAL FISHERIES, TECHNOLOGICAL LABORATORY, SEATTLE, WASHINGTON.

Carbonyl Compounds in Fish as Related to Deterioration. I--Detection of Volatile Carbonyl Compounds Formed in Fish Flesh, by F. Ota, 9 pp., illus., processed. (Translated from Bulletin of the Japanese Society of Scientific Fisheries, vol. 24, no. 5, 1958, pp. 334-337.)

Lipids of the Muscle of Tuna, THUNNUS ORIENTALIS. I--Acetone-Soluble Lipids of the Ordinary Muscle; II--Acetone-Soluble Lipids of the Dark-Colored Muscle, by Hisanao Igarashi, 8 pp., processed. (Translated from Bulletin of the Japanese Society of Scientific Fisheries, vol. 22, no. 12, 1957, pp. 787-794.)

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

Japanese Summer Fishery for Albacore (GERMO AL-ALUNGA), by Wilvan G. Van Campen, Research Report 52, 31 pp., illus., printed, 1960, 15 cents. The important albacore fishery carried on by a fleet of Japanese live-bait tuna boats in the spring and early summer in the northwestern Pacific is described. An account is given of the historical background of the fishery, and the magnitude of its production is compared with other Japanese albacore fisheries and with the United States west coast tuna fishery. The seasonal trends in landings, geographical distribution of bases and fishing grounds, and the marketing and utilization of the catch are discussed. The fishery is shown to be the largest in the world for this species, although a recent outgrowth of, and still subsidiary to, the Japanese skipjack fishery, and to be largely dependent on foreign markets for its support.

"A Portable Conductivity Meter for Use with Electro-fishing Gear," by Richard B. Thompson and Richard H. Van Haagen, article, Progressive Fish-Culturist, vol. 22, April 1960, p. 63, processed, single copy 25 cents.

Relation Between Fish Condition and Population Size in the Sardine (SARDINOPS CAERULEA), by John S. MacGregor, Fishery Bulletin 166 (from Fishery Bulletin of the Fish and Wildlife Service vol. 60), pp. 215-230, illus., printed, 20 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 OF PUBLISHER MENTIONED. DATA ON PRICES, IF READILY AVAILABLE, ARE SHOWN.

### AGAR AGAR:

"Studies on the Chemical Constitution of Agar-Agar. XXI--Re-Investigation of Methylated Agarose of Gelidium amansii," by Choji Araki and Susumu Hirase, article, Bulletin of the Chemical Society of Japan, vol. 33, March 1960, pp. 291-295, printed. Chemical Society of Japan, No. 5, 1-Chome, Surugadai Kanda Chiyoda-ku, Tokyo, Japan.

### ALGAE:

"New Delhi Symposium on Algae," by G. E. Fogg, article, Nature, vol. 185, March 19, 1960, pp. 820-821, printed. Nature, MacMillan & Co., Ltd., St. Martin's St., London WC 2, England.

### ANTIBIOTICS:

"The Application of Chlortetracycline in Extending the Storage Life of Chilled Fish Fillets," by F. Babin and T. Sakharova, article, Kholodil'naia Tekhnika, no. 4, 1960, pp. 35-37, illus., printed in Russian with short summary in English. Kholodil'naia Tekhnika, c/o Four Continent Book Corp., 822 Broadway, New York 3, N. Y.

"Effectiveness of Tetracycline Treatment on Quality Improvement of Processed Foods. II--Quality Improvement and Chlortetracycline Residue of Salt Salmon Due to CTC-Treatment," by Tetuo Tomiyama and Yasuo Yone, article, Bulletin of the Japanese Society of Scientific Fisheries, vol. 25, no. 1, 1959, pp. 67-71, illus., printed in Japanese with English abstract. Bulletin of the Japanese Society of Scientific Fisheries, c/o Tokyo University of Fisheries, Shiba-kaigandori 6-Chome, Tokyo, Japan.

"Penetration of Tetracycline Antibiotics into Tuna, Sole, and Rockfish Flesh and Their Stability during Steaming and Retorting," by Peter A. Lerne and Lionel Farber, article, Food Technology, vol. 14, May 1960, pp. 217-221, printed. Food Technology, The Garrard Press, 510 No. Hickory St., Champaign, Ill.

### AUSTRALIA:

Third Annual Report on the Operation of the Fishing Industry Act 1956 During the Year Ended 30th June 1959, 5 pp., processed. Department of Primary

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Industry, Canberra, Australia. This report outlines the operations of the Fisheries Development Trust Account, established for the purpose of financing activities designed to foster the development of the Australian fishing industry, for the year ended June 30, 1959. It discusses the shrimp trawling survey; exploratory trawling in the Great Australian Bight; and investigations of the barracuda and spiny lobster industries.

#### BIOCHEMISTRY:

"The Amino Acid Composition of Some Fish Collagens: The Relation Between Composition and Structure," by Karl A. Piez and Jerome Gross article, Journal of Biological Chemistry, no. 235, April 1960, pp. 995-998, printed. The American Society of Biological Chemists, Inc., Mt. Royal and Guilford Aves., Baltimore, Md.

"Determination of Actomyosin in Fish Muscles," by L. I. Pershina, article, Izvestia Vysshikh Uchebnykh Zavedenii, Pishchevaya Tekhnologiya, no. 5, 1958, pp. 157-161, printed in Russian. Izdanie Krashodarskogo Instituta Pishchevoi Promyshlennosti, ul. Krasnaya, 135, Krasnodar, U. S. S. R.

#### BIOLOGY:

The Biology of Marine Animals, by J. A. Colin Nicol, 718 pp., printed, 95s. (about US\$13.30). Sir Isaac Pitman and Sons, Ltd., London, England, 1960.

#### BRAZIL:

Lista dos SCIAENIDAE Marinhas Brasileiros, Contendo Chave de Identificacao e Proposta de "Nomes Vulgares Oficiais," (List of the Brazillian Marine Sciaenidae, Containing a Key for Identification and a List of Proposed "Official Common Names"), by Haroldo Travassos and Melquiades Pinto Paiva, 31 pp., illus., printed in Portuguese. (Reprinted from Boletim do Instituto Oceanografico, vol. 8, nos. 1 and 2, 1957, pp. 139-165.) Boletim do Instituto Oceanografico, Universidade de Sao Paulo, Sao Paulo, Brazil.

#### CALIFORNIA:

California Cooperative Oceanic Fisheries Investigations Reports (January 1, 1958, to June 30, 1959), vol. 7, 217 pp., illus., printed. California Dept. of Fish and Game, Marine Research Committee, Sacramento, Calif., January 1960. This report consists of two sections. The first section contains a review of the present operational organization of the investigations, a brief review of the research under way during the period reported on, a description of the partial resurgence of the sardine fishery during the 1958/59 season, and a list of publications arising from the program. The second section is a report on a symposium held in June 1958 to review the unusual changes in the ocean circulation off California during 1957 and 1958. The cooperating agencies are: California Academy of Sciences; California Department of Fish and Game; Stanford University, Hopkins Marine Station; U. S. Bureau of Commercial Fisheries; University of California, Scripps Institution of Oceanography.

#### CANADA:

Fisheries Statistics of Canada, 1958 (Ontario, Prairie Provinces, and Northwest Territories), 67 pp., printed in French and English, C\$1. Queen's Printer and Controller of Stationery, Ottawa, Canada, September 1960. Contains tables giving the value of the princi-

pal species of inland fish landed, 1951-58; quantity and value of landings by species and fisheries districts, 1957-58; 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, Alberta, and the Northwest Territories.

Fisheries Statistics of Canada, 1958 (Prince Edward Island), 20 pp., printed, 50 Canadian cents. Queen's Printer and Controller of Stationery, Ottawa, Canada, September 1960. Contains tables showing the quantity and value of fishery products landed in Prince Edward Island, 1939-1958, by species; quantity and value by species and fisheries districts; quantity and value of manufactured fishery products by species, 1957-1958; capital equipment in the primary fisheries operations; and the number of fishermen engaged in the primary fisheries operations.

Fisheries Statistics of Canada, 1958 (Quebec), 61 pp., illus., printed in French and English, C\$1. Queen's Printer and Controller of Stationery, Ottawa, Canada, September 1960. Consists of statistical tables giving the quantity and value of the principal species of fish and shellfish landed in Quebec in 1939-58; quantity and value of landings by species and fisheries districts, 1957-58; capital equipment employed in the primary operations by fisheries districts, 1957-58; and number of persons engaged in primary operations by fisheries districts, 1957-58.

Journal of the Fisheries Research Board of Canada, vol. 17, no. 4, July 1960, 149 pp., illus., printed. Queen's Printer and Controller of Stationery, Ottawa, Canada. Contains, among others these articles: "The Effect of Impoundment on the Population and Movement of Atlantic Salmon in Eilerslie Brook, Prince Edward Island," by J. W. Saunders; Assessment of the Progressive Spoilage of Ice-Stored Shrimp," by J. R. Iyengar and others; "Facilities for Anadromous Fish Passage, Passamaquoddy Project," by M. C. Bell and C. H. Clay; "Possible Effects of Passamaquoddy Tidal Power Structures on the Canadian Lobster Industry," by D. G. Wilder; and "The Role of Electrical Conductivity of Water in Shocking Lampreys (Petromyzon marinus)," by R. W. McCauley.

Report of the Royal Commission on Price Spreads of Food Products, vol. III, 570 pp., illus., processed, C\$2. Queen's Printer and Controller of Stationery, Ottawa, Canada, March 1960. Consists of research documents, statistical data, and extended studies of the marketing of particular commodities, including fishery products. The section on fisheries prices includes an introduction to studies of fisheries commodities, and information on canned sockeye salmon; Pacific halibut; lobsters; cod and haddock fillets; and whitefish fillets and dressed whitefish. Contains a number of statistical tables showing the Fisheries Prices Support Board operations, 1948/49 to 1957/58; British Columbia canned salmon pack by species and by years, 1949 to 1958; freight rates on canned fish and boxed fish from British Columbia to eastern Canadian destinations; landings of Pacific halibut, 1949-58; annual Canadian landings and landed values of lobsters, by Provinces, 1949 to 1958; and other pertinent data.

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#### CARIBBEAN COMMISSION:

Report of the Third Caribbean Fisheries Seminar (St. Maarten, Netherland Antilles, July 3-9, 1959), 45 pp., processed. Central Secretariat, Caribbean Commission, Kent House, Trinidad, W. I., 1959. Covers the agenda and reports presented at the Third Caribbean Fisheries Seminar attended by delegates and observers from Governments in the Caribbean area. Specific problems related to the fishery industry included fisheries statistics, marketing and economics of the fishery industry, fishing boat design including engine selection, improvement of fishing gear, fish farming, and regional training. The Seminar considered a proposal for the setting up of some regional association of fisheries officers for the Caribbean.

#### COD:

"Animal Physiology Water Content of Cod (*Gadus callarias* L.) Muscle," by R. M. Love, article, Nature, vol. 185, March 5, 1960, p. 692, printed. Nature, Mac Millan & Co., Ltd., St. Martin's St., London WC 2, England.

"Free and Combined Amino Acids in the Flesh and Liver of Baltic Cod," by Teofil Dabrowski and Zenon Ganowiak, article, Roczniki Panstwowego Zakladu Higieny, vol. 9, 1958, pp. 549-556, printed in Polish with English summary. Panstwowy Zaklad Wydawnictw Lekarskich, ul. Chocimska, 22, Warsaw, Poland.

"The Identity of the Larval Nematodes Found in the Body Muscles of the Cod (*Gadus callarias* L.)," by J. N. R. Grainger, article, Parasitology, vol. 49, May 1959, pp. 121-131, printed. Parasitology, Cambridge University Press, 32 E. 57th St., New York 22, N. Y.

#### COMMISSIONS:

Twelfth Annual Report of the Pacific Marine Fisheries Commission for the Year 1959, 40 pp., printed. Pacific Marine Fisheries Commission, 741 State Office Bldg., 1400 S. W. Fifth Ave., Portland 1, Oreg. Reports briefly the specific activities of the Pacific Marine Fisheries Commission during 1959 and presents a review of long-term developments in the fields of research, regulation, and coordination. Recommends the admission to membership on the Commission of the States of Alaska and Hawaii and any other state having streams tributary to waters draining into the Pacific Ocean. Presents sections on commercial and sport salmon fisheries, the otter-trawl fishery, the Pacific Coast crab industry, and the shrimp and albacore fisheries.

#### CORAL REEFS:

"Our First Underseas Park," by Gilbert L. Voss, article, National Parks Magazine, vol. 34, no. 157, October 1960, pp. 12-14, illus., printed. National Parks Association, 1300 New Hampshire Ave., NW., Washington 6, D. C. The Key Largo Coral Reef Preserve, laying entirely under water, was established by presidential proclamation on March 15, 1960. This preservation, about 75 square miles in area, is situated south of Miami and east of the northern Florida Keys. It encompasses both lagoon and barrier reefs and contains two lighthouses. The reefs give shelter to scores of species of fish, including sponges, turtles, grouper, snapper, spiny lobster, and conch. The idea of establishing the park origi-

nated with conservationists interested in preservation of the area from commercial and other depletions, and was realized with the aid of the State of Florida and the U. S. Department of the Interior.

#### CUBA:

Ichtiologia Cubana (Cuban Ichthyology), by Don Felipe Poey y Aloy, vol. 1, 373 pp., illus., printed in Spanish. Ministerio de Educacion, Republica de Cuba, Havana, Cuba, 1955.

#### EUROPEAN COMMON MARKET:

"Common Market Speeds Ahead," article, Foreign Commerce Weekly, vol. 64, no. 11, September 12, 1960, pp. 5-6, printed, single copy 15 cents. Bureau of Foreign Commerce, U. S. Department of Commerce, Washington, D. C. (Available from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.)

#### EUROPEAN FREE TRADE ASSOCIATION:

"Completely Free Trade for Members EFTA's Goal by 1970," article, Foreign Commerce Weekly, vol. 64, no. 11, September 12, 1960, pp. 9, 24, printed, single copy 15 cents. Bureau of Foreign Commerce, U. S. Department of Commerce, Washington, D. C. (Available from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.)

#### FAROES ISLANDS:

Development of the Faroese Fishing Fleet, Faroes in Figures no. 11, September 1960, 6 pp., printed. Faroes in Figures, Faero Amts Sparekasse, Copenhagen, Denmark. Summarizes the renewal and enlargement of the Faroese fishing fleet to date and the purchase and intended purchase of new vessels. Discusses Government and private financing for the building of new vessels and the rebuilding of old ones and the present composition of the fleet. Includes several statistical tables showing types of vessels utilized, operation of the Faroese Fishing Vessel Mortgage Finance Corporation, and production and export of salted fish and dried cod.

#### FISH CULTURE:

Fish Culture, for Fun, for Profit, by Wayne Seaman and Gene Cook, Educational Pamphlet No. 6, 16 pp., illus., printed. Education Division, Colorado Game and Fish Department, 1530 Sherman St., Denver 1, Colo., revised April 1960. A handbook for those interested in fish culture for sport, food, or economic gain in the Rocky Mountain area. Discusses the basic requirements for fish culture--proper water supplies and suitable construction; trout culture; and warm water fish--water and food, pond and fish, and pond management. A list of reference books on fish culture is included.

Methods of Treating the Bottoms of Fish Ponds and Their Effects on Productivity--Part I; and Fish Culture in Certain European Countries--Part II, by Alfred G. Wurtz, General Fisheries Council for the Mediterranean Studies and Reviews No. 11, 50 pp., processed. GFCM Secretariat, Food and Agriculture Organization of the United Nations, Rome, Italy, June 1960. Part I, which contains a brief summary of the various methods of treating the bottoms of fish ponds and their effects on productivity, discusses the treatment of the ground at the bottom of

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the ponds, with or without crop growing. The author states that "the drying out of the bottom of fish ponds is indispensable in order to obtain high fish production." Part II gives an account of fish-pond cultural practices and piscicultural research in certain European countries.

#### FISH FLOUR:

"Biological Quality of Dilis Fish Flour Used as Source of Protein for Growing Rats," by Angelina Alcaraz-Bayan and Ruth M. Leverton, article, Philippine Journal of Science, no. 86, 1957, pp. 259-271, printed, Institute of Science, Manila, Philippines.

#### FISH MEAL:

"Acceptability of Fish Meal to Young Turkey Poults," by B. A. Krautman and C. D. Caskey, article, Feedstuffs, vol. 32, March 26, 1960, pp. 74-75, printed, Feedstuffs, Miller Publishing Co., 118 So. 6th St., Minneapolis 2, Minn.

"Quality of Protein in Different Kinds of Fish Powder (Meal)," by A. Vinokurova, article, Sbornik Studii Nauchno-Issledovatel'skii Rabot Moskova Sel'skokhoz. Akademii im. Timiryazeva, no. 8, 1958, pp. 331-336, printed in Russian. Nauchno-Issledovatel'skii Rabot Moskova Sek'skokhoz. Akademii im. Timiryazeva, Moscow, U. S. S. R.

"Relation of Residual Oil and Menhaden Fish Meal Quality," by Thomas L. Meade and Russell T. McIntyre, article, Proceedings of the Gulf and Caribbean Fisheries Institute, vol. 10, 1958, pp. 86-91, printed. The Marine Laboratory, University of Miami, #1 Rickenbacker Causeway, Miami 49, Fla.

#### FISH OIL:

"Preparation of a Coating Material by Chlorination of Fish Oil. V--Aeration Velocity of Chlorine," by Kosaku Suzuki, article, Bulletin of the Japanese Society of Scientific Fisheries, vol. 25, July 1959, pp. 218-221, illus., printed in Japanese with English abstract. Japanese Society of Scientific Fisheries, c/o Tokyo University of Fisheries, Shiba-kaigandori 6-Chome, Tokyo, Japan.

#### FLORIDA:

Ichthyological Surveys of the Lower St. Lucie and Indian Rivers, Florida East Coast, by Victor G. Springer, 19 pp., processed. Florida State Board of Conservation, W. V. Knott Bldg., Tallahassee, Fla., June 23, 1960.

Summary of Florida Commercial Marine Landings, 1959 and an Analysis of the Catch and Effort of Certain Species, by Albert Rosen, no. 60-2, 54 pp., illus., processed. Florida State Board of Conservation, W. V. Knott Bldg., Tallahassee, Fla., June 1960. Presents a summary of Florida's commercial landings of marine products for 1959. The fisheries for shrimp, mullet, Spanish mackerel, menhaden, and other species are covered. For the second consecutive year, data for individual fishing trips were collected from a sample of fish dealers. Includes a number of statistical tables giving data on landings and value of catches by species and by counties during 1959.

#### FOOD AND AGRICULTURE ORGANIZATION:

Current Bibliography for Aquatic Sciences and Fisheries, vol. 3, Parts 1 and 2, 192 pp. and 120 pp., respectively, printed, each part 17s. 6d. (US\$2.60),

plus postage, or subscription per volume of 12 parts £9 (US\$27) post free. Fisheries Biology Branch, Food and Agriculture Organization of the United Nations, Rome, Italy, 1960. (Available from Subscription Dept., Taylor & Francis, Ltd., Red Lion Court, Fleet St., London EC4, England.) Lists documents (including films and filmstrips) referring to studies of living aquatic resources and their environments, or to methods of research applicable in that field. References on fishing craft, gear and methods, and on primary fishery industries generally are included where their contents seem relevant to appraisal and use of resources. In addition, references to fisheries legislation concerning secondary and tertiary, as well as primary fishery industries, and relating to economic and technological as well as biological fields, are included.

The Economic Importance of the Sea Fisheries in Different Countries, FAO Fisheries Papers No. 15, 14 pp., processed, limited distribution. Fisheries Division, Food and Agriculture Organization of the United Nations, Viale delle Terme di Caracalla, Rome, Italy, August 1959. The text of a paper presented at the United Nations Conference on the Law of the Sea, held in Geneva, Switzerland, from February to April 1958. The most general statistical indicator of the importance of sea fisheries in the economy of a country is the proportion of the national income derived from them. This report includes statistical tables showing the product of the sea fisheries as percentage of aggregate domestic product and other indicators of the economic importance of the sea fisheries in selected countries; indicators of the economic importance of the sea fisheries in different countries; and disposition of the catch by countries, 1955.

Mediterranean Brackish Water Lagoons and Their Exploitation, by Ruggero de Angelis, GFCM Studies and Reviews No. 12, 66 pp., illus., processed. General Fisheries Council for the Mediterranean Secretariat, Food and Agriculture Organization of the United Nations, Rome, Italy, August 1960. This is the third and final study in a series on brackish-water fisheries. In the first section of this study, the author discusses the principles of exploitation: history and operation of the "valli," a barricade for trapping lagoonward migrating pelagic fish; characteristics of the lagoons; and gear used in landing the fish found in lagoons. In the second section, he covers the Mediterranean lagoons. Physical characteristics of the various lakes and lagoons are discussed together with the gear used and species of fish found in each locality.

The Need for Economic Statistics of the Fisheries, by Anthony Scott, FAO Fisheries Papers No. 16, 12 pp., processed, limited distribution. Fisheries Division, Food and Agriculture Organization of the United Nations, Viale delle Terme di Caracalla, Rome, Italy, March 1960. The text of a paper presented at the Expert Meeting on Fishery Statistics in the North Atlantic Area, held in Edinburgh, Scotland, in September 1959. Discusses the need for measuring the costs of fishing, examples of cost statistics, relation between output and cost, the use of cost and value estimates, and fishing in relation to connected industries.

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

Purpose and Methods in Fisheries Statistics, Doc. No. 13--"Development of Fishery Statistics in the Management of Philippine Fisheries," by Bayani Ong-changco, 13 pp., processed. Food and Agriculture Organization of the United Nations, Viale delle Terme di Caracalla, Rome, Italy, March 1952.

\_\_\_\_\_, Doc. No. 16--"The Statistical Work of the International Council for the Exploration of the Sea in Retrospect," by Nils Rosen, 6 pp., April 1952.

\_\_\_\_\_, Doc. No. 23--"The Collection of Pelagic Fish Statistics," by B. B. Parrish, 4 pp., May 1952.

\_\_\_\_\_, Doc. No. 29--"Swedish Fisheries Statistics - Existing Organization and Planned Improvements," by Otto Zetterberg, 5 pp., July 1952.

Some Economic Aspects of Fish Pond Operations, by Wylie D. Goodsell, FAO Fisheries Papers No. 14, 49 pp., processed, limited distribution. Fisheries Division, Food and Agriculture Organization of the United Nations, Viale delle Terme di Caracalla, Rome, Italy, February 1959. A brief report of a tour of inland fisheries in ten important European, Mid-Eastern and Far-Eastern countries. The object of the tour was to study the economic aspects of fish-pond culture, especially the practices and methods of production, financing, and distribution, and their bearing on costs of operation and income of owners. The tour was connected with and a part of the Third International Inland Fisheries Training Centre held at Bogor, Indonesia, from October 31 to December 10, 1955. The report is divided into sections on pond culture and on general observations on the pond fisheries in the countries visited.

TILAPIA MOSSAMBICA (Peters), Preliminary Findings in Netherlands New Guinea, by G. A. Reeskamp Jr., IPFC Occasional Paper 60/1, 3 pp., processed. Food and Agriculture Organization of the United Nations, Regional Office for Asia and the Far East, Maliwan Mansion, Phra Atit Road, Bangkok, Thailand.

The Use of Fishery Statistics by Government and Business in North America, by John B. Rutherford, FAO Fisheries Papers No. 18, 14 pp., processed, limited distribution. Fisheries Division, Food and Agriculture Organization of the United Nations, Viale delle Terme di Caracalla, Rome, Italy, July 1960. The text of a paper presented at the Expert Meeting on Fishery Statistics in the North Atlantic Area, which was held in Edinburgh, Scotland, in September 1959. Discusses the position of business and role of governments; classification of uses of fishery statistics; the "action," "immediate," or "short-term" use in marketing by both business and government, in current fisheries management, and in current economic indicators; and the "planning," "research," or "long-term" use in research by business, in biological and economic research by governments and universities, in analyzing and describing industry structure, in general economic investigations, and by governments and international fisheries management.

The Food and Agriculture Organization has published reports describing that Agency's activities under the Expanded Technical Assistance Program for developing the fisheries of many countries. These re-

ports have not been published on a sales basis, but have been processed only for limited distribution to governments, libraries, and universities. Food and Agriculture Organization of the United Nations, Viale delle Terme di Caracalla, Rome, Italy.

Report to the Government of:

Iraq on the Development of Inland Fisheries, by A. van den Eelaart, FAO Report No. 270, April 1954.

Chile on Increasing Fish Consumption, by John Fridthjof, FAO Report No. 271, April 1954.

Ceylon on the Mechanization of Fishing Operations, by Alan Glanville, FAO Report No. 284, July 1954.

Liberia on the Handling, Processing, and Marketing of Fish, by Jan van Pel, FAO Report No. 286, July 1954.

Italy as the Administering Authority for the Trust Territory of Somalia on the Exploratory Fishery Survey in Somalia, 1952/53, by H. W. Ogilvie, A. Fraser-Brunner, and D. L. Byrd, FAO Report No. 288, August 1954.

FRANCE:

"La Peche et le Marche des Crustaces au Cours des Cinq Dernieres Annees" (The Fishery and the Market for Crustaceans during the Last Five Years), by L. Plouas, article, La Peche Maritime, vol. 39, no. 989, August 1960, pp. 453-457, printed in French. La Peche Maritime, 190, Boulevard Haussmann, Paris, France.

"Le Rapport sur la Production du Comite Central des Peches Maritimes--La Production Francaise en 1959: 476,000 Tonnes pour Plus de 62 Milliards d'Anciens Francs" (The Production Report by the Central Committee on Maritime Fisheries--French Production in 1959: 476,000 Metric Tons Valued at more than 62 Billion Old Francs), article, La Peche Maritime, vol. 39, no. 989, August 1960, pp. 463-469, printed in French. La Peche Maritime, 190, Boulevard Haussmann, Paris, France.

FREEZER TRAWLERS:

"Recent Developments in Propulsion Machinery and Freezing Equipment for Deep-Sea Trawlers," by G. C. Eddie, article, Shipbuilder and Marine Engine Builder, May 1958, pp. 3-8, printed. Shipbuilder and Marine Engine Builder, Newcastle-on-Tyne, London, England.

FREEZERS:

"New Vertical-Plate Freezer Steps Up Performance," by Arthur V. Gemmill, article, Food Engineering, vol. 32, April 1960, pp. 66-68, printed. Food Engineering, McGraw-Hill Publishing Co., Inc., 330 W. 42nd St., New York 36, N. Y.

FRENCH ANTILLES:

"La Peche aux Antilles et en Guyane Francaise" (The Fishery in the Antilles and French Guiana), by Jean Morice, article, pour l'Expansion Economique des Departements d'Outre-Mer, no. 1, July 1960, pp. 19-22, illus., printed in French. Societe d'Assistance Technique et de Credit Social d'Outre-Mer, 235, Boulevard Saint-Germain, Paris (VII<sup>e</sup>), France.

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

#### FRENCH POLYNESIA:

"The Utilization of Marine Resources in French Polynesia," by Michel Angot, article, South Pacific Bulletin, vol. 10, no. 3, July 1960, pp. 46-50, illus., printed. South Pacific Commission, Box 5254, G. P. O., Sydney, Australia. Reviews fishery and other marine resources of the Windward Islands, Leeward Islands, the Tuamotu Group, and the Marquesas, and discusses methods and problems of exploiting them. Covers the type of vessel used, method of fishing, and species landed in the lagoons, on reefs, outside the reefs but within sight of land, and in the deep-sea fisheries. Describes the marketing systems within and outside the Society Islands and mother-of-pearl shell--the one marine export product.

#### FROZEN STORAGE:

"Odor Transference from Fish to Butter and Fried Chicken During Frozen Storage," by Ernest A. Fieger and Arthur F. Novak, article, Quick Frozen Foods, vol. 23, no. 1, August 1960, pp. 94-96, printed. Quick Frozen Foods, E. W. Williams Publishing, Inc., 82 Wall St., New York 5, N. Y. A study was conducted over a three-year period to determine if odors from fish would be transferred to fried chicken and butter during frozen storage. Results showed that proper packaging can prevent transfer of odors from one food to another.

#### GREAT LAKES:

"Canada's Great Lakes Research Program," by D. V. Anderson, article, The Conservationist, August-September 1960, pp. 2-5, 34, illus., printed. The Conservationist, Rm. 335, State Campus, Albany, N. Y. The author reports on a long-range, comprehensive study of Canada's Great Lakes. The program received a great boost in 1958 with the loan from the Royal Canadian Navy of the Porte Dauphine, a 125-foot, 400-ton vessel, easily adapted to research work. From April 1959 to March 1960, this vessel covered 17,000 miles, concentrating on Lake Ontario but cruising in the other lakes as well. Valuable hydrographic, biological, and meteorological data were collected. The vessel was sponsored by the University of Toronto and cooperatively supported by Federal and provincial agencies.

#### HALIBUT:

"Variations in Chemical Composition of Different Parts of Halibut Flesh," by Claude E. Thurston and Patricia P. MacMaster, article, Food Research, vol. 25, March-April 1960, pp. 229-236, printed. Food Research, The Garrard Press, 510 No. Hickory St., Champaign, Ill.

#### IRRADIATION PRESERVATION:

Food Irradiation Quarterly International Newsletter, vol. 1, no. 1, July-September 1960, 39 pp., processed. O.E.E.C. Mission, Publications Office, Suite 1223, 1346 Connecticut Ave., N. W., Washington 6, D. C. The first issue of a new quarterly published by the European Information Center for Food Irradiation. Contains, among others, an article entitled: "U. S. Government Increases Activity in Radiation Processing of Foods," by Eugene W. Scott. Also discusses the inauguration of the European information center for food irradiation; study of O.E.E.C. for a European Food Irradiation Center; and threshold for induced radioactivity in irradiated foods. The publication also contains reports on meetings, schol-

arship and study opportunities, and a selected bibliography.

"Tooling Up for Low Dose Irradiation Processing of Fresh Foods," by Warren W. Eukel and Wolfgang Huber, article, Food Technology, vol. 14, April 1960, pp. 198-203, printed. Food Technology, The Garrard Press, 510 No. Hickory St., Champaign, Ill.

#### LABOR LEGISLATION:

Supplement to Federal Labor Laws and Agencies (1960 Supplement to Bulletin 123), 75 pp., printed, 30 cents. Bureau of Labor Standards, U. S. Department of Labor, Washington, D. C. (Available from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.) This booklet will serve as a guide to the layman on matters pertaining to labor-management relations, social security, employment security, and working conditions. It discusses in detail the Labor-Management Relations Act (Taft-Hartley Act); Labor-Management Reporting and Disclosure Act of 1959; Welfare and Pension Plans Disclosure Act; Social Security Act; Railroad Retirement Act; unemployment insurance legislation; Safety Amendment to Section 41 of the Longshoremen's and Harbor Workers' Compensation Act; and other labor legislation.

#### LAKE TROUT:

Further Observations on the Survival of Yearling Lake Trout Planted in South Bay, Lake Huron, by J. C. Budd and F. E. J. Fry, 7 pp., illus., printed. (Reprinted from The Canadian Fish Culturist, no. 26, March 1960, pp. 7-13.) The Queen's Printer and Controller of Stationery, Ottawa, Canada.

Survival and Growth of Tagged Lake Trout in South Bay, Lake Huron, by John C. Budd, 2 pp., printed. (Reprinted from Transactions of the American Fisheries Society, vol. 89, no. 3, 1960, pp. 308-309.) The American Fisheries Society, Librarian, Colorado A. and M. College, Fort Collins, Colo.

#### MADAGASCAR:

Bulletin de Madagascar, vol. 10, no. 171, August 1960, 80 pp., illus., printed in French. Service General de l'Information, Place Colbert, Tananarive, Madagascar. Includes, among others, an article on the inland fisheries entitled, "Monographie du Lac de Tampolo-Fenerive" (Monograph on the Lake of Tampolo-Fenerive), by A. Kiener. With the granting of self-governing status to this former French colony, Madagascar is now known as the Malagasy Republic.

#### MARINE BORERS:

Marine Borer Investigations, Final Report 60-1, May 1960, 37 pp., illus., processed. The Marine Laboratory, University of Miami, #1 Rickenbacker Causeway, Miami 49, Fla.

#### MARKING FISH:

The Use of Lead Versenate to Place a Time Mark on Fish Scales, by F. E. J. Fry and others, 5 pp., illus., printed. (Reprinted from Transactions of the American Fisheries Society, vol. 89, no. 2, 1960, pp. 149-153.) The American Fisheries Society, Librarian, Colorado A. and M. College, Fort Collins, Colo.



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## MELANESIA:

"SPC Fisheries Investigations in Melanesia," by H. van Pel, article, South Pacific Bulletin, vol. 10, no. 3, July 1960, pp. 25-28, illus., printed. South Pacific Commission, Box 5254, G. P. O., Sydney, Australia.

## MIDWATER TRAWLING:

Midwater Trawling Studies in the North Pacific, by William Aron, 10 pp., illus., printed. (Reprinted from Limnology and Oceanography, vol. 4, no. 4, October 1959, pp. 409-418.) Woods Hole Oceanographic Institution, Woods Hole, Mass. Summarizes the results of midwater trawling studies conducted in the North Pacific by the research vessel Brown Bear of the University of Washington, Department of Oceanography, during the summer of 1957. The trawl studies were made on a cruise devoted primarily to research for the International Geophysical Year program. The trawling studies were primarily exploratory--to find out what animals inhabit the depths under study and also to obtain some idea of their relative abundance. Within these two major objectives, information was desired regarding the horizontal and vertical distribution of trawl-caught animals and the relationship between these distributions and the oceanographic data which were obtained during the course of the work.

## NETHERLANDS:

Jaarcijfers over de Visserij Gedurende het Jaar 1959 (Annual Fisheries Statistics, 1959), No. 51, 163 pp., illus., printed in Dutch with English titles and summaries, and statistical tables in both Dutch and English. Directie van de Visserijen, 's-Gravenhage, Netherlands, 1960. A review of Dutch fisheries during 1959 covering the sea, inshore, and river and inland fisheries; Government regulations; whaling; export of salted and smoked herring; fisheries research; and fishing vessels. The second half of the report is devoted to statistical tables showing number and tonnage of fishing vessels of various types; quantity and value of fish and shellfish landed at each port by Dutch and foreign vessels; extent and outcome of the drift-net, trawl, and Danish seine fisheries; landings in the various coastal and inland fisheries; whaling results; outcome of the salmon and other pelagic fisheries; and other pertinent data.

## NORWAY:

"Fiskernes Inntektsniva i 1958" (Investigation of Fishermen's Income in 1958), article, Fiskets Gang, vol. 46, no. 28, July 14, 1960, pp. 417-422, printed in Norwegian. Fiskets Gang, Postgiro Nr. 691 81, Bergen, Norway.

## NYASALAND:

Annual Report of the Department of Game, Fish and Tsetse Control for the Year Ended 31st December 1959, 32 pp., printed. The Government Printer, Zomba, Nyasaland, 1960. The section of fisheries discusses the state of the fish stocks, the non-African fishery, the African fishery, the fish trade, developmental and experimental work, fisheries research organizations, trout fishing, and fish farming. Also includes tables showing results of experimental work done with various types of floats, different colors of nets, and other similar data.

## ORGANIZATION FOR EUROPEAN ECONOMIC COOPERATION:

Fishery Policies in Western Europe and North America, 302 pp., illus., printed \$3. OEEC Mission, Publications Office, Suite 1223, 1346 Connecticut Ave., NW., Washington 6, D. C. September 1960. A report describing the fishery policies of the 18 Western European member countries of the Organization for European Economic Cooperation. The members are Austria, Belgium, Denmark, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, and the United Kingdom. The United States and Canada participated in the work as associate members. Yugoslavia is represented by an observer but since July 1959 has participated on an equal basis with member countries in work on agriculture and food. The report covers: conditions in the fisheries of each country--size of fleet and vessels, production, utilization, consumption, imports, and exports; and policies pursued in an effort to improve the condition of the fisheries--duties, quotas, price stabilization schemes, subsidies, low-interest loans, grants, landing bans, and other government programs. The member countries operate fisheries which in 1958 accounted for one-third of the world's total fish production. The increase in the fish production of OEEC countries since the end of World War II has been achieved by the introduction of bigger and more efficient vessels and by improved fishing techniques. While catches per man have risen considerably, catches per ton of fishing vessel have shown a decline. A wide range of fishery policies is employed in the various countries. Measures ranging from general services to schemes for direct financial support have encouraged an expansion of production and a high degree of self-sufficiency in fish supplies in most countries. OEEC countries could, however, by coordinating their fishery policies, make substantial progress in improving the economic position of their fisheries.

"Les Travaux de l'O.E.C.E. sur les Pêcheries Européennes" (The Work of the O.E.E.C. on European Fisheries), by R. Lagrade, article, La Pêche Maritime, vol. 39, no. 989, August 1960, pp. 459-460, printed in French. La Pêche Maritime, 190 Boulevard Haussmann, Paris, France.

## OYSTER DRILLS:

"Copper, a Possible Barrier to Oyster Drills," by John B. Glude, article, Proceedings of the National Shellfisheries Association, vol. 47, 1958, pp. 73-82, printed. National Shellfisheries Association, U. S. Fish and Wildlife Service, Department of the Interior, Washington 25, D. C.

## OYSTERS:

"Microbiology of Shellfish. Bacteriological Study of the Natural Flora of Pacific Oysters (Crassostrea gigas)," by R. R. Colwell and J. Liston, article, Applied Microbiology, vol. 8, March 1960, pp. 104-109, printed. Applied Microbiology, Williams and Wilkins, Mt. Royal and Guilford Aves., Baltimore 2, Md.

Oyster Mortality Studies by the Chesapeake Biological Laboratory (Preliminary Progress Report), by G. Francis Beaven, L. Eugene Cronin, and Elgin A. Dunnington, Ref. No. 60-25, 6 pp., processed. Mary-

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land Dept. of Research and Education, Chesapeake Biological Laboratory, Solomons, Md., June 30, 1960.

"Studies on Freshness Determination of Fish Meal by the Distillation Ratio of Volatile Acids. IX--On the Applicability of D. R. Value to the Determination of the Freshness of Oyster," by Suez Asakawa, article, Bulletin of the Japanese Society of Scientific Fisheries, vol. 24, no. 9, 1959, pp. 714-718, printed in Japanese with English abstract. Japanese Society of Scientific Fisheries, c/o Tokyo University of Fisheries, Shiba-kaigandori 6-Chome, Tokyo, Japan.

#### PERU:

La Industria Peruana de Pesca en 1959 (The Peruvian Fishery Industry in 1959), by Javier Iparraguirre Cortez, Serie de Divulgacion Cientifica No. 13, 21 pp., processed in Spanish. Ministerio de Agricultura, Direccion de Pesqueria y Caza, Lima, Peru. The annual report on the Peruvian fisheries for 1959 by the Department of Fisheries and Wildlife. Covers the position of Peru in the world fisheries; fish landings by species; utilization of the catch; freezing and canning of fishery products; and manufacture of fish meal and fish oil. Includes a number of statistical tables showing the quantity and value of fishery products consumed in the greater Lima area; landings of fish and their utilization; foreign trade in fishery products; world production of canned fish and fish meal; and landings of whales.

#### PESTICIDES:

Some Effects of Pesticides on Marine Arthropods and Mollusks, by Victor L. Loosanoff, 5 pp., processed. (Reprinted from the Transactions of the Second Seminar on Biological Problems in Water Pollution, April 20-24, 1959.) Public Health Service, U. S. Department of Health, Education, and Welfare, Washington 25, D. C.

#### PORTUGAL:

Boletim da Pesca, vol. 13, no. 68, September 1960, 100 pp., illus., printed in Portuguese. Gabinete de Estudos das Pescas, R. S. Bento, 644, 4<sup>o</sup>-Esq., Lisbon, Portugal. Contains these articles: "Documentos sobre Higiene de Farinhas de Peixe em Angola" (Papers on Sanitation of Angolan Fish Meal), by E. Tropa and J. Brito Guterres; "Deficiencias e Potencialidade Economica do Camarao, em Lourenco Marques" (Deficiencies and Economic Potentiality of the Shrimp of Lourenco Marques), by Luis Marques Neto; "Algumas Consideracoes sobre os Elementos de Base para a Exploracao Nacional das Pescas" (Some Considerations on the Basic Elements for a National Fisheries Exploration Program), by F. Marques da Silva; "Teoria e Pratica sobre a Industria da Pesca" (Theory and Practice in the Fishery Industry), by Pompilio da Cruz; and "Os Pescadores de S. Tome" (The Fishermen of S. Tome), by Jose Marques Elpidio.

#### QUALITY:

"Correlation of Taste Panel Gradings with Salt-Extractable Protein of Frozen Fish Fillets," by M. N. Moorjani, W. A. Montgomery, and G. G. Coote, article, Food Research, vol. 25, March-April 1960, pp. 263-269, printed. Food Research, The Garrard Press, 510 N. Hickory St., Champaign, Ill.

"A New Method for Estimating the Freshness of Fish," by Tsuneyuki Saito, Arai Ken-ichi, and Minoru Mat-

suoyoshi, article, Bulletin of the Japanese Society of Scientific Fisheries, vol. 24, no. 9, 1959, pp. 749-750, printed. Japanese Society of Scientific Fisheries, c/o Tokyo University of Fisheries, Shiba-kaigandori 6-Chome, Tokyo, Japan.

#### RED TIDE:

"The Effect of Salinity on Growth of Gymnodinium breve Davis," by David V. Aldrich and William B. Wilson, article, The Biological Bulletin, vol. 119, no. 1, August 1960, pp. 57-64, illus., printed. The Biological Bulletin, Marine Biological Laboratory, Woods Hole, Mass.

#### SEA HORSE:

The Sea-Horse and Its Relatives, by Gilbert Whitley and Joyce Allan, 90 pp., illus., printed. Georgian House Pty. Ltd., 296 Beaconsfield Parade, Middle Park, Melbourne S. C. 6, Australia.

#### SEAWEEEDS:

Sobre a Prospeccao Algologica com Fins Industriais Efectuada no Arquipelago de Cabo Verde (Availability of Agar-Bearing Seaweeds in the Cape Verde Islands), by F. Palminha, Notas Mimeografadas do Centro de Biologia Piscatoria 11, 8 pp., processed. Centro de Biologia Piscatoria, Lisbon, Portugal, 1960.

#### SHARKS:

"Shark Attacks During 1959," by Perry W. Gilbert, Leonard P. Schultz, and Stewart Springer, article, Science, vol. 132, no. 3423, August 5, 1960, pp. 323-326, printed. American Association for the Advancement of Science, National Publishing Co., 1515 Massachusetts Ave., N. W., Washington 5, D. C.

#### SHRIMP:

"La Industria Mexicana del Camaron en el Pacifico" (The Mexican Shrimp Industry in the Pacific), by Hugo Loredano Hernandez, article, Industrias Pesqueras, vol. 34, nos. 793 and 794, May 15, 1960, pp. 154-155, 157-158, printed in Spanish. Industrias Pesqueras, Policarpo Sanz, 21-22, Vigo, Spain.

#### SMELT:

"Canada's Atlantic Smelt Fishery," by R. A. McKenzie, article, Trade News, vol. 13, no. 2, August 1960, pp. 3-8, illus., processed. Informational and Education Service, Department of Fisheries, Ottawa, Canada. Discusses the landings and value of the smelt fishery in Canada's Maritime Provinces and Quebec during the past 40 years. Also covers the commercial catch in the Miramichi River area, results of tag recoveries, and the nature of the smelt. Included are several charts showing distribution of smelt landings; size, age, and commercial grades in Miramichi smelt, kinds of smelt fishing nets used in various areas of the Maritime Provinces; and other pertinent data. During the last 40 years, the smelt landings on the Atlantic coast of Canada have averaged about 7 million pounds a year, and from 1952 to 1955 the average value was about \$825,000. There are various points in the life history of the smelt where management might benefit the survival, abundance, and usefulness of the stock.

#### SPAIN:

"Un Ensayo sobre Productividad y Reorganizacion de la Industria Conservera" (An Essay on Production and Reorganization of the Canning Industry), by

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Alevin, article, Industria Conservera, vol. 26, no. 252, June 1960, p. 153, printed in Spanish. Industria Conservera, Calle Marques de Valladares, 41, Vigo, Spain.

#### SPONGES:

Sponges, by Senji Tanita, Biological Results of the Japanese Antarctic Research Expedition No. 1, 10 pp., illus., printed, 50 yen (about 14 U. S. cents). Seto Marine Biological Laboratory, Sirahama, Wakayama-Ken, Japan, May 1959.

#### SWORDFISH:

"The Moisture Distribution in Frozen Meat of Swordfish During Cold Storage," by Yasuhiko Tsuchiya and Shizuo Uchimi, article, Tohoku Journal of Agricultural Research, vol. 10, March 1959, pp. 71-73, printed. Tohoku Journal of Agricultural Research, The Faculty of Agriculture, Sendai, Japan.

#### TAIWAN:

Fisheries of Taiwan, by T. P. Chen, 14 pp., illus., printed. Chinese-American Joint Commission on Rural Reconstruction, Taipei, Taiwan, July 1960. Describes briefly the geography of Taiwan, important commercial fish, administration and research institutions, fisheries training facilities, and fishermen's organizations. Also covers the deep-sea, in-shore, and coastal fisheries; fish culture; fish processing; fisheries landings, 1952-59; and marketing of fisheries products.

#### TILAPIA:

"The Effect of Sexual Maturity on the Length-Weight Relationship of Tilapia mossambica (Peters)," by J. S. Kenny, article West Indies Fisheries Bulletin, no. 3, May/June 1960, pp. 1-16, illus., processed. Ministry of Natural Resources and Agriculture, Federal House, Port-of-Spain, Trinidad, W. I.

#### TUNA:

"Albacore Migration and Growth in the North Pacific Ocean as Estimated from Tag Recoveries," by Tamio Otsu, article, Pacific Science, vol. 14, no. 3, July 1960, printed. Pacific Science, University of Hawaii, Honolulu 14, Hawaii,

#### TURKEY:

Balik ve Balikcilik (Fish and Fishery), vol. 8, nos. 1-2, January-February 1960, 48 pp., illus., printed in Turkish with English table of contents. Balik ve Balikcilik, Kat 5, Yeni Valde Han, Sirkeci, Istanbul, Turkey. Includes, among others, these articles: "The Different Uses of Sharks (Part I)," by Fehmi Ersan; and "Anchovy and Its Catch," by Sitki Uner.

\_\_\_\_\_, vol. 8, no. 3, March 1960, 32 pp.; "The Different Uses of Sharks (Part II)," by Fehmi Ersan; and "Methods of Extraction of Oils from Fish Livers (Part I)," by Hikmet Akgunes.

\_\_\_\_\_, vol. 8, no. 4, April 1960, 32 pp.; "The Possibilities of Canning Various Types of Shark Meat," by Fehmi Ersan; "Methods of Extraction of Oils from Fish Livers (Part II)," by H. Akgunes; "Anchovy and Its Catch (Part II)," by Sitki Uner; and "On Fish Living in Hot Seas (Part I)."

\_\_\_\_\_, vol. 8, no. 5, May 1960, 32 pp.; "On the Use of Fish Oils in Industry," by Fehmi Ersan; "On the Industrial Use of Raw Materials Extracted

from Fish," by Hikmet Gunes; "Preservation of Lobsters," by Sait Akgun; "On the Biology of the Shark," by Huseyin Uysal; and "On Fish Living in Hot Seas (Part II)."

\_\_\_\_\_, vol. 8, no. 6, June 1960, 32 pp.; "Fishing Economy and the Importance of Fish Meals," by Fehmi Ersan; "Economic and Technical Aspects of Our Fish Canning Industry (Part I)," by A. Baki Ugur; "On Our Demersal and Pelagic Fishes," by Huseyin Uysal; "Tuna and Its Catch, with Hook and Line (Part I);" and "A Short Survey of the History of Mackerel Canning Industry," by Sait Akgun.

\_\_\_\_\_, vol. 8, no. 7, July 1960, 32 pp.; "Tuna and Its Catch with Hook and Line (Part II)," by Sitki Uner; and "On Fish Traps in the Bosphorus and Surroundings (Part I)," by S. Aydinazici and A. Oker.

\_\_\_\_\_, vol. 8, no. 8, August 1960, 32 pp.; "On Fish Traps in the Bosphorus and Surroundings (Part II)," "Food Poisoning and Sea Products," by Dr. Orhan Demirhindi; and "The Role of Atomic Energy on Fish Biology."

#### UNESCO

Marine Sciences Newsletter, no. 1, November 1959, 23 pp., processed. UNESCO Science Cooperation Office for Southeast Asia, Djl. Diponegoro 76, Box 2313, Djakarta, Indonesia. A new publication of the UNESCO Science Cooperation Office for Southeast Asia, published irregularly. One important aim of UNESCO's program in the natural sciences is to contribute to improving living conditions of mankind by the promotion of scientific knowledge in order that a greater and better use may be made of natural resources. In Southeast Asia, of course, where there is an extremely extended coastline, development of marine sciences is of the greatest importance. To aid in this work, UNESCO established in 1956 the International Advisory Committee on Marine Sciences, whose task is to advise it on its program of research in the marine sciences. This issue of the Newsletter includes, among others, these articles: "International Oceanographic Congress and 4th Session of International Advisory Committee on Marine Sciences," "Symposium on Aology," and "Films on Fisheries and Marine Science."

\_\_\_\_\_, no. 2, March 1960, 29 pp., processed. Includes, among others, articles on: "Report on Marine Biology in the Central Indo-Pacific Region," by R. Serene; "Preparatory Meeting of the Intergovernmental Conference on Oceanographic Research;" "Regional Training Course in Marine Sciences;" "Scientific Conference on Disposal of Radio-Active Wastes;" and "International Indian Ocean Expedition."

#### UNITED KINGDOM:

Fisheries of Scotland Report for 1959, 100 pp., printed, 5s. 6d. (about 77 U. S. cents). Department of Agriculture and Fisheries for Scotland, Aberdeen, Scotland, July 1960. (Available from Her Majesty's Stationery Office, 13A Castle St., Edinburgh 2, Scotland.) This report discusses the changes which took place in the Scottish fishing fleet during 1959 as well as details of the catch. It also includes in the appendices reports on fisheries research and harbors. A number of statistical tables are included in the report which deal with quantities and values of fish landed,

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number of vessels and fishermen engaged in the fisheries, and production of fishery byproducts. The Marine Laboratory at Aberdeen continued its investigations of herring, brown trout, and salmon. Emphasis in research was placed on the environmental aspects--hydrography, nutrients in the sea, and plankton and bottom fauna--and on chemical work--fertilization of lochs, phosphorus content of bottom deposits and macrophytes, and chemical changes in unpolluted rivers.

Scottish Sea Fisheries Statistical Tables, 1959, 48 pp., printed, 5s. (about 70 U. S. cents). Department of Agriculture and Fisheries for Scotland, Edinburgh 1, Scotland, July 15, 1960. (Available from Her Majesty's Stationery Office, 13A Castle St., Edinburgh 2, Scotland.) Contains 24 statistical tables showing fish landed and cured, vessels and fishermen, and creek returns. Tables 1 through 17 cover quantity and value of fish landed by British and foreign vessels; landings of British vessels according to method of fishing, 1938-59; quantity, value, and average value of each kind of fish landed by British vessels in 1913, 1938, and 1952-59; and quantity and value of each kind of fish landed in specific districts by British vessels of various types. They also cover quantity of each kind of fish landed and expenditure of fishing effort in each fishing region by British vessels; quantity of each kind of fish landed by foreign vessels from each fishing region and quantity and value of fish landed by each nationality; and seasonal landings of herring. Tables 18 through 20 show quantity of herring cured, 1913-59 and quantity and value of white fish cured and herring cured in each district, according to method of cure. Tables 21 through 23 show fishing vessels; fishermen employed; and greatest number of vessels and persons employed in each district in any week. Table 24 shows number of vessels and fishermen and quantity and value of fish landed in creeks.

#### UNITED NATIONS:

U. S. Participation in the UN (Report by the President to the Congress for the Year 1959, 86th Congress, 2d Session), House Document No. 378, 298 pp., illus., printed. Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C., August 1960. The fourteenth annual report covering United States participation in the United Nations during the year 1959. Contains sections on maintenance of peace and security; economic and social cooperation and human rights; dependent territories; legal and constitutional developments; and budgetary, financial, and administrative matters. Includes a discussion of the work of the Food and Agriculture Organization, such as the holding of three international fisheries conferences, the aid of an FAO fisheries expert in developing a fish-farming research station in Arkansas, and the publication of a number of technical bulletins and reports on fisheries.

#### U. S. S. R.

The following English translations of foreign language articles are available only from:

The Fisheries Research Board of Canada,  
Biological Station, Nanaimo, B. C., Canada.

Certain Peculiarities in the Biology of Propagation and Development of the Salmonid Fish Nerka--ONCOR-

HYNCHUS NERKA (Walbaum), by A. I. Smirnov, Translation Series No. 229, 4 pp., processed, 1959. (Translated from Doklady Akademii Nauk SSSR, vol. 123, no. 2, 1958, pp. 371-374.)

The Effect of Mechanical Agitation on Developing Eggs of the Pink Salmon ONCORHYNCHUS GORBUSCHA (Walbaum), Salmonidae, by A. I. Smirnov. Translation Series No. 231, 5 pp., processed, 1959. (Translated from Doklady Akademii Nauk SSSR, vol. 97, no. 2, 1954, pp. 365-368.)

The Effect of Mechanical Agitation at Different Periods of Development on the Eggs of Autumn Chum Salmon (ONCORHYNCHUS KETA infrasp. AUTUMNALIS Berg, Salmonidae), by A. I. Smirnov, Translation Series No. 230, 5 pp., processed. (Translated from Doklady Akademii Nauk SSSR, vol. 105, no. 4, 1955, pp. 873-876.)

Hydro Construction in Siberia and Problems of the Fishing Industry, by B. G. Ioganzhen and A. V. Podlesnyi, Translation Series No. 227, 6 pp., processed, 1959. (Translated from Rybnoe Khoziaistva, vol. 11, November 1958, pp. 21-26.)

Intergeneric Hybridization of Pacific Salmon, by A. I. Smirnov, 2 pp., illus., processed 1960. (Translated from Priroda, vol. 6, June 1959, pp. 98-100.)

The Fisheries Research Board of Canada,  
Biological Station, St. Andrews, N. B., Canada.

Year-to-Year Changes in the Food of Cod in the Barrents Sea, by N. S. Grinkevich, Translation Series No. 223, 21 pp., processed, 1959. (Translated from Trudy Poliarnovo N. -I. Institut Morskovo Rybnovo Khoziaistva i Okeanografii (PINRO), no. 10, 1957, pp. 88-105.)

#### VENEZUELA:

"27,000 Tonelados de Sardinias al Ano Son Pescadas en Venezuela" (27,000 Tons of Sardines a Year are Landed in Venezuela), article, El Agricultor Venezolano, vol. 23, no. 217, March-April 1960, pp. 21-23, illus., printed in Spanish. El Agricultor Venezolano, Ministerio de Agricultura y Cria, Caracas, Venezuela.

#### VESSELS:

Standard Specifications for the Construction of Scottish Wooden Fishing Vessels, Overall Length 30 Feet to 90 Feet, Inclusive, 37 pp., illus., printed. White Fish Authority, 5 Forres St., Edinburgh 3, Scotland, September 1960. The specifications described were drawn up by a working party of specialists appointed by the White Fish Authority's Committee for Scotland and Northern Ireland in 1956 after discussions with the Scottish inshore fishing industry and fishing vessel builders. They contain precise rules for the construction of various ranges of vessels within the over-all length, and prescribe standards for electrical equipment and the general outfitting of the vessels. Tables of dimensions and drawings are provided. An appendix sets out a recommended style for a detailed specification. Compliance with these specifications is to be a condition for grant and loan assistance by the Authority for wooden fishing vessels built in Scotland for Scottish owners.

#### WEATHER CHARTS:

Coastal Warning Facilities Charts, 1960, 12 charts, 2 pp. each, processed, 10 cents each, 1960. (For

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sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.) Weather Bureau, U. S. Department of Commerce, Washington 25, D. C. Charts show stations displaying storm warnings, small craft, storm and hurricane warnings and explanations, and schedules of AM and FM radio and TV stations that broadcast weather forecasts and warnings: 8P--Canadian Border to Eureka, Calif.; 9P--Cape Hatteras to Brunswick, Ga.; 10P--Eastport, Maine, to Montauk Point, N. Y.; 11P--Eureka to Point Conception, Calif.; 12P--Eastern Fla.; 13P--Hawaiian Islands; 14P--Manasquan, N. J., to Cape Hatteras and Chesapeake Bay; 15P--Montauk Point N. Y., to Manasquan N. J.; 16P--Morgan City, La., to Apalachicola, Fla.; 17P--Morgan City, La., to Brownsville, Texas; 18P--Point Conception, Calif., to Mexican Border; and 19P--Puerto Rico and Virgin Islands.

#### WHALE OIL:

"Epoxidation of Whale Oil," by N. A. Dybakova, E. N. Zilberman, and A. A. Berlin, article, Trudy po Khimii i Khimicheskoi Tekhnologii, vol. 1, 1958, pp. 679-681, printed in Russian. Nauchno-Issledovatel'skii Institut Khimii, Naberezhnaya im. Zhdanova, d. No. 11, Gorki, U. S. S. R.

#### WHALES:

"Amino-Acid Composition of Whale Meat," by Tetsuo Ogawa, Toshinao Tsunoda, and Makio Osawa, article, Scientific Reports of the Whales Research Institute, no. 13, 1958, pp. 303-307, printed. Whales Research Institute, Geirui Kenkyusho, 12-4, Tsukishima-Nishigashi-dori, Chuo-ku, Tokyo, Japan.

#### WHALING:

"Whaling Operations in the Antarctic, Season 1959/60," article, Norsk Hvalfangst-Tidende (Norwegian Whaling Gazette), vol. 49, no. 8, August 1960, pp. 351-380, illus., printed in Norwegian and English. Norsk Hvalfangst-Tidende, Sandefjord, Norway. A survey of the whaling operations in the Antarctic in the season 1959/60 prepared for and submitted at the meeting of the International Whaling Commission in London in June 1960. Covers the withdrawal of Norway and the Netherlands from the International Whaling Convention in July 1959, the most important regulations of the Convention, the number of factoryships and catching boats engaged in pelagic whaling since 1934/35, and their average gross tonnage, and the duration of the whaling period. Also discusses the catch and oil production of the individual expeditions, the catch results in relation to the vessels engaged in whaling and catching time spent, oil yield per blue-whale unit, sexually mature and immature whales, and ratio of blue and fin whales in the catch. Includes a number of statistical tables showing data on these topics.



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"Canning was first developed on an extensive commercial scale in the United States and most of our pioneer canners were primarily packers of fish and seafoods; packing fruits, vegetables, and preserves as secondary or incidental items. Strangely enough, the packing of fishery products presents more difficulties than processing other types of foods." (Principles and Methods in the Canning of Fishery Products, Research Report No. 7, page 2, U. S. Fish and Wildlife Service.)