



RECENT FISHERY PUBLICATIONS

FISH AND WILDLIFE SERVICE PUBLICATIONS

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

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

- | Number | Title |
|----------|---|
| CFS-1836 | - Alaska Fisheries, 1957 Annual Summary (Revised), 1 p. |
| CFS-1849 | - North Carolina Landings, June 1958, 2 pp. |
| CFS-1868 | - Mississippi Landings, June 1958, 1 p. |
| CFS-1869 | - Fish Meal and Oil, July 1958, 1 p. |
| CFS-1870 | - Frozen Fish Report, August 1958, 7 pp. |
| CFS-1871 | - Georgia Landings, July 1958, 1 p. |
| CFS-1872 | - South Carolina Landings, July 1958, 1 p. |
| CFS-1874 | - North Carolina Landings, July 1958, 2 pp. |
| CFS-1877 | - Texas Landings, April 1958, 2 pp. |
| CFS-1878 | - Florida Landings, July 1958, 5 pp. |
| CFS-1882 | - Shrimp Landings, May 1958, 5 pp. |
| CFS-1883 | - Alabama Landings, June 1958, 1 p. |
| CFS-1884 | - Texas Landings, May 1958, 2 pp. |
| CFS-1885 | - Texas Landings, June 1958, 2 pp. |

Wholesale Dealers in Fishery Products:

- SL-27 - Indiana (Lakes Area), 1958 (revised).
 SL-45 - Mississippi (Mississippi River and Tributaries Area), 1958.
 SL-46 - Texas (Mississippi River and Tributaries), 1958.

- FL-460 - Fungus or Saprolegnia Infestation of Incubating Fish Eggs, by Ken Wolf, 4 pp., July 1958.
 FL-465 - Kidney Disease of Salmonid Fishes (Bacterial), by Ken Wolf, 4 pp., July 1958.

- FL-472 - The Shrimp and the Shrimp Industry of the Southern United States, by William W. Anderson, 9 pp., illus., July 1958. A description of the various species of shrimp and where the principal fisheries are located. More is known about the white shrimp, *Penaeus setiferus*, and a brief outline of its life history is given as an example of penaeid shrimp development. The author also discusses briefly the nutritive value of shrimp, iodine shrimp, and methods of cap-

ture, and gives a list of publications which contain further and more detailed information on the shrimp and shrimp industry of the southern United States.

- SSR-Fish. No. 255 - Rapid Counting of Nematoda in Salmon by Peptic Digestion, by Joseph A. Stern, Diptiman Chakravarti, Joseph R. Uzmans, and Mary N. Hesselholt, 5 pp., May 1958.

- SSR-Fish. No. 257 - Serological Differentiation of Populations of Sockeye Salmon, *Oncorhynchus nerka*, by G. J. Ridgway, J. E. Cushing, and G. L. Durall, 9 pp., August 1958.

- SSR-Fish. No. 263 - Jack Mackerel Eggs, Pacific Coast, 1951-54, by David A. Farris, 44 pp., July 1958.

- SSR-Fish. No. 264 - English Translations of Fishery Literature--Additional Listings, 1958, by Leslie W. Scattergood, 33 pp., July 1958.

- SSR-Fish. No. 266 - Species Composition of Industrial Trawl Landings in New England, 1957, by Robert L. Edwards, 23 pp., July 1958. Presents data on the species composition of the industrial trawl fish catch landed in 1957 at the New England ports of Point Judith, R. I., and New Bedford and Gloucester, Mass. The information given covers percent by weight and pounds landed for each of the principal fishing areas, by month and port.

- WL-398 - Fur Catch in the United States, 1957, 3 pp., September 1958. Presents statistics on the wild fur catch for the 1956/57 season, including the fur-seal catch in the Pribilof Islands, Alaska.

- Sep. No. 526 - A New Method of Handling Long-line Gear Using a Rotating Tub.

- Sep. No. 527 - Research in Service Laboratories (October 1958): Contains these articles--"Technical Note No. 46 - Method for Removing Blood from Halibut to Improve Appearance of Frozen Steaks;" and "Studies on the Relationship of Fish Oils to Circulatory Diseases Initiated."

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

- California Fishery Products Monthly Summary, August 1958, 14 pp. (Market News Service, U. S. Fish and Wildlife Service, Post Office Bldg., San Pedro, Calif.) California cannery receipts of raw tuna and tunalike fish, and sardines; pack of canned tuna, mackerel, anchovies, and sardines; market fish receipts at San Pedro, Santa Monica, Eureka, and San Diego areas; California

imports; canned fish and frozen shrimp prices; American Tuna Boat Association Auction sales; for the month indicated.

Gulf Monthly Landings, Production, and Shipments of Fishery Products, August 1958, 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; and sponge sales; for the month indicated.

Monthly Summary of Fishery Products Production in Selected Areas of Virginia, North Carolina, and Maryland, September 1958, 4 pp. (Market News Service, U. S. Fish and Wildlife Service, 18 So. King St., Hampton, Va.) Fishery landings and production for the Virginia areas of Hampton Roads, Lower Northern Neck, and Eastern Shore; the Maryland areas of Crisfield, Ocean City, and Cambridge; and the North Carolina areas of Atlantic, Beaufort, and Morehead City; together with cumulative and comparative data; for the month indicated.

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

(New York) Monthly Summary - Receipts of Fishery Products at New York City's Wholesale Salt-Water Market, July 1958; August 1958; 15 pp. each. (Market News Service, U. S. Fish and Wildlife Service, 155 John St., New York 38, N. Y.) Receipts in the salt-water section of the Fulton Fish Market by species and by states and provinces; for the month indicated.

(Seattle) Monthly Summary - Fishery Products, August 1958, 8 pp. (Market News Service, U. S. Fish and Wildlife Service, Pier 42 South, Seattle 4, Wash.) Includes landings and local receipts, with ex-vessel and wholesale prices in some instances, as reported by Seattle and Astoria (Oregon) wholesale dealers; also Northwest Pacific halibut landings; Seattle Salmon Exchange; Alaska troll salmon landings and ex-vessel prices; and Washington shrimp landings; for the month indicated.

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Experimental Exploitation of Fish Populations, by Ralph R. Silliman and James S. Gutsell, with the

technical assistance of Clarence E. Dunbar and Saufley B. Friddle, Fishery Bulletin 133 (From Fishery Bulletin of the Fish and Wildlife Service, vol. 58), pp. 215-252, illus., printed, 20 cents, 1958.

September is Canned Foods Month, Fisheries Marketing Bulletin, 15 pp., illus. As part of the "September is Canned Foods Month" promotion, sponsored by the canned foods industry, this bulletin presents information on fishery products. Reports some facts concerning canned Pacific Coast shrimp, salmon, tuna, clams, and Maine sardines. Also includes some selected canned fish recipes which have been developed and tested by home economists of the Bureau of Commercial Fisheries.

MISCELLANEOUS PUBLICATIONS

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ANCHOVIES:

"Algunas Apreciaciones Relacionadas con la Anchoveta Peruana (ENGRAULIS RINGENS J.) y su Fecundidad" (Some Estimates in Relation to the Peruvian Anchovy, ENGRAULIS RINGENS J., and its Fecundity), by Jorge Minano M., article, Boletin de la Compañia Administradora del Guano, vol. 34, February, 1958, pp. 9-17, printed in Spanish. Compañia Administradora del Guano, Casilla 2147, Lima, Peru.

"Algunas Apreciaciones Relacionadas con la Anchoveta Peruana (ENGRAULIS RINGENS J.) y su Fecundidad" (Some Estimates in Relation to the Peruvian Anchovy, ENGRAULIS RINGENS J., and its Fecundity), by Jorge Minano M., article, Boletin de la Compañia Administradora del Guano, vol. 34, March 1958, pp. 11-24, printed in Spanish. Compañia Administradora del Guano, Casilla 2147, Lima Peru.

AUSTRALIA:

Tasmanian Farm Dams in Relation to Fish Culture, by A. H. Weatherley, Technical Paper No. 4, 24 pp., illus., printed. Division of Fisheries and Oceanography, Commonwealth Scientific and Industrial Research Organization, Melbourne, Australia, 1958.

BONITO:

"A Novelty in Bonito Canning" (Torik Konservesinde Venilik), by Fehmi Ersan, article, Balik ve Balikcilik, vol. 6, no. 4, April 1958, pp. 13-14, printed in Turkish. Et ve Balik Kurumu Umum Mudurlugu, Kat 5, Yene Valde Han Sirkeci, Istanbul, Turkey. Describes a new method of bonito canning at the Fishery Research Center of Turkey's Meat and Fish Office.

BRAZIL:

Producao de Pescado, Segundo Especies e Unidades da Federacao, 1955/56 (Production of Fish

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by Species and Districts, 1955/56), 10 pp., processed in Portuguese. Ministerio da Agricultura, Servico de Estatistica da Producao, Rio de Janeiro, Brazil, April 1958.

BYPRODUCTS:

"Application of Conversion Factors for the Determination of Vitamin A in Fish Liver Oils," by S. Balasundaram, H. R. Cama, P. R. Sundaresan, and T. N. R. Varma, article, Journal of Scientific Industrial Research, vol. 16C, 1957, pp. 8-11, printed. Indian Institute of Science, Bangalore, India.

"Chitosan--Useful Chemical from Shrimp Shells," by Ted F. Meinhold and Paul C. Thomas, article, Chemical Processing, vol. 21, April 1958, pp. 121-122, printed. Putnam Publishing Co., 111 E. Delaware Place, Chicago, Ill. Describes the operations of a processing plant at Brunswick, Ga., which is daily manufacturing 500 pounds of dry chitosan from 10,000 pounds of wet shrimp shells.

"Determination of the Lipide Content of Fish Meals," by Dominica Montequi and Ma. D. Garcia, article, Boletin del Instituto Espanol de Oceanografia, no. 78/9, 1956, 13 pp., printed in Spanish. Instituto Espanol de Oceanografia, Madrid, Spain.

"Determination of Vitamin A by Conversion to Anhydrovitamin A," by P. Budowski and A. Bondi, article, The Analyst, no. 82, November 1957, pp. 751-760, printed. W. Heffer & Sons, Ltd., 3 and 4 Petty Cury, Cambridge, England.

"Fish Meal Package Plant," by H. A. Carsten, article, Canadian Fisherman, vol. 45, January 1958, pp. 20-21, printed. National Business Publications, Ltd., Gardenvale, Quebec, Canada. Discusses a newly-developed self-contained fish meal package plant which has undergone extensive trials in the ports of Hull and Grimsby in England. This new package plant is unique in that it must be used in combination with a gas turbine which provides the hot air for drying the fish meal. As a result of the compactness of the plant, foundation, building, and erection costs are reported to be quite low, and it is indicated that the unit can be moved to new locations or even set up as a mobile installation.

"New Type Fish Meal Shows Promise in Mississippi Tests," article, Feedstuffs, vol. 30, March 29, 1958, p. 52, printed. Miller Publishing Co., 118 S. 6th St., Minneapolis 2, Minn. Reports on a new type of fish meal that has been manufactured from whole trash fish and which has shown favorable results as a source of protein, vitamins, and unidentified factors when used in experimental poultry rations. The new type meal is made by grinding and steam-dehydrating whole trash fish that until recently were being dumped back into the ocean by shrimp fishermen. In tests conducted at Mississippi State College, the new fish meal was found to be equal in protein value to either menhaden or sardine meal. Approximately 100 tons of this type of meal is being produced monthly at Vancleave, Miss.

CANADA:

A Checklist of the Freshwater Fishes of Canada and Alaska, by W. B. Scott, 30 pp., printed, 35 U. S. cents. Royal Ontario Museum, Division of Zoology, Ottawa, Ontario, Canada. Presents the first up-to-date listing since 1913 of fresh-water fish of Canada and Alaska.

"Maintaining Quality of Inland Fish," by James Kinloch, article, Trade News, vol. 11, no. 2, August 1958, pp. 3-6, illus., printed. Department of Fisheries, Ottawa, Canada. The Department has recently opened Inspection Laboratories at Toronto and Winnipeg to increase efficiency of its operations in connection with maintaining quality of inland fish. These laboratories not only are equipped for routine inspection of fish and fishery products, both those produced in Canada and those imported from other countries, but can also be used to assist in solving the unusual technological problems which continually arise in any enterprise dealing with food. This article describes the inspection tests that are conducted at the laboratories and the services the laboratories provide for plant inspection.

CANNING:

Ultraviolet Irradiation of Sea Water for Fish Canning, by M. K. Rowan, Fishing Industry Research Institute Progress Report No. 30, printed. Fishing Industry Research Institute, University of Cape Town, Rondebosch, South Africa.

COMMISSIONS:

International Commission for the Northwest Atlantic Fisheries, Statistical Bulletin for the Year 1956, 58 pp., illus., printed. International Commission for the Northwest Atlantic Fisheries, Halifax, N. S., Canada, 1958. This bulletin is divided into two parts as follows: Part 1 summarizes the statistics on landings of the past five years, and Part 2 gives the tables of statistics dealing with the fisheries in the Convention Area in 1956. Following last year's procedure, the presentation of the basic statistical data was designed to place emphasis on area and month of fishing. Includes a summary of all the landings by country and statistical subdivision; landings of cod, haddock, ocean perch, halibut, and flounder for each kind of gear; total quantity of each species landed in each subarea; and all the basic statistics for 1956 on fishing effort and on the landings of cod, haddock, ocean perch, halibut, the flounder group, and the other groundfish group that were reported according to the Commission's statistical requirements. A summary of the national statistics is given, and this table also includes certain supplementary information which was reported by the member countries.

Tenth Annual Report of the Pacific Marine Fisheries Commission for the Year 1957, 32 pp., printed. Pacific Marine Fisheries Commission, 340 State Office Bldg., 1400 S. W. Fifth Avenue, Portland 1, Ore. Briefly reports the specific activities of the Pacific Marine Fisheries Commission during 1957 and presents a review of long-term developments in the fields of research, regulations, and coordination.

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Describes research on ocean salmon, sablefish, the otter-trawl fishery, crabs, oysters, and marine water pollution.

CONSERVATION:

"The Conservation Partnership," by Ross Leffler, article, *Louisiana Conservationist*, vol. 10, no. 9, September 1958, pp. 8-9, illus., printed. Louisiana Wild Life and Fisheries Commission, 126 Civil Courts Bldg., New Orleans, La. This article discusses the problems confronting the wise utilization and conservation of our fish and wildlife resources, and points out the necessity for close teamwork between the Federal Government, the state fish and game departments, and private agencies "which will eliminate waste effort and make our combined contribution as effective and as fast as is humanly possible."

EELS:

"Mystery of the Eel Unfolded by Scientists" by Roger Latham, article, *South Carolina Wildlife*, vol. 5, no. 3, Summer 1958, pp. 2-3, 18-19, illus., printed. South Carolina Wildlife Resources Department, Columbia, S. C. Describes the strange and mysterious life history of the American eel (*Anguilla rostrata* Le Seuer) and presents comparative data on the European eel (*Anguilla vulgaris*). Explains the effects of the American eel as a predator, clarifying, however, that the American eel is not the same as the dreaded sea lamprey. In summarizing the commercial value of the eel fishery in the United States, the author points out that the eel remains greatly underutilized because United States consumers have not learned of its fine food quality.

FISH COOKERY:

"The Effects of Oven Temperature on Certain Characteristics of Baked Salmon," by Helen Charley and Grayce E. Goertz, article, *Food Research*, vol. 23, January-February 1958, pp. 17-24, printed. The Garrard Press, 119-123 West Park Ave., Champaign, Ill. Reports on the results of a study of the cooking losses and palatability of large pieces of baked silverside salmon (*Oncorhynchus kisutch*).

FISHES:

Fiskarna i Farg (Fishes in Color), 3rd edition, 197 pp., 64 color plates, illus., printed. Almqvist and Wiksell, Stockholm, Sweden, 1957.

FLORIDA CURRENT:

A Technical Report of Investigation for the Period of June 25, 1956, to May 7, 1957, by Frank Chew and L. P. Wagner, Report 58-3, 57 pp., illus., processed. The Marine Laboratory, University of Miami, Coral Gables, Fla., September 1958. A report for the period of June 25, 1956, to May 7, 1957, on a study of the kinematics, dynamics, and variation in the heat transport of the Florida current.

FOOD AND AGRICULTURE ORGANIZATION:

Ecuador: Emergency Legislative Decree No. 11 Amending the Sea Fishing and Hunting Act, Food and Agricultural Legislation, vol. VI, no. 4, XVI.5/57.3, 5 pp., printed. Food and Agriculture Organization of the United Nations, Rome,

Italy. (For sale by Columbia University Press, International Documents Service, 2960 Broadway, New York 27, N. Y.)

General Fisheries Council for the Mediterranean, Agenda and Notes, 5th Meeting, October 13-18, 1958, 32 pp., processed in French and English. Food and Agriculture Organization of the United Nations, Viale delle Terme di Caracalla, Rome, Italy, 1958.

Netherlands: Act Specifying New Rules for Promoting the Production, Sale and Equitable Price-Fixing of Agricultural and Fisheries Products Specifically on Behalf of the Purchasers of Such Products (Agriculture Act), Food and Agricultural Legislation, vol. VI, no. 4, I/57.1, 19 pp., printed. Food and Agriculture Organization of the United Nations, Rome, Italy. (For sale by Columbia University Press, International Documents Service, 2960 Broadway, New York 27, N. Y.)

El Salvador: Decree No. 111 Adding a Paragraph to the Regulations Made Under the Sea Fishing and Hunting Act, Food and Agricultural Legislation, vol. VI, no. 4, XVI.3/57.2, 2 pp., printed. Food and Agriculture Organization of the United Nations, Rome, Italy. (For sale by Columbia University Press, International Documents Service, 2960 Broadway, New York 27, N. Y.)

FRANCE:

"Une Etude Economique sur l'Industrie des Conservees de Poisson en France Metropolitaine" (An Economic Study of the Fish Canning Industry in France), article, *La Peche Maritime*, vol. 37, no. 965, August 1958, pp. 480-482, illus., printed in French. Editions Maritimes, 190 Boulevard Haussmann, Paris, France.

"La Pesca Maritima Francesa en el Cuadro del Mercado Comun" (France's Marine Fisheries in Relation to the Common Market), by L. A. Boiteaux, article, *Industrias Pesqueras*, vol. 32, no. 752, August 15, 1958, pp. 6-7, printed in Spanish. Industrias Pesqueras, Policarpo Sanz, 21-2, Vigo, Spain.

FREEZING:

"Characteristics of the Histological Changes in Fish on Freezing," by A. Piskarev, G. Krylov, and L. Lukyanitsa, article, *Kholodil'naia Tekhnika*, U. S. S. R., No. 4, 1958, pp. 48-52, 8 figures, illus., printed in Russian with English summary. Kholodil'naia Tekhnika, c/o Four Continent Book Corp., 38 W. 58th St., New York 19, N. Y. Histological studies have shown that in the freezing of fish not only the freezing rate, but also the before-freezing quality of the fish due to post-mortem changes, affects the character of crystal formation. The size of the ice crystals and the amount of injury to the tissue as revealed histologically increase with the time of storage of the fish prior to freezing. In view of this fact, crystal size and histological structure of the tissue are insufficient for characterizing the rate of freezing and for dividing the fish into quick- and slow-frozen categories. Fine crystals are undoubtedly a criterion of

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quick-freezing but large crystals are not exclusively indicative of slow freezing. Quality freezing is considered such freezing wherein no damage occurs to the muscle fiber sheaths despite ice formation in the interfibrillar spaces.

"La Congelacion en el Negocio Pesquero, VI Parte" (Freezing in the Fishing Industry), by Jose Manuel Casal Lopez-Valeiras, article, *Revista del Frio*, vol. 3, no. 1, January-March 1958, pp. 19-28, 12 figures, illustrated, printed in Spanish with English summary. Centro Experimental del Frio, Serrano, 150, Madrid, Spain. The rules to which the operation of forced air-flow freezer must be adapted are described. Description also covers the difficulties met in achieving high productivity in freezing, and the means for overcoming them. In this connection, some tunnels installed on factoryships are described as well as the type best adapted to the particular ship. In view of the advantages of processing on shore part of the product frozen on board, the technical difficulties of this method and the means of eliminating them are indicated, particularly in production of fillet blocks for fish sticks. The method for fish glazing in the tunnel is also established.

"Experiments on the Preservation of Fish Fillets by Freezing," by G. Botalla, O. Bruss, A. Daghetta, and A. Monzini, article *Annali della Sperimentazione Agraria*, vol. 10, pp. 1651-1661, printed. Ministero dell' Agricoltura e della Foreste, Rome, Italy, 1956. Presents the results of experiments on hake, perch, and mackerel fillets which were wrapped in Cryovac, Neothene (a polyethylene film), or cellophane film and stored at -18°C . (-0.4°F .) for 6 months. The chemical changes which appeared to be most injurious to the quality of the frozen fish are those concerned with the lipids, and especially those which lead to the oxidation of unsaturated fatty acids. The fish fillets kept in good condition for 4 months.

"Sobre la Congelacion de Mariscos" (On the Freezing of Shellfish), by Jose Antonio Munoz-Delgado Ortiz, Antonio Valdecantos Jimenez, and Manuel Estada Girauta, article, *Revista del Frio*, vol. 3, no. 1, January-March 1958, pp. 13-18, printed in Spanish with English summary. Centro Experimental del Frio, Serrano, 150, Madrid, Spain. A study is made of the freezing processes applied to lobsters, spiny lobsters, shrimp, oysters, and crabs, and the conditions most favorable to this type of handling. There is also an analysis of the most frequent changes occurring during the freezing of these products and suggestions on the means to be used to prevent, as far as possible, such changes.

FROZEN FISH:

"Effect of Glazing on Quality, Preservation and Extension of Storage Life of Frozen Fish," by A. Piskarev, article, *Kholodil'naia Tekhnika*, vol. 31, no. 3, pp. 51-54, printed. Kholodil'naia Tekhnika, c/o Four Continent Book Corp., 38 W. 58th St., New York 19, N. Y., 1954. Results of tests conducted on quality, preservation, and extension of storage life of frozen fish. Stur-

geon, carp, and other fish were ice-glazed, and stored at -18° to -20°C . (-0.4° to 4°F .); similar fish were stored unglazed as controls. The sturgeon were piled as glazed; whereas the other fish were placed in paper-lined cases. All fish were examined after 4, 7, and 11 months of storage. Glazing prolonged the storage life of the fish by 4 to 5 months. Fish stored at -18°C . (-0.4°F .) will keep for 8 to 10 months if the weight of the glaze is 7 to 8 percent of the weight of the fish, or for 4 to 5 months if the glaze is 4.5 to 5 percent. Sprats frozen in blocks and glazed kept for 4 months at -18°C . (-0.4°F .)

"Handling and Care of Fresh Unfrozen Fish," by W. A. Empey, article, *Food Preservation Quarterly*, vol. 18, March 1958, pp. 6-11, printed. Division of Food Preservation and Transport, C. S. I. R. O., 314 Albert Street, East Melbourne, Australia. Reports on the deterioration of quality in unfrozen fish, shellfish, and crustaceans caused by enzymatic activity, oxidative reactions, and bacterial activities. Lists the identifying characteristics of various types and degrees of spoilage. Presents suggested methods of extending storage life of unfrozen fish, especially against bacterial activity which is the most important cause of deterioration.

GEAR:

"The Nylon Propeller in 1958," by Johannes Hojsgaard, article, *World Fishing*, vol. 7, no. 9, September 1958, pp. 45-47, illus., printed. John Trundell Ltd., St. Richards House, Eversholt St., London, N. W. 1, England. A report on the performance of nylon propeller blades and the construction of molds for casting the propeller blades. This article also contains a report on the efficiency of nylon propellers as compared with a smooth bronze propeller. The author states that "We are now sure that our nylon blades are doing a very good job and only the high prices of molds will hold us back in our program to supply these blades in all common fishing vessel sizes."

"In Operating a Danish Seine Net is Starboard or Port Side Best?" by Ichiro Saito, article, *Canadian Fisherman*, vol. 45, January 1958, pp. 11, 13, 15, printed. National Business Publications, Ltd., Gardenvale, Quebec, Canada.

Ring Nets Made of Synthetic Fibres, by Gerhard Klust, General Fisheries Council for the Mediterranean Studies and Reviews No. 4, 18 pp., illus., processed. Food and Agriculture Organization of the United Nations, Viale delle Terme di Caracalla, Rome, Italy, September 1958. Describes and illustrates the different types of surrounding nets--lampara, purse seine, and ring net. Also discusses synthetic fibers, choice of synthetic twines for ring nets, and some experiences with surrounding nets made of synthetic fibers.

GENERAL:

The Effect of Artificial Lights on Fish and Other Marine Organisms at Sea, by J. H. S. Blaxter and B. B. Parrish, *Scottish Home Department Marine Research No. 2*, 1958, 28 pp., illus.,

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printed, 8s. (about US\$1.15). Her Majesty's Stationery Office, Edinburgh, Scotland. The author describes briefly the utilization of artificial lights in fishing operations in different parts of the world. He also describes in detail a series of experiments with artificial lights which were conducted around the coast of Scotland between 1953 and 1957. The principal aims of these experiments were to investigate (1) the behavior of fish in relation to light stimuli and (2) the possibility of using artificial lights commercially as an aid to catching fish. Particular attention was paid to identification and sampling the fish in the aggregations obtained by lights. Data were also obtained on the horizontal extent of aggregations and the effect of other factors such as tide, turbidity, and moonlight on the behavior of fish. The author states that "In assessing the value of lights in commercial fishing the following conclusions were reached. Lights might be of advantage in fishing for whiting by hand and long line in the Scottish inshore fisheries or encircling nets might be adapted to catch aggregated fish. Lights would not be likely to benefit trawl or seine fisheries unless experiments showed that lights attached to these gears would prevent fish escaping round the nets. Although few experiments were carried out on adult herring, no evidence is available that they will aggregate in response to artificial lights. Lights might be of use in the sprat and juvenile herring fisheries, particularly in areas where the water is clear. It is probable that the most effective means of catching aggregations of such fish would be by pumping devices but the ring-net or purse-seine fishing techniques might again be adapted to this end."

Pathfinder of the Seas, by J. L. McHugh, Contribution No. 80, 7 pp., illus., printed. (Reprinted from Bulletin of the International Oceanographic Foundation, vol. 4, no. 2.) Virginia Fisheries Laboratory, Gloucester Point, Va. A brief biography of Matthew Fontaine Maury, author of "The Physical Geography of the Sea," published in 1855, and founder of scientific oceanography.

Requirements of the United States Food, Drug, and Cosmetic Act (A Guide for Foreign Manufacturers and Shippers), FDA Publication No. 2, 1958 Revision, 62 pp., printed, 20 cents. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.) Food and Drug Administration, U. S. Department of Health, Education, and Welfare, Washington, D. C.

HALIBUT:

The Occurrence of Plerocercoid Larvae of GRILLOTIA ERINACEUS (van Beneden) in Halibut, by Bennet B. Rae, Scottish Home Department Marine Research No. 4, 1958, 34 pp., illus., printed, 10s. 6d. (about US\$1.50). Her Majesty's Stationery Office, Edinburgh, Scotland.

HERRING:

Prospects for the 1958-59 Herring Fishing Season, Circular No. 49, 8 pp., illus., processed. Fisheries Research Board of Canada, Biological Station, Nanaimo, B. C., Canada, July 1958.

This is the fourteenth in an annual series of circulars dealing with the prospects of the British Columbia herring fishery. These forecasts are made to aid in the formation of effective management policies and to help the industry use the resources more effectively. The forecasts are derived from prediction of the carry-over from the estimated population abundance in the previous season and the expected new recruitment.

INDIA:

Survey of the TCM Fisheries Program in India, by Richard Van Cleve, 46 pp., processed. International Cooperation Adm., 815 Connecticut ave., NW., Washington 25, D. C., March 1957.

IRAN:

Societe Anonyme des Pecheries Iraniennes (Iran Fisheries Corporation), 10 pp., illus. in color, printed in French. Iran Fisheries Corporation, Teheran, Iran. A publication prepared for distribution at the Brussels World Fair. Presents information on the production of sturgeon caviar, sturgeon, and other fishery products and byproducts by the Corporation, including export statistics for 1956-57 by quantity and country of destination. Contains colored illustrations of the most commercially-important fish of Iran's Caspian Sea fisheries. The Iran Fisheries Corporation is Government-operated. In 1953 it took control of the Iranian-Soviet joint fishery company in Iran.

JAPAN:

Bulletin of the Faculty of Fisheries, Hokkaido University, vol 9, no. 1, 88 pp., illus., printed. Faculty of Fisheries, Hokkaido University, Hakodate, Japan, May 1958. Contains, among others, the following articles: "On the Decrease of Buoyant Force of the Float (1)," by Shuzo Igarashi; "An Experiment on a Mid-Water Trawl. V. Experiment on Full-Sized Mid-Water Trawl Gear at Sea," by Kiichiro Kobayashi and Naoichi Inoue; "Ecological Analysis of the Catch in a Set-Net Fishing Ground Near Hakodate, Hokkaido," by Yoshihide Nomoto; "On Measured Appearing Distances of the Sea Clutter Echoes That Interfere with Radar Watching by Means of Corner Reflectors," by Shoji Saito and Takeji Fujii; "Studies on the Complete Utilization of Squid (Ommastrephes sloani pacificus). XVI. On the Manufacture of Dried Squid Meat. (8) Amines Produced in Dried Squid Meat," by Eiichi Tanikawa and Terushige Motohiro; and "Model Experiment on the Tidal and Ocean Currents through the Strait of Tsugaru," by Seiti Yamaguti.

Studies on Fishing Ground, Fishing Gears and Fishing Technique in One-Boat Medium Trawl Fishery, by Ichiro Saito, Memoirs of the Faculty of Fisheries, Hokkaido University, vol. 5, no. 1, 90 pp., illus., printed. The Faculty of Fisheries, Hokkaido University, Hakodate, Japan, 1957. Presents a complete report on the one-boat medium trawl fishery which was developed in Japan. In the section covering investigation of the fishing grounds, the author discusses the application of the echo-sounder in the trawl fishery, the vertical distribution and density of the

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population of demersal fish in the sea northwest of Hokkaido, and the value of fishing grounds for the trawl fishery in Musashi Bank and its surrounding waters. Also reports on the results of studies made on the gear and methods employed in the one-boat medium trawl fishery.

KENYA:

Report on Kenya Fisheries, 1957, 16 pp., printed. Ministry of Forest Development, Game and Fisheries, Fisheries Division, Nairobi, Kenya, 1958. A complete review of Kenya's fisheries for 1957. Reports on work at a tilapia culture farm and at a trout hatchery, and developments in the trout and other inland fisheries. A section on the marine fishing industry covers: general developments in progress, trade, exploratory work, demand, and fishery legislation; frozen, dried, and salted fish trade; sedentary fisheries; green turtle and crayfish fisheries; and exploratory and experimental work in fishing gear and methods. Several tables of catch statistics are included as appendices.

LAW OF THE SEA:

Situation, Documents and Commentary on Recent Developments in the International Law of the Sea, by Bronson MacChesney, U. S. Naval War College, International Law Situation and Documents, 1956, vol. 51, 629 pp., printed, \$2.75. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C., 1957.) A book in three parts. Part I covers the problems of a hypothetical "International Law Situation." Part II, which comprises the largest part of the book, presents a collection of treaties, municipal laws, and other materials relating to recent developments in the international law of the sea. One lengthy section of this part is devoted to a review of significant national legislation and unilateral claims concerning the high seas, the territorial sea, the continental shelf, and fisheries, along with representative protests that some states have made to recent national claims. Throughout this part of the volume, introductory notes are provided with each section, presenting additional background information with references to documentary sources, guides to recent literature on pertinent topics, and a detailed table of contents. Part III presents recent national claims and agreements providing for defensive air and sea zones.

MIDWATER TRAWLING:

A Method of Determining the Depth of Midwater Trawl Nets, by W. E. Barraclough, Circular No. 48, 6 pp., illus., processed. Fisheries Research Board of Canada, Biological Station, Nanaimo, B. C., Canada, August 1958. A useful and relatively simple method for determining the depth of midwater trawl nets involves the measurement of the angle the warp makes with the horizon at the stanchion block on the stern of the vessel and the length of the warp. There is considerable controversy about the accuracy of this method, according to the author, because changes in the tide and wind, alterations of the vessel's course, and sag in the warp all tend to upset calculations of the depth of the gear. "While

this method is not entirely accurate," states the author, "it was found during our fishing experiments that it is sufficiently accurate at depths less than 60 fathoms to be of considerable value in midwater trawling for herring during the winter months." The author describes the method and apparatus used in the fishing experiments and illustrates the procedure.

"Midwater Trawling for Cornish Pilchards," by H. J. May and J. P. Bridger, article, World Fishing, vol. 7, no. 9, September 1958, pp. 36-38, illus., printed. John Trundell Ltd., St. Richards House, Eversholt St., London, N. W. 1, England. Single-trawl experiments conducted by the research vessel Chichester Lass in Cornish waters show that under certain conditions the modified Canadian herring trawl has many advantages over drift netting. This article describes the gear used in these experiments, the way the gear was worked, and the results achieved.

MISCELLANEOUS:

Journal du Conseil, vol. XXIII, no. 3, pp. 321-517, illus., printed, single copy Kr. 16 (US\$2.32). Messrs. Andr. Fred. Høst & Søn, Bredgade, Copenhagen, Denmark, July 1958. Among the articles presented in this journal are the following: "Plankton in the Western Barents Sea and the Year-Class Strength of the Arcto-Norwegian Cod," by John Corlett; "Cod Growth and Temperature," by Clyde C. Taylor; "Results of English Cod Tagging in the Barents Sea," by Geoffrey C. Trout; "On the Interpretation of the East Anglian Herring Data, 1923-1955," by W. C. Hodgson; "Fat Cycles of North Sea Herring," by R. J. Wood; "Seasonal Fluctuations in the Catches of Salmon in the Baltic," by Gunnar Alm; "Notes on Recent Atlantic Salmon Investigations in the USSR," by G. Nikolsky; and "A Device for Rapid Single-Handed Measurement of Shellfish," by Peter J. Warren.

NEW ENGLAND:

"How New England Buys Fish," by F. B. Clark, article, Foreign Trade, vol. 110, no. 6, September 1958, pp. 16-18, illus., printed, single copy 20 Canadian cents. Department of Trade and Commerce, Ottawa, Canada. A brief description of New England's fishing industry, production by regions, and what is being done to help the industry solve some of its problems. The author discusses imports in the New England area and gives some suggestions for Canadians who want to sell their fishery products in this area. The author states that "Although New England fish production is expected to improve with the fleet modernization program, the growing local and national market will still need the present flow of imports and possibly more."

NEW GUINEA:

"SPC Fisheries Survey in Netherlands New Guinea," by H. Van Pel, article, SPC Quarterly Bulletin, vol. 8, no. 3, July 1958, pp. 28-29, illus., printed, single copy 30 U. S. cents. South Pacific Commission, Box 5254, G. P. O., Sydney, Australia. A brief report describing a two-month survey by the South Pacific Commission

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of the marine and inland fisheries resources of Netherlands New Guinea. Investigations of the marine fisheries resources produced good catches of red snapper, Spanish mackerel, barracuda, trevally, jobfish, dolphin, tuna, and shark. The main purpose of the inland fisheries survey was to find ways of increasing the aquatic food resources, especially crayfish.

NORWAY:

"Over 84,000 Fishing Vessels on a 3,000-Mile Coastline--That's Norway," by Gregory Haines, article, World Fishing, vol. 7, no. 9, September 1958, pp. 42-44, 70, illus., printed. John Trundell Ltd., St. Richards House, Eversholt St., London, N. W. 1, England. The author's impression of the Norwegian fishing industry, and descriptions of the Lofoten cod fishery, whaling market, tuna fishery, and the failure of this year's herring season.

Praktiske Fiskeforsøk, 1957 (Practical Fishery Research, 1957), Arsberetning Vedkommende Norges Fiskerier 1957, Nr. 9, 78 pp., illus., printed in Norwegian. A. S. John Griegs Boktrykkeri, Bergen, Norway, 1958.

NYASALAND:

Annual Report of the Department of Game, Fish and Tsetse Control for the Year Ended 31st December, 1957, 20 pp., printed. The Government Printer, Zomba, Nyasaland, 1958. The section on fisheries discusses the state of the fish stocks, the non-African fishery, the African fishery, fish trade, developmental and experimental work, fisheries research organization, trout fishing, and fish farming. Statistics are also given on landings of the different species of fish in the non-African and African fisheries.

OYSTERS:

"Riboflavin, Niacin, and Thiamine in Apalachicola Bay Oysters," by Jane Wentworth and Harvy Lewis, article, Food Research, vol. 23, March-April 1958, pp. 194-197, printed. The Garrard Press, 119-123 West Park Ave., Champaign, Ill.

PHILIPPINES:

The Philippine Journal of Fisheries, vol. 4, no. 1, January-June, 1956, 83 pp., illus., printed. Department of Agriculture and Natural Resources, Manila, Philippines. Contains, among others, the following articles: "The Stake (Patusok) Method of Oyster Farming in the Dagat-Dagatan Lagoon, Rizal Province," and "Assay of the Goby Fry (Ipon) Fisheries of the Laoag River and its Adjacent Marine Shores," by Guillermo J. Blanco.

POND FISH:

"New Introduction of Edible Pond Fish from Philippines," article, SPC (South Pacific Commission) Quarterly Bulletin, vol. 8, no. 2, April 1958, p. 19, illus., printed, single copy 30 U. S. cents. South Pacific Commission, Box 5254, G. P. O., Sydney, Australia. The introduction of carefully-selected species of edible pond fish to Pacific territories for stocking inland waters forms an important part of the Commission's long-term program for the development of fisheries in the

region. In October 1955 the Commission imported by air from the Philippines an experimental consignment of tilapia. They quickly multiplied, and successful transplantings have since been made to many Pacific territories. This article describes briefly a similar transfer of fingerlings of four species of edible pond fish--carp, sepat, dalag, and gourami--which were transported by air from the Philippines to New Caledonia in January 1958. Species which multiply successfully will be used to stock natural waters in Pacific territories, to provide supplementary protein in the diet of islanders.

PORTUGAL:

Lista de Embarcacoes das Pescas Industriais (List of Vessels Engaged in Industrial Fisheries), 800 pp., illus., printed in Portuguese, US\$8.75. Gabinete de Estudos das Pescas, Lisbon, Portugal, 1956. Presents information on the number, tonnage, and types of registered vessels engaged in Portugal's commercial fisheries. The vessels are listed separately as follows: (1) trawlers engaged in high seas and coastal fishing, (2) tuna fishing vessels, (3) cod fishing vessels, (4) whaling vessels, and (5) sardine fishing vessels. Preceding each listing are colored illustrations of the identifying flags used on Portuguese fishing vessels and a corresponding key to the firms that own them.

PRESERVATION:

"Assessment of Quality of Iced White Fish," article, Report of the Food Investigation Board, 1956, pp. 5-6, printed. Food Investigation Board, London, England, 1957.

"The Chlortetracycline (CTC) Content of CTC-Treated Fish and of "Kamaboko" Made from the Treated Fish," by T. Tomiyama, Y. Yone, and A. Tsuda, article, Bulletin of the Japanese Society of Scientific Fisheries, vol. 23, no. 9, 1957, pp. 568-571, printed. Photostat copies or microfilms may be purchased from the library of the Institut International du Froid, 177 Boulevard Maiesherbes, Paris 17^e, France. Describes cold-storage tests made on "kamaboko"--a mixture of croaker and sea eel.

"The Chlortetracycline (CTC) Content of Trawl Catch Treated on Board and Residual CTC in Edible Part on Cooking and Processing of Treated Fish," by T. Tomiyama, Y. Yone, and A. Tsuda, article, Bulletin of the Japanese Society of Scientific Fisheries, vol. 23, no. 9, 1957, pp. 572-578, illus., printed. Photostat copies or microfilms may be purchased from the library of the Institut International du Froid, 177 Boulevard Maiesherbes, Paris 17^e, France.

"Spoilage of Whole Fish and Fillets," article, Report of the Food Investigation Board for 1956, pp. 8-9, printed. Food Investigation Board, London, England, 1957. Discusses the differences in spoilage patterns of whole or fillets of white fish. Reports the effectiveness of (1) washing fillets in tap water, (2) dipping fillets in antibiotic solutions, and (3) wrapping fillets in polyethylene bags, on the over-all spoilage rate. Also reports confirmed findings that the keeping

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quality of prepackaged white fish fillets held at 32° F., is the same as the keeping quality of unwrapped fillets.

"Storage of Fish in Cold Water" (Sohranenie Pyby v Ohlajadennoi Vode), by P. G. Zukovskij, article, *Rybnoe Hozjajstvo*, no. 7, July 1957, pp. 35-37, illus., printed in Russian. Photostat copies, translations, or microfilms may be purchased from the library of the Institut International du Froid, 177 Boulevard Malesherbes, Paris 17^e, France. Describes tests carried out in 1956 to determine the cooling rate of salmonoid fish and their keeping life in cooled sea water.

PRESERVATION BY IRRADIATION:

International Institute of Refrigeration, Annexe 1957-3, Supplement au Bulletin de l'Institut International du Froid, 176 pp., illus., printed in French and English. Institut International du Froid, 177 Boulevard Malesherbes, Paris 17^e, France. Included, among others, are the following papers on the treatment of foodstuffs by ionizing radiations: "The Possible Use of Ionizing Radiations in Food Preservation," by J. Kuprianoff; "International Co-operation in the Field of Applications of Isotopes and Radiations in Agricultural Research," by R. A. Silow; "Radiations Processing: A Summary of Activity in Britain," by R. S. Hannan; "The Present Situation of the Application of Radiation to Food Preservation in Federal Republic in Germany," by J. Kuprianoff; "Ionizing Radiations as Applied to Food Preservation--Present Situation in France," by P. Vidal; "Preservation of Chicken Meat: Observations on the Use of Cathode and Gamma Rays," by M. J. Thornley; and "Some Problems in Irradiation of Foodstuffs," by L. Roussel and P. Vidal. These papers were presented at a meeting of the Institute in Switzerland, September 23-25, 1957.

PROTEINS:

"Analysis of the Protein Constituents of Drip from Thawed Fish Muscle," by Harry L. Seagran, article, *Food Research*, vol. 23, March-April 1958, pp. 143-149, printed. Department of Food Technology, University of California, Davis, Calif.

"Evaluation of Protein Quality--I. The Significance of the Problem," by Leo Friedman, article, *Journal of the Association of Official Agricultural Chemists*, vol. 41, February 15, 1958, pp. 188-191, printed. Association of Official Agricultural Chemists, Inc., Box 540, Benjamin Franklin Station, Washington 4, D. C.

"Evaluation of Protein Quality--II. Methods," by Philip H. Derse, article, *Journal of the Association of Official Agricultural Chemists*, vol. 41, February 15, 1958, pp. 192-194, printed. Association of Official Agricultural Chemists, Inc., Box 540, Benjamin Franklin Station, Washington 4, D. C.

SARDINES:

"Marginal Notes on the Problem of Frozen Sardines" (Remarques en Marge du Probleme de la Sardine Congelee), article, *R. Conserve*, vol.

13, no. 1, January-February 1958, pp. 81-83, printed in French. Photostat copies, translations, or microfilms may be purchased from the library of the Institut International du Froid, 177 Boulevard Malesherbes, Paris 17^e, France. Presents the recommendations of a group of United States and Yugoslav researchers for improving the quality of canned sardines made from frozen sardines.

"Refrigerating Tests on Sardines with Sea-Water" (Essais de Refrigeration des Sardines a l'Eau de Mer), article, *R. Conserve*, March 1958, p. 107, printed in French. Photostat copies, translations, or microfilms may be purchased from the library of the Institut International du Froid, 177 Boulevard Malesherbes, Paris 17^e, France. Presents preliminary findings on four tests made on the storage of sardines in chilled sea-water at 0° and -3° C. (32° and 26.6° F.). Results of the tests indicate that this process of chilling, which has been used successfully in conserving the freshness of herring, mackerel, and tuna for at least one week, does not seem suitable for the storage of sardines.

SCALLOPS:

"Scallops in Louisiana," by Ednard Waldo, article, *Louisiana Conservationist*, vol. 10, no. 9, September 1958, p. 21, illus., printed. Louisiana Wild Life and Fisheries Commission, 126 Civil Courts Bldg., New Orleans, La. A recent survey, one of a series being made which covers an area extending from behind North Island to the Chandler Light, revealed beds of bay scallops which, according to the author, may lead to a new industry in Louisiana. Skin divers brought up quantities of the bay scallops which were tested for edibility and found to be of excellent quality and taste. An aerial survey showed that submarine gardens, of the type in which scallops thrive, covered a strip some 50 miles in length and varied in width from about half a mile to some 8 miles, the latter in the vicinity of the Free Mason Islands.

SHARKS:

"Dogfish," by H. L. A. Tarr, article, *Progress Reports of the Pacific Coast Stations*, No. 110, p. 13, printed. Fisheries Research Board of Canada, Pacific Fisheries Experimental Station, 898 Richards St., Vancouver, B. C., Canada, April 1958. On the west coast of Canada, attempts have been made to utilize dogfish but with no lasting success. The various avenues of utilization that have been explored are (1) direct use in human food, for example, as fresh or canned dogfish, (2) use in production of liver oil, and (3) use in production of oil and meal. This article describes briefly the experimental work that has been done on the utilization of dogfish.

SPINY LOBSTER:

"The Refrigeration and Storage of Crawfish" (Holodil'naja Obrabotka i Hranenie Recnyh Rakov), by N. Golovkin and L. Persina, *Holodil'naja Tehnika*, no. 1, 1958, pp. 26-27, printed in Russian. Photostat copies, translations, or microfilms may be purchased from the library of the

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Institut International du Froid, 177 Boulevard
Malesherbes, Paris 17^e, France.

SPOT:

A Study of the Biology and Life History of the Spot, LEIOSTOMUS XANTHURUS LACEPEDE, with Special Reference to South Carolina, by C. E. Dawson, Contributions from Bears Bluff Laboratories No. 28, 48 pp., printed. Bears Bluff Laboratories, Wadmalaw Island, S. C., September 1958.

TROCHUS:

Selected Annotated Bibliography of Trochus, by R. Gail and L. Devambe, Technical Paper No. 111, 27 pp., illus., printed, 2/6 stg. (about 35 U. S. cents). South Pacific Commission, G. P. O. Box 5254, Sydney, Australia. The first part of this bibliography on trochus shell gives references in alphabetical order of authors' names. Brief summaries of the publications are also included. In the second part, the territory or country where the research has taken place is used as a subheading, and only the bibliographical reference is given. A map of the South Pacific Commission area, showing the natural and artificial distribution of trochus, is appended.

TUNA:

"Le Marche du Thon Tropical d'Origine Francaise" (The Market for Tropical Tuna of French Origin), by A. Sahut-Morel, article, La Peche Maritime, vol. 37, no. 965, August 1958, pp. 473-479, illus., printed in French. Editions Maritimes, 190 Boulevard Haussmann, Paris, France.

TURKEY:

"Catching Periods of *Sarda sarda* in Different Seasons and Years" (Torik-Palamut ve Sarda sarda larin Mevsim ve Senelere Bagli Av Peryotlari), by Ilham Artuz, article in 3 parts, Balik ve Balikcilik, Part I - vol. 6, no. 4, April 1958, pp. 1-5; Part II - vol. 6, no. 5, May 1958, pp. 1-6; Part III - vol. 6, no. 6, June 1958, pp. 7-11; printed in Turkish. Et ve Balik Kurumu Umum Mudurlugu, Kat 5, Yene Valde Han Sirkeci, Istanbul, Turkey

"The Girgir-Seines" (Girgir Agi), by Sitki Uner, article, Balik ve Balikcilik, vol. 6, no. 7, July 1958, pp. 22-26, illus., printed in Turkish. Et ve Balik Kurumu Umum Mudurlugu, Kat 5, Yene

Valde Han Sirkeci, Istanbul, Turkey. Describes the Girgir seines used by Turkish fishing boats.

"The Place of Turkish Fisheries in the Mediterranean Countries and in the World" (Memleketimiz Balikciliginin Dunya ve Akdeniz Balikciligindeki Veri), by M. Ilham Artuz, article in 3 parts, Balik ve Balikcilik, Part I - vol. 6, no. 7, July 1958, pp. 18-21; Part II - vol. 6, no. 8, August 1958, pp. 7-11; Part III - vol. 6, no. 9, September 1958, pp. 16-22; printed in Turkish. Et ve Balik Kurumu Umum Mudurlugu, Kat 5, Yene Valde Han Sirkeci, Istanbul, Turkey.

UNION OF SOUTH AFRICA:

Department of Nature Conservation, Report No. 14, 1957, 108 pp., illus., printed. Department of Nature Conservation, Provincial Administration of the Cape of Good Hope, Cape Town, Union of South Africa. A complete report on the activities of the Union of South Africa's Department of Nature Conservation. The section on Research and Field Surveys contains, among others, a report on inland fisheries and an article entitled "The Tidal Waters of the Rivers of the Cape Province," by G. F. van Wyk. This article describes a survey which has been undertaken chiefly with the object of providing fair legislation which will not deprive commercial fishermen and anglers of reasonable catches but which will at the same time prevent needless wastage of fish and fish bait. The section covering the Division of Inland Fisheries discusses the work being done at the Jonkershoek Hatchery, Pirie Trout Hatchery, Tsolo Fish Farm, and the stocking of public waters. Also included is a brief report on the Inland Fisheries and Fauna Administration and the figures on the game licenses issued in 1957.

VITAMINS:

"Assay of Vitamin A Oils," by E. Brunius, article, Nature, vol. 181, February 8, 1958, pp. 395-396, printed. Macmillan and Company, Ltd., St. Martins Street, London W. C. 2, England.

YEARBOOKS AND DIRECTORIES:

Fisheries Yearbook and Directory, 1958, edited by Harry F. Tysser, illus., printed, 20s. (about US\$2.80). British-Continental Trade Press Ltd., London, England.



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