

FISH AND WILDLIFE SERVICE PUBLICATIONS

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

Number	Title
CFS-3164	- Maine Landings, by County, Gear, and Subarea, 1962 Annual Summary, 15 pp.
CFS-3168	- Maine Landings, by Months, 1962 Annual Summary, 7 pp.
CFS-3181	- Mississippi Landings, February 1963, 3 pp.
CFS-3185	- Imports & Exports of Fishery Products, 1958-1962, Annual Summaries, 11 pp.
CFS-3203	- Texas Landings, January 1963, 3 pp.
CFS-3204	- Texas Landings, February 1963, 3 pp.
CFS-3207	- South Carolina Landings, April 1963, 3 pp.
CFS-3209	- Georgia Landings, April 1963, 3 pp.
CFS-3211	- New Jersey Landings, April 1963, 3 pp.
CFS-3212	- Rhode Island Landings, March 1963, 3 pp.
CFS-3213	- Wisconsin Landings, April 1963, 2 pp.
CFS-3214	- Shrimp Landings, November 1962, 8 pp.
CFS-3216	- Fish Meal and Oil, April 1963, 2 pp.
CFS-3217	- New York Landings, April 1963, 4 pp.
CFS-3218	- Virginia Landings, April 1963, 3 pp.
CFS-3219	- Ohio Landings, April 1963, 3 pp.
CFS-3220	- Frozen Fishery Products, May 1963, 8 pp.
CFS-3221	- Shrimp Landings, December 1962, 8 pp.
CFS-3222	- Mississippi Landings, April 1963, 3 pp.
CFS-3223	- Louisiana Landings, April 1963, 2 pp.
CFS-3224	- Maryland Landings, April 1963, 3 pp.
CFS-3225	- Maine Landings, April 1963, 4 pp.
CFS-3226	- Alabama Landings, February 1963, 3 pp.
CFS-3227	- Alabama Landings, March 1963, 3 pp.
CFS-3230	- North Carolina Landings, May 1963, 4 pp.
CFS-3231	- New Jersey Landings, May 1963, 3 pp.
CFS-3232	- California Landings, April 1963, 4 pp.
CFS-3233	- Rhode Island Landings, April 1963, 3 pp.
CFS-3234	- Fish Meal and Oil, May 1963, 2 pp.
CFS-3235	- Michigan Landings, March 1963, 3 pp.
CFS-3237	- South Carolina Landings, May 1963, 3 pp.
CFS-3238	- Michigan Landings, April 1963, 3 pp.
CFS-3239	- Alabama Landings, 1962 Annual Summary, 5 pp.
CFS-3241	- Florida Landings, May 1963, 8 pp.
CFS-3242	- Georgia Landings, May 1963, 3 pp.
CFS-3245	- Virginia Landings, May 1963, 3 pp.

Wholesale Dealers in Fishery Products, 1962 (Revised):
 SL- 6 - New York Coastal Area, 10 pp.
 SL- 9 - Delaware, 1 p.
 SL-10 - Maryland, 10 pp.
 SL-22 - Oregon, 3 pp.
 SL-23 - Washington, 7 pp.

Sep. No. 683 - Mechanizing the Blue Crab Industry - Part II - Measures for the Immediate Relief Through Worker Specialization.

Sep. No. 684 - Activation of U. S. Bureau of Commercial Fisheries Research Vessel George B. Kelez.

SSR-Fish. No. 440 - The King Salmon of Cook Inlet, Alaska, by Robert M. Yancey and Fredrik V. Thorsteinson, 22 pp., illus., 1963.

Annual Report of the Commissioner, Fish and Wildlife Service, to the Secretary of the Interior, 1962, 63 pp., illus., printed. (Reprinted from the Annual Report of the Secretary of the Interior, for the Fiscal Year ended June 30, 1962, pp. 265-323.) Summarizes the various activities of the Service. Describes the Bureau of Commercial Fisheries research and development programs, conferences, services to industry, developments in foreign fisheries and trade, international programs, Columbia River development program, fur-seal operations, and construction of research laboratories and vessels. Also covers the activities of the Bureau of Sport Fisheries and Wildlife, including the management of wildlife and sport fishery resources, wildlife and fishery research, and fish and wildlife and outdoor recreation.

THE FOLLOWING ENGLISH TRANSLATIONS OF FOREIGN LANGUAGE ARTICLES ARE AVAILABLE ONLY FROM THE U. S. BUREAU OF COMMERCIAL FISHERIES BIOLOGICAL LABORATORY, BOX 3830, HONOLULU, HAWAII.

An Observation on a School of Skipjack and Kimeji Accompanying a Drift Log, by Hiroshi Yabe and Tokumi Mori, 8 pp., illus., processed. (Translated from the Japanese, Bulletin of the Japanese Society of Scientific Fisheries, vol. 16, no. 2, 1950, pp. 35-39.)

Studies of Dolphin Fishing Conditions in the Western Sea of Japan. I., by Shumpei Kojima, 11 pp., illus., processed. (Translated from the Japanese, Bulletin of the Japanese Society of Scientific Fisheries, vol. 20, no. 12, 1955, pp. 1044-1049.)

II--"Tsuke" Rafts and their Attraction for the Fish, by Shumpei Kojima, 7 pp., illus., processed. (Translated from the Japanese, Bulletin of

the Japanese Society of Scientific Fisheries, vol. 21, no. 10, 1956, pp. 1049-1052.)

III--On the Stomach Contents of Dolphin, by Shumpei Kojima, 8 pp., illus., processed. (Translated from the Japanese, Bulletin of the Japanese Society of Scientific Fisheries, vol. 27, no. 7, 1961, pp. 625-629.)

V--On the Species of Fish Attracted to "Tsuke" Rafts, by Shumpei Kojima, 4 pp., processed. (Translated from the Japanese, Bulletin of the Japanese Society of Scientific Fisheries, vol. 26, no. 4, 1960, pp. 379-382.)

VI--On the Ecology of the Groups of Fish Congregating Around "Tsuke" Rafts, by Shumpei Kojima, 10 pp., illus., processed. (Translated from the Japanese, Bulletin of the Japanese Society of Scientific Fisheries, vol. 26, no. 4, 1960, pp. 383-388.)

Studies of Drifting Sea Weeds: Larval and Juvenile Fishes Accompanying Drifting Sea Weed. I--Investigations in the Vicinity of Tsuyazaki in Fiscal Year 1957, by Keitaro Uchida and Yoichi Shojima, 7 pp., illus., processed. (Translated from the Japanese, Bulletin of the Japanese Society of Scientific Fisheries, vol. 24, nos. 6 and 7, 1958, pp. 411-415.)

Underwater Fisheries Research in the U.S.S.R., by V. I. Zaitsev, 11 pp., illus., processed. (Translated from the Russian, Okeanologia, vol. 2, no. 6, 1962, pp. 961-969.)

THE FOLLOWING ENGLISH TRANSLATION OF A FOREIGN LANGUAGE ARTICLE IS NOT FOR GENERAL DISTRIBUTION BUT IS AVAILABLE FOR REFERENCE ONLY FROM THE BIOLOGICAL LABORATORY, BUREAU OF COMMERCIAL FISHERIES, U. S. FISH AND WILDLIFE SERVICE, P. O. BOX 3830, HONOLULU, HAWAII.

On Estimating Tuna Fishing Condition in the North Pacific Ocean, by Akira Suda, 7 pp., processed. (Translated from the Japanese, Tuna Fishing, no. 54, November 10, 1958, pp. 27-31.)

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

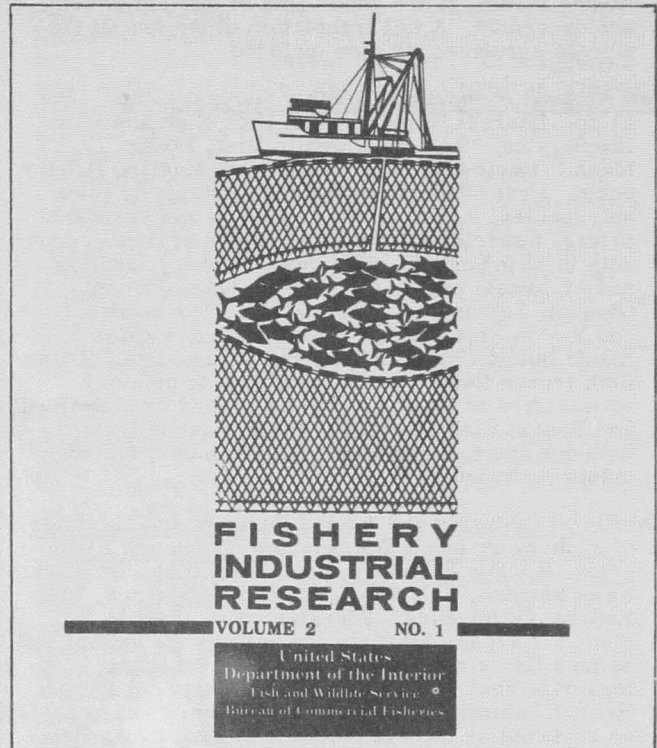
California Fishery Market News Monthly Summary, Part I - Fishery Products Production and Market Data, May and June 1963, 16 pp., each. (Market News Service, U. S. Fish and Wildlife Service, Post Office Bldg., Room 208, San Pedro, Calif.) California cannery receipts of tuna and tunalike fish and other species used for canning; pack of canned tuna, tunalike fish, mackerel, and anchovies; market fish receipts at San Pedro, Santa Monica, and Eureka areas; California and Arizona imports; canned fish and frozen shrimp prices; ex-vessel prices for cannery fish; for the months indicated.

California Fishery Market News Summary, Part II - Fishing Information, June 1963, 8 pp., illus. (U. S. Bureau of Commercial Fisheries, Biological Laboratory, P. O. Box 6317, Pt. Loma Station, San Diego 6, Calif.) Contains sea-surface temperatures, fishing and research information of interest to the West Coast tuna-fishing industry and marine scientists; for the month indicated.

(Chicago) Monthly Summary of Chicago's Wholesale Market Fresh and Frozen Fishery Products Receipts, Prices, and Trends, June 1963, 13 pp. (Market News Service, U. S. Fish and Wildlife Service, U. S. Customs House, 610 S. Canal St., Room 1014, Chicago

7, Ill.) Receipts at Chicago by species and by states and provinces for fresh- and salt-water fish and shellfish; and weekly wholesale prices for fresh and frozen fishery products; for the month indicated.

Fishery Industrial Research, vol. 2, no. 1, September 1962, 61 pp., illus., processed. (Branch of Reports, Bureau of Commercial Fisheries, U. S. Fish and Wildlife Service, Washington 25, D. C.) This is the second



issue of a new periodical which will be published irregularly and will present papers devoted to research on problems of the fishing industry. Includes articles on: "Quality Changes in Whiting Stored in Ice as Indicated by Organoleptic and Objective Tests," by Joseph M. Mendelsohn and John A. Peters; "Effect of Cooking Methods on the Sodium Content of Halibut, Haddock, and Flounder," by Bernard I. Sohn and Maynard A. Steinberg; "Proximate Composition Changes in Sockeye Salmon (*Oncorhynchus nerka*) during Spawning Migration," by Claude E. Thurston and H. William Newman; "Mechanically Deicing and Weighing Groundfish at the Dock in New England," by John A. Peters, Joseph W. Slavin, and Arvey H. Linda; "Methods of Separation of Fatty Acids from Fish Oils with Emphasis on Industrial Applications," by Edward H. Gruger, Jr.; "Storage of Fish in Refrigerated Sea Water. I--Quality Changes in Ocean Perch as Determined by Organoleptic and Chemical Analyses," by Edward H. Cohen and John A. Peters; "New-Type Multiple Debrader," by Melvin E. Waters and D. J. Bond.

Gulf of Mexico Monthly Landings, Production and Shipments of Fishery Products, April and May 1963, 8 pp. each. (Market News Service, U. S. Fish and Wildlife Service, Room 609, 600 South St., 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;

fishery imports at Port Isabel and Brownsville, Texas, from Mexico; and sponge sales; for the months indicated.

Japan-Soviet Private Kelp Fishery Agreement, 6 pp., illus. (Bureau of Commercial Fisheries, U.S. Fish and Wildlife Service, 101 Seaside Ave., Terminal Island, Calif.) Japan and the Soviet Union concluded a private kelp fishery agreement on June 10, 1963. Events leading to the conclusion of this agreement are described. A full translation of the text of the private agreement is also included.

New England Fisheries--Monthly Summary, June 1963, 21 pp. (Market News Service, U.S. Fish and Wildlife Service, 10 Commonwealth Pier, Boston 10, Mass.) Review of the principal New England fishery ports. Presents data on fishery 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 Boston Fish Pier and Atlantic Avenue fishery landings and ex-vessel prices by species; for the month indicated.

(Seattle) Washington and Alaska Receipts and Landings of Fishery Products for Selected Areas and Fisheries, Monthly Summary, June 1963, 9 pp. (Market News Service, U.S. Fish and Wildlife Service, 706 Federal Office Bldg., 909 First Ave., Seattle 4, Wash.) Includes Seattle's landings by the halibut and salmon fleets reported through the exchanges; landings of halibut reported by the International Pacific Halibut Commission; landings of otter-trawl vessels as reported by the Fishermen's Marketing Association of Washington; local landings by independent vessels; coastwise shipments from Alaska by scheduled and non-scheduled shipping lines and airways; imports from British Columbia via rail, motor truck, shipping lines, and ex-vessel landings; imports from other countries through Washington customs district; for the month indicated; and Alaska Canned Salmon Pack--1962-1963.

MISCELLANEOUS PUBLICATIONS

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ABALONE:

"Chemical Studies on the Meat of Abalone. II--(Halibutis discus Hannai) Detection of Mucoprotein in and Decomposition of Abalone Meat," by Eiichi Tanikawa, Minoru Akiba, and Jiro Yamashita, article, Bulletin of the Faculty of Fisheries, Hokkaido University, vol. 12, February 1962, pp. 293-308, printed. Hokkaido University, Kameda-Machi, Hokodate, Japan.

ALASKA:

Alaska Commercial Fishery Operators, 1962, Statistical Leaflet No. 4, 17 pp., illus., printed. Department of Fish and Game, Subport Bldg., Juneau, Alaska.

Alaska Fishery Operators, 1961, Statistical Leaflet No. 2, 16 pp., printed. Department of Fish and Game, Subport Bldg., Juneau, Alaska.

ALGINATES:

"Alginates from Seaweed," by E. R. Webber, article, Food Manufacture, vol. 37, July 1962, pp. 328-330, printed. Leonard Hill Ltd., 9 Eden Street, London, NW1, England.

"Studies on Alginase. IV--Investigation of Reactivities," by Isami Tsujino and Tsuneyuki Saito, article, Bulletin of the Japanese Society of Scientific Fisheries, vol. 29, no. 1, January 1963, pp. 58-65, illus., printed in Japanese with summary in English. Japanese Society of Scientific Fisheries, c/o Tokyo University of Fisheries, Shiba Kaigandori 6, Minato-ku, Japan.

AQUATIC PLANTS:

Control of Aquatic Plants, by Frederick A. Meyer, Inland Fisheries Informational Leaflet No. 18, 5 pp., illus., processed. California Department of Fish and Game, Inland Fisheries Branch, 722 Capitol Mall, Sacramento 14, Calif., revised May 1963. A leaflet designed to aid the pond owner with an aquatic plant problem in his efforts to control these plants. Discusses infestations by and treatment of algae, microscopic plants which give water its green color; submerged, growths rooted in the bottom and normally having all of their parts under water; and emergents, plants rooted in the bottom with some parts well above water or floating on the surface.

AUSTRALIA:

"Parasitic Copepoda from Australian Waters," by Poul Heegaard, article, Records of the Australian Museum, vol. 24, no. 9, 1962, pp. 147-233, illus., printed. Australian Museum, Sydney, Australia.

AUSTRIA:

Establishing a Business in Austria, OBR-63-99, 20 pp., printed, 15 cents. Bureau of International Commerce, U.S. Department of Commerce, Washington, D. C., April 1963. (For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D. C.) Summarizes the relevant Austrian policies and regulations in the fields of investment, business organization, employment, taxation, export promotion, trade license requirements, and other matters affecting the establishment and operation of business enterprises by non-Austrian nationals.

BALTIC SEA:

Salmon and Porpoise in the Baltic; Preliminary Communication, by Arne Lindroth, no. 6, 5 pp., illus., printed. Salmon and Trout Committee, International Council for the Exploration of the Sea, Charlottenlund-Slot, Denmark, 1961.

BYPRODUCTS:

"The Utilization of Fish Skins for Glue and Other Products," by A. Guttman, article, Progress Reports of the Atlantic Coast Stations, No. 73, August 1962, pp. 3-10, printed. Queen's Printer and Controller of Stationery, Ottawa, Canada.

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CALIFORNIA:

"Commercial Freshwater Fisheries of California," by Sterling P. Davis, article, California Fish and Game, vol. 49, no. 2, April 1963, pp. 84-94, illus., printed, single copy 75 cents. California Department of Fish and Game, Printing Division, Documents Section, Sacramento 14, Calif.

CAMBODIA:

"Fish and Water in Cambodia," by K. Krishna Moorthy, article, Far Eastern Economic Review, vol. XL, no. 7, May 1963, pp. 375-377, illus., printed. Far Eastern Economic Review, Ltd., 412 Marina House, Hong Kong.

CANADA:

Fisheries Council of Canada, Annual Review 1963, 79 pp., illus., printed. Fisheries Council of Canada, Room 703, 77 Metcalfe Street, Ottawa 4, Canada. Includes, among others, the following articles: "High Seas Salmon Research," by Roy I. Jackson; "Canada's National and Territorial Waters;" "The Scallop Industry," by G. J. Gillespie; and "Fisheries Policy in the European Common Market," by P. T. Eastham.

32nd Annual Report, 1961, Department of Fisheries, Cat. No. Fs 1-1961, 156 pp., illus., printed, 50 Canadian cents. Queen's Printer and Controller of Stationery, Ottawa, Canada, 1963. Presents an account of the functions and activities of the Department of Fisheries for the year 1961, and the financial statements of the Department for the fiscal year 1961/62. Covers in detail the work of the Department's Conservation and Development, Inspection, Economics, Information and Consumer, and Industrial Development Services. Also covers activities of departmental vessels, the Fishermen's Indemnity Plan, Fisheries Prices Support Board, Fisheries Research Board of Canada, international commissions, and special commissions. Canada's Pacific Coast, Lakes, and Atlantic Coast fisheries are also discussed. Statistics cover the quantity and value of fish and shellfish landed, exports by types of products, number of fishermen in Canada, and value of fishing craft and gear. The appendix contains financial statements, and reports on fish culture development.

CANNING:

"Oversikt over den Danske Fiskehelkonservesindustri" (Survey of the Danish Fish Canning Industry), by Hakon Nielsen, article, Tidsskrift for Hermetikindustri, vol. 49, no. 5, May 1963, pp. 190-192, 194-195, printed in Norwegian. Norske Hermetikfabrikers Landsforening, Stavanger, Norway.

CARIBBEAN SEA:

Association of Island Marine Laboratories, Fourth Meeting, 32 pp., illus., processed. Universidad de Puerto Rico, Oficina de Informacion y Publicaciones, Seccion de Impresos, Mayaguez, Puerto Rico. Contains papers presented at the fourth meeting of the Association of Island Marine Laboratories, sponsored by the Caraibisch Marien Biologisch Instituut, held in Curacao, Netherlands Antilles, November 18-21, 1962.

Discontinuity in Marine Fish Distribution in the Caribbean, by Donald S. Erdman, 5 pp., printed. (Re-

printed from Caribbean Agriculture, vol. 1, no. 2, March 1963, pp. 127-131.) Estado Libre Asociado de Puerto Rico, Departamento de Agricultura, San Juan, Puerto Rico.

CARRAGEENAN:

Genu Carrageenan, 35 pp., illus., printed. A/S Kobenhavns Pektinfabrik (The Copenhagen Pectin Factory Ltd.), Lille Skensved, Denmark. Carrageenan is an extract of the red seaweeds, Chondrus crispus and Gigartina stellata, although the name is often given to extracts from types of Eucheama and Iridea. The extracts are stabilizing, gelling, and viscosity increasing substances widely used in foods. The booklet describes the assumed molecular structure of carrageenan, the average composition, chemical and physical characteristics, analytical and test methods, and the evaluation of gels made with carrageenan using 4 instruments--the Ridgelimeter, the Bloom gelometer, the Gelometer, and the FIRA tester. An attached leaflet entitled "Fish in Jelly," describes the gels available and how to prepare and use them.

CEYLON:

Administration Report of the Director of Fisheries for 1960-61, Part IV--Education, Science and Art (L), 65 pp., printed in Ceylonese and English, 2/30 (about 50 U.S. cents). Government Publications Bureau, P.O. Box 500, Colombo, Ceylon. Report on the activities and accomplishments of the Ceylon Department of Fisheries for 1960/61. Includes, among other data, information on programs of the organization; disputes and regulations; benefits for fishermen; fishery loans; coastal navigation aids; and fishing harbors. It covers fresh- and brackish-water fisheries; pearl fisheries; fish factory at Mutwal; cooperative fish sales union; and fishery research. Also contains statistical tables on imports and exports of fish and fishery products; and production of fresh and cured fish for 1960/61.

CHESAPEAKE BAY:

Atlas of Salinity and Temperature Distributions in Chesapeake Bay 1952-1961 and Seasonal Averages 1940-1961, by E. D. Stroup and R. J. Lynn, Graphical Summary Report 2, Reference 63-1, 417 pp., illus., processed. Chesapeake Bay Institute, The Johns Hopkins University, Baltimore, Md., February 1963.

CLAMS:

"A New Digger for Soft-Shell Clams," by J. S. MacPhail and J. C. Medcof, article, Trade News, vol. 15, no. 9, March 1963, pp. 3-5, illus., processed. Director of Information and Consumer Service, Department of Fisheries, Ottawa, Canada. Describes a new hydraulic clam digger, its operation, and commercial fishing trials. Also discusses hydraulic digging and the future of the clam fishery.

COD:

"Merkeforsok pa brisling i fjorder pa Vestlandet, 1961-1962" (Tagging of Cod in the Western Bay, 1961-1962), by Kaare R. Gundersen, article, Fiskets Gang, vol. 49, no. 21, May 23, 1963, pp. 300-304, printed in Norwegian. Fiskets Gang, Fiskeridirektoratet, Radstuplass 10, Bergen, Norway.

"Salt-Fish Flavour in Frozen Cod Fillets Prepared from Stored Frozen Shore Cod Thawed in Sea Water," by W. J. Dyer and others, article, Progress

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Reports of the Atlantic Coast Stations, No. 73, August 1962, pp. 17-19, printed, Queen's Printer and Controller of Stationery, Ottawa, Canada.

COLD STORAGE:

"Physical and Chemical Changes in Fish Muscle during Cold Storage," by Hans Buttkus and H. L. A. Tarr, article, Food Technology, vol. 16, August 1962, pp. 84-88, printed. The Garrard Press, 510 North Hickory, Champaign, Ill.

COMMERCIAL FISHERIES BUREAU OF:

"B. C. F., 1961 Activities--Worldwide in Scope," by Donald L. McKernan, article, Fishing Gazette, Annual Review Number, vol. 79, pp. 18-24, printed, Fishing Gazette Publishing Corp., 461 8th Ave., New York 1, N. Y.

CONVENIENCE FOODS:

Convenience Foods in the Grocery Basket, by Harry H. Harp and Denis F. Dunham, Marketing Bulletin No. 22, 10 pp., illus., printed, 10 cents. Marketing Economics Division, Economic Research Service, U. S. Department of Agriculture, Washington, D. C., September 1962. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.) Although fishery products are not specifically mentioned, it is of general interest to those that handle such products.

CRABS:

Growth of Mature Female King Crab PARALITHODES CAMTSCHATICA (Tilesius), by George W. Gray Jr., Informational Leaflet No. 26, 5 pp., illus., processed, Alaska Department of Fish and Game, Subport Bldg., Juneau, Alaska, April 1963.

DECOMPOSITION:

"Chemical Indexes of Decomposition in Cod Stored in Natural Ice and in Chlorotetracycline (CTC) Ice," by Fred Hillig and others, article, Journal of the Association of Official Agricultural Chemists, vol. 45, August 1962, pp. 694-724, printed. Journal of the Association of Official Agricultural Chemists, P. O. Box 540, Benjamin Franklin Station, Washington 4, D. C.

DIRECTORIES:

World Fishing Guide, 1963, 155 pp., illus., printed in English, German, and Spanish, 60 s. (about US\$8.40). John Trundell and Partners Ltd., St. Richard's House, Eversholt St. London NW1, England. An International commercial fishing service covering Australia, Austria, Belgium, Canada, Denmark, Finland, France, Holland, Italy, Japan, Norway, Portugal, South Africa, Spain, Sweden, Switzerland, United Kingdom, United States, and West Germany. Consists of 2 directories: the first for manufacturers of fishing gear and equipment; the other for fishing vessel builders. The manufacturers are listed alphabetically by type of product under 239 headings, grouped under country of manufacture. The builders are presented alphabetically by countries. A product index makes it easy to locate the manufacturer of any particular item. The principal objective of this guide is to supply a multi-language directory of the gear and equipment made throughout the world for use by the commercial fishing industry. The publishers have concentrated in particular on the most important items of fishing equipment,

such as nets, winches, and fish-finding equipment.

DOLPHIN:

Vocal Behavior of the Bottlenose Dolphin, by John C. Lilly, 10 pp., illus., printed. (Reprinted from Proceedings of the American Philosophical Society, vol. 106, no. 6, December 1962, pp. 520-529.) Communication Research Institute, Miami, Fla., April 27, 1962.

ECOLOGY:

Ecology of Fishes, by G. V. Nikolsky, 352 pp., illus., printed, \$12. Academic Press, 111 Fifth Ave., New York 3, N. Y., January 1963. The present edition is based on Professor Nikolsky's book The Biology of Fishes, published in 1944, though this has been radically revised. Chapters on the role of fishes in the life of mankind, and on the biological bases of a rational fishery have been added. All the remaining chapters have been virtually rewritten. Following a short introduction, in which the basic theoretical concepts of modern fish ecology are examined, conclusions are drawn concerning the interrelations between the fish and its organic and inorganic environment. In the second part of the book the fundamental links in the life-histories of fishes are examined. In selecting the examples, the author has used, where possible, data concerning species of commercial importance.

EXPORTS:

"U. S. Exporters Now Offered Faster, More Flexible Credit Insurance, Guarantee System," by Ada Wrigley, article, International Commerce, vol. 69, no. 12, March 25, 1963, pp. 2-5, printed, single copy 35 cents. U. S. Department of Commerce, Washington D. C. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.) A summary of the export credit insurance and guarantee programs, instituted as part of the U. S. efforts to increase exports. Five programs are available to help U. S. exporters extend credit on favorable commercial terms to their customers abroad. Using these facilities, exporters are now able to compete actively with foreign firms on credit terms.

FACTORYSHIPS:

"The Development of Factoryships and of Related Media in Ocean Fisheries," article, Norwegian Fishing and Maritime News, vol. 10, no. 1, 1963, pp. 27, 29, 31, printed. Fishing and Maritime News, P. O. Box 740, Slottsgt. 3, Bergen, Norway.

FAROE ISLANDS:

Faroes in Figures, no. 22, June 1963, 6 pp., printed. Faroes in Figures, Faero Amts Sparekasse, Copenhagen, Denmark. A review of the fisheries in the Faroes during 1962. Also contains financial data and statistics on fish production and exports.

"Forsøksfiske vest av Irland--Faeroyane (Experimental Fisheries West of Ireland--the Faroe Islands)," by Vaermund Dahl and Steinar Haraldsvik, article, Fiskets Gang, vol. 48, no. 44, November 1, 1962, pp. 598-600, illus., printed in Norwegian. Fiskets Gang, Fiskeridirektoratet, Radstuplass 10, Bergen, Norway.

FATTY ACIDS:

"Conversion of the Free Fatty Acids of Cod Oil to Methyl Esters in Situ," by R. G. Ackman and others, article,

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Journal of the Fisheries Research Board of Canada, vol. 19, July 1962, pp. 605-614, printed, Fisheries Research Board of Canada, Queen's Printer and Controller of Stationery, Ottawa, Canada.

FEEDS:

"Chemical and Biological Evaluation of Some Protein Feeds for Poultry," by I. Ascarelli and B. Gestetner, article, Journal of the Science of Food and Agriculture, vol. 13, August 1962, pp. 401-410, printed, The Society of Chemical Industry, 14 Belgrave Sq., London SW1, England.

"Maine Studies Value of Fish, Fermentation Products for Broilers," article, Feedstuffs, vol. 34, September 8, 1962, p. 64, printed, Miller Publishing Co., 2501 Wayzata Blvd., Minneapolis 5, Minn.

FISH BAIT:

"Fish Preservation Inquiries. The Preservation of Fish Bait" (Parts 1 and 2), by W. A. Montgomery and A. R. Prater, articles, Fisheries Newsletter (Australia), vol. 21, no. 7, July 1962, p. 17; and vol. 21, no. 8, August 1962, p. 17, printed, Commonwealth Fisheries Office, Department of Primary Industry, Canberra, Australia.

FISH COOKERY:

Tuna: As You Like it, 23 pp., illus., printed, Tuna Research Foundation, Dept. 300, Ferry Bldg., Terminal Island, Calif., 1963. A color-illustrated leaflet offering tuna recipes and information. Presents the history of tuna canning, the species of tuna used commercially, 39 tuna recipes, the nutritional value of tuna, the tuna fishermen and their fishing methods, how tuna is canned, and styles of pack. Included are recipes for casseroles, salads, sandwiches, soups, and appetizers.

FISH CULTURE:

Fish Culture: Its History and Techniques, by C. F. Hickling, 295 pp., printed, Faber & Faber Ltd., 23-24 Russell Sq., London WC1, England, 1962.

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Porpoise Performance Tests in a Sea-Water Tank, by Thomas G. Lang and Dorothy A. Daybell, NOTS TP 3063, 50 pp., printed, \$5.60. Naval Ordnance Test Station, China Lake, Calif., January 1963. (For sale by the Office of Technical Services, U. S. Department of Commerce, Washington 25, D. C.)

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"La Expansion de las Exportaciones Portuguesas de Conservas de Pescado" (The Expansion of Portuguese Canned Fish Exports), article, Industria Conservera, vol. XXXIX, no. 285, March 1963, p. 65, printed in Spanish. Union de Fabricantes de Conservas de Galicia, Calle Marques de Valladares, 41, Vigo, Spain.

PURSE-SEINE FISHERY:

"Notfisket i Lofoten" (Net Fishing at Lofoten Islands), by Arvid Hølen, article, Fiskets Gang, vol. 48, no. 43, October 25, 1962, pp. 581-587, illus., printed in Norwegian. Fiskets Gang, Fiskeridirektoratet, Radstuplass 10, Bergen, Norway.

QUALITY:

Studies on the Quality of Sea Food, by Keiichi Oishi, 68 pp., illus., printed. (Reprinted from Memoirs of the Faculty of Fisheries, Hokkaido University, vol. 10, no. 2, 1962, pp. 67-138.) The Faculty of Fisheries, Hokkaido University, Hakodate, Japan. Discusses factors influencing the quality of fish. Three typical samples of fish in Japan were chosen for this study. Part 1 is concerned with studies of fresh fish quality using 15 species of flatfish. Only fresh fish were used as samples in order to simplify the factors involved. So, no consideration was given to the freshness of a sample in this study. In Part 2, katsuwobushi (dried skipjack) was studied as representing processed fish in which boiling, sun-drying, smoking, and inoculation of molds are combined skillfully during the course of processing. In Part 3, a study is described of one of the edible seaweeds, kombu, which is an important item in the Japanese diet.

REFRIGERATED TRAILERS:

The Cold-Wall Trailer--Maintaining Frozen Food Below Zero, by David W. Kuenzli, Marketing Research Report No. 540, 36 pp., illus., processed.

Agricultural Marketing Service, U. S. Department of Agriculture, Washington 25, D. C., June 1962. This study is part of a broad program of research to improve the design and performance of transportation equipment used in the movement of agricultural products. The study on which this report is based was conducted to evaluate a new type of trailer design, based on the principle of enclosing the load on all sides with a blast of cold air, thereby picking up the heat transmitted through the trailer walls, floor, and ceiling before it reached the product. A companion trailer of conventional design was used for comparison in each test. Although the study was for agricultural products, this will be of interest to those transporting fishery products.

SALMON:

"Breeding Salmon Artificially--The Full Story," by John Murdoch, article, World Fishing, vol. 11, August 1962, pp. 61-62, printed. John Trundell & Partners Ltd., St. Richard's House, Everholt St., London NW1, England.

Enumeration of Red Salmon Smolt Migration, by O. E. Kerns, Jr. and R. A. Marriott, Informational Leaflet No. 25, 18 pp., illus., processed. Alaska Department of Fish and Game, Support Bldg., Juneau, Alaska, March 1963.

"Fatty Degeneration in Salmon," article, New Scientist, vol. 15, August 23, 1962, p. 420, printed. Harfison, Raison and Co. Ltd., Cromwell House, Fulwood Pl., High Holborn, London WC1, England.

On Growth Fluctuation in Baltic Salmon, by Arne Lindroth, No. 7, 10 pp., illus., printed. Salmon and Trout Committee, International Council for the Exploration of the Sea, Charlottenlund-Slot, Denmark, 1961.

"Pelleted Fish Food Produces Healthier, Cheaper Salmon," article, Feedstuffs, vol. 34, September 29, 1962, p. 17, printed. Miller Publishing Co., 2501 Wayzata Blvd., Minneapolis 5, Minn.

Salmon Gear Limitation in Northern Washington Waters, by William F. Royce and others, Contribution No. 145, University of Washington Publications in Fisheries, New Series, vol. II, no. 1, 129 pp., illus., printed. College of Fisheries, University of Washington, Seattle, Wash., February 1963. An economic, biological, and legal survey of the salmon resource of Northern Puget Sound and Strait of Juan de Fuca. According to the authors, "The excess fishing gear used to harvest the salmon resource of the northern Puget Sound and the Strait of Juan de Fuca has endangered the conservation of the salmon runs and greatly reduced the earnings of the men and vessels engaged. The International Pacific Salmon Fisheries Commission has officially requested that the gear be reduced, but it lacks the power to require its reduction. This study is the result of a request by the Governor's Fishery Advisory Committee and the Legislative Interim Committee on Fisheries to the University of Washington. The study has been organized in three main parts: (A) Biostatistical analyses of the catches to determine the amount by which the gear can be reduced and the runs still harvested; (B) Economic studies to determine the recent earnings of men and vessels and to estimate the effect on

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earnings of a reduction in gear; and (C) Legal studies to determine whether a legislatively-prescribed scheme for restricting the number of units of gear fishing would be valid.¹¹ The findings of the study are discussed, and recommendations are made for specific steps to reduce the number of units of fishing gear.

"Salmon, Steelhead...and Fish Screens," by Don Corley, article, Idaho Wildlife Review, vol. XV, no. 6, May-June 1963, pp. 3-7, illus., printed. Idaho Fish and Game Commission, 518 Front St., Boise, Idaho.

Size of Pink Salmon Downstream Migrants, by W. L. Sheridan and W. H. Noerenberg, Informational Leaflet No. 27, 20 pp., illus., processed. Alaska Department of Fish and Game, Subport Bldg., Juneau, Alaska.

Studies on the Petroleum Odour in Canned Chum Salmon, by Terushige Motohiro, 69 pp., illus., printed. (Reprinted from Memoirs of the Faculty of Fisheries, Hokkaido University, vol. 10, no. 1, 1962, pp. 1-65.) The Faculty of Fisheries, Hokkaido University, Hakodate, Japan.

SARDINES:

"Granographical Life Record Curve Method for Identifying Each Stock of Pelagic Fishes. II--Identification of Sardine Stocks in West-Coastal Waters of Kyushu; III--Appraisal of the Age and Growth by Stock for Sardine Groups in the Japan Sea and West Kyushu Waters," by Hideaki Yasuda, article, Bulletin of the Japanese Society of Scientific Fisheries, vol. 29, no. 1, January 1963, pp. 14-20, illus., printed in Japanese with summary in English. Japanese Society of Scientific Fisheries, c/o Tokyo University of Fisheries, Shiba Kaigandori 6, Minato-ku, Japan.

SAURY:

"Technical Factors Affecting Boat-Day Catch in Lift Net Fishing for Saury," by Shin'ichi Yajima, article, Bulletin of the Japanese Society of Scientific Fisheries, vol. 29, no. 3, March 1963, pp. 235-241, illus., printed in Japanese with summary in English. Japanese Society of Scientific Fisheries, c/o Tokyo University of Fisheries, Shiba Kaigandori 6, Minato-ku, Japan.

SCALLOPS:

"Sea Scallops Thrive in the Lab," by Eugene S. Clark, Jr., article, National Fisherman/Maine Coast Fisherman, vol. 43, August 1962, pp. 27, 29, printed. National Fisherman, Journal Publishing Co., Belfast, Me.

SEALS:

"Underwater Sounds of Pinnipeds," by William E. Schevill, William A. Watkins, and Carleton Ray, article, Science, vol. 141, no. 3575, July 5, 1963, pp. 50-53, illus., printed. American Association for the Advancement of Science, 1515 Massachusetts Ave. NW., Washington 5, D. C. Descriptions and analyses are presented of underwater sounds made by six species of seals in captivity. The suitability of these very faint sounds for echolocation is discussed.

SEA TROUT:

Age and Size Composition of Weakfish, CYNOSCION REGALIS, from Pound Nets in Chesapeake Bay, Virginia, 1954-1958, by William H. Massmann, Contribution No. 128, 9 pp., illus., printed. (Reprinted from Chesapeake Science, vol. 4, no. 1, March 1963, pp. 43-51.) Virginia Institute of Marine Science, Gloucester Point, Virginia.

Annulus Formation on the Scales of Weakfish, CYNOSCION REGALIS, of the Chesapeake Bay, by William H. Massmann, Contribution No. 129, 3 pp., illus., printed. (Reprinted from Chesapeake Science, vol. 4, no. 1, March 1963, pp. 54-56.) Virginia Institute of Marine Science, Gloucester Point Virginia.

SEA URCHIN:

"On the Growth of the Sea Urchin, Hemicentrotus pulcherrimus," by Akira R. Fiji, article, Bulletin of the Japanese Society of Scientific Fisheries, vol. 29, no. 2, February 1963, pp. 118-126, illus., printed. Japanese Society of Scientific Fisheries, c/o Tokyo University of Fisheries, Shiba Kaigandori 6, Minato-ku, Japan.

SHELLFISH:

"Studies on Muscle of Aquatic Animals. XXXV--Seasonal Variation of Chemical Constituents and Extractive Nitrogens in Some Species of Shellfish," by Itiro Takagi and Wataru Simidu, article, Bulletin of the Japanese Society of the Scientific Fisheries, vol. 29, no. 1, January 1963, pp. 66-70, printed in Japanese and English. Japanese Society of Scientific Fisheries, c/o Tokyo University of Fisheries, Shiba Kaigandori 6, Minato-ku, Japan.

SHRIMP:

"Culture of Kuruma-Shrimp (Penaeus japonicus)," by M. Fujinaga, article, Current Affairs Bulletin, no. 36, April 1963, pp. 10-11, printed. Indo-Pacific Fisheries Council, FAO Regional Office, Bangkok, Thailand. The author states that, "Though there are some variations in the timing of the spawning of Kuruma-shrimp according to areas, the spawning occurs in late April through early October in Seto Inland Sea, the peak being reached in Mid-June through early September. The number of eggs spawned by an adult shrimp is variable according to the size of spawner... Very simple treatment is required to let them ovulate." The procedures applied at present in the shrimp hatchery at Takamatsu, Japan, are discussed.

SMALL BUSINESS MANAGEMENT:

Buying and Selling a Small Business, by Verne A. Bunn, Management Research Summary, 2 pp., processed. Small Business Administration, Washington 25, D. C., 1963. Points out that the process of buying or selling a small business begins with the acquiring of adequate information in three general areas; (1) market information, (2) financial information, and (3) legal information. An early understanding must be reached as to just which assets of the business the buyer is acquiring. It is to the advantage of both buyer and seller to have the terms and conditions of the buy-sell agreement set down in a written contract.

Checking Your Management Methods, by Robert E. Levinson, Management Aid No. 153, 4 pp., processed.

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

Small Business Administration, Washington 25, D. C. Discusses 10 management methods which apply to the business itself and 6 which pertain to the owner's work as a manager.

Factors in the Growth of Manufacturing Firms, by Joseph W. McGuire, Management Research Summary, 2 pp., processed. Small Business Administration, Washington 25, D. C. Points out that the most important factor affecting the rate of growth of a business is the management's conscious effort to stimulate growth. For the purposes of the study, growth was measured by expansion in sales. External forces, the report states, might appear to speed up the growth of some enterprises for a short time. But for long-sustained expansion in sales, management had to take conscious and positive action toward that end.

Federal Taxes and the Legal Form of Small Firms, Management Research Summary, 2 pp., processed. Small Business Administration, Washington 25, D. C., 1963. Points out that Congress has given small-business owners a number of alternatives intended to prevent Federal income taxes from imposing undue burdens on small firms. One of these choices is whether the business shall be a proprietorship, a conventional corporation, or a corporation that elects the tax plan allowed by Subchapter S of the Internal Revenue Code.

International Marketing Assistance in Europe, by Wilfried A. Hoellige, Management Aid No. 152, 4 pp., processed. Small Business Administration, Washington 25, D. C. Describes the kinds of international marketing assistance which Western European organizations offer. Some of it is free, such as various publications of the Organization for Economic Cooperation and Development and the International Chamber of Commerce. Some of the assistance, such as the work of advertising agencies and private consultants, costs money. All of the sources listed in the report should be helpful to small businessmen who seek to learn more about sales opportunities in the 18 markets that make up Western Europe.

Management Planning in Small Firms, by Preston P. LeBreton, Management Research Summary, 4 pp., processed. Small Business Administration, Washington 25, D. C., 1963. Points out that a small business manager who follows an orderly planning procedure, using the proper tools of planning, is likely to keep his business on a stable and profitable course. Tools for managerial planning include operations research, motivation research, break-even analysis, market research, forecasting, and budgeting. Some of the newer tools--such as operations research and motivation research--cannot be carried on by small firms without outside help. But small firms can get the benefit of recent developments by hiring management consultants.

SOUTH AFRICA AND SOUTH-WEST AFRICA:

"Over One-Million Tons of Shoal Fish Landed in Year Under Review" (Annual Report 1961-1962), article, The South African Shipping News and Fishing Industry Review, vol. XVIII, no. 3, March 1963, pp. 61, 63, 65, 67, printed, single copy 25 cents. Thomson Newspapers, South African (Pty.) Ltd., Trust House, Thibault Sq., Box 80, Cape Town, South Africa Republic.

Details of the fifth consecutive year of record landings by the South African and South-West African in-shore fishing industry. While landings of pilchards by South African and South-West African fishermen in the calendar year 1961 at 818,500 tons represented the largest catch of this fish ever taken in a season in Southern African waters, for the nine months ended September 30, 1962, the figure was 882,960 tons. In addition to the application of more efficient techniques, the increase in size and capacity of boats employed and their longer range and increased power have been factors contributing to the development of the fisheries. The vast bulk of the catch in both the Republic and South-West Africa was delivered to reduction plants.

SPAIN:

"L'activite des pecheurs espagnols dans l'Atlantique-Sud" (The Activity of Spanish Fishermen in the South Atlantic), by V. Paz-Andrade, article, La Peche Maritime, vol. 42, no. 1022, May 1963, pp. 317-326, illus., printed in French. La Peche Maritime, 190 Boulevard, Haussmann, Paris, France.

"Otro Aspecto de la Exportacion de Conservas de Pescado" (Another Outlook on the Exportation of Canned Fish), by Mareiro; and "La Industria Espanola de Conservas de Pescado" (The Spanish Canned Fish Industry), article, Industria Conservera, vol. XXIX, no. 286, April 1963, pp. 87-88, 92-95, illus., printed. Redaccion y Administracion, Calle Marques de Valladares, 41, Vigo, Spain.

SPINY LOBSTERS:

"Notes on the Cultured Larvae of the Japanese Spiny Lobster, Panulirus japonicus (V. Siebold)" by Masaaki Inoue and Makoto Nonaka, article, Bulletin of the Japanese Society of Scientific Fisheries, vol. 29, no. 3, March 1963, pp. 211-218, illus., printed. Japanese Society of Scientific Fisheries, c/o Tokyo University of Fisheries, Shiba Kaigandori 6, Minatoku, Japan.

SPOILAGE:

"Decomposition in Shellfish," by Cynthia Campbell, article, Journal of the Association of Official Agricultural Chemists, vol. 45, August 1962, pp. 731-733, printed. Association of Official Agricultural Chemists, P. O. Box 540, Benjamin Franklin Station, Washington 4, D. C.

"Non-Bacterial Spoilage in Atlantic Groundfish: Metal-Included Rancidity," by C. H. Castell, Jacqueline Dale, and N. Dambergs, article, Canadian Fisherman, vol. 49, September 1962, pp. 30-33, printed. National Business Publications Ltd., Gardenvale, Que., Canada.

"Observations on the Spoilage of Crabmeat," by Melvin A. Benarde, article, Journal of Milk and Food Technology, vol. 21, November 1958, pp. 318-320, printed. International Association of Milk and Food Sanitation, Box 437, Shelbyville, Ind.

SQUID:

"Economic Importance of North Atlantic Squids," by Malcolm R. Clarke, article, New Scientist, vol. 17, no. 330, March 14, 1963, pp. 568-570, illus., printed. New Scientist, Cromwell House, Fulwood Place, High Holborn, London WC1, England. In the Pacific and

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Mediterranean, squid and octopus are an important source of protein, suitable for human or animal food, fertilizer, and for bait. According to the author, "The evidence from whales' stomachs shows that there are enormous squid populations to be caught in the deep Atlantic."

STANDARDS:

"Normas para la exportacion de pescados, crustaceos y moluscos" (Standards for the Export of Fish, Crustaceans, and Mollusks), article, Boletin de Informacion del Sindicato Nacional de la Pesca, no. 51, December 1962, pp. 14-15, processed in Spanish. Sindicato Nacional de la Pesca, 18-20 Paseo del Prado, Madrid, Spain.

STORAGE LIFE:

"Time and Temperature vs. Storage Life in Canned Meats," article, National Provisioner, vol. 147, September 1, 1962, pp. 12, 14, 22, printed. National Provisioner Inc., 15 West Huron St., Chicago 10, Ill.

SWITZERLAND:

Import Tariff System of Switzerland, OBR-63-98, 4 pp., processed, 15 cents. Bureau of International Commerce, U. S. Department of Commerce, Washington, D. C., April 1963. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.) Presents information on units of currency, weights, and measures; bases of specific and ad valorem duties; preferential duties; sales and other internal taxes; trade restrictions; other special regulations; and related subjects.

TAGGING:

"A Coded Wire Identification System for Macro-Organisms," by K. B. Jefferts, P. K. Bergman, and H. F. Fiscus, article, Nature, vol. 198, no. 4879, May 4, 1963, pp. 460-462, illus., printed. St. Martin's Press, Inc., 175 Fifth Ave., New York 10, N. Y. Describes a system for identification of macro-organisms which has been applied to the Pacific salmon (Oncorhynchus sp.). As the title suggests, the information carrier utilized is a small segment of ferromagnetic wire, coded in one of several fashions. It is implanted in muscle or cartilage, and its presence is determined through the external effects of a permanent magnetic moment impressed on the wire segment.

"An Evaluation of Five Tag Types Used in a Striped Bass Mortality Rate and Migration Study," by Harold K. Chadwick, article, California Fish and Game, vol. 49, no. 2, April 1963, pp. 64-83, illus., printed, single copy 75 cents. Printing Division, Documents Section, Sacramento 14, Calif.

TARIFFS:

United States Import Duties (1963), TC Publication 92, 413 pp., processed, \$1.50. United States Tariff Commission, Washington, D. C., 1963. (For sale by Division of Public Documents, U. S. Government Printing Office, Washington 25, D. C.) New edition (replaces United States Import Duties, 1962) shows the United States rates of duty on imports in effect on July 1, 1963. The primary purpose of this volume is to provide an up-to-date presentation of the United States tariff in a form which will enable the general user to ascertain current import-duty rates with the least possible difficulty. The dutiable list, Tariff

Act of 1930, Schedules 1-15, describes individual commodities and for each shows full rate and reduced rate of duty. Also shows free list, Tariff Act of 1930; processing taxes, Internal Revenue Code; special and additional import duties; and special exemptions and restrictions. Also contains an index of commodities carried in dutiable and free lists. The new edition is in loose-leaf form, and will be effective until such time as the revised Tariff Schedules of the United States go into effect.

TERRITORIAL WATERS:

"La question des eaux territoriales doit etre resolue sur le plan communautaire" (The Question of Territorial Waters must be Resolved by a Community Plan), article, La Peche Maritime, vol. 42, no. 1022, May 1963, pp. 292-296, illus., printed in French. La Peche Maritime, 190 Boulevard, Haussmann, Paris, France.

TRAINING:

"Course for Apprentice Fishermen. (17) Handling a Ship--and How a Ship Handles," article, World Fishing, vol. 11, February 1962, pp. 59-60, 63, printed. John Trundell & Partners Ltd., St. Richard's House, Everholt St., London NW1, England.

"Course for Apprentice Fishermen. (18) Handling a Ship in Dock," March 1962, pp. 55-56, 59-60.

"Course for Apprentice Fishermen. (20) How to Understand Charts," May 1962, pp. 34-37.

TRAP FISHING:

"Men and Dories Dominate Trap Fishing Down East," article, Fish Boat, vol. 7, September 1962, pp. 16-17, 44-45, printed. H. L. Peace Publications, 624 Gravier St., New Orleans 9, La.

TRAWLERS:

"Un Chalut Pelagique a un Seul Bateau pour la Peche Industrielle" (A Pelagic Trawl for Commercial Fishing Using a Single Vessel), by C. Nedelec, article, Science et Peche, no. 110, December 1962, pp. 1-13, illus., printed in French, 0.50 NF (about 10 U. S. cents). L'Institut Scientifique et Technique des Peches Maritimes, 59, Avenue Raymond-Poincare, Paris (16^e), France. (In Commercial Fisheries Review, vol. 25, no. 6, June 1963, p. 125, the listing of the article in France Peche, no. 70, February 1963, did not mention that it originally appeared in Science et Peche. This was called to our attention by Institut Scientifique et Technique des Peches Maritimes.)

*Energeticheskie Ustanovki Rybolovnikh Trauleroov (Power Installations on Fishing Trawlers), by L. P. Korshunov, R. 26681, printed in Russian, 1962.

"Improving Trawl Performance," by J. Phillips, article, World Fishing, vol. 12, no. 6, June 1963, pp. 75-77, illus., printed. John Trundell & Partners Ltd., St. Richard's House, Everholt St., London NW1, England.

"The Ross North Sea Experiment," article, World Fishing, vol. 12, no. 6, June 1963, pp. 141-142, illus., printed. Trundell & Partners Ltd., St. Richard's House, Everholt St., London NW1, England. Describes the various features of Britain's new stern trawler Ross Daring, the first of two similar vessels, scheduled to fish in the North Sea.

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"Vee-Form Trawl Doors," article, World Fishing, vol. 12, no. 6, June 1963, pp. 68-69, illus., printed, John Trundell & Partners Ltd., St. Richard's House, Eversholt St., London NW1, England.

TROUT:

"Experiment Indicates Cause of Trout Disease," article, Outdoor California, vol. 24, no. 5, May 1963, p. 13, illus., printed, Department of Fish and Game, 722 Capitol Mall, Sacramento 14, Calif.

"Some Phases of the Life History of the Trout-Perch," by John J. Magnuson and Lloyd L. Smith, Jr., article, Ecology, vol. 44, no. 1, Winter 1963, pp. 88-95, illus., printed, single copy \$2.50. Circulation Office, Duke University Press, Box 6697, College Station, Durham, N. C.

Trout Farming, by David Greenberg, 197 pp., illus., printed, regular list price \$12. (Special combination offer, including one year's subscription to the U. S. Trout News and one copy of Trout Farming, both for only \$10.50.) U. S. Trout Farmers Association, 110 Social Hall Ave., Salt Lake City, Utah. Contains background information on various trout, including new hybrids; history of artificial propagation; future of the trout industry; anatomy; physiology and embryology of trout; sorting, grading, and transporting; trout diseases; marketing methods; and information on water and water measurements.

"Water Temperature and Oxygen Demand," by Jack Coates, article, U. S. Trout News, vol. 7, September-October 1962, pp. 5, 20-21, printed, U. S. Trout Farmers Association, 110 Social Hall Ave., Salt Lake City 11, Utah.

TUNA:

An Account of the Bluefin Tuna in Newfoundland Waters with Some Reference to the Tuna Fishes in General, by Gordon R. Williamson, 30 pp., illus., processed, Newfoundland Tourist Development Office, Confederation Bldg., St. John's, Newfoundland, 1962. Discusses the general characteristics of the tuna species; the bluefin tuna (*Thunnus thynnus*); the fishery for this species at Conception Bay, Newfoundland; its migration and life history in the western North Atlantic; commercial tuna fishing; and future prospects for the fishery in Newfoundland.

Actual Status of the Knowledge on the Biology of Tunas in Offshore Waters of the Brazilian Coast, by Melquídes Pinto Paiva, Bulletin No. 5, 10 pp., printed, Estacao de Biologia Marinha, Universidade do Ceara, Fortaleza, Brazil, 1962.

"A Comparative Study of Tuna Longline Baits," by K. Sivasubramaniam, article, Bulletin of the Japanese Society of Scientific Fisheries, vol. 29, no. 3, March 1963, pp. 245-250, illus., printed, Japanese Society of Scientific Fisheries, c/o Tokyo University of Fisheries, Shiba Kaigandori 6, Minato-ku, Japan.

"Far-Ranging Tuna Fishery," by Bruce Woodland, article, Trade News, vol. 15, no. 5, November 1962, pp. 8-9, II, illus., processed, Information and Consumer Service, Department of Fisheries, Ottawa, Canada. Discusses briefly the development of a tuna fishery in British Columbia through the use of purse-

seine fishing and the brine-spray freezing system on board the vessels.

"Inshore Longlining for Yellowfin Tuna," by P. D. Lorimer, article, Fisheries Newsletter, vol. 22, no. 6, June 1963, pp. 21-23, illus., printed, Commonwealth Director of Fisheries, Department of Primary Industry, Canberra, Australia.

Mejoras en el Mantenimiento de la Carnada Viva para la Pesca de Tunidos en Cuba: I (Improvements in the Maintenance of Live Bait for the Cuban Tuna Fishery), by Hector E. Ramis Ramos, Nota sobre Investigaciones No. 5, 8 pp., printed in Spanish, Centro de Investigaciones Pesqueras, Playa Habana, Bauta, Cuba, October 1962.

"Monofilament Netting of Striped Tuna," by Alan Temple, article, Fisheries Newsletter, vol. 22, no. 6, June 1963, pp. 15-16, printed, Commonwealth Director of Fisheries, Department of Primary Industry, Canberra, Australia. According to the author, skipjack tuna "are known to occur in large quantities on the east coast of Australia and down to Tasmania, but they have never been fished to any extent for commercial purposes." This article describes experiments with monofilament mesh netting in fishing for tuna which give every promise of success. The author states that, "monofilament mesh netting can be carried out on shallow grounds and in weather conditions in which it would be practically impossible to operate a purse seine successfully."

"A Preliminary Report on Tuna in West Coast Waters of South Africa. Part II," by B. van D. de Jager, C. S. de V. Neppen, and R. J. van Wyk, article, The South African Shipping News and Fishing Industry Review, vol. XVIII, no. 5, May 1963, pp. 61, 63, 65, 67-69, illus., printed, single copy 25 cents. Thomson Newspapers, South Africa (Pty.) Ltd., Box 80, Cape Town, South Africa Republic.

"Relation Between Annual Variation of Hooking-Rate and Age Groups of Yellowfin Tuna in the Tropical Western Pacific Ocean. II. --Relation Between Annual Variation of Hooking-Rate and Year Class," by Jun Nakagome, article, Bulletin of the Japanese Society of Scientific Fisheries, vol. 29, no. 1, January 1963, pp. 21-26, illus., printed in Japanese with summary in English, Japanese Society of Scientific Fisheries, c/o Tokyo University of Fisheries, Shiba Kaigandori 6, Minato-ku, Japan.

"Studies on Movements of Albacore Fishing Grounds in the North Western Pacific Ocean. IV. --Migrations of the Deep Swimming Albacore Community in the Waters Adjacent to Japan in 1954-55," by Motoo Inoue, article, Bulletin of the Japanese Society of Scientific Fisheries, vol. 29, no. 2, February 1963, pp. 99-107, illus., printed in Japanese with summary in English, Japanese Society of Scientific Fisheries, c/o Tokyo University of Fisheries, Shiba Kaigandori 6, Minato-ku, Tokyo, Japan.

TUNISIA:

Seafish of Tunisia and the Central Mediterranean, 139 pp., illus., processed, 750 millimes (US\$1.80). British Chamber of Commerce, Place de la Victoire, Tunis, Tunisia. A catalog of all fish and other marine life found in Tunisian waters according to

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scientific classification, giving their names in five languages (English, French, Italian, Greek, and Tunisian Arabic). It includes explanatory remarks and sketches directed to the layman. A short section concerns general rules on the care of fish, along with various recipes used in Tunisia.

TURTLES:

"Camouflaged Still-Fishing," by H. Hediger, article, Natural History, vol. LXXII, no. 6, June-July 1963, pp. 18-21, illus., printed, single copy 50 cents, The American Museum of Natural History, Central Park West at 79th Street, New York 24, N. Y.

U.S.S.R.:

"La Industria Pesquera en Rusia" (The Fishing Industry in Russia), by F. de Varona, article, Puntal--Revista Maritima y Pesquera, vol. X, no. 107, February 1963, pp. 14-15, illus., processed, Puntal--Revista Maritima y Pesquera, Ramon y Cajal 3, Apartado 316, Alicante, Spain.

VESSELS:

"Operational Experience of Modern Boats on Atlantic Seaboard, Part I--Introduction," by John Proskie, article, Canadian Fisherman, vol. 49, September

1962, pp. 23-25, printed, National Business Publications Ltd., Gardenvale, Quebec, Canada.

VITAMIN A:

"Vitamin A Utilization by the Chick as Affected by Type of Vitamin A Concentrate and Other Factors," by I. Ascarelli and Miriam Senger, article, Journal of the Science of Food and Agriculture, vol. 13, June 1962, pp. 332-336, printed, The Society of Chemical Industry, 14 Belgrave Sq., London SW1, England.

WHALING:

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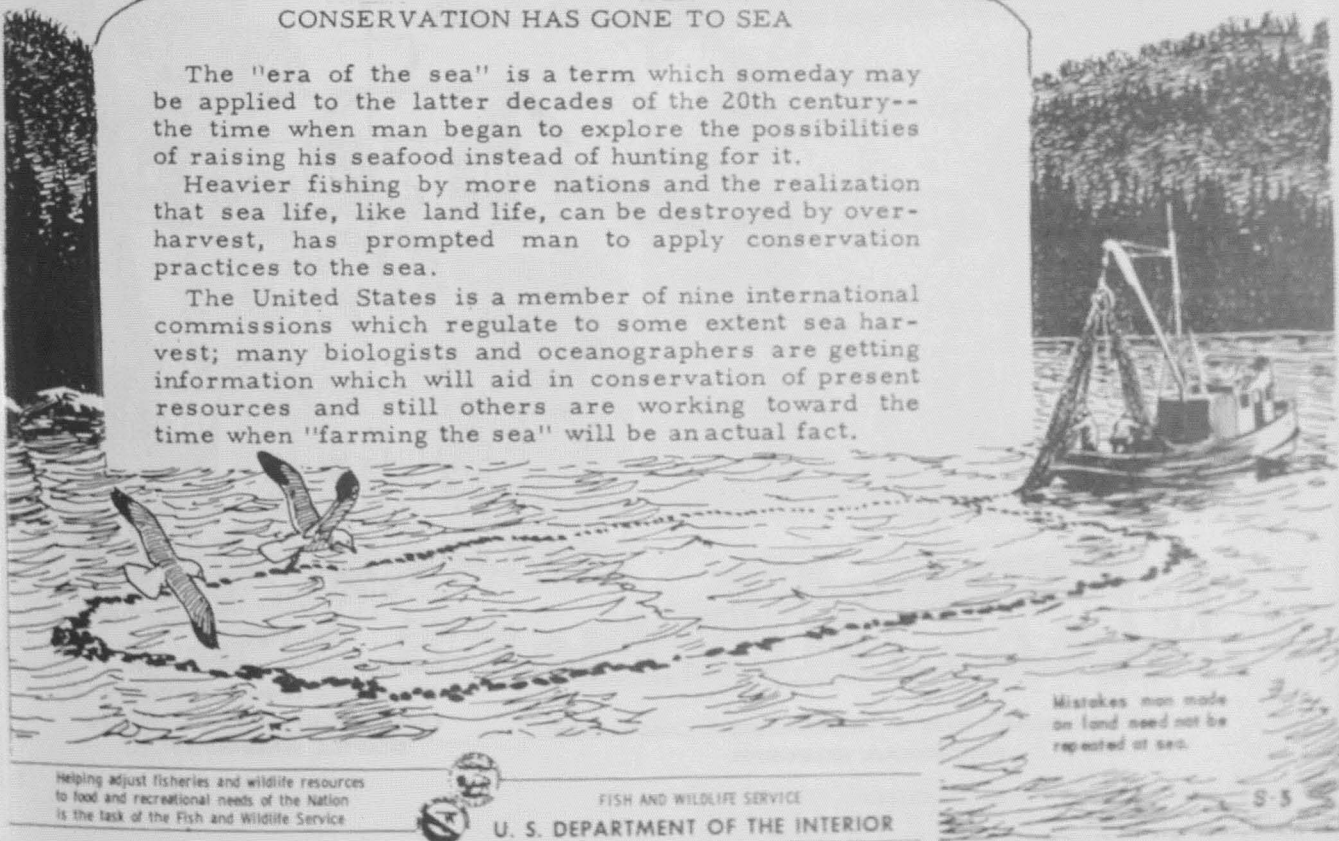


CONSERVATION HAS GONE TO SEA

The "era of the sea" is a term which someday may be applied to the latter decades of the 20th century--the time when man began to explore the possibilities of raising his seafood instead of hunting for it.

Heavier fishing by more nations and the realization that sea life, like land life, can be destroyed by overharvest, has prompted man to apply conservation practices to the sea.

The United States is a member of nine international commissions which regulate to some extent sea harvest; many biologists and oceanographers are getting information which will aid in conservation of present resources and still others are working toward the time when "farming the sea" will be an actual fact.



Mistakes man made on land need not be repeated at sea.

Helping adjust fisheries and wildlife resources to food and recreational needs of the Nation is the task of the Fish and Wildlife Service

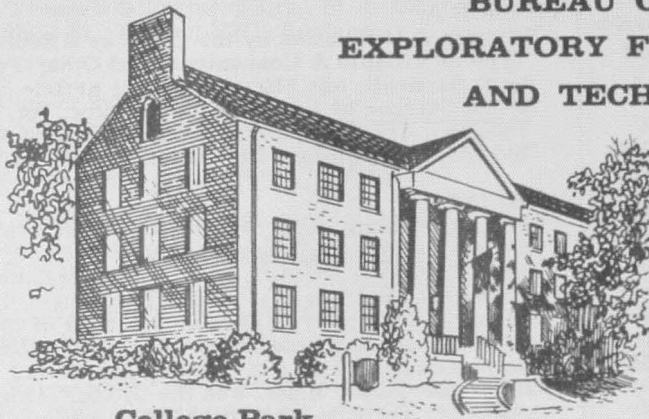


FISH AND WILDLIFE SERVICE

U. S. DEPARTMENT OF THE INTERIOR

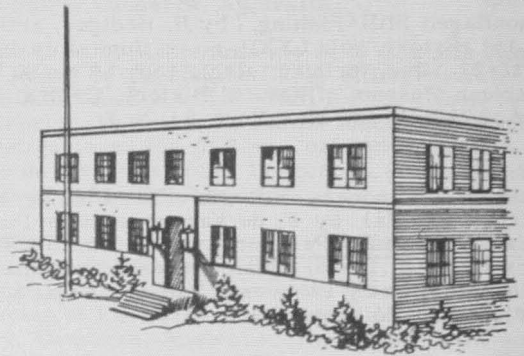
S-5

**BUREAU OF COMMERCIAL FISHERIES
EXPLORATORY FISHING & GEAR RESEARCH
AND TECHNOLOGICAL LABORATORIES**



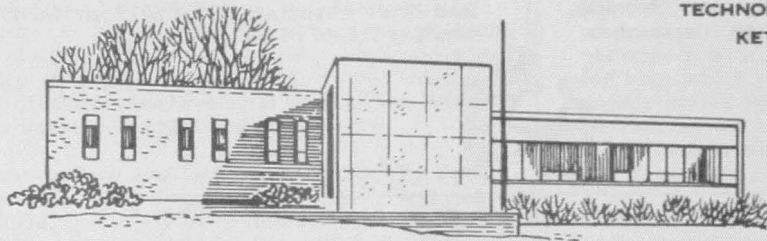
College Park

TECHNOLOGICAL LABORATORY,
COLLEGE PARK, MARYLAND



Ketchikan

TECHNOLOGICAL LABORATORY
KETCHIKAN, ALASKA



Gloucester

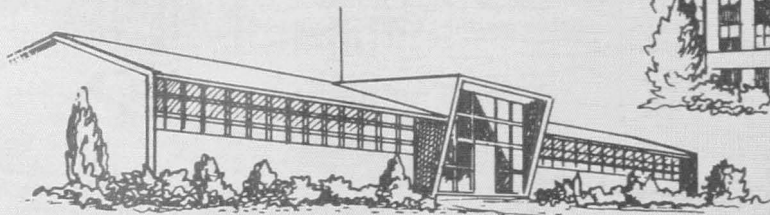
TECHNOLOGICAL LABORATORY

&

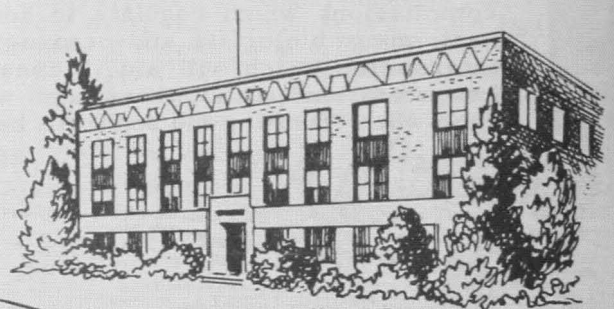
EXPLORATORY FISHING BASE,
GLOUCESTER, MASSACHUSETTS



Pascagoula



EXPLORATORY FISHING BASE & TECHNOLOGICAL LABORATORY,
PASCAGOULA, MISSISSIPPI



Seattle

TECHNOLOGICAL LABORATORY,
BIOLOGICAL LABORATORY, &
EXPLORATORY FISHING BASE,
SEATTLE, WASHINGTON

RAINBOW TROUT SCANDINAVIAN

- | | |
|--|----------------------------------|
| 6 pan-dressed rainbow trout or other small fish, fresh or frozen | 1 egg, beaten |
| 1 teaspoon salt | 1/4 cup milk |
| Dash pepper | 1 teaspoon salt |
| 1 cup chopped parsley | 3/4 cup toasted dry bread crumbs |
| 1/4 cup butter or margarine, softened | 1/2 cup grated Swiss cheese |
| | 3 tablespoons melted fat or oil |

Thaw frozen fish. Clean, wash, and dry fish. Sprinkle inside with salt and pepper. Add parsley to butter and mix thoroughly. Spread inside of each fish with approximately 1 tablespoon parsley butter. Combine egg, milk, and salt. Combine crumbs and cheese. Dip fish in egg mixture and roll in crumb mixture. Place on a well-greased cooky sheet, 12 x 15 inches. Sprinkle remaining crumb mixture over top of fish. Bake in an extremely hot oven, 500° F., for 10 to 15 minutes or until fish flakes easily when tested with a fork. Serves 6.

You will find your pot of gold at the end of a rainbow trout meal. This popular fish, made golden with cheese and great in a hot oven in 15 minutes, will "strike" the fancy of the entire family and send your "what do I serve?" blues on the "fly".



--From Fisheries Marketing Bulletin: "Protein Treasure from the Seven Seas." Issued by the National Marketing Services Office, U. S. Bureau of Commercial Fisheries, Chicago 5, Ill.