



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.
FL - FISHERY LEAFLETS.
MNL - REPRINTS OF REPORTS ON FOREIGN FISHERIES.
SEP. - SEPARATES (REPRINTS) FROM COMMERCIAL FISHERIES REVIEW.
SSR.- FISH. - SPECIAL SCIENTIFIC REPORTS--FISHERIES (LIMITED DISTRIBUTION).

Number	Title
CFS-2566	- Middle Atlantic Fisheries, 1960, Annual Summary, 8 pp.
CFS-2723	- Alaska Fisheries, 1960, Annual Summary, 8 pp.
CFS-2724	- Hawaii Fisheries, 1960, Annual Summary, 4 pp.
CFS-2728	- Frozen Fish Report, October 1961, 8 pp.
CFS-2729	- Michigan Landings, September 1961, 2 pp.
CFS-2730	- Fish Meal and Oil, September 1961, 2 pp.
CFS-2731	- Florida Landings, September 1961, 9 pp.
CFS-2732	- Maine Landings, September 1961, 4 pp.
CFS-2733	- Alabama Landings, June 1961, 3 pp.
CFS-2734	- Alabama Landings, July 1961, 3 pp.
CFS-2735	- Maryland Landings, September 1961, 3 pp.
CFS-2736	- Louisiana Landings, June 1961, 2 pp.
CFS-2737	- Shrimp Landings, July 1961, 6 pp.
CFS-2738	- Virginia Landings, September 1961, 4 pp.
CFS-2739	- Mississippi Landings, August 1961, 2 pp.
CFS-2740	- Wisconsin Landings, September 1961, 2 pp.
CFS-2741	- Ohio Landings, September 1961, 2 pp.
CFS-2742	- Minnesota Landings, September 1961, 2 pp.
CFS-2743	- Rhode Island Landings, September 1961, 3 pp.
CFS-2744	- New York Landings, September 1961, 5 pp.
CFS-2745	- California Landings, July 1961, 4 pp.
CFS-2748	- Louisiana Landings, July 1961, 2 pp.
CFS-2749	- North Carolina Landings, October 1961, 4 pp.
CFS-2751	- Maryland Landings, October 1961, 3 pp.
CFS-2755	- South Carolina Landings, October 1961, 2 pp.
CFS-2756	- Florida Landings, October 1961, 8 pp.
FL-520	- Biology and Methods of Controlling the Starfish, <i>Asterias forbesi</i> (Desor), by Victor Loosanoff, 11 pp., illus., revised July 1961. A report on the starfish, one of the most destructive enemies of shellfish on the Atlantic coast of North America. Discusses the distribution and occurrence of

of starfish, their food and feeding, habits, mechanical and chemical methods of control, and utilization.

FL-521 - The Menhaden Fishery of the United States, by Fred C. June, 13 pp., illus., August 1961. This report describes the menhaden resource, reviews and describes the fishery, and gives a summary of the life history and biology of Atlantic menhaden.

FL-528 - How about the New Marine Oils, 8 pp., illus. This report answers three questions: What are Marine Oils, How are Marine Oils Produced, and How are Marine Oils Used?

SSR-Fish. No. 375 - New England Haddock Fishery Biostatistics--1956, by John R. Clark and Frank A. Dreyer, 87 pp., illus., April 1961. A statistical review of the haddock fishery of New England banks (Subarea 5 of the International Commission for the Northwest Atlantic Fisheries) for the 1956 haddock year. Estimates of total fishery removals are given for scrod and large haddock, both landed and discarded at sea, by month and area of capture. The estimated age and length compositions of the total haddock discard for 1956 are given. Age and length compositions are estimated by months for haddock landed from Georges Bank and by season for haddock landed from Gulf of Maine. Also the fishing effort and abundance estimates are given for Georges Bank by months.

SSR-Fish. No. 377 - North Pacific and Bering Sea Oceanography, 1959, by Felix Favorite and others, 216 pp., illus., processed, May 1961.

SSR-Fish. No. 378 - Drift Bottle Records for the Gulf of Maine, Georges Bank and Bay of Fundy, 1956-58, by Dean F. Bumpus, 128 pp., illus., May 1961.

SSR-Fish. No. 380 - Water Temperatures off the South Atlantic Coast of the United States--Theodore N. Gill Cruises 1-9, 1953-54, by William W. Anderson, Joseph E. Moore, and Herbert R. Gordy, 212 pp., ill., May 1961.

SSR-Fish. No. 388 - Tolerance of Striped Bass and American Shad to Changes of Temperature and Salinity, by Marlin E. Tagatz, 8 pp., August 1961.

SSR-Fish. No. 391 and 392 - Effects of DDT Spray on Fish and Aquatic Insects in Gallatin River Drainage in Montana, by W.R. Bridges and Austin K. Andrews; and Effects of DDT Spray on Stream Bottom Organisms in Two Mountain Streams in Georgia, by Paul J. Frey, 14 pp., illus., August 1961.

Sep. No. 635 - Principal Species of Commercial Shrimp in Argentina.

Sep. No. 636 - Exploratory Fishing off the Coast of North Carolina, September 1959-July 1960.

Sep. No. 637 - Soft-Crab Industry.

Sep. No. 638 - North Pacific Fishery Research Vessels.

Fisheries Loan Fund, Fiscal Year 1960, Circular 123, 8 pp., illus. processed, 1961. Discusses the Bureau of Commercial Fisheries loans and grants activities, status of the fishery loan fund, and use of proceeds of loans. Includes graphs showing number of loan applications, value of applications, and other similar data.

Galveston Biological Laboratory Fishery Research, (Fiscal Year 1961), Circular 129, 85 pp., illus., July 1961. Summarizes the research work carried out at the Galveston Biological Laboratory during the fiscal year ended June 30, 1961. Describes in detail the research programs on the shrimp fishery, industrial fishery, estuarine, physiology and pesticide, and red tide. Also includes special reports on the sea-water system, oyster studies, and distribution of pink shrimp larvae and postlarvae.

The Pacific Region of the Bureau of Commercial Fisheries, by Thomas O. Duncan, Fish and Wildlife Circular 108, 17 pp. processed. Discusses the activities of the Pacific Region of the U.S. Bureau of Commercial Fisheries, which range from basic research on the populations of fish and the many factors influencing their abundance, to the product on the consumer's table. Between these extremes, the Bureau's work involves various types of problems in many fields of science and technology.

Progress in 1960, Circular 127, 31 pp., illus. This report summarizes scientific accomplishments for the year 1960 and plans for the future for the Bureau of Commercial Fisheries Biological Laboratory at Honolulu. Discusses briefly the Laboratory's research on oceanography, marine biology, etc.

Research Program of the Ichthyological Laboratory, Circular 124, by Daniel M. Cohen, 8 pp., processed. Discusses the program of the Ichthyological Laboratory, its objectives, problems, solutions, and future plans.

Sharks, Skates, Rays, and Chimaeras, by J. R. Thompson and Stewart Springer, Circular 119, 19 pp., illus., processed. A general introduction to the class Chondrichthyes (sharks, skates, rays, and to a lesser extent, chimaeras). Material included encompasses, in broad terms, characteristics of the class and of its components. General statements on reproduction, numbers and general distribution, size, food and feeding, sensory perception, structural adaptations to specific modes of life, and relation to man are included. A short annotated list of references directs the reader to more specific and detailed sources for further study.

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

Number	Title
MNL-62	Centolla (King Crab) Industry, Punta Arenas-Provenir, Chile, July 1961.

MNL-63 - Annual Report on Egyptian Fisheries, 1960.
MNL-64 - Fish Body Oil Markets in France.

THE FOLLOWING PUBLICATIONS ARE AVAILABLE FROM THE SPECIFIC OFFICE MENTIONED.

(Baltimore) Monthly Summary--Fishery Products, October 1961, 8 pp. (Market News Service, U. S. Fish and Wildlife Service, 103 S. Gay St., Baltimore 2, Md.) Receipts of fresh- and salt-water fish and shellfish at Baltimore by species and by states and provinces; total receipts by species and comparisons with previous periods; and wholesale prices for fresh fishery products on the Baltimore market; for the month indicated.

California Fishery Market News Monthly Summary, Part I--Fishery Products Production and Market Data, October 1961, 16 pp. (Market News Service, U. S. Fish and Wildlife Service, Post Office Bldg., San Pedro, Calif.) California cannery receipts of tuna and tunalike fish and other species used for canning; pack of canned tuna, tunalike fish, sardines, 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; Oregon and Washington receipts (domestic and imports) of fresh and frozen tuna and tunalike fish; for the month indicated.

(Chicago) Monthly Summary of Chicago's Wholesale Market Fresh and Frozen Fishery Products Receipts, Prices, and Trends, October and November 1961, 14 pp. each. (Market News Service, U. S. Fish and Wildlife Service, 565 W. Washington St., Chicago 6, Ill.) Receipts at Chicago by species and by states and provinces for fresh- and salt-water fish and shellfish; and weekly wholesale prices for fresh and frozen fishery products; for the months indicated.

Gulf of Mexico Monthly Landings. Production and Shipments of Fishery Products, October and November 1961, 8 pp. each. (Market News Service, U. S. Fish and Wildlife Service, Rm. 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.

Monthly Summary of Fishery Products Production in Selected Areas of Virginia, North Carolina, and Maryland, November 1961, 4 pp. (Market News Service, U. S. Fish and Wildlife Service, 18 S. King St., Hampton, Va.) Landings of food fish and shellfish and production of crab meat and shucked oysters for the Virginia areas of Hampton Roads, Chincoteague, Lower Northern Neck, and Lower Eastern Shore; the Maryland areas of Crisfield, Cambridge, and Ocean City; and the North Carolina areas of Atlantic, Beaufort, and Morehead City; together with cumulative and comparative data on fishery products and shrimp production; for the month indicated.

New England Fisheries--Monthly Summary, October, 1961, 22 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, Providentown, 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.

New England Sea Scallop Fishery, and Marketing of Sea Scallop Meats, 1939-60, by John J. O'Brien, 48 pp. (Market News Service, U. S. Fish and Wildlife Service, 10 Commonwealth Pier, Boston 10, Mass.) A special report on the sea scallop fishery of New England and the marketing of sea scallop meats (domestic and foreign). Summarizes all the pertinent data scattered through many Market News Service reports and other publications during the period (1939-1960), which goes back to the first complete year of operation of the Boston Fishery Market News Service. Included in the report is a brief analysis of the trends in the 1939-60 period, and the important developments that affected the New England sea scallop fishery and industry. Also relates some of the history of the fishery. It includes data on landings and ex-vessel prices of the sea scallop fishery in New England; primary wholesale prices, imports, stocks, market trends, receipts on some wholesale markets, and some retail prices for sea scallop meats. Also includes landings and ex-vessel prices in some competitive ports.

New York City's Wholesale Fishery Trade--Monthly Summary--August 1961, 24 pp. (Market News Service, 155 John St., New York 38, N. Y.) Includes summaries and analyses of receipts and prices on wholesale Fulton Fish Market, including both the salt- and fresh-water sections; imports entered at New York customs district; primary wholesaler's selling prices for fresh frozen, and selected canned fishery products; marketing trends; and landings at Fulton Fish Market docks and Stonington, Conn.; for the month indicated.

(Seattle) Washington and Alaska Receipts and Landings of Fishery Products for Selected Areas and Fisheries, Monthly Summary, October and November 1961, 8 pp. each. (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 receipts 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; and imports from other countries through Washington customs district; for the months indicated.

THE FOLLOWING ENGLISH TRANSLATION OF A FOREIGN LANGUAGE ARTICLE IS AVAILABLE ONLY FROM THE U. S. BUREAU OF COMMERCIAL FISHERIES, 101 SEASIDE AVE., TERMINAL ISLAND, CALIF.:

The Study on the Color of the Fishing Net. III--Effect of the Depth of Color of a Net on the Behavior of a

Fish School Near the Net, by Kenji Kanda, and others. Translation Series No. 3, 4 pp., processed, November 1961. (Translated from Bulletin of the Japanese Society of Scientific Fisheries, vol. 23, no. 10, p. 621-624, 1958.)

Summary of Observations on Oyster Setting in Long Island Sound during the Summer of 1961, by V. L. Looanoff, vol. 25, Bulletin No. 9, December 11, 1961, 9 pp., illus., processed. (Biological Laboratory, Bureau of Commercial Fisheries, U. S. Fish and Wildlife Service, Milford, Conn.) The report discusses the number and location of observation and sampling areas, operation of the spat collectors, procedure followed in observations, and analysis of findings. Included are illustrations and statistical tables showing results of sampling at the various stations.

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

Blood Properties of Prespawning and Postspawning Anadromous Alewives (ALOSA PSEUDOHARENGUS), by Carl J. Sindermann and Donald F. Mairs, Fishery Bulletin of the Fish and Wildlife Service, vol. 61, 11 pp., illus., printed, 15 cents, 1961.

Effects of Copper Ore on the Ecology of a Lagoon, by Kenneth T. Marvin, Larence M. Lansford, and Ray S. Wheeler, Fishery Bulletin 184 (from Fishery Bulletin of the Fish and Wildlife Service, vol. 61), 12 pp., printed, 15 cents, 1961.

MISCELLANEOUS PUBLICATIONS

THESE PUBLICATIONS ARE NOT AVAILABLE FROM THE FISH AND WILDLIFE SERVICE, BUT USUALLY MAY BE OBTAINED FROM THE ORGANIZATION ISSUING THEM. CORRESPONDENCE REGARDING PUBLICATIONS THAT FOLLOW SHOULD BE ADDRESSED TO THE RESPECTIVE ORGANIZATIONS OR PUBLISHER MENTIONED. DATA ON PRICES, IF READILY AVAILABLE, ARE SHOWN.

ABALONE:

"Photosensitization of Animals by the Viscera of Abalones, *Haliotis* Spp.," by Yoshiro Hashimoto, Koji Naito, and Junzo Tsutsumi, article, Bulletin of the Japanese Society of Scientific Fisheries, vol. 26, December 1960, pp. 1216-1221, printed in Japanese and English. Japanese Society of Scientific Fisheries, 6-Chome, Shiba-Kaigandori, Minato-Ku, Tokyo, Japan.

ALGAE:

"A List of Marine Algae Collected in the Vicinity of Oshoro Marine Biological Station, at Oshoro, Hokkaido, Japan," by Jun Tokida and Tomitaro Masaki, article, Bulletin of the Faculty of Fisheries, Hokkaido University, vol. 10, November 1959, pp. 173-195, printed in Japanese. Faculty of Fisheries, Hokkaido University, Hakodate, Japan.

"On a New Amino Acid (Chondrine) Isolated from Red Alga *Chondria crassicaulis*," by Mitsuo Kuriyama, Mitsuzo Takagi and Kiichi Murata, article, Bulletin of the Japanese Society of Scientific Fisheries, vol. 26, June 1960, pp. 627-631, printed in Japanese with English summary. Japanese Society of Scientific

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Fisheries, 6-Chome, Shiba-Kaigandori, Minato-Ku, Tokyo, Japan.

ANIMAL NUTRITION:

"The Effect of Unidentified Growth Factor Sources and Restricted Feeding on the Performance of Egg Strain Chickens," by W. F. Pepper, S. J. Slinger, and G. C. Ashton, article, Poultry Science, vol. 40, p. 588, printed. Poultry Science Association, Ohio State University, Columbus 10, Ohio.

ANTIOXIDANTS:

"Estimation of Antioxidants Added to Marine Products. I--Extraction and Colorimetric Estimation of BHA (Butylated Hydroxyanisole)," by Kenzo Toyama, Michio Nakai and Hiroshi Yamaga, article, Nippon Suisan Gakkaishi, vol. 25, 1959-1960, pp. 212-217, printed, Chemical Abstracts, vol. 54, No. 15737e, August 10, 1960.

BACTERIOLOGY:

"Detection and Enumeration of Fecal Indicator Organisms in Frozen Sea Foods. 1--Escherichia Coli," by H. Raj and J. Liston, article, Applied Microbiology, vol. 9, March 1961, pp. 171-174, printed. Applied Microbiology, Williams and Wilkins Co., Mount Royal and Guilford Aves., Baltimore 2, Md.

BAIT:

"Study on the Bait for Fishing. Part 1--An Improved Type of Chum for Yellowtail Fishing," by Takashi Kaneda, Takeo Koyama, and Seinosuke Ishii, article, Bulletin of the Japanese Society of Scientific Fisheries, vol. 26, June 1960, pp. 610-613, printed in Japanese with English summary. Japanese Society of Scientific Fisheries, 6-Chome, Shiba-Kaigandori, Minato-Ku, Tokyo, Japan.

BIOCHEMISTRY:

"Phosphoglucosomutase, Phosphoribomutase, and Phosphoglucosomerase of Lingcod Muscle," by Gerard B. Martin and H.L.A. Tarr, article, Canadian Journal of Biochemistry and Physiology, vol. 39, February 1961, pp. 297-308, printed. Canadian Journal of Biochemistry and Physiology, Division of Administration, The National Research Council, Sussex St., Ottawa, Canada.

BRAZIL:

A First Appraisal of the Landing and Mechanism of the Santos Fishery, by I. D. Richardson and M. N. de Moraes, 85 pp., illus., printed in English. Universidade de Sao Paulo, Sao Paulo, Brazil, 1960. (Reprinted from Boletim do Instituto Oceanografico, Tomo XI, Fasc. 1, pp. 5-86.) This paper summarizes and analyzes the landing data collected at Santos, Brazil, during the period July 1958-June 1959. These data are given in terms of weight landed of the more important fish and shrimp and also in terms of value. The distribution of the landings of each of the more important species is shown both according to the type of fishing gear used and fishing area. The fishing area is given in the form of statistical rectangles of 60 miles square. The landings are broken down to obtain a figure for the landing per hour of fishing for each species, for each gear, and for each rectangle fished. This figure of landing per unit fishing time is used to compare one area with another, one gear with another, and one month with another for each

of the important species. In this way, comparisons of the available density of a species by time, area, and fishing gear are made.

BROWNING OF FISH FLESH:

"Studies on the Browning of Fish Flesh. II--Change of Sugar Content by Heat Process and Browning," by Fumio Nagayama, article, Bulletin of the Japanese Society of Scientific Fisheries, vol. 26, October 1960, pp. 1026-1031, printed in Japanese with English summary. Japanese Society of Scientific Fisheries, 6-Chome, Shiba-Kaigandori, Minato-Ku, Tokyo, Japan.

CALIFORNIA:

The Ecology of the Salton Sea, California, in Relation to the Sportfishery, Fish Bulletin No. 113, 204, pp., illus., printed. California Department of Fish and Game, 722 Capitol Ave., Sacramento 14, Calif., 1961.

CANADA:

Journal of the Fisheries Research Board of Canada, vol. 18, no. 5, September 1961, pp. 645-891, illus., printed. Queen's Printer and Controller of stationery, Ottawa, Canada. Contains, among others, the following articles: "Comparative Osteology of Representative Salmonid Fishes, with Particular Reference to the Grayling (Thymallus arcticus) and Its Phylogeny," by Carroll R. Norden; "Detection of Incomplete Reporting of Tags," by Gerald J. Paulik; "The Light Pickle Salting of Cod," by P. B. Crean; "The Partial Desalting of Salted Cod," by P. B. Crean; "Chemical Characteristics of Salted Cod," by A. E. Cardin and others; "Effect of Estradiol Monobenzoate on Some Serum Constituents of Maturing Sockeye Salmon (Oncorhynchus nerka)," by F. Chung-Wai Ho and W. E. Vanstone; "Fatty Alcohols from Marine Oils and Segregated Esters," by P. M. Jangaard and R. G. Ackman; and "Growth and Age Determination of the Pacific Edible Crab (Cancer magister Dana)," by T. H. Butler.

CATFISH:

"Catfishes," by Frank Schwartz, article, Maryland Conservationist, vol. 38, no. 5, September-October 1961, pp. 21-26, illus., printed. Maryland Department of Game and Fish, State Office Bldg., Box 231, Annapolis, Md. Describes catfish in general, then singles out the seven varieties found in various parts of Maryland, giving a description of each. Also covers briefly, the commercial catch of catfish, methods of catching them, and their spawning; and how to catch for sport, dress, and cook catfish.

CLAMS:

Operation Baby Clam in Florida, by Kenneth D. Woodburn, Contribution No. 58, 10 pp., illus., processed. Florida State Board of Conservation Marine Laboratory, Maritime Base, Bayboro Harbor, St. Petersburg, Fla. The development of dependable techniques for laboratory culture of seed clams in quantity has spurred interest in the commercial potential of growing baby clams in Florida, where marketable sizes are reached sooner than in northern states. Hybrid and northern hard-shell baby clams are being grown in protective boxes along the Gulf and Atlantic coasts. It is hoped that, when the clams are large enough they can be placed on suitable bottoms, enclosed within screened frames and grown to marketable size.

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COD:

Loss in Weight and Yield of Production after Gutting, Heading, and Filleting Cod on an Industrial Scale, by Jerzy Maciejczyk, OTS 60-21294, 15 pp., illus., processed, 1961. (Translated from Polish Prace Morskiego Instytutu Rybackiego, vol. 9, 1957, pp. 681-703.) Office of Technical Services, Department of Commerce, Washington 25, D. C., at 50 cents each. Order by OTS number.

"IV. Observations on the Cod Trawl Fishery in the Gulf of St. Lawrence during the Spring of 1958," by John R. Clark and F. D. McCracken, article, Annual Proceedings, International Commission for the Northwest Atlantic Fisheries, vol. 8, 1958, pp. 99-100, printed. International Commission for the Northwest Atlantic Fisheries, Forrest Bldg., Carleton St., Halifax, N. S., Canada.

"Slicing of Fillets as an Aid in Detection and Removal of Codworms from Atlantic Cod Fillets," by H. E. Power, article, Journal of the Fisheries Research Board of Canada, vol. 18, January 1961, pp. 137-140, printed. Journal of the Fisheries Research Board of Canada, Queen's Printer & Controller of Stationery, Ottawa, Canada.

COMPOSITION:

"Fish Composition - Proximate Composition of Nine Species of Sole and Flounder," by Claude E. Thurston, article, Agricultural and Food Chemistry, vol. 9, no. 4, July-August 1961, pp. 313-316, printed. Agricultural and Food Chemistry, American Chemical Society, 1155 - 16th St. NW., Washington 6, D. C.

"Proximate Composition and Sodium and Potassium Contents of Four Species of Commercial Bottom Fish," by Claude E. Thurston, article, Journal of Food Science (formerly Food Research), vol. 26, no. 5, 1961, pp. 495-498, printed. Journal of Food Science, Institute of Food Technologists, 510-522 No. Hickory St., Champaign, Ill.

CUBA:

Estudio Bioquímico de la Langosta PANULIRUS ARGUS. I (Biochemical Study of the Spiny Lobster Panulirus argus, I), by Eduardo Peon Gonzalez, Note on Investigation No. 3, 64 pp., illus., printed in Spanish. Centro de Investigaciones Pesqueras, Playa Habana, Bauta, Cuba, August 1961.

Segunda Pesca Exploratoria y Datos Biológicos de la Langosta (PANULIRUS ARGUS) en Cuba (Second Exploration and Biological Data for Spiny Lobster, Panulirus argus, in Cuba), by Rene J. Buesa Mas, Contribution No. 12, 70 pp., illus., printed in Spanish. Centro de Investigaciones Pesqueras, del Departamento de Pesca del Instituto, Nacional de Reforma Agraria, Playa Habana, Bauta, Cuba, May 1961.

CURRENTS:

"Current Measurements from Moored Buoys," by W. S. Richardson, article, Oceanus, vol. 8, no. 2, December 1961, pp. 14-19, illus., printed. The Woods Hole Oceanographic Institution, Woods Hole, Mass.

CUTTLEFISH:

"Biochemical Studies on the Viscera of Cuttlefish, Omastrephes sloani Pacificus, V--On the Amylase and Esterase of Viscera," by Takashi Takahashi, article, Bulletin of the Japanese Society of Scientific Fisheries, vol. 26, October 1960, pp. 1006-1009, printed in Japanese with English summary. Japanese Society of Scientific Fisheries, 6-Chome, Shiba-Kaigandori, Minato-Ku, Tokyo, Japan.

DOLPHINS:

Dolphins: The Myth and the Mammal, by Antony Alpers, 268 pp., illus., by Erik Thorn, printed, \$5. Houghton Mifflin Co., 2 Park St., Boston 7, Mass.

ELECTRICAL FISHING:

"Considerations sur la Peche au Moyen de l'Electricite" (Regarding Fishing by Means of Electricity), article, France Peche, vol. 6, no. 54, September 1961, pp. 23-26, illus. printed in French. France Peche, Tour sud-est, Rue de Guemene, Boite Postale 179, Lorient, France.

EXPORTS:

Preparing Shipments to the Republic of South Africa, WTIS Part 2, Operations Report No. 61-67, 8 pp., printed, single copy 10 cents. Bureau of International Programs, U. S. Department of Commerce, Washington, D. C., September 1961. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.) A report giving information on the preparation of shipments for export to the Republic of South Africa. It covers the preparation of shipping documents, information on labeling and marking, customs procedures, and related subjects.

FEEDSTUFFS:

"Animal Body Meals as Protein Feedingstuffs," by H. J. Oslage, article, Futter und Fütterung (Supplement to Der Tierzuechter), vol. 12, 1961, pp. 44, printed in German. Futter und Fütterung, Schweinezucht und Schweinemast, Grazerstrasse, Hanover-Waldehausen, Zone 20, Germany.

FISH CULTURE:

Bamidgeh--Bulletin of Fish Culture in Israel, vol. 12, December 1960, 77 pp., illus., printed in English and Hebrew. Bamidgeh--Bulletin of Fish Culture in Israel, Fisheries Department, Ministry of Agriculture, Publication Division, Nir-David, D. N. Israel. Contains these articles; "Suggestions for the Improvement of Fish Breeding," by S. Tal; "New Substances for Control of Pymnesium," by S. Sarig and others; "An Electric Instrument for Brandmarking Fish," by Rom Moav and others; "Adaptability of Tilapia nilotica to Various Saline Conditions," by Ruth Lotan; "The Elimination of Uncontrolled Spawns in Carp Fattening Ponds," by J. Pruginin and J. Shechter; "A Mobile Belt for Hauling and Sorting Fish," by Z. Shatz.

FISH FLOUR:

"The Manufacture of Fish Flour in South Africa," by G. M. Dreosti and R. P. van der Merwe, Fishing Industry Research Institute Progress Report No. 64, article, The South African Shipping News and

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Fishing Industry Review, vol. 16, no. 8, August 1961, pp. 50, 63, and 65, printed. The South African Shipping News and Fishing Industry Review, Odhams Press, South Africa (Pty.) Ltd., Box 2598, Cape Town, South Africa. Discusses the history of fish flour in South Africa which started in 1937. Also discusses the technological aspects in the production of fish flour, such as type of fish, solvents, yield of fish flour, factors affecting rate of extraction, method of extraction and related subjects.

FISH MEAL:

"The Available Lysine Content of Fish Meals," by J. Olley and H. Watson, article, Journal of the Science of Food and Agriculture, vol. 12, 1961, p. 316, printed. Journal of the Science of Food and Agriculture, The Society of Chemical Industry, 14 Belgrave Square, London SW 1, England.

"Change of Nitrogenous Substances of Fish Meat in the Preparation of Meal," by K. A. Mrochkov, article, Rybnoe Khoziaistvo, vol. 35, 1958, pp. 131-144, printed in Russian. Rybnoe Khoziaistvo, VNIRO Glavniproekta, pri Gosplanie SSSR, Moscow, U.S.S.R.

(FAO) International Meeting on Fish Meal, CL 35/LIM/3, 5 pp., printed. Food and Agriculture Organization of the United Nations, Viale delle Terme di Caracalla, Rome, Italy, June 20, 1961.

"Feed Firm Study Shows Fish Meal Response," article, Feedstuffs, vol. 33, April 15, 1961, pp. 54, printed. Feedstuffs, Miller Publishing Co., 2501 Wayzata Blvd., Minneapolis 5, Minn.

"Fish Meal," article, Report for 1960 from Fiskeriministeriets Forsogslaboratorium, p. 46, printed in Danish. Fiskeriministeriets Forsogslaboratorium, Copenhagen, Denmark.

"Fish Meal and Today's Feed Industry," by Herbert C. Davis, article, Western Feed and Seed, vol. 16, February 1961, pp. 25-26, printed. Western Feed & Seed, Western States Publications, 320 Market St., San Francisco 11, Calif.

"Fish Meal, Use as Food," by V. C. Metta, article, Journal of the American Dietetic Association, vol. 37, 1960, p. 234, printed. American Dietetic Association, 620 No. Michigan Ave., Chicago 11, Ill.

"Graded Levels of Herring Meal to Bacon Pigs, Effect on Growth Rate, Feed Efficiency, and Bacon Quality," article, Journal of Agricultural Science, vol. 56, 1961, p. 307, printed. Journal of Agricultural Science, Cambridge University Press, 200 Euston Rd., London NW1, England.

"Preservation of Caspian Sprat with Sodium Nitrate for the Manufacture of Fodder Flour," by N. A. Kulikov, article, Rybnoe Khoziaistvo, vol. 35, No. 10, 1959, pp. 65-68, printed in Russian. Rybnoe Khoziaistvo, VNIRO Glavniproekta, pri Gosplanie SSSR, Moscow, U.S.S.R.

FISH SCHOOLS:

"Studies on the Structure of Fish Shoals by Means of Fish Finder. I--Echo Patches of Hair-Tail Observed at the Middle Area of the East China Sea, in Feb-

ruary 1959," by Tsuneo Aoyama, article, Bulletin of the Japanese Society of Scientific Fisheries, vol. 26, December 1960, pp. 1162-1166, printed in Japanese with English summary. Japanese Society of Scientific Fisheries, 6-Chome, Shiba-Kaigandori, Minato-Ku, Tokyo, Japan.

FISH SOLUBLES:

"Fish Solubles Experiment Grows Grass on B.C. Highway," by T. Leach, article, Canadian Fisherman, vol. 48, no. 7, 1961, p. 36, printed. Canadian Fisherman, National Business Publications Ltd., Gardenvale, Quebec, Canada.

FOOD:

A Guide to the Selection, Combination, and Cooking of Foods, vol. 1 - Selection and Combination of Foods, by Carl A. Rietz, 411 pp., illus., printed, \$15.00 dom., \$16.00 for. The Avi Publishing Co., Inc., P.O. Box 388, Westport, Conn., 1961. Everyone partakes of food at least three times a day, but our knowledge about foods is very limited. The food behavior of man is the general subject of this book. One of the purposes of this book is to prove that good cooking is "simple." The author states that: "The vast majority of people feed. They do not eat." One of the cardinal premises of the book is that it is not possible for a person to qualify as a judge of food who does not know how to prepare it. The preface points out that cooking, though not an art, is a craft in which the arts have application. It involves discipline in the use of knowledge which has been furnished by many sciences. The more complete the scientific bases of a craft, the more perfect the craft; this generalization applies as well to cookery. Part I indicates a number of sciences which are directly connected with the science of food preparation. Familiarity with the rudiments of such subjects as biology, botany, chemistry, nutrition, pharmacology, physics, physiology, neurology, and psychology are basic for an epicurean cook. The chapters in Part I deal with educational requirements for culinary skills, anatomical and physiological limitations of man, interrelation of taste to other senses, and psychosomatics--what is involved in taste and flavor values. Part II deals with the "Gustametric Master Chart," its method, and its use in food selection. According to the preface, "all foods can be rated according to their flavor intensity, registered on a common logarithmic scaling system." The use of the chart makes it possible to determine quickly and exactly which combinations of foods make for agreeable meals. All types of foods and more than 600 individual foods are covered by the chart. It seems to me this is the first attempt ever made to determine what foods go together and to show a simple method of selecting combinations which are sure to please the average palate. Selection and combination of foods is placed on a scientific basis. In Part II there are chapters on aquatic food or fishery products, meat, poultry, dairy products, vegetables, fruits, beverages, herbs, spices, etc. The chapter on aquatic foods is quite comprehensive and includes sea plants, water fowl, and aquatic mammals. However, since frozen fishery products are increasing in importance, the lack of an extensive discussion on those products is noticeable. The appendix contains a chart on aquatic foods listing those foods according to their technical order and flavor rating intensity on a logarithmic scale. The appendix also includes sections on dry botanicals for beverages, relative sour-

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ness of foods, relative sweetness of wines, flavor appraisal, recommended procedures for packaging foods to be cooked for intrinsic flavor appraisal, and procedures in package cookery. The book has a good index. Anyone engaged in processing, handling, or studying foods will find a good deal of useful information in this book. Of course, anyone who is interested in food for eating pleasure will find the book a valuable addition to his personal library.

--Joseph Fileggi

FOOD AND AGRICULTURE ORGANIZATION:

Current Bibliography for Aquatic Sciences and Fisheries, Indexes to Supplement I, 29 pp., processed. Food and Agriculture Organization of the United Nations, Viale delle Terme di Caracalla, Rome, Italy, 1961. Contains geographic, taxonomic, subject, and citation indexes to references 570001-571944.

FRANCE:

"Les Problemes de la Peche Francaise Face au Marche Commun" (The Problems the French Fisheries Face in the Common Market), article, France Peche, vol 6, no. 54, September 1961, pp. 39-48, illus., printed in French. France Peche, Tour sud-est, Rue de Guemene, Boite Postale 179, Lorient, France.

FREEZING:

"The Optimum Conditions for Freezing Fish in an Air Blast," by G. S. Konokotin, article, Kholodil'nai Tekhnika, no. 5, 1961, pp. 53-58, illus., printed in Russian. Kholodil'naia Tekhnika, c/o Four Continent Book Corp., 822 Broadway, New York 3, N. Y.

FRESH-WATER FISH:

A Checklist of the Freshwater Fishes of Canada and Alaska, by W. B. Scott, 30 pp., printed. Royal Ontario Museum, Toronto, Canada.

FROZEN FOOD:

Handling and Merchandising Frozen Food, by F. Miles Sawyer, Thaddeus F. Midura, and Richard M. Vondell, 67 pp., printed. Food Distribution Program, Cooperative Extension Service, Stockbridge Hall, University of Massachusetts, Amherst, Mass., November 1960. A manual prepared to assist State Extension Service personnel in training programs to improve the handling and merchandising of frozen foods, including fish. Major emphasis has been devoted to retail handling. Minor treatment has been given to sections on processing, transportation, and warehousing to provide general background information.

GEAR:

"Top Chafing Gear Studies," by F. D. McCracken, article, Annual Proceedings, International Commission for the Northwest Atlantic Fisheries, vol. 9, 1959, pp. 101-103, printed. Annual Proceedings, International Commission for the Northwest Atlantic Fisheries, Forrest Bldg., Carleton St., Halifax, N.S., Canada.

GENERAL:

Fishing News International, vol. 1, no. 1, October 1961, 1961, 120 pp., illus. printed, annual subscription £1 10s. (US\$4.75). Fishing News International, Arthur J. Heighway Publications, Ltd., 110 Fleet

St., London E. C. 4, England. This quarterly Journal is designed to form a link between the world's fishing industry and those whose task it is to further its development--the oceanographers, marine biologists, technical experts in catching, processing, distribution and management, and the numerous ancillary industries without whose products or services fishing would still be primitive. Will contain authoritative works on proper exploitation of the sea such as different aspects of marine science, modern vessel design and construction, equipment and machinery, reviews of catching techniques, advances and improvements in handling and processing on board, in factories, etc. This first issue contains a number of articles on the various aspects of commercial fisheries. Included are the following: "Science in Fisheries," by Editor in Chief, Arthur J. Heighway; "Freedom from Hunger," by D. B. Finn; "Preservation by Antibiotics, Part I," by H.L.A. Tarr; "International Conferences;" "Fisheries of Mainland China," by E. F. Szezepanik; "Examination of Stern Trawling," by Conrad Birkhoff; "Common Policy in the Common Market," by P. Hovart; "Reorganizing Tunisia's Fishing Industry," by Mary R. Bull; "Handling of the Catch, Part I," by Jan F. Minnee; and "Accelerated Freeze Drying in Fish Processing," by Enid A. M. Bradford.

Life in the Sea, by Gosta Jagersten, photographs by Lennart Nilsson, 184 pp., printed, 50s. (US\$7.00), G. T. Foulis and Co., Ltd., London, England, 1961. A book of photographs, a few in color but mainly black-and-white, of marine invertebrates and a few fish.

A Report of Data Obtained in Florida Straits and off the West Coast of Florida July-December 1960, 111 pp. illus., processed. The Marine Laboratory, University of Miami, 1 Rickenbacker Causeway, Miami 49, Fla.

GERMAN FEDERAL REPUBLIC:

Allgemeine Fischwirtschafts-Zeitung, Fachheft-Export, Special Technical Issue No. 34, August 26, 1961, printed in German and English. Verlag Carl Th. Gorg, Am Sorgfeld 110, Hamburg-Blankenese, German Federal Republic. A special issue dealing primarily with the export situation in Germany. Contains, among others, the following articles: "Export Prospects in the Wider Market," by Karl Kuhne; "The Importance of Germany's Food Export Economy with Particular Regard to the Fish Economy," by von Albert M. Groening; "The Fish Economy Trade of the EEC Countries," by Margot Krohn; "The Situation in the Exportation Domain Concerning Fresh Fish, Quick Frozen Fish, and Fish By-products;" "Last Product of German Fishery: The Frozen Fish," by E. G. Rudolph; and "The Export of Salt Fish," by Erich Dehl.

GREECE:

Import Tariff System of Greece, WTIS Part 2, Operations Report No. 61-68, 2 pp., printed, single copy 10 cents. Bureau of International Programs, U. S. Department of Commerce, Washington, D. C., September 1961. (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; import regula-

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tions; bases of specific and ad valorem duties; customs duties and surtaxes; sales and other internal taxes; and consular documents and fees.

HALIBUT:

Bering Sea Halibuts, by N. P. Novikov, Translation Series No. 329, 4 pp., processed. (Translated from the Russian, Rybnoe Khoziaistvo, vol. 36, no. 1, pp. 12-15, 1960). English translations available from the Fisheries Research Board of Canada Biological Station, Nanaimo, B. C., Canada.

HERRING:

"The Liquefaction of British Columbia Herring by Ensilage, Proteolytic Enzymes and Acid Hydrolysis," by J. R. McBride, D. R. Idler, and R. A. Macleod, article, Journal of the Fisheries Research Board of Canada, vol. 18, 1961, p. 39, printed. Journal of the Fisheries Research Board of Canada, Queen's Printer & Controller of Stationery, Ottawa, Canada.

"Preparation of Marinated Herring Using Lactic Acid," by H. Houwing, article, Conserva, vol. 8, 1960, pp. 252-253, printed in Dutch. Maanblad voor de Voedings-en Genotmiddelen-Industrie, Moormans Periodieke Pers N. V., The Hague, Netherlands.

"Un Rideau de Bulles d'Air Auxiliaire de la Pêche au Hareng," (Fishing for Herring with Aid of Air-Bubble Curtain), article, France Pêche, vol. 6, no. 54, September 1961, pp. 15-17, 19-22, illus., printed in French. France Pêche, Tour sud-est, Rue de Guemene, Boite Postale 179, Lorient, France.

INTERNATIONAL COMMISSIONS:

(International North Pacific Fisheries Commission) Statistical Yearbook, 1960, 67 pp., illus., printed. International North Pacific Fisheries Commission, 6640 NW. Marine Dr., Vancouver 8, B.C., Canada. A statistical summary covering the salmon fishery in Canada, Japan, and the United States; herring fishery in Canada and the United States; halibut fishery along the coast of the North American west coast; and the king crab fishery in the Eastern Bering Sea during 1960. Statistical tables cover landings of salmon, herring, halibut, and king crab; and salmon and king crab packs.

IRAN:

Licensing and Exchange Controls--Iran, WTIS Part 2, Operations Report No. 61-66, 11 pp., printed, single copy 10 cents. Bureau of International Programs, U. S. Department of Commerce, Washington 25, D. C., September 1961. Outlines Iran's import and exchange controls (general and special provisions, prohibited imports, and commercial profits tax); Iran's export controls and United States controls (exports, imports, and other controls). Includes list of prohibited import goods and list of goods subject to commercial profits tax (by tariff chapters).

ITALY:

"Fenomeni Alternativi del Pesce e Metodi Chimici per il Loro Riconoscimento" (Fish Spoilage and Chemical Methods for Recognizing It), by Antonio Montefredine and Concetta Testa, article, Bollettino di Pesca, Piscicoltura e Idrobiologia, vol. 15, Jan-

uary-June 1961, pp. 48-135, printed in Italian with summary in English. Bollettino di Pesca, Piscicoltura e Idrobiologia, Laboratorio Centrale di Idrobiologia, 91 Piazza Borghese, Rome, Italy.

JAPAN:

Progress Report of the Cooperative Investigations on Important Neritic-Pelagic Fisheries Resources 1956-1957, 320 pp., illus., printed in English and Japanese. Tokai Regional Fisheries Research Laboratory, Tsukishima, Chuo-ku, Tokyo, Japan.

KOREA:

Annual Report of the Central Fisheries Experiment Station, No. 1, 89 pp., illus., printed in Korean with summary in English. Central Fisheries Experiment Station, Pusan, Korea, 1960. Discusses the history and organization of the Central Fisheries Experiment Station, research and surveys of 1960, and contains a list of research vessels. A list of past publications is also included.

Bulletin of the Central Fisheries Experiment Station, No. 1--Processing and Food Technology, 138 pp., printed in Korean with summaries in English. Central Fisheries Experiment Station, Pusan, Korea, 1960. Contains, among others, the following articles: "Studies on the Chemical Change in Frozen Oyster and Shrimp during Cold Storage," by Bong Nai Lee and others; "Studies on the Improvement of the Salted Products. I--Influence of the Freshness of Raw Fish and the Quality of Salts Affecting in the Salted Fish; and II--Effectiveness of Chlorotetracycline and Salting Methods for Keeping Quality of the Salt Cured Products," by Sang Ho Shin and Jai Hyung Byun; and "Experiment to Increase the Yield of Agar-Agar," by Nam Ki Paek.

MARINE BACTERIA:

"Marine Bacteria and their Taxonomy," by John Liston and Rita R. Colwell, Contribution 116, article, Research in Fisheries 1960, pp. 18-20, printed. College of Fisheries, University of Washington, Seattle 5, Wash., March 1961.

MARINE PLANTS:

Marine Plant Resources of British Columbia, by Robert F. Seigel, Bulletin No. 127, 50 Canadian cents. The Queen's Printer and Controller of Stationery, Ottawa, Canada.

MARKING FISH:

"There's More Than One Way to Leave a Mark on Life," by Keen Buss, article Pennsylvania Angler, vol. 30, no. 10, October 1961, pp. 1-5, illus., printed. Pennsylvania Fish Commission, South Office Bldg., Harrisburg, Pa. Describes methods of marking fish which aids the biologist to determine movement, age and growth, population densities, and other habits of fish.

NAVIGATION:

United States Coast Pilot 3--Atlantic Coast, Sandy Hook to Cape Henry, Seventh Edition, 204 pp., printed, \$2.50. U. S. Department of Commerce, Coast and Geodetic Survey, Washington 25, D. C., 1961. A nautical book containing a wide variety of information important to navigators. Subjects include landmarks, navigation regulations, channels, anchorages,

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dangers, weather, ice, routes, pilotage, and port facilities. Most of the information in the book cannot be shown conveniently on the standard nautical charts. The book is corrected through Notice to Mariners 24 of June 17, 1961.

NETHERLANDS:

Jaarcijfers over de Visserij Gedurende Het Jaar 1960 (Annual Fisheries Statistics, 1960), No. 52, 168 pp., illus., printed in Dutch with summaries in English, and statistical tables in both Dutch and English. Directie van de Visserijen, 's-Gravenhage, Netherlands, 1961.

NETS:

"The Development of German Driftnets for Salmon and the Test of New Types of Nets," by F. Thurow, article, Das Fischerblatt, vol. 7, 1959, pp. 197-201, printed in German. Das Fischerblatt, Landesfischerei-Verband Schleswig-Holstein, 108 Holstenstrasse, Kiel, Germany.

"Influence of Waves Against Behavior of the Double Drift Net in the Waters, the Case When the Net is put Parallel with Running Wave Direction," by Masatsune Nomura, Keishiro Mori, and Hajime Taketomi, article, Bulletin of the Japanese Society of Scientific Fisheries, vol. 26, June 1960, pp. 570-576, printed in Japanese with English summary. Japanese Society of Scientific Fisheries, 6-Chome, Shipa-Kai-gandori, Minato-Ku, Tokyo, Japan.

NEW ZEALAND:

Report on Fisheries for 1960, 23 pp., printed. R. E. Owen, Government Printer, Wellington, New Zealand. This report contains statistical data on fisheries for the calendar year 1960. Includes, among others, data containing estimated total quantities and values of the principal classes of fishery products marketed in 1960; and annual totals for the most important group of fish (wet fish) for years 1941-1950; the fishery for crayfish; fishing vessels and personnel; methods of capture; exports and imports; whaling; research and investigation; legislation on fisheries; etc.

NORWAY:

"Fiskefartoyers Lonnsomhet i 1959--Sesongresultater" (Fishing Vessel Profits in 1959--Annual Results), article, Fiskets Gang, vol. 47, no. 30, July 27, 1961, pp. 527-532, printed in Norwegian. Fiskets Gang, Fiskeridirektoratet, Radstuplass 10, Bergen, Norway.

NUTRITION:

"The Assessment of Nutritive Value in Protein Concentrates by the Gross Protein Value Method," by J. Duckworth, A. A. Woodham, and I. McDonald, article, Journal of the Science of Food and Agriculture, vol. 12, 1961, p. 407, printed. Journal of the Science of Food and Agriculture, The Society of Chemical Industry, 14 Belgrave Square, London SW1, England.

"Fat Absorption during the First Year of Life in Prematurely Born Children after Administration of Different Amounts of Fish Oil," by V. Ya. Vashchilko, Fiziol Osobennosti Detsk Vozrasta i Voprosy Profilaktiki Zabalevanii (Kharkon) Sbornik, 1959, pp.

93-100. Chemical Abstracts, vol. 55, No. 3747d, February 20, 1961.

Fish and Your Health, 2 pp., folder, illus., printed. U. S. Bureau of Commercial Fisheries, Southwest Area Marketing Office, 4232 Herschel Ave., Dallas 19, Texas. The tremendous interest all over the United States in polyunsaturated and saturated fats, cholesterol control, heart disease, etc., has prompted the issuance of a timely and useful leaflet, outlining the role of fish in diets for control of blood cholesterol levels, polyunsaturation, and use of oily and non-oily fish in the diet.

Forget Birthdays. . . Enjoy Good Eating, 2 p. folder, illus., printed single copy 3 cents (in quantities of 50--\$1.25; 100--\$2.00). The American Dietetic Association, 620 No. Michigan Ave., Chicago 11, Ill., September 1961. Contains facts regarding daily dietary requirements, the necessity for three well-planned meals a day, and the way to form good eating habits. The daily meal plans shown in the pamphlet all include fish.

"Nutritive Value of Maine Sardines. II--Animal Feeding Tests," by S. A. Miller and others, article, Journal of Nutrition, vol. 74, 1960, p. 70, printed. Journal of Nutrition, American Institute of Nutrition, 36th Street at Spruce, Philadelphia 4, Pa.

OCEANOGRAPHY:

Investigations of Inner Continental Shelf Waters Off Lower Chesapeake Bay. Part II. Sand Lance Larvae, AMMODYTES AMERICANUS, by John J. Norcross, and others, contribution No. 96, 9 pp., illus., printed. (Reprinted from Chesapeake Science, vol. 2, no. 1-2, March-June 1961.) Department of Research and Education, Chesapeake Biological Laboratory, Solomons, Md.

A Technical Report Bathymetric Reconnaissance of Exhuma Sound, by Violet B. Seigler, 36 pp., illus., processed. The Marine Laboratory, University of Miami, 1 Rickenbacker Causeway, Miami 49, Fla.

O.E.C.D.:

"Development Aid Accented as O.E.C.D. Comes Into Existence," article, Foreign Commerce Weekly, vol. 66, no. 18, October 30, 1961, pp. 5-6, printed, single copy 30 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.) Discusses the reconstitution of the Organization for European Economic Cooperation (O.E.E.C.) which was organized in April 1948 to administer Marshall Plan aid and to restore the European economy on a cooperative basis, to the newly-established Organization for Economic Cooperation and Development (O.E.C.D.). The new organization will take over two of the main aspects of O.E.E.C.'s work, the study of trade problems and of economic expansion, but on a scale which will include the North American countries. Will also aid in developing countries outside confines of Organization's membership, i.e. the newly-emerging nations of Africa and Asia.

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

OYSTER DRILLS:

Sexual Behavior of the Oyster Drills: EUPLEURA CAUDATA and UROSALPINX CINEREA, by William J. Hargis, Jr., and Clyde L. Mackenzie, Jr., Contribution No. 100, 11 pp., illus., printed. (Reprinted from Nautilus vol. 75, no. 1, July 1961, pp. 7-16.) Virginia Fisheries Laboratory, College of William and Mary, Gloucester Point, Va.

OYSTERS:

Mass Culture of Phytoplankton as Foods for Metazoans, by Harry C. Davis and Ravenna Ukeles, article, 2 pp., illus., printed. (Reprinted from Science, vol. 134, no. 3478, August 1961, pp. 562-564.) American Association for the Advancement of Science, 1515 Massachusetts Ave. NW., Washington 5, D. C.

Prospectus on Oyster Rehabilitation for the Hillsborough County Port Authority, by K. D. Woodburn, 8 pp., processed. Director of Research, Florida State Board of Conservation, W. V. Knott Building, Tallahassee, Fla.

PACKAGING:

Vacuum Packaging as a Means for Prolonging the Storability of Smoked Herring Fillets, by M. von Schelhorn, 2 pp., printed. Jahresbericht uber die Deutsche Fischwirtschaft, Berlin, Germany, 1957.

PLANKTON:

Investigations of Inner Continental Shelf Waters of Lower Chesapeake Bay. Part III. The Phorozooid Stage of the Tunicate DOLIOLUM NATIONALIS, by Robert M. Terry, contribution No. 99, 4 pp., illus., printed. (Reprinted from Chesapeake Science, vol. 2, no. 1-2, March-June 1961.) Department of Research and Education, Chesapeake Biological Laboratory, Solomons, Md.

The Oceanic and Bathypelagic Plankton of the North-East Atlantic, and its Possible Significance to Fisheries, by J. H. Fraser, Marine Research No. 4, 48 pp., illus., printed, 16s. 0d. (US\$2.24). Her Majesty's Stationery Office, 13A Castle St., Edinburgh 2, Scotland, 1961.

PORTUGAL:

Gremio dos Armadores da Pesca de Arrasto, Relatório e Contas do Exercício de 1960 e Orcamento para 1961 (Trawler Owners' Guild, Statement of Operations for 1960 and Budget for 1961), 36 pp., illus., printed in Portuguese. Comissao Revisora de Contas, Lisbon, Portugal, March 15, 1961.

PROTEIN:

"The Quality of Fish Flour, Liver Meal, and Visceral Meal as Sources of Dietary Protein", by B. A. Larsen and W. W. Hawkins, article, Journal of the Fisheries Research Board of Canada, vol. 18, 1961, p. 85, printed. Journal of the Fisheries Research Board of Canada, Queen's Printer & Controller of Stationery, Ottawa, Canada.

RHODESIA:

The Fishes of Northern Rhodesia, by P. B. N. Jackson, printed, 7s. 6d. (about US\$1.05). The Government Printer, P. O. Box 136, Lusaka, Northern Rhodesia. This book deals with every fish known from Northern Rhodesia except those of Lake Tanganyika. It is a checklist of that area, providing a key to identification of species, a description of each fish,

and a wealth of valuable information on their ecology and habits.

RED TIDE:

Red Tide Studies, Final Report 57-18, 24 pp., illus., processed. Florida State Board of Conservation, W. V. Knott Bldg., Tallahassee, Fla., July 1957.

SALMON:

"The Elusive Salmon," article, World Fishing, vol. 10, April 1961, pp. 73-74, printed. John Trundell (Publishers) Ltd., St. Richard's House, Eversholt St., London, NW 1, England.

SCALLOPS:

Scallop Investigation, Tasman Bay 1959-60, by J. H. Choat, Fisheries Technical Report No. 2, 51 pp., processed. New Zealand Marine Department, Wellington, New Zealand.

SEAWEEDS:

Recovery of Swelling Agents from Seaweeds, by Tjoa S. Lian, German Patent No. 1,021,696, December 27, 1957. Deutsches Patentamt, Zeibucken, Strasse 12, Munich 2, Germany.

SHAD:

A Potomac River Shad Fishery, 1814-1824, by William H. Massmann, Contribution No. 98, 6 pp., illus., printed. (Reprinted from Chesapeake Science, vol. 2, no. 1-2, March-June 1961.) Department of Research and Education, Chesapeake Biological Laboratory, Solomons, Md.

SHRIMP:

Biological Observations on the Commercial Shrimp, PENAEUS DUORARUM Burkenroad, in Florida Waters, by Bonnie Eldred and others, Professional Papers Series No. 3, 139 pp., illus., printed. Florida State Board of Conservation, Marine Laboratory, St. Petersburg, Fla. This report results from comprehensive studies that have been under way since 1955. Discusses methods and equipment used in the survey; Tampa Bay area monthly shrimp stations; Tortugas controlled area sampling; sex size disparity, ratio and sexual development of shrimp; and migration and sexual maturity. Also discusses the relation of temperature to distribution, spawning, and population densities; behavior, diet, growth, and parasites; incidental samples of P. duorarum from Florida waters; and commercial offshore shrimp catch (P. duorarum) from west coast of Florida.

Maturation and Spawning of the Pink Shrimp, PENAEUS DUORARUM Burkenroad, by William C. Cummings, Contribution No. 328, 7 pp., illus., printed. (Reprinted from Transactions of the American Fisheries Society, vol. 90, no. 4, October 1961.) Transactions of the American Fisheries Society, Librarian, Colorado A. and M. College, Fort Collins, Colorado.

Notes on the Caridean Shrimp, RHYNCHOCINETES RIGNES Gordon (CRUSTACEAE, DECAPODA), in the Western Atlantic, by Raymond B. Manning, Contribution No. 334, 7 pp., illus., printed. (Reprinted from Notulae Naturae, no. 348, November 10, 1961.) Notulae Naturae, The Academy of Natural Sciences of Philadelphia, Philadelphia, Pa.

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

"Turning Shrimp Waste into Profit," article, Norwegian Fishing and Maritime News, vol. 7, no. 1, 1960, p. 17, printed. Norwegian Fishing and Maritime News, P. O. Box 740, Slottsgt. 3, Bergen, Norway.

SMALL BUSINESS MANAGEMENT:

Pointers on Meeting Competition, by Edward C. Bursk, Management Aids for Small Manufacturers No. 134, 4 pp., processed. Small Business Administration, Washington 25, D. C., November 1961. This report discusses pointers on meeting competition in business. Certain elements in today's economy such as automation, statistical decision-making, and the cost-price squeeze tend to force the large business into a pattern of standardization. Despite predictions to the contrary, these same conditions can bring new opportunities to small businessmen prepared to capitalize on them. He can retain his adaptability, and be in a good position to pick up opportunities that must be bypassed by his larger competitor.

Understanding Why They Buy, by Bertrand Klass, Small Marketers Aid No. 73, 4 pp., processed. Small Business Administration, Washington 25, D. C., November 1961. A report designed to tell small marketers what "motivation research" is and what it can mean to their businesses was issued recently by the Small Business Administration. Why customers buy as they do is an important question for small business owners and managers. Finding answers is often far from easy. But more and more businessmen are trying to find answers, and many are seeking scientific help in getting reliable ones. Some even feel that a really effective merchandising approach cannot be planned without knowing what makes customers buy--in other words, without "motivation research." The author recognizes that small marketers rarely engage in doing motivation research themselves, but suggests that they may be able to use the results of studies conducted by big concerns to merchandise their products. In this way, the small marketer can better organize and direct his selling efforts.

SMOKED FISH:

"The 3, 4-Benzopyrene Content of Fish Smoked by Different Processes," by N. D. Gorelova and others, article, Voprosy Onkol, vol. 6, No. 1, 1960, pp. 33-37, printed in Russian. Chemical Abstracts, vol. 55, No. 4814h, March 6, 1961.

SOUTH AFRICA REPUBLIC:

Import Tariff System of Republic of South Africa, WTIS Part 2, Operations Report No. 61-65, 4 pp., printed, single copy 10 cents. Bureau of International Programs, U. S. Department of Commerce, Washington, D. C., September 1961. (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; import regulations; bases of specific and ad valorem duties; customs duties and surtaxes; sales and other internal taxes; and consular documents and fees.

Marine Studies off the Natal Coast, C.S.I.R. Symposium No. S2, 134 pp., illus., printed. The South African Council for Scientific and Industrial Research,

P. O. Box 395, Pretoria, South Africa, March 1961. A symposium on marine studies off the Natal Coast was arranged to review the present state of knowledge and to assess the more urgent needs for research. This report contains papers on "Origin and Development of the Natal Coast," "Meteorological Aspects, Especially Surface Winds and Associated Weather Along the Natal Coast," "The Nearshore Circulation of Water," "Bathymetric and Hydrographic Aspects of Marine Studies off the Natal Coast," "The Use of Drift-Cards to Deduce Currents Along the Natal Coast," "The Nearshore Movement of Sand at Durban," "Some Aspects of Offshore Whaling," "Intertidal and Estuarine Fauna," "A Quantitative Assessment of the Effects of Factory Effluent Upon Littoral and Estuarine Faunas at Umkomaas," "Shark Research in Natal," "Fisheries Research in Natal Waters," and "Basic Model Studies of Nearshore Wave Action."

SPAIN:

"La Gamba del Golfo de Cadiz y Marruecos" (The Shrimp of the Gulf of Cadiz and Morocco), article, Puntal--Revista Maritima y Pesquera, vol. 8, no. 89, pp. 16-21, illus., printed in Spanish. Puntal--Revista Maritima y Pesquera, Ramon y Cajal 3, Apartado 316, Alicante, Spain.

La Pesca Espanola en 1960" (The Spanish Fisheries in 1960), article, Boletin de Informacion del Sindicato Nacional de la Pesca, nos. 34-35, July-August 1961, pp. 13-19, printed in Spanish. Sindicato Nacional de la Pesca, Paseo del Prado, 18-20, Madrid, Spain.

SPONGES:

"Antimicrobial Substances from Sponges," by Sophie Jakowska and Ross F. Nigrelli, article, Annals of the New York Academy of Science, vol. 90, Art. 3, 1960, pp. 913-916, printed. New York Academy of Science, 2 E. 63rd St., New York 21, N.Y.

"Contributions to the Study of Marine Products. L--Phospholipids of Sponges," by Robert A. Landowne and Werner Bergmann, article, Journal of Organic Chemistry, vol. 26, April 1961, pp. 1257-1261, printed. Journal of Organic Chemistry, The American Chemical Society, 1155 16th St. NW., Washington, D. C.

"Nucleic Acids of Sponges," by Martin F. Stempien, Jr., article, Annals of the New York Academy of Science, vol. 90, Art. 3, 1960, pp. 910-912, printed. New York Academy of Science, 2 E. 63rd St., New York 21, N.Y.

STARFISH:

"Confirmation of Saponin as a Toxic Principle of Starfish," by Yoshiro Hashimoto and Takeshi Yasumoto, article, Bulletin of the Japanese Society of Scientific Fisheries, vol. 26, November 1960, pp. 1132-1138, printed in Japanese and English. Japanese Society of Scientific Fisheries, 6- Chome, Shiba-Kaigandori, Minato-Ku, Tokyo, Japan.

STORAGE:

"French Tests on the Pre-Storage of Sardine on Board Fishing Boats by Cooling in Sea Water at -0°C.," article, Rev. Conserve, vol. 15, May-June 1960, pp. 130-131, printed in French. Rev. Conserve, Societe d'

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

Edition pour l'Alimentation, 1 Rue de la Real, Paris, France.

STORAGE LIFE:

"Studies on the Evaluation of Freshness and on the Estimation of the Storage Life of Raw Fishery Products," by Lionel Farber and Peter Lerke, article, Food Technology, vol. 15, April 1961, pp. 191-196, printed. Food Technology, The Garrard Press, 510 No. Hickory, Champaign, Ill.

STRIPED BASS:

Movements of Striped Bass Tagged in Virginia Waters of Chesapeake Bay, by William H. Massmann and Anthony L. Pacheco, Contribution No. 97, 7 pp., illus., printed. (Reprint from Chesapeake Science, vol. 2, no. 1-2, March-June 1961, pp. 37-44.) Department of Research and Education, Chesapeake Biological Laboratory, Solomons, Md.

TIDEWATER FISHERIES:

Department of Tidewater Fisheries: What It Is, What It Does, 36 pp., printed. Tidewater Fisheries Commission, State Office Bldg., Annapolis, Md. A report of the Department of Tidewater Fisheries with statements about its organization and activities from the reorganization July 1, 1959, to December 1, 1960. Discusses, among others, the oyster propagation program, soft-shell clams, and finfish and crab program.

TRADE LISTS:

The Bureau of Foreign Commerce, U. S. Department of Commerce, Washington 25, D. C., has published the following mimeographed trade list. Copies may be obtained by firms in the United States from that office or from Department of Commerce field offices at \$1 each.

Canneries and Frozen Food--Producers and exporters--Egyptian Region of United Arab Republic, 3 pp. (October 1961). Lists names and addresses, size of firms, and types of products handled by each firm. Includes fish canneries, and producers and exporters of frozen shrimp and sardines.

TRASH FISH:

Preservation of Trash Fish, by William Saenz and D. L. Dubrow, Marine Fisheries Research Report, Special Service Bulletin No. 17, 5 pp., processed. Marine Laboratory, Institute of Marine Science of the University of Miami, Virginia Key, Miami 49, Fla. (Available from Florida State Board of Conservation, Tallahassee, Fla.) A simple and inexpensive method for the preservation of "trash fish" on board vessels is described. This method involves converting the trash into liquid fish and stabilizing it in an acid medium. The resulting slurry can be converted into fertilizers, animal foods, purified chemical foods, and fish meal.

TRAWLERS:

"A German Stern Trawler with Novel Winching Arrangements," article, World Fishing, vol. 10, May 1961, p. 62, printed. John Trundell (Publishers) Ltd., St. Richard's House, Eversholt St., London, NW1, England.

TROUT:

Movements and Growth of Spotted Seatrout, CYNOSCION NEBULOSUS (Cuvier), in West Florida, by Alan W. Moffett, Technical Series No. 36, 35 pp., illus., printed. The Marine Laboratory, Institute of Marine Science of the University of Miami, Virginia Key, Miami 49, Fla., May 1961. (Available from Florida State Board of Conservation, Tallahassee, Fla.) This report covers a description of the spotted sea trout fishery, materials and methods, tag releases, movements, growth, and spawning. The small amount of movement observed between tagging areas suggests that a series of nearly isolated groups of spotted sea trout exist on the west coast of Florida. Connection is maintained between these groups because of a few fish which make longer movements. However, for the purposes of fishery management the areas may be considered separate, and regulations made affecting one area would have little effect in other areas. The decline of commercial landings of spotted sea trout in Florida, which began in 1952, reached a low in 1955 but since have increased. This suggests that the cause may have been cyclical. At present, there is no information to indicate that spotted sea trout on the west coast of Florida are being overexploited.

TUNA:

"Observations on 'Green' Tuna," by A. M. Dollar and others, article, Food Technology, vol. 15, no. 5, 1961, pp. 253-255, printed. Food Technology, The Garrard Press, 510 No. Hickory St., Champaign, Ill.

"Tagging and Recovery of Tropical Tunas, 1955-1959," by Milner B. Schaefer, and others, Inter-American Tropical Tuna Commission Bulletin, vol. 5, no. 5, 111 pp., illus., printed in English and Spanish. Inter-American Tropical Tuna Commission, La Jolla, Calif.

TURKEY:

"Balik Endustrimizi Gelistirmek icin Fon" (ICA Fund to Develop Our Fishing Industry), by Suleyman Arisoy, article, Turkiye Iktisat Gazetesi, no. 430, June 22, 1961, p. 5, printed in Turkish. Odalar Birligi Matbasi, P. K. 397, Ankara, Turkey.

"Balikcilik Kooperatiflerimizizin Reorganizasyonu" (The Reorganization of Our Fishing Cooperatives), by Suleyman Arisoy, article, Turkiye Iktisat Gazetesi, no. 416, March 9, 1961, p. 4, printed in Turkish. Odalar Birligi Matbaasi, P. K. 397, Ankara, Turkey.

"Dunyada Aclikla Mucadele Kampanyasi ve Turkiye Balikciligi" (Turkey's Fisheries and Freedom from Hunger Campaign "FFHC") by Suleyman Arisoy, article, Turkiye Iktisat Gazetesi, no. 424, May 4, 1961, p. 4, printed in Turkish. Odalar Birligi Birli gi Matbaasi, P. K. 397, Ankara, Turkey.

"Prof. Baade Raporuna Gore Balikciligimiz ve Beslenme Imkanlarimiz" (Our Nutrition Possibilities and Our Fisheries in the Light of Prof. Baade's Report), by Suleyman Arisoy, article, Turkiye Iktisat Gazetesi, no. 403, December 8, 1960, p. 5, printed in Turkish. Odalar Birligi Matbaasi, P. K. 397, Ankara, Turkey.

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

"Prof. F. Baade'ye Gore 1975 Yilinda Turkiyenin Gida Problemiye Balikciligimiz" (Nutrition Problems and Turkish Fisheries in 1975 according to Prof. Baade's Report), by Suleyman Arisoy, article, Turkiye Iktisat Gazetesi, no. 437, August 10, 1961, p. 5, printed in Turkish. Okalar Birliđi Matbaasi, P. K. 397, Ankara, Turkey.

"Turk Standartlari Ensitusu (TSE) Kanununun Kabulü Dolayisiyle Dunyada ve Turkiyede Balik Endustrisi Mamullerinin Standardizasyonu" (The Standardization of Fish Processing in Turkey and the World in the Light of the Act of Turkish Standardization Institute "TSE"), by Suleyman Arisoy, article, Turkiye Iktisat Gazetesi, no. 404, December 15, 1960, p. 5, no. 405, December 22, 1960, p. 5, printed in Turkish. Odalar Birliđi Matbaasi, P. K. 397, Ankara, Turkey.

"Turkiye Balik Ekonomisinin Gelismesinde T. C. Ziraat Bankasi Mufettislerinin Vazife ve Mes'uliyeti" (Duties and Responsibilities of Inspectors of the Agricultural Bank of the Turkish Republic in the Development of the Turkish Fisheries Economics), by Suleyman Arisoy, article, Turkiye Cumhuriyeti Ziraat Bankasi Teftis Bulteni, vol. 3, nos. 31, 32, 33, July-September 1960, pp. 20-25, printed in Turkish. T. C. Ziraat Bankasi Matbaasi, Ankara, Turkey.

--Listings under Turkey supplied by Suleyman Arisoy, Fisheries Advisor, Agricultural Bank of the Turkish Republic, Ankara, Turkey.

U.S.S.R.:

THE FOLLOWING ENGLISH TRANSLATION OF A FOREIGN LANGUAGE ARTICLE IS AVAILABLE FROM THE FISHERIES RESEARCH BOARD OF CANADA BIOLOGICAL STATION, NANAIMO, B. C.

Commercial Fishes of the Anadyr River and the Anadyr Estuary, by A. G. Kaganovski, Translation Series no. 282, 5 pp., processed. (Translated from the Russian, Vestnik Dalnevostochnovo Filiala Akademii Nauk SSR for 1933, No. 1-3, pp., 137-139, 1933, Vladivostok).

VIET NAM:

Licensing and Exchange Controls--Viet-Nam, WTIS Part 2, Operations Report No. 61-69, 6 pp., printed, single copy 10 cents. Bureau of International Programs, U. S. Department of Commerce, Washington 25, D. C., September 1961. This report discusses the import and export controls of Viet Nam, and United States import and export controls.

WASHINGTON:

1960 Fisheries Statistical Report, by Robert Robison, Dale Ward, and Arthur Palmen, 94 pp., illus., printed. Washington State Department of Fisheries, 4015 20th Ave., W., Seattle 99, Wash., 1961. Contains statistical data on salmon landings in the Puget Sound, Grays Harbor, Willapa Harbor, and Columbia River Districts; bottomfish landings; oyster production; and shellfish landings in the Puget Sound and Grays Harbor Districts. Also covers the Indian fisheries; fishway counts at the various dams in the State of Washington; and related subjects.

WHALE OIL:

"The Absorption Spectrum of the Molecular Distillation Residue of Whale-Liver Oil," by Yoshimori Omote, article, Nippon Kagaku Zasshi, vol. 80, 1959, pp. 804-805. Chemical Abstracts, vol. 55, No. 3093i, February 6, 1961.

WHALES:

"Studies on Whale Lipase. I--Lipase of the Pancreas of Little Finner," by Yoshio Ishihara, article, Bulletin of the Faculty of Fisheries, Hokkaido University, vol. 11, May 1960, pp. 23-28, printed in Japanese. Bulletin of the Faculty of Fisheries, Hokkaido University, Hakodate, Japan.

CHANGE OF ADDRESS

In the November 1961 issue, page 88, article "Commercial Application of Accelerated Freeze-Drying," the address of the National Business Publications, Ltd. (publisher of the Canadian Refrigeration and Air-Conditioning Journal) has been changed to Gardenvale, Quebec, Canada.



HEAT PENETRATION IN CANNING FISHERY PRODUCTS DEPENDS ON SIZE OF PARTICLES

The size of the particles into which a canned product is divided has considerable effect on the rate of heat penetration. For example, shrimp will heat through to the center more rapidly than salmon because a can of shrimp contains a large number of small pieces and salmon one or two large pieces.

--Principles and Methods in the Canning of Fishery Products, Research Report No. 7 (page 21), U. S. Fish and Wildlife Service.