



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.
 SL - LISTS OF DEALERS IN AND PRODUCERS OF FISHERY PRODUCTS AND BYPRODUCTS.
 WL - WILDLIFE LEAFLETS.

Number	Title
CFS-2605	- New Jersey Landings, March 1961, 3 pp.
CFS-2606	- New Jersey Landings, April 1961, 4 pp.
CFS-2620	- Minnesota Landings, April 1961, 2 pp.
CFS-2628	- South Carolina Landings, May 1961, 2 pp.
CFS-2630	- Shrimp Landings, February 1961, 6 pp.
CFS-2631	- New Jersey Landings, May 1961, 4 pp.
CFS-2633	- Florida Landings, May 1961, 9 pp.
CFS-2634	- Maine Landings, May 1961, 3 pp.
CFS-2635	- Fish Meal and Oil, May 1961, 2 pp.
CFS-2637	- New York Landings, May 1961, 5 pp.
CFS-2639	- Michigan Landings, May 1961, 2 pp.
CFS-2640	- Wisconsin Landings, May 1961, 2 pp.
CFS-2641	- Virginia Landings, May 1961, 4 pp.
CFS-2642	- Minnesota Landings, May 1961, 2 pp.
CFS-2643	- Texas Landings, March 1961, 3 pp.
CFS-2644	- California Landings, April 1961, 4 pp.
CFS-2645	- Ohio Landings, May 1961, 2 pp.
CFS-2646	- Mississippi Landings, May 1961, 2 pp.
CFS-2647	- Texas Landings, April 1961, 3 pp.
CFS-2649	- Fish Sticks and Portions, April-June 1961, 3 pp.
CFS-2650	- North Carolina Landings, June 1961, 4 pp.
CFS-2651	- Georgia Landings, June 1961, 2 pp.
CFS-2652	- South Carolina Landings, June 1961, 2 pp.
CFS-2654	- Florida Landings, June 1961, 9 pp.
CFS-2655	- Fish Meal and Oil, June 1961, 2 pp.
CFS-2659	- Maryland Landings, June 1961, 3 pp.
CFS-2660	- Rhode Island Landings, May 1961, 3 pp.
FL-9	- (Revised April 1961) - Available Leaflets on Fisheries, 7 pp.
FL-411	- (Revised January 1960) - Care of Tropical Aquarium Fishes, 18 pp.
FL-512	- United States Fish and Wildlife Service Publications in Limnology, 1940-1960, compiled by Lola T. Dees, 7 pp., April 1961.

FL-514 - List of Special Scientific Report (Nos. 1-67) and Special Scientific Report-Fisheries (Nos. 1-357), compiled by Lola T. Dees, 36 pp., processed, April 1961.

FL-515 - United States Fish and Wildlife Service Papers on Physical and Chemical Oceanography, compiled by Lola T. Dees, 14 pp., April 1961.

FL-518 - A List of the Circulars of the United States Fish and Wildlife Service, compiled by Lola T. Dees, 9 pp., processed, June 1961.

FL-519 - List of Research Reports of the United States Fish and Wildlife Service, compiled by Lola T. Dees, 5 pp., processed, June 1961.

Wholesale Dealers in Fishery Products, 1961 (Revised):
 SL-12 - Virginia
 SL-13 - North Carolina
 SL-20 - Texas (Coastal Area).

WL-436 - Fur Catch in the United States, 1960, 3 pp., processed, June 1961.

List of Special Scientific Reports - Wildlife-Nos. 1-54,
 3 pp., 1960.

Selected List of Fish and Wildlife Materials for Conservation Education, 2 pp.

Sep. No. 627 - Some Factors Influencing Maine Lobster Landings.

Sep. No. 628 - Development of a Thread-Herring Fishery in the Gulf of Mexico.

Equipment Note No. 10 - A Sea Sled to Towing Vessel Communication Method.

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-7	- Mexican Fisheries, 1960.
MNL-8	- Portugal's Fisheries Statistical Report, 1960.
MNL-26	- Taiwan Fisheries in 1960.
MNL-56	- Norwegian Fisheries, 1960.

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

(Baltimore) Monthly Summary--Fishery Products, May, June, and July 1961, 8 pp. each. (Market News Serv-

ice, U. S. Fish and Wildlife Service, 400 E. Lombard 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 years; and wholesale prices on the Baltimore market; for the months indicated.

California Fishery Products Monthly Summary, Part I--Fishery Products Production and Market Data, June 1961, 15 pp. (Market News Service, U. S. Fish and Wildlife Service, Post Office Bldg., San Pedro, Calif.) California cannery receipts of tuna and tuna-like 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 imports; canned fish and frozen shrimp prices; ex-vessel prices for cannery fish; American Tuna Boat Association auction sales; Oregon and Washington receipts (domestic and imports) of fresh and frozen tuna and tunalike fish; for the month indicated.

Chemical Control of POLYDORA WEBSTERI and Other Annelids Inhabiting Oyster Shells, by Clyde L. MacKenzie, Jr., and L. W. Shearer, 7 pp., illus., processed. (Reprinted from Proceedings of the National Shellfisheries Association, vol. 50, 1961, pp. 105-111.) U. S. Bureau of Commercial Fisheries, Biological Laboratory, Milford, Conn.

(Chicago) Monthly Summary of Chicago's Fresh and Frozen Fishery Products Receipts and Wholesale Market Prices, July 1961, 13 pp. (Market News Service, U. S. Fish and Wildlife Service, 565 W. Washington St., Chicago 6, Ill.) Receipts at Chicago by species and by states and provinces for fresh- and salt-water fish and shellfish; and wholesale prices for fresh and frozen fishery products; for the month indicated.

The Effects of Salt Solutions of Different Strengths on Oyster Enemies, by L. W. Shearer and C. L. MacKenzie, Jr., 7 pp., processed. (Reprinted from Proceedings of the National Shellfisheries Association, vol. 50, 1961, pp. 97-103.) U. S. Bureau of Commercial Fisheries, Biological Laboratory, Milford, Conn.

The Geographic Distribution of the Shrimp of Northwest Mexico, and the Problem of the Fixed Fishing Gears--Traps (Discussion, Resume, Conclusions), by Hector Chapa Saldana, 52 pp., processed, 1956. (Translated from Spanish La Distribucion Geografica de los Camarones del Noroeste de Mexico, y el Problema de las Artes Fijas de Pesca, pp. 49-84.) Biological Laboratory, Bureau of Commercial Fisheries, U. S. Fish and Wildlife Service, Galveston, Tex., September 22, 1960.

Gulf Monthly Landings, Production, and Shipments of Fishery Products, June 1961, 8 pp. (Market News Service, U. S. Fish and Wildlife Service, 609-611 Federal Bldg., New Orleans 12, La.) Gulf States shrimp, oyster, finfish, and blue crab landings; crab meat production; LCL express shipments from New Orleans; Gulf menhaden landings and production of meal, solubles, and oil; wholesale prices of fish and shellfish on the New Orleans French Market; fishery imports at Port Isabel and Brownsville, Tex., from Mexico; and sponge sales; for the month indicated.

Inheritance of Shell Markings and Growth in the Hard Clam, VENUS MERCENARIA, by Paul E. Chanley, 7 pp., illus., processed. (Reprinted from Proceedings of the National Shellfisheries Association, vol. 50, 1961, pp. 163-169.) U. S. Bureau of Commercial Fisheries, Biological Laboratory, Milford, Conn.

Monthly Summary of Fishery Products Production in Selected Areas of Virginia, North Carolina, and Maryland, July 1961, 4 pp. (Market News Service, U. S. Fish and Wildlife Service, 18 So. King St., Hampton, Va.) Fishery landings and production for the Virginia areas of Hampton Roads, Lower Northern Neck, and Eastern Shore; the Maryland areas of Crisfield, Cambridge, and Ocean City; and the North Carolina areas of Atlantic, Beaufort, and Morehead City; together with cumulative and comparative data; for the month indicated.

New England Fisheries--Monthly Summary, June 1961, 22 pp. (Market News Service, U. S. Fish and Wildlife Service, 10 Commonwealth Pier, Boston 10, Mass.) Reviews the principal New England fishery ports, and presents food fish landings by ports and species; industrial fish landings and ex-vessel prices; imports; cold-storage stocks of fishery products in New England warehouses; fishery landings and ex-vessel prices for ports in Massachusetts (Boston, Gloucester, New Bedford, Provincetown, and Woods Hole), Maine (Portland and Rockland), Rhode Island (Point Judith), and Connecticut (Stonington); frozen fishery products prices to primary wholesalers at Boston, Gloucester, and New Bedford; and landings and ex-vessel prices for fares landed at the Boston Fish Pier and sold through the New England Fish Exchange; for the month indicated.

New York City's Wholesale Fishery Trade--Monthly Summary for June 1961, 18 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, imports entered at New York City, primary wholesaler prices for frozen products, and marketing trends; for the month indicated.

Production of Fishery Products in Selected Areas of Alabama, Florida, Louisiana, Mississippi, and Texas, 1960, by Peter DiMarco, 42 pp., processed, August 4, 1961. (Available free from the U. S. Fish and Wildlife Service, 609-611, Federal Bldg., 600 South St., New Orleans 12, La.) Part I reports on trends and conditions in Gulf Coast fisheries during 1960 and gives a resume of the individual fisheries. For the shrimp fishery, a detailed account is presented of total landings by states, extent of coverage of landings, composition of shrimp landings by species and sizes, prices, canning, imports, cold-storage stocks, and general trends and developments. Discusses production and market conditions for the oyster and blue crab fisheries, as well as imports of fresh and frozen fish and shellfish. Part II includes shrimp closed seasons in effect in the Gulf States during 1960, minimum shrimp size regulations, conversion factors and container capacities, and shrimp sizes. The second part also contains statistical tables showing total fishery products landings; crab meat production by areas and months; fishery imports through the New Orleans and Morgan City, La., Customs Districts and Port Isabel

and Brownsville, Tex.; and LCL express shipments from New Orleans for 1960 by months and destination. Also includes tables showing monthly range of wholesale prices of fishery products on the New Orleans French Market; Gulf States weekly oyster and shrimp packs, 1959/60 season and packs by season 1955-60; summary of Gulf shrimp landings for selected areas, 1959-60 and 5-year averages; and fishery products market classifications in the Gulf area.

(Seattle) Washington, Oregon, and Alaska Receipts and Landings of Fishery Products for Selected Areas and Fisheries, Monthly Summary, June and July, 1961, 9 pp. each. (Market News Service, U. S. Fish and Wildlife Service, Pier 42 South, Seattle 4, Wash.) Includes landings and local receipts, with ex-vessel and wholesale prices in some instances, as reported by Seattle and Astoria (Oreg.) wholesale dealers; shipments of fishery products; also Northwest Pacific halibut landings; and Washington shrimp landings; for the month indicated.

THE FOLLOWING ENGLISH TRANSLATIONS OF FOREIGN LANGUAGE ARTICLES ARE AVAILABLE ONLY FROM THE U. S. FISH AND WILDLIFE SERVICE BIOLOGICAL LABORATORY, HONOLULU, HAWAII:

Families of Fishes New to the Antarctic (Communication 1), by A. P. Andriiashev, 9 pp., illus., processed. (Translated from Russian Zoologicheskii Zhurnal, Academy of Sciences of the USSR, vol. 39, no. 2, 1960, pp. 244-249.)

The Utilization of a Submarine for Scientific Fisheries Research (Expeditions of the Submarine Severyanka), by V. P. Zaitsev and D. V. Radakov, 4 pp., processed, July 1961. (Translated from Russian Soviet Fisheries Investigations in North European Seas, 1960, pp. 463-465.)

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

"Applications of a Boat-Rigged Direct-Current Shocker on Lakes and Streams in West-Central Wisconsin," by Ludwig Frankenberger, article, Progressive Fish-Culturist, vol. 22, no. 3, 1960, pp. 124-128, processed, single copy 25 cents.

"Channel Catfish Culture in California, by G. E. Geibel and P. J. Murray, article, Progressive Fish-Culturist, vol. 23, no. 3, July 1961, pp. 99-105, processed, single copy 25 cents.

"A Collapsible Nylon Fish Trap for Pond Sampling," by Alfred Houser, article, Progressive Fish-Culturist, vol. 22, no. 3, 1960, pp. 129-133, processed, single copy 25 cents.

Fishery Statistics of the United States, 1959, by E. A. Power, Statistical Digest No. 51, 458 pp., illus., printed, \$2, 1961. The latest in a series of annual statistical reports on the fisheries of the United States contains data on the catch and ex-vessel value of fishery products, employment in the fisheries, quantity of gear operated, the number of fishing craft employed in the capture of fishery products, and certain information on the production and value of manufactured fishery products and byproducts. Historical fishery statistics in the report in-

clude data on the areas in the United States for which statistical surveys had been conducted from 1880 to 1959, inclusive. The catch of fishery products in all sections of the United States during 1959 totaled approximately 5.1 billion pounds, valued at \$346 million ex-vessel--an increase of 8 percent in quantity but a decrease of 7 percent in value as compared with 1958.

Menhaden continued to rank first in quantity among the species taken by United States fishermen, yielding a catch of 2.2 billion pounds--43 percent of the total landings. Landings were up in all areas with the yield in the Gulf States reaching a record of 752 million pounds, an increase of 70 percent over the 1958 catch in these States.

The 1959 catch of shrimp, amounting to 240 million pounds valued at \$58 million, yielded more revenue to United States fishermen than any other species. Large runs of brown shrimp in Louisiana and Mississippi during the late spring and early summer and off the Texas Coast in the late summer and early fall contributed chiefly to the increase. Despite heavier landings in 1959 the shrimp industry faced many problems, among which was the steady decline of retail prices, resulting in a 20-percent loss in total value as compared with 1958.

The salmon fishery in the four Pacific Coast States, in 1959, yielded a commercial catch of only 202 million pounds--the smallest during the century. Landings in Alaska were 39 percent less than in 1958; while the Oregon catch was down 35 percent, and Washington, 22 percent. However, large catches of chinook and silver in California raised that State's catch to 6.8 million pounds.

Reedville, Virginia, with landings of 324 million pounds, mainly menhaden, was the leading United States fish-landing port in 1959. For the first time, the catch of fish for industrial purposes and for animal feeding--2,753 million pounds--exceeded the quantity taken for human consumption--2,369 million pounds. Canned fishery products totaling 975 million pounds were packed in the United States, Puerto Rico, and American Samoa, yielding \$348 million. The production of fish meal and scrap amounted to 307 thousand tons--58 thousand tons more than in 1958. The production of fresh and frozen packaged fish fillets and steaks totaled 147.2 million pounds--a decrease of 8.6 million pounds as compared with the previous year. The value of fishery imports entered for consumption in 1959 was 12 percent greater than in the previous year, while the value of exports of domestic fishery products increased 43 percent. Important items received in considerably greater volume during 1959 were frozen tuna, shrimp, groundfish fillets, and canned tuna.

Biological information included provides detailed data on fluctuations in the commercial catch by species, locality, gear, and type of craft operated.

"Results of Planting Kokanee Salmon in Two Adirondack Mountain Lakes, New York," by Dwight A. Webster and William Flick, article, Progressive Fish-Culturist, vol. 22, no. 2, 1960, pp. 59-63, processed, single copy 25 cents.

"A Small Drag Net for Capture of Bottom Fish and Invertebrates," by S. U. Quadri, article, Progressive

Fish-Culturist, vol. 22, no. 2, 1960, pp. 90-91, processed, single copy 25 cents.

"A Unitized System of Water-Level and Fish-Population Control Structures for Spawning Sloughs," by Donald R. Franklin and Lloyd L. Smith, Jr., article, Progressive Fish-Culturist, vol. 22, no. 3, 1960, pp. 138-140, processed, single copy 25 cents.

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.

AIRPLANE SPOTTING:

"Directing Fishing Vessels to Herring Schools with Aircraft," by V. Maslov, article, Rybnoe Khoziaistvo, vol. 34, 1958, pp. 35-37, printed in Russian. Rybnoe Khoziaistvo, VNIRO Glavniproekta, pri Gosplanie SSSR, Moscow, U.S.S.R.

ALGAE:

An Algal Mass-Culture Unit for Feeding Marine Invertebrate Larvae, by B. Wisely and C. Purday, Technical Paper No. 12, 14 pp., illus., printed. Division of Fisheries and Oceanography, Commonwealth Scientific and Industrial Research Organization, Melbourne, Australia, 1961.

The Wonders of Algae, by Lucy Kavalier, 96 pp., illus., printed, \$3.50. Doubleday & Co., Garden City, N. Y. Describes generally marine and fresh-water algae, and tells young people about their space age uses.

AMINO ACIDS:

"The Chemical Composition of the Scent of Fresh Water Fish With Special Reference to Amines and Amino Acids," by H. Kleerekoper and J. A. Mogenssen, article, Zeitschrift fur Vergleichende Physiologie, vol. 42, 1959, pp. 492-500, printed in English. Zeitschrift fur Vergleichende Physiologie, Springer-Verlag, Neuheimer Landstr. 24, (17 a) Heidelberg, Germany.

"Composition of the Nonprotein-Bound Amino Acids in the Muscles of the River Lamprey," by Ghislaine Duchateau and Marcel Florin, article, Archives Internationales de Physiologie et Biochimie, vol. 65, 1957, p. 378, printed in French. Archives Internationales de Physiologie et Biochimie, Imprimerie H. Vaillant-Carmanne, S. A., 4 Place Saint-Michel, Liege, Belgium.

AUSTRALIA:

Trawl Fishes of the Great Australian Bight, by I. S. R. Munro and D. E. Kurth, Australian Fisheries Leaflet No. 1, 7 pp., illus., printed. (Reprinted from Fisheries Newsletter, vol. 19, no. 7.) Department of Primary Industry, Division of Fisheries and Oceanography, Canberra, Australia.

BACTERIOLOGY:

"Bacteriology for Frozen Food Processors," article, Frosted Food Field, vol. 32, February 1961, pp. 51-52, 54-56, printed. Frosted Food Field, Inc., 321 Broadway, New York 7, N. Y.

BELGIUM:

Rapport Annuel sur l'Evolution de la Flotte de Peche en 1960 (Annual Report of the Status of the Fishing Fleet in 1960), 43 pp., processed in French. Ministere des Communications, Administration de la Marine et de la Navigation Interieure, Brussels, Belgium.

BERMUDA:

Bermuda Fisheries Research Program, Final Report, August, 1958, by John E. Bardach, C. Lavett Smith, and D. W. Menzel, 64 pp., illus., printed. Bermuda Trade Development Board, Hamilton, Bermuda, 1958. Deals with the problems of whether and how a developing Bermuda fishing industry can satisfy the demands of a relatively large permanent population and an even larger number of visitors annually. The section on the present status of the fishery covers fishing grounds, fish stocks, methods of catching and marketing fish and shellfish, and their food value. The section on the future of Bermuda's fishery discusses unexploited resources--flying fish, snappers, and rough fish; and proposed organization of the fishery--subsidy, management practices, fishing centers, distribution, mechanization of vessels and gear, and biological research. Includes statistical tables showing results of red snapper test fishing, 1956/57; data on experiments with fish attractant; and organization of the fisheries on several Caribbean Islands.

BIBLIOGRAPHIES:

An Annotated Bibliography on the Uses of Statistics in Ecology--A Search of 31 Periodicals, by Vincent Schultz, TID-3908, 320 pp., processed, \$3. Office of Technical Information, U. S. Atomic Energy Commission, Washington, D. C., 1961. (For sale by the Office of Technical Services, U. S. Department of Commerce, Washington 25, D. C.)

BIOCHEMISTRY:

"Determination of Oxalic Acid in Fish Muscle," by Yoshitaka Yamazoe, article, Kagaku (Tokyo), vol. 29, 1959, p. 468, printed in Japan. Kagaku, Iwanami Shoten 2-3, Kanda-hitotsu bashi, Chiyoda-ku, Tokyo, Japan.

"Quantitative Determination of Glycogen and Lactic Acid in Fish Meat," by Janina Trawinska, article, Annales Universitatis Mariae Curie-Sklodowska Lublin-Polonia, Section DD, vol. 12, 1959, pp. 41-63, printed in Polish with English summary. Uniwersytet Marii Curie-Sklodowskiej Bivro Wydawnictw, Plac Stalinas, Lublin, Poland.

BIOLOGICAL RESEARCH:

"Connection Between Maturity, Size, and Age in Fishes," by Gunnar Alm, article, Report No. 40, 1959, pp. 5-145, printed in Swedish. Fishery Board of Sweden, Institute of Freshwater Research, Drottningholm, Sweden.

BRITISH GUIANA:

Onverwagt Brackish-water Fish Culture Station, British Guiana, 1960, Bulletin No. 3, 58 pp., illus., printed, BG\$1.00 (59 U. S. cents). Fisheries Division, Department of Agriculture, Georgetown, British Guiana, November 22, 1960. The establishment of an experimental and demonstration station for brackish-water fish culture was recommended by the International Bank for Reconstruction and Development in its report on the economic development of British Guiana in the early 1950's. The present report contains

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descriptions of the facilities and activities of the station, completed in 1959. The research program includes chemical and physical studies of water; and biological studies such as daily collections of fish fry and larvae and research on growth rates and ecological problems. The report also discusses operation of a smokehouse; fishing gear in use at the Station; and such problems as silting, control of predators, shrimp cultivation, and plankton blooms.

CALIFORNIA:

California Fish and Game, vol. 47, no. 3, July 1961, 75 pp., illus., printed, single copy 75 cents. California Fish and Game, 987 Jedsmith Dr., Sacramento 19, Calif. (For sale by the Printing Division, Documents Section, Sacramento 14, Calif.) Includes, among others, articles on: "Survival, Mortality and Movements of White Catfish and Brown Bullheads in Clear Lake, California," by George W. McCammon and Charles M. Seeley; "The Use of the Sediment Bottle Collector for Monitoring Polluted Marine Waters," by Donald J. Reish; "Age and Length Composition of the Sardine Catch Off the Pacific Coast of the United States and Mexico in 1958-59," by Robert S. Wolf and Anita Daugherty; and "The Distribution of the California Sea Otter," by Richard A. Boolootian.

CANADA:

Fisheries Statistics of Canada, 1959 (Ontario, Prairie Provinces, and Northwest Territories), 70 pp., printed in French and English, C\$1. Queen's Printer and Controller of Stationery, Ottawa, Canada, July 1961. Contains tables giving the value of the principal species of inland fish landed, 1952-59; quantity and value of landings by species and fisheries districts, 1958-59; capital equipment used in the primary fisheries operations; and the number of persons engaged in the fisheries. This information is presented separately for the provinces of Ontario, Manitoba, Saskatchewan, Alberta, and the Northwest Territories.

Journal of the Fisheries Research Board of Canada, vol. 18, no. 3, May 1961, 184 pp., illus., printed. Queen's Printer and Controller of Stationery, Ottawa, Canada. Contains, among others, these articles: "Spoilage of Fish in the Vessels at Sea. 7--Further Studies on Seasonal Variations in the Landed Quality of Guttled, Trawler-Caught Atlantic Cod and Haddock," by C. H. Castell and Jacqueline G. Giles; "Grading Fish for Quality. 4--Variations in the Relation between Trimethylamine Values and Grades for Guttled, Trawler-Caught Atlantic Cod and Haddock," by C. H. Castell, Maxine F. Elson, and Jacqueline G. Giles; "Observations on Post Mortem Biochemical Changes in Fish Muscle in Relation to Rigor Mortis," by N. Tomlinson and others; "Variability in Aerial Counts of Spawning Salmon," by Donald E. Bevan; "Preparation of Deoxynucleosides, Purine and Pyrimidine Bases and Deoxyribose 1-Phosphate from Deoxyribonucleic Acid Employing Salmon Enzyme Systems," by Abdul Mannan and H. L. A. Tarr; "A Comparison of Three Methods of Inactivating Lobster Claws," by D. G. Wilder and D. W. McLeese; "Dietary Marine Fish Oils and Cholesterol Metabolism. 3--The Comparative Hypocholesterolemic Activities of Fish Oil and Vitamin A," by J. D. Wood and J. Topliff; "Radio-

active Iron as a Fish Mark," by D. P. Scott; "Plasma Proteins of Coho Salmon, *Oncorhynchus kisutch*, as Separated by Zone Electrophoresis," by W. E. Vanstone and F. Chung-Wai Ho; "Influence of Size upon the Adaptation of Steelhead Trout (*Salmo gairdneri*) and Chum Salmon (*Oncorhynchus keta*) to Sea Water," by Arthur H. Houston; "Comparison of Largest Great Slave Lake Fish with North American Records," by J. J. Keleher; and "The Lake Trout of Lac la Ronge, Saskatchewan," by D. S. Rawson.

CANNING:

"Rapid Method for Determination of Tin in Canned Fish Products," by G. S. Akchurina and A. I. Cherkesov, article, Trudy Astrakhanskogo Tekhnicheskogo Instituta Rybnoi Promyshlennosti i Khozyaistva, no. 5, 1958, pp. 147-154, printed in Russian. Izdanie Tekhnicheskogo Instituta, Rybnoi Promyshlennosti i Khozyaistva Astrakhan, U. S. S. R.

CANS:

"Black Discoloration of Cans Containing Fish and Shellfish," by Kisaku Yamada and Mizuho Tanaka, article, Seikai-ku Suisan Kenkyusho Kenkyu, Hokoku, no. 17, 1959, pp. 1-13, printed in Japanese with English summary. Suisan-cho Seikai-ku, Suisan Kenkyusho, Marvo-Machi Nagasaki-shi, Japan.

CAVIAR:

"Slow Death Faces Russian Caviar Trade," article, Business Week, no. 1664, July 22, 1961, pp. 122-124, illus., printed. Business Week, McGraw-Hill Publishing Co., Inc., 330 W. 42nd St., New York 36, N.Y. Tells how nature, new hydro-power stations and irrigation projects, cutthroat Russian poachers, and river pollution are threatening the extinction of sturgeon in Soviet waters. Also includes data on the rise of sturgeon prices, competition in the caviar market, and Russia's limited hopes and plans for the future of the sturgeon fishing industry.

CHEMICAL CONTENT:

A Convenient Arrangement for the Determination of Trimethylamine in Fillets, by P. L. Hoogland, New Series Circular No. 3, 10 pp., illus., processed. Fisheries Research Board of Canada, Technological Station, Halifax, Nova Scotia, Canada, March 1956.

CHILE:

"La Industria Pesquera Chilena" (The Chilean Fishing Industry), article, Puntal, vol. 8, no. 87, June 1961, pp. 16-19, illus., printed in Spanish. Puntal, 21 San Fernando, Alicante, Spain.

COD:

"A Comparison of the Acid-Soluble Collagens from the Skin and Swim Bladder of the Cod," by E. Gordon Young and J. W. Lorimer, article, Archives of Biochemistry and Biophysics, vol. 92, January 1961, pp. 183-190, printed. Archives of Biochemistry and Biophysics, Academic Press Inc., 111 5th Ave., New York 3, N. Y.

"Merkeforsok pa Brisling i Fjordene Sor for Bergen i Juni-September 1960" (Tagging of Cod in the Bay South of Bergen, June-September 1960), by Kaare R. Gundersen, article, Fiskets Gang, vol. 47, no. 22, June 1, 1961, pp. 425-426, illus., printed in Norwegian. Fiskeridirektoratet, Radstu-
pllass 10, Bergen, Norway.

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COMMISSIONS:

Thirteenth Annual Report of the Pacific Marine Fisheries Commission for the Year 1960, 60 pp., illus., printed. Pacific Marine Fisheries Commission, 741 State Office Bldg., 1400 SW. 5th Ave., Portland 1, Oreg. Reports briefly the specific activities of the Pacific Marine Fisheries Commission during 1960 and presents a review of long-term developments in the fields of research, regulation, and coordination. Recommends that Congress set aside the Salmon River of Idaho, tributary of the Snake River, as a sanctuary for fish. Presents sections on commercial and sport salmon fisheries, the otter-trawl fishery, the Pacific Coast crab industry, and the shrimp and albacore fisheries. Also includes results of research on English and petrale sole, salmon tagging, and comparative hooking mortality between treble and single hooks.

COMMON MARKET:

"The Common Market Forges Ahead," by P. T. Eastham, article, Foreign Trade, vol. 116, no. 1, July 1, 1961, pp. 5-8, printed. Foreign Trade, Queen's Printer, Government Printing Bureau, Ottawa, Canada. This comprehensive review of progress made within the European Economic Community last year touches on all aspects of the Community's activities, with emphasis on the eventual achievement of economic integration.

COMPOSITION:

"Inorganic Chemical Constituents of Sea Fishes," by Noboru Imanishi, article, Records of Oceanographic Works in Japan, Spec. no. 3, 1959, pp. 135-139, printed. Japanese National Commission for UNESCO, 4-3 Kasumigaseki, Chiyoda-ku, Tokyo, Japan.

CONNECTICUT:

"A Preliminary List of the Fishes Found in the Fresh Waters of Connecticut," by Robert J. Behnke and Ralph M. Wetzel, article, Copeia, no. 2, June 29, 1960, pp. 141-143, printed. American Society of Ichthyologists and Herpetologists, 34th St. and Girard Ave., Philadelphia 4, Pa.

CONTAINERS:

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Utilization of Fish Liver Residues, by C. Gunasekera, Contribution No. 3, 4 pp., printed. (Reprinted from *Proceedings of the Indo-Pacific Fisheries Council, 8th Session, Section II, 1958, pp. 89-92.*) Fisheries Research Station, Colombo, Ceylon.

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Future Developments in the Production and Utilization of Fish Meal--Vol. I (Report of the International Meeting on Fish Meal, FAO, Rome, 20-29, March 1961), 38 pp., processed. Included are Appendix A--Officers of the Meeting, 2 pp.; Appendix B--The World Outlook for Fish Meal, 58 pp.; Appendix C--Fish Meal Production and Trade in the World, 67 pp.; Appendix D--Nutritional Aspects of Importance in the Analysis of the Market for Fish Meal, 31 pp.; Appendix E--Present-Day Use of Fish Meal and Autolysates as Livestock and Poultry Feed, 8 pp.; Appendix F--World Fish Meal Production and Trade, 47 pp.; Appendix G--The Medium-Term Outlook for Demand and Production of Pigmeat, Poultry Meat and Eggs in the Major Producing Areas, 3 pp.; Appendix H--Edible Fish Flour, 12 pp.; Appendix I--Addendum to Appendix H--Edible Fish

Flour, 5 pp.; Appendix J--Report of Working Party on Specifications for Fish Protein Concentrate (Committee B), 4 pp.; Appendix K--Selected Aspects of Existing Plants Producing Fish Protein Concentrates, Fish Flour, Fish Meal for Human Consumption, 4 pp.; Appendix L--Edible Fish Meal and Fish Flour: Suggestions for International Action, 9 pp.; Appendix M--Statistical Tables, 11 pp.; Appendix N--List of Participants and Secretariat, 19 pp.; and Appendix O--List of Documents, 4 pp., Food and Agriculture Organization of the United Nations, Viale delle Terme di Caracalla, Rome, Italy.

FISH OIL:

"Preparation of a Coating Material by Chlorination of Fish Oil. VIII--Polymerization of Fish Oil With Di-T-Butyl Peroxide," by Kosaku Suzuki, article, *Bulletin of the Japanese Society of Scientific Fisheries*, vol. 26, August 1960, pp. 835-838, printed in Japanese with English summary. Japanese Society of Scientific Fisheries, 6-chome, Shiba Kaigandori, Minato-ku, Tokyo, Japan.

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Chesapeake Bay Fishing Harbors Economic Study, Maryland and Virginia, 347 pp., illus., processed. Corps of Engineers, U. S. Army, Board of Engineers for Rivers and Harbors, 2nd and Q Sts. SW, Washington 25, D. C., January 1961. The planning and construction of harbors and channels to serve the commercial fisheries of Chesapeake Bay, Maryland, and Virginia, is a part of the water resources development responsibility of the U. S. Corps of Engineers. The primary purpose of this study is to serve as an aid in preparation of future survey reports concerning specific localities, to determine whether additional harbor and channel improvements are economically justified. Contains basic information on the nature and magnitude of the commercial fishery activities to be served and on the harbors and channels available for this purpose. Includes data relative to biological, technological, and marketing aspects of the fisheries. Presents information as to costs and effects of harbor improvements already accomplished. Much of the data, not previ-

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ously available, was obtained directly from watermen and others engaged in fishery activities, by means of standardized questionnaires and personal field interviews.

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Report on the FAO Technical Meeting on Credit for Fishery Industries, Paris, 17-22 October 1960, by R. Hamlish, 79 pp., processed. Food and Agriculture Organization of the United Nations, Viale delle Terme di Caracalla, Rome, Italy.

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Report to the Government of Burma on the Development of Food Research and Food Industry in Burma, by H. Wittfogel, FAO Report No. 1378, 30 pp., 1961.

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"Pour l'Approvisionnement du Marche Metropolitain: Necessite d'un Juste Equilibre Entre le Germon et l'Albacore" (Supplying the Home Market: Need for a Balance Between Yellowfin and Albacore); La Situation de la Conserverie sur le Marche du Thon (The Tuna Market and the Status of the Canning Industry), by A. de Torquat; "Le Comite du Thon a Fait Preuve de Sagesse en Reconduisant le Systeme de l'Eventail des Prix" (Tuna Committee Proves the Wisdom in Renewing the System of a Price Range); "La Campagne de Prospection Thoniere du Navire Oceanographique *Thalassa* de l'Institut Scientifique et Technique des Peches Maritimes" (Tuna Exploratory Cruise of the Oceanographic Vessel *Thalassa* of the Scientific and Technical Institute of Maritime Fisheries); and "Le Rapport de l'Expedition Oceanographique Norvegiene Devant les Cotes de l'Afrique Occidentale" (The Report of the Norwegian Oceanographic Expedition Along the Coasts of Western Africa), articles, *La Peche Maritime*, vol. 40, no. 1,000, July 1961, pp. 497-500, 502-511, illus., printed in French. La Peche Maritime, 190 Blvd. Haussman, Paris, France.

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"Latin American Free Trade Association Now in Operation," by A. J. Poirier, article, *Foreign Commerce Weekly*, vol. 66, no. 2, July 10, 1961, pp. 25, 42, 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.) The Latin American Free Trade Association, established under a treaty signed by Argentina, Brazil, Chile, Mexico, Paraguay, Peru, and Uruguay at Montevideo on February 18, 1960, and ratified on May 2, 1961, by all countries except Paraguay, is now legally in operation for the 6 countries which have deposited their instruments of ratification. At the 9th session of the United Nations Economic Commission for Latin America (ECLA), held in Santiago, Chile, May 4-15, much of the work related to the achievements of and plans for LAFTA and advent of the Central American Common Market.

FREEZE-DRYING:

"Freeze-Dries for World Market," article, *Food Engineering*, vol. 33, no. 7, July 1961, pp. 37-39, illus., printed, single copy \$1. Food Engineering,

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Chilton Company, Chestnut and 56th Sts., Philadelphia 39, Pa. An Irish firm has recently commenced operation of a \$700,000 plant for freeze-drying meats, fish, vegetables, and fruits. This article explains in detail the process used at that plant. Since the weight of the finished products is only a fraction of that of the food before freezing, economy in shipping is expected to compensate for the relatively high processing cost. Other advantages of freeze-dried foods are palatableness and long-keeping quality.

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La Peche Maritime, vol. 40, no. 999, June 1961, 164 pp., illus., printed in French. La Peche Maritime, 190, Boulevard Haussmann, Paris, France. A special issue, devoted to frozen fish, includes, among others, the following articles: "La Congelation et Ses Limites" (Freezing and Its Limitations), by L. Soublin, and "Progres de la Vente du Poisson Surgele en France" (Progress in the Sale of Frozen Fishery Products in France), by A. Kiener. Also contains, under the heading of "foreign," articles on: "Le Developpement de l'Industrie du Poisson Surgele en Allemagne" (The Development of the Frozen Fish Industry in Germany), by Walter W. Schwedke; "Production, Distribution et Consommation du Poisson Surgele en Norvege" (Production, Distribution, and Consumption of Frozen Fish in Norway), by Rolf Kirkvaag; "Organisation du Marche du Poisson Surgele en Belgique" (Organization of the Frozen Fish Market in Belgium), by A. Verhavert; "Essor de la Vente du Poisson Surgele en Grande-Bretagne" (Soaring of Frozen Fish Sales in Great Britain), by G. B. Butcher; and "La Chaine du Froid et le Commerce du Poisson Surgele en Italie" (The Cold Chain and the Frozen Fish Trade in Italy), by Cesare de Felip. In addition, includes several articles under the headings "Freezing at Sea," "Transportation," and "Selling."

FROZEN FOODS:

"Frozen Precooked Foods Need Special Sanitation Care," by F. S. Thatcher, article, Food in Canada, vol. 20, 1960, pp. 24-27, printed. Food in Canada, Maclean-Hunter Publishing Co. Ltd., 481 University Ave., Toronto 2, Canada.

GATT:

"The General Agreement on Tariffs and Trade: An Article-by-Article Analysis in Layman's Language," by Honore M. Catudal, article, The Department of State Bulletin, vol. 44, no. 1148, June 26, 1961, pp. 1010-1020; vol. 45, no. 1149, July 3, 1961, pp. 35-42, printed, single copy 25 cents. Office of Public Services, Bureau of Public Affairs, U. S. Department of State, Washington, D. C. (For sale by the Superintendent of Documents, U. S. Printing Office, Washington 25, D. C.) In an introductory statement, the author explains the organization of the General Agreement on Tariffs and Trade (GATT), its genesis and development, the trade agreements authority, and the structure of the General Agreement and the Protocol of Provisional Application. There follows a short explanation of each of the 35 articles of the GATT. There are now 39 countries which are full contracting parties to the Agreement. The schedules of tariff concessions include about 60,000 items in the tariff classifications of the contracting parties and cover more than half of the world's total foreign trade.

GERMAN FEDERAL REPUBLIC:

Jahresfischfachheft 1960 zur 2. Fischwirtschafts-Ausstellung in Kiel (The 1960 Yearly Issue on Fisheries, prepared for the Second Exhibition on Fishery Economics, Held at Kiel, June 18-26, 1960), 74 pp., illus., printed in German, DM 3 (about 75 U. S. cents). Fette, Seifen, Anstrichmittel, Industrieverlag von Hernhaußen K. G., Rodingsmarkt 24, Hamburg 11, Germany.

GULF OF MEXICO:

Gulf Research Report, vol. 1, no. 1, April 1961, 61 pp., illus., printed. Gulf Coast Research Laboratory, Ocean Springs, Miss. The first issue of a new journal devoted primarily to publication of data on marine sciences, chiefly of the Gulf of Mexico and adjacent waters. Contains an article, "The Marine and Brackish Water Mollusca of the State of Mississippi," by Donald R. Moore.

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"Biological Characteristics and Conditions for the Use of Purse Seines in North Atlantic Herring Fisheries," by B. P. Manteifel' and L. A. Chaianeva, article, Trudy Soveshchaniia, no. 10, 1960, pp. 98-105, printed in Russian. Trudy Soveshchaniia, Akademiia Nauk SSSR, Ikhtiologicheskaiia Komissiiia, Moscow, U.S.S.R.

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"Specific Features and Characteristics of Commercially Important Fall and Winter Concentrations of the Atlanto-Scandinavian Herring," by I. G. Iudanov, article, Trudy Soveshchaniia, no. 10, 1960, pp. 59-65, printed in Russian. Trudy Soveshchaniia, Akademiia Nauk SSSR, Ikhtiologicheskaiia Komissiiia, Moscow, U. S. S. R.

HERRING MEAL:

"The Effect of Storage Temperature and Antioxidant Treatment on the Chemical and Nutritive Characteristics of Herring Meal," by B. E. March, J. Biely, and C. Goudie, article, Journal of the American Oil Chemists' Society, vol. 38, February 1961, pp. 80-84, printed. American Oil Chemists' Society, 35 E. Wacker Dr., Chicago 1, Ill.

HONDURAS:

Preliminary Report on the Marine Fisheries of Honduras, by C. P. Idyll and William Saenz, 24 pp.,

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INTERNATIONAL COMMISSIONS:

List of Vessels over 50 Gross Tons Fishing in the ICNAF Convention Area in 1959, Serial No. 781, printed. International Commission for the Northwest Atlantic Fisheries, Forrest Bldg., Carleton St., Halifax, N. S., Canada, 1961. Presents a summary of number and tonnage of vessels over 50 tons fishing in the Northwest Atlantic Fisheries Convention Area in 1959, by country and type of vessel. The number of vessels increased from 799 in 1953 to 872 in 1956, and to 1,162 in 1959. The increase in tonnage was even larger. The greater number and tonnage of vessels reported was caused by several new countries having begun to fish in the Area since 1956 and by the more detailed information on the vessels submitted in 1959. Otter trawls are by far the most common gear used in the Area. Of the 14 countries reporting, 8 have used otter trawls exclusively. In the case of only 3 countries (Denmark, Norway, and Portugal), the other vessels (liners and dories) predominate. The term "liner" applies mainly to long-liners but also to a few hand-liners.

(North Pacific Fur Seal Commission) Annual Report for the Fiscal Year Ending June 30, 1959, 83 pp., processed. Secretary, North Pacific Fur Seal Commission, Department of the Interior, Washington 25, D. C., January 1960.

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"The Italian Market for Fish," by M. S. Strong, article, Foreign Trade, vol. 116, no. 3, July 29, 1961, pp. 20-22, printed, single copy 20 Canadian cents. Foreign Trade, Queen's Printer, Government Printing Bureau, Ottawa, Canada. Despite policies designed to increase domestic production, Italy must import large quantities of fish to meet demands of a growing population. This article discusses official policies on the fisheries, the importance of the co-operatives in the industry, the distribution and consumption of fresh and frozen fish and shellfish, the effect of the Common Market on tariffs, and opportunities for expansion of the fishery products market by foreign firms. Includes the common external tariff rates on fish imports into EEC countries.

JAPAN:

Survey of Market Conditions and Principal Fishery Products Prepared by the Fishery Agency, 76 pp., printed in Japanese. Fisheries Agency, Ministry of Agriculture and Forestry, Kasumigaseki, Chiyodaku, Tokyo, Japan.

Technical Report of Fishing Boat, no. 15, 161 pp., illus., printed in Japanese with English abstracts. Fishing Boat Laboratory, Production Division, Fisheries Agency, Ministry of Agriculture and Forestry, Kasumigaseki, Chiyodaku, Tokyo, Japan, March 1961.

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Labrador Fishing, Laboratory Leaflet No. 26, 9 pp., illus., processed. Ministry of Agriculture, Fisheries and Food, Fisheries Laboratory, Lowestoft, England, January 1961.

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Yellow Discoloration in Frozen Lobster Meat, by W. J. Dyer and D. C. Horne, New Series Circular No. 2, 6 pp., illus., processed. Fisheries Research Board of Canada, Atlantic Fisheries Experimental Station, Halifax, Nova Scotia, Canada, June 1953.

MARINE FUNGI:

Thalassiomycetes. I--Principles of Delimitation of the Marine Mycota With the Description of a New Aquatically Adapted Deuteromycete Genus, by Royall T. Moore and Samuel P. Meyers, Contribution No. 295, 6 pp., illus., printed. (Reprinted from Mycologia, vol. 51, no. 6, November-December 1959, pp. 871-876.) Marine Laboratory, University of Miami, #1 Rickenbacker Causeway, Miami 49, Fla.

MARKETING:

Food is a Bargain, Marketing Bulletin No. 18, 14 pp., illus., printed, 10 cents. Marketing Economics Division, Economic Research Service, U. S. Department of Agriculture, Washington, D. C., May 1961. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.) Presents, in booklet form, the story of food economics from farmer to consumer. It describes the changes that took place in our food bill between 1947-49 and 1960--and what happens today to the money we spend in the market for foods produced on American farms. Illustrated with cartoon drawings and printed in large type, this bulletin will be of special interest to students.

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"General Remarks on the Mediterranean Deep-Sea Fishes," by Enrico Tortonese, article, Bulletin de L'Institut Oceanographique, no. 1167, February 10, 1960, pp. 1-14, printed in English with French summary. Bulletin de L'Institut Oceanographique, Fondation Albert I^{er}, Prince de Monaco, Monaco.

MIDWATER TRAWLING:

"Experimental Fishing for Herring with Midwater Trawls in the North Atlantic by Vessels of the SRT Type," by B. S. Solov'ev and A. A. Degtiarev, article, Rybnoe Khoziaistvo, vol. 34, 1958, pp. 21-25, printed in Russian. Rybnoe Khoziaistvo, VNIRO Glavniproekta, pri Gosplanie SSSR, Moscow, U.S.S.R.

NORWAY:

"Fiskernes Arsinnokter i 1959" (Annual Report on Fishermen in 1959), by Georg Oppedal, article, Fiskets Gang, vol. 47, no. 21, May 25, 1961, pp. 402-413, printed in Norwegian. Fiskets Gang, Fiskeridirektoratet, Radstuplass 10, Bergen, Norway.

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"Biology of Rosefish and Outlook for Its Fisheries in Seas of the North Atlantic," by V. I. Travin, article, Trudy Soveshchaniia, no. 10, 1960, pp. 125-230, printed in Russian. Trudy Soveshchaniia, Akademiia Nauk SSSR, Ikhtiologicheskaiia Komissiiia, Moscow, U.S.S.R.

OCEANOGRAPHY:

Oceanography, by Maurice Ewing and others, 654 pp., illus., printed, \$14.75. American Association for the Advancement of Science, 1515 Massachusetts Ave. NW., Washington 5, D. C. Invited lectures presented at the International Oceanographic Congress held in New York, August 31-September 12, 1959, covering history of oceans, marine life, boundaries of the sea, and cycles of organic and inorganic substances in the ocean.

Studies of Luminescent Flashing in Phosphorescent Bay, Puerto Rico, and in the Gulf of Naples Using a Portable Bathyphotometer, by George L. Clarke and Lloyd R. Breslau, Contribution No. 1090, 35 pp., illus., printed in English with French summary. (Reprinted from Bulletin de L'Institut Oceanographique, Monaco, no. 1171, March 4, 1960.) Woods Hole Oceanographic Institution, Woods Hole, Mass.

OREGON:

Commercial Fishing Laws, State of Oregon, 1959-1960, 180 pp., printed. Oregon Fish Commission, 307 State Office Bldg., 1400 SW 5th Ave., Portland1, Oreg. A compilation of the laws of the State of Oregon relating to the protection and propagation of fish and shellfish. Contains chapters on application, administration, and enforcement of commercial fishing laws; compacts with other states; and licenses and pass books. Also includes sections on general protective regulations; local and special regulations; and regulations pertaining to the packing of fish and manufacture of fishery products.

OYSTERS:

"Plant Shells for Oysters," by Ednard Waldo, article, Louisiana Conservationist, vol. 13, nos. 7-8, July-August 1961, pp. 10-12, illus., printed. Louisiana Conservationist, Wild Life and Fisheries Bldg., 400 Royal St., New Orleans 16, La. The author describes how shells, which are sprayed hydraulically from barges, are planted in scientifically located areas where there are firm enough bottoms to sustain their weight and where the proper environment for oyster growth has been established.

"Les Prodissoconques (Coquilles Larvaires) des Ostreides Vivants" (The Hinges--Larval Shells--of Living Oysters), by Gilbert Ranson, article, Bulletin de L'Institut Oceanographique, no. 1183, June 7, 1960, pp. 1-41, illus., printed in French with English summary. Bulletin de L'Institut Oceanographique, Fondation Albert I^{er}, Prince de Monaco, Monaco.

PASSAMAQUODDY TIDAL POWER PROJECT:

International Passamaquoddy Fisheries Board Report to International Joint Commission, 64 pp., illus., processed. International Joint Commission, United States and Canada, Washington, D. C., October 1959.

PEARLING:

"The 1960/61 Survey of Pearling Grounds," by Vernon Wells, article, Fisheries Newsletter, vol. 20, no. 6, June 1961, pp. 25, 27, printed. Fisheries Newsletter, Commonwealth Director of Fisheries, Department of Primary Industry, Canberra, Australia.

PESTICIDES:

"Are the Insecticides Required for Insect Control Hazardous to Aquatic Life?" by C. H. Hoffman, article, Agricultural Chemicals, vol. 14, no. 6, 1959, pp. 34-36, printed. Agricultural Chemicals, Industry Publications, Inc., Box 31, Caldwell, N. J.

"Pollutional Effects of Organic Insecticides," by Clarence M. Tarzwell, article, Transactions of the 24th North American Wildlife Conference, pp. 132-142, printed. Wildlife Management Institute, Wire Bldg., Washington 5, D. C., 1959.

PHILIPPINES:

"Marine Fishes in Philippine Rivers and Lakes," by Albert W. C. T. Herre, article, Philippine Journal of Science, vol. 87, no. 1, 1958, pp. 65-88, printed. Philippine Institute of Science and Technology, Department of Agriculture and Natural Resources, Manila, Philippines.

POLLUTION:

"The Effect of Sulphite Waste Waters on Death of Fish," by E. Marczek and J. Zielinski, article, Gaz, Woda i Technika Sanitarna, vol. 31, 1957, pp. 45-49, printed in Polish. Ul. Czackiego 3/5, Warsaw, Poland.

Pollution-Caused Fish Kills in 1960, Public Health Service Publication No. 847, 22 pp., printed. Public Health Service, U. S. Department of Health, Education, and Welfare, Washington 25, D. C., 1961. The initial summary of the cooperative Federal-State fish kill project shows that in the first 7 months, June-December 1960, a total of 286 reports were received from 36 states showing a total of more than 6 million fish killed. Industrial wastes were the number one killer, with agricultural poisons lagging far behind. This report discusses in detail the method used in handling data, the type of coverage, the data obtained, sources of pollution, other information submitted, general evaluation of the findings, and a sampling of respondents' comments. Included are a sample of the questionnaire used and statistical tables compiled from data obtained in the survey.

Pollution Problems Along the Gulf Coast, by Gordon Gunter, 5 pp., printed. (Reprinted from Transactions of the Second Seminar on Biological Problems in Water Pollution, April 20-24, 1959, Cincinnati, Ohio.) U. S. Public Health Service, Department of Health, Education, and Welfare, Washington 25, D. C.

"A Review of the Literature of 1958 on Sewage Waste Treatment, and Water Pollution," by H. Heukelekian and others, article, Sewage and Industrial Wastes,

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vol. 31, no. 7, 1959, pp. 763-803, printed. Federation of Sewage and Industrial Wastes Associations, 4435 Wisconsin Ave. NW., Washington 16, D. C.

PORTUGAL:

Boletim da Pesca, vol. 13, no. 71, June 1961, 118 pp., illus., printed in Portuguese. Boletim da Pesca, R. S. Bento, 644, 4^o-Esq., Lisbon, Portugal. Contains, among others, the following articles: "Contribuicao para o Conhecimento da Biologia dos Trachurus de Angola" (Contribution to the Study of the Biology of the Trachurus of Angola), by Pedro da Franca and Maria de Lurdes Paes da Franca; and "XVII Congresso das Pescas e Industrias Maritimas, Lorient, 4 a 9 de Outubro de 1960" (XVII Congress on Fisheries and Marine Industries, Lorient, October 4-9, 1960), by J. Le Garrec.

Gremio dos Armadores de Navios da Pesca do Bacalhau, Relatorio e Contas do Exercicio de 1960 e Orcamento para 1961 (Cod Fishing Vessel Owners' Guild, Statement of Operations for 1960 and Budget for 1961), 24 pp., printed in Portuguese. Comissao Revisora de Contas, Lisbon, Portugal, February 18, 1961.

Gremio dos Armadores da Pesca da Baleia, Relatorio e Contas do Exercicio de 1960 e Orcamento para 1961 (Whaling Vessel Owners' Guild, Report of Operations in 1960 and Budget for 1961), 32 pp., illus., printed in Portuguese. Comissao Revisora de Contas, Lisbon, Portugal, March 2, 1961.

Gremio dos Armadores da Pesca da Sardinha, Relatorio e Contas do Exercicio de 1960 e Orcamento para 1961 (Sardine Fishing Vessel Owners' Guild, Statement of Operations for 1960 and Budget for 1961), 20 pp., printed in Portuguese. Comissao Revisora de Contas, Lisbon, Portugal, January 27, 1961.

PRESERVATION:

"Experiences in the Preservation at Sea of Herring for Fish Meal and Oil Industry. I--Drainage before Preservation in Partitioned Fish Holds. II--Use of Preservatives and Results Obtained," by E. Arnesen, article, Fiskaren, vol. 36, 1959, pp. 1, 7, printed in Norwegian. Fiskaren, Norges Fiskarlag, 6 Strandkaien, Bergen, Norway.

PROTEINS:

"Comparison of Physiological Actions of Inactive Protein Crystals Obtained from Crude Tuna-Fish Insulin Powder and Crystalline Glucagon," by Kakuma Nagasawa and others, article Eisei Shikenjo Hokoku, no. 76, 1958, pp. 321-322, printed in Japanese. Kokuritsu Eisei Shikenjo, Yoda, Setagaya-ku, Tokyo, Japan.

Plasma Proteins in the Blood of Fishes from the Gulf of Mexico, by L. L. Sulya, B. E. Box, and Gordon Gunter, 3 pp., illus., printed. (Reprinted from American Journal of Physiology, vol. 200, no. 1, January 1961, pp. 152-154.) American Journal of Physiology, 102 Mezes Hall, University of Texas, Austin, Tex.

"Proteins of Shellfish. VI--Paper-Electrophoretic Behavior of Myosin Fraction of Adductor Muscle of

the Clam, Meretrix Meretrix," by Haruo Baba, article, Annual Report of the National Institute of Nutrition, 1959, p. 54, printed. National Institute of Nutrition, Toyamacho, Tokyo, Japan.

RADIOACTIVE WASTE:

"Control of Radioactive Wastes," by A. S. Flemming, article, Public Health Report, no. 74, 1959, pp. 883-884, printed. U. S. Public Health Service, Department of Health, Education and Welfare, Washington 25, D. C.

The Need for Biological Monitoring of Radioactive Waste Streams, by R. F. Foster, Fifth Nuclear Engineering and Science Congress (Cleveland, Ohio, 1959), Preprint V-6, 20 pp., printed. Engineering Joint Council, 29 W. 39th St., New York 18, N. Y.

RADIOACTIVITY:

Radioactive Materials in Food and Agriculture (Report of an FAO Expert Committee, Rome, 30 November-11 December 1959), FAO Atomic Energy Series No. 2, 132 pp., illus., printed, \$1.50. Food and Agriculture Organization of the United Nations, Viale delle Terme di Caracalla, Rome, Italy, 1960. (For sale by Columbia University Press, International Documents Service, 2960 Broadway, New York 27, N. Y.)

SAFETY AT SEA:

International Conference on Safety of Life at Sea, 1960 (Final Act of Conference with Annexes Including the International Convention for the Safety of Life at Sea, Signed in London, 17 June, 1960), 513 pp., printed in French and English, £1 1s. (about US\$2.95). Her Majesty's Stationery Office, York House, Kingsway, London WC2, England, 1960.

SALMON:

Age of Pink Salmon and the Pattern of Their Fluctuations in Abundance, by A. P. Vedenskii, OTS 60-21150, 114 pp., illus., processed, \$1.25. (Translated from Russian, Izvestiya Tikhookeanskogo Nauchno-Issledovatel'skogo Instituta Rybnogo Khozyaistva i Okeanografii, vol. 41, 1954, pp. 111-195.) Office of Technical Services, U. S. Department of Commerce, Washington 25, D. C., 1960.

"Artificial Spawning Channel Studied," article, Outdoor California, vol. 22, no. 6-7, June-July 1961, pp. 16-17, illus., printed. Outdoor California, Department of Fish and Game, 722 Capitol Ave., Sacramento 14, Calif. Describes an artificial spawning channel located in California about four miles below Pardee Dam on the Mokelumne River. Ordinarily, when a dam blocks off a spawning area a hatchery is constructed to mitigate for the loss of the spawning area. "In certain situations," states the author, "it is believed that spawning channels may provide a more efficient and more economical method of salmon culture than hatcheries. Also, fish produced from a channel may have a better survival in the later stages of their life cycle."

"Biochemical Studies on Sockeye Salmon During Spawning Migration. XII--Liver Glycogen," by Violet M. Chang and D. R. Idler, article, Canadian Journal of Biochemistry and Physiology, vol. 38, June 1960, pp. 553-558, printed. Canadian Journal of Biochemistry and Physiology, National Research Council, Ottawa, Canada.

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

"Kodiak Bear-Red Salmon Relationships at Karluk Lake, Alaska," by Webster K. Clark, article, Transactions of the 24th North American Wildlife Conference, March 2, 3, and 4, 1959, pp. 337-345, printed. Wildlife Management Institute, Wire Bldg., Washington 5, D. C., 1959.

"A Possible Source of Error in Assessing the Survival of Pacific Salmon Eggs by Redd Sampling," by J. G. McDonald, article, The Canadian Fish Culturist, Issue 26, March 1960, pp. 27-30, printed. The Canadian Fish Culturist, Department of Fisheries of Canada, Ottawa, Canada.

"On the Possibilities of Improving Salmon Spawning Areas," by William F. Royce, article, Transactions of the 24th North American Wildlife Conference, pp. 356-366, printed. Wildlife Management Institute, Wire Bldg., Washington 5, D. C., 1959.

"The Structural Characters of Te Anau Salmon," by G. Stokell, article, Transactions of the Royal Society of New Zealand, vol. 87, nos. 3-4, 1959, pp. 255-263, printed. Royal Society of New Zealand, Wellington, New Zealand.

SALT COD:

A Selected Bibliography of Salt Cod, compiled by Marjorie E. McPhail, New Series Circular No. 5, 35 pp., processed. Fisheries Research Board of Canada, Technological Station, Halifax, Nova Scotia, Canada, June 1957.

SALT CONTENT:

Determination of the Salt Content of Fish (A Simple Apparatus and Procedure), by P. L. Hoogland and H. C. Freeman, New Series Circular No. 4, 10 pp., illus., processed. Fisheries Research Board of Canada, Technological Station, Halifax, Nova Scotia, Canada, April 1957.

SARDINES:

Contribuicoes para o Estudo da Biologia dos "Clupeidae" de Angola. 2--Observacoes Metricas e Meristicas em SARDINELLA EBA C. & V. (Contributions to the Study of the Biology of the Clupeidae of Angola. 2--Quantitative and Qualitative Observations of Sardinella eba C. & V.), by Rui Monteiro, Notas Mimeo-grafadas do Centro de Biologia Piscatoria No. 15, 16 pp., illus., processed in Portuguese. Centro de Biologia Piscatoria, Ministerio do Ultramar, Junta de Investigacoes do Ultramar, Lisbon, Portugal, 1960.

"Contribution a l'Etude Ecologique des Etangs Mediterraneens--Quelques Donnees Sur les Caracteres Morphologiques et Biologiques de la Sardine (Sardina pilchardus Walb.) de l'Etang de Berre" (Contribution to the Ecological Study of Mediterranean Ponds--Data on the Morphological and Biological Characteristics of the Sardine--Sardina pilchardus Walb.--from the Pond of Berre), by D. Schachter, article, Bulletin de l'Institut Oceanographique, no. 1175, March 1960, pp. 1-29, illus., printed in French with English summaries. Bulletin de l'Institut Oceanographique, Fondation Albert I^{er}, Prince de Monaco, Monaco.

SCALLOPS:

Outlook for the Georges Bank Scallop Fishery, by N. Bourne, General Series Circular No. 33, 2 pp., printed. Fisheries Research Board of Canada, Biological Station, St. Andrews, New Brunswick, Canada, September 1960.

SHELLFISH:

Partial Metamorphosis in ANOMIA SIMPLEX, by V. L. Loosanoff, 1 p., illus., printed. (Reprinted from Science, vol. 133, no. 3470, June 30, 1961, pp. 2070-2071.) American Association for the Advancement of Science, 1515 Massachusetts Ave. NW., Washington 5, D. C.

Recent Advances in the Control of Shellfish Predators and Competitors, by Victor L. Loosanoff, 15 pp., illus., printed. (Reprinted from Proceedings of the Gulf and Caribbean Fisheries Institute, Thirteenth Annual Session, November 1960, pp. 113-127.) Marine Laboratory, University of Miami, #1 Rickenbacker Causeway, Miami 49, Fla. The purpose of this article is to describe briefly several methods of control of shellfish enemies that either came into practical use during recent years or are on the threshold of being employed on a large scale by shellfish industries.

SHRIMP:

Contributions to the Knowledge of the Alpheid Shrimp of the Pacific Ocean. Part V--The Indo-Pacific Members of the Genus ATHANAS; and Part VII--On METABETAeus Borradaile, with a New Species from Hawaii, by Albert H. Banner and Dora May Banner, 28 pp. and 5 pp., respectively, illus., printed. (Reprinted from Pacific Science, vol. 14, no. 2, April 1960, pp. 129-155; and vol. 14, no. 3, July 1960, pp. 299-303, respectively.) Pacific Science, University of Hawaii, Honolulu 14, Hawaii.

SMALL BUSINESS MANAGEMENT:

Trade Regulation and Small Business, Small Marketers Aid No. 67, 4 pp., processed. Small Business Administration, Washington 25, D. C., June 1961. A report outlining Federal and State trade regulation laws and their application to the small businessman. Government regulation of monopolistic and unfair trade practices directly affects and benefits small business. This report points out certain types of practices which are permitted the businessman and others which are prohibited.

SMOKED FISH:

"Curing Fish by Smoking," article, South Pacific Bulletin, vol. 11, no. 2, April 1961, pp. 32-33, illus., printed, single copy 30 cents. South Pacific Commission, Box 5254 G.P.O., Sydney, Australia.

SOMALI REPUBLIC:

Feasibility Study of Sea Foods Processing in the Somali Republic, 14 pp., processed. Industry Division, USOM/SR, United States Embassy, Mogadiscio, Somali Republic, December 1960. Covers present status of the fishing industry, background information and feasibility of operations, and availability of raw material. Also covers the possibilities of marketing, materials and supplies, and distribution

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of processed spiny lobster tails, shrimp, and fish such as tuna. Included are statistical tables showing costs of vessels and equipment, working capital required, and related data.

SPINY LOBSTERS:

Nova Contribuicao para o Conhecimento das Lagostas do Arquipelago de Cabo Verde (New Contribution to Knowledge of Spiny Lobsters in the Cape Verde Islands), by P. da Franca, M. L. Paes da Franca, and F. Correia da Costa, Notas Mimeo grafadas do Centro de Biologia Piscatoria No. 19, 43 pp., illus., printed in Portuguese. Centro de Biologia Piscatoria, Junta de Investigacoes do Ultramar, Lisbon, Portugal, 1961. Presents the results of biological studies and experimental fisheries of spiny lobsters in the Cape Verde Islands and supplements the report (No. 6) published in 1959.

Pesca Exploratoria de la Langosta con Nasas, al Sur de Camaguey, Cuba (Exploratory Fishing for Spiny Lobsters with Various Type Pots to the South of Camaguey, Cuba), by R. J. Buesa Mas, Contribucion No. 11 del Centro de Investigaciones Pesqueras, 30 pp., illus., printed in Spanish. Banco de Fomento Agricola e Industrial, Playa Habana, Bauta, Cuba, April 1960.

STANDARDS:

Shellfish Definitions and Standards under the Federal Food, Drug, and Cosmetic Act, F.D.C. Regs., Part 36, 7 pp., printed, 5 cents, reprinted April 1961. Food and Drug Administration, U. S. Department of Health, Education, and Welfare, Washington, D. C. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.) A reprint of the definitions and standards of identity and fill of container for shellfish (canned shrimp, canned oysters, raw oysters, and Pacific oysters) promulgated under the Federal Food, Drug, and Cosmetic Act. The act requires the Secretary of Health, Education, and Welfare to promulgate reasonable definitions and standards for food to promote honesty and fair dealing in the interest of consumers. After a standard goes into effect, it constitutes the official specification for that food for the purposes of enforcement of the act.

SURGEONFISH:

A Contribution to the Biology of the Convict Surgeonfish of the Hawaiian Islands, ACANTHURUS TRIOSTEGUS SANDVICENSIS, by John E. Randall, Contribution No. 301, 58 pp., illus., printed. (Reprinted from Pacific Science, vol. 15, no. 2, April 1961, pp. 215-272.) Marine Laboratory, University of Miami, #1 Rickenbacker Causeway, Miami 49, Fla.

SWEDEN:

Preliminar Fangststatistik over det Svenska Havsfisket Ar 1960 (Preliminary Catch Statistics of the Swedish Marine Fishery, 1960), 10 pp., processed in Swedish. The Royal Statistic Central Bureau, Branch of Agriculture Statistics, Stockholm, Sweden.

TARIFFS:

"Effect of Tariff Changes on the Prices and Volume of Imports," by Mordechai E. Kreinin, article, The American Economic Review, vol. 51, no. 3, June 1961, pp. 310-324, printed, single copy \$1.50. The American Economic Association, Curtis Reed Plaza, Menasha, Wis.

TOXICITY:

"Biological Assay of Herbicides for Fish Toxicity," by James T. Davis, article, Weeds, vol. 7, no. 4, 1959, pp. 397-404, printed. Weed Society of America, University of Wisconsin, Madison, Wis.

Concerning Some Principles of the Toxicology of Fish (Sur Quelques Principes de la Toxicologie due Poisson), by K. Wuhrmann, Translation Series No. 243, printed. Fisheries Research Board of Canada, Ottawa, Canada, 1959.

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.

Fish Processing Companies--Brazil, 4 pp. (July 1961).

Lists the names and addresses, size of firms, and types of products handled by each firm. Includes fish and shellfish canneries and freezers.

TRAINING:

"Trainees Build Cutters for SPC Fisheries Course," by H. Van Pel, article, South Pacific Bulletin, vol. 11, no. 2, April 1961, pp. 28-29, 37, illus., printed, single copy 30 cents. South Pacific Commission, Box 5254, G.P.O., Sydney, Australia. The three 25-foot fishing cutters built by trainees at the South Pacific Commission Boatbuilding School at Auki, in the British Solomons, will be used to train participants who will attend the SPC Fisheries Centre, expected to open in that area during 1961. Progress being made at both School and Centre is described in this article.

TRANSFER OF FISH AT SEA:

"Sausages and Fishpots," by J. J. Waterman, article, World Fishing, vol. 10, no. 7, July 1961, pp. 19-20, printed. World Fishing, John Trundell Ltd., St. Richards House, Eversholt St., London NW1, England. In 1960, the Torry Research Station began a series of experiments in the "sausage" and "fishpot" methods of transferring fish at sea. Some of the early results and conclusions of those experiments are summarized here.

TRAWLING:

"Biological Prerequisites and Techniques of Fishing for Herring With Variable-Depth Trawls in the North Atlantic," by M. I. Ryzhenko, article, Trudy Soveshchaniia, no. 10, 1960, pp. 239-242, printed in Russian. Trudy Soveshchaniia, Akademiia Nauk SSSR, Iktiologicheskaiia Komissiiia, Moscow, U.S.S.R.

The Extensive Report of Shrimp Trawl Exploratory Fishing, Report No. 4292-4293, 56 pp., illus., printed in Korean. The Central Fisheries Experiment Station, Office of Marine Affairs, Pusan, Korea.

"Fishing Efficiency of Otter Trawl Aided with a Kite," by Shigene Takayama, article, Indo-Pacific Fisheries Council Proceedings, 8th Session, Colombo, Ceylon, December 6-22, 1958, Section II, pp. 38-41, printed. IPFC Secretariat, FAO Regional Office for Asia and the Far East, Bangkok, Thailand, 1960.

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TROUT:

"Further Observations on the Survival of Yearling Lake Trout Planted in South Bay, Lake Huron," by J. C. Budd and F.E.J. Fry, article, The Canadian Fish Culturist, Issue 26, March 1960, pp. 7-13, printed. Canadian Fish Culturist, Department of Fisheries of Canada, Ottawa, Canada.

Insect Emergence from a Small Trout Loch and Its Bearing on the Food Supply of Fish, by N. C. Morgan and A. B. Waddell, Freshwater and Salmon Fisheries Research no. 25, 41 pp., illus., printed, 12s. 6d. (about US\$1.75). Her Majesty's Stationery Office, York House, Kingsway, London WC2, England, 1961.

"New Horizons in Stocking Hatchery Trout," by Paul R. Needham, article, Transactions of the 24th North American Wildlife Conference, pp. 395-407, printed. Wildlife Management Institute, Wire Bldg., Washington 5, D. C., 1959.

TUNA:

Algumas Regras Praticas para a Pesca do Atum com Isco Vivo (Some Practical Rules for the Live Bait Tuna Fishery), by F. Correia da Costa, Notas Mimeo-grafadas do Centro de Biologia Piscatoria No. 18, 19 pp., illus., processed in Portuguese with French and English abstracts. Centro de Biologia Piscatoria, Junta de Investigações do Ultramar, Lisbon, Portugal, 1961.

"Chemical Composition of Yellowfin Tuna Meat," by Masayuki Kochi and Shitoku Era, article, Norinsho Suisan Koshusho Kenkyu Hokoku, vol. 8, 1959, pp. 67-71, printed in Japanese. Shimonoseki College of Fisheries, Jamaguchi Prefecture, Yoshimi, Shimonoseki, Japan.

Contribution a l'Etude Biometrique de l'Albacore (Contribution to the Biometric Study of Albacore), by L. Vincent-Cuaz, 107 pp., illus., processed in French. Ministere de l'Agriculture, Centre d'Etudes Scientifiques et Techniques Appliquees a la Peche, Cotonou, Dahomey, French West Africa.

Larvae and Juveniles of Tunas, Sailfishes, and Swordfish (THUNIDAE, ISTIOPHORIDAE, XIPHIIDAE) From the Central and Western Part of the Pacific Ocean, by Sun Tsi-Gen, 21 pp., processed, (Translated from Russian Trudy Institute Okeanologi, vol. 41, pp. 175-191.) Inter-American Tropical Tuna Commission, La Jolla, Calif., 1960.

"Life History Notes on the Little Tuna, Euthynnus alletteratus, from the Southeastern United States," by Donald P. de Sylva and Warren F. Rathjen, article, Bulletin of Marine Science of the Gulf and Caribbean, vol. 11, no. 2, 1961, pp. 161-190, illus., printed. Marine Laboratory, University of Miami, #1 Rickenbacker Causeway, Miami 49, Fla.

"La nouvelle conserverie de thon de la Star-Kist Caribe, a Porto Rico" (The New Star-Kist Caribe Tuna Cannery in Puerto Rico), article, La Peche Maritime, vol. 40, no. 1,000, July 1961, pp. 530-531, 533, illus., printed in French. La Peche Maritime, 190 Blvd. Haussman, Paris, France.

Size and Year Class Composition of Catch, Age and Growth of Yellowfin Tuna in the Eastern Tropical Pacific Ocean for the Years 1954-1958, by Richard C. Hennemuth, 111 pp., illus., printed in English and Spanish. (Reprinted from Inter-American Tropical Tuna Commission Bulletin, vol. 5, no. 1, 1961, pp. 5-112.) Inter-American Tropical Tuna Commission, La Jolla, Calif.

Studies of the Age, Growth, Sexual Maturity and Spawning of Populations of Anchoveta (CETEN-GRAULIS MYSTICETUS) of the Coast of the Eastern Tropical Pacific Ocean, by Izadore Barrett and Gerald V. Howard, 104 pp., illus., printed in English and Spanish. (Reprinted from Inter-American Tropical Tuna Commission Bulletin, vol. 5, no. 2, 1961, pp. 115-216.) Inter-American Tropical Tuna Commission, La Jolla, Calif.

"Tagging of Skipjack in Hawaiian Waters," by Daniel T. Yamashita and Kenneth D. Waldron, article, Pacific Science, vol. 13, no. 4, 1959, pp. 342-348, printed. Pacific Science, University of Hawaii, Honolulu 14, Hawaii.

TURKEY:

Balık ve Balıkçılık (Fish and Fishery), vol. 9, no. 5, May-June 1961, 32 pp., illus., printed in Turkish with English table of contents. Balıkçılık Mudurluğu, Besiktas, Istanbul, Turkey. Includes, among others, these articles: "Weight of Our Bonitos for the Last Two Years," by Sadan Barlas; "Agriculture and Industry of Seaweeds," by Fehmi Ergan; "The Biology and Appearance of Mackerels (Part II)," by Huseyin Uysal; and "Of Biological and Hydrodynamic Sounds Emitted by Fish," by Muzaffer Atli.

TURTLES:

"Turtles, Tame and Truculent," by Percy Viosca, Jr., article, Louisiana Conservationist, vol. 13, nos. 7-8, July-August 1961, pp. 5-8, illus., printed. Louisiana Conservationist, Wild Life and Fisheries Bldg., 400 Royal St., New Orleans 16, La. Describes the tortoises, terrapin, and turtles of Louisiana. The diamond-back terrapin and five kinds of sea turtles are of commercial value. Includes a short note on the scientific names and habitats of each of 21 species of Louisiana Turtle.

UNITED KINGDOM:

The Economics of White Fish Distribution in Great Britain, by R. A. Taylor, 253 pp., illus., printed, 30s. (about US\$4.25). Gerald Duckworth & Co., Ltd., 3 Henrietta St., London WC2, England, 1960. According to the author, "This study is concerned with the economic aspects of the distribution of white fish in Great Britain. White fish is defined as 'fish (whether fresh or preserved) of any kind found in the sea, except (a) herring, (b) any of the salmon species or (c) any species of trout which migrates to and from the sea' but is more generally understood to cover those varieties which live on or near the sea bed. The primary purpose of the study, however, was not to give a comprehensive description of the organization and methods of white fish distribution, but rather to examine such matters relative to the distribution and consumption of this commodity as appeared to merit special study. Part I is

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essentially descriptive and gives the various trends of white fish landings, consumption and prices and the patterns of fish consumption. Quantitative data on these subjects are necessary for a proper understanding of the forces influencing the present organization of the fish trades, their recent history and possible future developments. Part II describes the structure and organization of the trades and examines the costs of fish distribution and the costs of producing quick-frozen fish. Methods of sale, boxing and transport are also considered, and in the final chapters the demand for white fish at first-hand sales and consumer demand for fish are analyzed."

Sea Fisheries Statistical Tables, 1960, 47 pp., printed, 5s. (70 U. S. cents). Her Majesty's Stationery Office, York House, Kingsway, London WC2, England, 1961. Consists principally of statistical tables showing the quantity, total value, and average value of fish and shellfish production in England and Wales by species, region, and method of capture for 1960. Fish are divided into three main groups: demersal, pelagic, and shellfish. Information of the number of fishermen, vessels, and principal ports are given. Data on foreign trade in fishery products are also shown.

White Fish Authority, Tenth Annual Report for the Year ended 31st March, 1961, 54 pp., printed, 3s. (about 42 U. S. cents). Her Majesty's Stationery Office, York House, Kingsway, London WC2, England. Covers the activities and functions of the White Fish Authority for the fiscal year ending March 31, 1961, its income, expenditures, and fishery loans. Also includes sections on production of fishery products, marketing and distribution, research and experiments, training courses, and investigations.

U.S.S.R.:

"Regards sur--Les Peches Sovietiques" (Regarding Soviet Fisheries), by Robert Lenier, article, France Peche, vol. 6, no. 51, May 1961, pp. 11-15, 17, illus., printed in French. France Peche, Tour Sud-Est, Rue de Guemene, Lorient, France.

"Sovjets Havsimperium I" (The Soviet Ocean Empire I), by Georg Borgstrom, article, Svenska Vastkustfiskaren, vol. 31, no. 10, May 25, 1961, pp. 220-221, illus., printed in Swedish. Svenska Vastkustfiskaren, Fiskhannen, Gothenborg V, Sweden. This article will be continued in the next issue.

VESSELS:

"Operating Costs of Small Mechanized Fishing Boats," by Ernest Hess, article, West Indies Fisheries Bulletin, no. 2, pp. 1-8, March-April 1961, processed. Ministry of Natural Resources and Agriculture, Federal House, Port-of-Spain, Trinidad, West Indies. Although mechanization is advantageous for many reasons, many fishermen do not realize that before mechanization can pay its way, considerable additional catches and larger gross profits must be made to pay for the financing and operation of the boat and engine itself. In this article, the economics of fishing vessel operation are explained and suggestions made for record-keeping and cost accounting.

WATER POLLUTION:

Reports on Sulfite Waste Liquor in a Marine Environment and Its Effect on Oyster Larvae, Research Bulletin No. 6, 165 pp., illus., processed. State of Washington, Department of Fisheries, Seattle, Wash., December 1960.

WEATHER CHARTS:

Coastal Warning Facilities Charts, 1961, 2 charts, 2 pp. each, processed, 10 cents each, 1961. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.) Weather Bureau, U. S. Department of Commerce, Washington, D. C. Charts show stations displaying small craft, gale, whole gale and hurricane warnings, explanations of warning displays, and schedules of AM and FM radio, TV, and radiophone stations that broadcast weather forecasts and warnings: 16P--Morgan City, La., to Apalachicola, Fla.; and 17P--Point Conception, Calif., to Mexican Border.

WEST INDIES:

"Fisheries Problems in the West Indies," by E. Hess, article, West Indies Fisheries Bulletin, no. 2, 1960, pp. 1-10, processed. Ministry of Natural Resources and Agriculture, Federal House, Port-of-Spain, Trinidad, West Indies.

"West Indies Fisheries Development 1959/60," by E. Hess, article, West Indies Fisheries Bulletin, no. 1, 1961, pp. 1-3, processed. Ministry of Natural Resources and Agriculture, Federal House, Port-of-Spain, Trinidad, West Indies.

WHALE OIL:

"Deodorization of Liquid Whale Oil in Hydrogen Atmosphere," by T. A. Khorin, article, Masblobino-Zhirovaya Promyshlennost, vol. 25, no. 3, 1959, pp. 34-35, printed in Russian. Masblobino-Zhirovaya Promyshlennost, Izdatel'stvo Literaturny po Pishchevoi, Promyshlennosti, Moscow, U.S.S.R.

WHALES:

"Census of the California Gray Whale, 1959/60," by Dale W. Rice, article, Norsk Hvalfangst-Tidende, vol. 50, no. 6, June 1961, pp. 219-225, illus., printed in Norwegian and English. Hvalfangerforeningen, Sandefjord, Norway.

International Whaling Statistics, no. XLV, 85 pp., printed, Kr. 2.00 (about 28 U. S. cents). The Committee for Whaling Statistics, Oslo, Norway, 1961. A report on the results of the whaling operations in the Antarctic during the season 1958/59 and on grounds outside the Antarctic in the calendar year 1959. Includes statistical tables on whaling in the Antarctic; whaling operations of Norway, the United Kingdom, Japan, and the U.S.S.R.; whaling results for various other countries; average size of whales caught; and whales caught by species, sex, and size. Also includes data on average production of oil per "blue-whale equivalent;" average production of oil per sperm-whale; and whale fetuses measured.

International Whaling Statistics, no. XLVI, 56 pp., printed, Kr. 2.00 (about 28 U. S. cents). The Committee for Whaling Statistics, Oslo, Norway, 1961.

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

A report on the whaling operations in the Antarctic during the season 1959/60. Includes statistical tables showing whaling in the Antarctic; results for various countries; average size of whales caught; whales caught by species, sex, and size; and average production of oil per blue-whale unit. Also includes data on size of pregnant whale females caught; whale fetuses measured by species and groups of size; and whale fetuses measured by species and sex.

WORLD TRADE:

The following World Trade Information Service Reports, published by the Bureau of Foreign Commerce, U. S. Department of Commerce, Washington, D. C., are for sale by the Superintendent of Docu-

ments, U. S. Government Printing Office, Washington 25, D. C., at 10 cents a copy.

Licensing and Exchange Controls, Japan, Operations Report No. 61-27, Part 2, 4 pp., printed, April 1961.

Preparing Shipments to Austria, Operations Report No. 61-31, Part 2, 8 pp., printed, April 1961.

Patent and Trademark Regulations of Uruguay, Operations Report No. 61-34, Part 2, 8 pp., April 1961.

Import Tariff System of Italy, Operations Report No. 61-35, Part 2, 4 pp., printed, May 1961.

Licensing and Exchange Controls, Israel, Operations Report No. 61-37, Part 2, 4 pp., printed, May 1961.



ORIGIN OF PACIFIC SALMON CANNING INDUSTRY

"George and William Hume with their friend A. S. Hapgood were the creators of the Pacific salmon canning industry. The Hume brothers, who had worked as fishermen at their home in Maine, went to California as Forty-niners. They noticed that salmon were plentiful in the Sacramento River and believed that money might be made canning the fish. They went back to Maine on a visit, induced A. S. Hapgood, a lobster canner, to return west with them and the first Pacific salmon pack was made at Sacramento, California, in 1864. The pack was a failure the next year, but conditions were reported to be extremely favorable on the Columbia River, so the Hume firm moved their equipment to Eagle Cliff, Washington, about 40 miles up the river from Astoria and made the first pack of Columbia River salmon in 1866.

"Canned salmon was introduced to England and Germany where the first large market for this product was established by ships loading wheat and lumber for European ports. Canneries became numerous along the Columbia River, and as the sale of canned salmon increased steadily, the industry sought new and profitable locations, first at New Westminster on the Fraser River in British Columbia in 1867; then at Mukilteo, on Puget Sound, Washington Territory, in 1877; and while Alaska is today the most important salmon canning area, its first cannery was not built until 1878 at Klawak, on Prince of Wales Island."

Principles and Methods in the Canning of Fishery Products, Research Report No. 7 (page 3), U. S. Fish and Wildlife Service