



RECENT FISHERY PUBLICATIONS

FISH AND WILDLIFE SERVICE PUBLICATIONS

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- 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 - STATISTICAL LISTS OF DEALERS IN AND PRODUCERS OF FISHERY PRODUCTS AND BYPRODUCTS.
- SSR.- FISH. - SPECIAL SCIENTIFIC REPORTS--FISHERIES (LIMITED DISTRIBUTION).

- | Number | Title |
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| CFS-2977 | - Massachusetts Landings, May 1962, 5 pp. |
| CFS-2980 | - Frozen Fish Report, August 1962, 8 pp. |
| CFS-2986 | - Fish Meal and Oil, July 1962, 2 pp. |
| CFS-2987 | - Middle Atlantic Fisheries, 1961 Annual Summary, 7 pp. |
| CFS-2989 | - New York Landings, July 1962, 4 pp. |
| CFS-2991 | - Maine Landings, July 1962, 4 pp. |
| CFS-2992 | - Wisconsin Landings, July 1962, 2 pp. |
| CFS-2995 | - Ohio Landings, July 1962, 2 pp. |
| CFS-2997 | - Mississippi Landings, July 1962, 3 pp. |
| CFS-2998 | - Virginia Landings, July 1962, 3 pp. |
| CFS-3001 | - Alabama Landings, June 1962, 3 pp. |
| CFS-3002 | - Alabama Landings, July 1962, 3 pp. |
| CFS-3003 | - Michigan Landings, June 1962, 3 pp. |
| CFS-3004 | - Louisiana Landings, April 1962, 2 pp. |
| CFS-3007 | - Maryland Landings, August 1962, 3 pp. |
| CFS-3008 | - North Carolina Landings, August 1962, 3 pp. |
| CFS-3009 | - South Carolina Landings, August 1962, 2 pp. |
| CFS-3011 | - Georgia Landings, August 1962, 2 pp. |
| CFS-3012 | - New Jersey Landings, July 1962, 3 pp. |
| CFS-3014 | - Wisconsin Landings, August 1962, 2 pp. |
| CFS-3015 | - Fish Meal and Oil, August 1962, 2 pp. |
| FL-176 | - Atlantic Salmon (<u>Salmo salar</u>), 3 pp., June 1962 (Revised). |
| FL-448 | - Some Publications on Fish Culture and Related Subjects, 13 pp., June 1962 (Revised). |
| FL-537 | - A List of the Fishery Bulletins of the United States Fish and Wildlife Service, by L. T. Dees, 16 pp., April 1962. The Fishery Bulletins are technical reports of scientific investigations of fishery biology. The Bulletin of the United States Fish Commission was begun in 1881. It became the Bulletin of the Bureau of Fisheries in 1904 and the Fishery Bulletin of the Fish and Wildlife Service in 1941. Paging is serially by volumes. Through volume 46, separates were issued as Documents, each with a |

Document number. Beginning with volume 47, each separate was issued as a numbered Bulletin. Fishery Bulletins are distributed to depository libraries and are sold by the Superintendent of Documents, Washington 25, D. C.

FL-540 - List of Fishery Leaflets of the U. S. Fish and Wildlife Service, by Lola T. Dees, 37 pp., May 1962. Fishery Leaflets are correspondence aids giving information on fishes and fisheries. In this report the latest issue or revision of each leaflet is listed, without reference to the original issue. Available fishery leaflets may be obtained without charge from the U. S. Fish and Wildlife Service.

Sep. No. 659 - Progress Report on Midwater Trawling Studies Carried Out Off the New England Coast in 1961 by M/V Delaware.

Sep. No. 660 - The Stockfish and Spiny Lobster Fisheries of South Africa.

Firms Canning, 1961 (Revised):

- SL-101 - Salmon, 3 pp.
- SL-111 - Clam Products, 2 pp.
- SL-112 - Shrimp, 2 pp.
- SL-113 - Crab Meat, 2 pp.

SSR-Fish. No. 397 - Winter Water Temperatures and an Annotated List of Fishes--Nantucket Shoals to Cape Hatteras, Albatross III Cruise No. 126, by Robert L. Edwards, Robert Livingstone, Jr., and Paul E. Hamer, 34 pp., illus., September 1962.

SSR-Fish. No. 399 - Some Effects of DDT on the Guppy and the Brown Trout, by Susan Frances King, 24 pp., illus., processed, March 1962.

SSR-Fish. No. 412 - Distribution of Fish Eggs and Larvae, Temperature, and Salinity in the Georges Bank-Gulf of Maine Area, 1956, by Robert R. Marak and others, 98 pp., illus., March 1962.

SSR-Fish. No. 415 - Pacific Tuna Biology Conference (August 14-19, 1961, Honolulu, Hawaii), edited by John C. Marr, 50 pp., processed, May 1962. A report of the work and results of the Pacific Tuna Biology Conference, held at the University of Hawaii in August 1961 under the auspices of the Bureau of Commercial Fisheries Biological Laboratory, Honolulu, and attended by tuna research workers and fishery experts from 11 countries. The report comprises a general account of the proceedings of the Conference; summaries of the discussions in 6 general sessions on distribution, migrations, sub-populations, behavior, tuna oceanography, and tax-

onomy and nomenclature; the reports of 2 special working groups, on identification of larval and juvenile tunas and on taxonomy and nomenclature; resolutions adopted by the Conference; abstracts of the 50 papers presented; and a list of the participants.

SSR-Fish. No. 418 - Use of Mobile Bioassay Equipment in the Chemical Control of Sea Lamprey, by John H. Howell and Willman M. Marquette, 13 pp., illus., April 1962.

SSR-Fish. No. 419 - Annual Fish Passage Report - Rock Island Dam, Columbia River, Washington, 1960, by Paul D. Zimmer and Clifton C. Davidson, 25 pp., illus., April 1962.

Common Parasites of Fishes, by Glenn L. Hoffman and Carl J. Sindermann, Circular 144, 19 pp., illus., 1962.

Monthly Mean Charts, Sea Surface Temperature, North Pacific Ocean, Circular 134, 41 pp., illus., printed, April 1962, limited distribution. The historical charts of monthly sea surface temperature in the North Pacific Ocean for 1956 and 1957 contain mean temperature data and isotherms. Also included are 12 charts showing the temperature change from each month in 1956 to the corresponding month in 1957. According to the report, the 1956-1957 period was selected for initial treatment because of widespread scientific interest in the warming which began in 1957 along the eastern boundaries of the North Pacific Ocean.

Something About--Fish, Wildlife--and You, 2 pp., illus., processed, 1962. A leaflet, intended for Girl Scouts, which discusses the importance of conservation of our fish and wildlife resources. Emphasizes the responsibility of every citizen in furthering the conservation cause. Describes the role of the Fish and Wildlife Service's National Wildlife Refuges, National Fish Hatcheries, research laboratories, exploratory fishing and research vessels, and other facilities in conservation.

Something About--the Sea, 2 pp., illus., processed, 1962. A leaflet describing the sea, its resources, typography, and movements. Discusses the food chain, peaks and valleys in the oceans' floors, ocean currents, erosion of the coastlines by the seas, and the upwellings of water from the oceans' depths.

THE FOLLOWING MARKET NEWS LEAFLET IS AVAILABLE FROM THE FISHERY MARKET NEWS SERVICE, U. S. FISH AND WILDLIFE SERVICE, SUITE 611, 777 14TH ST. NW., WASHINGTON 5, D. C.

Number	Title
MNL-177	Italian Fishing Industry, 1960-61, 8 pp.

THE FOLLOWING ENGLISH TRANSLATIONS OF FOREIGN LANGUAGE ARTICLES ARE AVAILABLE ONLY FROM THE BIOLOGICAL LABORATORY, BUREAU OF COMMERCIAL FISHERIES, U. S. FISH AND WILDLIFE SERVICE, BOOTH-BAY HARBOR, MAINE.

Preliminary Results of the "Forfangst" and Fat-Herring Investigations in Summer of 1954, by Olaf Dragesund, 11 pp., processed, 1957. (Translated from Fiskets Gang, vol. 41, no. 23, June 1955, pp. 317-322.)

The Recruitment of the Herring Stocks and the Growth of the Spring and Autumn Herring in the Western

Baltic, by Rudolph Kandler, 16 pp., illus., processed, 1957. (Translated from the German, Monatshefte fur Fischerei, vol. 10, no. 2, pp. 17-22.)

THE FOLLOWING ENGLISH TRANSLATION OF A FOREIGN LANGUAGE ARTICLE IS AVAILABLE ONLY FROM THE U. S. BUREAU OF COMMERCIAL FISHERIES BIOLOGICAL LABORATORY, BOX 3830, HONOLULU, HAWAII.

Gorbusha (Pink Salmon) - ONCORHYNCHUS GORBUS-CHA (Walbaum), by L. S. Berg, English Translations of Fishery Literature, Miscellaneous Series No. 36, 5 pp., printed, 1956. (Translated from the Russian, Promyslovye Ryby SSSR, 1949, pp. 154-156.)

THE FOLLOWING ENGLISH TRANSLATION OF A FOREIGN LANGUAGE ARTICLE IS AVAILABLE ONLY FROM THE U. S. FISH AND WILDLIFE SERVICE, BUREAU OF COMMERCIAL FISHERIES, BIOLOGICAL LABORATORY, SEATTLE, WASHINGTON.

Saika (Polar Cod), BOREOGADUS SAIDA (Lepechin), by L. S. Berg and others, 7 pp., printed, 1957. (Translated from the Russian, Promyslovye Ryby SSSR, 1949, pp. 519-521.)

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

Annual Report of Sealing Operations, 1962, Pribilof Islands, Alaska, 17 pp., processed, October 1, 1962. (Bureau of Commercial Fisheries, U. S. Fish and Wildlife Service, 6116 Arcade Bldg., Seattle 1, Wash.) Discusses kill of commercial bachelor seals, age composition, regular or bachelor season, kill of female seals, mortality among young-of-the-year, expectations for 1963, labor imported for seal killing and skin curing, and materials used in curing. Also discusses rejection of seals from killing drive, byproducts, remuneration of employees, details of daily kills, and time spent on sealing operations. Including statistical tables showing distribution of sealskins, counts of bull seals, blubber reserved for sealskin processing, ages of male seals comprising kill, abstracts of seals killed on St. Paul and St. George Islands, and time report of sealing operation.

(Baltimore) Monthly Summary--Fishery Products, August 1962, 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, August 1962, 17 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, 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, July, August, September 1962, 13 pp. ea. (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.

Fish Protein Concentrate, Lifeline of the Future, 6 pp., illus., printed, September 1962. (Branch of Technology, U. S. Bureau of Commercial Fisheries, Washington 25, D. C.) Fish protein concentrate (FPC) is the name for a group of possible products from dehydrated and defatted fish. It may be rendered tasteless, odorless, and colorless and the final product can range from a fine powder to one of granular consistency. It is an excellent source of high quality protein. This leaflet discusses the role of fish protein concentrate in the complete utilization of the fishery resource, hunger as the biggest human problem of the century, doubling of the world population in the next 40 years, and the inability of land food resources to supply needs. It also discusses the sea as the key to an immediate solution, the immense potential of fish protein concentrate, some notable efforts at FPC manufacture, and the need for a more vigorous research and development program.

Gulf of Mexico Monthly Landings, Production and Shipments of Fishery Products, September 1962, 8 pp. (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 month indicated.

Monthly Summary of Fishery Products Production in Selected Areas of Virginia, North Carolina, and Maryland, September 1962, 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 York City's Wholesale Fishery Trade--Monthly Summary--June, July 1962, 18 pp. ea. (Market News Service, U. S. Fish and Wildlife 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 wholesalers' selling prices for fresh, frozen, and selected canned fishery products; marketing trends; and landings at Fulton Fish Market docks and Stonington, Conn.; for the months indicated.

(Seattle) Washington and Alaska Receipts and Landings of Fishery Products for Selected Areas and Fisheries, Monthly Summary, September 1962, 9 pp. (Market News Service, U. S. Fish and Wildlife Service, 706 Federal Office Bldg., 909 First Ave., Seattle 4, Wash.) Includes Seattle's landings by the halibut and salmon fleets reported through the exchanges; landings of halibut reported by the

International Pacific Halibut Commission; landings of otter-trawl 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 month indicated.

Status of Fish Tagging and Tagging Techniques, U. S. Dept. of the Interior, Fish and Wildlife Service, Bureau of Commercial Fisheries, Woods Hole, Massachusetts, for the Period 1957 through 1961, by S. Cogswell, Woods Hole Laboratory Report No. 62-2, 23 pp., printed, 1962. (U. S. Bureau of Commercial Fisheries, Biological Laboratory, Woods Hole, Mass.)

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

Chronic Effects of Endrin on Bluntnose Minnows and Guppies, by Donald Irvin Mount, Research Report 58, 42 pp., illus., 35 cents, 1962.

"A Comparative Study of the Blood of Wild and Hatchery-Reared Lake Trout," by Robert G. Piper and Robert F. Stephens, article, Progressive Fish-Culturist, vol. 24, no. 2, 1962, pp. 81-84, processed, 25 cents.

"Experimental Heating of Pond Water to Start Rainbow Trout Fry on a Dry Diet," by Kenneth E. Morton, article, Progressive Fish-Culturist, vol. 24, no. 2, 1962, pp. 94-96, processed, 25 cents.

Federal Aid in Fish Restoration, Regulatory Announcement 65, 22 pp., printed, 15 cents, 1962.

Federal Aid in Wildlife Restoration, Regulatory Announcement 64, 21 pp., printed, 15 cents, 1962.

"Growth Rate of Brook Trout at Different Population Densities in a Small Infertile Stream," by Edwin L. Cooper, Joseph A. Bocardy, and John K. Andersen, article, Progressive Fish-Culturist, vol. 24, no. 2, 1962, pp. 74-80, processed, 25 cents.

"The Indispensable Amino Acids for Rainbow Trout," by Warren E. Shanks, George D. Gahimer, and John E. Halver, article, Progressive Fish-Culturist, vol. 24, no. 2, pp. 68-73, processed, 25 cents.

"A Method for Force-Feeding Radioisotopes to Yearling Trout," by R. E. Nakatani, article, Progressive Fish-Culturist, vol. 24, no. 2, 1962, pp. 56-59, processed, 25 cents.

Predicting Year-Class Abundance of Yellowstone Lake Cutthroat Trout, by Ross V. Bulkley and Norman G. Benson, Research Report 59, 25 pp., illus., 25 cents, 1962.

Sexual Maturity and Spawning of the Albacore in the Central South Pacific Ocean, by Tamio Otsu and Richard J. Hansen, Fishery Bulletin 204 (from Fishery Bulletin of the Fish and Wildlife Service, vol. 62), 11 pp., illus., printed, 15 cents, 1962.

"Some Observations of the Feeding Habits of Brown Trout," by F. Phillip Sharpe, article, Progressive

Fish Culturist, vol. 24, no. 2, 1962, pp. 60-64, processed, 25 cents.

"Supplemental Feeding of Fingerling Channel Catfish," by Otto W. Tiemeier, article, Progressive Fish-Culturist, vol. 24, no. 2, 1962, pp. 88-90, processed, 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.

ABALONE:

"Muscle Extract of Aquatic Animals. IV--Distribution of Nitrogenous Constituents in the Muscle Extracts of an Abalone, Haliotis gigantea Discus Reeve," by Shoji Konosu and Yasuhiko Maeda, article, Bulletin of the Japanese Society of Scientific Fisheries, vol. 27, March 1961, pp. 251-254, printed. Japanese Society of Scientific Fisheries, 6-chome, Shiba-Kaigandori, Minato-Ku, Tokyo, Japan.

AFGHANISTAN:

Import Tariff System of Afghanistan, WTIS Part 2, Operations Report No. 62-47, 2 pp., printed, 15 cents. Bureau of International Programs, U. S. Department of Commerce, Washington, D. C., September 1962. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.) Discusses units of currency, weights and measures; bases of specific and ad valorem duties; method of payment of duty; customs surtaxes; sales and other internal taxes; preferential duties; consular documents and fees; trade restrictions; and other information.

ALASKA:

Kitoi Bay Research Station, Its Development, Accomplishments and Future, by Howard D. Tait, Informational Leaflet No. 9, 6 pp., processed. Division of Biological Research, Alaska Department of Fish and Game, Juneau, Alaska, February 23, 1962. Discusses the purpose and facilities of the Laboratory; current research activities--lake rehabilitation studies, pink salmon studies, and predator studies; and future plans.

ALGAE:

"An Approach to Sea Farming," by Alan D. Ansell, article, Fisheries Newsletter, vol. 21, no. 9, September 1962, pp. 17-18, 26, illus., printed. Commonwealth Office of Fisheries, Department of Primary Industry, Canberra, Australia. A progress report on experiments, using flue gas from a power station and fertilizers, to promote the growth of marine algae, for direct use or for feeding to shellfish. According to the author, "It is possible that combined algal and shellfish culture will present an efficient method of intensive cultivation of small areas of sea water. Clams, or other shellfish, reared under controlled conditions, planted on prepared grounds, protected from enemies and receiving food supplements, would be the main product.

Growth of these shellfish might be further accelerated in some areas by irrigation of the beds with the warm water effluents from industrial cooling systems."

Bibliographic Data Useful in the Study of Marine Algae, by Harold Judson Humm, Special Scientific Report No. 29, 12 pp., printed. Virginia Institute of Marine Science, Gloucester Point, Va., 1962.

Contribution to the Study of the Marine Algae of Ceylon, by M. Durairatnam, Bulletin No. 10, 181 pp., illus., printed, Department of Fisheries, Fisheries Research Station, Colombo, Ceylon, 1961.

Key to the Genera of Marine Bluegreen Algae of Southeastern North America, by Harold Judson Humm, Special Scientific Report No. 28, 6 pp., printed. Virginia Institute of Marine Sciences, Gloucester Point, Va., 1962.

"Preliminary Survey of Fungistatic Properties of Marine Algae," by Ann Marie Welch, article, Journal of Bacteriology, vol. 83, January 1962, pp. 97-99, printed. Society of American Bacteriologists, Mount Royal and Guildford Aves., Baltimore 2, Md.

ANGOLA:

Sobre a Ocorrência de SARDINOPS OCELLATA (Pappe) em Aguas Centro-Angolanas (On the Occurrence of Sardinops ocellata (Pappe) in the Waters of Central Angola), by R. Monteiro, Notas Mimeografadas, no. 25, 12 pp., illus., processed in Portuguese with English summary. Centro de Biologia Piscatoria, Lisbon, Portugal, 1962.

ANTIBIOTICS:

"Antibiotics as Food Preservatives," by R. H. Vaughn, and G. F. Stewart, article, Journal of the American Medical Association, vol. 174, 1960, pp. 1308-1310, printed. Journal of the American Medical Association, 535 N. Dearborn Ave., Chicago 10, Ill.

"Gli antibiotici nella conservazione dei prodotti ittici. Effetti dell'Aureomicina sui processi di alterazione della carne di pesce" (Antibiotics in the Preservation of Fish Products: Effects of Aureomycin on the Decomposition of Fish Meat), by C. M. Ricotta, article, Conserva e Derivati Agrumari, vol. 9, no. 1, 1960, pp. 18-20, printed in Italian. Centro Sperimentale per l'Industria della Pesca e dei Prodotti del Mare, Palermo, Sicily, Italy.

AQUATIC SCIENCES:

"A Developing Aquatic Sciences Information Retrieval System," by Joel S. O'Connor, and Saul B. Sails, article, Transactions of the American Fisheries Society, vol. 91, no. 2, 1962, pp. 151-154, printed. American Fisheries Society, 233 Broadway, New York, N. Y.

ARGENTINA:

"La Pesca en el Mar Argentino" (The Fishery in Argentine Waters), by Juan Manuel Gordini, article, Pesca y Marina, vol. 14, no. 4, August-September 1962, pp. 4-8, illus., printed in Spanish. Pesca y Marina, Fernando Flores Ltd., 705 N. Windsor Blvd., Los Angeles 38, Calif.

La Pesca en el Mar Argentino, Primer Parte--Pesca Costera (The Fishery in Argentine Waters, Part One--Coastal Fishery), by Juan Manuel Gordini, 161 pp., illus., printed in Spanish. Direccion General

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de Pesca y Conservacion de la Fauna, Secretaria de Estado de Agricultura y Ganaderia de la Nacion, Buenos Aires, Argentina.

ATLANTIC OCEAN:

A Literature Survey of the Hydrography, Bathymetry and Fisheries of the Atlantic Ocean Under the Atlantic Missile Range with an Appendix on the Mona Island Region, by Godfrey C. Day, Reference no. 61-36, 114 pp., illus., processed. Oceanographic Institution, Woods Hole, Mass., 1961.

BACTERIOLOGY:

Physiological Studies on the Radiation Resistant Bacteria Occurring in Food, by D. E. Duggan, Dissertation for Ph. D., 187 pp., printed. Oregon State University, Corvallis, Oreg., 1961.

BALTIC SEA:

Ecology of the More Important Benthic Invertebrates in the Baltic Sea, by Zygmunt Mulicki, OTS 60-21297, 58 pp., illus., processed, 50 cents. (Translated from the Polish, Prace Morskiego Instytutu Rybackiego w Gdyni, no. 9, 1957, pp. 313-379.) Office of Technical Services, U. S. Department of Commerce, Washington 25, D. C., 1961.

BIOCHEMISTRY:

Biosynthesis of Trimethylammonium Compounds in Aquatic Animals. III--Choline Metabolism in Marine Crustacea, by E. Bilinski, 6 pp., printed. (Reprinted from the Journal of the Fisheries Research Board of Canada, vol. 19, no. 3, 1962, pp. 505-510.) Queen's Printer and Controller of Stationery, Ottawa, Canada.

"Extraction of Sarcoplasmic Fraction of Fish Muscle with Salt Solutions of Different Ionic Strengths and pH," by B. R. Baliga, M. N. Moorjani, and N. L. Lahiry, article, Food Technology, vol. 17, February 1962, pp. 86-88, printed. Food Technology, The Garrard Press, 510 N. Hickory, Champaign, Ill.

"Technical Characteristics of Various Fish Products," by L. S. Levieva and others, article, Israel Program of Scientific (PST) Catalogue, no. 109, 1960, pp. 175-188, printed. (Translated from the Russian, Trudy VNIRO, vol. 35, 1958, pp. 192-204.) Israel Program of Scientific Translations (PST) Catalogue, 14 Sham-mai St., Jerusalem, Israel.

BLACKFISH:

"Some Phases in the Life History of the Alaskan Blackfish Dallia pectoralis," by Roger F. Blackett, article, Copeia, no. 1, 1962, pp. 124-130, printed. American Society of Ichthyologists and Herpetologists, 18111 Nordhoff St., Northridge, Calif.

BRAZIL:

"Relatorio dos Trabalhos Realizados Pelo Servico de Piscicultura, Durante o Anodo 1959" (A Report of the Work Carried Out by the Fish Culture Service during the Year 1959), by Osmar Fontenele, article, Publicacion Departamento Nacional Obras Contra as Secas, no. 219, 1960, pp. 1-123, printed in Portuguese. Servico Piscicultura, Fortaleza, Brazil.

BREAM:

Growth and Sexual Maturity of the North Caspian Bream in Relation to Changes in Its Abundance,

by K. A. Zemskaya, OTS 61-31041, 29 pp., illus., processed, 50 cents. (Translated from the Russian, Trudy Vsesoyuznogo nauchno-issledovatel'skogo instituta morskogo rybnogo khozyaistva i okeanografii (VNIRO), vol. 34, 1958, pp. 63-86.) Office of Technical Services, U. S. Department of Commerce, Washington 25, D. C., 1962.

CANADA:

Journal of the Fisheries Research Board of Canada, vol. 19, no. 5, September 1962, 253 pp., illus., printed, single issue C\$1.50. Queen's Printer, Ottawa, Canada. Includes, among others, these articles: "Distribution and Survival of Herring Larvae (Clupea pallasii Valenciennes) in British Columbia Waters," by J. C. Stevenson; "Migration and Feeding of the Gray Whale (Eschrichtius gibbosus)," by Gordon C. Pike; "Air Blowing of Cod Liver Oil and Other Marine Oils," by P. M. Jangaard and R. G. Ackman; "Seasonal Changes in Feeding of Coho and Chinook (Spring) Salmon in Southern British Columbia Waters," by A. Prakash; "Efficiency and Rate of Yolk Utilization by Developing Embryos and Larvae of the Pacific Sardine sardinops caerulea (Girard)," by Reuben Lasker; "Possible Effects of Passamaquoddy Power Project on Clams, Scallops and Shipworms in Canadian Waters," by J. C. Medcof; "Flow of Water in the Passages of Passamaquoddy Bay Measured by the Electromagnetic Method," by R. W. Trites and D. G. MacGregor; "On the Feeding and Growth of Young Herring (Clupea harengus L.) in Captivity," by Naresh Das and S. N. Tibbo; and "A Relationship between Growth, Hatching and Spawning Season in Canadian Atlantic Herring (Clupea harengus L.)," by T. R. Graham.

CANNING:

"La Conserve Appertisee se Porte Bien" (Appert's Canning Method is Still Good), article, France Peche, vol. 7, no. 64, July-August 1962, pp. 23-26, illus., printed in French. France Peche, Service Abonnement, Boite Postale 179, Lorient (Morbihan), France.

CATFISH:

"Daily Movement of Channel Catfish, Ictalurus punctatus (Rafinesque), in a Farm Pond," by Earl D. Stevens and O. W. Tiemeier, article, Transactions of the Kansas Academy of Science, vol. 64, no. 1, 1961, pp. 218-224, printed. Transactions of the Kansas Academy of Science, Library, Kansas State College, Lawrence, Kans.

CEYLON:

The 1958 Pearl Oyster Fishery, Gulf of Mannar, by S. Sivalingam, Bulletin no. II, 28 pp., illus., printed. Department of Fisheries, Fisheries Research Station, Colombo, Ceylon, 1961.

CHAR:

"O Pitanií Dal'nevostochnykh Gol'tsov" (The Nutrition of Far-Eastern Chars), by K. A. Savvaitova, article, Rybnoe Khoziaistvo, no. 1, 1961, pp. 9-11, printed in Russian. VNIRO Glavniproekta, pri Gosplanie SSSR, Moscow, U.S.S.R.

A Preliminary Study of the Migration and Growth of the Dolly Varden Char in Kitoi Bay, Alaska, by Leonard Revet, Informational Leaflet No. 17, 6 pp., illus., processed. Division of Biological Research,

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

Alaska Department of Fish and Game, Juneau, Alaska, August 23, 1962. The Dolly Varden char, Salvelinus malma (Walbaum), is an important predator and competitor of young salmon. In some areas, it is also an important sport and food fish. For these reasons and because attempts are now being made to utilize this species commercially in Alaska, a life history study was started at the Kitoi Bay Research Station on Afognak Island in 1961. During the first two years of the study, the objectives were (1) to define the migratory pattern and (2) to study the ocean growth of the fish.

CLAMS:

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Daily Migration of Herring Shoals and Their Reaction to Fishing Gear, by Stanislaw Okonski and Hubert Konkol, OTS 60-21306, 14 pp., illus., processed, 50 cents. (Translated from the Polish, Prace Morskiego Instytutu Rybackiego w Gdyni, no. 9, 1957, pp. 549-563.) Office of Technical Services, U. S. Department of Commerce, Washington 25, D. C., 1961.

"Destruction of the Reproductive Organs of Herring Caused by Ultrasound under Natural Conditions,"

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

by A. I. Rumyantsev, article, Doklady, vol. 134, no. 4, 1960, pp. 955-958, printed in Russian. Doklady Akademiia Nauk SSR, Podsosenski Per. 21, Moscow B-64, U.S.S.R.

Effect of Salinity on the Sperm, Eggs, and Larvae of the Okhotsk Herring, by L. A. Galkina, OTS 61-31037, 15 pp., illus., processed, 50 cents. (Translated from the Russian, Izvestiya Tikhookeanskogo nauchno-issledovatel'skogo instituta rybnogo khoziaistva i okeanografii, vol. 45, 1957, pp. 37-50.) Office of Technical Services, U. S. Department of Commerce, Washington 25, D. C., 1962.

Experiments in the Incubation of Baltic Herring Eggs, by M. M. Toom, OTS 61-31040, 13 pp., illus., processed, 50 cents. (Translated from the Russian, Trudy Vsesoyuznogo nauchno-issledovatel'skogo instituta morskogo rybnogo khoziaistva i okeanografii, vol. 34, 1958, pp. 19-29.) Office of Technical Services, U. S. Department of Commerce, Washington 25, D. C., 1962.

"Results of Scottish Herring Fisheries in 1961 and Prospects for 1962," by B. B. Parrish, A. Saville, and I. G. Baxter, article, Scottish Fisheries Bulletin, no. 17, June 1962, pp. 3-12, illus., printed. Marine Laboratory, Department of Agriculture and Fisheries for Scotland, P. O. Box No. 101, Victoria Rd., Aberdeen, Scotland.

"Smalsildundersokelsene i Nord-Norge 1961/62" (Investigation of Small Herring in Northern Norway in 1961/62), by T. Hognestad, article, Fiskets Gang, vol. 48, no. 32, August 9, 1962, pp. 453-457, illus., printed in Norwegian. Fiskets Gang. Fiskeridirektoratet, Radstuplass 10, Bergen, Norway.

"Swimming Speed of River Herring Pomolobus pseudoharengus (Wilson)," by Robert L. Dow, article, Journal du Conseil, vol. 27, no. 1, 1962, pp. 77-80, printed. Conseil Permanent International pour l'Exploration de la Mer, Charlottenlund-Slot, Denmark.

HYBRIDIZATION:

Experimental Hybridization Among Three Coregonine Fishes, by E. T. Garside and W. J. Christie, 5 pp., printed. (Reprinted from Transactions of the American Fisheries Society, vol. 91, no. 2, April 1962, pp. 196-200.) American Fisheries Society, 233 Broadway, New York, N. Y.

HYDROGRAPHY:

Hydrographic Data from the Atlantic Plankton Cruises of the R/V PATHFINDER, December 1959-December 1960, by Edwin Bibb Joseph and William H. Massmann, Special Scientific Report No. 18, 3 pp., illus., printed. Virginia Fisheries Laboratory, Gloucester Point, Va., 1961.

New Ways of Measuring Salinity and Temperature of Sea Water, by H. Wattenberg and J. Joseph, Trans-34, 12 pp., printed. (Translated from the German, Annalen der Hydrographie und Maritimen Meteorologie, 1943, pp. 240-245.) U. S. Navy Hydrographic Office, Washington 25, D. C.

Surface Water Temperature and Salinity, Pacific Coast North and South America and Pacific Ocean

Islands, C&GS Publication 31-3 (First Edition), 73 pp., illus., processed, 45 cents. Coast and Geodetic Survey, U. S. Department of Commerce, Washington, D. C., 1962. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.) Summaries of sea water temperatures and salinities are based on observations made in Pacific harbor and coastal waters through the year 1960. Presents monthly and annual means and extremes of the surface water temperatures and salinities for each year of observation after 1954. Earlier observations are combined in 5-year groups. Also includes an index map of Pacific Ocean stations, a list of stations, a table for conversion of Fahrenheit to centigrade, and mean temperature and salinity curves.

ICE MACHINE:

"Ice Maker for Trawlers," by P. F. Konoplev, H. A. Abdul'manov, and V. P. Nekrasov, article, Rybnoe Khoziaistvo, vol. 36, January 1960, pp. 66-69, printed in Russian. Rybnoe Khoziaistvo, VNIRO Glavniproekta, pri Gosplanie SSSR, Moscow, U.S.S.R.

INDUSTRIAL MANAGEMENT:

A New Look at Export Markets, by Hani J. Korkegi and Laurence P. Dowd, Management Aid No. 144, 4 pp., processed. Small Business Administration, Washington 25, D. C., September 1962. Small businessmen in increasing numbers are taking a new look at export markets. Some of them are seeing tremendous possibilities there. This leaflet is designed to help you re-examine foreign markets. It points out that facts are the key to market research, whether domestic or export. The kinds of facts are much the same for both markets. Although there are some differences in overseas markets, these differences often are not as great as they may seem. Information about specific foreign markets helps owner-managers to work around such differences. This leaflet lists sources, both Government and private, from which small businessmen can get such information.

Renovation-Expansion Checklist, Management Aids No. 143, 4 pp., processed. Small Business Administration, Washington 25, D. C., August 1962. A leaflet designed to help small businessmen who face the problem of renovating or expanding their production facilities. The first section, on weaknesses in present facilities, should help owner-managers determine what sort of renovations are needed. The next section, on what a renovation plan would involve, suggests specific improvements which owners need to consider when drawing up renovation plans. In some cases present facilities may call for an addition to the plant or other expansion.

INSECTICIDES:

"Insecticide Contamination in a Farm Pond. Part I--Origin and Duration. Part II--Biological Effects," by H. Page Nicholson and others, article, Transactions of the American Fisheries Society, vol. 91, no. 2, 1962, pp. 213-222, printed. American Fisheries Society, 233 Broadway, New York, N. Y.

IRAN:

Licensing and Exchange Controls--Iran, WTIS Part 2, Operations Report No. 62-42, 4 pp., printed, 10 cents.

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

Bureau of International Programs, U. S. Department of Commerce, Washington, D. C., August 1962. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.) Discusses Iran's import policy, including licensing and exchange controls, commercial profits tax, prohibited imports, and Iran's export controls. Also discusses United States export and import controls and similar information.

IRRADIATION PRESERVATION:

Food Irradiation, vol. 1, no. 2, October-December 1960, 27 pp., illus., processed. Interdepartmental Committee on Radiation Preservation of Food, U. S. Department of Commerce, Washington 25, D. C. Includes, among others, the following articles: "Evaluation of the Wholesomeness of Irradiated Food," by H. F. Kraybill; "Comments on the Wholesomeness of Irradiation-Processed Foods," by B. Connor Johnson; "Package Irradiation Plant in U. K.," by F. J. Ley; and "Information to be Supplied in Support of a Request for Authorisation to Possess Radioactive Substances with a View to the Treatment of Foodstuffs by Ionising Radiations, France."

Food Preservation by Irradiation, 1951-58, CTR-357, 4 pp., processed. Office of Technical Services, U. S. Department of Commerce, Washington 25, D. C., May 1959. A bibliography of publications on radiation preservation of foods. Includes an explanation of how to order the reports, addresses of Department of Commerce Field Offices, and types of reports available from them.

"The Radiation Department of the Federal Research Institute for Food Preservation in Karlsruhe (Germany)," by J. Kuprianoff, article, Food Irradiation, vol. 1, no. 4, April-June 1961, pp. 7-8, illus., processed. Interdepartmental Committee on Radiation Preservation of Food, U. S. Department of Commerce, Washington 25, D. C.

ISRAEL:

Fishermen's Bulletin, vol. 4, no. 2 (32), June 1962, 32 pp., illus., printed in Hebrew with English abstracts. Sea Fisheries Research Station, P. O. B. 699, Haifa, Israel. Includes, among others, articles on: "Israel South Red Sea Expedition, 1962," by O. H. Oren; "Fisheries Investigations of the ISRSE (Part 1. Thunnids)," by A. Ben-Tuvia; "Transport of Fish from the Red Sea to Eilat," by Z. Samish and A. Har-Tabor; "Hybrids of Two Species of Fishes of the Genus *Tilapia* (Cichlidae, Teleostei)," by L. Fishelson; "Fisheries in USSR," by S. Tal; and "On the Fisheries of Israel," by M. Shavit.

ITALY:

"Italian Fisheries," by Giuseppe Milone, article, Review of the Economic Conditions in Italy, vol. 16, no. 2, March 1962, pp. 130-145, illus., printed. Banco di Roma, Ufficio Studi, Casella Postale 2442, Rome A/D, Italy. Discusses the role of the fisheries in the Italian economy, necessity for increasing the total productivity of the fisheries, mechanization of the fleet and government regulation of and aid to the fisheries, and size of the fleet and production. Also discusses the excessively large difference between production and consumption prices, the setting up of fishery cooperatives, par-

ticipation of the Italian fishing fleet in the Atlantic Ocean fishery and the necessity of constructing suitable harbors for this purpose, and the necessity for increased fishery production to meet the needs of the expanding world population.

KENYA:

Report on Kenya Fisheries, 1961, 25 pp., printed, 3 s. (about 42 U. S. cents). Government Printer, Nairobi, Kenya, 1962. Reviews the work done by Kenya's Fisheries Department in inland fisheries development, Lake Victoria fisheries, a fish-culture farm, and a trout hatchery and fisheries. Discusses the fishery survey and possibilities of dried fish production at Lake Randolph. The section on sea fisheries discusses landings and value of fishery products, imports, markets, loans to fishermen, crawfish landings, catch of green turtles, and the shark fishery. Also covered are two experimental fishing surveys, oyster culture, use of fish-finding gear, gear research, netting trials, deep-sea snapper traps, drifting shark long lines, and big-game fishing. Included are statistical tables showing landings and value of fish and shellfish.

KING CRAB:

King Crab (PARALITHODES CAMTSCHATICA) Recoveries in 1962 from Alitak Bay Tagging, by Guy C. Powell, Information Leaflet No. 19, 5 pp., illus., processed. Division of Biological Research, Alaska Department of Fish and Game, Juneau, Alaska, September 28, 1962. Of the 5,976 adult male king crabs tagged in August 1961 in Alitak Bay (Alaska), 517 were recovered in July 1962. Tag recovery had been heavy during previous months as well as during July, and as a result, approximately 2,500 crabs (42 percent) had been captured since release.

Length-Width Relationships of Carapace Measurements of the King Crab (PARALITHODES CAMTSCHATICA), by Roy Rickey and William Sheridan, Information Leaflet No. 2, 6 pp., illus., processed. Division of Biological Research, Alaska Department of Fish and Game, Juneau, Alaska, October 1961. Because taking both carapace length and carapace width measurements of male king crabs requires more time than taking only the length measurement, and because width measurements are subject to greater error, a calculated width was developed and is presented. Data from male king crabs measured in Chiniak Bay, Southeastern Bering Sea, and Kachemak Bay are analyzed and compared. No significant difference was found between slopes of the carapace width-length relationship lines from the three areas. Tests also showed that the length-width relationship for Chiniak Bay data was definitely linear.

LAMPREY:

"Studies on European Lampreys," by Giuseppe S. J. Zanandrea, article, Evolution, vol. 15, no. 4, 1961, pp. 523-534, printed. Society for the Study of Evolution, American Museum of Natural History, New York 24, N. Y.

LANE SNAPPER:

Estudios Estadísticos y Biológicos sobre la Biajaiba (LUTIANUS SYNAGRIS) (Statistical and Biological Studies on the Lane Snapper -- *Lutianus synagris*), by Zeida Rodríguez Pino, Nota Sobre Investigaciones No. 4, 88 pp., illus., printed in Spanish with French resume. Centro de Investigaciones Pesqueras, Playa Habana, Bauta, Cuba, April 1962.

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

LARVAE:

"On the Relation between the Numbers of Eggs, the Larvae of Fishes and the Volume of Plankton Collected Simultaneously with the Larval Net," by Tetsushi Senta, article, Japanese Journal of Ecology, vol. 11, no. 6, 1961, pp. 221-223, printed. Ecological Society of Japan, c/o Biological Institute, Tohoku, Japan.

LOBSTERS:

"Lobster Storage Problem Solved," article, Modern Refrigeration, vol. 134, February 1962, p. 134, printed. Refrigeration Press Ltd., Maclaren House, 131 Great Suffolk St., London SE1, England.

"Refrigerated Storage of Lobsters," by H. J. Thomas, article, Scottish Fisheries Bulletin, no. 17, June 1962, pp. 16-20, illus., printed. Marine Laboratory, Department of Agriculture and Fisheries for Scotland, P. O. Box 101, Victoria Rd., Aberdeen, Scotland.

LOUISIANA:

"Distribution of Fishes in Lake Bistineau, Louisiana," by Victor W. Lambou, article, Journal of Wildlife Management, vol. 26, no. 2, 1962, pp. 193-203, printed. Wildlife Society, 2000 P St. NW., Washington, D. C.

NETHERLANDS ANTILLES:

Import Tariff System of the Netherlands Antilles (Aruba, Bonaire, Curacao), WTIS Part 2, Operations Report No. 62-46, 2 pp., printed, 10 cents. Bureau of International Programs, U. S. Department of Commerce, Washington, D. C., August 1962. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.) Discusses the territory included; currency, weights, and measures; bases of duties; method of payment of duty; sales and other internal taxes; exchange regulations; and trade restrictions. Also discusses the absence of requirements of customs surtaxes, preferential duties, and consular documents and fees.

NETS:

The I. C. E. S. Mesh Gauge, by C. J. W. Westhoff, J. A. Pope, and R. J. H. Beverton, 13 pp., illus., printed. Conseil Permanent International pour l'Exploration de la Mer, Charlottenlund Slot, Denmark, April 1962. The gauge described in this prospectus was developed under the auspices of the Comparative Fishing Committee of the International Council for the Exploration of the Sea. It represents, in the opinion of the Committee, a combination of the best features of the various gauges which have been developed in recent years, and it has been adopted as the standard gauge for research purposes by the Council in place of the 1959 Westhoff Gauge which was previously adopted as an interim standard.

NEW ZEALAND:

Commercial Fishing, vol. 1, no. 1, September 1962, 32 pp., illus., printed, annual subscription rate (12 copies), 36/-; Australia 47/6; U. K. and foreign 38/-; U. S. and Canada \$5.50. (Sole subscription agents: R. Hill & Son Ltd., Cnr. Crowhurst and Kent Sts., Newmarket, Auckland, New Zealand.) Commercial Fishing, Trade Publications Ltd., 47

Lewis Eady Bldg., 192 Queen St., Auckland, New Zealand. The first issue of a new periodical devoted to the New Zealand fishing industry. It states that, "In launching the journal, the publishers were influenced by two main considerations: commercial fishing is the only New Zealand primary industry which has not hitherto been served by its own publication; and secondly, all indications are that the industry is approaching a period of all-time record growth." Includes, among others, articles on: "Wholesalers and Fishermen Call for More Dynamic Approach to Industry Development," by A. R. Simm; "Latest Statistics: Last Year's Fish Catch;" "Tuna Project Could be Based on New Zealand and the Cook Islands," by Ronald Powell; "Dunedin Exporter, Back from World Tour, Reports on Overseas Markets;" "Programme for an Integrated Fishing Industry," by W. B. Sutch; "Disputes and Bad Weather Heavily Reduce 1962 Oyster Catch;" "Cutting Cables Can Be Dangerous -- and Costly;" "Six Fishing Boats Being Built at Port Chalmers;" "Inflatable Liferrafts Have Saved Many Lives;" "Dorman Engines Power Fishing Craft Throughout the World;" "Facilities Being Expanded for Timaru's Growing Fleet;" "San Rosa Makes Experimental Trawl in Bay of Plenty;" "Quest, New Gisborne Tuna Boat, Will Use Long Line Method of Fishing;" and "New Charts are Important Aids to Navigation."

NIGERIA:

Establishing a Business in the Federation of Nigeria, WTIS Part 1, Economic Report No. 62-57, 8 pp., printed, 15 cents. Bureau of International Programs, U. S. Department of Commerce, Washington, D. C., July 1962. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.) Discusses the Nigerian Government's policy on private foreign investment, incentives to industrial development, foreign ownership, trade factors, and customs tariff. It also discusses types of business organization, industrial property rights, legislation, regulations affecting employment, and taxation.

NORTHERN PIKE:

The Growth and Harvest of Stocked Yearling Northern Pike, ESOX LUCIUS Linnaeus, in a Minnesota Wall-eye Lake, by Merlyn L. Wesloh and Donald E. Olson, Investigational Report 242, 9 pp., printed. Minnesota Department of Conservation, Division of Game and Fish, 301 Centennial Bldg., 658 Cedar St., St. Paul 1, Minn.

NORWAY:

Fiskeflaten 1961 (Fishing Fleet, 1961), Arsberetning vedkommende Norges Fiskerier (1961) No. 13, 30 pp., illus., printed in Norwegian. A.s John Griegs Boktrykkeri, Bergen, Norway, 1962.

Licensing and Exchange Controls--Norway, WTIS Part 2, Operations Report No. 62-41, 4 pp., printed, 10 cents. Bureau of International Programs, U. S. Department of Commerce, Washington, D. C., August 1962. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.) Discusses Norway's import controls including licensing and exchange controls and export controls including the free list and exchange controls. Also discusses United States controls on exports and imports from Norway and related information.

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

"Melding fra Fiskeridirektoren 26/7 1962, Fiskerioverenskomsten mellom Norge og Sovjet-Samveldet" (Announcement of the Fisheries Director, July 26, 1962; Agreement on Fisheries between Norway and the Soviet Union), article, Fiskets Gang, vol. 48, no. 30, July 26, 1962, pp. 422-427, printed in Norwegian. Fiskets Gang, Fiskeridirektoratet, Radstuplass 10, Bergen, Norway.

Norges Handel, 1960, Del II (Foreign Trade of Norway, 1960, Part II), Norway's Official Statistics, Series 12, no. 73, 259 pp., printed in Norwegian with English titles. Central Bureau of Statistics of Norway, Oslo, Norway, 1962. Discusses foreign trade statistics and the balance of current account, imports and exports of foods included in foreign trade statistics, and index numbers of volume and price. Also covers imports and exports by principal commodities (including fishery products), and foreign trade by countries and by ports of entry. Presents statistical tables showing imports and exports by sections and divisions, by groups and items, and by principal countries and commodities. Commodities are classified according to the Standard International Trade Classification (SITC).

NUTRITION:

"Mathematical Theory of Nutritional Relationship of Fishes," by V. S. Ivlev, article, Nature, vol. 192, October 28, 1961, pp. 297-298, printed. Nature, St. Martin's Press, 175 5th Ave., New York 10, N. Y.

OCEANOGRAPHY:

Bottom Topography from "Crawford" Cruise Ten Obtained for the International Geophysical Year of 1957-58, by Robert Allen Lufburrow, 8 pp., illus., printed. Oceanographic Institution, Woods Hole, Mass., 1957.

Datos Oceanograficos de la Playa Habana: III (Oceanographic Data for Havana Beach. III), by Jose A. Perez Sori, Contribucion No. 16, 26 pp., illus., printed in Spanish with French resume. Centro de Investigaciones Pesqueras, Playa Habana, Bauta, Cuba, June 1962.

Meeres-Mikrobiologie Tiefseeforschungen (Deep-Sea Microbiology), by A. E. Kriss, 579 pp., illus., printed in German, 98.10 D. M. (about US\$24.53). Gustav Fischer Verlag, Jena, Federal Republic of Germany, 1961. Presents a composite picture of the vertical and horizontal distribution of bacterial populations throughout the world's seas and oceans, including the effects thereon of various seasonal, geographical, and other factors. Includes descriptions of the various species of bacteria, yeasts, and actinomycetes encountered and their morphological variations, both vertical and horizontal. Describes the microbial biomass in the seas and oceans. Covers microorganisms in relation to the biological productivity of the ocean.

Oceanographic Data from "Crawford" Cruise Ten Obtained for the International Geophysical Year of 1957-58, by Frederick Charles Fuglister, 129 pp., illus., printed. Oceanographic Institution, Woods Hole, Mass., 1957.

Oceanographic Instrumentation: Salinity, Temperature, and Sound Velocity Measurements, 98 pp.,

printed. Lockheed Aircraft Corporation, Missiles and Space Division, Sunnyvale, Calif., 1960.

The Present Status of Knowledge Concerning the Primary Production of the Ocean, by O. Koblents-Mishke, Translation 147, 28 pp., printed. (Translated from the Russian, Okeanologiya, vol. 1, no. 1, pp. 95-106.) U. S. Hydrographic Office, Washington, D. C., 1962.

Processing Physical and Chemical Data from Oceanographic Stations, Manual Series Publication M-2, 110 pp., illus., processed, 90 cents. National Oceanographic Data Center, Washington, D. C., 1962. (For sale by U. S. Navy Hydrographic Office, Washington 25, D. C.) The National Oceanographic Data Center is sponsored by 6 government agencies having an interest in the marine environment. The sponsoring agencies are Atomic Energy Commission, Bureau of Commercial Fisheries, Coast and Geodetic Survey, Department of the Navy, National Science Foundation, and Weather Bureau. This publication describes the methods used at the National Oceanographic Center (NODC) for reducing processed physical and chemical oceanographic station data to a standard format. It is intended also for use by other agencies or contributors interested in furnishing oceanographic data to NODC or making their data systems compatible with those of NODC. An outline of the format of the Computed Card is included in order to acquaint the users of the NODC oceanographic station data holdings with the end product of the routinely performed computations.

"Sovremennoye Sostoyaniye Izucheniya Pervichnoy Produktzii Okeana" (The Present Status of Knowledge Concerning the Primary Production of the Ocean), by O. I. Koblents-Mishke, article, Okeanologiya, vol. 1, no. 1, 1961, pp. 95-106, printed in Russian. Okeanologiya, Akademii Nauk SSSR, Moscow, U.S.S.R.

Transparency Records as a Method of Oceanographic Investigation, by Joachim Joseph, Translation 108, 20 pp., illus., printed. (Translated from the German, Deutsche Hydrographische Zeitschrift, vol. 3, nos. 1/2, May 1950, pp. 69-77.) U. S. Hydrographic Office, Washington, D. C., 1961.

OYSTER DRILLS:

Transportation of Oyster Drills by Horseshoe "Crabs", by Clyde L. MacKenzie, Jr., 2 pp., illus., printed. (Reprinted from Science, vol. 137, no. 3523, July 6, 1962, pp. 36-37.) American Association for the Advancement of Science, 1515 Massachusetts Ave. NW., Washington 5, D. C. Observations indicate that horseshoe "crabs" (Limulus polyphemus) which were collected in New Haven Harbor, Long Island Sound, had large numbers of oyster drills attached to them. Since these animals migrate long distances, they may be important distributors of oyster drills.

OYSTERS:

"Are Oysters Edible during the Summer Season," by Motokazu Asano and Masao Itoh, article, Tohoku Journal of Agricultural Research, vol. 12, October 1961, pp. 239-243, printed. The Faculty of Agriculture, Tohoku University, Sendai, Japan.

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

Collecting Spat and Producing Bedding Oysters on Shell Strings, by J. C. Medcof, General Series Circular No. 36, 3 pp., illus., printed. Fisheries Research Board of Canada, Biological Station, St. Andrews, N. B., Canada, July 1962. Describes ways of collecting spat, preparing shell strings, and use of shell strings in deeper water and the intertidal zone. Also describes wintering spat on shell strings, rearing spat to bedding size, and separating bedding oysters. Older and useful Japanese methods are also described.

"Respiration, Electron-Transport Enzymes, and Krebs-Cycle Enzymes in Early Developmental Stages of the Oyster *Crassostrea virginica*", by Robert E. Black, article, The Biological Bulletin, vol. 123, no. 1, August 1962, pp. 58-70, printed, single copy \$2.50. The Biological Bulletin, Marine Biological Laboratory, Woods Hole, Mass.

Seasonal Cycle of Condition Index of Oysters in the York and Rappahannock Rivers, by Dexter Haven, Contribution no. 104, 25 pp., illus., processed. (Reprinted from Proceedings of the National Shellfisheries Association, vol. 51, 1960, pp. 42-66.) Virginia Institute of Marine Science, Virginia Fisheries Laboratory, Gloucester Point, Va. Five series of studies were made to test for differences in condition index of oysters grown in the York and Rappahannock Rivers. Oysters were cultured in elevated trays and on the bottom from 1956 through 1961. All groups came from a single source and were selected for uniformity in size. Results showed that, in general, the level of quality in the York was almost always lower than in the Rappahannock. Differences in level of index between tray and bottom oysters were not associated with presence of *Deremocystidium* or *Pinnotheres ostreum* or with age or crowding, but were probably the result of factors associated with the bottom.

"Ultra-Violet Light Helps Oyster Cleaning," article, New Scientist, vol. 12, December 7, 1961, p. 605, printed. Harrison, Raison and Co. Ltd., Cromwell House, Fulwood Place, High Holborn, London WC1, England.

PACKAGING:

"Fish-in-Bags Hook Plus-Sales," by R. Bloomberg, article, Food Engineering, vol. 32, no. 6, 1960, p. 99, printed. Food Engineering, Chilton Co., Chestnut and 56th Sts., Philadelphia 39, Pa.

"Packaging of AFD Foods - Progress Report," by J. L. Mills, article, Sales Appeal and Packaging Technology, vol. 3, no. 10, 1961, pp. 10-12, 14, 16, printed. Creative Journals, Ltd., 9 Grosvenor St., London W1, England.

PARASITES:

Immature Nematodes of the Genus CONTRACAECUM Railliet and Henry, 1912, from Shrimps, by Robert F. Hutton, Thelma Ball, and Bonnie Eldred, Contribution No. 65, 6 pp., illus., printed. (Reprinted from The Journal of Parasitology, vol. 48, no. 2, April 1962, pp. 327-332.) Florida State Board of Conservation, W. V. Knott Bldg., Tallahassee, Fla.

"Rapid Counting of Nematodes in Salmon by Peptic Digestion," by J. A. Stern and others, article Bul-

letin, International North Pacific Fisheries Commission, no. 3, 1961, pp. 1-4, printed. School of Fisheries, University of Washington, Seattle, Wash.

PASTEURIZATION:

Pasteurization--a Method of Extending Storage Life of Shellfish Meat, by C. F. Dunker and G. W. Whar-ton, paper presented at FAO International Conference on Fish in Nutrition, Washington, D. C., 17-29 September 1961, printed in English with French and Spanish abstracts. Food and Agriculture Organization of the United Nations, Viale delle Terme di Caracalla, Rome, Italy, 1961.

PENNSYLVANIA:

The Age and Growth of the Fishes in Pennsylvania, by Jack Miller and Keen Buss, 26 pp., printed. Conservation Education Commission, Pennsylvania Fish Commission, South Office Bldg., Harrisburg, Pa.

PERU:

Algunos Peces Nuevos y Poco Conocidos de la Fauna Marina del Peru (Some New and Little Known Fish of the Marine Fauna of Peru), by Norma F. Chirichigno, Serie de Divulgacion Cientifica No. 17, 29 pp., illus., printed in Spanish. Servicio de Pesqueria, Lima, Peru, 1962.

PHYSIOLOGY:

"Die abh ngigkeit des Standardmetabolismus vom Gewicht der Fische" (The Relation Between Standard Metabolism and Weight of Fishes), by E. Zeisberger, article, Zeitschrift fur Fischerei, vol. 10, nos. 1-3, 1961, pp. 203-219, printed in German with English and Russian summary. Neumann Verlag, 19 Dr. Schmincke Allee, Radebeul 1, Germany.

PICKEREL:

"The Redfin Pickerel *Esox A. Americanus* in North Carolina, by E. J. Crossman, article, Copeia, no. 1, 1962, pp. 114-123, printed. American Society of Ichthyologists and Herpetologists, 18111 Nordhoff St., Northridge, Calif.

POISONOUS FISH:

"Ciguetera: Tropical Fish Poisoning," by J. E. Randall, article, Sea Frontiers, vol. 7, no. 3, 1961, pp. 130-139, illus., printed. International Oceanographic Foundation, The Marine Laboratory, University of Miami, #1 Rickenbacker Causeway, Miami 49, Fla.

POLLOCK:

"The Growth Rate of New England Pollock," by John M. Hoberman and Albert C. Jensen, article, Transactions of the American Fisheries Society, vol. 91, no. 2, 1962, pp. 227-228, printed. American Fisheries Society, 233 Broadway, New York, N. Y.

POND FISH:

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of Commerce, Washington, D. C., and are for sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C., 10 cents each. Charts show stations displaying small craft, gale, whole gale, and hurricane warnings, explanation of warning displays, and schedules of AM and FM radio, TV, and radiophone stations that broadcast weather forecasts and warnings.

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CERTAIN CANNED FISHERY PRODUCTS REQUIRE LONGER HEAT PROCESSING

"It has long been known that starchy foods have a very slow rate of heat penetration. Fishery products such as fishballs, fish pudding, and fish pastes must be processed for longer periods than fish which are canned without added starchy ingredients. For example, fish pudding will require a process averaging 5 minutes longer than mackerel or salmon solely because of starch content, even though the size of can, fill, initial temperature, and all other factors show no difference between the products.

A product packed too tightly heats much more slowly than a more loosely-packed can of the same product. This is indicated most clearly in the canning of certain vegetables, but the condition may occur in the canning of fishery products. A too heavy consistency will of itself delay the rate of heat penetration."

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