



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.
 SL - BRANCH OF STATISTICS LIST OF DEALERS IN AN PRODUCERS OF FISHERY PRODUCTS AND BYPRODUCTS.
 SSR.- FISH. - SPECIAL SCIENTIFIC REPORTS- FISHERIES (LIMITED DISTRIBUTION).
 SEP.- SEPARATES(REPRINTS) FROM COMMERCIAL FISHERIES REVIEW.

- | Number | Title |
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| CFS-2398 | - Massachusetts Landings, July 1960, 5 pp. |
| CFS-2406 | - Frozen Fish Report, September 1960, 8 pp. |
| CFS-2411 | - Fish Meal and Oil, August 1960, 10 pp. |
| CFS-2412 | - Louisiana Landings, April 1960, 2 pp. |
| CFS-2413 | - New York Landings, August 1960, 4 pp. |
| CFS-2414 | - Virginia Landings, August 1960, 3 pp. |
| CFS-2415 | - New Jersey Landings, August 1960, 3 pp. |
| CFS-2416 | - Rhode Island Landings, August 1960, 3 pp. |
| CFS-2417 | - California Landings, June 1960, 4 pp. |
| CFS-2420 | - Ohio Landings, August 1960, 2 pp. |
| CFS-2423 | - Mississippi Landings, July 1960, 2 pp. |
| CFS-2429 | - Fish Meal and Oil, September 1960, 2 pp. |
| CFS-2430 | - Georgia Landings, September 1960, 2 pp. |
| FL-74 | - (Revised September 1960) - The American Lobster, <i>Homarus americanus</i> , by Leslie W. Scattergood, 9 pp., illus. Discusses the classification of lobsters; their range and importance in the U. S. fisheries; attempts to transplant; their size, habits, and reproduction; and care of the eggs. Also covers the development of the young, growth and molting, enemies, method of holding and shipping lobsters, conservation measures, and production. Included is a list of publications on lobsters. |
| Wholesale Dealers in Fishery Products, 1959 (Revised): | |
| SL-35 | - Illinois (Mississippi River and Tributaries). |
| SL-47 | - Louisiana (Mississippi River and Tributaries). |
| SSR-Fish. No. 345 | - Physical, Chemical, and Biological Observations in the Eastern Tropical Pacific Ocean Scot Expedition, April-June 1958, by Robert W. Holmes and Maurice Blackburn, 109 pp., illus., 1960. |
| SSR-Fish. No. 348 | - Marquesas Area Fishery and Environmental Data, January-March 1959, by Howard O. Yoshida, 41 pp., illus., June 1960. |

SSR-Fish. No. 350 - Effect of Fishway Slope on Rate of Passage of Salmonids, by Joseph R. Gauley, 25 pp., illus., June 1960.

SSR-Fish. No. 351 - Creel Census Connecticut River Shad Sport Fishery, 1957-58, and Estimate of Catch, 1941-56, by Paul R. Nichols and Marlin E. Tagatz, 14 pp., illus., July 1960.

SSR-Fish. No. 352 - Parasites in Summer-Caught Pacific Rockfishes, by John Liston, John Peters, and Joseph A. Stern, 12 pp., illus., July 1960.

SSR-Fish. No. 353 - Use of Dynamite to Recover Tagged Salmon, by Richard W. Tyler, 11 pp., illus., July 1960.

SSR-Fish. No. 355 - Capturing Tagged Red Salmon with Pulsed Direct Current, by Richard B. Thompson, 12 pp., illus., August 1960.

SSR-Fish. No. 357 - Holding Ponds for Adult Salmon, by Roger E. Burrows, 15 pp., illus., July 1960.

SSR-Fish. No. 359 - Oceanographic Observations, 1959, East Coast of the United States, by C. Godfrey Day, 118 pp., illus., 1960.

SSR-Fish. No. 361 - Reference Sources for Marine Mammalogy, by Gerald J. Oppenheimer, 10 pp., August 1960.

Sep. No. 605 - Observations of Russia's Far Eastern Activities.

Sep. No. 606 - Down with Rejects--Up with Profits.

Sep. No. 607 - Equipment Note No. 6 - Chain Bridles and Accumulators Increase Effectiveness of "Fall River" Clam Dredges in Deep Water.

Sep. No. 608 - Equipment Note No. 7 - Space-Saving Chart Table Installed on Seattle Trawler Sunbeam.

Galveston Biological Laboratory Fishery Research, Circular 92, 79 pp., illus., July 1960. Summarizes the research work carried out at the Galveston Biological Laboratory during the fiscal year ended June 30, 1960. Describes in detail investigations on the shrimp fishery, the industrial fishery, estuarine ecology, red tide incursions, and effects on the fisheries of engineering projects in the Gulf area. Also includes special reports on penaeid shrimp, copper content of Tampa Bay waters, brown shrimp movements, and pink shrimp larvae. Of particular interest is work commenced on the effects of insecticides on a number of species of estuarine shrimp.

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-36	Peruvian Fisheries Statistics, 1959.
MNL-37	Swedish Consumption of Fish and Fish Products in 1959.
MNL-38	Developments in Costa Rican Fisheries Industry, 1960.

THE FOLLOWING ENGLISH TRANSLATIONS OF FOREIGN LANGUAGE ARTICLES ARE NOT FOR GENERAL DISTRIBUTION BUT ARE AVAILABLE FOR REFERENCE ONLY FROM THE U. S. FISH AND WILDLIFE SERVICE, BUREAU OF COMMERCIAL FISHERIES, P. O. BOX 3830, HONOLULU, HAWAII.

Critical Study of Echo-Sounders Used for Tuna Detection, by Fernando Lozano Cabo, 6 pp., processed. (Translated from F.A.O. General Fisheries Council for the Mediterranean, Proceedings and Technical Papers, vol. 5, 1959, pp. 91-99.)

The Use of Echo-Sounders in the Study of the Migrations of Tuna, by Fernando Lozano Cabo, 4 pp., processed. (Translated from F.A.O. General Fisheries Council for the Mediterranean, Proceedings and Technical Papers, vol. 5, 1959, pp. 101-104.)

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

(Baltimore) Monthly Summary - Fishery Products, June and July 1960, 8 pp. each. (Market News Service, U.S. Fish and Wildlife Service, 400 E. Lombard St., Baltimore 2, Md.) Receipts at Baltimore by species and by states and provinces for fresh- and salt-water fish and shellfish; total receipts by species and comparisons with previous years; and wholesale prices on the Baltimore market; for the months indicated.

California Fishery Market News Monthly Summary, Part I - Fishery Products Production and Market Data, September 1960, 16 pp. (Market News Service, U.S. Fish and Wildlife Service, Post Office Bldg., San Pedro, Calif.) California cannery receipts of tuna and tunalike fish; mackerel, anchovies, and sardines; pack of canned tuna, mackerel, anchovies, and sardines; market fish receipts at San Pedro, Santa Monica, and Eureka areas; California and Arizona imports; canned fish and frozen shrimp prices; ex-vessel prices for cannery fish; for the month indicated.

(Chicago) Monthly Summary of Chicago's Fresh and Frozen Fishery Products Receipts and Wholesale Market Prices, October 1960, 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.

Monthly Summary of Fishery Products Production in Selected Areas of Virginia, North Carolina, and Maryland, October 1960, 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, September 1960, 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.

Production of Fishery Products in Selected Areas of Virginia, Maryland, and North Carolina, 1959 (As reported to Hampton Fishery Market News Office), by William N. Kelly, 44 pp., processed. (Available free from the Market News Service, 18 So. King St., Hampton, Va.) A summary of commercial landings of fish and shellfish and the production of crab meat and shucked oysters as reported by producers and wholesalers from selected principal fishing localities of Virginia, Maryland, and North Carolina. The statistics contained in this annual summary represent the approximate commercial fisheries production only and do not represent complete commercial landings or production for a given area, individual State, or the Chesapeake Bay area as a whole. However, the statistics give an indication as to the trend in fisheries production for the specific areas designated and reflect the over-all production trend by species, localities, and states.

Washington, Oregon, and Alaska Receipts and Landings of Fishery Products for Selected Areas and Fisheries, Monthly Summary, October 1960, 11 pp. (Market News Service, U.S. Fish and Wildlife Service, Pier 42 South, Seattle 4, Wash.) Includes landings and local receipts, with ex-vessel and wholesale prices in some instances, as reported by Seattle and Astoria (Oreg.) wholesale dealers; also Northwest Pacific halibut landings; and Washington shrimp landings; for the month indicated.

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 ORGANIZATION OR PUBLISHER MENTIONED. DATA ON PRICES, IF READILY AVAILABLE, ARE SHOWN.

ALEWIVES:

"Coming of the Alewives," by John Hay, article, Natural History, vol. 67, no. 5, May 1958, pp. 232-237, illus., printed. American Museum of Natural History, Central Park W. at 79th St., New York 24, N.Y. A description of a spring alewife run into streams on Cape Cod. Summarizes the life history of the alewife, its other common names, spawning, and high mortality of its eggs. Several excellent pen-and-ink illustrations are included.

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

AUSTRALIA:

Manufacturing Industries, 1958-59. "No. 23--Meat and Fish Preserving," by S. R. Carver, 9 pp., processed. Commonwealth Bureau of Census and Statistics, Canberra, Australia, July 1960. Contains a summary of the principal statistics of Australian meat and fish-preserving plants during 1958-59, and comparisons with previous years. Includes data on the quantity and value of production and of foreign trade in canned and smoked fish, canned shellfish, fish paste, fish, meal, and other similar products.

BARENTS SEA:

Comparison of the Abundance of Year-Classes of Cod and Haddock in the Barents Sea, as Made from a Quantitative Survey of the Young Fish and from the Commercial Fishery, by A. S. Bananenková, 17 pp., processed. (Translated from Trudy Poliarnovo N. -I. Institut Morskovo Rybnovo Khoziaistva i Okeanografii (PINRO), no. 10, 1957, pp. 54-77.) Fisheries Research Board of Canada, Biological Station, St. Andrews, N. B., Canada, 1959.

CANADA:

Canadian Atlantic Sea Shells, by E. L. Bousfield, illus., printed, C\$. Queen's Printer and Controller of Stationery, Ottawa, Canada.

Fish Culture Development (A Report of the Fish Culture Development Branch of the Conservation and Development Service), 45 pp., printed. (Reprinted from the Twenty-Eighth Annual Report of the Department of Fisheries of Canada.) The Queen's Printer and Controller of Stationery, Ottawa, Canada, 1959.

Fisheries Statistics of Canada (Nova Scotia), 1958, 53 pp., printed in French and English, C\$. Queen's Printer and Controller of Stationery, Ottawa, Canada, October 1960. Consists of tables giving the quantity and value of fish and shellfish landed in Nova Scotia, 1939-58; the quantity and value of fishery products by species and fisheries districts, 1957-1958; and capital equipment employed and number of persons engaged in the primary operations by fisheries districts, 1957-1958.

Journal of the Fisheries Research Board of Canada, vol. 17, no. 5, September 1960, 140 pp., illus., printed. Queen's Printer and Controller of Stationery, Ottawa, Canada. Includes, among others, these articles: "On the Source of Free Ribose Formed Post Mortem in the Muscle of Lingcod (Ophiodon elongatus)," by Neil Tomlinson and Vera M. Creelman; "A History of the Lake Winnipeg Fishery for Whitefish, Coregonus clupeaformis, with Some Reference to Its Economics," by L. C. Hewson; "Maturity and Breeding of the Pacific Edible Crab, Cancer magister Dana," by T. H. Butler; "The Behaviour of Pacific Salmon Fry during Their Downstream Migration to Freshwater and Salt-water Nursery Areas," by J. McDonald; "Underwater Television Observations of the Swimming Speed and Behaviour of Captive Herring," by Vivien M. Brawn; "Seasonal and Diurnal Vertical Distribution of Herring (Clupea harengus L.) in Passamaquoddy Bay, N. B.," by Vivien M. Brawn; "Effects of Proposed Passamaquoddy Bay, N. B.," by Vivien M. Brawn; "Effects of Proposed Passamaquoddy Power Project on Anadromous Fishes in Canadian Waters," by C. J. Kerswill; "Temperature Tolerance of Unacclimated Herring (Clupea harengus L.)," by Vivien M. Brawn;

"Survival of Herring (Clupea harengus L.) in Water of Low Salinity," by Vivien M. Brawn; and "Explorations for Herring in the Bay of Fundy and Gulf of Maine," by S. N. Tibbo and V. M. Brawn.

Thirteenth Annual Report of the Fisheries Prices Support Board, for the Year 1959-60, 9 pp., printed, 15 Canadian cents. The Queen's Printer and Controller of Stationery, Ottawa, Canada, 1960. In cooperation with the Economics Service of the Department of Fisheries, the staff of the Fisheries Prices Support Board continued to carry on surveys and other specialized studies of fishermen's costs and returns in Quebec and the Maritime Provinces. In addition, the staff, working in cooperation with the Department of Trade and Commerce, maintained a continuous review of the markets for various fishery products. This report also summarizes the Canadian fisheries during 1959; the fisheries markets; and Fisheries Prices Support Board activities such as fisheries salt assistance, Fishermen's Indemnity Plan, subsidy for destruction of Pacific Coast dogfish, and aid in construction of 20 community-processing facilities in Newfoundland.

CONTAINERS:

"The Sanitation of Fish Boxes. I--The Quantitative and Qualitative Bacteriology of Commercial Wooden Fish Boxes," by R. Spencer, article, Journal of Applied Bacteriology, vol. 22, April 1959, pp. 73-84, printed. Journal of Applied Bacteriology, Wallace & Tierman Ltd., Power Rd., London W4, England.

DENMARK:

Fiskeriberetning for Aret 1959 (The Ministry of Fisheries Annual Report for 1959), 146 pp., illus., printed in Danish with English summary. Fiskeriministeriet, 1 Kommission Hos G.E.C. Gad, Copenhagen, Denmark. A report on the Danish fishing industry during 1959. Includes information and statistical tables on the number of fishermen employed; fishing vessels; gear and nets; and landings of fish and shellfish. Also includes sections on trout produced in ponds; production of canned, smoked, and filleted fish; production of fish meal and oil; and foreign trade in fishery products.

EELS:

"Eels--An Export of Quebec," article, Trade News, vol. 13, no. 4, October 1960, pp. 8-9, illus., processed. Information and Educational Service, Department of Fisheries, Ottawa, Canada. The much maligned eel, a creature of murky waters shrouded in mystery is a practical reality to fishermen in Canada's Quebec Province as it bolsters their incomes by an annual sale of about a million pounds. This article discusses the spawning and food habits of the American eel and fishing gear used in Quebec.

ELECTRIC FISHES:

"Electric Fishes," by Harry Grundfest, article, Scientific American, vol. 203, no. 4, October 1960, pp. 115-124, illus., printed. Scientific American, Inc., 415 Madison Ave., New York 17, N. Y. The electric eel is only one of a number of fishes that are capable of generating a respectable electric current. These fishes variously use their electricity for purposes of attack, defense, and navigation.

EUROPEAN FISHERIES COMMUNITY:

"Let Us Have a Western European Fisheries Community." by John Bennett, article, World Fishing, vol.

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9, no. 11, November 1960, pp. 29-30, illus., printed. World Fishing, John Trundell (Publishers) Ltd., St. Richard's House, Eversholt St., London NW1, England. The idea of a Western European Fisheries Community has been gaining ground lately. In this article, the author gives his views on the subject and sums up the many advantages which a community of this type would have for its members. Among the advantages would be the improved access to markets for all members and a coherent international policy of fisheries conservation.

FISH BEHAVIOR:

"Swimming Sounds and the Schooling of Fishes," by James M. Moulton, article, The Biological Bulletin, vol. 119, no. 2, October 1960, pp. 210-223, illus., printed. The Biological Bulletin, Marine Biological Laboratory, Woods Hole, Mass.

FISH BLOCKS:

Thawing of Blocks of Small Fish, by S. I. Gakicko and V. D. Borodin, 24 pp., illus., printed in Russian. Central Institute of Scientific Research of the Refrigeration Industry, A. I. Mikojana, State Editions of Commercial Books, Moscow, U.S.S.R., 1959.

FOOD AND AGRICULTURE ORGANIZATION:

Manual of Field Methods in Fisheries Biology (Provisional Edition), edited by G. L. Kesteven, FAO Manuals in Fisheries Science No. 1, 161 pp., illus., printed. Food and Agriculture Organization of the United Nations, Viale delle Terme di Caracalla, Rome, Italy, 1960. Contains sections on planning of expeditions (primarily sea-going); records and reports; collection and preservation of material; measurements and counts; gear and operating methods; and meteorological, oceanographical, and limnological observations. Emphasis is on fish measurement, physical oceanography, and commercial gear.

A New Method for "Aimed" One-Boat Trawling in Midwater and on the Bottom, by J. Scharfe, GFCM Studies and Reviews No. 13, 62 pp., illus., processed. General Fisheries Council for the Mediterranean Secretariat, Food and Agriculture Organization of the United Nations, Rome, Italy, September 1960. Design and operation of a new type of one-boat midwater trawl gear are described and discussed in detail. The construction of this gear, which can also be used on the bottom, resulted from experimental and developmental work conducted mainly in 1959 by the Institute for Fishing Methods and Gear Research, Hamburg, Germany. This trawl gear, which was found suitable for craft up to large deep-sea trawlers, combines special hydrofoil otter boards with a light and high-opening trawl net made of synthetic twine and an echo-sounding net gauge with the transducer attached to the headline of the net. The gear can be operated from conventional trawlers with only slight modifications in the usual handling. Intended primarily for midwater trawling, it can also be used successfully on a smooth bottom and close to rough ground. The next step, according to the author, is its use in exploratory fishing for previously inaccessible pelagic fish stocks.

The Food and Agriculture Organization has published a report describing that Agency's activities under the Expanded Technical Assistance Program for developing the fisheries of many countries. This re-

port has not been published on a sales basis, but has been processed only for limited distribution to governments, libraries, and universities. Food and Agriculture Organization of the United Nations, Viale delle Terme di Caracalla, Rome, Italy.

Report to the Government of Turkey on Fish Handling and Refrigeration, by Helgi Bergs, FAO Report No. 282, 47 pp., illus., June 1954.

FREEZE-DRYING:

"Freeze-Drying, Dehydrofreezing Confused by Industry: Maclinn, article, Frosted Food Field, vol. 30, May 1960, p. 36, printed. Frosted Food Field, Inc., 19 W. 44th St., New York 18, N. Y.

FREEZING:

"Experiment on Oil Glazing, Especially Using Acetoglycerides," by K. Tanaka, article, Refrigeration, vol. 35, no. 389, March 1960, pp. 9-14, printed. Nihon Reito Kyokai (Japanese Society of Refrigeration), No. 3, 1-Chome, Ginza Nishi, Chuo-ku, Tokyo, Japan.

"Freezing and Thawing of Fish, article, Redogorelse for Arbetsaret July 1, 1958-June 30, 1959 (SIK Report No. 71), pp. 37-38, printed in Swedish. Svenska Institute For Konserveringsforskning, Goteborg, Sweden, 1959.

FROZEN FISH:

"The Storage of Frozen Salaka for Canning Purposes," by A. Piskarev, A. Kaminarskaja, and L. Luk'janica, article, Kholodil'naia Tekhnika, no. 2, 1960, pp. 40-43, illus., printed in Russian with English abstract. Kholodil'naia Tekhnika, c/o Four Continent Book Corp., 822 Broadway, New York 3, N. Y.

FUR SEALS:

"Canada's Share in the North Pacific Fur Seal Resource," by Gordon C. Pike, article, Trade News, vol. 13, no. 3, September 1960, pp. 8-9, illus., processed. Trade News, Information and Educational Service, Department of Fisheries, Ottawa, Canada. Discusses Canada's share in the profits (about \$500,000 annually since 1940) of the fur-seal harvest conducted each year under supervision of the U. S. Bureau of Commercial Fisheries in the Pribilof Islands of Alaska. Also covers the provisions of the Interim Convention for the Conservation of North Pacific Fur Seals of 1957, under the terms of which this harvest is made. Canada and Japan each share 15 percent of the seal-skins taken commercially by the United States and the Soviet Union.

Sea Bears: The Story of the Fur Seal, by Fredericka Martin, 201 pp., illus., printed, \$3.50. Chilton Co., 5605 Chestnut St., Philadelphia 39, Pa. About the Alaskan sea bears, the Aleuts who hunt them, and the fur trade.

GENERAL AGREEMENT ON TARIFFS AND TRADE: The Activities of GATT 1959/60, GATT/1960-2, 35 pp., printed, 75 cents. International Document Service, Columbia University Press, 2960 Broadway, New York 27, N. Y., May 1960.

GERMANY:

"Struktur und Wirtschaftlichkeit der Kutterfischerei Schleswig-Holsteins" (Structure and Economic

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Aspects of the Cutter Fishery of Schleswig-Holstein, by A. Pape, article, Informationsdienst der Landesregierung Schleswig-Holstein, vol. 8, no. 15, August 1960, pp. 107-110, printed in German. Informationsdienst der Landesregierung Schleswig-Holstein, Kiel, Germany.

HERRING:

"Det Norske Sildefiskets Naturgrunnlag" (Foundations of the Norwegian Herring Industry), by Finn Devold, article, Fiskets Gang, vol. 46, no. 36, September 8, 1960, pp. 506-512, illus., printed in Norwegian. Fiskets Gang, Postgiro nr. 691 81, Bergen, Norway.

"Norway's Herring Harvest," article, The Lamp, vol. 42, no. 3, Fall 1960, pp. 10-15, illus., printed. Standard Oil Company (New Jersey), 30 Rockefeller Plaza, New York 20, N. Y. A short description of the herring industry, highlighting one skipper and his village on the western Norwegian coast. Explains, in a simple, narrative, manner, the fleet, the varieties of herring and season fished, volume and value of the catch, the gear and method of landing the fish, herring byproducts, and division of the profits. The article also mentions the work of the Norwegian Government fishery research vessel, the importance of the herring industry in the economy, and fishing as a way of life for entire villages. The reproductions of dramatic full-color oil paintings of the fleet on the fishing grounds add a great deal of interest.

HONG KONG:

Hong Kong University Fisheries Journal, no. 2, September 1958, 147 pp., illus., printed, \$2.20. Hong Kong University Press, Hong Kong, B. C. C. Contains, among others, these articles: "A Survey of the Biology of the Grass Carp, Ctenopharyngodon idellus (Cuvier and Valenciennes)," by J. L. Gidumal; "Growth Characteristics of Four Species of Pondfish in Hong Kong," by T. Chow; "An Analysis of the Fishing Operations of a Pair of Trawlers Based on Hong Kong from 1949 to 1952," by C. Y. Chu; "On the Biology and Culture of the Native Oyster of Deep Bay, Hong Kong, Crassostrea sp.," by J. D. Bromhall; and "Report on the Fisheries Research Unit, University of Hong Kong, for the Years 1955 to 1957," by D. Barker.

, no. 3, April 1960, 201 pp., illus., printed, \$3.15. Contains, among others, these articles: "Hong Kong Marine Fisheries Status Report No. 1 (1957)," by C. Y. Chu; "A Key to the Identification of Hong Kong Penaeid Prawns with Comments on Points of Systematic Interest," by T. S. Cheung; "Growth Characteristics of Two Species of Pondfish in Hong Kong," by T. Chow; "The Yellow Croaker Fishery of Hong Kong and Preliminary Notes on the Biology of Pseudosciaena crocea (Richardson)," by C. Y. Chu; and "Report on the Fisheries Research Unit, University of Hong Kong, for the Years 1958 to 1959," by F. D. Ommanney.

ICE:

"Preparation and Use of Antiseptic Ice for the Transport of Fresh Fish," by V. Bercescu and S. Cristea, article, Lucrarile Institutului de Cercetari Alimentare, vol. 3, 1959, pp. 249-260, illus., printed in Rumanian. Lucrarile Institutului de Cercetari Alimen-

tare, Ministerul Industriei Alimentare, Institutul de Cercetari Alimentare, Str. Momdicevschi nr. 1, Bucharest, Rumania.

INDUSTRIAL OPERATIONS:

Pointers on In-Plant Trucking, by Wilbur G. Hudson, Technical Aids for Small Manufacturers No. 73, July-August 1960, 4 pp., illus., printed. Small Business Administration, Washington 25, D. C. Motorized trucks for in-plant materials handling are most economical in large plants in which the flow of work is intermittent and subject to change and when the size, shape, and composition of the materials to be transported vary considerably. Selection of the particular type of truck will depend on the uses to which it will be put and the power requirements. Ventilation for exhaust fumes is always a consideration in the use of fuel-burning engines in enclosed areas. Utilization of various types of pallets, portable platforms on which loads can be carried by lift trucks, can expedite materials handling operations. Cost factors in buying and operating mechanized equipment must be considered.

INTERNATIONAL CONFERENCES:

Participation of the United States Government in International Conferences, July 1, 1958-June 30, 1959, Department of State Publication 7012, 321 pp., printed, \$1. Office of International Conferences, U. S. Department of State, Washington, D. C., September 1960. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.) Describes, among others, the following conferences: Eighth Session of the Indo-Pacific Fisheries Council of the Food and Agriculture Organization of the United Nations (Colombo, Ceylon, December 6-22, 1958); Fifth Annual Meeting of the International North Pacific Fisheries Commission (Tokyo, Japan, November 4-10, 1958); Interim Meeting of the Ad Hoc Committee on Abstention of the International North Pacific Fisheries Commission (Honolulu, Hawaii, August 7-11, 1958); Ninth Annual Meeting of the International Commission for the Northwest Atlantic Fisheries (Montreal, Canada, June 1-6, 1959); Second Meeting of the North Pacific Fur Seal Commission (Washington, D. C., December 8-13, 1958).

JAPAN:

Data Record of Oceanographic Observations and Exploratory Fishing, No. 4, 226 pp., illus., printed in Japanese and English. The Faculty of Fisheries, Hokkaido University, Hakodate, Hokkaido, Japan, March 1960. Consists of data collected on cruises to the Bering Sea and to the North Pacific and Okhotsk Sea during 1959. Data include information on plankton, fish larvae, salmon gill-netting, trawling, whales, and other material.

Data Record of Oceanographic Observations and Exploratory Fishing, No. 3, 303 pp., illus., printed in Japanese and English. The Faculty of Fisheries, Hokkaido University, Hakodate, Hokkaido, Japan, November 1959. Contains data collected on cruises to the northern North Pacific, north of New Guinea, the Bering Sea, and the North Pacific and the Okhotsk Sea during 1957 and 1958. Data include information on tuna long-lining, biological characters of salmon, hydrographic observations, and other material.

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The Tohoku Journal of Agricultural Research, vol. 11, no. 1, April 1960, 115 pp., illus., printed. The Faculty of Agriculture, Tohoku University, Sendai, Japan. Includes, among others, these articles: "Studies on the Utilization of Electro-Smokes-Solution for Fish Smoking," by Y. Tsuchiya and T. Nakano; and "Studies on the Amounts of the Anchovy Consumed by the Mackerel," by M. A. Hatanaka and M. Takahashi.

MINK RATIONS:

"Cod Fish Offal as a Complete Substitute for Horse Meat in Mink Rations During the Growth and Furring Seasons," by C. K. Gunn, article, National Fur News, vol. 32, no. 9, October 1960, pp. 36, 39, printed. National Fur News, Galen E. Broyles Co., Inc., 200 Clayton St., Denver 6, Colo. The scarcity and high cost of horse meat for mink feed has made it necessary for other kinds of food to be used. As cod offal is readily available in the Maritime Provinces, tests were carried out at the Experimental Fur Ranch, Summerside, Prince Edward Island, Canada, to determine its value. This article reports the quality and color of fur of mink that were fed cod offal.

NAMES OF FISH:

A List of Common and Scientific Names of Fishes from the United States and Canada (Second Edition), Special Publication No. 2, 104 pp., printed, \$1 (paper). Secretary-Treasurer, American Fisheries Society, Box 483, McLean, Va., 1960. Includes 1,892 entries, more than a threefold increase over those in the first edition, presented as a natural or phylogenetic sequence of families of fishes, with the species of each family alphabetized to generic and specific names. In order to facilitate use, the three classes of recent fishes (jawless, cartilaginous, and bony) and the orders are indicated. Both common and technical names of families are given. An innovation in this edition is the inclusion of authorities for scientific names. Encompasses all species of fishes known from the fresh waters of the continental United States and Canada, and those marine species inhabiting contiguous waters on or above the continental shelf, to a depth of 100 fathoms.

NEW ZEALAND:

Report on Fisheries for 1959, 41 pp., printed. Marine Department, Wellington, New Zealand, 1960. A report on the fisheries of New Zealand which covers crayfish landings, fishing vessels and personnel, fish landings, methods of capture, landings at ports, exports and imports, big-game fishing, fish-liver oil, the 1959 whaling season, rock oysters, dredged oysters, the 1959 whitebait fishery, and landings of mussels. Also discusses fresh-water fisheries, and research, marine research, the Fishing Industry Advisory Council, and fisheries legislation. Includes statistical tables giving detailed data on the fisheries.

NORWAY:

"Forekomst av Egg og Yngel av Fisk i Vest- og Nord-Norske Kyst- og Bankfarvann varen 1959" (Fish Eggs and Young Fish off the West and North Norwegian Coast and Banks, Spring 1959), by Kr. Fr. Wiborg, article, Fiskets Gang, vol. 46, no. 37, September 15, 1960, pp. 522-528, illus., printed in Norwegian. Fiskets Gang, Postgiro nr. 691 81, Bergen, Norway.

OCEANOGRAPHY:

Oceanic Observations of the Pacific, 1950, 508 pp., illus., printed, \$4.50. Scripps Institution of Oceanography, University of California, La Jolla, Calif. (For sale by the University of California Press, Berkeley, Calif.)

OEEC:

Marketing and Consumption of Frozen Fish in OEEC Countries, by Otto Hanssen, No. 21, Project No. 5718, 116 pp., processed, 7s. (about 98 U. S. cents). The European Productivity Agency, Organization for European Economic Cooperation, Paris, France. (Available from OEEC Mission, Publications Office, Suite 1223, 1346 Connecticut Ave., NW, Washington 25, D. C.) This report, presented at the meeting of experts on frozen foods held at Verona, October 6-12, 1959, surveys comprehensively the problems of grading, transport, and handling at retail of frozen fish and fillets in Europe. The first part of the report contains chapters on production, warehousing, transportation, wholesaling, retailing, and locker plants and home freezers. The second part covers problems in each of the member countries and discusses topics such as fish, landings, the fishing fleet, facilities for a cold chain, foreign trade in frozen fish, and promotion of the consumption of fishery products.

Summary Report on Activities Undertaken by EPA

Since Its Establishment in 1953, 60 pp., processed. Division for Technical Action and Productivity in Agriculture and Food, European Productivity Agency, OEEC, 3, rue Andre-Pascal, Paris, 16^e, France, May 1960. A report on the activities which form part of the work for a closer economic cooperation in Europe, launched by the Organization for European Economic Cooperation, of which the European Productivity Agency is the operational branch. A chapter on fish and fish products covers improvement of quality and packaging; organization and structure of the market for fish; improvement of methods of distribution and sales; market and consumer research; and development of the cold chain.

OREGON:

Salmon and Steelhead Hatcheries, 6 pp., illus., printed.

The Fish Commission of Oregon, State Office Bldg., Portland, Oreg. A pamphlet describing briefly the operation of a hatchery; the history of the Oregon hatcheries; their purpose; natural salmon spawning; and the functions of the Oregon Fish Commission--the principal of which is the management and development of the State's food fish resources.

OYSTER FARMING:

"Use of the Escalator in Oyster Farming," by J. S. MacPhail, article, Trade News, vol. 13, no. 3, September 1960, pp. 5-7, illus., processed. Trade News, Information and Educational Service, Department of Fisheries, Ottawa, Canada. Although the escalator harvester was developed for fishing soft-shell clams, the author believes its greatest usefulness may be to the Canadian oyster farming industry. The new technique of rearing spat to bedding-size oysters on the bottom instead of on expensive floating trays and the ability of the escalator harvester to recover them will reduce the labor and material costs of oyster farming.

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

OYSTERS:

"Conditioning *Ostrea edulis* L. from the Limfjord for Reproduction Out of Season," by I. A. Aboul-Ela, article, Meddelelser fra Danmarks Fiskeri- og Havundersogelser, Ny Serie, Bind II, Nr. 23-26, 1960, Nr. 25, 19 pp., illus., printed in English with Danish summary. C. A. Reitzels Forlag, Bianco Lunos Bogtrykkeri A/S, Copenhagen, Denmark, 1960.

"Mechanisms of Removal of Injected Microorganisms from the American Oyster, *Crassostrea virginica* (Gmelin)," by M. R. Tripp, The Biological Bulletin, vol. 119, no. 2, October 1960, pp. 273-282, illus., printed. The Biological Bulletin, Marine Biological Laboratory, Woods Hole, Mass.

PLANKTON:

Measuring the Production of Marine Phytoplankton, by J. D. H. Strickland, printed, C\$2. Queen's Printer and Controller of Stationery, Ottawa, Canada.

POLLUTION:

Ecological Effects of Sewage Pollution in Biscayne Bay, Florida: Distribution of Coliform Bacteria, Chemical Nutrients, and Volumes of Zooplankton, by J. Kneeland McNulty, Ernest S. Reynolds, and Sigmund M. Miller, 14 pp., illus., printed. (Reprinted from the Transactions of the Second Seminar on Biological Problems in Water Pollution, April 20-24, 1959, U. S. Public Health Service, Robert A. Taft Sanitary Engineering Center, Cincinnati 26, Ohio.) U. S. Public Health Service, Department of Health, Education, and Welfare, Washington 25, D. C.

POND FISHERIES:

Hook-and-Line Catch in Fertilized and Unfertilized Ponds, by Donald F. Hansen and others, 50 pp., illus., printed. (Reprinted from Illinois Natural History Survey Bulletin, vol. 27, art. 5, August 1960, pp. 345-390.) Illinois Natural History Survey, Natural Resources Bldg., Urbana, Ill.

REFRIGERATED WAREHOUSES:

Capacity of Refrigerated Warehouses in the United States, October 1, 1959, Co St-2 (60), illus., processed. Agricultural Marketing Service, U. S. Department of Agriculture, Washington, D. C., October 1960. Knowledge of the capacity of refrigerated warehouses in the United States has been of interest to both industry and Government ever since 1921 when a survey was made to gather statistics on facility location, capacity, and type of service offered. Beginning with that initial effort, successive surveys were made, with one exception, on October 1 of each alternate year. They include all known public, private, and semiprivate refrigerated storage facilities, including one-product houses that include such products as fish.

SALMON:

Migratory Behavior of Adult Fraser River Sockeye, Progress Report by Philip Gilhousen, 81 pp., illus., processed. International Pacific Salmon Fisheries Commission, New Westminster, B. C., Canada, 1960.

SARDINES:

"Depuis Quand Peche-t-on la Sardine?" (How Long Has the Sardine Fishery Been in Existence?) by Jules Molard, article, France Peche, vol. 5, no. 43,

September 1960, pp. 15-18, illus., printed in French with English summary. France Peche, 84 Rue Carnot, Lorient, France.

"Perspectiva Actual de la Pesca Espanola de Sardina" (Current Prospects for the Spanish Sardine Fishery), by V. Paz-Andrade, article, Industrias Pesqueras, vol. 34, no. 797, July 1960, pp. 266-267, printed in Spanish. Industrias Pesqueras, Policarpo Sanz, 21-22, Vigo, Spain.

The South African Pilchard (SARDINOPS OCELLATA) -- Trends in the Pilchard Fishery of the Union of South Africa, 1943-58, by C. G. Du Plessis, Investigational Report No. 38, 27 pp., illus., printed. (Reprinted from Commerce and Industry, September 1959). Division of Fisheries, Beach Road, Sea Point, Cape Town, Union of South Africa, 1959.

SPERM OIL:

"Methods of Analysis of Sperm Whale Oil and Its Derivatives," by S. A. Moldavskaya and E. S. Dmitrieva, article, Masloboino-Zhirovaya Promyshlennost, no. 7, 1955, pp. 30-32, printed in Russian. Izdatel'stvo Literaturny po Pishchevoi, Promyshlennosti, Moscow, U.S.S.R.

Separation of Wax from Sperm Oil, by Katsumi Higashi, Iwao Kojiro, and Saburo Tsukamoto, Japan Patent No. 8531, September 24, 1958, printed in Japanese. Japanese Patent Office, Tokyo, Japan.

TENNESSEE VALLEY AUTHORITY:

Fish and Game Development, 1960, Report No. 235-60, 13 pp., illus., printed. Fish and Game Branch, Division of Forestry Relations, Tennessee Valley Authority, Norris, Tenn. Includes information and statistical tables on the commercial fish harvest in TVA reservoirs and mussel shell harvest in the Tennessee River.

TUNA:

"La Campana de Albacora y la Exportacion" (The Albacore Season and Exports), article, Industria Conservera, vol. 26, no. 253, July 1960, pp. 179-180, printed in Spanish. Industria Conservera, Calle Marques de Valladares, 41, Vigo, Spain.

"Problems of Colour of Frozen Tuna Meat on Cooking," by T. Yamamoto, Refrigeration, vol. 35, no. 389, March 1960, pp. 1-8, illus., printed. Nihon Reito Kyokai (Japanese Society of Refrigeration), No. 3, 1-Chome, Ginza Nishi, Chuo-ku, Tokyo, Japan.

"La Produccion de Tunidos--Nivel Actual de su Explotacion en Espana" (Tuna Production--Current Level of Spanish Exploitation), by Angel Gonzalez Rodal, article Industrias Pesqueras, vol. 34, no. 797, July 1960, pp. 271-273, illus., printed in Spanish. Industrias Pesqueras, Policarpo Sanz, 21-22, Vigo, Spain.

A Study of Measures of Population Density and of Concentration of Fishing Effort in the Fishery for Yellowfin Tuna, NEOTHUNNUS MACROPTERUS, in the Eastern Tropical Pacific Ocean, from 1951 to 1956, by Raymond C. Griffiths, 98 pp., illus., printed in Spanish and English. (Reprinted from Inter-American Tropical Tuna Commission Bulletin, vol. 4, no. 3, 1960, pp. 41-136.) Inter-American Tropical Tuna Commission, La Jolla, Calif.

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

"Sugerencias para un Incremento de las Exportaciones de Atun a los Estados Unidos" (Suggestions for an Increase in Tuna Exports to the United States), article, Industria Conservera, vol. 26, no. 253, July 1960, pp. 185-186, printed in Spanish. Industria Conservera, Calle Marques de Valladares, 41, Vigo, Spain.

TURKEY:

Balik ve Balikcilik (Fish and Fishery), vol. 8, no. 9, September 1960, 32 pp., illus., printed in Turkish with English table of contents. Balik ve Balikcilik, Istanbul Balikcilik, Mudurlugu, Besiktas, Istanbul, Turkey. Includes, among others, these articles: "Food Poisoning and Sea Products (Part II)," by Orhan Demirhindi; "A Visit to Marmara Cold Storage Plant;" and "Protection Against Sharks."

UNION OF SOUTH AFRICA:

The South African Pilchard (SARDINOPS OCELLATA) and the Maasbanker (TRACHURUS TRACHURUS)-- A Preliminary Study of the Salps and Doliolids Off the West and South Coasts of South Africa, by R. P. Van Zyl, Investigational Report No. 40, 29 pp., illus., printed. (Reprinted from Commerce and Industry, December 1959.) Division of Fisheries, Beach Road, Sea Point, Cape Town, Union of South Africa, 1960.

UNITED KINGDOM:

The Scottish Seine Net Fishery, 1921-1957, by A. Ritchie, Marine Research No. 3, 69 pp., illus., printed, £1 1s. (about US\$2.95). Her Majesty's Stationery Office, 13A Castle St., Edinburgh 2, Scotland, 1960. Next to the otter trawl, the Danish seine-net

is the most important type of gear in use today by Scottish fishermen for the landing of demersal fish. While trawling is limited to vessels based in a few ports, seining covers an extensive part of the Scottish coast and in many areas seining constitutes the main source of income to fishermen. This report covers regulations pertaining to the seine-net fishery; history of the fishery; and the species landed. Included are tables giving data on distribution of the various species landed by districts, months, and seasons during 1935-38, 1946-50, and 1951-55.

Sea Fisheries Statistical Tables, 1959, 40 pp., printed, 4s. (56 U. S. cents). Her Majesty's Stationery Office, York House, Kingsway, London WC2, England, 1960. 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 1959. Breakdowns of catches by vessels 40 feet and over, demersal landings, and pelagic landings are included. Information of the number of fishermen, vessels, and vessels by gross tonnage, principal ports and methods are given. Data on foreign trade in fishery products are also shown.

VENEZUELA:

"Laboratorio de Biología Pesquera" (Fishery Biology Laboratory), by Felipe Martin Salazar, article, El Agricultor Venezolano, no. 24, no. 218, May-June 1960, pp. 18-21, illus., printed in Spanish. El Agricultor Venezolano, Ministerio de Agricultura y Cria, Caracas, Venezuela.



EFFECTS OF HIGH TEMPERATURE ON SURVIVAL OF THE GIANT SCALLOP

Scallops in the northern Gulf of St. Lawrence undergo mass mortalities that lead to sudden disappearances of local fisheries. A recent report by Dr. Lloyd Dickie of the St. Andrews Station and published in the Journal of the Fisheries Research Board (Volume 15, Number 6) suggests why. He shows first of all, in a series of critical tests, that scallops are killed by fairly warm water of 69° to 74° F. The exact temperature depends upon the previous temperature experience of the scallop, since those which are accustomed to warm conditions are more resistant to rapid warming. Sudden flooding of scallop beds by warm water may thus lead to mass mortalities. Such floodings have been observed to occur. Dr. Dickie points out that rapid changes in water temperatures can damage scallop populations in a second way. Scallops, unlike other shellfish, are ordinarily mobile and actually escape enemies. Sudden temperature changes such as are known to occur on the Magdalen Shallows, even if not killing, reduce scallop activity. When they are thus an easy prey to their enemies, populations can be greatly cut down by predation. (Bulletin, Fisheries Council of Canada - May 25, 1959.)