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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).
 WL - WILDLIFE LEAFLETS.

- | Number | Title |
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| CFS-3139 | - New Jersey Landings, 1962 Annual Summary, 11 pp. |
| CFS-3142 | - United States Fisheries, 1961 Annual Summary, 16 pp. |
| CFS-3147 | - Rhode Island Landings, January 1963, 3 pp. |
| CFS-3151 | - Massachusetts Landings, November 1962, 6 pp. |
| CFS-3153 | - Virginia Landings, 1962, Annual Summary, 9 pp. |
| CFS-3160 | - Frozen Fishery Products, March 1963, 8 pp. |
| CFS-3161 | - Maine Landings, February 1963, 4 pp. |
| CFS-3162 | - California Landings, December 1962, 4 pp. |
| CFS-3163 | - Massachusetts Landings, December 1962, 6 pp. |
| CFS-3165 | - California Landings, January 1963, 4 pp. |
| CFS-3166 | - Maryland Landings, February 1963, 3 pp. |
| CFS-3167 | - New York Landings, February 1963, 4 pp. |
| CFS-3169 | - New Jersey Landings, February 1963, 3 pp. |
| CFS-3170 | - Alabama Landings, January 1963, 2 pp. |
| CFS-3171 | - Fish Meal and Oil, February 1963, 2 pp. |
| CFS-3172 | - Wisconsin Landings, February 1963, 2 pp. |
| CFS-3173 | - Louisiana Landings, February 1963, 2 pp. |
| CFS-3174 | - Rhode Island Landings, 1962 Annual Summary, 8 pp. |
| CFS-3175 | - Michigan Landings, January 1963, 2 pp. |
| CFS-3176 | - Shrimp Landings, September 1962, 8 pp. |
| CFS-3177 | - Rhode Island Landings, February 1963, 3 pp. |
| CFS-3178 | - Fish Sticks and Fish Portions, January-March 1963, 2 pp. |
| CFS-3179 | - Virginia Landings, February 1963, 3 pp. |
| CFS-3181 | - Mississippi Landings, February 1963, 3 pp. |
| CFS-3183 | - Great Lakes Fisheries, 1961 Annual Summary, 15 pp. |
| CFS-3184 | - Georgia Landings, March 1963, 3 pp. |
| CFS-3186 | - Fish Meal and Oil, March 1963, 2 pp. |
| CFS-3187 | - North Carolina Landings, March 1963, 4 pp. |
| CFS-3188 | - South Carolina Landings, March 1963, 3 pp. |
| CFS-3189 | - Florida Landings, March 1963, 9 pp. |
| CFS-3192 | - California Landings, February 1963, 4 pp. |
| CFS-3195 | - Louisiana Landings, March 1963, 2 pp. |
- Firms Canning, 1962 (Revised):
 SL-112 - Shrimp, 2 pp.
 SL-113 - Crab Meat, 2 pp.
 SL-116 - Food for Animals, from Marine-Animal Products, 3 pp.
 SL-119 - Squid, 1 p.
 SL-120 - Anchovies, 1 p.
- Firms Manufacturing, 1962 (Revised):
 SL-152 - Oyster Shell Products, 2 pp.
 SL-153 - Miscellaneous Industrial Fishery Products, 1 p.
 SL-155 - Marine Pearl Shell Buttons, 1 p.
 SL-159 - Fresh-Water Mussel-Shell Products, 1 p.
 SL-160 - Menhaden Products, 2 pp.
- Wholesale Dealers in Fishery Products, 1962 (Revised)
 SL- 8 - Pennsylvania, 3 pp.
 SL-11 - Washington, D. C., 1 p.
 SL-13 - North Carolina, 6 pp.
 SL-14 - South Carolina, 3 pp.
 SL-15 - Georgia, 3 pp.
 SL-17 - Alabama, 3 pp.
 SL-18 - Mississippi, 3 pp.
- FL-323 - Snails, 7 pp., August 1962 (Revised).
- FL-549 - Marking Fish and Invertebrates, by George A. Rounsefell, 16 pp., 1963.
- SSR-Fish. No. 413 - Surface Currents of Lake Michigan 1931 and 1932, by John Van Oosten 54 pp., illus., 1963.
- SSR-Fish. No. 431 - A List of the Marine Mammals of the World, by Victor B. Scheffer and Dale W. Rice, 14 pp., 1963.
- SSR-Fish. No. 435 - Variation in Vertebral Numbers of Juvenile Atlantic Menhaden, by Doyle F. Sutherland, 25 pp., processed, 1963.
- SSR-Fish. No. 442 - Sea Surface Temperature Monthly Average and Anomaly Charts Eastern Tropical Pacific Ocean, 1947-58, by James A. Renner, 60 pp., illus., 1963.
- Sep. No. 677 - Bottom Fish Survey off the Oregon Coast, April-June 1961.
- Sep. No. 678 - Accuracy of the Official Method for Determining Breeding Percentages of Frozen Raw Breaded Shrimp.
- Sep. No. 679 - The Line-Trawl Fishery for Cod and Haddock at Chatham, Massachusetts.
- WL-441 - Selected Federal Laws on Fish and Wildlife Conservation and the Migratory Bird Treaties, 5 pp., 1963.

Biological Laboratory, Galveston, Texas, Fishery Research for the Year Ending June 30, 1962, Circular 161, 105 pp., 1963.

Careers in Bureau of Sport Fisheries and Wildlife, for Fishery Biologists and Wildlife Biologists (Brochure for Applicants), 16 pp., illus., December 1962.

Commercial Fisheries: Research and Development in the Great Lakes and Central Region (A Long-Range Program of the Bureau of Commercial Fisheries), Circular 147, 41 pp., illus., 1963. The goal of the Bureau's program in the Great Lakes and Central Region is the economic betterment of the commercial fishing industry in all its phases--production, processing, and distribution--and improved products and services for the consumer. This circular discusses the Great Lakes and Central Region as a market for fish and as a producer of fish. It also discusses the unique management situation created by the fact that the lakes are owned by the States, and the U. S. fisheries operate under eight separate State fishery codes, as many as four of which may apply within a single lake; the Ontario regulations add still another code on every lake but Michigan. A section on the immediate and critical problem areas covers the sea lamprey, changes in the Lake Michigan and Lake Erie fisheries, and the Arkansas rice fields. The long-range program discussion includes work in the fields of biological research economics, exploratory fishing, marketing, market news, statistics, and technology.

6 Questions Everbody Asks at National Fish Hatcheries, Circular 157, 8 pp., illus., printed, 1963.

This is a Trout Hatchery (Operated by Bureau of Sport Fisheries and Wildlife to Help Manage Our Sport Fishery Resources and Provide Recreation for Millions of Americans), Circular 31, 8 pp., illus., printed, 1962 (revised).

THE FOLLOWING MARKET NEWS LEAFLETS ARE AVAILABLE FROM THE FISHERY MARKET NEWS SERVICE, U. S. BUREAU OF COMMERCIAL FISHERIES, SUITE 611, WYATT BLDG., 777 14TH ST. NW., WASHINGTON 5, D. C.

Number	Title
MNL-5	Denmark's Fisheries, 1962, and 1963 Trends, 10 pp.
MNL-34	Fisheries in Greece, 1962, 6 pp.
MNL-80	Brazil's Fishing Industry, 1962, 24 pp.

THE FOLLOWING ENGLISH TRANSLATIONS OF FOREIGN LANGUAGE ARTICLES ARE AVAILABLE ONLY FROM THE EASTERN FISH DISEASE LABORATORY, BUREAU OF SPORT FISHERIES AND WILDLIFE, U. S. FISH AND WILDLIFE SERVICE, KEARNEYSVILLE, WEST VIRGINIA.

Dangers of Electric Fishing: Precautions to Take, by R. Cuinat, 9 pp., processed, 1962. (Translated from the French, *Bulletin Francais de Pisciculture*, no. 204, 1962, pp. 125-131.)

Handbook of Fish Diseases, by Erwin Amlacher, 19 pp., processed, 1962. (Translated from the German, *Taschenbuch der Fischkrankheiten*, 1961, pp. 37-45, 54-57.)

THE FOLLOWING ENGLISH TRANSLATIONS OF FOREIGN LANGUAGE ARTICLES ARE AVAILABLE ONLY FROM THE FISHERY TECHNOLOGICAL LABORATORY, BUREAU OF COMMERCIAL FISHERIES, U. S. FISH AND WILDLIFE SERVICE, 2725 MONTLAKE BLVD., SEATTLE 2, WASH.

Cuttle-Fish Oil. V--Isolation and Structure of Octadecatetraenoic Acid, by Akemi Adachi, 12 pp., processed. (Translated from the Japanese, *Journal of Japan Oil Chemists' Society*, vol. 9, no. 4, 1960, pp. 191-194.)

Cuttle-Fish Oil. XII--Existence of C₂₄ Acids, C₂₆ Acids, and C₂₈ Acids, by Akemi Adachi, 8 pp., processed. (Translated from the Japanese, *Journal of Japan Oil Chemists' Society*, vol. 9, no. 11, 1960, pp. 591-593.)

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

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

California Fishery Market News Monthly Summary, Part II - Fishing Information, April 1963, 13 pp., illus. (U. S. Bureau of Commercial Fisheries, Biological Laboratory, P. O. Box 6121, Pt. Loma Station, San Diego 6, Calif.) Contains sea-surface temperatures, fishing and research information of interest to the West Coast tuna-fishing industry and marine scientists; for the month indicated.

(Chicago) Monthly Summary of Chicago's Wholesale Market Fresh and Frozen Fishery Products Receipts, Prices, and Trends, March and April 1963, 14 and 13 pp., respectively. (Market News Service, U. S. Fish and Wildlife Service, U. S. Customs House, 610 S. Canal St., Room 1014, Chicago 7, Ill.) Receipts at Chicago by species and by states and provinces for fresh - and salt - water fish and shellfish; and weekly wholesale prices for fresh and frozen fishery products; for the months indicated.

The Danes Undertake the Marketing of Mackerel Sharks with the Help of Norwegian and Faeroese Fishermen, 2 pp., processed. (Translated from the Norwegian, *Fiskaren*, vol. 39, no. 21, 1962, p. 5.) (Branch of Reports, U. S. Bureau of Commercial Fisheries, Fish and Wildlife Service, Washington 25, D. C.)

Fish Counter Evaluation Program, by Julius Rockwell, Jr., and George M. Lucich, 102 pp., illus., May 10, 1960 (revised). (U. S. Bureau of Commercial Fisheries, Fish and Wildlife Service, Biological Laboratory, Fish Counting Investigation, 2725 Montlake Blvd., Seattle 2, Wash.)

Fish-Farming Industry, by June H. Olden, TL 19, 19 pp., processed, January 1960 (revised). (Technological Laboratory, U. S. Bureau of Commercial Fisheries, 2725 Montlake Blvd., Seattle 2, Wash.)

Fisheries Research -- Its Organization and Program within the U.S.S.R. with Special Reference to the Pacific Fisheries, by C. E. Atkinson, 131 pp., illus., January 15, 1960. (Biological Laboratory, U. S. Bureau of Commercial Fisheries, 2725 Montlake Blvd., Seattle 2, Wash.)

Halibut and Troll Salmon Landings and Ex-Vessel Prices for Seattle, Alaska Ports and British Columbia, 1962-61, 34 pp. (Market News Service, U. S. Fish and Wildlife Service, 706 Federal Office Bldg., 909 First Ave., Seattle 4, Wash.) Gives landings and ex-vessel prices of troll salmon and halibut at leading United States ports of the Pacific Coast; ex-vessel halibut prices and landings at leading British Columbia ports; United States and Canadian Pacific Coast halibut landings, 1936-1962; Seattle season averages of ex-vessel halibut prices, 1952-1962; and troll salmon landings and receipts at Seattle and Alaskan ports; with comparative data.

Information and Explanatory Statement for Daily New England Market News Service "Fishery Products Reports" Issued at Boston, revised April 1963, 9 pp. (Market News Service, U. S. Fish and Wildlife Service, 10 Commonwealth Pier, Boston 10, Mass.)

List of Brokers and Importers of Fishery Products and Byproducts, Chicago, Ill., 1963. (Market News Service, U. S. Fish and Wildlife Service, U. S. Customs House, 610 S. Canal St., Room 1014, Chicago 7, Ill.)

List of Primary Receivers of Imported Fishery Products and Byproducts at New Orleans, La., 1963, 3 pp. (Market News Service, U. S. Fish and Wildlife Service, Room 609, 600 South St., New Orleans 12, La.)

Monthly Summary of Fishery Products Production in Selected Areas of Virginia, North Carolina, and Maryland, April 1963, 4 pp. (Market News Service, U. S. Fish and Wildlife Service, 18 S. King St., Hampton, Va.) Landings of food fish and shellfish and production of crab meat and shucked oysters for the Virginia areas of Hampton Roads, Chincoteague, Lower Northern Neck, and Lower Eastern Shore; the Maryland areas of Crisfield, Cambridge, and Ocean City; and the North Carolina areas of Atlantic, Beaufort, and Morehead City; together with cumulative and comparative data on fishery products and shrimp production; for the month indicated.

New England Fisheries--Monthly Summary, March 1963, 21 pp. (Market News Service, U. S. Fish and Wildlife Service, 10 Commonwealth Pier, Boston 10, Mass.) Review of the principal New England fishery ports. Presents data on fishery landings by ports and species; industrial-fish landings and ex-vessel prices; imports; cold-storage stocks of fishery products in New England warehouses; fishery landings and ex-vessel prices for ports in Massachusetts (Boston, Gloucester, New Bedford, Provincetown, and Woods Hole), Maine (Portland and Rockland), Rhode Island (Point Judith), and Connecticut (Stonington); frozen fishery products prices to primary wholesalers at Boston, Gloucester and New Bedford; and Boston Fish Pier and Atlantic Avenue fishery landings and ex-vessel prices by species; for the month indicated.

New York City's Wholesale Fishery Trade--Monthly Summary--February 1963, 18 pp. (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 month indicated.

In Order to Catch More Fish, by N. Nikolskii, 2 pp., October 1962. (Translated from the Russian, *Ekonomicheskaja Gazeta*, September 1, 1962.) (Branch of Foreign Fisheries and Trade, Bureau of Commercial Fisheries, U. S. Fish and Wildlife Service, Washington 25, D. C.)

Pacific Tuna Biology Conference, Papers I-VII, illustrated, processed, 1962. (Bureau of Commercial Fisheries, U. S. Fish and Wildlife Service, Biological Laboratory, Box 3830, Honolulu, Hawaii.) Contains numerous papers distributed for information in connection with the informal Pacific Tuna Biology Conference, Honolulu, August 1961.

Pelagic Fur Seal Investigations, California to British Columbia, 1961, by Clifford H. Fiscus, Karl Niggold, and Ford Wilke, 94 pp., illus., 1961, distribution limited. (Marine Mammal Biological Laboratory, Bureau of Commercial Fisheries, U. S. Fish and Wildlife Service, Sand Point Naval Air Station, Seattle 15, Wash.)

(Seattle) Washington and Alaska Receipts and Landings of Fishery Products for Selected Areas and Fisheries, Monthly Summary, April 1963, 8 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 vessel 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.

Seattle, Washington, Brokers and Importers of Fishery Products, 1963, 6 pp. (Market News Service, U. S. Fish and Wildlife Service, 706 Federal Office Bldg., 909 First Ave., Seattle 4, Wash.)

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"Distribution of Tunas in Oceanic Waters of the Northwestern Atlantic," by James L. Squire, Jr., *Fishery Bulletin* 211 (from *Fishery Bulletin of the Fish and Wildlife Service*, vol. 62), 25 pp., illus., printed, 20 cents, 1962.

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.

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ALABAMA:

"Fishing in Alabama," by I. B. Byrd, article, Alabama Conservation, vol. XXXIII, no. 1, December 1962-January 1963, pp. 12-13, 16-17, 22, illus., printed. Alabama Department of Conservation, 64 N. Union St., Montgomery 4, Ala.

ALASKA:

Alaska Commercial Fisheries Catch, 1946-1960, by Philip E. Chitwood, Statistical Leaflet No. 1, 19 pp., illus., printed. Department of Fish and Game, Subport Bldg., Juneau, Alaska.

Annual Report for 1959, Report No. 11, 116 pp., illus., printed. Alaska Department of Fish and Game, Subport Bldg., Juneau, Alaska. Includes, among others, sections on accomplishments in biological research and in the commercial and sport fisheries.

ANCHOVIES:

*Mortality Coefficients during the Embryonic and Larval Period of Development of the Black Sea Anchovy, by T. V. Dekhnik, M.5176, printed. (Translated from the Russian, Tr. Sevastopol'sk. biol. sta. AN SSSR, vol. 13, 1960, pp. 216-244.)

ANTIBIOTICS:

"A Marine Fish-Rearing Experiment Using Antibiotics," by J. E. Shelbourne, article, Nature, vol. 198, no. 4875, April 6, 1963, pp. 74-75, illus., printed, single copy 4s. (about 60 U. S. cents). St. Martin's Press, Inc., 175 Fifth Ave., New York 10, N. Y.

ARTIFICIAL REEF:

"Seascapes from Car 1538," by Charles H. Turner, article, Outdoor California, vol. 23, no. 7, July 1962, pp. 11-13, illus., printed. The Resources Agency of California, Department of Fish and Game, 722 Capitol Ave., Sacramento 14, Calif.

AUSTRALIA:

Fishing and Whaling, Australia, Statistical Bulletin No. 8, 23 pp., illus., processed. Commonwealth Bureau of Census and Statistics, Canberra, Australia. This is the eighth of a series of annual statistical bulletins dealing with the fishing and whaling industry. Statistics relate to the year 1961-1962 for general fisheries, to the 1961 season for pearl-shell and trochus-shell fisheries, and to the 1962 season for whaling, with comparative data for the previous four years. The bulletin is divided into four parts. Part I deals with general fisheries including those for fish, crustaceans, and molluscs (edible products). Part II includes fisheries for pearl shell and trochus shell (inedible products). Part III covers the operation of the whaling industry in Australia and Norfolk Island. Part IV shows particulars of oversea trade in the products of fishing and whaling.

BRAZIL:

Estudo Sobre Pesqueiros de Arrasto para a Costa do Brasil (Study of the Trawl Fisheries Off the Coast of Brazil), by Yapery Tupiassu de Brito Guerra, Tecnologia no. 2, 83 pp., illus., printed in Portuguese. Instituto Oceanografico, Universidade de Sao Paulo, Sao Paulo, Brazil, 1962.

Novo genero e nova especie de peixe anual de Brasilia com uma nota sobre os peixes anuais da Baixada Fundulinae (New Genera and New Species in the Annual Fish Catch of Brazil with a Special Note on the Annual Catch of Baisada fundulinae), by A. L. de Carvalho, Boletim Zoologia No. 201, 10 pp., printed in Portuguese with English summary. Museu Nacional, Rio de Janeiro, Brazil, 1959.

CALIFORNIA:

California Fish and Game, vol. 49, no. 1, January 1963, 61 pp., illus., printed, single copy 75 cents. California Fish and Game, Printing Division, Documents Section, Sacramento 14, Calif. Includes, among others, articles on "Trout Survival in Taylor Creek, a Tributary of Lake Tahoe, California," by Garth I. Murphy. "Synonymy, Characters, and Variation of Gila crassicauda, a Rare California Minnow, with an Account of Its Hybridization with Lavinia exilicauda," by Robert Rush Miller; "Variant Hemoglobin and Electrophoretic Whole Blood Studies in Two Tunas and Three Other Fish Species," by Albert C. Smith; and "The First California Record of Sierra, Scomberomorus sierra Jordan and Starks," by Bruce B. Collette, Frank H. Talbot, and Richard H. Rosenblatt.

CANADA:

Fisheries Statistics, Quebec, 1961, 57 pp., illus., printed in French and English, 75 Canadian cents. Queen's Printer and Controller of Stationery, Ottawa, Canada, April 1963. Consists of tables giving the quantity and value of the principal species of fish and shellfish landed in Quebec, 1949-1961; quantity and value of landings by species and fisheries districts; quantity and value of processed fishery products by species; capital investment in gear and vessels; and number of fishermen employed, by fisheries districts; during 1960-1961. A section on Quebec's inland fisheries presents data on landings, quantity, and value, by species and fisheries districts; capital equipment employed in fisheries; and number of fishermen employed, by fisheries districts; all during 1960-1961.

CANNED FISH:

Examen Tecnico-Sanitario, desde el Punto de Vista Practico, de una Conserva de Pescado (Technical-Sanitary Inspection, from a Practical Point of View, of Canned Fish), by Rafeal Lopez Costa, No. 110, 16 pp., illus., printed in Spanish. (Reprinted from Boletin del Instituto Espanol de Oceanografia, October 1962.) Secretario del Instituto Espanol de Oceanografia, Alcala 27, Madrid, Spain.

CAPE VERDE ARCHIPELAGO:

Peixes do Arquipelago de Cabo Verde (Fishes of the Cape Verde Archipelago), by M. L. Paes da Franca and M. S. Vasconcelos, Notas Mimeografadas do Centro de Biologia Piscatoria No. 28, 88 pp., processed in Portuguese. Centro de Biologia Piscatoria, Junta de Investigaçoes do Ultramar, Lisbon, Portugal, 1962.

CATFISH:

"Der Waller und sein Fang (The Catfish--Silurus glanis L.--and His Capture), by Arnold Bacmeister,

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article, Allgemeine Fischerei-Zeitung, vol. 88, no. 7, April 1963, pp. 182-185, illus., printed in German, 1 DM (about 25 U.S. cents). Landesfischereiverband Bayern, 5 Kaiser Ludwigs Platz, Munich 15, Germany.

CHESAPEAKE BAY:

Data on Coastal Currents off Chesapeake Bay, by J. J. Norcross, W. H. Massmann, and E. B. Joseph, Special Scientific Report No. 31, 6 pp., illus., printed. Virginia Institute of Marine Science, Gloucester Point, Va., 1962.

COD:

*The Distribution of Cod, by N. V. Mironova, M. 5216, 19 pp., printed. (Translated from the Russian, Akademiia Nauk SSSR, 1958.)

"Peixes Utilizados na Industria Bacalhoeira" (Species of Fish Utilized in the Cod Industry), by Mario Goni Garcia, article, Boletim da Pesca, vol. XV, no. 78, March 1963, pp. 75-78, illus., printed. Gabinete de Estudos das Pescas, 644 R. S. Bento, Lisbon, Portugal. (Also appeared in Conservas de Peixe, vol. XVII, no. 203, February 1963, pp. 20-21.)

COMMISSIONS:

Gulf States Marine Fisheries Commission Thirteenth Annual Report 1961-1962 (to the Congress of the United States and to the Governors and Legislators of Alabama, Florida, Louisiana, Mississippi, and Texas), 45 pp., illus., printed. Gulf States Marine Fisheries Commission, 312 Audubon Bldg., New Orleans 16, La., 1962. Outlines the Commission's activities for the period October 1961-October 1962, with a summary of recommendations and actions. Describes briefly the activities of each of the member States during that period. Includes short discussions of U. S. Fish and Wildlife Service activities in navigation projects, flood control, hurricane protection projects, industrial fish explorations, gear research, and shrimp exploration. Also discusses work of the Service's exploratory vessels, accomplishments of biological and technological laboratories, progress in the seafood inspection service, and marketing research achievements. Also contains a financial report of the Commission.

CONTAINERS:

"Dosenkorrosionen bei Fischvollkonserven" (Corrosion of Tin Cans of Preserved Fish), by G. Wunsche, article, Tidsskrift for Hermetikindustri (Norwegian Cannery Export Journal), vol. 49, no. 1, January 1963, pp. 29-32, 34-36, 38-39, printed in Norwegian. Norske Hermetikfabrikers Landsforening, Stavanger, Norway.

"Fiskekasser" (Fish Boxes), by Poul Hansen, article, Konserves & Dybfrost, vol. 21, no. 3, 1963, pp. 28-33, illus., printed in Danish. Konserves & Dybfrost, Vester Farimagsgade 31, Copenhagen V, Denmark.

CRABS:

Distribution of Calcium in the Land Crab CARDISOMA GUANHUMI During Shell Wound Recalcification, by Charles A. Gifford and Robert F. Johnson, Contribution no. 416, 5 pp., illus., printed. (Reprinted from Comparative Biochemistry and Physiology,

vol. 7, 1962, pp. 227-231.) The Marine Laboratory, University of Miami, 1 Rickenbacker Causeway, Virginia Key, Miami 49, Fla.

Records of the Chesapeake Bay Blue Crab Fishery, by Willard Abraham Van Engel, Special Report no. 24 pp., illus., printed. Virginia Fisheries Laboratory, Gloucester Point, Va., 1950.

"Variations in the Larval Stages of a Decapod Crustacean, Pleuroncodes planipes Stimpson (Galatheidae)," by Carl M. Boyd and Martin W. Johnson, article, The Biological Bulletin, vol. 124, no. 2, April 1963, pp. 141-152, illus., printed, single copy \$2.50. The Biological Bulletin, Marine Biological Laboratory, Woods Hole, Mass.

CRAWFISH:

"Natural and Domestic Production of Crawfish," by J. G. Broom, article, Louisiana Conservationist, vol. 15, nos. 3 and 4, March-April 1963, pp. 14-15, illus., printed. Wildlife and Fisheries Commission, 400 Royal St., New Orleans 16, La.

CRAYFISH:

"Additions to the Australian Freshwater Crayfish," by E. F. Riek, article, Records of the Australian Museum, vol. 24, no. 1, 1956, pp. 1-6, printed. Australian Museum, Sydney, Australia.

CRUSTACEA:

Records of Decapod Crustacea from British Columbia, by T. H. Butler, Reprint no. 45, printed. (Reprinted from Canadian Journal of Zoology, vol. 39, 1961.) Fisheries Research Board of Canada, Biological Station, Nanaimo, B. C., Canada.

DEPARTMENT OF THE INTERIOR:

Annual Report 1962, The Secretary of the Interior (For the Fiscal Year Ended June 30, 1962), 523 pp., illus., printed, \$1.75. U. S. Department of the Interior, Washington 25, D. C. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.) The activities of the Department's bureaus and offices, including the United States Fish and Wildlife Service, are summarized in this report. A brief summary of the activities of the Bureau of Commercial Fisheries is given. Also included is a summary of the accomplishments of the Bureau of Sport Fisheries and Wildlife.

Careers in the United States Department of the Interior, A Directory for College Students, Catalog No. II.2:C 18/962, 69 pp., illus., printed, 35 cents. U. S. Department of the Interior, Washington, D. C., 1962. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.) Following a brief section providing general employment information, this directory describes the activities of the Interior Department and its Bureaus and discusses the recruitment needs of the Department. Short descriptions of each of the various types of occupations needed and the minimum qualifications for each are given.

DIRECTORIES:

Fishing News Directory and Diary, 1962, by Arthur Heighway and Lloyd G. B. Butcher, 314 pp., illus.,

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printed, £1 1s. 9d. (about US\$3.05). Arthur J. Heighway Publications Ltd., Ludgate House, 110 Fleet St., London EC4, England, 1961. Contains a pictorial presentation of the catching of fish by many different types of vessels used by British fishermen; list of fishing vessels of the United Kingdom; merchandising section covering wholesalers, exporters, and transportation firms; and roster of freezers and canners. Also includes a list of Government agencies and associations concerned with the fishing industry; guide to firms which manufacture or supply fishing gear and equipment; and a section giving information on the Food and Agriculture Organization of the United Nations, the British White Fish Authority, and other related topics.

EAST AFRICA:

East African Freshwater Fishery Research Organization, Annual Report, 1961, 50 pp., printed, 4s. (about 60 U.S. cents). East African Fisheries Research Organization, P. O. Box 343, Jinja, Uganda, 1962. Describes scientific work accomplished in the study of fisheries of Lake Victoria, culture of Tilapia in ponds, study of river fish migration, gear research, buoy releases experiments, and other projects. Also includes a bibliography of recent publications on East African fisheries and related subjects, and appendices of research papers on fisheries.

FEDERAL REGULATIONS:

Cumulative Pocket Supplement to Code of Federal Regulations, Title 50, Wildlife and Fisheries, as of January 1, 1963, GS 4,108: 50/supp. 963, 100 pp., printed, 45 cents. Federal Register Office, General Services Administration, Washington, D. C., 1963. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.)

FISH COOKERY:

The Frozen Food Cookbook and Guide to Home Freezing, by Jean I. Simpson, 494 pp., illus., printed, \$7.95 domestic, \$8.45 foreign. The Avi Publishing Co., Inc., P. O. Box 388, Westport, Conn., 1962. This is really two books in one. First, it contains directions for selection, preparation, and freezing of home-frozen foods. Second, it presents more than 500 recipes for cooking frozen foods. With frozen foods becoming more and more popular, information on their preparation and use is needed. Exotic recipes which otherwise would require time-consuming preparation are now possible because of the time-saving factor offered by frozen foods. For the homemaker who works there is one chapter devoted to recipes and menus that require up to 30 minutes to prepare. Included among these recipes are creamed shrimp and lobster. The preparation and freezing of foods is divided into chapters on frozen fish and shellfish, meats, poultry, vegetables, fruits, and fruit juices. There are ideas for special occasions or holidays, outdoor cookery, and lunch boxes. A menu for a cocktail party shows hot French-fried fantail shrimp with tartar sauce. Among the other features are nutritional values of food; packaging techniques for freezing; tables showing storage periods for every type of food, and thawing time; and timetables for broiling, baking, and braising. There are also discussions on all types of home freezers, locker-plant services, freezer food plans, use of packaging materials for home freezing, and advantages of

frozen foods. The chapter on frozen fish and shellfish covers cooking methods, types of frozen products available, methods of cooking them, sauces, garnishes, menus, and recipes. Among the recipes are Jiffy Fish Fry, Fried Smelts, Boiled Fish with Egg Sauce, Baked Flounder Thermidor, Fish Baked in Grapefruit Juice, Cream of Fish Soup, Clam Pie, Grapefruit and Crabmeat Cocktail, Lobster and Pineapple Salad, Oysters Rockefeller, Deviled Scallops, Shrimp in Blankets, and many others. Another section of the book describes the selection and preparation of fish and shellfish for freezing. This book will be of value not only to the user of frozen foods, but to processors and handlers.

--Joseph Pileggi

The Way to Cook Fish, 21 pp., illus., printed. Consumer Branch, Department of Fisheries, Sir Charles Tupper Bldg., Ottawa, Canada, 1963. This is the latest consumer publication of the Department of Fisheries of Canada dealing with fish cookery. Describes the various types of fish caught and processed in Canada and provides advice on the way to buy, how much to buy depending on personal or family requirements, and the proper method of storing the product. Advice is also given on the various cooking methods--oven cookery, baking in aluminum foil, broiling, pan and deep-fat frying, boiling, and others. Included are recipes using the various cooking methods.

FISH CULTURE:

Fish Culture, by C. Hickling, 295 pp., illus., printed. Faber & Faber Ltd., 23-24 Russel Sq., London WC1, England.

FISH MEAL:

"La Industria Reductora, Su importancia en el sector pesquero" (The Reduction Industry--Its Importance in the Fishery Sector), by Jose Manual Casal, article, Informacion Comercial Espanola, no. 349, September 1962, pp. 145-155, illus., printed in Spanish, single copy 25 ptas. (about 42 U.S. cents). Servicio de Estudios del Ministerio de Comercio, Goya 73, Madrid 1, Spain.

FOOD AND AGRICULTURE ORGANIZATION:

Information Bulletin, General Fisheries Council for the Mediterranean, no. 22, May 1962, 53 pp., illus., processed in French and English. Secretariat of the GFCM, Food and Agriculture Organization of the United Nations, Viale delle Terme di Caracalla, Rome, Italy. Contains discussions of the Freedom from Hunger Campaign; activities of the GFCM; activities of the FAO; and news of member countries. Also includes information on international organizations and meetings; a statistical summary of 1960 fisheries in GFCM countries; and a 1962-1963 schedule of international meetings of interest to fisheries workers.

Indo-Pacific Fisheries Council, Agreement between United States and Other Governments, as Amended at 9th Session of Council, Karachi, January 6-23, 1961, and Amendments Adopted December 17, 1958, by Council at 8th Session, Colombo, 17 pp., printed in French and English, 10 cents. U. S. Department of State, Washington, D. C., 1963. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.)

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

FRANCE:

Biennale Internationale des Peches, 25 Mai-3 Juin, 1962, Lorient, Catalogue Officiel (Biannual International Fisheries Fair, May 25-June 3, 1962, Lorient, Official Catalogue), 131 pp., illus., printed in French. France Peche, 8 Rue du Chalutier-la-Tanche, Lorient, France.

"Ou va la Peche Industrielle Francaise?" (Where is the French Commercial Fishery Going?), by R. Lenier, article, France Peche, no. 69, January 1963, pp. 13-14, 52, illus., printed in French. France Peche, Tour sud-est, Rue de Guemene, Lorient (Moribihan), France.

FREEZE-DRYING:

The Accelerated Freeze-Drying (AFD) Method of Food Preservation, 175 pp., illus., printed. Her Majesty's Stationery Office, York House, Kingsway, London WC2, England, 1961. A report on some work of the Research Establishment and Experimental Factory of the Ministry of Agriculture, Fisheries and Food, Aberdeen, Scotland, between 1955 and 1960.

"Alguns aspectos da criodessecacao" (Some Aspects of Freeze-Drying), by A. Torres Botelho, article, Conservas de Peixe, vol. XVII, no. 203, February 1963, pp. 19, 33, printed in Portuguese. Sociedade da Revista Conservas de Peixe Lda., 68 Regueirao dos Anjos, Lisbon, Portugal.

"Freeze Drying of Fish," by A. K. Kaminarskaya, article, Kholodil'naia Tekhnika, no. 6, 1962, pp. 42-45, illus., printed. Kholodil'naia Tekhnika, c/o Four Continent Book Corporation, 822 Broadway, New York 3, N. Y.

FRESH-WATER FISH:

Beginner's Guide to Fresh-Water Life, by Leon Augustus Hausman, 128 pp., illus., printed. G. P. Putnam's Sons, 210 Madison Ave., New York 16, N. Y., 1950.

"Kielb Kesslera (*Gobio kessleri* Dyb.) w Polsce (The Polish Gudgeon-*Gobio kessleri*), by Halina Rolik, article, Fragmenta Faunistica, vol. 8, no. 12, 1959, pp. 207-221, printed in Polish. Polska Akademia Nauk, Instytut Zoologiczny, Warsaw, Poland.

FRESH-WATER SHRIMP:

"Studies on the Rearing of Larvae and Juveniles and Culturing of Adults of *Macrobrachium rosenbergi* (De Man)," by S. W. Ling, article, IPFC Current Affairs Bulletin, no. 35, December 1962, pp. 1-11, printed. Indo-Pacific Fisheries Council, Food and Agriculture Organization of the United Nations, Malivan Mansion, Phra Atit Rd., Bangkok, Thailand. A simple and practical method of rearing and culturing fresh-water shrimp is being developed in Malaya. Suitable food, proper feeding, and careful management of water conditions have been found to be the principal factors in this work. Juveniles grow rapidly and can be easily acclimatized to live in fresh water. Young shrimp, about 3 months old and measuring 5-6 cm. long, are suitable for stocking and culturing purposes. They can be cultured in ponds, mining pools, and irrigated rice fields, in combination with noncarnivorous fish.

GEAR:

Fishing Gear and Machinery from Norway, 56 pp., illus., printed. The Export Council of Norway, H. Heyerdahls gt. 1, Oslo, Norway, 1963. Tried and proved in Norway's own fisheries, Norwegian fishing gear and fish-processing equipment are being exported on a growing scale. This catalog presents a number of articles on vessels, navigation and fish finding equipment, and many other subjects.

Ship's Gear from Norway, 1963, 100 pp., illus., printed. The Export Council of Norway, H. Heyerdahls gt. 1, Oslo, Norway, 1963. A catalog of ship and shipyard equipment, containing articles covering the entire industry.

GERMAN FEDERAL REPUBLIC:

"Biologisch-statistische Untersuchungen uber die deutsche Hochseefischerei. IV--Die Entwicklung der Hochseefischerei in Fangtechnischer, raumlicher und biologischer Hinsicht. 5--Die Dampferfischerei in der Nordsee" (Biological-Statistical Investigations in the German Deep Sea Fisheries. Part IV--The Development of the Deep Sea Fisheries in Gear Technology, Biology, and Area of Operations. No. 5--The Large Trawler Fishery in the North Sea), by Johannes Lundbeck, article, Berichte der Deutschen Wissenschaftlichen Kommission für Meeresforschung, neue folge, band XVI, heft 3, February 1962, pp. 177-246, illus., printed in German. Nagel u. Obermiller, E. Schweizerbart'sche Verlagsbuchhandlung, Stuttgart, Germany.

GREAT LAKES:

Commercial Fish Production in the Great Lakes 1367-1960, printed. Great Lakes Fishery Commission, University of Michigan, Ann Arbor, Mich. Records of the production of fish from the Great Lakes were collected as early as 1867 in Canada and 1879 in the United States. This information appeared in reports and records of a number of agencies but was not brought together until the establishment of the International Board of Inquiry for the Great Lakes Fisheries in 1940. Tables showing commercial production of principal species in both countries were published in a report by U. S. members of the Board in 1943. The need for an up-to-date record of the production of the fishery was drawn to the attention of the Great Lakes Fishery Commission, which agreed to republish the early statistics with those collected since 1940.

GROUND FISH:

The Feeding and Growth of Young Gadoid Fishes in the Coastal Zone of the Eastern Murman, by N. V. Mironova, 71 pp., processed. (Translated from the Russian, Academy of Sciences of the U.S.S.R., Murman Biological Station, 1956-1.) Ministry of Agriculture, Fisheries and Food, Fisheries Laboratory, Lowestoft, Suffolk, England, 1961.

HALIBUT:

Utilization of Pacific Halibut Stocks: Estimation of Maximum Sustainable Yield, 1960, by Douglas G. Chapman, Richard J. Myhre, and G. Morris Southward, Report No. 31, 35 pp., printed. International Pacific Halibut Commission, Fisheries Hall No. 2, University of Washington, Seattle, Wash., 1962.

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

HERBICIDE:

Aquatic Herbicide Data, compiled by J. M. Lawrence, Agriculture Handbook No. 231, 135 pp., printed, 65 cents. Agriculture Research Service, U. S. Department of Agriculture, Washington, D. C., December 1962. (For sale by the Superintendent of Documents, Government Printing Office, Washington 25, D. C.) Presents in tabular form, a compilation of data on the effect of herbicides on algae, aquatic plants, and fish.

HERRING:

Herring Industry Acts, 1935 to 1957, printed, 11d. (about 20 U. S. cents postpaid). House of Commons, London, England, February 1963. (For sale by British Information Services, 845 3rd Ave., New York 22, N. Y.)

Herring, Selected Articles from Soviet Periodicals, OTS 60-51149, 158 pp., illus., printed, \$1.50. Office of Technical Services, U. S. Department of Commerce, Washington 25, D. C., 1961.

"Vergleichende Untersuchungen an Otolithen von Jungheringen der Nordsee im Frühjahr 1960" (Comparative Investigations of Otoliths of Young Herring of the North Sea, Spring 1960), by Eva Bohl, article, Berichte der Deutschen Wissenschaftlichen Kommission für Meeresforschung, neue folge, band XVI, heft 3, February 1962, pp. 161-176, illus., printed in German with English summary. Nagele u. Obermiller, E. Schweizerbart'sche Verlagsbuchhandlung, Stuttgart, Germany.

IDENTIFICATION OF FISH SPECIES:

"Identification of Fish Species by Starch Gel Zone Electrophoresis of Protein Extracts," by Robert Thompson, article, Journal of the Association of Official Agricultural Chemists, May 1962, pp. 275-276, printed. Association of Official Agricultural Chemists, P. O. Box 540, Benjamin Franklin Station, Washington 4, D. C. Describes a method to differentiate various species of fish by starch gel zone electrophoresis. This method has been used to check cases of possible substitution and misbranding.

INTERNATIONAL COMMISSIONS:

Convention for the Regulation of Meshes of Fishing Nets and the Size Limits of Fish, London, April 5, 1946, Treaty Series No. 11, Is. 9d (US\$2.40 postpaid). Her Majesty's Foreign Office, London, England, 1963. (For sale by British Information Services, 845 3rd Ave., New York 22, N. Y.) Includes amendments to the Convention adopted in 1960, 1961, and 1962.

International Commission for the Northwest Atlantic Fisheries, Annual Proceedings for the Year 1961-1962, vol. 12, 1962, 34 pp., printed. International Commission for the Northwest Atlantic Fisheries, Halifax, N. S., Canada. Presents the Commission's administrative report for the year ending June 30, 1962, including financial statements; a report of the Twelfth Annual Meeting held June 4-8, 1962, in Moscow; and summaries of research during 1961, by subareas.

International Commission for the Northwest Atlantic Fisheries, Statistical Bulletin for the Year 1960,

vol. 10, 75 pp., illus., printed, C\$3. International Commission for the Northwest Atlantic Fisheries, Halifax, N. S., Canada, 1962. This bulletin is divided into two parts: Part 1 summarizes statistics on fishery landings in the Convention Area, 1952-1960; and Part 2 includes statistical tables dealing with the fisheries in 1960. The presentation of the basic statistical data again has been designed to place emphasis on area and month of fishing. Contains a summary of all landings by species group, country, and statistical subdivision; landings of cod, haddock, ocean perch, halibut, and flounder for each type of gear; landings of each species by subarea; and fishing effort and landings by country, gear, and subarea. New species for which data are included are American plaice, witch, yellowtail, winter flounder, wolffish, pollock, silver hake, and white hake. Member countries include Canada, Denmark, France, Germany, Iceland, Italy, Norway, Poland, Portugal, Spain, U.S.S.R., United Kingdom, and the United States.

ISRAEL:

Bamidgheh, vol. 14, no. 1, March 1962, 52 pp., illus., printed in Hebrew and English. Department of Fisheries and Fish Breeders Association, Nir-David D N., Israel. Includes the following articles: "The Fish Culture Research Station, Dor--General Report for the Year 1961," by A. Yashou; "Preliminary Report on the Culture of *Tilapia nilotica* as a Supplementary Fish in Carp Ponds in Israel in 1960 and 1961," by J. Pruginin; "Preliminary Study of Fluctuations of Vitamin B12 Content in Fish Ponds in the Beith-Shean Valley," by Eliezer Tal.

JAPAN:

Bulletin of the Japanese Society of Scientific Fisheries, vol. 28, no. 1, January 1962, 164 pp., illus., printed in Japanese with English summaries. Japanese Society of Scientific Fisheries, c/o Tokyo University of Fisheries, Shiba Kaigandori 6, Minato-ku, Tokyo, Japan. Contains, among others, the following articles: "Studies on the Fish Community of the Zostera Area. I--The Ecological Order for Feeding in the Fish Group Related to the Dominant Species," by M. Hatanaka and K. Iizuka; "On the Movements of the Mackerel, *Scomber japonicus* Houttuyn, Tagged in the Neighboring Waters of Oki Islands," by S. Kojima; "Studies on Relationships between Amount and Price of the Marine Fish Catch from the Pacific Coast of Honshu in 1958," by K. Kondo; "Studies on the Mechanism of Consumption and Accumulation of Vitamin A in Fish (Part II)," by Y. Yamamura; "Studies on the Browning of Fish Flesh. VII--Fluorescence and Flavor of Autoclaved Sugar-Amino Acid System," by F. Nagayama; "Studies on Lipids of Wild Rainbow Trout," by Y. Shimma and H. Taguchi; "Post-Mortem Change of Fish Myosins. I--Some Physicochemical Changes with Special Reference to Species and Lethal Conditions of Fish," by T. Suzuki and M. Migita; "Change of the Lipid during Development of Rainbow Trout Eggs," by K. Ando; and "The Effectiveness and Safety of the Use of Antibiotics Keeping Freshness of Fish, a Symposium."

Bulletin of the Japanese Society of Scientific Fisheries, vol. 28, no. 2, February 1962, 156 pp., illus., printed in Japanese with English summaries. Japanese Society of Scientific Fisheries, c/o Tokyo Uni-

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versity of Fisheries, Shiba Kaigandori 6, Minato-ku, Tokyo, Japan. Includes, among others, these articles: "On a New Bacterium, *Paracolobactrum anguillimortiferum* n. sp.," by T. Hoshina; "Difference in Properties of Oil Extracted with Different Solvent from Oxidized Matter," by K. Ando and M. Noguchi; "Studies on Enzymes in Fish Blood. II--Effects of Organophosphorus Insecticides on Cholinesterase Activity," by K. Hayama and S. Kuwabara; "Studies on Multiple Hemoglobins of Eel. I--Absorption Spectrum and Some Other Properties," by K. Yamaguchi and others; "On the Yellowtail Oil. VIII--Cephalin in Meats," by H. Tsuyuki, U. Naruse, and A. Shionoya; and "Studies on Utilization of Oils and Fats Obtainable from Viscera of Aquatic Animals. III--Investigations in Industrial Aspect of Concentration by Molecular Distillation of Vitamin Oil (Part I)," by H. Sone.

Bulletin of the Japanese Society of Scientific Fisheries, vol. 28, no. 3, March 1962, 98 pp., illus., printed in Japanese with English summaries. Japanese Society of Scientific Fisheries, c/o Tokyo University of Fisheries, Shiba Kaigandori 6, Minato-ku, Japan. Includes, among others, articles on: "Studies on Plankton of the West Coast of Kyushu. III--On the Foods of the Sardine, *Sardinia melanosticta* (Temmink et Schlegel)," by Y. Enomoto and S. Hamada; "On the Bimodality Found in the Catch of Japanese Spiny Lobster, *Panulirus japonicus*," by I. Kubo; "Chemical Studies on the Green Alga, *Monostroma nitidum* Wittrock. I--Component Sugars of the Mucilage (Part I)," by S. Maeshige; "Variation of Biological Potency (Maleic Value) by the Difference of Extraction Methods of Fish Liver Oil," by M. Toyomizu, E. Saigusa, and Y. Tomiyasu; "Paralytic Shellfish Poison. I--A Note on the Shellfish Poisoning Occurred in Ofunato City, Iwate Prefecture in May 1961," by T. Kawabata and T. Yoshida; "Digestibility of Dietary Components in Fishes. I--Digestibility of Dietary Proteins in Rainbow Trout," by D. Inaba and others; and "The Toxic Effect of Pentachlorophenolate, a Herbicide, on Fishery Organisms in Coastal Waters. I--The Effect on Certain Fishes and a Shrimp," by T. Tomiyama and K. Kawabe.

KENTUCKY:

A Field Manual of Kentucky Fishes, by William M. Clay, 148 pp., illus., printed. Department of Fish and Wildlife Resources, New State Office Bldg., Frankfort, Ky., 1962.

LOBSTER:

A Report to the Fishing Industry Regarding Lobster Disease (Gaffkaemia), by James E. Stewart, and Joan F. MacDonald, Circular, No. 9, 2 pp., printed. Fisheries Research Board of Canada, Technological Station, Halifax, N.C., Canada, 1962.

Report of the Investigation and Study of the Deep Sea Lobster Fishery, by John Hughes, House No. 3190, 11 pp., printed. Division of Marine Fisheries, Department of Natural Resources, 15 Ashburton Place, Boston 8, Mass., 1963. A special report relative to the practices undertaken by owners of commercial deep sea fishing boats, with particular reference to the lobster fishery beyond the 3-mile territorial limit.

MARINE FLORA:

Additions to the Marine Flora of Costa Rica and Nicaragua, by E. Yale Dawson, 21 pp., illus., printed. (Reprinted from *Pacific Naturalist*, vol. 3, December 20, 1962, pp. 375-395.) Beaudette Foundation for Biological Research, Solvang, Calif., 1962.

MARKETING:

"Food Marketing in Western Europe Today," by John C. Abbott, article, *Journal of Marketing*, vol. 27, no. 2, April 1963, pp. 17-22, printed, single copy \$2.50. American Marketing Association, 27 E. Monroe St., Chicago 3, Ill. According to the author, "Food trade in Europe is undergoing many changes; and both retailers and investors seem to be gaining confidence in self-service supermarkets, prepackaging, frozen foods, and similar developments."

"Seafoods: Volume and Profit Producers," article, *Frosted Food Field*, vol. 36, no. 3, April 1963, pp. 32-34, printed, single copy \$1. *Frosted Food Field*, 321 Broadway, New York 7, N.Y.

MARLIN:

"White Marlin, *Tetrapturus albidus*, in the Middle Atlantic Bight, with Observations on the Hydrography of the Fishing Grounds," by Donald P. de Sylva and William P. Davis, article, *Copeia*, vol. 50, no. 1, March 30, 1963, pp. 81-99, illus., printed, single copy \$2.50. American Society of Ichthyologists and Herpetologists, 18111 Nordhuff St., Northridge, Calif.

MARYLAND:

The Seafood Problem (Report of the Sub-Committee on Seafood), 13 pp., printed. Economic Development Committee of Talbot County, The Court House, Easton, Md., January 11, 1961.

MOLLUSCS:

Annotated List and Bibliography of the Abyssal Marine Molluscs of the World, by Arthur H. Clarke, *Biological Series*, No. 67, 120 pp., printed. Department of Northern Affairs and National Resources, National Museum, Ottawa, Canada, 1962.

NETS:

Prospectus of the I.C.E.S. Mesh Gauge, by C.J.W. Westhoff, J.A. Pope, and R.J.H. Beverton, 14 pp., illus., printed. Conseil Permanent International pour l'Exploration de la Mer, Charlottenlund Slot, Denmark, 1962.

NICARAGUA:

Import Tariff System of Nicaragua, OBR-63-18, 2 pp., printed, 15 cents. Bureau of International Commerce, U.S. Department of Commerce, Washington, D.C., March 1963. (For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C.) Presents information on units of currents, weights, and measures; bases of specific and ad valorem duties; method of payment of duty; customs surtaxes and internal taxes; shipping documents and fees; trade restrictions; and related subjects.

OCEANOGRAPHY:

Introduction to the National Oceanographic Data Center, General Series, Publication G-1, 19 pp., illus., printed, 40 cents. National Oceanographic Data Center, Washington 25, D.C., 1963.

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Quarterly List of Fully Processed Oceanographic Cruises, 16 pp., processed. National Oceanographic Data Center, Washington 25, D. C. Oceanographic cruise data (physical and chemical) processed to completion and available from National Oceanographic Data Center archives as of January 1, 1963.

OCEAN PERCH:

Local Redfish Stocks in the Newfoundland and Labrador Regions, by K. P. Yanulov, 11 pp., processed. (Translated from the Russian *Sovetskie Rybokhoziaistvennyye Issledovaniia v Severo-Zapadnoi Chasti Atlanticheskogo Okeana*, pp. 299-307, 1960. Ministry of Agriculture, Fisheries and Food, Fisheries Laboratory, Lowestoft, Suffolk, England, 1962.

Redfish Explorations in the Gulf of St. Lawrence, 1957, by Julien Bergeron, Contribution No. 85, 4 pp., illus., printed. Ministère des Pêcheries, Province de Québec, Québec, Canada, 1962.

OKLAHOMA:

A Study of the Commercial Fishery of Lake Texoma, by Alfred Houser, no. 63, 34 pp., illus., printed. Fisheries Research Laboratory, Norman, Okla., 1957.

OREGON:

Keys to Oregon Freshwater Fishes, by Carl Eldon Bond, Technical Bulletin 58, 42 pp., illus., printed. Agricultural Experiment Station, Oregon State University, Corvallis, Ore., 1961.

OTTER-TRAWLING:

"Model Tests with 3 Bottom Trawl Otterboards," by H. Aa. Walderhaug and A. Akre, article, Norwegian Fishing and Maritime News, vol. X, no. 1, 1963, pp. 10, 12-13, 15, 33, 35, 37-38, illus., printed. Norwegian Fishing and Maritime News, P. O. Box 740, Bergen, Norway.

OYSTERS:

Publications of the Institute of Marine Science, vol. 7, 1961, 329 pp., illus., printed. Institute of Marine Science, University of Texas, Port Aransas, Texas, July 1962. A special issue devoted entirely to papers summarizing part of the extensive unpublished reports on oysters and their relationship to the oil industry prepared from 1947 to 1960 as part of 2 projects of the Texas Agricultural and Mechanical Research Foundation.

PACIFIC OCEAN:

Physical and Chemical Data for a Portion of the Northeast Pacific Ocean Extending from the Coasts of Washington and British Columbia Westward to 131°W., April 1956-April 1958, by C. M. Love, Technical Report No. 66, 204 pp., illus., printed. Department of Oceanography, University of Washington, Seattle, Wash., 1960.

PAKISTAN:

Agriculture Pakistan, vol. XIII, no. 2, June 1962, 421 pp., illus., printed, 3s. 9d. (about 55 U.S. cents). Central Publications Branch, Government of Pakistan, Karachi, Pakistan. Pakistan, with 500 miles of coastline in the Western Wing and 200 miles in the Eastern Wing in addition to rivers and inland fisheries, has large and practically unutilized fishery resources. With the rapid population growth

and low protein intake, there is an urgent need to increase the per capita fish consumption from the present 5 pounds a year to an amount closer to the international standard of 22 pounds. Efforts to increase fishery production are reflected in the articles contained in this issue, some of which are: "Inland Fish and Fishery of Pakistan," by N. Ahmad; "Marine Fisheries Potential of Pakistan," by M. R. Qureshi; "Fertilization of Fish Ponds," by S. K. Chakraborti; "Control of Aquatic Weeds in Closed Waters," by S. A. Siddiqi; "Shrimp Fisheries of Mekran Coast," by M. Ahmad and A. Hussain; "Sardine Fisheries of Mekran Coasts," by M. Ahmad and A. Hussain; "An Account of the Food of Oysters of Karachi Coast Together with a Note on Fattening and Their Behaviour to Some Ecological and Hydrographical Factors," by Nooruddin; "Tilapia Culture in Extensive Water Areas in West Pakistan," by N. Ahmad; "Trawling in East Pakistan," by S. M. Munir-ul-Islam and M. R. Qureshi; "Report on the Exploratory Fishing on the Coast of West Pakistan for the Period September 1958 to June 1959," by M. A. Burney and S. Q. Mohiuddin; "Preliminary Studies on the Pollution and the Causes of Mortality in the Soan River," by A. Saleem; and "Fish Meal and Manure--Their Preparations and Uses," by A. Sattar.

PERSIAN GULF:

"El Golfo Persico y Sus Recursos" (The Persian Gulf and Its Resources), article, Puntal, vol. 9, no. 104, November 1962, pp. 4-8, illus., printed in Spanish, single copy 12 ptas. (about 20 U.S. cents). Puntal, Apartado de Correos 316, Alicante, Spain.

PERU:

Estadística Económica de la Industria Pesquera (Economic Statistics of the Fishery Industry), by Javier Iparraguirre Cortez, 161 pp., illus., printed. Ministerio de Agricultura, Dirección de Pesquería y Caza, Lima, Peru, 1959.

PHILIPPINES:

"Report to the Government of the Philippines on Marine Fishery Resources," by K. F. W. Tiews, article, Philippine Journal of Fisheries, vol. 6, no. 2, July-December 1958, pp. 107-216, illus., printed. Agricultural Information Division, Department of Agriculture and Natural Resources, Quezon City, Philippines, 1962. Discusses the history of fisheries research in the Philippines; examines local problems; assesses the means available for research; and presents conclusions on the directions in which research should be prosecuted in the future and on the methods by which this should be done.

PLANKTON:

"The Distribution of Some Plankton Animals in the English Channel and Approaches. III--Theories about Long-Term Biological Changes, including Fish," by A. J. Southward, article, Journal of the Marine Biological Association of the United Kingdom, vol. 43, no. 1, February 1963, pp. 1-29, illus., printed, single copy \$13. Cambridge University Press, 32 E. 57th St., New York 22, N. Y.

El Molibdeno en el Plancton de la Ria de Vigo. Algunas Determinaciones de Nitrogeno y Fosforo: Su Relacion y Contenido en Material Organica y Humedad (Molybdenum in the Plankton of the Vigo Estu-

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ary. Some Determinations of Nitrogen and Phosphorus: Their Relation and Content of Organic Material and Moisture), by Antonio Fernandez del Riego, No. 108, 24 pp., illus., printed in Spanish. (Reprinted from *Boletín del Instituto Español de Oceanografía*, October 1962.) *Secretario del Instituto Español de Oceanografía*, Alcalá 27, Madrid, Spain.

"Spring in the Sea," by Gwynne Vevers, article, *New Scientist*, vol. 18, no. 333, April 4, 1963, pp. 32-34, illus., printed, single copy 1s. (about 14 U. S. cents). Cromwell House, Fulwood Place, High Holborn, London WC1, England.

Toxicity of Plankton to CRISTISPIRA Inhabiting the Crystalline Style of a Mollusk, by C. Berkeley, Reprint No. 38, printed. (Reprinted from *Science*, vol. 135, no. 3504, 1962.) Fisheries Research Board of Canada, Biological Station, Nanaimo, B. C., Canada.

POISONOUS FISH:

"Experimental Induction of Ciguatera Toxicity in Fish through Diet," by Philip Helfrich and Albert H. Banner, article, *Nature*, vol. 197, no. 4871, March 9, 1963, pp. 1025-1026, printed, single copy 4s. (about 60 U. S. cents). St. Martin's Press, Inc., 175 Fifth Ave., New York 10, N. Y.

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each. Division of Environmental Engineering and Food Protection, Shellfish Sanitation Branch, U. S. Department of Health, Education, and Welfare, Washington, D. C., 1962. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.) This manual, prepared in two parts, is intended as a guide for the preparation of State shellfish sanitation laws and regulations, and for sanitary control of the growing and processing of shellfish. Part 1 deals with sanitary control of the growing, relaying, and purification of shellfish. Part 2 deals with sanitary control of the harvesting, shucking, packing, repacking, and reshipping of shellfish.

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SMALL BUSINESS MANAGEMENT:

Suggested Management Guides, Catalog No. SBA 1.19:M31, 308 pp., illus., printed \$1.75. Small Business Administration, Washington D. C., 1962. (For sale by the Superintendent of Documents, Government Printing Office, Washington 25, D. C.)

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- Occasional Report of Nankai Regional Fisheries Research Laboratory, no. 1, 85 pp., illus., printed, Nankai Regional Fisheries Research Laboratory, Sanbashi-dori, Kochi, Japan, June 1962. Contains papers presented to the Pacific Tuna Biology Conference, Honolulu, August 1961: "An Outline of the Tuna Longline Grounds in the Pacific," by Hiroshi Nakamura; "Distribution of Yellowfin in the Long-Line Fishing Ground in the Pacific Ocean, Especially on the Regional Variation of the Density in Each Size Group," by Tadao Kamimura and Misao Honma; "Studies on Indomaguro," by Koya Mimura; "Relation between the Distribution of Tunas and Water Masses of the North and South Pacific Oceans West of 160° W.," by Hajime Yamanaka and Noboru Anraku; "Age and Growth of Yellowfin Tuna," by Yoichi Yabuta and Mori Yukinawa; "Studies on the Spawning Activity of the Pacific Tuna, *Parathunnus mebachi* and *Neothunnus macropterus*, by the Gonad Index Examination," by Shoji Kikawa; "Contributions to the Study of the Early Life History of the Tunas," by Hiroshi Yabe and Shoji Ueyanagi; "Biochemical Studies on the Races of Tuna. Base Composition of Testis Deoxyribonucleic Acid (DNA)," by Yutaka Fujii, Koichi Mimoto, and Shichiro Higasa; and "Blood Types in Tuna," by Akimi Suzuki.
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The Fishes of Uganda, by Peter Humphry Greenwood, 124 pp., illus., printed. Uganda Society, Kampala, Uganda, 1958.

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1955-1958 G. G. (The Results of Biological Research Conducted by the Soviet Antarctic Expedition from 1955 to 1958, Part I), 311 pp. Izdatel'stvo Akademii Nauk SSSR, Moscow, 1962. (Published in the series Issledovaniia Fauni Morei I (IX).)

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Laws of Virginia Relating to Fisheries of Tidal Waters, 125 pp., printed \$3. Commission of Fisheries of Virginia, Newport News, Va., 1962. Contains laws relating to fish, oysters, shellfish, and other marine life; and laws relating to waters of the state, ports, and harbors. Also includes an abstract of license laws--licenses required of persons engaged in taking, catching, and marketing fish, oysters, clams, scallops, and mussels.

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Earnings in the Atlantic and Gulf Coasts Shellfish Processing Industry, March 1962, 8 pp., processed. Bureau of Labor Statistics, U.S. Department of Labor, Washington 25, D. C., March 1963. Covers a survey undertaken to provide information on wages in the shellfish-processing industry, which became subject to the minimum wage provisions of the Fair Labor Standards Act in September 1961. The survey included all establishments with one or more employees engaged in onshore processing (except canning) of clams, crabs, oysters, and shrimp on the Atlantic and Gulf Coasts. The data reflect the earnings of production and related workers for the payroll week of February 26-March 3, 1962.

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Improved Tripping Mechanism for Plastic Water Samplers, by K. Stephens, Reprint No. 77, printed. (Reprinted from Limnology and Oceanography, vol. 7, no. 4, 1962.) Fisheries Research Board of Canada, Biological Station, Nanaimo, B. C., Canada.

WEATHER CHARTS:

The following processed weather charts, 2 pp. each are published by the Weather Bureau, U.S. Department 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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Coastal Warning Facilities Chart, Morgan City, La., to Brownsville, Tex., 1963.

WHALES:
"Whale Music," by W. E. Schevill, article, Oceanus, vol. IX, no. 2, December 1962, pp. 3-7, illus., printed. The Woods Hole Oceanographic Institution, Woods Hole, Mass. Discusses recorded sounds of the "voices" of several species of whale.

WHALING:
International Whaling Statistics, no. L, 58 pp., printed, Kr.2.00 (about 30 U.S. cents). Bureau of Interna-

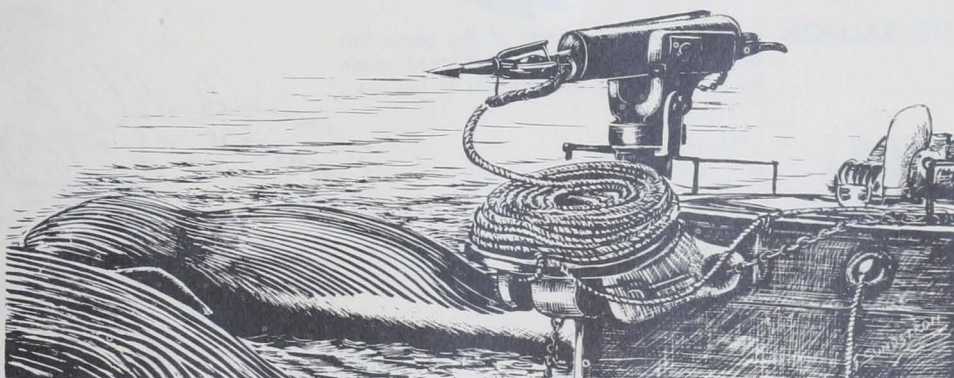
tional Whaling Statistics, Oslo, Norway, 1963. Results of the whaling operations in the Antarctic during the season 1961/62. Includes statistical tables on whaling operations of Japan, Norway, Netherlands, United Kingdom, and U. S. S. R.; average size of whales caught; and number of whales caught, by species, sex, and size. Also includes data on average production of oil per blue-whale unit.

YUGOSLAVIA:
Improvement of Fish Culture in Yugoslavia: Final Report, by S. Sarig, 21 pp., illus., printed. Agency for International Development, U.S. Embassy, Belgrade, Yugoslavia, 1961.

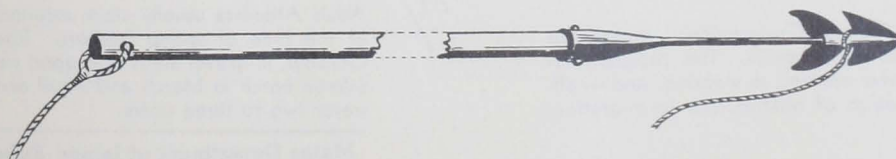


HARPOONS

Harpoons are instruments with pointed barbed blades which are used in capturing large fish or mammals. The blades are detachable from the pole, shaft, or handle. Harpoons are either thrown by hand or discharged from a gun.



Whale harpoon gun

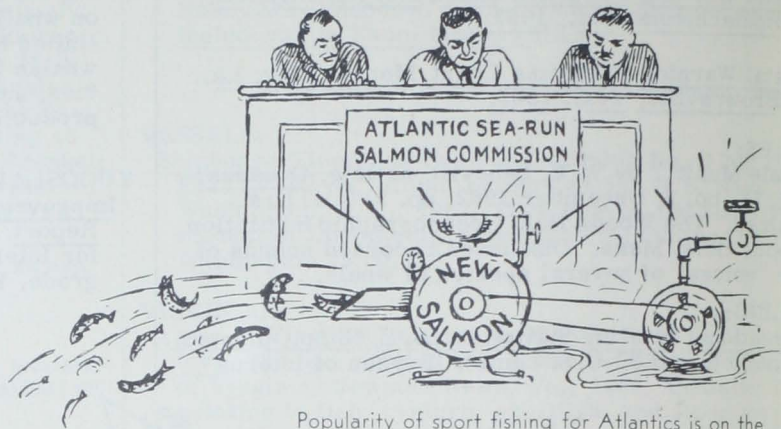


Swordfish or tuna harpoon

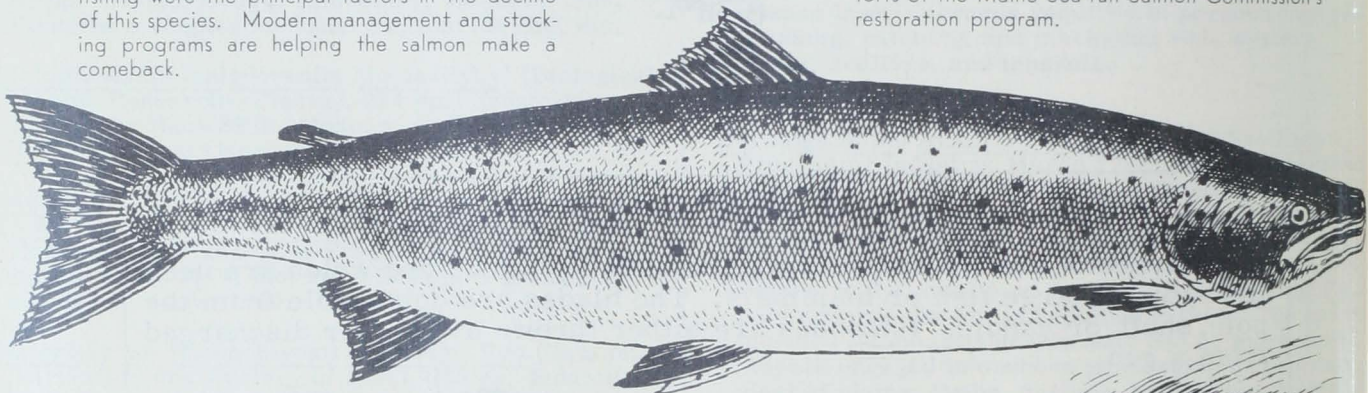
Note: Excerpt from Circular 109, Commercial Fishing Gear of the United States, for sale from the Superintendent of Documents, Government Printing Office, Washington 25, D. C., single copy, 40 cents.



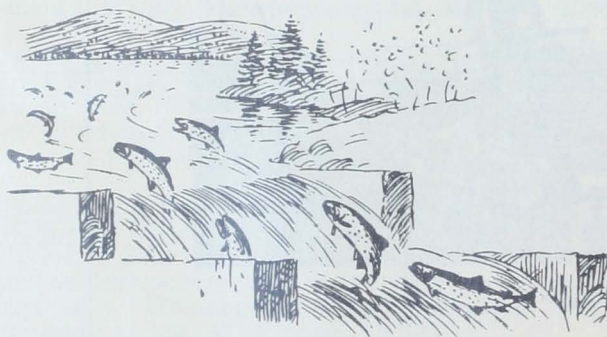
Maine rivers once supported large runs of Atlantic salmon. Obstructions, pollution, and over-fishing were the principal factors in the decline of this species. Modern management and stocking programs are helping the salmon make a comeback.



Popularity of sport fishing for Atlantics is on the increase on Maine's coastal rivers, thanks to efforts of the Maine Sea-run Salmon Commission's restoration program.



THE ATLANTIC SALMON is one of the aristocrats of the game fish world. It differs from its landlocked cousin by living part of its adult life in the sea.



The Maine Sea-run Salmon Commission is responsible for management of this species. The program includes research, water control, re-stocking, and — all-important — elimination of obstructions to migration.



Adult Atlantics usually start entering spawning rivers at the time of spring freshets. Spawning begins in October, in gravel areas with good water-flow. Young salmon hatch in March and April and remain in fresh water two to three years.

Maine Department of Inland Fisheries & Game,
Spring 1963 issue, State House, Augusta, Me.