



# RECENT FISHERY PUBLICATIONS

## FISH AND WILDLIFE SERVICE PUBLICATIONS

THESE PROCESSED PUBLICATIONS ARE AVAILABLE FREE FROM THE BUREAU OF INFORMATION, U. S. FISH AND WILDLIFE SERVICE, WASHINGTON, D. C. 20240. TYPES OF PUBLICATIONS ARE DESIGNATED AS FOLLOWS:

- CFS - CURRENT FISHERY STATISTICS OF THE UNITED STATES.
- FL - FISHERY LEAFLETS.
- MNL - REPRINTS OF REPORTS ON FOREIGN FISHERIES.
- SEP. - SEPARATES (REPRINTS) FROM COMMERCIAL FISHERIES REVIEW.
- SL - STATISTICAL LISTS OF DEALERS IN AND PRODUCERS OF FISHERY PRODUCTS AND BYPRODUCTS.
- SSR - FISH. - SPECIAL SCIENTIFIC REPORTS--FISHERIES (LIMITED DISTRIBUTION).

- | Number   | Title  |
|--|--|
| C-3718   | - Massachusetts Landings, July 1964, 9 pp.                                     |
| C-3719   | - Maryland Landings, November 1964, 4 pp.                                      |
| C-3728   | - Fish Sticks, Fish Portions, and Breaded Shrimp, October-December 1964, 3 pp. |
| C-3732   | - New Jersey Landings, December 1964, 3 pp.                                    |
| C-3735   | - California Landings, October 1964, 4 pp.                                     |
| C-3738   | - North Carolina Landings, December 1964, 4 pp.                                |
| C-3739   | - California Landings, November 1964, 4 pp.                                    |
| C-3740   | - Frozen Fishery Products, January 1965, 8 pp.                                 |
| C-3741   | - Rhode Island Landings, October 1964, 3 pp.                                   |
| C-3742   | - Louisiana Landings, December 1964, 3 pp.                                     |
| C-3745   | - Maryland Landings, December 1964, 4 pp.                                      |
| C-3746   | - Mississippi Landings, November 1964, 3 pp.                                   |
| C-3747   | - Alabama Landings, December 1964, 3 pp.                                       |
| C-3748   | - New York Landings, December 1964, 4 pp.                                      |
| C-3749   | - Shrimp Landings, December 1964, 5 pp.  |
| C-3751   | - Michigan, Ohio & Wisconsin Landings, November 1964, 4 pp.                    |
| C-3753   | - Maine Landings, December 1964, 4 pp.   |
| C-3754   | - North Carolina Landings, January 1965, 4 pp.                                 |
| C-3757   | - California Landings, December 1964, 4 pp.                                    |
| C-3759   | - Mississippi Landings, December 1964, 3 pp.                                   |
| C-3762   | - Texas Landings, September 1964, 2 pp.  |
| C-3763   | - Texas Landings, October 1964, 2 pp.  |
| C-3771   | - Fish Sticks, Fish Portions, and Breaded Shrimp, 1964 Annual Summary, 4 pp.   |
| C-3776   | - Packaged Fishery Products, 1964 Annual Summary, 5 pp.                        |
| <b>Statistical Lists of Dealers in Fishery Products, 1963 (Revised):</b> |  |
| -  | Minnesota (Great Lakes Area), 1963, 1 p.                                       |
| -  | Wisconsin (Great Lakes Area), 1963, 2 pp.                                      |
| -  | Indiana (Great Lakes Area), 1963, 1 p.   |
| -  | Minnesota (Mississippi River and Tributaries), 1963, 1 p.                      |

- SL-36 - Iowa (Mississippi River and Tributaries), 1963, 2 pp.
- SL-37 - Kansas (Mississippi River and Tributaries), 1963, 1 p.
- SL-38 - Missouri (Mississippi River and Tributaries), 1963, 2 pp.
- SL-40 - Oklahoma (Mississippi River and Tributaries), 1963, 1 p.
- SL-42 - Kentucky (Mississippi River and Tributaries), 1963, 1 p.

Sep. No. 732 - Soviet and Japanese Fishing Activity off Alaska in 1964.

Sep. No. 733 - The Trade Expansion Act and the Kennedy Round.

FL-57 - Care of Goldfish, 4 pp., revised Jan. 1965.

SSR-Fish. No. 491 - Monthly Sea-Surface Temperature Anomaly Graphs for Atlantic Coast Stations, by Franklin Stearns, 14 pp., illus., Dec. 1964.

SSR-Fish. No. 494 - Stream Catalog of the Wood River Lake System, Bristol Bay, Alaska, compiled by Richard A. Marriott and others, 219 pp., illus., Oct. 1964.

SSR-Fish. No. 508 - Seasonal Gonadal Cycle of the Male Soft-Shell Clam, *Mya arenaria*, in Maryland, by William N. Shaw, 7 pp., illus., Feb. 1965.

A Device for Stamina Measurement of Fingerling Salmónids, by Allan E. Thomas, Roger E. Burrows, and Harry H. Chenoweth, Research Report 67, 19 pp., illus., printed, 1964.

Effects of Accumulated Excretory Products on Hatchery-Reared Salmonids, by Roger E. Burrows, Research Report 66, 16 pp., illus., printed, 1964.

THE FOLLOWING MARKET NEWS LEAFLETS ARE AVAILABLE FROM THE FISHERY MARKET NEWS SERVICE, U. S. BUREAU OF COMMERCIAL FISHERIES, RM. 510, 1815 N. FORT MYER DR., ARLINGTON, VA. 22209.

- | Number | Title  |
|--------|--|
| MNL-5  | - Denmark's Fishing Industry, 1964, (Supplement), 23 pp.                         |
| MNL-14 | - United Kingdom's Fishing Industry, 1964, 11 pp.                                |
| MNL-98 | - A News Service for Europe's Fish Markets, 4 pp.                                |
| MNL-99 | - The General Agreement on Fisheries and Norway's Current Subsidy System, 13 pp. |

THE FOLLOWING ENGLISH TRANSLATIONS OF FOREIGN LANGUAGE REPORTS ARE AVAILABLE FROM THE U. S. BUREAU OF COMMERCIAL FISHERIES, 101 SEASIDE AVE., TERMINAL ISLAND, CALIF. 90731.



Chapter XII--Tuna Industry Organizations, by Shoichi Masuda, Translation Series No. 14, 11 pp., processed, March 1965. (Translated from the Japanese, Comprehensive View of the (Japanese) Tuna Fishery, March 1963, pp. 803-813.)

Controversy Surrounding the Exporters Agreement on Canned Tuna Exports to the United States, Translation Series No. 15, 24 pp., processed, April 1965. (Translated from the Japanese, Suisan Tsushin Sha, Chiyoda Kaikan, 1-banchi, 2-chome, Kudan, Chiyoda-ku, Tokyo, Japan, Oct. 1, 1964.)

THE FOLLOWING ARE AVAILABLE FROM THE BRANCH OF REPORTS, BUREAU OF COMMERCIAL FISHERIES, U. S. DEPARTMENT OF THE INTERIOR, WASHINGTON, D. C. 20240, DISTRIBUTION LIMITED.

Distribution of Physical-Chemical Properties and Tabulations of Station Data, Washington and British Columbia Coasts, May 1963, by W. James Ingraham, Jr., Data Report 5, 3 microfiche cards, illus., March 1965.

Lake Michigan Chemical Data, 1954-55, 1960-61, by Alfred M. Beeton and James W. Moffett, Data Report 6, 3 microfiche cards, illus., March 1965.

North Pacific and Bering Sea Oceanography, 1960 and 1961, by Betty Ann Morse, Data Report 7, 8 microfiche cards, illus., March 1965.

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

FL-575 - Parasites of Freshwater Fishes: IV--Miscellaneous; The Anchor Worm (*Lernaea cyprinacea*) and Related Species, 4 pp., Jan. 1965. (Eastern Fish Disease Laboratory, U. S. Bureau of Sport Fisheries and Wildlife, Leetown, Post Office Kearneysville, W. Va. 25430.)

California Fishery Market News Monthly Summary, Part I - Fishery Products Production and Market Data, Feb. 1965, 13 pp. (Market News Service, U. S. Fish and Wildlife Service, Post Office Bldg., San Pedro, Calif. 90731.) California cannery receipts of tuna and tunalike fish and other species used for canning; pack of canned tuna, tunalike fish, sardines, mackerel, and anchovies; market fish receipts at San Pedro, Santa Monica, and Eureka areas; California and Arizona imports; canned fish and frozen shrimp prices; ex-vessel prices for cannery fish; prices for fish meal, oil, and solubles; for the month indicated.

Fishery and Oceanography Translations, no. 4, Jan. 1965, 51 pp., processed. (Translation Program, Branch of Reports, U. S. Bureau of Commercial Fisheries, 2725 Montlake Blvd. E., Seattle, Wash. 98102.)

Gulf of Mexico Monthly Landings, Production and Shipments of Fishery Products, Jan. 1965, 13 pp. (Market News Service, U. S. Fish and Wildlife Service, Rm. 609, 600 South St., New Orleans, La. 70130.) Gulf States shrimp, oyster, finfish, and blue crab landings; crab meat production; LCL express shipments from New Orleans; wholesale prices of fish and shellfish on the New Orleans French Market; Gulf menhaden landings and production of meal, solubles, and oil; fishery imports at Mobile, Ala., Morgan City and New Orleans, La., Miami, Fla., and Houston, Port Isabel, and Brownsville, Tex.; and sponge sales; for the month indicated.

Informational Guide for the Chicago Daily "Fishery Products Reports", 5 pp., 1965. (Market News Service, U. S. Fish and Wildlife Service, Rm. 704, 610 S. Canal St., Chicago, Ill. 60607.) Information to aid subscribers in interpreting the contents of the Chicago daily "Fishery Products Reports." Items covered include terms for receipts, landings, prices, cold-storage movement and holdings, imports, market trends and developments, and other explanatory information concerning the data as presented in the reports.

Monthly Summary of Fishery Products Production in Selected Areas of Virginia, North Carolina, and Maryland, Feb. 1965, 4 pp. (Market News Service, U. S. Fish and Wildlife Service, 18 S. King St., Hampton, Va. 23369.) 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, Jan. 1965, 22 pp. (Market News Service, U. S. Fish and Wildlife Service, 10 Commonwealth Pier, Boston, Mass. 02210.) 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, and Provincetown), 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--Dec. 1964, 20 pp. (Market News Service, U. S. Fish and Wildlife Service, 155 John St., New York, N. Y. 10038.) 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 at Stonington, Conn.; for the month indicated.

Seattle--Landings, Receipts, and Value of Fishery Products, 1964, by Charles M. Reardon, 38 pp., March 1965. (Market News Service, U. S. Fish and Wildlife Service, 706 Federal Office Bldg., 909 First Ave., Seattle, Wash. 98104.) Reviews Pacific Northwest fisheries trends and their effect on Seattle fishery receipts for 1964. Contains statistical tables on landings by U. S. halibut fleet; Seattle's landings and receipts of fishery products, by months; carload and truckload shipments of fishery products by months; imports of canned fishery products; receipts of Alaskan canned fish and shellfish; and names, classifications and approximate standards as used on Seattle Wholesale Market. Also presents data on receipts of fresh and frozen fish and shellfish; fresh and frozen salmon receipts and imports; ex-vessel landings and prices of fish by the otter-trawl fleet; Puget Sound canned salmon pack; and related information.



## 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.

### ACCLIMATIZATION:

A discussion of the problems of acclimatization of fishes and their food," by B. G. Ioganzen, article, Breeding, Population Dynamics and Health of Fish, OTS 64-31188, printed, 1964, \$1.50. (Translated from the Russian, Voprosy Ikhtiologii, vol. 4, no. 1, 1964, pp. 196-197.) Office of Technical Services, U. S. Department of Commerce, Washington, D. C. 20230.

### ALASKA:

Market Research Study for a Proposed Alaska Bottomfish Industry, 110 pp., illus., processed, Feb. 1965, 55 cents. Area Redevelopment Administration, U. S. Department of Commerce, Washington, D. C. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402.) Reports on a market research survey for a projected Alaska bottomfish industry, to determine the extent to which the products of processed Alaska bottomfish would be able to enter present markets, competitively, and provide estimates of the long-range potential of such products. A section on assessment of the Northeast Pacific bottomfish resource discusses the extent and availability of flatfish species, and the nature and distribution of present fishing effort. Another section on delineation of potential markets covers potentially important commercial markets, state and condition in which fish are marketed, present domestic and foreign suppliers of bottomfish, the potential by species and market, and projection of long-range market trends. A short chapter on possibilities of fish meal as a byproduct of the bottomfish industry is included. The final chapter, presenting consideration of the economic feasibility of an Alaska bottomfish fishery, explains wage and processing considerations; marketing, distribution, and promotion problems; pricing considerations; and management and flexibility of operation. The authors conclude that unless a proposed Alaska bottomfishery uses more efficient vessels and gear than the present West Coast industry, unless it employs more modern processing and distribution methods, unless it avoids the technical shortcomings characteristic of the bottomfish industries on both East and West Coasts, it cannot expect to approach economic viability.

### ALGAE:

Introductory Account of the Smaller Algae of British Coastal Waters. Part V--Bacillariophyceae (Diatoms), by N. Ingram Hendey, Fishery Investigations Series IV, printed, 1964, 182s. 6d, (about US\$36.50 when ordered in the United States). Ministry of Agriculture, Fisheries and Food, London, England. (Available from the British Information Services, 845 Third Ave., New York, N. Y. 10022.)

### ANCHOVY:

¡Asombroso! Desembarcamos 8,700,000 toneladas! (Wonderful! We land 8,700,000 metric tons), article, Mundo Pesquero, vol. 2, no. 16, Dec. 1964, pp. 6-8, 42, illus., printed in Spanish, single copy 10 soles (about 40 U. S. cents). Editoriales Unidas S. A., Av. Mariscal Benavides 1207, Lima, Peru.

"La pesqueria de la Anchoveta" (The anchovy fishery), article, Informe, vol. 1, no. 1, 1965, pp. 1-15, illus., processed in Spanish. Biblioteca, Instituto del Mar del Peru, Apartado 3734, Lima, Peru.

### ANTIOXIDANTS:

"Antioxidantes" (Antioxidants), article, Mundo Pesquero, vol. 2, no. 16, Dec. 1964, pp. 13-15, illus., printed in Spanish, single copy 10 soles (about 40 U. S. cents). Editoriales Unidas S. A., Av. Mariscal Benavides 1207, Lima, Peru. Discusses research being conducted in Peru on the effectiveness of three antioxidants in stabilizing fish flour, maintaining its freshness, preventing oxidation and subsequent loss of nutritive value, and eliminating spontaneous combustion.

### ARGENTINA:

Following reports in Spanish available from Dirección General de Pesca y Conservación de la Fauna, Secretaría de Estado de Agricultura y Ganadería de la Nación, Buenos Aires, Argentina:

Almejas Nacaríferas de la República Argentina, Género DIPLODON (Moll. Mútelidos) (Fresh-Water Mussels of the Republic of Argentina, Genus Diplodon--Mollusca Mutelidae), by Zulma J. Ageitos de Castellanos, Publicación Miscelánea No. 421, 40 pp., illus., 1960.

Contribución al Estudio Bioeconómico de las Especies de Almejas Nacaríferas del Río Paraná (Contribution to the Bioeconomic Study of the Fresh-Water Mussels of the Paraná River), by Oscar A. Canzio, 34 pp., illus., 1960.

### ATOMIC ENERGY COMMISSION:

Annual Report to Congress of the Atomic Energy Commission for 1964, 89th Congress, 1st Session, Senate Document No. 8, 450 pp., illus., printed, Jan. 1965. U. S. Atomic Energy Commission, Washington, D. C. 20545. A short section deals with radiation preservation of food (includes fishery products) preservation factors, acceptability factors, wholesomeness and public health safety, packaging, and irradiators. Shown is a schematic drawing of a fishery products irradiator.

### AUSTRALIA:

Fishing and Whaling, Australia, 1963-64, Statistical Bulletin No. 10, 25 pp., illus., processed, March 9, 1965. Commonwealth Bureau of Census and Statistics, Canberra, Australia. This is the tenth of a series of annual statistical bulletins dealing with the fishing and whaling industry. Statistics relate to the year 1963/64 for general fisheries, the 1963 season for pearl shell and trochus shell fisheries, and the 1964 season for whaling, with comparative data for the previous four years. Exports and imports of fish products, unmanufactured shells, and marine-animal oils are shown for 1963/64 together with comparable figures for the previous two 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 operations of the whaling industry in Australia and Norfolk Island. Part IV shows particulars of overseas trade in the products of fishing and whaling.

### BRAZIL:

Sudene, Boletim de Estudos de Pesca, vol. 3, no. 8, Aug. 1963, 21 pp., processed in Portuguese. Depart-



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amento de Industrializacao, Divisao de Pesca, Superintendencia do Desenvolvimento do Nordeste, Edificio Juscelino Kubitschek, 12º Andar, Recife, Pernambuco, Brazil. Includes, among others, articles on: "Novos horizontes de Pesca no Atlântico Sul" (New horizons in the South Atlantic fishery); "Caca de baleias no Nordeste: 1963 (Jun/Jul)" (Whaling season in the Northeast, 1963--June/July), by Bento F. Grangeiro; "Métodos de beneficiamento de langostas" (Method of improving spiny lobsters), by A. R. Prater and W. A. Montgomery; and "Pescarias experimentais de lagosta no Panamá" (Experimental lobster fishery in Panama), by Harvey R. Bullis, Jr.

#### CALIFORNIA:

The California Marine Fish Catch for 1963, Fish Bulletin 129, 45 pp., illus., printed, 1965. Office of State Printing, Documents Section, P. O. Box 1612, Sacramento, Calif. 95807. A summary of the 1963 landings of the California commercial fishing fleet, the imports from other states or foreign countries of fresh fish received for processing, the catches of the party boat fleet, and poundages of inshore bait handled during the year. Statistical data cover landings and shipments of leading species, by weight and value; annual landings and shipments, 1916 through 1963; number of licensed commercial fishermen; number of registered fishing vessels by length; and origin of shipments, 1963. Also included are data on origin of commercial fish landings, 1963; monthly landings and shipments, 1963, by areas and statewide; value and poundage, annual landings and shipments by areas, 1963; value of landings and shipments by ports and areas, 1963; party boat sport catch, 1954-63; and live bait catch, 1963.

Marine Baits of California, by Charles H. Turner and Jeremy C. Sexsmith, 71 pp., illus., printed, May 1964. Department of Fish and Game, 1416 Ninth St., Sacramento, Calif. 95814.

#### CANADA:

Costs and Earnings of Selected Fishing Enterprises, Atlantic Provinces, 1962, by John Proskie, Primary Industry Studies No. 1, vol. 12, 144 pp., illus., processed, 1964. Economics Service, Department of Fisheries of Canada, Ottawa, Canada. This is an annual progress report on a study of the economics of 137 primary fishing enterprises. They are grouped in 19 classes according to region and type and size of fishing craft and gear employed. In the first part, the findings for the 1962 season are examined and discussed. The second part includes detailed tables summarizing the fishing activities and financial results for the fishing enterprises included in the 1962 phase of the study. The study in 1962 was extended to include for the first time a sample of Nova Scotia 97-foot scallop draggers and 115-foot wooden otter trawlers.

Following are available from Queen's Printer and Controller of Stationery, Ottawa, Canada.:

Fisheries Statistics, British Columbia, 1963, Catalogue No. 24-208, 17 pp., illus., processed in French and English, March 1965, 50 Canadian cents. Presents data on the quantity and value of fishery products by species, 1951-63; quantity and value by species and fisheries districts, 1962-63; capital equip-

ment employed in primary fisheries operations; and number of persons engaged in primary fisheries operations.

Journal of the Fisheries Research Board of Canada, vol. 22, no. 1, Jan. 1965, 254 pp., illus., printed, single copy C\$2. Contains, among others, these articles: "Effects of salting and smoking on protein quality of cod," by I. C. Munro and A. B. Morrison; "Some methods for estimating ocean mortality of Pacific salmon and applications," by R. A. Fredin; "Effect of polyphosphates and other salts on drip loss and oxidative rancidity of frozen fish," by J. W. Boyd and B. A. Southcott; "Reproduction of king crabs, *Paralithodes camtschatica* (Tilesius)," by Guy C. Powell and Richard B. Nickerson; "Tetracycline antibiotics in shrimp preservation," by B. A. Southcott and J. W. Boyd; "Lipids and component fatty acids of the Newfoundland squid, *Illex illecebrosus* (Le Sueur)," by Peter M. Jangaard and R. G. Ackman; "Lampetra richardsoni, a new nonparasitic species of lamprey (Petromyzonidae) from western North America," by Vadim D. Vladykov and W. I. Follett; "Significance of early emergence, environmental rearing capacity, and behavioral ecology of juvenile coho salmon in stream channels," by J. C. Mason and D. W. Chapman; and "Northern range extensions for four species of rockfish (*Sebastes goodei*, *S. helveticus*, *S. rubrivinctus*, and *S. zacentrus*) in the North Pacific Ocean" by S. J. Westfrheim.

34th Annual Report, 1963, Department of Fisheries, Catalogue No. Fs 1-1963, 137 pp., illus., printed, 1964 C\$1.25. Presents the functions and activities of the Department of Fisheries for the year 1963, and the financial statement of the Department for the fiscal year 1963/64. Covers in detail the activities of the Protection Branch's patrol vessels; and those of the Conservation and Development, Inspection, Economic Information and Consumer, and Industrial Development Services. Also covers the Fishermen's Identity Plan, Fisheries Prices Support Board, the Fisheries Research Board of Canada, international commissions, and special committees. Canada's Pacific and Atlantic Coast and inland fisheries are also discussed. Statistics cover the quantity and value of fish and shellfish landed, by areas and species and by areas and provinces; exports by types of products, countries of destination; number of fishermen in Canada; and value of fishing craft by areas. The appendix contains financial statements for the fiscal year 1963/64, and statements on fish-culture development.

#### CANNING:

"A practical method for canning freshwater fish," by A. W. Lantz, article, Trade News, vol. 17, no. 8, 1965, pp. 3-8, illus., processed, Information and Consumer Service, Department of Fisheries, Ottawa, Canada.

#### COD:

"Protein denaturation in frozen fish. IX--The inhibitory effect of glycerol in cod muscle," by R. M. L. and M. K. Elerian, article, Journal of the Science of Food and Agriculture, vol. 16, no. 2, Feb. 1965, pp. 65-70, illus., printed, single copy £1 17s. (about US\$5.20). Society of Chemical Industry, 14 Belgrave Sq., London SW1, England.



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## COMPOSITION:

"Lipids and protein denaturation in fish muscle," by June Olley and W. R. H. Duncan, article, *Journal of the Science of Food and Agriculture*, vol. 16, no. 2, Feb. 1965, pp. 99-104, printed, single copy £1 17s. (about US\$5.20). Society of Chemical Industry, 14 Belgrave Sq., London SW1, England.

## CIBS:

"Blackening of the outer surface of tins of canned crab," by V. S. Gordievskaya, article, *Trudy Dalrybvntus*, vol. 3, 1963, pp. 157-165, printed in Russian. Dal'nevostochnogo Tekhnicheskogo Instituta Rybnoi Promyshlennosti i Khoziaistva, Vladivostok, U.S.S.R.

## DIMARK:

"8 millioner kg. fisk ul 546 millioner kroner fanget i Danske fiskere i 1964" (865 million kg. of fish worth 546 million kroner landed by Danish fishermen in 1964), article, *Dansk Fiskeritidende*, vol. 82, no. 19, Feb. 19, 1965, pp. 92-94, illus., printed in Danish. Dansk Fiskeritidende, Studiestraede 3, 2, Copenhagen K, Denmark.

"Fisheries' Equipment and Fish Processing Machinery from Denmark, 106 pp., illus., printed (Spanish edition also available), 1965. The Federation of Danish Industries, 18 H. C. Andersens Blvd., Copenhagen, Denmark. This booklet presents descriptions and illustrations of products and processes of 43 Danish firms manufacturing fisheries equipment for export. Some of the categories are fishing vessels, engines and propellers, navigating equipment, nets and cordage, freshwater generators, fish meal and oil equipment, freeze-driers, refrigerating and freezing equipment, food processing machinery, conveyor belts, and refrigerated trucks and containers. Also includes a list of the firms represented.

## IDFISH:

"The characterization of collagen from the skin of the fish shark, *Squalus acanthias*," by Marc S. Lewis and Karl A. Piez, article, *Journal of Biological Chemistry*, vol. 239, Oct. 1964, pp. 3336-3340, printed by Williams and Wilkins Co., Mount Royal and Guilford Aves., Baltimore 2, Md.

## E-E:

"Origen de una Angula que se Convertio en Angula (Origin of a Larva Which Was Changed Into An Eel), by Jose Ma. Navaz y Sanz, 40 pp., illus., printed by Sociedad de Oceanografia de Guipúzcoa, San Sebastián, Spain.

## E-E-PIA:

"Report on the Fisheries in Ethiopia, by M'nakhem Yami, 117 pp., illus., processed, 1964. Department for International Cooperation, Ministry for Foreign Affairs, State of Israel, Jerusalem, Israel. Presents the results of a survey of Ethiopia's marine and fresh-water fisheries conducted between 1960 and July 1963. Covers the resources of Ethiopian waters of the Red Sea, the fresh fish industry, other marine products of commerce such as shells and pearls, motorization of fishing craft, Ethiopian fisheries administration, and the Lake Tana fishery. Recommendations include establishment of a Fisheries Division, fisheries boards, and cooperatives; provision in the Five-Year Plan for improved marketing; training of fishermen and edu-

cation for their children; a fishing harbor project; experimental fishing; motorization of native craft; development of the fish meal industry; increasing the demand for fresh fish; and production of fresh and canned catfish from Lake Tana.

## FISH DETECTION:

"The Relation of the Intensity of the Echo-Signal to the Duration of the Impulse, by E. V. Shishkova, *Translations (New Series) No. 32*, 4 pp., printed, 1964. (Translated from the Russian, *Rybnoe Khoziaistvo*, no. 1, 1962, pp. 37-40.) Fisheries Laboratory, Ministry of Agriculture, Fisheries and Food, Lowestoft, Suffolk, England.

## FISH MEAL:

"The nitrogen metabolism of the young pig. II--Effect of heat treatment on the 'available' lysine content of fish meal and the performance of pigs," by A. A. Jones and A. Cadenhead, article, *Journal of the Science of Food and Agriculture*, vol. 16, no. 1, Jan. 1965, pp. 38-42, printed, single copy £1 17s. 6d. (about US\$5.27). Society of Chemical Industry, 14 Belgrave Sq., London SW1, England.

"Use of chick plasma non-protein nitrogen in evaluating fish meals," by G. R. Childs and G. F. Combs, article, *Poultry Science*, vol. 43, Sept. 1964, pp. 1220-1222, printed. Poultry Science Association, Kansas State College, Manhattan, Kans.

## FISH OIL:

The following are from *Chemical Abstracts*, vol. 59. American Chemical Society, 1155 16th St. NW., Washington, D. C. 20006.:

"Edible oil from marine oil," by Seiji Okami, Eiji Negoro, and Hisatake Sato, Oct. 28, 1963, Abstract No. 10354a.

"Fish oils from fish caught in the Inland Sea of Japan. I--Oils from *Harengula zunasi*, *saurida* and halfbeak," by Seiichi Ueno and Shigeru Hamada, July 8, 1963, Abstract No. 846a.

"Reaction mechanism of antioxidant in marine products. I--Relation between the efficacy of antioxidant and the unsaturation degree of fish oil," by Kenzo Toyama, Nov. 11, 1963, Abstract No. 12090d.

## FISH POISONING:

"Fish Poisoning along the North Eastern Coast of Tanganyika, by C. S. Alexander, 4 pp., printed, 1964. (Reprinted from *Tanganyika Notes and Records*, vol. 62, March 1964.) University of Illinois, Urbana, Ill.

## FISH PROTEIN CONCENTRATE:

"Fish flour (fish protein concentrate) controversy nearing solution," article, *Food Processing*, vol. 25, Oct. 1964, pp. 21-22, printed. Putnam Publishing Company, 111 E. Delaware Pl., Chicago 11, Ill.

"Measurement of oxygen absorption by fish flours. Stabilization by antioxidants," by J. F. Flanzly, G. Rocquelin, and Andree Pihet, article, *Chemical Abstracts*, vol. 59, Sept. 30, 1963, Abstract No. 8050g, printed. American Chemical Society, 1155 16th St. NW., Washington, D. C. 20006.



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#### FISH SOLUBLES:

"Crystalline growth factors isolated from fish solubles," article, *Feedstuffs*, vol. 36, Sept. 19, 1964, p. 39, printed, Miller Publishing Co., 2501 Wayzata Blvd., Minneapolis 5, Minn.

"Studies of the growth-promoting activity for chicks of fish solubles," by G. F. Harrison and M. E. Coates, article, *British Journal of Nutrition*, vol. 18, no. 3, 1964, pp. 461-466, printed, Cambridge University Press, 32 E. 57th St., New York, N. Y. 10022.

#### FOOD AND AGRICULTURE ORGANIZATION:

*Yearbook of Fishery Statistics, 1963* (Catches and Landings), vol. 16, 367 pp., illus., processed in French, Spanish, and English, 1964, \$4.50. Food and Agriculture Organization of the United Nations, Rome, Italy. (Available from Columbia University Press, International Documents Service, 2690 Broadway, New York, N. Y. 10027.) Beginning with this edition, two volumes of the Yearbook are published annually. This volume, subtitled "Catches and Landings," reports data on quantities and values of fish, shellfish, and plants landed and harvested by countries, by species, and by fishing areas. The other volume, subtitled "Fishery Commodities" covers disposition of the catches and both production and international trade data by types of fishery commodities. The tables in this volume are arranged in three sections. The first section contains statistical tables on summaries of catches by continents and by countries; by species; and by major fishing areas. The second section has data on catches by individual countries. The final section includes data on catches by species under the categories of fresh-water and diadromous fish, marine fish, shellfish, whales, seals and other marine mammals, aquatic animals and residues, and aquatic plants.

#### FRANCE:

"Au Pardon des Terre-Neuvas de Fecamp M, Jean Morin évoque les problèmes de la grande pêche et de l'armement hauturier" (At the pilgrimage of the Newfoundland fishermen at Fecamp, Mr. Jean Morin discusses the problems of the marine fishery and distant-water vessels), article, *La Pêche Maritime*, vol. 44, no. 1043, Feb. 1965, pp. 77-81, 82, printed in French, single copy 14 F (about US\$2.85). La Pêche Maritime, 190, Blvd. Haussmann, Paris, France.

The following articles are from *France Pêche*, no. 91, Jan. 1965, printed in French, single copy 2,50 F (about 50 U. S. cents). France Pêche, Boite Postale 179, Lorient, France.:

"L'Institut Scientifique et Technique des Pêche Maritimes" (The Scientific and Technical Institute of Marine Fisheries), by Jean Furnestin, pp. 4-7, illus.

"A Nice: vente sans crie" (at Nice--sale without auction), by Y. Le Berre, pp. 8-11, illus. Discusses an agreement and a contract between the fish salesmen and the fishermen-owners.

#### FREEZE-DRYING:

"Thermal conductivity of some freeze-dried fish," by Graham Lusk, Marcus Karel, and Samuel A.

Goldblith, article, *Food Technology*, vol. 18, Oct. 1964, pp. 121-124, printed, single copy \$1.50. The Garrard Press, 510 N. Hickory, Champaign, Ill. 61823.

#### FRENCH POLYNESIA:

"Fisheries development in French Polynesia," by Louis Devambe, article, *South Pacific Bulletin*, vol. 15, no. 1, Jan. 1965, p. 36, illus., printed, single copy 30 cents. South Pacific Commission Publications Bureau, G. P. O. Box 5254, Sydney, Australia.

#### FROZEN FISH:

"Preventive effect of polyphosphate on the drip formation of the thawed fish flesh," by Fuyuo Ota and Junichi Nishimoto, article, *Chemical Abstracts*, vol. 61, July 6, 1964, Abstract No. 1178d, printed, American Chemical Society, 1155 16th St. N.W., Washington, D. C. 20006.

#### GALAPAGOS ISLANDS:

"Apuntes e informaciones sobre las pesquerias en el Archipiélago de Colon (Islas Galápagos) (Memoranda and information on the fisheries of the Columbus Archipelago--Galapagos Islands)," by Domingo Quiroga and Anibal Orbes Armas, article, *Boletín Informativo*, vol. 1, no. 5, 1964, pp. 1-18, illus., printed in Spanish. Biblioteca, Instituto Nacional de Pesca del Ecuador, Casilla 5918, Guayaquil, Ecuador.

#### GEAR:

"Theory of catching ability and the classification of commercial fishing gear," by V. N. Voinikanis-Mirskii, article, *Trudy Dalrybvtus*, vol. 3, 1963, pp. 29-40, printed in Russian. Dal'nevostochnogo Tekhnicheskogo Instituta Rybnoi Promyshlennosti i Khozyaistva, Vladivostok, U.S.S.R.

#### GENERAL:

*Journal du Conseil*, vol. 29, no. 2, Oct. 1964, 110 pp., illus., printed, Kr. 16 (about US\$2.35). Andr. Fred. Høst & Son, Bredgade, Copenhagen, Denmark. Contains, among others, articles on: "The duration of maturation stages of herring," by T. D. Iles; "Racial studies on Manx herring stocks," by D. J. Symonds; "A direct method for determining the pumping rate of siphonate bivalves," by John Coughlan and Alan D. Ansell; "Some parameters of growth of mature *Venus mercenaria* L.," by Alan D. Ansell; and "The spawning and fecundity of the Norway lobsters (*Nephrops norvegicus* L.) around the Scottish coast," by H. J. Thomas.

*Wondrous World of Fishes*, Editor-in-Chief Melville Bell Grosvenor, 367 pp., illus., printed, 1965, \$8.75 postpaid anywhere in the world. National Geographic Society, 17th and M Sts. N.W., Washington, D. C. 20036. With the greater emphasis that is being placed today on the importance of oceanography and the effect it will have on each and everyone of us in the near future, it behooves us to learn something about our watery world and the creatures that inhabit it. This book has made it easy. It reveals the fascinating and still-mysterious lives and haunts of 340 species of fish and shellfish found in and around North America and Hawaii. With more than 400 illustrations (371 in superb color), the sea and its creatures are brought right into your living room. The Society's technique of lifelike color photography (now more realistic than ever because of the great



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progress made in underwater photography) brings book to life. You actually travel deep into the



of the 371 color photographs appearing in the book, *Wondrous World of Fishes*.

realm where man still is an intruder. Dr. Leonard P. Schultz, curator of the Smithsonian Institution's Division of Fishes, served as scientific consultant for the book, and a large number of others contributed to the book. In the opening chapter, Dr. Schultz reveals a wealth of curious facts about fish and answers many questions. What is a fish? Do fish make noise? Do fish have external ears? Do fish sleep? Do fish drink water? Revealed are other facts: fish have rings on scales that tell age; some fish set up "cleaning stations"; the angler concentrates on fishing for fun. Chapters in part take you angling in the United States, ice fishing, tarpon fishing, fishing for devilfish in the Stream. Coast and deep-sea fish are covered in the second part, and the chapters deal with fishing on the North Atlantic Grand Banks, America's national park in the sea, Florida's underwater wonderland, and the nation's major oceanariums. The third part discusses lake and stream dwellers and introduces a look at West Coast streams together with salmon and sturgeon that inhabit them; the story of the fight to save the golden trout or sunapee in a Hampshire lake; and a look-see at aquarium fish (America's most numerous pets) which lure game hunters to the far corners of the world. The fourth and last major part of the book is titled "Warm Curiosities." The chapters in this part point out the fascination of the book: "Miracle of the Mermaid's Purse"; "Little Horses of the Sea"; and "Solvent Life Secrets of the Sailfish." Each of the four parts concludes with a gallery of the species of fish pertinent to that particular part--(1) marine game fish, (2) marine nongame or commercial fish, (3) freshwater fish, and (4) sharks and Hawaiian fish--with life histories, illustrated with photographs and drawings in brilliant, living color. One of the book's chapters points up vividly the freedom of photographers in taking pictures under water. The photographer responsible for that chapter, Jerry Greenberger, describes two months of roaming the waters of the John Pennekamp Coral Reef State Park off Florida's east coast. At a distance of only seven miles he photographed a 10-foot lemon shark eating a snapper. Chapter 20 is a "Guide to Fish Cookery" by that world-renowned gourmet James A. Beard. Besides a good index, there is also a listing of aquariums open to the public. If you are a hobbyist, a student, a biologist, an angler, a scientist, a fisherman, a cook or gourmet, or just someone who has an interest in the world around you, this book will be a constant companion.

--Joseph Pileggi

#### GERMAN DEMOCRATIC REPUBLIC:

Fish Catch of the GDR to be More Than Doubled by 1970, JPRS 27932, 7 pp., processed. (Translated from the German, *Seeverkehr*, vol. 4, no. 10, 1964, pp. 546-550.) Office of Technical Services, U. S. Department of Commerce, Bldg. Tempo E, E. Adams Dr., 4th and 6th Sts. SW., Washington, D. C. 20443.

Gesammelte Sonderdrucke aus dem Institut für Hydrobiologie und Fischereiwissenschaft der Universität Hamburg 1963 (Collected Reprints from the Institute for Hydrobiology and Fisheries Science of the University of Hamburg, 1963), 127 pp., illus., printed in German or English, 1964. Institut für Hydrobiologie und Fischereiwissenschaft, Universität Hamburg, Olbersweg 24, 2 Hamburg-Alton 1, Federal Republic of Germany. Includes, among others, articles on: "Das neue Institut für Hydrobiologie und Fischereiwissenschaft der Universität Hamburg und seine geschichte" (The new Institute for Hydrobiology and Fisheries Science of the University of Hamburg and its history), by A. Buckmann; "Fisheries research and international collaboration," by C. E. Lucas; "Some comments on scientific procedure in herring investigations," by A. Buckmann; "The causes of changes in recruitment. Herring Symposium 1962, Annex II," by G. Hempel; "On the condition of herring larvae," and "The influence of egg size on herring larvae (*Clupea harengus* L.)," by J. H. S. Blaxter and G. Hempel; "Die auswirkung der kanalisierung unserer flüsse auf die fischfauna und ihre lebensbedingungen" (The effect of the canalization of our rivers on fishes and their environment), and "Probleme der fischerischen Nutzung kanalisierter flüsse" (Use of canalized rivers for fishing), by K. Lillelund.

#### HAKE:

La Pesca de la Merluza en el Mar Argentino, durante el Año 1963, Areas de Captura y Rendimientos (The Hake Fishery in the Sea Off Argentina during 1963, Areas of Capture and Yield), by Luis R. Vasquez and others, 22 pp., illus., processed in Spanish, 1964. Direccion General de Pesca y Conservacion de la Fauna, Secretaria de Estado de Agricultura y Ganaderia, Buenos Aires, Argentina.

#### HERRING:

On the Occurrence of Thiaminase in Baltic Herring, by Taina Kuusi, Tiedotus, Sarja IV, *Kemia* 52, 14 pp., printed, 1963. Valtion Teknillinen Tutkimuslaitos, Helsinki, Finland. Describes experiments to determine the quantity of thiaminase, an enzyme which destroys vitamin B<sub>1</sub>, present in frozen Baltic herring, fresh bream, and ensilaged Baltic herring. Only the gills and viscera were used and it was found that thiaminase activity occurs in Baltic herring, although it is not nearly so high as in bream. However, ensilaging with acid evidently inactivates the thiaminase of the fish.

The following articles are from Trudy BaltNIRO, vol. 9, 1962, printed in Russian. Baltiiskii Nauchno-Issledovatel'skii Institut Morskogo Rybnogo Khozyaistva i Okeanografii, Kaliningrad, U.S.S.R.:

"Biology and Stocks of herring of the Nova Scotia shelf," by I. G. Fridlyand, A. F. Erokhin, and M. P. Yakovchuk, pp. 88-122.

"Rate of maturation in herring from Georges Bank in July-August 1961," by V. I. Sauskan, pp. 158-159.



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

#### INDUSTRIAL PRODUCTS:

"Study of improved recovery of protein from rendering-plant raw materials and products. I--Liquid cyclone separation with carbon tetrachloride; II--Acid and enzyme hydrolysis," by L. G. Criswell and others, articles, Food Technology, vol. 18, Sept. 1964, pp. 243-251, printed, single copy \$1.50. The Garrard Press, 510 N. Hickory, Champaign, Ill. 61823.

#### INTERNATIONAL COMMISSIONS:

(International North Pacific Fisheries Commission) Proceedings of the Eleventh Annual Meeting, 1964, 306 pp., illus., processed, March 8, 1965. International North Pacific Fisheries Commission, 6640 NW. Marine Dr., Vancouver 8, B. C., Canada. Presents the minutes of sessions and committee reports of the meeting held at Tokyo, November 16-21, 1964. Includes reports of the Committee on Biology and Research--subcommittees on sockeye salmon, pink salmon, chum salmon, coho and chinook salmon, oceanography, Bering Sea groundfish, king crab research and planning, editorial matters, and research plans. Also contains reports of the committees on finance and administration, Gulf of Alaska groundfish, and abstention.

#### INTERNATIONAL TRADE:

Report of the FAO/OIE/WHO Meeting on Basic Principles for the Control of International Traffic of Animals and Animal Products, Berne, Switzerland, 12-17 October 1964, Meeting Report AN 1964/9, 30 pp., processed. Animal Health Branch, Animal Production and Health Division, Food and Agriculture Organization of the United Nations, Viale delle Terme di Caracalla, Rome, Italy. A section on standardization and harmonization of regulations or criteria for fish and fisheries products covers a review and discussion of the problems connected with the hygienic inspection of fishery products for human or animal consumption as well as with international traffic in live fish and fish eggs for breeding, stocking, and ornamental purposes.

#### IRRADIATION PRESERVATION:

"The influence of gamma-radiation on semi-preserved fish products," by K. Abrahamsson, article, Iva Meddelande, vol. 138, pp. 83-84, printed. Iva, s. Upplysningstjänst, Box 5073, Stockholm 5, Sweden. Second Scandinavian meeting on food preservation by ionizing radiation, Stockholm, Sept. 9-11, 1963.

#### JAPAN:

Journal of the Faculty of Fisheries and Animal Husbandry, Hiroshima University, vol. 5, no. 2, December 1964, 283 pp., illus., articles printed in German, Japanese, or English. The Faculty of Fisheries and Animal Husbandry, Hiroshima University, Fukuyama, Japan. Includes, among others, articles on: "On eleven new species of the Cephalopoda from Japan, including two new genera of Octopodinae," by Iwao Taki; and "Note on the fishing condition of the common octopus, Octopus vulgaris Cuvier, in the Inland Sea of Seto, Japan," by Sadaichi Nishikawa.

Memoirs of the Faculty of Fisheries, Kagoshima University, vol. 13, no. 39, Dec. 1964, 114 pp., illus., printed in Japanese with English abstracts (some articles in English). The Faculty of Fisheries, Kagoshima University, Kagoshima, Japan. Contains,

among others, articles on: "Notes on the first stage Phyllosoma of Scyllarid lobster, Scylleris bicuspidatus," by Toshio Saisho; "Topographical consideration on the shallow water fishing ground inside bay. I," by Koji Nozawa; "On the utility of some algae as agar source in the Southern Sea of Kyushu," by Fuyuo Ohta and Takesi Tanaka; "Effect of lipids on insolubilization of protein in frozen fish muscle during storage," by Fuyuo Ohta and Jun-ichi Nishimoto; "Distribution of vitamin B<sub>12</sub> in the laver-farm," by Ken-ichi Kashiwada, Akio Kanazawa, and Ichiro Sasaki; "Chemical studies on volatile constituents of algae. XX--Pharmacological action of volatile constituents and biochemical significance of the existence of acrylic acid," by Teruhisa Katayama; "Studies on the drag net. I--An increase of the current velocity inside the net," by Nobio Higo; "On the relation between the 'horizontal tuna long-line form' and the spot foretelling of the fishing condition in the Celebes Sea," by Tomio Henmi; and "Experimental studies on the eating reaction of fishes to each hook in the small long-line gear. I--On the results of experiments by 5-hook gear," by Tomokazu Morita.

Following reports in Japanese are available from the Japanese Fisheries Agency, Ministry of Agriculture and Forestry, 2-1, Kasumigaseki, Chiyoda-ku, Tokyo, Japan.:

General Situation of Fishing Vessel Insurance for FY 1964 (as of End of 1964), 116 pp. Consists of tables showing number of powered and nonpowered vessels by size and region covered by insurance, insured amount, insurance premium, etc., and amount subsidized by Japanese Government.

Measures Planned for Implementation for the Coastal Fisheries in 1965, 33 pp. "White Paper" for Diet.

1964 Annual Report on Fisheries Trends. Part 1--Report on Fisheries Trends; Part 2--Report on Measures Implemented for the Coastal Fisheries, 147 pp. "White Paper" on Japan's fisheries prepared for submission to the 48th (Regular) Diet Session.

Following reports in Japanese are available from the Resources Research Council, Science and Technology Agency, 2-2, Kasumigaseki, Chiyoda-ku, Tokyo, Japan.:

Recommendations Concerning Modernization of Food Distribution Structure for a Systematic Improvement of Dietary Life, Recommendation No. 15, 20 pp., Jan. 26, 1965.

\_\_\_\_\_ . Appended Data, 510 pp., Jan. 26, 1965.

#### LATIN AMERICA:

"Latin-Americas fiskerier utbygges i raskt tempo" (Latin America's fisheries being developed quickly) by Rolf M. Hjelseth, article, Tidsskrift for Hermetikindustri, vol. 51, no. 1, Jan, 1965, pp. 32-33, printed in Norwegian. Norske Hermetikfabrikers Landsforening, Stavanger, Norway.

#### LAW OF THE SEA:

Law of the Sea--Convention on the Territorial Sea and the Contiguous Zone Between the United States of America and Other Governments--Done at Geneva April 29, 1958, Treaties and Other International Act



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Series 5639, 70 pp., printed, 1964, 25 cents. U. S. Department of State, Washington, D. C. (Available from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402.) Presents a Presidential Proclamation, including text of the Convention in English, French, Chinese, Russian, and Spanish, concerning the territorial sea and contiguous zone. Part I of the Convention covers the territorial sea--definition and extent of sovereignty; limits of the territorial sea; and right of innocent passage including rules applicable to all ships, rules applicable to merchant ships, to government ships other than warships, and to warships. Part II concerns the contiguous zone, which may not extend beyond 12 miles from the baseline from which the breadth of the territorial sea is measured. Part III covers the final articles--provisions for signature, ratification, accession, and other matters. Included are signatures to the Convention by the United States and 43 other nations.

**STOCK NUTRITION:**

Nitrogen retention by cattle given all-concentrate diets containing different concentrations of fish meal," by H. B. Bowers and others, article, Proceedings of the Nutrition Society, vol. 23, no. 2, 1964, pp. 31-32, printed. Cambridge University Press, 32 E. 57th St., New York, N. Y. 10022.

**LETTERS:**

Case for Lobster Conservation, 8 pp., illus., printed (French version also available), 1964. Queen's Printer and Controller of Stationery, Ottawa, Canada. The key to conservation and proper management is through cooperation, which can only result from a well-informed, reasonable attitude on the part of all concerned--governments, fishermen, and the fish processing industry. This booklet provides information which will enable lobstermen to understand why they should obey the present Canadian regulations. Points out these favorable results of the regulations: size limits guarantee that some lobsters remain on the grounds and increase the average size of legally marketed lobsters, which bring higher prices; small lobsters returned to the water soon grow to a more profitable size in the same locality; fishing seasons improve the quality of landed lobsters, reduce some fishing costs, permit the fishermen to fish for other species during the remainder of the year; releasing spawning females increases the hatch; and observation of regulations is the only practical means of maintaining stocks.

Dead--Alive, Not Dead! by D. G. Wilder, General Fisheries Circular No. 45, 7 pp., illus., printed, Feb. 1965. Biological Station, Fisheries Research Station, St. Andrews, N. B., Canada. A message to lobster fishermen on the proper care and handling of their catch. Of Canada's 45 million pounds of lobsters landed annually, probably 3 million pounds are lost during storage and shipment. Most of those losses could be avoided. Suggestions include: (1) handle lobsters carefully as their underparts are easily injured; (2) band both claws quickly with rubber bands; (3) keep lobsters cool and moist; (4) don't freeze them; (5) protect from rain; (6) avoid creosote, bilge; (7) give stored lobsters special care, away from polluted water; (8) pack properly; (9) cooperate and share greater profits.

**NATURAL RESOURCES:**

Water Resources Research, vol. 1, no. 1, First Quarter 1965, 146 pp., illus., printed, single copy \$2.50; annual subscription \$3 for AGU members, and \$6 for nonmembers. American Geophysical Union, Suite 506, 1145 19th St. NW., Washington, D. C. 20036. In an effort to bridge the physical and social sciences and so to meet the challenge of the future, this new quarterly journal has been established as essential to a coherent development of all the water sciences. The emphasis will be upon the sciences of water--whether physical, chemical, biological, or social--rather than on water engineering or water projects. It is expected that papers will cover such diverse fields as snow, lakes, floods, hydrology, glaciology, limnology, hydraulics, water law, precipitation, stream flow, soil moisture, sedimentation, ground-water, water quality, water planning, systems analysis, water economics, river morphology, evapotranspiration, and watershed management. Some of the articles in this first issue are: "Criteria for social investment," by Kenneth J. Arrow; "Streamflow from small watersheds on the western slope of the Cascade Range of Oregon," by Jack Rothacher; and "A note on a new method of cost allocation for combined power and water desalination plants," by Joseph Barnea.

**NAVIGATION:**

"Scheme for the automatic directing of vessels by radio-locating deviation," by I. I. Mishenko, article, Trudy Dalrybvtus, vol. 3, 1963, pp. 75-89, printed in Russian, Dal'nevostochnogo Tekhnicheskogo Instituta Rybnoi Promyshlennosti i Khozyaistva, Vladivostok, U.S.S.R.

Available free from the Coast and Geodetic Survey, U. S. Department of Commerce, Washington Science Center, Rockville, Md. 20852.:

First Supplement to United States Coast Pilot 7, Pacific Coast--California, Oregon, Washington, and Hawaii, Ninth (June 15, 1963) Edition, 13 pp., printed, Jan. 2, 1965.

Fourth Supplement to United States Coast Pilot 1, Atlantic Coast--Eastport to Cape Cod, Sixth (March 26, 1960) Edition, 20 pp., printed, Jan. 2, 1965.

Second Supplement to United States Coast Pilot 5, Atlantic Coast--Gulf of Mexico, Puerto Rico, and Virgin Islands, Fifth (June 16, 1962) Edition, 17 pp., printed, Jan. 2, 1965.

Third Supplement to United States Coast Pilot 3, Atlantic Coast--Sandy Hook to Cape Henry, Seventh (June 17, 1961) Edition, 18 pp., printed, Jan. 2, 1965.

Third Supplement to United States Coast Pilot 8, Pacific Coast, Alaska--Dixon Entrance to Cape Spencer, Eleventh (Jan. 6, 1962) Edition, 10 pp., printed, Jan. 2, 1965.

**OCEANOGRAPHY:**

California and the World Ocean, Governor's Conference, 118 pp., printed, 1964, \$7.50. California Museum of Science and Industry, Los Angeles, Calif. (Available from the Office of State Printing, Sacramento, Calif.)

General Oceanography and Long Range Research (Annual Progress Report for July 1963-June 1964), 116



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

pp., printed, Nov. 1, 1964, \$1. Scripps Institution of Oceanography, University of California, La Jolla, Calif. (For sale by the Office of Technical Services, U. S. Department of Commerce, Washington, D. C. 20230.)

National Oceanographic Program, Fiscal Year 1966, ICO Pamphlet No. 17, 75 pp., printed, Jan. 1965, Interagency Committee on Oceanography, Federal Council for Science and Technology, Office of Naval Research, Rm. 1818, 17th St. and Constitution Ave. NW., Washington, D. C. 20360. Outlines a coordinated plan for the accomplishment of national goals in oceanography while pursuing individual agency missions. Chapter I presents a summary of the 1966 program, agency responsibilities, and a financial statement; and program goals--strengthening basic science, improving national defense, managing resources in the world ocean, managing resources in domestic waters in order to safeguard public health and conserve resources held in common, and protecting life and property ashore and insuring safety of operations at sea. Chapter II outlines oceanographic effort--research by individual agencies, special programs, oceanographic surveys, data processing facilities and projects, international programs, and cooperative interagency programs. Chapter III, reviewing oceanographic resources, covers ships, instrumentation, facilities, and manpower and training. Appendices include budget tables and an inventory of research/survey vessels in the U. S. oceanographic fleet (including Government and privately-owned vessels).

"Oceanographic ships around the world," edited by Charles W. Covey, article, Undersea Technology, vol. 6, no. 1, Jan. 1965, pp. 35-36, 38-39, 40-41, 42, 44-49, printed, single copy \$1. Compass Publications Inc., 617 Lynn Bldg., 1111 N. 19th St., Arlington, Va. 22209. A condensed tabulation of oceanographic ships showing physical characteristics, equipment, and capabilities to perform oceanographic and marine sciences work. References for operators and owners are also listed. Reported information was obtained from data submitted by ship owners and operators, and the National Oceanographic Data Center. Additional ships will be included in a reprint of this listing based on subsequent information. Copies of that reprint are available at \$1.75 each.

The following articles are from Trudy BaltNIRO, vol. 9, 1962, printed in Russian. Baltiiskii Nauchno-Issledovatel'skii Institut Morskogo Rybnogo Khozyaistva i Okeanografii, Kaliningrad, U.S.S.R.:

"Relation between the waters and the distribution of (commercial) fishes in the Nova Scotia area," by Yu. A. Vyalov, E. A. Filippov, and E. I. Konovalev, pp. 123-130.

"The scientific fish locating expedition with RT Muk-sun to the southwestern coast of Africa," by Yu. A. Komarov and S. K. Kuderskii, pp. 3-18.

"Scientific fishery investigations at Malakka and Indonesia in 1960 with the trawler Arsen'ev," by A. N. Probatov, pp. 137-147.

#### OYSTERS:

"Elemental composition of oyster shell," by R. A. Smith and E. R. Wright, article, Chemical Abstracts, vol. 58, Jan. 28, 1963, Abstract No. 1746f, printed, American Chemical Society, 1155 16th St. NW., Washington, D. C. 20006.

#### PERU:

"Peru nets a boom in fishmeal," article, Business Week, no. 1851, February 20, 1965, pp. 64-65, 67-68, illus., printed, single copy 50 cents. McGraw-Hill, Inc., 330 W. 42nd St., New York, N. Y. 10036.

#### PESTICIDES:

Fish and Pesticides: A General Statement of FAO Policy, FAO Fisheries Technical Paper No. 45, 7 pp., processed, July 1964. Biology Branch, Fisheries Division, Food and Agriculture Organization of the United Nations, Rome, Italy.

#### PHYSIOLOGY:

"Marine biotelemetry," by Howard A. Baldwin, article, Bioscience, vol. 15, no. 2, Feb. 1965, pp. 95-97, illus., printed, single copy \$2. American Institute of Biological Sciences, 1323 Greenwood Rd., Baltimore, Md. 21208. Several experiments involving transmission of physiological information by telemetry from unconfined marine mammals are described. Preliminary data have been obtained to date on depth of dives with seals. The electrocardiograms of several diving mammals are described as well as instruments for body temperature measurement and transmission of acoustic activity in dolphins. A technique for remote control of olfactory stimulants in freely swimming sharks is mentioned. Marine biotelemetry offers an unusual opportunity to conduct experiments in natural environmental backgrounds that should lead to a fuller understanding of the sensory and regulatory physiology of animal life. It should also give researchers the ability to monitor aquatic microenvironments of living systems without disturbing those characteristics which may be important.

#### PORTUGAL:

The following articles are from Jornal do Pescador, vol. 26, no. 312, Jan. 1965, printed in Portuguese, single copy 5\$00 (about 20 U. S. cents). Junta Central das Casas dos Pescadores, Rua de S. Bento, 644-4 Esq., Lisbon, Portugal:

"Frota nacional da pesca dos crustaceos" (National crustacean fishery fleet), pp. 35-36, illus.

"A lota da praia de peixe em Cascais" (The beach auction of fish at Cascais), pp. 51-52, illus.

"Matosinhos é o mais importante porto sardineiro mundo" (Matosinhos is the most important sardine port in the world), pp. 39-41, illus.

"O peixe grosso em Cascais é vendido no edificio da lota, em bon e agradável estado" (The large catch of Cascais is sold in the auction house, in a good and agreeable condition), pp. 37-38, illus.

#### POULTRY NUTRITION:

"Feeding of fish oil and ethyl ester fractions of fish oil to broilers," by Kam C. Leong and others, article, Poultry Science, vol. 43, Sept. 1964, pp. 1235-1240, printed, Poultry Science Association, Kansas State College, Manhattan, Kans.



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**QUALITY:**

Following articles are from Journal of the Science of Food and Agriculture, vol. 15, 1964. Society of Chemical Industry, 14 Belgrave Sq., London SW1, England.:

Rapid estimations of hypoxanthine concentrations as indices of the freshness of chill-stored fish," by N. R. Jones and others, pp. 763-774.

Rapid measures of nucleotide dephosphorylation in chilled fish muscle. Their value as indices of freshness and of inosine 5'-monophosphate (IMP) concentration," by N. R. Jones and J. Murray, pp. 684-690.

**MON:**

Placements de Saumons Adultes (SALMO SALAR L.) Etiquetés en Gaspésie de 1955 à 1957 (Removal of Adult Salmon--*Salmo salar* L.--Tagged on the Gaspé Peninsula from 1955 to 1957), by Julien Bergeron and Leon Tremblay, Travaux sur les Pêcheries du Québec No. 3, 17 pp., illus., printed in French, 1964. Bureau des échanges, Station de Biologie Marine, Grande-Rivière, Gaspé-Sud, Quebec, Canada.

63 Kvichak River Red Salmon Smolt Studies, by Richard A. Marriott, Informational Leaflet 48, 42 pp., illus., processed, March 1, 1965. Department of Fish and Game, Subport Bldg., Juneau, Alaska.

Report on Fish Disease as a Possible Cause of Pre-Spawning Mortalities of Fraser River Sockeye, by James W. Wood, 27 pp., illus., processed, 1965. International Pacific Salmon Fisheries Commission, P. O. Box 1120, New Westminster, B. C. Canada.

The following articles are from Trudy Dalrybvtus, vol. 3, 1963, printed in Russian. Dal'nevostochno i Tekhnicheskogo Instituta Rybnoi Promyshlennosti i Khozyaistva, Vladivostok, U.S.S.R.:

Spawning migration of the Pacific salmon," by I. V. Lizevetter, pp. 133-144.

Salination in the flesh of Pacific salmon by salting and drying," by E. A. Nasedkina, pp. 145-156.

**DINES:**

Phospholipids of the South African pilchard (*Sardinella tawillata* Jenyns), by M. H. Silk, article, Journal of the American Oil Chemists' Society, vol. 41, Sept. 1964, pp. 619-622, printed. American Oil Chemists' Society, 35 E. Wacker Dr., Chicago 1, Ill.

The pilchard industry of Cornwall: a review," by M. Culley, article, The Fishing News, no. 2692, Jan. 1965, p. 6, illus., printed, single copy 9d. (about 10 U. S. cents). Fishing News, 110 Fleet St., London EC4, England.

The following articles are from Trudy BaltNIRO, vol. 1962, printed in Russian. Baltiiskii Nauchno-Issledovatel'skii Institut Morskogo Rybnogo Khozyaistva i Okeanografii, Kaliningrad, U.S.S.R.:

Composition of the commercial stock of *Sardinella tawillata* in the Takoradi and Dakar areas," by E. S. Fosvirov and I. I. Osetinskaya, pp. 81-87.

"The South African sardine (*Sardinops ocellata*)" (biology and fishery), by Yu. A. Komarov, pp. 19-34.

**SCALLOPS:**

Scallops and the Offshore Fishery of the Maritimes, by N. Bourne, Fisheries Research Board of Canada Bulletin No. 145, 60 pp., illus., printed, C\$1.75. Queen's Printer, Ottawa, Canada.

**SCALLOPS AND FLOUNDER:**

A Marketing Study of the Scallop & Flounder Industry of New Bedford, Massachusetts, 92 pp., illus., processed, 1965, 35 cents. Area Redevelopment Administration, U. S. Department of Commerce, Washington, D. C. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402.) This study was undertaken by the Research Foundation of the New Bedford Institute of Technology in an attempt to assist the sea scallop and flounder fisheries in the depressed area of New Bedford. A test advertising promotion campaign was devised and conducted in representative areas of the United States to determine the effect of such promotion on the consumption of sea scallops and flounder. Results showed that a strong potential for new scallop sales exists in the West Coast area, and that the proper combination of consumer advertising, publicity, and store promotion can substantially increase flounder fillet sales in the northeastern United States. Researchers also found, however, that the New Bedford fishing industry is in serious need of an overall marketing program. Under such a program the industry should form a marketing organization to coordinate research and development with production and management, not merely advertising and promotion. As a food industry, it must develop long-range plans for improving the marketing of its products. Specific recommendations for such improvement include the adoption of a cooperative brand name and better packaging methods and design. In addition, many other considerations must be investigated, such as the establishment of an information clearinghouse, training programs, and a fishing institute. Attention should be given to a continuing study of fish population trends, and to financial, insurance, and employee benefit plans. However, the weakest aspect of the New Bedford fishing industry is the marketing problem, and the researchers urge that active measures be taken to implement the recommendations of this study.

**SEALS:**

Comparative Feeding Habits of the Fur Seal, Sea Lion and Harbour Seal on the British Columbia Coast, by D. J. Spaulding, Fisheries Research Board of Canada Bulletin No. 146, 52 pp., illus., printed, C\$1.50. Queen's Printer, Ottawa, Canada.

**SHARKS:**

Sharks and Survival, edited by Perry W. Gilbert, 578 pp., printed, Jan. 1963. American Institute of Biological Sciences, 2000 P St. NW., Washington, D. C.

**SMELT:**

Smelt Life History and Fishery in the Miramichi River, New Brunswick, by R. A. McKenzie, Fisheries Research Board of Canada Bulletin No. 144, 77 pp., illus., printed, C\$2. Queen's Printer, Ottawa, Canada.



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

#### SMOKING:

"Physical-chemical basis for smoking (fish)," by A. M. Sushko, article, Trudy Dalrybvtus, vol. 3, 1963, pp. 127-131, printed in Russian. Dal'nevostochnogo Tekhnicheskogo Instituta Rybnoi Promyshlennosti y Khozyaistva, Vladivostok, U.S.S.R.

#### SOUNDS IN THE SEA:

Marine Bio-Acoustics (Proceedings of a Symposium held at the Lerner Marine Laboratory, Bimini, Bahamas, April 11 to 13, 1963), edited by William N. Tavolga, 425 pp., illus., printed, 1964, 100s. (\$15 in the United States). A Pergamon Press Book. The Macmillan Company, 60 Fifth Ave., New York, N. Y. 10011. The sea had long been recognized as a silent world, but this illusion was shattered when the development of underwater listening systems and sonar during World War II revealed that many marine creatures emitted sounds or noises. Since the war, underwater sound patterns and their meanings have been studied and analyzed. Many results of the studies in the United States were reported at a symposium held in the Bahamas in April 1963. It was held at the Lerner Marine Laboratory, Bimini, a field station of the American Museum of Natural History, where much pioneering work in the study of underwater sound has been carried out with a unique shore-monitored underwater acoustic-video installation. Also, the Laboratory has a tape library of recorded material of the research in the field which is available to interested scientists. Marine bio-acoustics is a rapidly expanding field of science which embodies the interests and activities of biologists, physicists, mathematicians, acousticians, and other specialists. The symposium brought together several of those disciplines. Many of the sounds coming from the sea are now known to be of biological origin and vary from short bursts of noise to persistent sounds. A considerable amount of noise emanates from such creatures as snapping shrimp and mussels, which both produce significant crackles. Frictional or snapping noises are made by barnacles. Sea urchins make a "frying" noise. On occasions the heavy crackle made by large numbers of Crustacea often makes sonar useless for other purposes in shallow water. Many fish are vocal and the "sonar equipment of fishes is as varied as are the fishes themselves," according to the book. Sounds are variable, and the possible significances of the greatest number are related to the breeding season. In that case, a large proportion is produced either primarily, or in some instances, exclusively by the males. A chorus of sound often occurs during a particular period each day, such as the summer evening croaker chorus which in California occurs regularly each night soon after sunset for about 90 minutes. Also, it seems evident that certain marine mammals (like whales, porpoises, and dolphins) make considerable use of sound for communication, possibly navigation, and echo-location. But many of the noises heard are still a mystery. The symposium, cosponsored by the Office of Naval Research and the American Museum of Natural History, brought together some 70 specialists from various fields of science, and 22 of the papers presented are correlated in this book. The subsequent discussions are also included. The many topics were covered in five parts: an acoustic-video system for marine biological research (includes papers on requirements, description of the system, use of television); physi-

cal and acoustical aspects (includes such subjects as obtaining bio-acoustic data, processing problems, and types of noises); biological sound producers in the sea; marine fishes as acoustic detectors; and special acoustic problems in cetacean research. Included is a list of attendees and contributors, and both an author and subject index. Although not a book for the general public, it is of particular value to those directly concerned with marine sciences and to others such as mathematicians and physicists, who are interested in some of the many aspects of marine science.

--Joseph P. ...

#### SOUTH ATLANTIC:

"Development of a fishery in the South Atlantic," by A. Studenetskii, article, Trudy BaltNIRO, vol. 5, 1963, pp. 148-151, printed in Russian. Baltiiskii Nauchno-Issledovatel'skii Institut Morskogo Rybnogo Khozyaistva i Okeanografii, Kaliningrad, U.S.S.R.

#### SPAIN:

"Breve analisis de la exportacion Gallega de conservas de pescado en 1963" (Brief Analysis of the Galician export of canned fish in 1963), article, Industria Conservera, vol. 30, no. 305, Nov. 1964, pp. 292-294, printed. Union de Fabricantes de Conservas de Galicia, Calle Marques de Valladares, 41, Vigo, Spain.

"Otro ano de crecimiento de la produccion pesquera Espanola" (Another year of growth in Spanish fish production), by Mareiro, article, Industrias Pesqueras, vol. 34, no. 905, Jan. 1, 1965, pp. 12-13, printed in Spanish, single copy 40 ptas. (about 70 U. S. cents). Industrias Pesqueras, Policarpo Sanz, 21-2º, Vigo, Spain.

Publicaciones Tecnicas Junta de Estudios de Pesca (Technical Publications of the Fishery Research Committee), no. 4, 1965, 409 pp., illus., printed in Spanish. Direccion General de Pesca Maritima, Subsecretaria de la Marina Mercante, Ministerio de Comercio, Madrid, Spain. Contains, among others, the articles: "Las merluzas Atlanticas" (The Atlantic hakes), by Fernando Lozano Cabo; "La pesqueria de arrastre de Castellón, en ejemplo de sobrepesca" (The trawl fishery of Castellón, an example of overfishing), by Manuel Gomez Larraneta; "Evolucion de los rendimientos al finalizar el tercer año del plan experimental de pesca de arrastre" (Development of the effort to finalize the third year of the experimental trawl fishing plan), by P. Suau; "Evolucion de los costos y beneficios de la flota de arrastre de San Carlos de la Rápita, perteneciente al plan experimental de pesca de arrastre en 1963" (Change in the costs and profits of the trawler fleet of San Carlos de la Rápita pertaining to the experimental trawl fishing plan in 1963), by Luis Millan Roca; "Nuevos pesqueros que entran en servicio" (New fishing vessels which went into service); "La campaña del Walther Herwig en aguas de Africa occidental" (The cruise of the Walther Herwig in West African waters), by Manuel Massuti; "Sobre las fluctuaciones de la produccion de atunes de las almadrabas sudatlánticas" (The fluctuations in tuna production in the South Atlantic tuna fisheries), by Julio Rodriguez-Roda; "Las algas de interes industrial de la costa de Cadiz" (Seaweeds of commercial interest on the Cadiz coast), by Juan Seoane Cambra; "Campaña a bordo de un caladero" (Cruise on board a cod fishing vessel), Orestes Cendredo; "Perspectivas de la mejora de



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pesca de arrastre de Valencia" (Prospects of improvement in the trawl fishery of Valencia), by J. M. an Feliu; "Estudios sobre la pesca de arrastre en la Provincia de Tarragona" (Studies on the trawl fishery in the Province of Tarragona), by F. Vives almes; and "Evolucion de la produccion pesquera española" (Changes in the Spanish fishery production), by Antonio Franco and Julian Sanchez-Ramos. Also includes articles on: "Estudios de la gamba pastada o carabinero (*Aristeus antennatus*)" (Studies on the red shrimp--*Aristeus antennatus*), by C. Bas; "Plan de estudios sobre la pesca de arrastre en general y la de langostinos y acedias en particular, en la region Sudatlantica Andaluza" (Plan for studies on the trawler fishery in general and that of spiny lobsters and yellow soles in particular, in the South Atlantic area of Andaluz), by F. Lozano Cabo; "Estudio sobre las algas de aprovechamiento industrial en la Provincia de Santander" (Study on the seaweeds for industrial development in the Province of Santander), by F. Ramos and O. Cendrero; "Las algas del Noroeste de España" (The seaweeds of Northwest Spain) by J. Seoane; "Programa de recuperacion ostricola en el Bao (Ria de Arosa)" (Program for renewal of oyster culture in El Bao--Arosa Estuary), by B. Andreu; "Plan de estudio de las pesquerias de arrastre de Baleares" (Plan for study of the trawl fisheries of the Balearics), by M. Olivera and M. Massuti; "Plan de trabajos sobre los escombridos Atlanticos-Africanos" (Plan for research on the African Atlantic mackerels), by F. Lozano; "Rehabilitacion ostricola en el Cantabrico" (Renewal of oyster culture in Cantabria), by J. Cuesta; "Actividades internacionales de la Direccion General de Pesca Maritima" (International activities of the Office of Marine Fisheries), by O. Rodriguez Martin; "La tecnica pesquera del futuro" (The fishery technique of the future), by Trad, J. Barcelo; and "Trabajos tecnicos de la O.E.C.D." (Technical works of the O.E.C.D.).

SPAIN AND NORWAY:

Estudios actuales y perspectivas de las pesquerias de merluza y bacalao en España y Noruega" (Current views about fisheries in Spain and Norway), by B. Løvås-Svendsen, *Tidsskrift for Fiskerimetikindustri*, vol. 51, no. 1, Jan. 1965, pp. 21-28, printed in Norwegian. Norske Hermetikfabrikker Landsforening, Stavanger, Norway.

Sperm OIL:

Following are from *Chemical Abstracts*, vol. 59, American Chemical Society, 1155 16th St. NW., Washington, D. C. 20006:

Technology of sperm oils," by N. A. Nikonova and E. E. Kulyasova, Dec. 9, 1963, Abstract No. 14227g.

Treatment of sperm whale oil," by Hisashi Fujii, Takao Hori, and Takeo Horii, Nov. 11, 1963, Abstract No. 11768e.

Treatment of sperm whale oil," by Saburo Yoritachi and Koretsu Wo, Nov. 11, 1963, Abstract No. 11768d.

LOBSTER:

Campagne trop longue, mais des resultats positifs--Telle est la premiere leçon de la campagne du langoustier *Rigel*, de Douarnenez, au Honduras" (A campaign too long but with practical results--such is the primary conclusion of the cruise of the spiny

lobster vessel *Rigel* from Douarnenez to Honduras), article, *La Peche Maritime*, vol. 44, no. 1043, Feb. 1965, pp. 77-81, 82, illus., printed in French, single copy 14 F (about US\$2.85). *La Peche Maritime*, 190, Blvd. Haussmann, Paris, France.

"La langosta" (The spiny lobster), by Lorenzo Marques, article, *Iberica*, vol. 42, no. 30, Dec. 1964, pp. 394-396, 397, illus., printed in Spanish. *Iberica*, Pabellon 3, Apartado 759, Barcelona-2, Spain.

STURGEON:

From the series: *Travaux sur les Pêcheries du Québec*, illus., printed in French, 1964. Bureau des échanges, Station de Biologie Marine, Grande-Rivière, Gaspé-Sud, Québec, Canada.:

Étude Préliminaire de l'Esturgeon de Lac, *ACIPENSER FULVESCENS*, dans la Région de l'Abitibi (Preliminary Study of the Lake Sturgeon, *Acipenser fulvescens*, in the Abitibi Region), by Gerard Deaulieu and Etienne Corbeil, No. 4, 8 pp.

Validite d'une Distinction Specificque entre les Deux Acipenserides: *Acipenser Sturio* L. d'Europe et *Acipenser OXYRHYNCHUS* d'Amérique du Nord (Validity of a Specific Distinction Between the Two Acipenseridae: *Acipenser sturio* L. of Europe and *Acipenser oxyrhynchus* of North America), by Etienne Magnin, No. 1, 20 pp.

SWEDEN:

"Det Svenska havsfisket ökade under ar 1964" (The Swedish marine fisheries increase during the year 1964), article, *Svenska Västskustfiskaren*, vol. 35, no. 4, Feb. 25, 1965, pp. 76-77, illus., printed in Swedish, single copy 10 kr. (about US\$1.95). Svenska Västskustfiskarnas Centralforbund, Ekonomiskottet Postbox 1014, Goteborg 4, Sweden.

TRADE LISTS:

The U. S. Department of Commerce has published the following mimeographed trade list. Copies may be obtained by firms in the United States from the Commercial Intelligence Division, Office of International Trade Promotion, Bureau of International Commerce, U. S. Department of Commerce, Washington, D. C. 20230, or from Department of Commerce field offices at \$1 each.:

Canneries and Frozen Foods--Producers and Exporters--Greece, 12 pp., Feb. 1965. Lists the names and addresses, size of firms, and types of products (including fish and shellfish) handled by each firm. Also contains trade and industry data (including fishery products) on production, exports, imports and import control of canned and frozen foods.

TRAWLING:

Preliminary Bibliography on Trawlers and Trawling with Particular Reference to Tropical Waters, compiled by A. Soulier, Occasional Paper 64/4 (Addendum 1), 8 pp., processed, Jan. 1965. Indo-Pacific Fisheries Council, Regional Office for Asia and the Far East, Food and Agriculture Organization of the United Nations, Bangkok, Thailand.

TUNA:

"Purse seine for tuna fishing," by V. S. Dolbish, article, *Trudy Dalrybvtus*, vol. 3, 1963, pp. 41-52, printed



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in Russian. Dal'nevostochnogo Tekhnicheskogo Instituta Rybnoi Promyshlennosti i Khozyaistva, Vladivostok, U.S.S.R.

#### TUNA AND TUNA-LIKE:

Tuntsy i Mecheobraznye Tikhogo i Indijskogo Okeanov (Tunas and Billfishes of the Pacific and Indian Oceans), by V. G. Osipov, I. V. Kizevetter, and A. V. Zhuravlev. 74 pp., illus., printed in Russian, 1964, 23 Kop. (about 25 U. S. cents). Pishchevaia Promyshlennost', Moscow, U.S.S.R. The first chapter is devoted to a review of the biology of tuna and billfish. A section on the tuna fishery covers reconnaissance; features of the fishery--bait, purse-seine, and long-line fisheries; characteristics of foreign vessels--tuna motherships with catcher boats; fishing gear; and machinery and equipment. The final section includes information on processing technology for tuna, and other aspects of the tuna fishery--tuna, billfish, yellowtail (amberjack), barracuda, bonito, mackerel, dolphin fish, sharks and rays, processing of the catch aboard vessels, and canning of tuna. Most of the sections are based on older literature. Even though this book was published in April 1964, in general it draws on much older publications and data than one would expect from the date of publication. Although the authors draw on information from non-Russian literature, some information on the Russian tuna fishery is included. The book appears to be concentrating on long-lining for tuna, which most likely reflects the fact that the U.S.S.R. seems to be especially interested in that type of fishery. The Kaliningrad-type line hauler mentioned in the book could be of interest to gear technologists. The section dealing with processing technology is perhaps most noteworthy. It contains many data on the various tuna and other fish which were obtained by the investigators of TINRO (Pacific Scientific Research Institute of Marine Fishery and Oceanography). The section contains, among other items, information on: (1) weight-length relationship; (2) relation of the various parts of the body to the total weight; (3) data on the content of moisture, oil, protein, and ash for various fish and various body parts; (4) amino acid composition; (5) physical-chemical properties of the oil; (6) vitamins; and (7) mineral components.

--W. L. Klawe, Inter-American Tropical Tuna Commission

#### TURKEY:

Balik ve Balikcilik (Fish and Fishery), vol. 13, no. 2, Feb. 1965, 32 pp., printed in Turkish. Et ve Balik Kurumu G. M., Balikcilik Mudurlugu, Besiktas, Istanbul, Turkey. Includes, among others, "The role of fish in animal feeding and nutritional contributions of fish products. Part II," by Macide Akgunes; "Technological developments in the field of fish flour. Part III," by Hikmet Akgunes; and "General Fisheries Council for the Mediterranean. Part I," by Sadan Barlas.

#### UNITED KINGDOM:

The following Command Papers of the British Parliament, Session 1964-65, are available from the British Information Services, 845 Third Ave., New York, N. Y. 10022.:

Agreement between the Government of the United Kingdom of Great Britain and Northern Ireland and

the Government of the Kingdom of Norway for the Continuance of Fishing by Norwegian Vessels within the Fishery Limits of the United Kingdom of Great Britain and Northern Ireland, London, Sept. 28, 1964 (with Exchanges of Notes), (Ratifications Have Not Been Exchanged), Norway No. 2 (1964), Cmnd. 2507, printed, 1s. (20 U. S. cents when ordered in the United States).

Exchange of Notes between the Government of the United Kingdom of Great Britain and Northern Ireland and the Government of the Polish People's Republic regarding the Rights to be Accorded to Polish Vessels within the British Fishery Limits to be Established on Sept. 30, 1964, Warsaw, Sept. 26, 1964 (The Agreement entered into force on Sept. 30, 1964), Treaty Series No. 64 (1964), Cmnd. 2507, printed, 1s. (20 U. S. cents when ordered in the United States).

Exchange of Notes between the Government of the United Kingdom of Great Britain and Northern Ireland and the Government of the Union of Soviet Socialist Republics on Matters Arising from the Establishment by the United Kingdom of the Fishery Regime Provided for by the Fishery Limits Act, 1964, Moscow, Sept. 30, 1964 (The Agreement entered into force on Sept. 30, 1964), Treaty Series No. 63 (1964), Cmnd. 2506, printed, 1s. (20 U. S. cents when ordered in the United States).

Protocol of Provisional Application of the Fisheries Convention and Two Agreements as to Transitional Rights Open for Signature at London from March 9-April 10, 1964, London, March 9, 1964 (The Protocol and Agreements entered into force on March 9-April 10, 1964), Treaty Series No. 60 (1964), Cmnd. 2499, printed, 1s. 3d. (30 U. S. cents when ordered in the United States).

#### U.S.S.R.:

Sovetskie Rybokhoziaistvennye Issledovaniia v Morskikh Evropeiskogo Severa (Soviet Fisheries Investigations in North European Seas), 468 pp., illus., printed in Russian with English summaries, 1960, Vsesoiuznyi Nauchno-Issledovatel'skii Institut Morskogo Rybnogo Khozyaistva i Okeanografii, Moscow, U.S.S.R. Contains, among others, these articles: "Some results of oceanographic investigations in the Norwegian and Greenland Seas," by A. P. Alekseev and B. V. Istoshin; "Oceanographic characteristics of the North Greenland Sea," by A. F. Laktionov, A. Shamontyev, and A. V. Yanes; "On the effect of some oceanographic characteristics on herring migration in the Norwegian Sea," by S. I. Potaichuk; "Changes in the Barents Sea bottom fauna under influence of fluctuations in the hydrological regime," by K. N. Nesis; "Zooplankton of the frontal zone of the North Atlantic in the spring of 1958," by A. Kusmorskaya; "Main regularities in the plankton development in the Norwegian and Greenland Seas," by E. A. Pavshchik; "The distribution of plankton along the 30° W. meridian in the Atlantic, April-May 1958," by I. P. Kanaeva; "Biological peculiarities in some groups of the Barents Sea cod," by E. M. Mankevich; "The results of young cod and haddock surveys in the Barents Sea in the period 1946-1959," by A. S. Efanenkova; "Main stages in the Soviet studies of the redfish in the North Atlantic," by V. A. Borodatchik and V. I. Travin; "A note on local redfish stocks in the Newfoundland and Labrador areas," by K. P.



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lov; "The distribution and migrations of immature and young mature Atlanto-Scandian herring," by S. Fedorov; "Peculiarities in distribution, growth and maturation of some herring year-classes in the Barents Sea," by I. V. Shutova-Korzsh; "Distribution of herring of the Atlanto-Scandian stock," by I. G. Fridland; "On methods of scouting for herring in the Northern Seas," by A. A. Baral; "On estimation of the Atlanto-Scandian herring stock," by Ju. Ju. Marty, S. S. Fedorov, and I. G. Yudanov; "Fisheries investigations in the Middle Atlantic," by A. N. Protopov, E. S. Prosvirov, and O. G. Ryabikov; "On the stocks of main food fishes in the Southern and Southern Baltic Sea," by N. P. Birukov, G. I. Tokarova, and A. V. Seletskaya; "Fishery investigations in the White Sea," by N. A. Dmitriev; "Some results of investigations on biology of salmon (*Salmo salar* L.) in the Kola Peninsula Rivers," by V. V. Azbelev and I. Lagunov; "Main peculiarities in the annual life cycle of the White Sea population of Greenland seals," by S. V. Dorofeev; "Observations on fish behaviour by means of underwater technique in the Barents Sea," by O. N. Kiselev; and "The use of submarines for fishery research," by V. P. Zaitsev and D. V. Radakov.

Tekhnicheskogo Instituta Rybnoi Promyshlennosti i Khozyaistva, Vladivostok, U.S.S.R.:

"The fishing industry of Kamchatka," by V. S. Gorelik, article, pp. 5-17.

"Increase in the transport capacity of the East refrigerated fishing fleet (Vostokrybkhodflot)," by Sh. G. Nadiboidze, pp. 18-28.

WHALE MEAT:

"Determination of the quality of whale meat," by L. P. Shmelkova and N. A. Nikonova, article, *Trudy Dalrybvvtus*, vol. 3, 1963, pp. 173-176, printed in Russian. *Dal'nevostochnogo Tekhnicheskogo Instituta Rybnoi Promyshlennosti i Khozyaistva, Vladivostok, U.S.S.R.*

WHALING:

"The Antarctic baleen whale stocks," article, *Norsk Hvalfangst-Tidende (The Norwegian Whaling Gazette)*, vol. 54, no. 1, Jan. 1965, pp. 1-3, printed. *Hvalfangerforeningen, Sandefjord, Norway.*

WHITING:

*Extension d'Aire du Merlu, MERLUCCIOUS BILINEARIS (Mitchill) en Amérique du Nord (Extension of the area for whiting, Merluccius bilinearis Mitchill, in North America)*, by Gerard Beaulieu and Etienne Corbeil, *Travaux sur les Pêcheries du Québec* No. 5, 7 pp., illus., printed, 1964. *Bureau des échanges, Station de Biologie Marine, Grande-Rivière, Gaspé-Sud, Quebec, Canada.*

RSS--transformation et commercialisation du poisson" (U.S.S.R.--Processing and commercial development of fish), by Carlo Lozzi, article, *France Pêche*, no. 91, Jan. 1965, pp. 39-40, 49, illus., printed in French, single copy 2.50 F (about 50 U. S. cents). *France Pêche, Boite Postale 179, Lorient, France.*

The following articles are from *Trudy Dalrybvvtus*, vol. 3, 1963, printed in Russian. *Dal'nevostochnogo*



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