



# RECENT FISHERY PUBLICATIONS

## FISH AND WILDLIFE SERVICE PUBLICATIONS

THESE PROCESSED PUBLICATIONS ARE AVAILABLE FREE FROM THE OFFICE OF INFORMATION, U. S. FISH AND WILDLIFE SERVICE, WASHINGTON 25, D. C. TYPES OF PUBLICATIONS ARE DESIGNATED AS FOLLOWS:

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

- | Number   | Title                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CFS-2890 | - Georgia Landings, March 1962, 2 pp.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| CFS-2892 | - Imports and Exports of Fishery Products, 1957-1961, Annual Summary, 15 pp.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| CFS-2893 | - Alabama Landings, Annual Summary, 1961, 7 pp.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| CFS-2894 | - Texas Landings, February 1962, 3 pp.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| CFS-2898 | - Alabama Landings, March 1962, 3 pp.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| CFS-2899 | - Frozen Fish Report, April 1962, 8 pp.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| CFS-2901 | - Fish Meal and Oil, March 1962, 2 pp.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| CFS-2902 | - Maine Landings, March 1962, 4 pp.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| CFS-2903 | - New York Landings, March 1962, 4 pp.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| CFS-2904 | - Maryland Landings, February 1962, 3 pp.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| CFS-2905 | - California Landings, February 1962, 4 pp.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| CFS-2907 | - Virginia Landings, March 1962, 3 pp.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| CFS-2909 | - Mississippi Landings, March 1962, 3 pp.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| CFS-2911 | - New Jersey Landings, March 1962, 3 pp.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| CFS-2913 | - Texas Landings, March 1962, 3 pp.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| CFS-2916 | - Fish Meal and Oil, April 1962, 2 pp.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| CFS-2921 | - Florida Landings, April 1962, 9 pp.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| CFS-2900 | - Fisheries of the United States, 1961 (A Preliminary Review), 74 pp., illus., April 1961. This bulletin includes 1961 statistics on the United States catch, price indexes, manufactured fishery products, foreign trade, supplies of certain fishery products, fishery loan program, and world fisheries. Per capita consumption of fish in the United States increased to 10.9 pounds in 1961, a half pound more than in the previous year. This increase was divided equally between "fresh and frozen" and canned items. The supply of domestically-produced fresh and frozen products declined substantially, the report shows, even though the annual harvest was the Nation's second largest--5.2 billion pounds. Imports were up sharply due to increased receipts of groundfish fillets and blocks, and shrimp; however, both edible and nonedible imports established records. The total amount paid to United States fishermen and vessel owners amounted to \$358 million--nearly \$4 million more than 1960, but \$15 million less than the record \$373 mil- |

lion paid in 1958. The average price per pound was 6.94 cents, a low figure due to the record catch (2.3 billion pounds) of low-priced menhaden. San Pedro, Calif., was the leading United States fishing port in 1961 with respect to both volume and value--416 million pounds with an ex-vessel value to the fishermen of \$36 million. The figures on the 1960 world catch--a record of 83.2 billion pounds--recently compiled by the Food and Agriculture Organization of the United Nations are included in the report. Five countries accounted for well over 50 percent of the total catch--Japan (16.4 percent), China (Mainland) (13.3 percent), Peru (9.4 percent), U.S.S.R. (8.1 percent), and the United States (7.5 percent).

- FL-536 - Recognizing Important Shrimps of the South, by William W. Anderson, 5 pp., illus., February 1962 (Revision of FL-366, December 1958, and Sep. No. 242, December 1949). Describes the more frequently taken species of shrimp along the South Atlantic and Gulf coasts of the United States which are of some commercial value. Includes illustrations of the white or common shrimp, brown shrimp, pink or brown-spotted shrimp, the seabob, rock shrimp, and the royal red shrimp.

### Wholesale Dealers in Fishery Products, 1962 (Revised):

- SL- 4 - Rhode Island, 2 pp.  
 SL- 5 - Connecticut, 1 p.  
 SL- 9 - Delaware, 1 p.  
 SL-18 - Mississippi, 3 pp.  
 SL-23 - Washington, 7 pp.

### Firms Canning, 1961 (Revised)

- SL-103 - Tuna, 2 pp.  
 SL-107 - Fish and Shellfish Specialties, 5 pp.  
 SL-119 - Squid, 1 p.

- SL-161 - Producers of Packaged Fish, 1961, 7 pp. (Revised)

- Sep. No. 652 - Chicago Receipts of Fresh and Frozen Fishery Products, and Wholesale Market Trends, 1961.

- SSR-Fish. No. 389 - Oceanic Salinities off the South Atlantic Coast of the United States--Theodore N. Gill Cruises 1-9, 1953-54, by William W. Anderson, Joseph E. Moore, and Herbert R. Gordy, 212 pp., illus., August 1961.

- SSR-Fish. No. 410 - Spring and Summer Temperatures of Streams Tributary to the South Shore of Lake Superior, 1950-60, by Bernard R. Smith, 63 pp., illus., March 1962.

Annual Report of the Gloucester Technological Laboratory, Fiscal Year 1961, by Joseph W. Slavin, Circular 139, 13 pp., illus., processed. A discussion of the highlights of the program and accomplishments of the Gloucester Technological Laboratory for fiscal year 1961 including research on the chemistry and biochemistry of fish, developments of grade standards and specifications, inspection and certification of fishery products, and studies on the preservation of fish. Also included is a list of publications written by laboratory personnel during 1961. The new technological laboratory at Gloucester was dedicated by the Bureau of Commercial Fisheries on June 17, 1960, and is staffed by 19 professional people trained in the fields of chemistry, food technology, and engineering.

Operations of the Bureau of Commercial Fisheries under the Saltonstall-Kennedy Act, Fiscal Year, 1960, 109 pp., illus., processed. The sixth annual report to the Congress of the activities of the U. S. Bureau of Commercial Fisheries during the fiscal year ending June 30, 1960, under the provisions of the Saltonstall-Kennedy Act of July 1, 1954. The Act makes available funds from import duties collected on foreign fishery products for the promotion of the free flow in commerce of domestic fishery products and provides for a wide range of research and services supporting the development and wise utilization of the nation's fishery resources and the stabilization of the domestic fishing industry. This publication discusses commercial fishery progress by geographic areas including nationwide programs such as technological programs, economic studies, statistical programs, Market News services, and marketing programs. Among the important accomplishments during fiscal year 1960: (1) methods were developed to determine amounts of saturated fatty acids and numbers of double-bond structures in fish oils; (2) methods were developed to prepare several polyunsaturated derivatives from fish oils which are of potential value in the food industry, in the fields of resins and plasticizers, and in other fields; (3) in New England an analysis of average landings of yellowtail flounder per day of fishing effort aided biologists in determining the factor causing fluctuations in the abundance of this species; (4) at 14 stations along the Middle Atlantic shelf of the Eastern United States, sea scallops were found in sufficient quantities to warrant a limited commercial fishery; (5) experiments demonstrated the advantage of suspended oyster cultch in the Chesapeake Bay; (6) positive identification of the early developmental stages of yellowfin menhaden was accomplished by artificial fertilization of eggs and rearing of the larvae in the South Atlantic; (7) in the Gulf of Mexico identifications of early larval stages of two penaeid shrimp were specific and important advancements toward estimation of the abundance, seasonal occurrence, and distribution of shrimp larvae; (8) the results of exploratory trawling cruises in Lake Erie showed that up to 5,000 pounds of smelt can be taken at certain times and in certain places in the waters of Ohio, Pennsylvania, and New York; (9) in California, listings of some 4 million oceanographic observations, along with selected summaries, have been obtained for an investigation of month-to-month and year-to-year changes in oceanic conditions over the past 25 years; (10) studies were initiated in the Pacific Northwest for determining the downstream migration paths and times of migration of young salmon in lakes behind dams; and

(11) a tagging study in Brooks Lake, Alaska, has shown the importance of specific racial groups occurring close to each other in a single lake system.

Our Commercial Fisheries, Conservation Notes, Circular 55, Revised October 1960. Informative bulletin containing fishing terminology, classification of fish, and facts man should know about fish and what affects their abundance and movements. Also included are data on the food chain, tagging, color marking, underwater television and Scuba divers, chemical and electrical aids, sounds of fish, sea mammals, international and interstate commissions, and the American catch. Research data and statistics on fishing for food are also covered.

THE FOLLOWING MARKET NEWS LEAFLETS ARE AVAILABLE FROM THE BRANCH OF MARKET NEWS, BUREAU OF COMMERCIAL FISHERIES, U. S. FISH AND WILDLIFE SERVICE, WASHINGTON 25, D. C.

Number	Title
MNL-26	- Taiwan Fisheries in 1961, 7 pp.
MNL-34	- Fisheries in Greece, 1961, 16 pp.
MNL-54	- Fisheries in British Borneo, 1961, 3 pp.
MNL-57	- Fisheries in the Federal Republic of Germany - Annual Survey, 1961, 22 pp.
MNL-71	- Canada's Fishing Industry, 1961, 7 pp.

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, April 1962, 15 pp. (Market News Service, U. S. Fish and Wildlife Service, Post Office Bldg., San Pedro, Calif.) California cannery receipts of tuna and tunalike fish and other species used for canning; pack of canned tuna, tunalike fish, mackerel, and anchovies; market fish receipts at San Pedro, Santa Monica, and Eureka areas; California and Arizona imports; canned fish and frozen shrimp prices; ex-vessel prices for cannery fish; Oregon and Washington receipts (domestic and imports) of fresh and frozen tuna and tunalike fish; for the month indicated.

California Fishery Market News Monthly Summary, Part II - Fishing Information, May 1962, 11 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, May 1962, 13 pp. (Market News Service, U. S. Fish and Wildlife Service, 565 W. Washington St., Chicago 6, Ill.) Receipts at Chicago by species and by states and provinces for fresh- and salt-water fish and shellfish; and weekly wholesale prices for fresh and frozen fishery products; for the month indicated.

Monthly Summary of Fishery Products Production in Selected Areas of Virginia, North Carolina, and Maryland, May 1962, 4 pp. (Market News Service, U. S. Fish and Wildlife Service, 18 S. King St., Hampton, Va.) Landings of food fish and shellfish and production of crab meat and shucked oysters for the Virginia areas of Hampton Roads, Chincoteague, Lower Northern Neck, and Lower Eastern Shore; the Maryland areas of Crisfield, Cambridge, and Ocean City; and the North Carolina areas of Atlantic, Beaufort.

and Morehead City; together with cumulative and comparative data on fishery products and shrimp production; for the month indicated.

New York City's Wholesale Fishery Trade--Monthly Summary-- March 1962, 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.

(Seattle) Washington and Alaska Receipts and Landings of Fishery Products for Selected Areas and Fisheries, Monthly Summary, May 1962, 9 pp. (Market News Service, U. S. Fish and Wildlife Service, 706 Federal Office Bldg., 909 First Ave., Seattle 4, Wash.) Includes Seattle's landings by the halibut and salmon fleets reported through the exchanges; landings of halibut reported by the International Pacific Halibut Commission; landings of otter-trawl receipts reported by the Fishermen's Marketing Association of Washington; local landings by independent vessels; coastwise shipments from Alaska by scheduled and non-scheduled shipping lines and airways; imports from British Columbia via rail, motor truck, shipping lines, and ex-vessel landings; and imports from other countries through Washington customs district; for the month indicated.

THE FOLLOWING ENGLISH TRANSLATION OF A FOREIGN LANGUAGE ARTICLE IS AVAILABLE ONLY FROM THE U. S. BUREAU OF COMMERCIAL FISHERIES BIOLOGICAL LABORATORY, SEATTLE, WASH.:

A Study of the Hokkaido King Crab (Hokkaido-san Tarabagani no Kenkyu), by Kiichi Nakazawa, Report No. 60-22528, 1960, printed. (Translated from Dobutsugaku Zasshi, vol. 24, no. 279, 1912, pp. 1-13.)

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

The Copepod Fauna (Calanoida) and Zoogeographical Divisions of the North Pacific and Adjoining Waters, by K. A. Brodsky, 78 pp., illus., processed. (Translated from the Russian Izdatel'stvo Akademii Nauk SSSR, Moscow-Leningrad, 1957.)

THE FOLLOWING ENGLISH TRANSLATION OF A FOREIGN LANGUAGE ARTICLE IS NOT FOR GENERAL DISTRIBUTION BUT IS AVAILABLE FOR REFERENCE ONLY FROM THE U. S. BUREAU OF COMMERCIAL FISHERIES, P. O. BOX 3830, HONOLULU, HAWAII.

On the Distribution of Macroplankton in the Northern Half of the Indian Ocean, by N. M. Voronina, 13 pp., illus., processed, May 1962. (Translated from Okeanologiya, vol. 2, no. 1, 1962, pp. 118-125.)

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

Tank Culture of Tilapia, by Richard N. Uchida and Joseph E. King, Fishery Bulletin 199 (from Fishery Bulletin of the Fish and Wildlife Service, vol. 62), 36 pp., illus., printed, 30 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 ORGANIZATIONS OR PUBLISHER MENTIONED. DATA ON PRICES, IF READILY AVAILABLE, ARE SHOWN.

### AGAR-AGAR:

"Itanigusa Ahnfeltia plicata Yori Kanten no Shinseizoho Nikansuru Kenkyu. I" (Studies on New Method of Preparation of Agar Agar from Ahnfeltia plicata, I", by Y. Kojima and others, article, Journal of the Shimonoseki College of Fisheries, vol. 9, no. 1, 1960, pp. 43-52, illus., printed in Japanese with English summary. Yoshimi, Shimonoseki, Japan.

"\_\_\_\_\_. II--Shinta no Dasshoku Oyobi Dassui ni Tsuite" (II--On the Decolorization and Dehydration of Crude Agar Gel), vol. 9, no. 3, pp. 317-322.

"\_\_\_\_\_. III--Itani Kanten Seizo no Kogyoka ni Tsuite" (III--On the Industrialization for Manufacturing Itani Agar), vol. 9, no. 3, pp. 323-328.

### ALASKA:

Annual Report of Progress, 1959-60 (Federal Aid in Fish Restoration Project F-5-R-1, Sport Fish Investigations of Alaska), Report No. 1-A, vol. 1, 142 pp., illus., processed, Alaska Dept. of Fish & Game, Sport Fish Division, Juneau, Alaska.

### ALGAE:

"The Marine Algae of the Hundred Islands, Philippines," by Ernani G. Menez, article, The Philippine Journal of Science, vol. 90, no. 1, March 1961, pp. 37-86, illus., printed. National Institute of Science and Technology, P. O. Box 774, Manila, Philippines.

### ALMANAC:

The Nautical Almanac for the Year 1963, 30 M, 311 pp., printed, \$2. U. S. Naval Observatory, Washington, D. C., 1962. (Available from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.) Provides in a convenient form the data required for the practice of astronomical navigation at sea.

### ARCTIC CHAR:

"Ilkalupik"--The Arctic Char," article, Trade News, vol. 14, no. 9, April 1962, pp. 3-5, illus., printed. Director of Information and Consumer Service, Department of Fisheries, Ottawa, Canada. Describes, with numerous illustrations, the arctic char fishing operation of the Eskimos. Ilkalupik, meaning "special fish" in English, is the name the Eskimos have given to the arctic char. The Eskimos have been encouraged to organize fishing cooperatives, procure fishing gear, freezing apparatus, and other equipment necessary for a commercial fishery. The char fisheries provide a good source of income for the Eskimo fishermen, and serve to reduce their reliance on hunting as a means of acquiring food supplies for their families.

### BARNACLES:

The Attachment of the Barnacle, BALANUS APMPHITRITE NIVEUS Darwin, and Other Fouling Organisms to the Rock Shrimp, SICYONIA DORSALIS



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

Kingsley, by Bonnie Eldred, Contribution No. 62, 5 pp., illus., printed. (Reprinted from *Crustaceana*, vol. 3, part 3, pp. 203-206.) Florida State Board of Conservation Marine Laboratory, Maritime Base, Bayboro Harbor, St. Petersburg, Fla., 1962.

#### BRAZIL:

Pesca - 1960, Estrutura e Producao (Fisheries - 1960, Organization and Production), 45 pp., illus., processed in Portuguese. Ministerio da Agricultura, Servico de Estatistica da Producao, Avenida Pasteur no. 404, Rio de Janeiro, Brazil, April 1962.

#### CALIFORNIA:

Digest of Commercial Fish Laws, 1961-63, 30 pp., illus., printed. California Department of Fish and Game, 722 Capitol Ave., Sacramento 14, Calif. Explains the California commercial fishing laws. This booklet is not intended to replace the Fish and Game Code but to explain the Code to the fishing industry. Contains information on license provisions, species covered, the commercial fishing districts, provisions of the Code affecting the commercial fisheries, calendar of the fishing seasons, and use or possession of nets in certain districts.

#### CANADA:

Fisheries Council of Canada, Annual Review, 1962, 72 pp., illus., printed. Fisheries Council of Canada, Rm. 703, 77 Metcalfe St., Ottawa 4, Canada. Contains, among others, the following articles: "Quebec Fisheries, 1961," by Guy LeBlanc; "Water Pollution in British Columbia," by Michael Waldichuk; "Canada's Fisheries in 1961," by W. C. MacKenzie; "Commercial Fisheries of New Brunswick," by Leonce Chenard; "Rehabilitation of the Atlantic Oyster Industry," by Mary Hatheway; and "The Fishery in the ICNAF Convention Area in 1959," by Frank R. Thomas.

Fisheries Statistics of Canada, 1960 (New Brunswick), 32 pp., illus., printed in French and English, 75 Canadian cents. Queen's Printer and Controller of Stationery, Ottawa, Canada, June 1962. Consists of tables giving the quantity and value of the principal species of fish and shellfish landed in New Brunswick, 1948-60; quantity and value of manufactured fishery products, 1948-60; quantity and value of landings by species and fisheries districts, 1959-60; capital equipment in the primary fisheries operations, 1959-60; classification of powered fishing craft by over-all length, 1960; number of persons engaged in primary operations by fisheries districts, 1959-60; and persons engaged in the major fisheries, 1959-60.

Fisheries Statistics of Canada, 1960 (Quebec), 57 pp., illus., printed in French and English, C\$1. Queen's Printer and Controller of Stationery, Ottawa, Canada, May 1962. Consists of tables giving the quantity and value of the principal species of fish and shellfish landed in Quebec in 1948-1960; quantity and value of landings by species and fisheries districts, 1959-1960; quantity and value of manufactured fishery products by species, 1959-1960; capital equipment employed in primary operations by fisheries districts, 1959-1960; and number of persons engaged in primary operations by fisheries districts, 1959-1960. Also includes a map and description of Quebec's sea fisheries districts.

Journal of the Fisheries Research Board of Canada, vol. 19, no. 2, March 1962, pp. 173-363, illus., printed, C\$1.50. Queen's Printer and Controller of Stationery, Ottawa, Canada. Includes, among others, the following articles: "Migratory Behaviour of Juvenile Rainbow Trout, *Salmo gairdneri*, in Outlet and Inlet Streams of Loon Lake, British Columbia," by T. G. Northcote; "Tag Failure Associated with a Net Fishery as a Source of Experimental Error," by Robert R. Parker; "Dogfish Gelatin," by Shirley E. Geiger, Eve Roberts, and N. Tomlinson; "Olfactory Perception in Juvenile Salmon. I - Observations on Response of Juvenile Sockeye to Extracts of Foods," by J. R. McBride and others; "Photographing Halibut Otoliths for Measuring Growth Zones," by G. Morris Southward; and "A Method of Calculating Body Lengths from Otolith Measurements for Pacific Halibut and Its Application to Portlock-Albatross Grounds Data Between 1935 and 1957," by G. Morris Southward.

#### CANNING:

"As Conservas de Peixe no Mercado Ingles em 1961" (Canned Fish on the English Market in 1961), by Victor A. Martin; "As Conservas de Peixe Portuguesas e o Mercado Belga em 1961" (Portuguese Canned Fish on the Belgian Market in 1961), by Willy Moers; "A Situacao das Conservas de Peixe na Italia" (Status of Canned Fish in Italy), by Enrico Cresta; "Mercado de Franca" (Markets of France), by J. Cardoso, articles, *Conservas de Peixe*, vol. 17, no. 193, April 1962, pp. 63-65, 67-68, 71, 73, 77, 75, illus., printed in Portuguese. Sociedade Astoria, Lda., Requeirao dos Anjos, 68, Lisbon, Portugal.

"Etudes et Recherches sur la Fabrication des Conserves de thon de Madrague du Maroc (*Thunnus thynnus* L.)" (Studies and Research on the Canning of Tuna from the Madragues or Coastal Traps of Morocco), by R. Meesemaeker and Y. Sohier, 27 pp., illus., printed in French. (Reprinted from *Revue de la Conserve*, December 1960 and January 1961.) Societe d'edition pour L'alimentation, 1 rue de la Reale, Paris 1, France.

#### CARP:

"Experiments on Induced Spawning of Indian Carps with Pituitary Injections," by H. Chaudhuri, article, *Indian Journal of Fisheries*, vol. 7, no. 1, 1960, pp. 20-48, illus., printed. Ministry of Food and Agriculture, New Delhi, India.

L'elevage de la carpe au Liban (Rearing of Carp in Lebanon), by J. A. Timmermans, *Travaux*, Ser. D., no. 29, 1960, 23 pp., illus., printed in French with English summary. Administration des Eaux et Forêts, Station de Recherches de Groenendaal, Groenendaal, Belgium.

#### CHESAPEAKE BAY:

Chesapeake Science, vol. 3, no. 1, March 1962, 61 pp., illus., printed, 75 cents. Natural Resources Institute of the University of Maryland, Chesapeake Biological Laboratory, Solomons, Md. Contains the following articles: "Sport Fishing Survey in 1960 of the Lower Patuxent Estuary and the 1958 Year-Class of Striped Bass," by L. W. Shearer, D. E. Ritchie, Jr., and C. M. Frisbie; "Age and Growth of Spot in Lower Chesapeake Bay, with Notes on Distribution and Abundance of Juveniles in the York River System,"

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

by A. L. Pacheco; "Effects of Gamma Radiation on Two Decapod Crustaceans, *Palaemonetes pugio* and *Uca pugnax*," by George H. Rees; "Occurrence of the Acanthocephalan Parasite, *Telosentis tenuicornis*, in the Spot, *Leiostomus xanthurus*, in Chesapeake Bay," by Harry W. Huizinga and A. James Haley; "Atlantic Menhaden Larvae in Virginia Coastal Waters," by W. H. Massmann, J. J. Norcross, and E. B. Joseph; "Predation of Bluefish on Young Atlantic Menhaden in Indian River, Delaware," by George C. Grant; and "The Atlantic Bonito, *Sarda sarda*, in Upper Chesapeake Bay, and Comments on the Seaside Fishery of Maryland," by Romeo J. Mansueti.

*Chesapeake Science*, vol. 3, no. 2, June 1962, 80 pp., illus., printed, 75 cents. Managing Editor, Natural Resources Institute of the University of Maryland, Chesapeake Biological Laboratory, Solomons, Md. Includes, among others, the following articles: "Quantitative Seasonal Aspects of Zooplankton in the Delaware River Estuary," by L. Eugene Cronin, Joanne C. Daiber, and Edward M. Hulburt; "Intra-specific Variation in the White Perch, *Roccus americanus* (Gmelin)," by William S. Woolcott; "Periods of Spawning and Setting of the Soft-Shell Clam, *Mya arenaria*, at Solomons, Maryland," by Hayes T. Pfitzenmeyer; "Distribution of Species of *Cliona* (Boring Sponge) of the Eastern Shore of Virginia in Relation to Salinity," by Sewell H. Hopkins; "Summer Food and Growth of Chain Pickerel, *Esox niger*, in Brackish Waters of the Severn River, Maryland," by C. D. Meyers and R. J. Muncy; "Calico Crab, *Ovalipes o. ocellatus*, in Mid-Chesapeake Bay, Maryland," by Romeo J. Mansueti; "First Record of the King Mackerel, *Scomberomorus cavalla*, in Northern Chesapeake Bay, Maryland," by Grover Butz and Romeo J. Mansueti; and "Distribution of Small, Newly Metamorphosed Sea Lampreys, *Petromyzon marinus*, and Their Parasitism of Menhaden, *Brevoortia tyrannus*, in Mid-Chesapeake Bay During Winter Months," by Romeo J. Mansueti.

#### CLAMS:

"The Pacific Razor Clam," by D. B. Quayle, article, *Trade News*, vol. 14, no. 9, March 1962, pp. 8-9, illus., printed. Director of Information and Consumer Service, Department of Fisheries, Ottawa, Canada. The only significant fishery for razor clams in Canada occurs out of Masset, British Columbia. This article describes the razor clam (*Siliqua patula*) as to appearance, methods of obtaining, and processing.

#### COD:

"Aspectos da Industria Nacional do Bacalhau" (Outlook of the National Cod Industry), by A. Torres Botelho, article, *Conservas de Peixe*, vol. 17, no. 193, April 1962, pp. 51, 53, illus., printed in Portuguese. Sociedade Astoria, Lda., Regueirao dos Anjos, 68, Lisbon, Portugal.

"Observations on the Cod Trawl Fishery in the Gulf of St. Lawrence During the Spring of 1958," by J. R. Clark and F. D. McCracken, article, *Annual Proceedings, International Commission for the Northwest Atlantic Fisheries*, vol. 8, 1958, pp. 99-100, printed. International Commission for the Northwest Atlantic Fisheries, Halifax, Nova Scotia, Canada.

#### COMMISSIONS:

(Atlantic States Marine Fisheries Commission) *Twentieth Annual Report* (to the Congress of the United States and to the Governors and Legislators of the Fifteen Compacting States), 80 pp., illus., printed. Atlantic States Marine Fisheries Commission, 200 E. College Ave., Tallahassee, Fla., June 1962. Summarizes the changes that have taken place during the past two decades in fisheries work by the Federal agencies and by state administrative agencies and laboratories along the Atlantic Coast. Includes condensed reports on the work of the Commission and of various committees. Also contains reports from the North Atlantic Section on the need for an Extension Service, Federal aid (S. 1230 Gruening bill), time-temperature studies on frozen fish products, Northeastern Resources Committee, and shellfisheries problems. The Middle Atlantic Section reports on sport fishery catch statistics, fish protein concentrate, Federal aid for state research, pollution of near-shore waters by small boats, Biological Committee, artificial reefs, shellfish sanitation, and striped bass regulations. The Chesapeake Bay Section discusses mid-Atlantic bight, report of Biological Committee, Gruening Bill S. 1230, sport fishery studies, striped bass, report of Technological Committee, shellfish sanitation, and Potomac River Compact. The South Atlantic Section reports on shrimp, exploratory fishing, recommendations of Scientific Committee, and difficulty in getting Dingell-Johnson funds. Appendices include state legislation recommended, auditor's report, report of committees, and resolutions adopted by the Commission.

#### CURRENTS:

*Manual of Current Observations* (Supplement to Special Publication No. 215, Revised 1950 Edition), 10 pp., illus., printed, single copy 20 cents. Coast and Geodetic Survey, U. S. Department of Commerce, Washington, D. C., November 1961. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.) The Coast and Geodetic Survey has made many changes in the methods used to observe, record, and process water currents since the publishing of the Manual of Current Observations in 1950. Several of the more important changes are given in this supplement.

#### ESTUARINE STUDIES:

*Potential Research Benefits to be Derived from Estuarine Heterogeneity*, by Robert M. Ingle, Contribution No. 63, 5 pp., printed. (Reprinted from *Tulane Studies in Zoology*, vol. 9, no. 5, April 16, 1962, pp. 295-299.) Florida State Board of Conservation, Tallahassee, Fla.

#### FACTORYSHIPS:

"Freezing Equipment for Ships," by M. B. F. Ranken, article, *Fish Trades Gazette*, No. 4047, pp. 11-14, printed. Industrial Newspapers Ltd., John Adams House, John Adams St., London, WC2, England, 1961.

*Refrigeration in Fishing Vessels*, by G. E. Eddie, 8 pp., printed. World Refrigeration and Air-Conditioning, 11a Gloucester Rd., London, SW7, England, April, 1961.

"Walfangmutterschiff *Jury Dolgoruky*" (The Whalecatcher-Mothership *Jury Dolgoruky*), article *Schiffbautechnik*, vol. 11, 1961, pp. 59-68, 115-125, 235-

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

241, illus., printed in German. VEB Verlag Technik, 13/14, Oranienburgerstrasse, Berlin C.2, Germany.

#### FAROE ISLANDS:

"The Fishery of the Faroes in 1961," article, Faroes in Figures, no. 18, June 1962, pp. 2-7, printed. Faero Amts Sparekasse, Thorshavn, Faroe Islands. Features a review of the fishery in the Faroes in 1961. Contains statistical tables on total catch; catch of demersal species and herring by fishing grounds, 1953-61 and 1952-1961, respectively; disposition of catch, 1952-61; annual output of processed commodities, 1953-61; exports of salt fish and dried cod by countries; and production of salt fish by fishing grounds and mode of catch.

#### FAUNA:

A Checklist of the Flora and Fauna of Northern Florida Bay and Adjacent Brackish Waters of the Florida Mainland Collected During the Period July, 1957 Through September, 1960, by Durbin C. Tabb and Raymond B. Manning, Contribution No. 354, 88 pp., illus., printed. (Reprinted from Bulletin of Marine Science of the Gulf and Carribean, vol. 11, no. 4, December 1961, pp. 552-649.) Marine Laboratory, University of Miami, 1 Rickenbacker Causeway, Miami, Fla.

#### FEEDING OF FISH:

Rate of Metabolism and Food Requirements of Fishes, by G. G. Winberg, Translation Series No. 194, 248 pp. (Translated from the Russian under the editorial direction of F. E. J. Fry and W. R. Ricker.) Fisheries Research Board of Canada, Biological Station, Nanaimo, B. C., Canada, 1960.

#### FISH CULTURE:

Compte rendu de Mission piscicole aux Etats-Unis et au Canada, Debut septembre - mi-octobre 1958 (Account of the Fish Culture Mission to the United States and Canada, Beginning September - Mid-October 1958), by Marcel Huet, Travaux, Ser. D, no. 25, 1959, 40 pp., illus., printed in French. Administration des Eaux et Forets, Station de Recherches de Groenendaal, Groenendaal, Belgium.

#### FISHERIES MANAGEMENT:

"Fish and the Freedom of the Seas," by S. V. Ozere, article, Trade News, vol. 14, no. 9, March 1962, pp. 3-5, 11, printed. Director of Information and Consumer Service, Department of Fisheries, Ottawa, Canada. According to the author, "While it is essential for Government to be thoroughly acquainted with the problems of the fishing industry, it is equally important for industry to have a good knowledge of the problems of Government. Only in this way can we bring about sound development of our resources for the benefit of the present and future generations." In this article, the author discusses some of the international aspects of the problems encountered in the management of sea fisheries.

#### FISHERY COOPERATIVES:

"An Experiment in Fisheries Cooperatives," by G. T. Taylor, article, West Indies Fisheries Bulletin, no. 6, November-December 1961, pp. 1-9, processed. Ministry of Natural Resources and Agriculture, Federal House, Port of Spain, Trinidad, West Indies. Discusses an experiment used to develop the

fisheries in St. Lucia, utilizing mechanized boats with a variety of gear, and organized operation of fishing boats and marketing fish.

#### FISH FINDER:

Comparison Between Survey Map by 14.5 KC. Fish-Finder and That by 200 KC. Fish-Finder with Sharp Beam on Same Sea, by Tomiju Hashimoto and Yoshinobu Maniwa, Report No. 60-13257, 1960, 20 pp., illus., printed, \$1.10. (Translated from Gyosen Kenkyu Giho, no. 12, 1958, pp. 149-155.) Office of Technical Services, U. S. Department of Commerce, Washington 25, D. C.

#### FISH LIST:

"An Annotated List of the Fishes of Great Smoky Mountains National Park," by Robert E. Lennon, article, Journal of the Tennessee Academy of Science, vol. 37, no. 1, 1962, pp. 5-7, printed. Secretary, Tennessee Academy of Science, Belmont College, Nashville, Tenn.

#### FISH MANAGEMENT:

"Fisheries Management in Australia," by D. J. Gates and D. Macdonald, article, Fisheries Newsletter, vol. 21, no. 2, February 1962, pp. 21-24, illus., printed. Commonwealth Director of Fisheries, Department of Primary Industry, Canberra, Australia. A summary of the fisheries management program of Australia. Includes a table of major management measures in force January 1, 1962, under the Fisheries Act 1952-1959, and the fisheries acts of the States. Also contains maps illustrating the areas in which closed seasons apply, and the area where Danish seine mesh regulations are in force.

Fishery Management, by R. S. Fort and J. D. Brayshaw, 394 pp., illus., printed. Faber and Faber, 24 Russell Square, London WC1, England, 1961.

#### FISH MEAL:

"Fiskemelindustrien i Peru" (The Fish Meal Industry in Peru), article, Konkylien, vol. 6, no. 1-2, December 1961, pp. 19, 29, printed in Norwegian with English summary. Stord Marin Industri A. S., Bergen, Norway.

#### FISH POPULATIONS:

Comparison of Variations of Fishing Condition in a Whole Year Among Each Subarea and Migration of Fish Groups in the Southern Part of the Pacific Ocean, by J. Nakagome, Report No. 59-19361, August 31, 1959, 10 pp., printed, microfilm \$1.80, photocopy \$1.80. Library of Congress, Photoduplication Service, Publication Board Project, Washington 25, D. C.

Correlation Between the Movement and Appearance of Fish School, by Torshiro Kuroki, Report No. 59-22355, 1959, 29 pp., illus., printed, microfilm \$2.40, photocopy \$3.30. (Translated from Kago-shima Daigaku Suisan Gakubu Kiyo, vol. 7, February 1959, pp. 87-101.) Library of Congress, Photoduplication Service, Publication Board Project, Washington 25, D. C.

#### FOOD AND AGRICULTURE ORGANIZATION:

The Food and Agriculture Organization has published reports describing that Agency's activities under



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

the Expanded Technical Assistance Program for developing the fisheries of many countries. These reports have not been published on a sales basis, but have been processed only for limited distribution to governments, libraries, and universities. Food and Agriculture Organization of the United Nations, Viale delle Terme di Caracalla, Rome, Italy.

Report on the Indo-Pacific Fisheries Statistics Training Center Held in Bangkok, Thailand, 19 June to 31 July, 1952, FAO Report No. 357, 58 pp., illus., 1955.

#### FREEZE-DRYING:

"Accelerated Freeze Drying. II--Fundamental Design Problems," by K. Ward, article, Food Manufacture, vol. 36, no. 2, 1961, pp. 60-63, 66, illus., printed. Leonard Hill Ltd., 9 Eden St., London NW1, England.

"Torrering of Levnedsmidler" (Drying of Foodstuffs), by E. E. Petersen, article, Ingeniørens Ugeblad, vol. 5, no. 28, 1961, 12 pp., illus., printed in Danish. Ingeniørhuset, 31, Vester Farimagsgade, Copenhagen-V., Denmark.

#### FREEZERSHIP:

Fishroom Insulation and Refrigeration--Some Experiences on a Modern Trawler, by J. Waterman, Torry Research Report No. 2, 4 pp., printed. Torry Research Station, Aberdeen, Scotland, 1960.

"The Frozen Food Story," by Sheila R. Naidoo, article, Liberia Chamber of Commerce Journal, pp. 12-13, illus., printed, 25 cents. Consolidated Publications, Inc., The Simpson Bldg., Center St., P. O. Box 470, Monrovia, Liberia. Describes the fish factory trawler, The Fairtry III, and methods used to process and freeze fish at sea. A diagram showing various sections of the vessel is also included.

#### FREEZING:

"Gyoniku no Tokusei ni Kansuru Kenkyu. III--Chushutsu Actomyosin no Toketsu ni Yoru Fuyokasei" (Studies on the Characteristic Quality of Fish Meat. III--On Insolubility of Extracted Actomyosin Brought About by Freezing), by T. Tokunaga and M. Nakamura, article, Bulletin, Hokkaido Regional Fisheries Research Laboratory, no. 23, 1960, pp. 61-66, illus., printed in Japanese with English summary. Hokkaido Regional Fisheries Research Laboratory, Yoichi, Hokkaido, Japan.

"Konveirnyi Skoromozil'nyi Apparat na Murmanskoy Pybokombinate i evo Ispytanie" (Conveyor-Type Quick Freezer at the Murmansk Fish Processing Plant and Its Testing), by I. T. Brosalin, A. K. Kaminskaya and G. E. Martyshekin, article, Kholodil' naya Tekhnika, no. 1, 1962, pp. 34-37, illus., printed in Russian. Four Continent Book Corp., 822 Broadway, New York 3, N. Y.

#### FRESH-WATER FISH:

"Bacteriological Studies of Freshwater Fish. I--Isolation of Aerobic Bacteria from Several Species of Ontario Fish," by T. P. T. Evelyn and L. A. McDermott, article, Canadian Journal of Microbiology, vol. 7, 1961, pp. 375-382, illus., printed. National Research Council, Ottawa, Canada.

"Fisheries Research Team Provides Practical Aid to Industry. IV--Freshwater Fish Bacteria," by A. S. Bogoslawski, article, Canadian Fisherman, vol. 48, no. 7, 1961, p. 34, printed. National Business Publications Ltd., Gardenvale, Quebec, Canada.

Practical Fresh Water Fishing, by Francis E. Sell, 198 pp., illus., printed. Ronald Press Co., 15 E. 26 St., New York 10, N. Y.

#### FROZEN FOOD:

"AFDOUS Frozen Food Code," article, Quarterly Bulletin, vol. 26, no. 1, January 1962, pp. 25-42, printed, single copy \$1.00. Association of Food and Drug Officials of the United States, c/o State Department of Health, Austin 1, Texas. The Frozen Foods Code was adopted by the Association of Food and Drug Officials of the United States (AFDOUS) in June 1961 and is designed to be used as a guide or, with the addition of legal language and penalties, may be adopted in part or in its entirety as regulations or law. Contains sections on definitions, frozen food, construction and layout of frozen food plants, design and construction of frozen food processing equipment, operating practices for the commercial manufacture of frozen food, transportation, warehousing, and retail.

#### GERMANY:

Die Dokumentationsgrundlagen der Forschungsstelle--Stand: Ende 1961 (Basic Bibliography of the Research Agency--Year Ending 1961), No. 1/6, 50 pp., processed in German. Forschungsstelle für Fischereiwirtschaft, Parkstrasse 50, Bremen, Germany, March 1962.

Einweihung der Bundesforschungsanstalt für Fischerei am 1. Juni 1962 (Dedication of the Federal Institute for Fishery Research on June 1, 1962), by P. F. Meyer-Waarden, Special Issue, Archiv für Fischereiwissenschaft, vol. 13, supplement 1, May 1962, 156 pp., illus., printed in German. Herausgegeben von der Bundesforschungsanstalt für Fischerei, Hamburg, Germany. (Available from Westliche Berliner Verlagsgesellschaft Heenemann KG, Berlin-Wilmersdorf, Germany.)

Einweihung der neuen Bundesforschungsanstalt für Fischerei in Hamburg-Altona, 1. Juni 1962 (Dedication of the New Federal Institute for Fishery Research in Hamburg-Altona on June 1, 1962), Special Issue, Allgemeine Fischwirtschaftszeitung, no. 21, May 1962, 48 pp., illus., printed in German. Verlag Carl Th. Gorg, P. O. Box 406, Bremerhaven F., Germany.

The Fishing Industry of the Federal Republic of Germany, by P. F. Meyer-Waarden, 88 pp., illus., printed, DM4 (US\$1). Land- und Hauswirtschaftlicher Auswertungsdienst e. V., Heerstr. 124, Bad Godesberg, Germany, 1961. (Available from Messrs. Hans Meister KG, Postfach 444, Kassel, Germany.) This survey of the fishing industry of Germany covers four major topics: the natural conditions, structure, economic importance, and promotion of the fishing industry. The first discusses formation of the coast, areas of the sea fishery and fresh-water fishery, and transport channels from the fishing grounds to the consumers. The second includes diagrams, charts, and illustrations of different types of sea fishery,

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

ports and markets, preparation and processing of fish, and fish trade. The section on economic importance is made up of statistical tables. The last section deals with the organization of the fishery administration, fishery policy, legislation and protection, and education and economic advisory service.

#### HERRING:

"Aktuellt om Skarpsillundersokningar" (Present Situation Concerning Sprat Investigations), by Armin Lindquist, article Svenska Vastkustfiskaren, vol. 32, no. 3, February 10, 1962, pp. 56-57, illus., printed in Swedish. Svenska Vastkustfiskarnas Centralforbund, Goteborg, Sweden.

"Fabrikksildfisket ved Island" (The Herring Fishery off Iceland), by Harald Kaarstad, article, Konkylien, vol. 6, no. 1-2, December 1961, pp. 7-10, 26-28, illus., printed in Norwegian with English summary. Stord Marin Industri A. S., Bergen, Norway.

Measurement of the Viscosity of Herring Solubles, by W. A. B. Thomson and others, Circular No. 21, 5 pp., illus., processed. Fisheries Research Board of Canada, Technological Station, Vancouver, B. C., Canada, April 1958.

"Sildeinnsiget 1962" (Herring Detection 1962), by Finn Devold, article, Fiskets Gang, vol. 48, no. 17, April 26, 1962, pp. 255-257, illus., printed in Norwegian. Fiskeridirektoratet, Radstuplass 10, Bergen, Norway.

"Sildeundersokelser i Norskehavet med F/F Johan Hjort, 5.-17. desember 1961" (Herring Research in the Norwegian Sea with the Research Vessel Johan Hjort, December 5-17, 1961), by Ole J. Ostvedt, article, Fiskets Gang, vol. 48, no. 17, April 26, 1962, p. 258, illus., printed in Norwegian. Fiskeridirektoratet, Radstuplass 10, Bergen, Norway.

Study on Desoxyribose Nucleic Acid of Herring Spermatozoa by Diffusion Measurement, by Kojiro Iso and Itaru Watanabe, Report No. 59-14632, 1959, 15 pp., printed, microfilm \$2.40, photocopy \$3.30. (Translated from Nihon Kagaku Zasshi, vol. 78, no. 9, 1957, pp. 1268-1272.) Library of Congress, Photoduplication Service, Publication Board Project, Washington 25, D. C.

#### INDONESIA:

Scientific Facilities and Information Services of the Republic of Indonesia, by John O. Sutter, Pacific Scientific Information No. 1, 137 pp., illus., printed, \$1. The Manager, Pacific Scientific Information Center, Bishop Museum, Honolulu 17, Hawaii, 1961.

#### INTERNATIONAL COMMISSIONS:

(International North Pacific Fisheries Commission) Annual Report, 1960, 123 pp., illus., printed. International North Pacific Fisheries Commission, 6640 NW, Marine Dr., Vancouver 8, B. C., Canada, 1961. This is the seventh consecutive annual report of the International North Pacific Fisheries Commission, established by a Convention between Canada, Japan, and the United States on June 12, 1953, for the purpose of promoting and coordinating the necessary scientific studies and to recommend the required conservation measures in order to secure the maximum sustained productivity of

fisheries of joint interest. Contains a summary account of the annual meeting of the Commission held in Vancouver, B. C., Canada, November 7-11, 1960; summary of administrative activities during the year; and progress reports on research conducted by the member governments under the Commission's program.

(International North Pacific Fisheries Commission) Proceedings of the Eighth Annual Meeting, 1961, Parts 1 and 2, 70 and 314 pp., respectively, processed. International North Pacific Fisheries Commission, 6640 N. W. Marine Dr., Vancouver 8, B. C., Canada. Part 1 covers the agenda, list of participants, minutes of sessions, report of the Committee on Finance and Administration, and the administrative report for 1961. The auditors' report for the fiscal year ended June 30, 1961, appears in the appendix. Part 2 consists of the report of the Committee on Biology and Research for 1961. It contains numerous appendices covering, among other items, reports of various sub-committees.

#### ITALY:

Annuario Statistico della Pesca e della Caccia, 1961 (Annual Statistics of Fish and Game, 1961), vol. 9, 1962, 182 pp., illus., printed in Italian. Istituto Centrale di Statistica, Via C. Balbo, 16 - Rome, Italy. Includes data on 1960 landings of fish and shellfish, sales and prices by species, number and types of vessels engaged in fishing, etc.

#### JAMAICA:

"Fisheries Development in Jamaica--A Progress Report," by A. G. Kirton, article, West Indies Fisheries Bulletin, no. 6, November-December 1961, pp. 10-15, processed. Ministry of Natural Resources and Agriculture, Federal House, Port of Spain, Trinidad, West Indies. Discusses progress made by the development program undertaken by the Fisheries Division of the Ministry of Agriculture and Lands in Jamaica in both marine and fresh-water or inland fisheries. Deals with fishing boats, fishing methods, fish-culture research, and extension work.

#### JAPAN:

Bulletin of the Hokkaido Regional Fisheries Research Laboratory, no. 24, March 1962, 212 pp., illus., printed. Hokkaido Regional Fisheries Research Laboratory, Yoichi, Hokkaido, Japan. Contains the following articles: "Studies on the Age and Growth of Crustacea," by Hiroshi Kurata; "An Ecological Study of Laminaria angustata Kjellman on the Coast of Hidaka Prov., Hokkaido," by Yoshio Hasegawa; "The Relation Between the Size of Mesh of Salmon Gill Net and the Length of Salmon in the Catches," by Mitsuo Konda; "The Investigation of Salmon Shark as a Predator on Salmon in the North Pacific, 1960," by Osamu Sano; "On the Distribution of Zoea Larvae of King Crab, Paralithodes camtschatica, in the Southeastern Bering Sea in 1960," by Isamu Takeuchi; "Histological Studies on Ovarian Eggs of Herring, Clupea pallasii, with Special Reference to So-called 'Shiniko' (Abnormal Eggs)," by Rikiichi Ishida, Takeo Sasaki, and Setsuko Arita; "Studies on the Bound Water in Fish Muscle. A New Method of Bound Water Determination and Some Application Thereof to Fish Muscle," by Hiroshi Oshima; "Studies on the Freezing Technique of Alaska Pollack in Bering Sea for the Material of Fish Sausage and 'Kamaboko'," by



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

Shu Tanaka and others; "Studies on Freezing and Refrigeration of Marine Products. Part II. On Drip and Heat Juice Loss in Frozen Cod Fillets," by Kaoru Tamoto and Shu Tanaka; "Studies of Muscle of Aquatic Animals. I--On the Relation of Protein Solubility to Setting-Forming Ability," by Kaoru Tamoto and Toru Fukumi.

"Le Developpement de la Grande Peche Industrielle Japonaise" (The Development of the Large Japanese Commercial Fishing Industry), by F. Doumenge, article, La Peche Maritime, vol. 41, no. 1008, March 1962, pp. 147-155, illus., printed in French. La Peche Maritime, 190, Boulevard Haussmann, Paris, France.

#### JAWFISH:

Notes on the West Atlantic Jawfishes, OPISTHOGNATHUS AURIFRONS, O. LONCHURUS and GNATHYPOPS BERMUDEZI, by James E. Bohlke and Lowell P. Thomas, Contribution No. 346, 14 pp., illus., printed. (Reprinted from Bulletin of Marine Science of the Gulf and Caribbean, vol. 11, no. 4, December 1961, pp. 503-516.) Marine Laboratory, University of Miami, #1 Rickenbacker Causeway, Miami 49, Florida.

#### JELLYFISH:

"Synopsis of the Medusae of the World," by L. P. Kramp, article, Journal of the Marine Biological Association of the United Kingdom, vol. 40, 1961, 469 pp., printed, \$20. Marine Biological Association of the United Kingdom, Cambridge University Press, 200 Euston Rd., London NW1, England.

#### LOBSTER:

"Le Bandage des Pinces de Homards" (Securing the Claws of Lobsters), article, La Peche Maritime, vol. 41, no. 1008, March 1962, pp. 156-157, illus., printed in French. La Peche Maritime, 190, Boulevard Haussmann, Paris, France.

#### MACKEREL:

"Untersuchungen uber die Biologie der Makrele (Scomber scombrus L.) in der Nordsee" (Research on the Biology of the Mackerel (Scomber scombrus L.) in the North Sea), by Erdal Aker, article, Berichte der Deutsche Wissenschaftliche Kommission fur Meeresforschung, N. F., vol. 16, no. 2, 1961, pp. 105-128, illus., printed in German with English summary. Deutsche Wissenschaftliche Kommission fur Meeresforschung, E. Schweizerbart'sche Verlagsbuchhandlung (Nagele u. Obermiller), Stuttgart W., Germany.

#### MALAYA & SINGAPORE:

Scientific Facilities and Information Services of the Federation of Malaya and State of Singapore, by John O. Sutter, Pacific Scientific Information No. 2, 51 pp., illus., printed, 50 cents. The Manager, Pacific Scientific Information Center, Bishop Museum, Honolulu 17, Hawaii, 1961.

#### MANAGEMENT AIDS:

Improving Your Product's Value, by Robert E. Holmes and Thomas M. Trainer, Management Aids, No. 140, 4 pp., printed, Small Business Administration, Washington 25, D. C., May 1962. Discusses steps small businessmen can follow as they seek to improve the value of their products. Among such steps are determining what is "value" in a product, by-passing the pitfalls in judging value, deciding the

effect you want the value improvement to have on customers, looking for new ideas, evaluating new ideas, tooling up to make the improved product, and keeping ahead of the demand for value. Points out that an owner-manager can increase his chances for success by having several improvement ideas in various stages of action. Such a procedure also helps him to inject current marketing information into his value improvement projects.

#### MARINE BORERS:

Destructive Marine Borers, by F. A. McNeill, Australian Fisheries Leaflet No. 4, 4 pp., illus., printed. (Reprinted from Fisheries Newsletter, vol. 20, no. 5.) Fisheries Newsletter, Commonwealth Fisheries Office, Department of Primary Industry, Canberra, Australia.

#### MARINE ORGANISMS:

Relationships of Some Marine Organisms of the Northeast Pacific to Water Temperatures, Particularly During 1957 Through 1959, by John Radovich, Fish Bulletin No. 112, 62 pp., illus., printed. California Department of Fish and Game, Printing Division, Documents Section, Sacramento 14, Calif., 1961.

#### MARINE SCIENCE:

Bulletin of Marine Science of the Gulf and Caribbean, vol. 12, no. 1, March 1962, 188 pp., illus., printed, \$2. Institute of Marine Science, University of Miami, 1 Rickenbacker Causeway, Virginia Key, Miami 49, Fla. Contains, among others, the following articles: "Seasonality of Fishes on a South Florida Shore," by Victor G. Springer and Andrew J. McErlean; and "The Biology of the Flyingfish, Hirundichthys affinis (Günther)," by John B. Lewis, J. K. Brundritt, and A. G. Fish.

#### MARKETING:

Selling Meats and Seafoods to the Armed Forces, 16 pp., illus., processed. Headquarters, Defense Subsistence Supply Center, 226 W. Jackson Blvd., Chicago 6, Ill., April 1962. Gives a brief history of the Defense Subsistence Supply Center (DSSC), and describes how it buys food for the Armed Forces and how one may qualify as a potential supplier. Also includes a listing of meats and seafoods purchased by the DSSC, a map showing location of supply centers, and samples of various forms used by the organization.

#### MINK RATIONS:

"Feeding of Raw Carp," by Phil J. Mingo, article, National Fur News, vol. 34, no. 4, May 1962, p. 13, printed. Broyles, Allebaugh & Davis, Inc., 200 Clayton St., Denver 6, Colo. Use of special high-protein supplements, along with fortified cereals, allows ranchers in many areas to use large quantities of products that are locally abundant and low priced. One of these products is carp, or other rough fish fed raw.

"Fish in the Mink Ration," by Walter G. Jones, article, National Fur News, vol. 34, no. 4, May 1962, pp. 11, 30, 33, illus., printed. Broyles, Allebaugh & Davis, Inc., 200 Clayton St., Denver 6, Colo. In the past 10-15 years fish and fishery byproducts have become an increasingly important staple in the rations of ranch mink. Discusses the use of fish in mink food including species of fish, source, and amounts used; problems encountered, and research being conducted.

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

#### MISCELLANEOUS:

Annual Report of the Board of Regents of the Smithsonian Institution--Showing the Operations, Expenditures, and Condition of the Institution for the Year Ended June 30, 1960, Publication 4435, 87th Congress, 1st Session, House Document No. 9, Part 2, 615 pp., illus., printed, Smithsonian Institution, Washington 25, D. C. Includes, among others, the following reports: "Photography of the Ocean Floor," by A. S. Laughton; "History of a Tsunami" (the experiences of some fishermen in a seismic sea wave), by Elliott B. Roberts; "Luminescence in Marine Organisms," by J. A. C. Nicol; and "Problems Involved in the Development of Clam Farms," by Harry J. Turner, Jr.

#### MOTHER-OF-PEARL:

"42 pc Fall in MOP Shell Take," article, Fisheries Newsletter, vol. 21, no. 5, May 1962, pp. 17-18, illus., printed, Commonwealth Fisheries Office, Dept. of Primary Industry, Canberra, Australia. Contains statistics of Australian production of mother-of-pearl (MOP) shell during 1961. Includes tables showing MOP and trochus production, 1957-61; exports of MOP and trochus shells; exports of all shell (excluding re-exports); vessels and men employed, 1957-61; and labor force, 1961.

#### NAVIGATION:

United States Coast Pilot 1--First Supplement, Sixth (March 26, 1960) Edition, 8 pp., printed, Coast and Geodetic Survey, U. S. Department of Commerce, Washington 25, D. C., January 6, 1962. Changes through January 6, 1962.

United States Coast Pilot 2--First Supplement, Sixth (September 10, 1960) Edition, 7 pp., printed, Coast and Geodetic Survey, U. S. Department of Commerce, Washington 25, D. C., January 6, 1962. Changes from date of edition to Notice to Mariners 1 of January 6, 1962.

United States Coast Pilot 4--Second Supplement, Atlantic Coast, Cape Henry to Key West, Sixth (September 12, 1959) Edition, 12 pp., printed, Coast and Geodetic Survey, U. S. Department of Commerce, Washington 25, D. C., January 6, 1962. Changes from date of edition through Notice to Mariners 1 of January 6, 1962.

United States Coast Pilot 7--Third Supplement, Pacific Coast, California, Oregon, Washington, and Hawaii, Eighth (February 21, 1959) Edition, 22 pp., printed, Coast and Geodetic Survey, U. S. Department of Commerce, Washington 25, D. C., January 6, 1962. Changes from date of edition through Notice to Mariners 1 of January 6, 1962.

United States Coast Pilot 8--Pacific Coast, Alaska--Dixon Entrance to Cape Spencer, Eleventh Edition, 246 pp., printed, \$2.50. U. S. Department of Commerce, Coast and Geodetic Survey, Washington 25, D. C., January 6, 1962.

United States Coast Pilot 9--Seventh Supplement, Alaska, Cape Spencer to Arctic Ocean, Sixth (November 6, 1954) Edition, 36 pp., printed, Coast and Geodetic Survey, U. S. Department of Commerce, Washington 25, D. C., January 6, 1962. Changes through January 6, 1962.

#### NETS:

"Farg--Fisklighet. IV" (Color--Fishability. IV), by G. Molin, article, Ostkusten, vol. 33, no. 5, 1961, pp. 21-25, illus., printed in Swedish. Sveriges Kust- och Havsfiskare, Hudiksvall, Sweden.

Rapports et Proces-Verbaux des Reunions (International Fisheries Convention of 1946, Committee on Mesh Difficulties, Report of the Scientific Sub-Committee, presented at the Seventh Meeting of the Permanent Commission, November 1958), vol. 151, 39 pp., illus., printed, Kr. 20 (US\$1.75). Conseil Permanent International pour l'Exploration de la Mer (International Council for Exploration of the Sea), Charlottenlund Slot, Denmark, November 1960. This report is in two parts. Part I, the edited version of which is reproduced here, deals with mixed fisheries that is, fisheries in which trawls with meshes smaller than those specified by the 1946 Convention are used for the purpose of capturing unprotected species listed in Article 6 of the Convention, but in which varying quantities of protected species listed in Annex II of the Convention may also be caught. The statistics for these fisheries up to the end of 1957 are presented, together with an assessment, so far as is possible on the data available, of the significance of the by-catch of protected species in relation to the fisheries for those species prosecuted in the same area with Convention mesh sizes.

#### NIGERIA:

Report on the Fisheries of Nigeria, 1961, by A. R. Longhurst, 57 pp., illus., processed. Federal Fisheries Service, Ministry of Economic Development, Lagos, Nigeria. The result of a fact-finding survey of Nigerian fisheries. It includes data both on the status and development of the fisheries themselves and of research and investigation programs undertaken by the various governmental agencies concerned with fisheries. Covers the organization of fisheries administration; inventory of facilities; survey of fish requirements, consumption, and importation; account of fisheries resources available to Nigeria. Also covers a survey of indigenous marine and fresh-water fisheries; development of the present mechanized fleet; fisheries development programs; and management, investigational, and research programs. Includes a register of trawlers operating out of Lagos, as of January 1, 1961; landing statistics, Lagos trawlers, 1959-1960; and a bibliography of literature relevant to Nigerian fisheries investigations.

#### NORWAY:

Beretning fra Fiskeridirektoratets Havforskningsinstitutt, 1958-59 (Report from the Sea Research Institute of the Fisheries Directorate, 1958-59), by Gunnar Rollefson, 50 pp., illus., printed in Norwegian. (Reprinted from Arsberetning vedkommende Norges Fiskerier, no. 2, 1959.) A.s. John Griegs Boktrykkeri, Bergen, Norway, 1961.

"Forekomst av egg og yngel av fisk i vest- og nordnorske kyst- og bankfarvann varen 1961" (The Occurrence of Egg and Larvae of Fish in the Western and Northern Norwegian Coast and Seaways During 1961), by Kr. Fr. Wiborg, article, Fiskets Gang, no. 11, March 15, 1962, pp. 161-164, illus., printed in Norwegian. Fiskeridirektoratet; Bergen, Norway.

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

"A Industria de Conservas de Peixe Norveguesa em 1961" (Norwegian Fish Canning Industry in 1961), by Olva Omland and Trygve Oree, article, Conservas de Peixe, vol. 16, no. 192, March 1962, pp. 23-24, illus., printed in Portuguese. Sociedade Astoria, Lda., Requeirao dos Anjos, 68, Lisbon, Portugal.

"Les Peches Norvegiennes" (Norwegian Fisheries), by M. Hohns. Sellaeg, article, France Peche, vol. 7, no. 59, February 1962, pp. 39-42, illus., printed. France Peche, Boite Postale 179, Lorient (Morbihan), France.

#### OCEANOGRAPHY:

Reference Sources for Oceanographic Station Data (Provisional), by National Oceanographic Data Center, Catalog Series, Publication C-1, 201 pp., printed, \$2.00. U. S. Navy Hydrographic Office, Washington 25, D. C. This publication is an advance provisional printing of a catalog of reference sources for oceanographic station data and is intended for limited distribution; a fully edited first edition will follow. The National Oceanographic Data Center receives, compiles, processes, and preserves worldwide oceanographic station data from all available sources, serves as a central repository, and disseminates these data for use by the scientific community and the general public. This publication has been prepared as a catalog of the Center's holdings of source material containing oceanographic station data and to provide users of the data with the necessary bibliographic information on source material used.

Serial Atlas of The Marine Environment--Sea Surface Temperature Regime in the Western North Atlantic, 1953-1954, by Robert L. Pyle, Folio 1, 33 pp., illus., printed, \$7.50. Serial Atlas of the Marine Environment, American Geographical Society, Broadway at 156th St., New York 32, N. Y. A marine atlas based upon a study of sea surface temperature observations in the western North Atlantic for the years 1953-54. The objective of the study was to evaluate these data for environmental research and to develop techniques for converting them into meaningful descriptions of the surface temperature regime. The plates in this folio illustrate the methods of analysis which have been developed. The study demonstrates how this material can bring out detailed patterns not attainable otherwise, points out features of the data which are pertinent to their usefulness for environmental research, and describes pronounced differences in temperature regime between the particular years 1953 and 1954. Subsequent folios of the Atlas will study other aspects of the marine environment, such as biological, geological, physical, or chemical.

#### OCEAN PERCH:

"Zum Rassenproblem beim rotbarsch--Rotbarschformen aus dem zentralen nordatlantik (zwischen den Faroern und Gronland-West)" (The Problem of Race in the Ocean Perch--Shape of the Ocean Perch from the Central North Atlantic, Between the Faroe Islands and West Greenland), by Adolf Kotthaus, article, Berichte der Deutsche Wissenschaftliche Kommission fur Meeresforschung, N. F., vol. 16, no. 1, 1961, pp. 18-50, illus., printed in German. Deutsche Wissenschaftliche Kommission fur Meeresfor-

schung, E. Schweizerbart'sche Verlagsbuchhandlung, (Nagele u. Obermiller), Stuttgart W., Germany.

#### OUTBOARD MOTORS:

The Contribution by the Outboard Motor to the Mechanization and Development of the Fishing Industry, by Ernst Ott, 6 pp., printed. (Reprinted from Proceedings of the Gulf and Caribbean Fisheries Institute, Thirteenth Annual Session, pp. 163-168, November 1960.) Outboard Marine International S. A., P. O. Box 830, Nassau, Bahamas. Describes the vast potential for the outboard motor in the fishing industry today. Explains how the mechanization of fisheries through the medium of the outboard motor has improved the economy and raised the standard of living in more than a score of countries throughout the world during the past six years.

Outboard Power Replaces Sails and Oars, 3 pp., illus., printed. (Reprinted from Fishing News International, October 1961.) Outboard Marine International S. A., P. O. Box 830, Nassau, Bahamas. Explains how the outboard motor is helping to provide more food for a hungry world by means of increased production in the fishing industry. Also discusses the donations of outboard motors to underdeveloped countries, the wide power range of outboards manufactured today, and methods being employed for the education of the fishermen in mechanization.

Outboards at Work, by William H. Taylor, 62 pp., illus., printed. Outboard Marine International S. A., Box 830, Nassau, Bahamas. Portrays, with numerous photographs, the extensive use and versatility of the outboard motor. Chapter 2 describes the use of the outboard motor in the commercial fisheries. According to the author, "Their suitability for most kinds of commercial fishing has spread in two directions. On the one hand, the outboard has taken the place of the oar, the paddle and the sail among small-boat fishermen who formerly depended on those means of getting to and from the fishing grounds and for hauling their nets and drags. On the other hand, the outboard is taking the place, in larger boats, of inboard engines. In both fields, it is bringing in millions of pounds of fish that, without the outboard motor, would not have been caught to feed the world's people, and it is putting more money into the pockets of fishermen who could not make as much by their older methods."

#### OYSTERS:

Oyster Farming in the Maritimes, by J. C. Medcof, 158 pp., illus., printed, \$1.75. Fisheries Research Board of Canada, Ottawa, Canada. (Available from Queen's Printer and Controller of Stationery, Ottawa, Canada.) Contains information on oyster farming, which is the practice of one or more of the many methods of improving the quality or increasing the quantity of oysters produced. Outlines the methods oyster farmers should follow, warns against the pitfalls they will likely encounter, and gives information on marketing and storing. All phases of the industry are covered, and are illustrated by photographs or drawings.

A System of Oyster Culture on Floating Shellfish Parks, by M. Nikolic and I. Stojnic, GFCM, Studies and Reviews No. 18, 17 pp., illus., processed. GFCM Secretariat, Food and Agriculture Organization of the



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

United Nations, Viale delle Terme di Carcalla, Rome, Italy, March 1962. An account of the ecological conditions and historical data on the development of shellfish culture in Limski Fjord located in Istria, Yugoslavia. Describes equipment used, rearing-places, and the old and new systems of oyster culture pointing out the advantages of the latter.

#### PILCHARDS:

The Pilchard of South West Africa (SARDINOPS OCELLATA)--Age Studies and Age Composition of SARDINOPS OCELLATA in the Commercial Catches, 1952-1958, and a New Method for the Determination of the Age of SARDINOPS OCELLATA, by O. Nawratil, Investigational Report No. 2, 43 pp., illus., printed, Administration of South West Africa, Marine Research Laboratory, Windhoek, South-West Africa.

#### POLAND:

"Les Peches Polonaises" (The Fisheries of Poland), article, France Peche, vol. 7, no. 60, March 1962, pp. 19-21, illus., printed in French. France Peche, Boite Postale 179, Lorient (Morbihan), France.

#### PORTUGAL:

"As Industrias de Conserva e da Pesca e Seus Multiplos Problemas" (The Canning and Fishing Industries and Their Multiple Problems), by Mario de Sousa, article, Conservas de Peixe, vol. 16, no. 192, March 1962, pp. 15, 17-18, 32, printed in Portuguese. Sociedade Astoria, Lda., Requeirao dos Anjos, 68, Lisbon, Portugal.

"As Pescarias no Algarve--Subsidios para a sua Historia" (The Fisheries of Algarve--Subsidies in Their History), by Alberto Iria, articles, Conservas de Peixe, vol. 16, no. 191, February 1962, pp. 31-33; and vol. 16, no. 192, March 1962, pp. 27-31, printed in Portuguese. Sociedade Astoria, Lda., Requeirao dos Anjos, 68, Lisbon, Portugal.

#### PRESERVATION:

"La Exportacion Espanola de Conservas y Semiconservas" (Spanish Exportation of Canned and Semi-Preserved Fishery Products), article, Industria Conservera, vol. 28, no. 273, March 1962, pp. 62-64, illus., printed in Spanish. Industria Conservera, Calle Marques de Valladares, 41, Vigo, Spain. Presents regulations for canning fishery products for export.

#### REFRIGERATED TRANSPORTATION:

Proyecto de Tratamiento, Conservacion y Transporte por el Frio, de Pescado y Productos de la Pesca (Project for Treatment, Conservation, and Refrigerated Transportation of Fish and Fishery Products), by Sergio Carvajal M., Divulgacion Pesquera Cartilla No. 1, 16 pp., processed in Spanish. Departamento de Pesca y Caza, Ministerio de Agricultura, Direccion de Agricultura y Pesca, Santiago, Chile, January 1962.

#### REFRIGERATION:

Institut International du Froid (International Institute of Refrigeration), 1961-62 supplement au Bulletin de l'Institut International du Froid, 254 pp., illus., printed in French and English. Institut International du Froid, 177, Boulevard Maiesherbes, Paris (17<sup>e</sup>), France, 1961. Discusses the meeting

of Commission 7 held at Padua, Italy, from June 1-3, 1961, on Refrigerated Transport by Land. Includes, among others, the following reports: "Chilled-air Distribution in Refrigerated Trailers," by P. R. Achenbach; "Notes on Testing the Insulation of Refrigerated Transport Equipment by the Cooling Method," by F. L. Levy; "Performance Tests of Thermostatic Control on Iced and Mechanically Refrigerated Rail Cars," by W. H. Redit; "The Transport of Quick-Frozen Foods in Great Britain in Highly Insulated Containers," by T. A. Eames; and "Transport of Foodstuffs Under Controlled Temperature in Rail-Road Trailers in France," by M. Chevallier. Also covers the meeting of Commission 5 held at Budapest, Hungary, from August 23-27, 1961, on Construction of Cold Stores, Quick Freezing, Insulation, Fruit Packing Stations. Includes, among others, the following reports: "Survey of Refrigeration Industries and Plants in Hungary," by P. Robert; "Pre-fabricated Single-Storeyed Cold-Stores," by V. I. Safonov; "Study of a Type of Freezing-Tunnel," by E. Gomez; "Deep-Freezing in Tunnels and Means to Obtain the Most Rapid Results Economically," by G. Ganger; "Practical Results of Quick-Freezing in Tunnels," by A. Lagoutte and J. Dalas; "Appreciation of the Quality of Frozen Products," by G. Perticara; "The Importance of Equilibrium Relative Humidity in the Cold Storage of Foodstuffs," by G. Torok; "Thermal Insulating Materials Used in the Construction of Cold-Stores," by N. T. Kudryashov; "Some Applications of Polystyrene for the Insulation of Cold-Stores," by J. Pau; "Insulation of Cold-Stores with Single Layer of Expanded Polystyrene," by J. Toledano; and "Insulation of Cold Rooms--New Insulation Materials and New Insulating Processes in Cold-Stores," by Ch. Fontanel.

#### RESEARCH VESSEL:

"Design of our New Research Vessel," by Jonathan Lieby, article, Oceanus, vol. 8, no. 4, June 1962, pp. 2-13, illus., printed. The Woods Hole Oceanographic Institution, Woods Hole, Mass. Describes the new oceanographic research ship now under construction by the Woods Hole Oceanographic Institution which will be the first major vessel designed and constructed for oceanographic service by a private laboratory in the United States since the 142 ft. ketch "Atlantis" in 1931. It has been designed to do effective all-weather oceanographic research from the fringe ice to the tropics and will be able to accommodate more than one scientific discipline on a given cruise. Detailed diagrams of the vessel are included.

#### SALMON:

"Nekotorye Dannye o Biologii i Promysle Lososiei v Tikhom Okeane" (Some Data on the Biology and Fishing of Salmon in the Pacific), by P. A. Dvinin, article, Rybnoe Khoziaistvo, vol. 35, no. 12, 1959, pp. 7-13, illus., printed in Russian. VNIRO Glavniproekta, pri Gosplanie SSSR, Moscow, U.S.S.R.

Pacific Salmon, OTS 60-51139, 288 pp., illus., printed, \$3. The Israel Program for Scientific Translations, 1961. (Available from The Office of Technical Services, U. S. Department of Commerce, Washington 25, D. C.) Contains translations of selected articles from various Soviet periodicals on Pacific salmon. The following articles are included: "Adaptive Features of Young Pacific Salmon," by V. V. Abramov;

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

"Migrations and Morphometrical Characteristics of the West Sakhalin Pink Salmon," by P. A. Dvinin; "The Type of Dynamics of Stocks and the Character of Spawning of the Chum and the Pink Salmon in the Amur River," by G. V. Nikol'skii; "Morphological Differences Between the Summer and the Autumn Chum Salmon," by L. D. Grigo; "One of the Factors of Prespawning Mortality of Pink Salmon in Rivers," by A. P. Makeeva; "Histological Study of Gonads of the Pink Salmon and the Summer Chum," by S. A. Ivanova; "Ecological and Morphological Characteristics of the Development of the Amur Autumn Chum Salmon," by N. N. Disler; "Pattern of Development of Summer Chum, Masu, and Pink Salmon," by S. G. Soin; "High-Seas Salmon Fisheries in the North Pacific," by P. A. Moiseev; "On the Artificial Raising of the Water Level in the Spawning Grounds of Far Eastern Salmon," by I. S. Vasil'ev; "Condition of Stocks of the Amur Salmon and Causes of the Fluctuations in Their Abundance," by A. G. Smirnov; "Changes in Chemical Composition of the Body of Red (Sockeye) Salmon," by I. V. Kizevetter; "Data on the Biology of the Amur Chum Salmon," by E. A. Lovetskaya; "Some Problems of the Biology and Population Dynamics of Pink Salmon," by A. G. Kaganovskii; "Results of Tagging Pacific Salmon in the Gulf of Kamchatka," by K. A. Lyamin; "Food of Pink Salmon at the End of Marine Stage of Migration," by N. F. Pushkareva; "Changes in the Blood Composition of Salmon During the Spawning Migration," by N. M. Lysaya; "Food of Pacific Salmon in Kamchatka Waters," by A. I. Synkova; "Morphology and Rate of Embryonic Development of Pacific Salmon," by M. Ya Ievleva; "The Osmoregulatory Ability of Young Autumn Chum Salmon Migrating Downstream," by V. Ya Levanidov; "Physical and Mechanical Properties of Pink Salmon," by L. M. Men'shutina; "Data on the Biology of Young Silver Salmon During the Marine Period of Live," by I. A. Piskunov; "Food of Downstream Migrant Young Summer Chum Salmon and Pink Salmon in the Amur Tributaries," by V. Ya Levanidov and I. M. Levanidova.

"Serological Differentiation of Populations of Sockeye Salmon, *Onchorhynchus nerka*," by G. J. Ridgway, J. E. Cushing, and G. L. Durall, article, *Bulletin, International North Pacific Fisheries Commission*, no. 3, 1961, pp. 5-10, illus., printed. International North Pacific Fisheries Commission, 6640 NW. Marine Dr., Vancouver 8, B. C., Canada.

"Some Problems in the Marking of Salmonids," by Donald H. Fry, article, *Pacific Marine Fisheries Commission Bulletin*, no. 5, 1961, pp. 77-83, illus., printed. Pacific Marine Fisheries Commission, 741 State Office Bldg., 1400 SW. 5th Ave., Portland 1, Oregon.

"Survival and Behavior of Sockeye Salmon Fry Migrating into Brooks Lake, Alaska," by Wilbur L. Hartman, Charles W. Strickland, and David T. Hoopes, article, *Transactions of the American Fisheries Society*, vol. 91, no. 2, April 1962, pp. 133-139, illus., printed. Secretary, American Fisheries Society, P. O. Box 483, McLean, Va.

#### SALTED FISH:

"Salted and Dried Fish. III--Washing of Used Salt," by M. K. Rowan, article, *Annual Report, Fishing Industry Research Institute*, vol. 13, 1960, pp. 12-

13, printed. University of Cape Town, Rondebosch, C. P., South Africa.

#### SARDINES:

*Biología y Tecnología de las Sardinias Cubanas. I--HARENGULA PENSACOLAE CUBANA Rivas y HARENGULA HUMERALIS (Cuvier) (Biology and Technology of the Cuban Sardines. I--Harengula pensacolae cubana Rivas and Harengula humeralis (Cuvier))*, by José A. Suarez Caabro, Pedro Pablo Duarte Bello, and Julia Alvarez Reguera, no. 19, 87 pp., illus., printed in Spanish. Instituto Cubano de Investigaciones Tecnológicas, Apartado 4026, Via Blanca y Carretera Central, Havana, Cuba, December 1961.

*Fishery Biology of the Sardine, SARDINOPS MELANO-STICTA (T. & S.), in the Waters Around Japan*, Bulletin No. 9, 227 pp., illus., printed in Japanese. Japanese Fisheries Agency, Japanese Sea Regional Fisheries Research Laboratory, Niigata, Japan, 1961.

"Refrigeration et Pre-Conservation des Sardinies a Bord du Bateau de Peche" (Chilling of Sardines in Refrigerated Seawater on Fishing Boats), by T. Le Berre, article, *Science et Peche*, no. 91, March 1961, 5 pp., printed in French. L'Institut Scientifique et Technique des Peches Maritimes, 59 Ave. Raymond-Poincare, Paris 16<sup>e</sup>, France.

#### SEAWEED:

*Annual Report for 1961*, 21 pp., printed. Institute of Seaweed Research, Inveresk, Midlothian, Scotland. Discusses developments in the Scottish and foreign seaweed byproducts industry during 1961, and the Institute's information and technical assistance services. Also discusses production of alginates from seaweed, use of seaweed meal in animal feedstuffs, and development of fertilizers from seaweed. Includes results of investigations on algal polysaccharides, biochemical studies on seaweeds, nitrogenous constituents of marine algae, chemical composition of marine micro-algae, and a list of publications on seaweed published during 1961.

#### SHARKS:

"Wanted: Shark Hunters!" by James Wiles, article, *Sea Frontiers*, vol. 8, no. 2, May 1962, pp. 84-93, illus., printed. Marine Laboratory, University of Miami, 1 Rickenbacker Causeway, Miami 49, Fla. No method for controlling sharks has yet provided complete protection from them or had long-lasting effects. Dyes, air-bubble shields, electronic fields, and off-shore nets are all defensive measures that have been taken. This article discusses the approach of turning defense into offense by seeking methods to eliminate or greatly reduce local shark populations by means of fishing programs. The author feels that through intensive systematic fishing, sharks not only can be captured and destroyed, but also can be made available to scientists for important studies.

#### SHELLS:

"Water Bottoms Bonanza," by McFadden Duffy, article, *Louisiana Conservationist*, vol. 14, no. 4, April 1962, pp. 21-24, illus., printed. Louisiana Wild Life and Fisheries Commission, Wild Life & Fisheries Bldg., 400 Royal St., New Orleans, La. A brief description of the operations of the Louisiana shell industry and the industrial uses of shells in

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

petroleum, chemicals, Portland cement, lime, chicken feed, concrete masonry units, railroad ballast, as well as all types of base construction for road work, stabilization of bases for air fields, runways, in addition to use in asphalt or plant mix. Shell "fines" are also used in the manufacture of roofing. Dredging of shells, and operation of industries using shells, are multi-million dollar activities in Louisiana. Obtaining shells for industry and the transportation to processing plants offers employment to several thousand people in Louisiana. Processing plants in the State employ additional thousands of persons.

#### SHRIMP:

"A Cooperative Study of Shrimp and Incidental Fish Catches Taken in Shrimp Fishing Gear in California and Oregon, 1958," by Alfred R. Morgan and Doyle E. Gates, article, Pacific Marine Fisheries Commission Bulletin, no. 5, 1961, pp. 85-106, illus., printed, Pacific Marine Fisheries Commission, 741 State Office Bldg., 1400 SW. 5th Ave., Portland 1, Oreg.

#### SMALL BUSINESS MANAGEMENT:

Building Sales to Younger Customers, Management Aids No. 80, by S. E. Mahle, 4 pp., printed. Small Business Administration, Washington 25, D. C. This leaflet tells how to build sales to younger customers. It emphasizes the younger group because cultivation of these consumers can mean three things. First, some small marketers can increase their present sales by selling directly to teenagers. Second, other small marketers can increase their sales through the influence that teenagers exert on the family's spending. And third, in some cases, small marketers can build loyalty that will mean increased future sales--sales when these boys and girls grow into the young adult group.

Measuring Your Growth Pattern, Management Aids, No. 141, by Joseph Mullen, 4 pp., printed. Small Business Administration, Washington 25, D. C. Describes methods by which businessmen may measure their growth pattern such as sales growth, production efficiency, rate of return on invested capital, customer turnover, new product development, and personnel growth.

A Survey of Federal Government Publications of Interest to Small Business, 71 pp., printed, 30 cents. Small Business Administration, Washington, D. C. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.) Contains information about publications of interest to small business owners. Some of the material listed outlines the help available from Federal agencies. Other publications listed explain, in non-technical language, the laws which the agencies enforce, and still others present statistical data useful in marketing or specialized information pertinent to particular industries or trades. Most of the publications included were published within the last two years and are all readily available to the small business owner-manager.

#### SMOKED FISH:

Selected Publications Concerning Smoked Fish, Circular No. 22, 5 pp., processed. Fisheries Research Board of Canada, Technological Station, Vancouver, B. C., Canada, May 1958.

#### SOUTH AFRICA:

Die sardyn van Suidwes-Afrika (SARDINOPS OCELLATA) (The Sardine of Southwest-Africa--Sardinops ocellata), by O. Nawratil, Research Report No. 2, 39 pp., illus., printed in Afrikaans. Administrasie van Suidwes-Afrika, Marine-Navorsingslaboratorium, Cape Town, South Africa Republic.

#### SOUTH PACIFIC:

Identifications of Fish Collections from Kapingamarangi, Eastern Caroline Ids, Ifaluk, Western Caroline Islands, Raroia, Tuamotu Archipelago, by Robert R. Rofen, AD-272 133, 118 pp., illus., printed, \$10.10. Pacific Science Board, National Research Council, Washington, D. C., Dec. 1961. (For sale by the HQ Armed Services Technical Information Agency, Arlington Hall Station, Arlington 12, Va.)

#### SOUTH WEST AFRICA:

"The Fishing Industry at Walvis Bay," article, The South African Shipping News and Fishing Industry Review, vol. 17, no. 1, January 1962, pp. 53-109, illus., printed, single copy 40 cents. Odhams Press, South Africa, P. O. Box 2598, Cape Town, South Africa Republic. Describes the growth and present healthy state of the fishing industry of South-West Africa's main seaport, Walvis Bay. Devotes a special article to each of the six pilchard processing factories.

#### SPAWNING:

Spawning Seasons and Growth of the Code Goby, *Gobiosoma robustum* (Pisces: Gobidae), in the Tampa Bay Area, by Victor G. Springer and Andrew J. McErlean, Contribution No. 56, 10 pp., illus., printed. (Reprinted from Tulane Studies in Zoology, vol. 9, no. 2, November 10, 1961, pp. 87-98.) Florida State Board of Conservation Marine Laboratory, St. Petersburg, Fla.

#### SPINY LOBSTERS:

"La Pesca Industrial de la Langosta en Cuba" (Commercial Fishing for Spiny Lobsters in Cuba), by F. de T., article, Puntal, vol. 9, no. 95, February 1962, pp. 12-13, illus., printed in Spanish, 12 pesetas (20 U. S. cents). Puntal, Ramon y Cajal 3, Apartado 316, Alicante, Spain.

#### SPORT FISH:

Northern Fishes (With Special Reference to the Upper Mississippi Valley), by Samuel Eddy and Thaddeus Surber, 267 pp., illus., printed. The University of Minnesota Press, Minneapolis, Minnesota, 1943.

#### STICKWATER:

Evaporadores de Agua de Cola (Stickwater Evaporators), by Peter C. J. Molteno, Divulgacion Pesquera Cartilla No. 2, 12 pp., illus., processed in Spanish. Departamento de Pesca y Caza, Ministerio de Agricultura, Direccion de Agricultura y Pesca, Santiago, Chile.

#### SWORDFISH:

The Swordfish (*Xiphias gladius* L.), Its Life-History and Economic Importance in the Northwest Atlantic, by S. N. Tibbo, L. R. Day, and W. F. Doucet, Bulletin No. 130, 53 pp., illus., printed, 75 Canadian cents. Fisheries Research Board of Canada, Ottawa, Canada, 1961. (Available from the Queen's Printer, Ottawa, Canada.) A general account is



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

given of the life-history of swordfish and the development of a fishery for swordfish in the north-west Atlantic. Special attention is given to the Canadian catch which has increased spectacularly in the last decade from about 2 million pounds in 1949 to nearly 7 million pounds in 1959. The increase is associated with a change in the nature of the fishery from a small boat, inshore operation to the use of long liners and dragnets that can operate offshore and over a wide area. The prospects for continued expansion of this important industry are discussed.

#### TAIWAN:

Taiwan Fisheries Yearbook 1961 Edition, 194 pp., illus., printed in Chinese and English. Department of Agriculture and Forestry, Provincial Government of Taiwan, Taipei, Taiwan, August 1961. Contains statistical tables showing fishermen's organizations and membership, fishermen, status of fishing vessels, status of ice making and cold-storage industries, fisheries production, and quantity of supply and sale of fishery products and their average value at principal fish markets. Also includes data on processed marine products, fish culture area, production of fish fries, number of casualties of fishermen, losses and damage to fishing vessels and gear, fishing activity at principal fishing harbors by type of craft, foreign trade in fishery products, and related information. Most data are for 1960.

#### TARIFFS AND TRADE:

Operation of the Trade Agreements Program, 13th Report--July 1959-June 1960, TC Publication 51, 255 pp., processed. United States Tariff Commission, Washington 25, D. C., 1962. During the period July 1959-June 1960, the U. S. had trade agreements obligations in force with 43 countries. Of these, 35 countries were contracting parties to the General Agreement on Tariffs and Trade, and 8 were countries with which the United States had bilateral trade agreements. The United States participated in limited trade-agreement negotiations under the General Agreement during this period with Cuba, Belgium, Denmark, West Germany, Japan, the Netherlands, Sweden, the United Kingdom, and Canada. The report describes these negotiations and, for those that were completed, analyzes the changes that they made in the schedules of concessions of the respective countries. Also covers other important developments including the major developments relating to the general provisions and administration of the General Agreement; the actions of the United States relating to its trade agreements program; and the major commercial policy developments in countries with which the United States has trade agreements.

#### TEREDO BORER:

The General Biology of Teredo (Final Report 1954-1960), by Charles E. Lane, 11 pp., processed. Marine Laboratory, University of Miami, #1 Rickenbacker Causeway, Miami 49, Fla. Presents a narrative account of the research project concerned with teredine borers--the principal findings and their significance. The objectives of the investigation were to define as broadly as possible the principal features of the life history and definitive physiology of the teredine borers. The results and conclusions derived from these studies

are included in the papers listed in the section entitled "Publications."

#### TRADE LISTS:

The Bureau of International Business Operations, U. S. Department of Commerce has published the following mimeographed trade lists. Copies may be obtained by firms in the United States from the Commercial Intelligence Division, Office of Trade Promotion, Bureau of Foreign Commerce, U. S. Department of Commerce, Washington 25, D. C., or from Department of Commerce field offices at \$1 each.

Canneries and Frozen Foods--Producers and Exporters--Costa Rica, 5 pp. (April 1962). Lists the names and addresses, size of firms, and types of products handled by each firm. Also contains trade and industry data, and a statistical table indicating the average annual imports of foodstuffs (including fish) during the period 1959-61 and the average percentage of the total imported from the United States.

Canneries--The Netherlands, 13 pp. (April 1962). Lists the names and addresses, size of firms, and types of products handled by each firm. Includes fish canneries and exporters. Also covers basic trade and industry data.

Oils (Animal, Fish and Vegetable)--Importers, Dealers, Producers, Refiners, and Exporters, Italy, 20 pp., processed (April 1962). Lists the names and addresses, size of firms, and types of products handled by each firm. Includes firms dealing in fish and whale oils.

#### TRAWLING:

"Tralernes Fiske i 1960" (Fish Trawling in 1960), article, Fiskets Gang, vol. 48, no. 10, March 1962, pp. 143-149, illus., printed in Norwegian. Fiskeridirektoratet, Radatuplass 10, Bergen, Norway.

#### TRAWL NETS:

"Duchalut de Fond a Grande Ouverture Verticale au Chalut Flottant" (From the Bottom Trawl with Large Vertical Opening to the Midwater Trawl), by C. Nedelec, article, Science et Peche, no. 85, July-August 1961, 13 pp., illus., printed in French. L'Institut Scientifique et Technique des Peches Maritimes, 59 Ave. Raymond-Poincare, Paris 16<sup>e</sup>, France.

"On the Fishing Experiments Conducted with 10-ft. Bean-Trawl Net," by S. E. Deshpande, article, Indian Journal of Fisheries, vol. 7, no. 1, 1960, pp. 174-186, illus., printed, Ministry of Food and Agriculture, New Delhi, India.

#### TUNA:

Catch Variations in the North Pacific Albacore. 2. Variation in the Amount of Recruitment, by Akira Suda, Report No. 59-18353, 1959, 22 pp., printed, microfilm \$2.70, photocopy \$4.80. (Translated from Nankai-ku Suisan Kenkyusho Hokoku, no. 10, 1959, pp. 72-87.) Library of Congress, Photoduplication Service, Publication Board Project, Washington 25, D. C.

On the Migration and the Growth of the Skipjack, KATSUWONUS PELAMIS (Linnaeus) in the Izu and Bonin Sea Areas and the Northeastern Sea Area Along the Pacific Coast of Japan, by Tsuyoshi Kawasaki

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

aki, Report No. 59-19341, 1959, 34 pp., printed, microfilm \$3.00, photocopy \$6.30. (Translated from Tohoku Kaiku Suisan Kenkyusho Kenkyu Hokoku, no. 4, 1955, pp. 101-119.) Library of Congress, Photoduplication Service, Publication Board Project, Washington 25, D. C.

On the Migration and the Growth of the Skipjack, KATSUWONUS PELAMIS (Linnaeus) in the South-Western Sea Area of Japan, by Tsuyoshi Kawasaki, Report No. 59-19342, 1959, 41 pp., printed, microfilm \$3.00, photocopy \$6.30. (Translated from Tohoku Kaiku Suisan Kenkyusho Kenkyu Hokoku, no. 4, 1955, pp. 83-100.) Library of Congress, Photoduplication Service, Publication Board Project, Washington 25, D. C.

On the Ovaries of the Skipjack, KATSUWONUS PELAMIS (Linnaeus) Captured in the Fishing Grounds Along the Japanese Coast, by Masakazu Yao, Report No. 59-18563, 1959, 15 pp., illus., printed, microfilm \$1.80. (Translated from Tohoku Kaiku Suisan Kenkyusho Kenkyu Hokoku, no. 5, 1955, pp. 43-52.) Library of Congress, Photoduplication Service, Publication Board Project, Washington 25, D. C.

"A Pesca de Atum-Suas Possibilidades en Angola" (Tuna Fishing - Its Possibilities in Angola), by A. de Oliveira Neves, article, Boletim da Pesca, vol. 12, no. 66, 1960, pp. 79-87, printed in Portuguese. Gabinete de Estudos das Pescas, R. S. Bento 644, Lisbon, Portugal.

On the Stomach Contents of the Skipjack, by Hideyuki Hotta and Toru Ogawa, Report No. 59-19338, 1959, 33 pp., printed, microfilm \$3.00, photocopy \$6.30. (Translated from Tohoku Kaiku Suisan Kenkyusho Kenkyu Hokoku, no. 4, 1955, pp. 62-82.) Library of Congress, Photoduplication Service, Publication Board Project, Washington 25, D. C.

Young Tunas Found in Stomach Contents, by Hiroshi Yabe, and others, Report No. 59-18393, 1959, 30 pp., printed, microfilm \$2.70, photocopy \$4.80. (Translated from Nankai-ku Suisan Kenkyusho Hokoku, no. 8, 1958, pp. 31-48.) Library of Congress, Photoduplication Service, Publication Board Project, Washington 25, D. C.

#### URUGUAY:

Revista del Instituto de Investigaciones Pesqueras (Journal of the Institute of Fisheries Research), vol. 1, no. 1, 1962, illus., printed in Spanish with English summaries, price in Uruguay 40 pesos or US\$3.65, other Western Hemisphere countries and Spain \$5.00, and all other countries \$6.00. Instituto de Investigaciones Pesqueras, Facultad de Veterinaria, Alberto Lasplacas, 1550, Montevideo, Uruguay. One article deals with the hydrolysis of whale meat. Another article describes the determination of the salinity through the Mohr-Westphal balance and presents four tables of direct conversion from specific weight to salinity.

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

"Perspektivy Razvitiia Sovetskogo Rybolovstva v Vodakh Atlantiki" (Prospects of the Development of Soviet Fisheries in the Atlantic Waters), by A. V.

Mikheev, article, Rybnoe Khoziaistvo, vol. 35, no. 11, 1959, pp. 3-6, illus., printed in Russian. VNIRO Glavniproekta, pri Gosplanie, SSSR, Moscow, U.S.S.R.

#### VESSELS:

"Das Kombinierte Fangschiff" (The Combination Fishing Vessel), by C. Birkhoff, article, Hansa, vol. 97, no. 16/17, 1960, pp. 826-831, illus., printed in German. Schiffahrts-Verlag "Hansa", Hamburg, Germany.

Die nordeuropaischen Seefischereifahrzeuge, ihre Entwicklung und ihre Typen (The Development and Types of Marine Fishing Vessels in Northern Europe), by Gerhard Timmermann, Handbuch der Seefischerei Nordeuropas, vol. 11, no. 4, 1962, 204 pp., illus., printed in German, DM 79.60 (about US\$20.00). E. Schweizerbart'sche Verlagsbuchhandlung (Nagel u. Obermiller), Stuttgart W., German Federal Republic. Contains a short history of ship construction and conditions responsible for the form of the various marine vessels in Northern Europe. Includes data on vessels of Middle-Europe, Scandinavia, and Western Europe, as well as information on vessels needed for whale and seal catches, a listing of types of vessels, and a bibliography. The survey on this subject can only be very general because there isn't sufficient literature available on each individual type of vessel. There were quite a few ships found that date from the days of the Vikings, and there is some historical source material available. Not until the 17th Century, however, do we come across some material describing certain marine vessels. Between the 17th and 19th centuries there were exhaustive books written on the subject, including valuable engravings displaying the various types of vessels. In the 20th century, bulletins of museums contained information on the folklore aspects of marine vessels. Later, when economic and technical considerations came into prominence, more information on the subject could be gathered from technical journals and books.

Proceedings of the International Economic Conference on Small Craft Fisheries and Transportation (May 24, 1960, Hotel Waldorf-Astoria, New York), 24 pp., illus., printed in French and Spanish. Outboard Marine International S. A., P. O. Box 830, Nassau, Bahamas.

#### VIET-NAM:

Scientific Facilities and Information Services of the Republic of Viet-Nam, by John O. Sutter, Pacific Scientific Information No. 3, 37 pp., illus., printed, 50 cents. The Manager, Pacific Scientific Information Center, Bishop Museum, Honolulu 17, Hawaii, 1961.

#### VIRGIN ISLANDS:

Charting the Marine Environments of St. John, U. S. Virgin Islands, by Herman Kumpf and Helen Randall, Contribution 348, 8 pp., illus., printed. (Reprinted from Bulletin of Marine Science of the Gulf and Caribbean, vol. 11, no. 4, December 1961, pp. 543-551.) The Marine Laboratory, University of Miami, #1 Rickenbacker Causeway, Miami, Fla., 1961. By use of the diving sled in conjunction with serial photos, charting of the marine biotopes of St. John, Virgin Islands, was carried out expediently and accurately. The method of operation of the diving sled is discussed and pos-

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

sible application to other phases of aquatic investigation are mentioned. The chart of the marine environments of St. John is figured.

#### WATER POLLUTION:

Conference on Water Pollution Problems in Europe (Held in Geneva from 22 February to 3 March 1961), vols. I, II, and III, United Nations Publications, sales number 61.II E/Mim. 24, 626 pp., processed, \$5.00. Sales Section, European Office of the United Nations, Palais des Nations, Geneva, Switzerland, 1961. The secretariat of the United Nations Economic Commission for Europe has assembled here the documents which were submitted to the Conference on Water Pollution Problems in Europe. The documents are assembled in three volumes and have been grouped according to the major items discussed at the Conference. Volume I contains documents dealing with the most urgent water pollution problems requiring attention; Volume II incorporates the papers concerned with administrative and legal aspects of water pollution control; and Volume III those which discuss the economic aspects of water pollution and the possibilities for international action through establishment of international water pollution control bodies and international exchanges of information. The report of the Conference and the list of participants are also included in Volume III.

#### WEATHER CHARTS:

Coastal Warning Facilities Chart, Cape Hatteras, N. C., to Brunswick, Ga., 1962, 2 pp., processed, 10 cents. Weather Bureau, U. S. Department of Commerce, Washington, D. C. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.) This chart shows stations displaying small craft, gale, whole gale, and hurricane warnings, explanation of warning displays, and schedules of AM and FM radio and TV stations that broadcast weather forecasts and warnings.

Coastal Warning Facilities Chart, Montauk Point, N. Y., to Manasquan, N. J., 1962, 2 pp., processed, 10 cents. Weather Bureau, U. S. Department of Commerce, Washington, D. C. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.) This chart shows stations displaying small craft, gale, whole gale, and hurricane warnings, explanation of warning displays, and schedules of AM and FM radio and TV stations that broadcast weather forecasts and warnings.

Coastal Warning Facilities Chart, 1962, Point Conception, Calif., to Mexican Border, 20M, 2 pp., processed, 10 cents, 1962. Weather Bureau, U. S. Department of Commerce, Washington, D. C. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.) Chart shows stations displaying small craft, storm, and hurricane warnings and explanations and schedules of AM and FM radio and TV stations that broadcast weather forecasts and warnings.

#### WHALES:

"Reproduction, Growth and Age of Southern Fin Whales," by R. M. Laws, article, Discovery, vol. 31, pp. 327-486, illus., printed, Jarrold and Sons Ltd., Norwich, England.

#### WHALING:

"Australia's 1961 Whaling Season," article, Fisheries Newsletter, vol. 21, no. 2, February 1962, pp. 15, 26, illus., printed. Commonwealth Director of Fisheries, Department of Primary Industry, Canberra, Australia. A summary of the whale catch from the five Australian shore stations during 1961. Includes data on location of catch; species, length, sex and maturity of whales caught; oil and byproducts yield; the Antarctic catch; and summary of the results of whaling from Australian stations since 1957.

"Pelagic Whaling in the Antarctic Season 1961/62," article, Norsk Hvalfangst-Tidende, vol. 51, no. 4, April 1962, pp. 156, 159-161, printed in Norwegian and English. Norsk Hvalfangst-Tidende, Sandefjord, Norway. Discusses details of the catch and vessels participating in the 1961/62 Antarctic whaling season under the flags of Norway, Japan, the United Kingdom, U.S.S.R., and the Netherlands. Includes statistics showing the weekly harvest of blue-whale units with comparative data for the two previous seasons; average number of blue-whale units per catcher day by countries in the last four seasons; last season's catch and production of whale products together with the average catch per catcher day; production of whale and sperm oil of the individual expeditions for the last three seasons; and other pertinent data for the whaling fleets of the five nations.

#### WORLD TRADE:

The following World Trade Information Service Reports, published by the Bureau of Foreign Commerce, U. S. Department of Commerce, Washington, D. C., are for sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C., at 10 cents a copy.

Licensing and Exchange Controls, Republic of South Africa, Operations Report No. 62-12, WTIS Part 2, 12 pp., printed, March 1962.

#### YUGOSLAVIA:

Informativni bilten (Information Bulletin), printed monthly in Serbo-Croatian. Institut za Tehnologiju Ribe, P.O.B. 110, Zadar, Yugoslavia. Contains, among others, the following articles:

\_\_\_\_\_, No. 1, January 1961. "Dark Spots in Fish Meat," by E. Androvic; and "On Retort Venting during Sterilization," by H. Lisac.

\_\_\_\_\_, No. 2, February 1961. "The Advantage and Quality of Canned Sardines Produced by IMC Machine," by N. Kucic; and "The Comparative Production of Solid Packs and Tunnyfish with Vegetable," by M. Lete.

\_\_\_\_\_, No. 3, March 1961. "Proposed Changes in Existing Standards for Fishery Products," by H. Lisac.

\_\_\_\_\_, No. 4, April 1961. "Some Problems of Soldering Fluxes," by K. Sepic.

\_\_\_\_\_, No. 5, May 1961. "Regular Repairs in Fish Canning Plants," by V. Perovic; and "The Big-



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

gest Export of Fish Products in 1960," by D. Djurdjevic.

\_\_\_\_\_, No. 6, June 1961. "Seaming Machine Adjustment," by K. Sepic.

\_\_\_\_\_, No. 7, July 1961. "The Use of Juvipur Piping in Fish Canning Plant," by V. Perovic.

\_\_\_\_\_, No. 8, August 1961, "Electrical Installation in Fish Canning Plant," by V. Perovic.

\_\_\_\_\_, No. 9, September 1961. "Fisheries of Cambodia," by K. Sepic.

\_\_\_\_\_, No. 10, October 1961. "A Brief Resume on Fish Handling and Processing in Egypt," by M. Aref; and "Fisheries of Cambodia--II," by K. Sepic.

\_\_\_\_\_, No. 11, November 1961. "The Use of Decollage<sup>1</sup>/ Cans for Canned Fish," by V. Zaputovic and S. Mramor; "Soldered Joints on Tin-Plate Cans," by K. Sepic; "Soldering Fluxes and Their Influence to the Can Content," by S. Banjad; and "Quality Control of Tin Plate Cans," by D. Franolic.

\_\_\_\_\_, No. 12, December 1961. "Aluminum, its Characteristics and Application in Food Canning Industry," by V. Perovic; "Notes about Fishing Industry in Japan," by S. Bacic; "Cans Volume and Weight of Content," by S. Banjad; and "The Causes of Loosened Seams Formation on Square Cans during Sterilization," by H. Lisac.

<sup>1</sup>Can with soldered lid or cover.

Listings under Yugoslavia supplied by K. Sepic.



#### TROUT PLANTED BY PLANE

In the Mount Rainier National Park stocking program, 53,300 fingerling rainbow trout (weighing a total of 65 pounds) were stocked from the air in eight lakes, according to a report from the Portland Regional Office of the U. S. Bureau of Sport Fisheries and Wildlife. The fish, which were provided by Quilcene National Fish Hatchery, were placed in plastic bags, oxygen added, and the bags carried in cardboard cartons stacked in the plane. A private flying plane was engaged to do the job. The 3-hour job cost \$90 for plane rental, a big saving over costs for pack stock and packers. The fish were released in excellent condition.

Editorial Assistant--Ruth V. Keefe

Compositors--Jean Zalevsky, Alma Greene, Helen Paretto, and Raie Carron

\* \* \* \* \*

Photograph Credits: Page by page, the following list gives the source or photographer for each photograph in this issue. Photographs on pages not mentioned were obtained from the Service's file and the photographers are unknown.

Cover and p. 72--Arnie J. Suomela, American Embassy, Tokyo, Japan; pp. 6 & 7--Maine Development Commission, Augusta, Maine; pp. 28, 30 (fig. 2--left column), and 31--F. B. Sanford & C. F. Lee; p. 30 (fig. 2--right column), Fishery Technological Laboratory, E. Boston, Mass.; p. 33--R. K. Brigham, Woods Hole, Mass.; p. 45--Andrew L. Pinto; p. 60--Press Bureau, Danish Foreign Ministry; p. 84--Walter H. Stolting.