



FISH AND WILDLIFE SERVICE PUBLICATIONS

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

- CFS - CURRENT FISHERY STATISTICS OF THE UNITED STATES.
 FL - FISHERY LEAFLETS.
 SL - BRANCH OF STATISTICS LISTS OF DEALERS IN AND PRODUCERS OF FISHERY PRODUCTS AND BYPRODUCTS.
 WL - WILDLIFE LEAFLETS.
 SSR.- FISH. - SPECIAL SCIENTIFIC REPORTS--FISHERIES (LIMITED DISTRIBUTION).
 SSR.- WILDLIFE - SPECIAL SCIENTIFIC REPORTS--WILDLIFE (LIMITED DISTRIBUTION).
 SEP.- SEPRATES (REPRINTS) FROM COMMERCIAL FISHERIES REVIEW.

- | Number | Title |
|----------|--|
| CFS-2336 | - Hawaii Landings, 1959 Annual Summary, 6 pp. |
| CFS-2348 | - Fish Meal and Oil, May 1960, 2 pp. |
| CFS-2351 | - Massachusetts Landings, April 1960, 5 pp. |
| CFS-2352 | - New York Landings, May 1960, 4 pp. |
| CFS-2353 | - California Landings, April 1960, 4 pp. |
| CFS-2354 | - North Carolina Landings, June 1960, 3 pp. |
| CFS-2355 | - South Carolina Landings, June 1960, 2 pp. |
| CFS-2356 | - Texas Landings, May 1960, 3 pp. |
| CFS-2357 | - Fish Sticks and Portions, April-June 1960, 3 pp. |
| CFS-2358 | - Frozen Fish Report, June 1960, 8 pp. |
| CFS-2359 | - Maryland Landings, May 1960, 3 pp. |
| CFS-2360 | - Shrimp Landings, April 1960, 6 pp. |
| CFS-2361 | - Rhode Island Landings, May 1960, 3 pp. |
| CFS-2362 | - Fish Meal and Oil, June 1960, 4 pp. |
| CFS-2362 | - (Supplement) - Imports of Fish Meal and Scrap, 1937-1959, 4 pp. |
| CFS-2364 | - New Jersey Landings, June 1960, 3 pp. |
| CFS-2366 | - Alabama Landings, April 1960, 2 pp. |
| CFS-2367 | - Ohio Landings, May 1960, 2 pp. |
| CFS-2368 | - Georgia Landings, June 1960, 2 pp. |
| CFS-2369 | - South Atlantic Fisheries, 1959 Annual Summary, 6 pp. |
| CFS-2371 | - Florida Landings, June 1960, 7 pp. |
| CFS-2374 | - Maryland Landings, June 1960, 3 pp. |
| FL-248 | - Japanese Whaling in the Bonin Island Area (A Preliminary Report), 16 pp., illus., June 1947. |
| FL-293 | - (Revised September 1959) - List of Fishermen's and Fish Shore Workers' Unions in the United States, 8 pp. |
| FL-498 | - Culture, Handling and processing of Pacific Coast Oysters, by Lynn G. McKee and Richard W. Nelson, 22 pp., illus., April 1960. |

Wholesale Dealers in Fishery Products (Revised):

- SL- 21 - California, 1959.
 SL- 39 - Tennessee (Mississippi River and Tributaries), 1959.
 SL- 40 - Oklahoma (Mississippi River and Tributaries), 1959.
 SL- 41 - Arkansas (Mississippi River and Tributaries), 1959.
 SL- 43 - Alabama (Mississippi River and Tributaries), 1959.
 SL- 45 - Mississippi (Mississippi River and Tributaries), 1959.
 SL- 46 - Texas (Mississippi River and Tributaries), 1959.

Firms Manufacturing, 1959 (Revised):

- SL- 152 - Oyster Shell Products, 1959.
 SL- 155 - Marine Pearl Shell Buttons, 1959.
 SL- 161 - Producers of Packaged Fish, 1959.

SSR-Fish. No. 283 - Marquesas Area Fishery and Environmental Data, October 1957-June 1958, by Robert C. Wilson, Eugene L. Nakamura, and Howard O. Yoshida, 110 pp., November 1958.

SSR-Fish. No. 329 - Use of Fish Pituitaries to Induce Spawning in Channel Catfish, by Kermit E. Sneed and Howard P. Clemens, 14 pp., illus., April 1960.

SSR-Fish. No. 336 - Age and Size Composition of the Menhaden Catch Along the Atlantic Coast of the United States, 1956 (With a Brief Review of the Commercial Fishery), by Fred C. June and John W. Reinjes, 42 pp., illus., April 1960.

SSR-Fish. No. 339 - Fishes Taken in the Menhaden Fishery of Alabama, Mississippi, and Eastern Louisiana, by J. Y. Christmas, Gordon Gunter, and Edward C. Whatley, 12, pp., illus., April 1960.

Sep. No. 598 - Lobster Explorations on Continental Shelf and Slope off Northeast Coast of the United States.

Sep. No. 599 - A Small-Boat Tuna Long-Line Fishery.

Organization and Management of Fishery Cooperative Associations in the United States, by Leslie D. McMullin, 11 pp., processed, 1959. This paper was presented at the Food and Agriculture Organization Technical Meeting on Fishery Cooperatives, May 12-21, 1959, at Naples.

A Report on the Fish and Wildlife Resources Affected by the Bruce Eddy Dam and Reservoir Project, North Fork Clearwater River, Idaho, 47 pp., illus., processed, June 1960.

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- 6	Mexico's Fish and Shellfish Canning Industry, 1959.
MNL- 7	Mexican Fisheries, 1959.
MNL- 8	Portuguese Fishing Industry, 1959.
MNL-23	Fisheries of Chile.
MNL-25	Canadian Reduction Plants.
MNL-26	Taiwan Fisheries in 1959.
MNL-27	French Reduction Plants.
MNL-28	Portuguese Reduction Plants.

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

California Fishery Products Monthly Summary, Part I--Fishery Products Production and Market Data, June 1960; 14 pp. (Market News Service, U. S. Fish and Wildlife Service, Post Office Bldg., San Pedro, Calif.) California cannery receipts of tuna and tuna-like fish; pack of canned tuna, mackerel, and anchovies; market fish receipts at San Pedro, Santa Monica, and Eureka Areas; California imports; canned fish and frozen shrimp prices; ex-vessel prices for cannerly fish; and Mexican frozen shrimp prices for the month indicated.

California Fishery Market News Monthly Summary, Part II--Fishing Information, July 1960, 11 pp., illus. (Bureau of Commercial Fisheries, Biological Laboratory, P. O. Box 6121, Pt. Loma Station, San Diego 6, Calif.) The first issue of a new publication which includes monthly sea-surface temperature charts for the eastern Pacific, and fishing and research information of interest to the west coast tuna fishing industry and marine scientists. The temperature charts cover that area of the Pacific from the Aleutians in the north to Peru and Chile in the south and offshore to 180° W. longitude. They show for each month the average sea-surface temperature and the deviations from the 30-year average and from the previous year. Research and fishing information indicates that the distribution of tunas and many other commercial species is directly affected by sea-surface temperatures.

(Chicago) Monthly Summary of Chicago's Fresh and Frozen Fishery Products Receipts and Wholesale Market Prices, July 1960, 13 pp. (Market News Service, U. S. Fish and Wildlife Service, 565 W. Washington St., Chicago 6 Ill.) Receipts at Chicago by species and by states and provinces for fresh and salt-water fish and shellfish; and wholesale prices for fresh and frozen fishery products; for the month indicated.

Gulf Monthly Landings, Production, and Shipments of Fishery Products, July 1960, 6 pp. (Market News Service, U. S. Fish and Wildlife Service, 609-611 Federal Bldg., New Orleans 12, La.) Gulf States shrimp, oyster, finfish, and blue crab landings; crab meat production; LCL express shipments from New Orleans; wholesale prices of fish and shellfish on the New Orleans French Market; sponge sales; and imports at Port Isabel and Brownsville, Texas, from Mexico; for the month indicated.

Monthly Summary of Fishery Products Production in Selected Areas of Virginia, North Carolina, and Maryland, July 1960, 4 pp. (Market News Service,

U. S. Fish and Wildlife Service, 18 So. King St., Hampton, Va.) Fishery landings and production for the Virginia areas of Hampton Roads, Lower Northern Neck, and Eastern Shore; the Maryland areas of Crisfield, Cambridge, and Ocean City; and the North Carolina areas of Atlantic, Beaufort, and Morehead City; together with cumulative and comparative data; for the month indicated.

New England Fisheries--Monthly Summary, June and July 1960, 22 pp. ea. (Market News Service, U. S. Fish and Wildlife Service, 10 Commonwealth Pier, Boston 10, Mass.) Reviews the principal New England fishery ports, and presents food fish landings by ports and species; industrial fish landings and ex-vessel prices; imports; cold-storage stocks of fishery products in New England warehouses; fishery landings and ex-vessel prices for ports in Massachusetts (Boston, Gloucester, New Bedford, Provincetown, and Woods Hole), Maine (Portland and Rockland), Rhode Island (Point Judith), and Connecticut (Stonington); frozen fishery products prices to primary wholesalers at Boston, Gloucester, and New Bedford; and landings and ex-vessel prices for fares landed at the Boston Fish Pier and sold through the New England Fish Exchange; for the months indicated.

Receipts of Fresh and Frozen Fishery Products at New York City's Fulton Fish Market, 1959 (Includes Statistics and Marketing Trends), by T. J. Risoli, 48 pp., processed. (Market News Service, U. S. Bureau of Commercial Fisheries, 155 John St., New York 38, N. Y.) The first part of this annual summary discusses fishery products receipts and marketing trends in the salt-water section of New York's wholesale Fulton Fish Market during 1959. The second part covers marketing trends and receipts in the wholesale fresh-water fish market for 1959. The third part consists of a series of statistical tables giving the receipts of finfish and shellfish on the salt-water section of Fulton Fish Market, 1959; receipts by months and methods of transportation; receipts by species, methods of transportation, states and provinces; prices of selected frozen fishery products, 1959, in New York Metropolitan Area; finfish receipts by points of origin and methods of transportation; shellfish receipts by points of origin and methods of transportation; and imports of selected fresh and frozen fishery products, 1959 compared with 1958.

New York City's Wholesale Fishery Trade--Monthly Summary for June 1960, 18 pp. (Market News Service, 155 John St., New York 38, N. Y.) Includes summaries and analyses of receipts and prices on wholesale Fulton Fish Market, imports entered at New York City, primary wholesaler prices for frozen products, and marketing trends; for the month indicated.

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

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

Distribution and Abundance of Eggs of the Pacific Sardine, 1952-1956, by Elbert H. Ahlstrom, Fishery Bulletin 165 (from Fishery Bulletin of the Fish and Wildlife Service, vol. 60, pp. 185-213), 32 pp., illus., printed, 30 cents, 1959.

Education in the Field of Oceanography (Hearing Before the Subcommittee on Earth Sciences of the Committee on Science and Astronautics, U. S. House of Representatives, Eighty-Sixth Congress, First Session, on H. R. 6298), no. 43, 39 pp., printed, August 25, 1959.

Fishery Statistics of the United States, 1958, by E. A. Power, Statistical Digest 49, 424 pp., illus., printed, \$2, 1960. The latest in a series of annual statistical reports on the fisheries of the United States, Alaska, and Hawaii, which contains data on the catch and ex-vessel value of fishery products, employment in the fisheries, quantity of gear operated, the number of fishing craft employed in the capture of fishery products, and certain information on the production and value of manufactured fishery products and by-products. Special features are data on the relative volume and value of the domestic catch on the United States catch taken on the high seas off foreign coasts. Historical fishery statistics in the report include data on the United States Atlantic cod catch from 1893 to 1958, inclusive. The statistical surveys, conducted during 1959 for 1958 data, covered all sections of the United States. The catch of fishery products in all sections of the United States and Alaska during 1958 totaled approximately 4.7 billion pounds, valued at \$371 million ex-vessel--a decrease of one percent in quantity but an increase of 6 percent in value as compared with 1957.

Menhaden ranked first in quantity among the species taken by United States fishermen, yielding a catch of 1.5 billion pounds--33 percent of the total landings. Although landings of menhaden were up in all areas except New England and Middle Atlantic States as compared with those in 1957, the total production in all areas declined.

Shrimp was again the most valuable single item taken by domestic fishermen, amounting to 214 million pounds, valued at nearly \$73 million ex-vessel. The Gulf of Mexico is the major shrimp-producing area, and accounted for 81 percent of the volume and 88 percent of the value of the total 1958 shrimp catch. The increase in total shrimp landings of 10 million pounds in 1958 as compared with 1957 was due to the development of the fishery for small shrimp off Washington, Oregon, and Alaska.

Several of the major food fish recorded noteworthy increases during the year: salmon (up 42 million pounds); North Pacific halibut (up 3 million pounds); and New England groundfish (up 17 million pounds). The return of sardines to California waters, after a partial absence since 1951, resulted in a catch of 207 million pounds--four-and-a-half times the 1957 production. A decline in the landings of Pacific and jack mackerel, anchovy, sea herring, and oysters were primarily responsible for the 1958 decline in the total landings as compared with the previous year.

The pack of canned fishery products in the United States, Alaska, Hawaii, Puerto Rico, and American Samoa in 1958 amounted to over 1.1 billion pounds valued at nearly \$389 million to the packers. Industrial fishery products amounted to 248 thousand tons of fish meal and scrap, 22 million gallons of fish oils, and 260 million pounds of fish solubles and homogenized condensed fish. Production of fresh and frozen packaged fish fillets and steaks totaled 155.9 million pounds valued at \$51.2 million to the processors. This represented an increase of 1.4 million pounds in volume and nearly \$4.5 million in value over the 1957 production. United States foreign trade in fishery products in 1958 was valued at over \$358 million of which \$327 million represented the value of imports and \$31 million the value of exports. The value of imported fishery products in 1958 was 10 percent greater than in the previous year. Among the more important imports during 1958 were frozen tuna, shrimp, and fresh and frozen groundfish fillets and steaks. The value of exports of domestic fishery products was 14 percent less than in 1957.

The economic data presented in this report are essential for use by persons engaged in the commercial fisheries and by governmental agencies concerned with the regulation, protection, and development of commercial fisheries. Biological information included, which is important to sound fishery management, provides detailed information of fluctuations in the commercial catch by species, locality, gear, and type of craft operated.

Oceanography in the United States (Hearings Before the Special Subcommittee on Oceanography of the Committee on Merchant Marine and Fisheries, House of Representatives, Eighty-Sixth Congress, First Session), 399 pp., illus., printed, 1959.

Propagation and Distribution of Food Fishes for the Calendar Years 1957-1958, Statistical Digest 46, 48 pp., printed, 20 cents, 1960.

Seasonal Abundance and Vertical Movements of Planktonic Crustacea in Lake Michigan, by LaRue Wells, Fishery Bulletin 172 (from Fishery Bulletin of the Fish and Wildlife Service, vol. 60), 31 pp., illus., printed, 25 cents, 1960.

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.

ALABAMA:

"Sporadic Mass Shoreward Migrations of Demersal Fish and Crustaceans in Mobile Bay, Alabama," by Harold Loesch, article, *Ecology*, vol. 41, no. 2, April 1960, pp. 292-298, illus., printed. Duke University Press, Box 6697, College Station, Durham, N. C.

ALGAE:

An Annotated List of the Marine Algae of British Columbia and Northern Washington (Including Keys to Genera), by Robert F. Scagel, National Museum of Canada Bulletin No. 150, 289 pp., illus., printed, C\$2.00. Department of Northern Affairs and National Resources, Ottawa, Canada, 1957.

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

ARGENTINA:

La Merluza del Mar Argentino--Biología y Taxonomía (The Hake of Argentine Waters--Biology and Taxonomy), by Victor Angelescu, Francisco S. Gnerl, and Alberto Nani, no. H. 1004, 246 pp., illus., printed in Spanish. Secretaria de Marina, Servicio de Hidrografía Naval, Buenos Aires, Argentina, 1958

AUSTRALIA:

Commonwealth Scientific and Industrial Research Organization, Division of Fisheries and Oceanography Annual Report, 1958-1959, 24 pp., processed. C. S. I. R. O., Marine Laboratory, P. O. Box 21, Cronulla, New South Wales. An annual report of the Division of Fisheries and Oceanography which is concerned with the study of the aquatic resources of Australia, including whales, the more important fish, crustacea, and shellfish. Fundamental to this study is an examination of the environment to ascertain the variations in oceanographic conditions which affect biological production and which are to a large extent responsible for fluctuations in fish occurrences.

Fisheries Research Vessel "Derwent Hunter," Report 21, 31 pp., illus., processed. Commonwealth Scientific and Industrial Research Organization, Division of Fisheries and Oceanography, Marine Biological Laboratory, Sydney, Australia, 1959.

Know Your Fishes (An Illustrated Guide to the Principal Commercial Fishes and Crustaceans of Queensland), by T. C. Marshall, E. M. Grant and N. M. Haysom, Ichthyological Notes, vol. 1, no. 4, 146 pp., illus., printed. Department of Harbours and Marine, Brisbane, Queensland, Australia, May 1959.

BALEARIC ISLANDS:

Carta de Pesca de las Baleares. I--Este y sur de Menorca (Chart of the Balearic Islands' Fishery. I-- East and South of Minorca), by Miguel Oliver, no. 26, 1959, illus., printed in Spanish. Instituto Espanol de Oceanografía, Madrid, Spain.

BOATING:

Recreational Boating Guide, CG-340, 79 pp., illus., printed, 40 cents. U. S. Coast Guard, Washington 25, D. C., June 1, 1960. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.) Although this handbook is intended primarily for boating enthusiasts, it will also be of interest to those in commercial fisheries as well as related fields. Discusses in some detail the numbering of boats propelled by engines of more than 10 hp; the legal minimum equipment requirements; other desirable equipment; rules for proper operation; aids to navigation; hints on safety afloat; rules for unpowered boats; emergency procedures; and U. S. Coast Guard Auxiliary instructions. The appendices contain the Federal Boating Act of 1958, the amended Motorboat Act of April 25, 1940, lists of Coast Guard districts; and Government publications of interest to boatmen.

CALIFORNIA:

Statistical Report of Fresh, Canned, Cured, and Manufactured Fishery Products, 1959, Circular No. 34, 18 pp., illus., printed. Department of Fish and Game, Biostatistical Section, Marine Resources Operation, Sacramento, Calif., 1960. This report, the latest in a series of annual reports on commercial fishery

production in California, includes statistical tables on landings by area and by species, tuna imports, fish processing plants, and pack of canned fish. Data are also included on volume of other types of processed fish, canned sardines, sardine meal and oil production, and the annual pack of anchovies, tuna, bonito, and yellowtail.

CAMBODIA:

Etude sur la Peche au Cambodge (Study of the Fisheries of Cambodia), by John E. Bardach, 82 pp., processed in French, June 1959. USOM, Phnom-Penh, Cambodia.

CANADA:

"Cruise No. 20 of the A. T. Cameron," by G. J. Gillespie, article, Trade News, vol. 12, no. 11, May 1960, pp. 3-5, illus., printed. Trade News, Department of Fisheries, Ottawa, Canada. Covers a cruise of the Canadian Government fisheries research vessel A. T. Cameron, centered mainly around Western and Emerald Banks lying in the Atlantic southeast of Nova Scotia, to study comparative fishing between the larger vessel and smaller craft, Hargenus. Both vessels had been used for survey work on the same populations of groundfish at different times of the year. To be able to compare data obtained by the two vessels, the cruise was designed to test their fishing abilities by having them work side by side on the same populations of fish at the same time.

Economic Survey of Salmon Fishermen in British Columbia, 1953 (Interim Report--Based on Records Obtained from 266 Salmon Fishermen), by Blake A. Campbell and D. R. Buchanan, 57 pp., illus., processed. Department of Fisheries of Canada, Markets and Economic Service, Vancouver, B. C., Canada, January 1955.

The Freshwater Fishes of Canada, by E. P. Slastenko, 387 pp., illus., printed. Klev Printers, 686 Richmond St. W., Toronto, Ontario, Canada, 1958.

The Freshwater Fishes of New Brunswick: A Checklist with Distributional Notes, by W. B. Scott and E. J. Crossman, No. 51, 45 pp., printed. The Royal Ontario Museum, Division of Zoology and Palaeontology, 100 Queen's Park, Toronto, Canada, June 20, 1959.

Journal of the Fisheries Research Board of Canada, vol. 17, no. 3, May 1960, 157 pp., illus., printed. Queen's Printer and Controller of Stationery, Ottawa, Canada. Includes, among others, these articles: "Salinity Preference, Thyroid Activity and the Seaward Migration of Four Species of Pacific Salmon (Oncorhynchus)," by Bertha Baggerman; "Biochemical Studies on Sockeye Salmon During Spawning Migration. XI--The Free Histidine Content of the Tissues," by J. D. Wood, D. W. Duncan, and M. Jackson; "The Phosphorus-Containing Fractions of Sterile Lingcod Muscle During Storage at 0° C.," by Neil Tomlinson, Vera M. Creelman, and K. G. Reid; "A Qualitative and Quantitative Study of the Plankton of the Quoddy Region in 1957 and 1958 with Special Reference to the Food of Herring," by J. E. Henri Legare and Delphine C. MacLellan; and "Iosine in the Muscle of Pacific Salmon Stored in Ice," by Vera M. Creelman and Neil Tomlinson.

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

CANNED FISH:

"Le Conserve di Scombridi con Particolari Riguardi ai tonni" (Canned Scombroid Fishes with Special Reference to Tuna), by A. Piegali, article, Monografie di Tecnologia della Stazione Sperimentale per l'Industria delle Conserve Alimentari, vol. 4, 1958, 141 pp., illus., printed in Italian. Stazione Sperimentale per l'Industria delle Conserve Alimentari, Parma, Italy.

CAPELIN:

On the Migrations and Spawning of the Barents Sea Capelin in 1953 and 1954, by V. S. Prokhorov, 8 pp., processed. (Translated from Trudy Pinro, vol. 10, 1957, pp. 230-243.) Fisheries Laboratory, Lowestoft, England, 1959.

CARP:

Die Karpfenteichwirtschaft in der Deutschen Demokratischen Republik und Ihre Wissenschaftlichen Hauptprobleme (Carp Fish-Pond Farming in the German Democratic Republic and its Principal Scientific Problems), edited by William Schaperclaus, Sitzungsberichte, vol. 7, no. 7, 33 pp., illus., printed in German. Deutsche Akademie, Landwirtschaftswissenschaften, Berlin, Germany, 1958.

CEYLON:

Fischer auf Ceylon--Ein Beitrag zur Wirtschafts- und Bevölkerungs-Geographie des Indischen Subkontinents (Fisheries of Ceylon--A Study of the Economics and Community-Life of the Indian Subcontinent), by Fritz Bartz, vol. 27, 121 pp., illus., printed in German. Bonner Geographische Abhandlungen, Institut der Universität Bonn, Bonn, Germany, 1959.

COD:

"Aspectos de Industria Nacional do Bacalhau" (Outlook of the National Cod Industry), by A. Torres Botelho, article, Conservas de Peixe, vol. 15, no. 169, April 1960, pp. 47-48, illus., printed in Portuguese. Conservas de Peixe, Sociedade Astoria, Lda., Requeirados Anjos, 68, Lisbon, Portugal.

COLD STORAGE:

"Typical Designs of Cold Stores for Fish," by L. M. Kazanskij, article, Rybone Khoziaistvo, no. 7, July 1959, pp. 65-72, illus., printed in Russian. Rybone Khoziaistvo, Kotel 'nicheskaia Naberezhiaia D 1/15, Souzpechaty Otdel "Zhurnal-Pochtoi," Moscow Zh-240, U. S. S. R.

DEMERSAL FISH:

Rapports et Proces-Verbaux des Reunions (Contributions to Special Scientific Meeting on Measures for Improving the Stock of Demersal Fish in the Baltic), vol. 147, 96 pp., illus., printed, Kr. 20 (US\$2.90). Conseil Permanent International pour l'Exploration de la Mer (International Council for Exploration of the Sea), Charlottenlund Slot, Denmark, August 1959.

FISH COOKERY:

The Art of Fish Cookery, by Milo Miloradovich, 471 pp., illus., printed. Doubleday & Company, Inc. Garden City, N. Y., 1949.

FISH PONDS:

How To Look After a Fishpond, by L. Davambe, 31 pp., printed, A. 1s. 0d. (11 U. S. cents). South Pacific Commission, Literature Bureau, Box 5254, G.P.O., Sydney, Australia.

FISHWAYS:

The Size and Location of Escape Ports for Bypassing Salmonid Fish at a Screened Diversion Canal (Thesis of Harry Henry Wagner for the Master of Science Degree in Fisheries), 85 pp., illus., processed. Oregon State College, Corvallis, Oreg., April 1959.

FLORIDA:

Apalachicola Watershed, Fish Management Bulletin No. 4, 15 pp., illus., printed. Florida Game and Fresh Water Fish Commission, Fisheries Division, Tallahassee, Fla., July 1959.

FROZEN FISH:

"Frozen Fish in Cabinets Has Limited Storage Life," article, Frozen Foods, vol. 12, no. 6, June 1959, p. 386, printed. Frozen Foods, Refrigeration House, Victoria Rd., Woking, England.

FUR SEALS:

"Blood Types in Fur Seals," by Kazuo Fujino and John E. Cushing, article, Science, vol. 131, no. 3409, April 29, 1960, p. 1310, printed. American Association for the Advancement of Science, 1515 Massachusetts Ave. NW., Washington 5, D. C.

GEAR:

"En Ny Synthetisk Fiber til Fiskeredskap" (Curlene--A New Synthetic Fiber for Fishing Gear), article, Fangst og Fiske, vol. 11, no. 1, 1959, printed in Norwegian. Fangst og Fiske, Landaslien 19, Bergen, Norway.

How to Look After Fishnets, by L. Devambe, 15 pp., printed, A. 1s. 0d. (11 U. S. cents). South Pacific Commission, Literature Bureau, Box 5254, G.P.O., Sydney, Australia.

Net Repair Manual, by Stacy V. Gebhards, 23 pp., illus., processed. Department of Fish and Game, Boise, Idaho, 1960. Although most fishing nets today are machine tied and are purchased ready-made from various firms, net repairs must still be done by hand. The purpose of this manual is merely to acquaint the beginner with the proper procedure in net mending. Proficiency in mending, according to the author, can come only through practice. The techniques described are essentially those which are used by commercial fishermen in the Illinois River Valley with some modifications by the author.

GENERAL:

"The Buoyancy of Marine Animals," by Eric Denton, article, Scientific American, vol. 203, no. 1, July 1960, pp. 118-128, illus., printed. Scientific American, Inc., 415 Madison Ave., New York 17, N. Y. Most fishes are equipped with swim bladders which give them neutral buoyancy and save them the effort of continuous swimming. The cuttlefish and the cranchid squid have developed quite different kinds of flotation organs. They anticipated man in using the working principles of the submarine and the bathyscaph, the one endowing the cuttlefish with active control of its buoyancy, the other permitting the squid to live at great depths.

Journal du Conseil, vol. 25, no. 2, March 1960, 124 pp., illus., printed. Conseil Permanent International pour l'Exploration de la Mer, Charlotten-

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

lund Slot, Denmark. Includes, among others, these articles: "Upper Lethal Temperatures for Larval Salmonids," by H. M. Bishai; "The Effect of Water Currents on the Survival and Distribution of Fish Larvae," by H. M. Bishai; "Food Habits of Larval Cod, Haddock, and Coalfish in the Gulf of Maine and Georges Bank Area," by Robert R. Marak; "New Implements for Fish Tagging," by Arni Frioriksson, Olav Aasen and Arne Revheim; "Mesh Selection and Apparent Growth of Haddock," by Rodney Jones; "A Note on the Dependence of Catches on Temperature and Wind in the Buchan Pre-Spawning Herring Fishery," by R. E. Craig; "Some Observations on the Body Proportions of North Sea Autumn Spawning Herring," by R. Muzinic and B. B. Parrish (with an appendix by J. A. Pope); and "Observations on the Size and Numbers of Herring Taken by the Herring Trawl," by I. D. Richardson.

Turn to the Sea, by Athelstan Spilhaus, 50 pp., illus., printed. National Academy of Sciences, National Research Council, Washington D. C., 1959.

GENERAL AGREEMENT ON TARIFFS AND TRADE:

Negotiations Under the Trade Agreements Act of 1934 as Amended and Extended (List of Products on which the U. S. May Seek Concessions from Other Countries; Notice of Public Hearings), Department of State Publication 6987, 69 pp., processed, 30 cents. The Interdepartmental Trade Agreements Organization, Washington, D. C., May 1960. (For sale by Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.) Fish and fishery products are included among the products listed.

Negotiations Under the Trade Agreements Act of 1934 as Amended and Extended (Notice of U. S. Intention to Negotiate; List of Products to be Considered for Possible U. S. Concessions; Notice of Public Hearings), Department of State Publication 6986, 118 pp., processed, 40 cents. Interdepartmental Trade Agreements Organization, Washington, D. C., May 1960. (For sale by Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.) Fish and fishery products are among the products listed.

HAWAII:

Handbook of Hawaiian Fishes, by William A. Gosline and Vernon E. Brock, 381 pp., illus., printed, \$11.00. University of Hawaii Press, Honolulu 14, Hawaii, 1960. This is the first handbook for the identification of fishes of the Hawaiian Islands known to the reviewer since Jordan and Gilbert's two-volume study published in 1905, now out of print. The authors have simplified as much as possible the process of determining correctly the species of Hawaiian fishes. The nontechnical person as well as the trained ichthyologist will find much of interest in this book. The secondary purpose of the handbook--to provide definitive common names for the more important commercial fishes in order to achieve uniformity of names for catch statistics and law enforcement--will be of interest to commercial fisheries interests. The preferred common name is identified easily since it is placed immediately under the scientific name. But less desirable common names are also given. Every native inshore fish that has been validly recorded from Hawaiian waters is included.

Intentionally-introduced fresh-water and marine species are also described although the section on the latter is a short one. Except for scientific names, scientific terms have been generally avoided. Illustrations consist of 279 figures which are aids to identification. Also included are five beautiful color plates which portray the beauty of Hawaiian fishes. Keys are provided for all Hawaiian fish families and for all inshore species. The authors point out in their preface that the book is the result of widespread cooperation and credits are widely subdivided. Among the chapters in the book are the following: Ecology of Hawaiian Fishes; the Nature and Derivation of Hawaiian Fishes and Keys to Families; and Accounts of Families and Species of Hawaiian Fishes. There are two appendixes: Intentionally Introduced Marine Species; and Check List of Native Hawaiian Fishes. The book is indexed.

--Joseph Pileggi

HERRING:

Scale Character and Growth Rate (A Study on Small Fat Herring from North Norway), by Mahhargo Soeprapto, vol. 12, no. 5, 16 pp., illus., printed. A. S. John Griegs Boktrykkeri, Bergen, Norway, 1959.

Vintersild (Winter Herring Fishery), by Magne Flem and Bjarne Skarbovik, 36 pp., illus., printed in Norwegian and English. Sunnmorsposten, Aalesund, Norway, 1959. An unusual booklet of photographs depicting many aspects of the winter herring fishery and the hardy fishermen who work it. The text accompanying the photos describes the preparations for the season in early January, the location of the fishing grounds just outside the coastal fringe of islands, the purse-seiners and drifters which catch the herring, locating the herring, methods of catching, the fishing villages, and plants for processing the herring.

INDIA:

"Observations on the Trawl Fisheries of the Bombay and Saurashtra Waters, 1949/50 to 1954/55," by R. Jayaraman and others, article, Indian Journal of Fisheries, vol. 6, no. 1, April 1959, pp. 58-144, illus., printed. Ministry of Food and Agriculture, Government of India, New Delhi, India.

JAPAN:

Bulletin of the Faculty of Fisheries, Hokkaido University, vol. 10, no. 3, November 1959, 112 pp., illus., printed in Japanese with English abstracts. Faculty of Fisheries, Hokkaido University, Hakodate, Japan. Contains, among others, the following articles: "Studies on Air Screen in Water. 1--Preliminary Observation of Behavior of Fish School in Relation to an Air Screen," by Kiichiro Kobayashi and others; "Chemical Studies on Marine Algae. XIII--Isolation of Crystal L-Citrulline from Chondrus ocellatus and Rhodoglossum pulchrum," by Mitsuo Kuriyama, Mitsuzo Takagi, and Kiichi Murata; "Quality of Flatfish from Hakodate. Part 2--The Factors Deciding the Quality. 3--Relations Between the Quality and the Amount of Connective Tissue. 4--Relations Between the Quality and the Amount of Acid Soluble Phosphorus. 5--Relations Between the Quality and the Extractive Nitrogen," by Keiichi Oishi; and "The Territorial Waters in the U. S. S. R.," by Akira Suzuki.

Bulletin of the Faculty of Fisheries, Hokkaido University, vol. 10, no. 4, February 1960, 90 pp., illus.,

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

printed in Japanese with English abstracts. Faculty of Fisheries, Hokkaido University, Hakodate Japan. Includes, among others, the following articles: "Quality of Flatfish from Hakodate. Part 3--The Factors Deciding the Quality. 6--Relations Between the Quality and the Amino Acid Composition of the Muscle Extractives," by Keiichi Oishi; "Observations on the Ship's Drifting due to Wind Action," by Shoji Saito, and "Studies on the Heat Sterilization of Fish Sauce," by Eiichi Tanikawa and others.

On the Fishes of the Family Chlorophthalmidae, by Toshiji Kamohara, Research Report of the Kochi University, vol. 5, no. 15, 17 pp., illus., printed in Japanese with English summary. The Kochi University, Kochi, Japan, 1959.

Illustration of Japanese Fishing Boat and Fishing Gear, 228 pp., illus., printed in Japanese and English, \$6.00. Japan Association for Agriculture and Forestry, Norin-sho Bldg., 2 Chome Kasumigaseki, Chiyodaku, Tokyo, Japan, 1959.

Memoirs of the Faculty of Fisheries of Kagoshima University, vol. 8, February 1960, 193 pp., illus., printed in Japanese with English summaries. The Faculty of Fisheries, Kagoshima University, Kagoshima, Japan. Contains, among others, the following articles: "Studies on the Life Histories of the Flying-Fishes Found in the Adjacent Waters of Japan-II," by Sadahiko Imai; "Carbonyl Compounds in Fish as Related to the Deterioration, III--Factors Affecting the Formation of Volatile Carbonyl Compounds in Fish Flesh," by Fuyuo Ota; "On the Process of the Formation of Lower Carbonyl Compounds in the Enzymatic Oxidation of Linoleic Acid," by Fuyuo Ota; "On the Storage of Frozen Whole-Round Skipjack, I--The Denaturation of Skipjack Muscle Protein Under the Freezing and Cold Storage," by Jun-ichi Nishimoto and Kazuo Tanaka; and II--"Histological Study of the Frozen Skipjack Muscle Tissue," by Jun-ichi Nishimoto and Kazuo Tanaka; "Studies on the Biochemical Change in Fish Muscle, XI--On the Enzymic Degradation of ATP by Unpurified Actomyosin Fraction of Fish Muscle," by Tomio Hidaka and Kaname Saito; "Biophysical Studies on the Auditory Characteristic of Fish, II--Directional Audibilities in Various Types of Lateral Line," by Toshiro Kuroki; "Simplified Ultrasonic Shell-Plate-Flaw-Detector for Fishing Vessel with the Use of the Standing-Wave Technique in the Thickness-Measurement," by Yoshikazu Narasako, Sukehiro Oya and Akira Yamabe; "Studies on the Constitutional State of Skipjack Fishing Ground over the Waters near the Tokara Retto, I--On the Relation between the Water Temperature and the Catching Condition in the Fishing Ground," by Tomokazu Morita; "A Consideration on the East China Sea Region Mackerel Fisheries," by Sumio Enami; "Studies on Bubble Net, I--Driving and Intercepting Effect on Some Fresh-Water Fishes," by Sumio Enami; "On the Physical Analysis of the Fixed-Fishing-Net Resistance," by Masaji Kanamori; and "Studies on the Radiological Contamination of Sea Water, Planktons and Fishes in the Western Region of the North Equatorial Current during the Period from 1958 to 1959" by Kaname Saito, Muneo Sameshima, and Tomio Hemmi.

Memoirs of the Faculty of Fisheries, Hokkaido University, vol. 7, no. 1/2, 155 pp., illus., printed. The Faculty of Fisheries, Hokkaido University, Hakodate, Japan, 1959. Includes, among others, the

following articles: "The Marine Algae of Southern Saghaliën," by J. Tokida; "Studies on the Proteins of the Meat of Sea Cucumber (*Stichopus japonicus* Selenka)," by E. Tanikawa; "Studies on the Manufacture of Algin from Brown Algae," by N. Suzuki; "Studies on the Tropomyosin of Squid," by K. Yoshimura; "Studies on Fishing Ground, Fishing Gears, and Fishing Technique in One-Boat Medium Trawl Fishery," by I. Saito; "Physico-Chemical Studies on the Activation and Fertilization of Fish Eggs," by S. Hamono; "The Species of Gracilaria and Gracilariopsis from Japan and Adjacent Water," by H. Ohmi; "Studies on the Technical Problems in the Processing of Canned Salmon," by E. Tanikawa; and "Studies on Technical Problems in the Processing of Canned Crab," by E. Tanikawa.

LAW OF THE SEA:

La Plataforma Continental y los Problemas Jurídicos del Mar (The Continental Shelf and the Juridical Problems of the Sea), by Humberto Lopez Villamil, 69 pp., printed in Spanish. Talleres Graficos, Juan Bravo, 3, Madrid, Spain, 1958.

The United States and the Treaty Law of the Sea, by Henry Reiff, 451 pp., printed. University of Minnesota Press, Minneapolis 14, Minn., 1959.

LAW OF THE SEA CONFERENCE:

La Conferencia de Ginebra y la Anchura del Mar Territorial (The Geneva Conference and the Extent of the Territorial Sea), by Alfonso García Robles, 410 pp., printed in Spanish. Libreria de Porrua Hermanos y Cia., S. A., Mexico D. F., Mexico.

LOBSTER:

"Many Types of Lobster Pots Used in Wales," article, World Fishing, vol. 8, no. 3, March 1959, pp. 41-43, illus., printed. World Fishing, John Trundell (Publishers), Ltd., Temple Chambers, Temple Ave., London EC4, England.

"World's First Quick-Freeze Lobster Boat," article, Trade News, vol. 12, no. 11, May 1960, p. 17, illus., printed. Trade News, Department of Fisheries, Ottawa, Canada. The Françoise Christine is the first quick-freeze lobster fishing vessel in the world which carries out vacuum-packing of lobster meat on board ship. The canning and packing process under vacuum is discussed.

MACKEREL:

"El Pejerrey" (The Mackerel), by F. Lahille, article, Boletín del Ministerio de Agricultura de la Nación, vol. 28, no. 3, July-September 1929, pp. 261-395, illus., printed in Spanish. Biblioteca del Ministerio de Agricultura, Paseo Colon 974, Buenos Aires, Argentina.

MISCELLANEOUS:

Substances Responsible for Taste and Smell in Fish, by F. Bramstedt, Translation Series No. 235, 15 pp., processed. (Translated from Archiv für Fisch-eriewissenschaft, vol. 8, pp. 94-103.) Fisheries Research Board of Canada, Technological Station, Grande Riviere, Quebec, Canada, 1959.

NIGERIA:

Annual Report, Fisheries Division, Ministry of Agriculture, 1958-59, Official Document No. 15 of 1960,

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

9 pp., printed, 1s (about 14 U. S. cents). Government Printer, Eastern Region, Enugu, Nigeria. Discusses the activities and accomplishments of the Fisheries Division of the Eastern Region of Nigeria during 1958-59. Contains sections on the organization; fisheries development plan, 1958-62; colonial development and welfare fisheries scheme; fisheries extension experimental fishing and investigations, and fresh-water fisheries.

NORWAY:

"Fettinnhold i Vintersild 1960" (Fat Content of Winter Herring in 1960), by Fredrik Villmark, article, Fiskets Gang, vol. 46, no. 19, May 12, 1960, pp. 275-276, illus., printed in Norwegian. Fiskets Gang, Postgiro Nr. 691 81, Bergen, Norway.

"La Industria Noruega de Conservas de Pescado en el Ano Ultimo" (The Norwegian Fish Canning Industry in 1959), article, Industria Conservera, vol. 26, no. 249, March 1960, pp. 67-68, printed in Spanish. Industria Conservera, Calle Marques de Valladares, 41, Vigo, Spain.

"Rapport om Fiskeforsok med Bankliner pa Rostbanken med M/K Vitamin av Tromso Februar/Mars 1960" (Report on Line Fishing at Rostbanken by the Research Vessel Vitamin out of Tromso Feb./Mar. 1960), by Kaare Halmo, article, Fiskets Gang, vol. 46, no. 23, June 1960, pp. 354-357, illus., printed in Norwegian. Fiskets Gang, Postgiro Nr. 691 81, Bergen, Norway.

OCEAN PERCH:

The Fisheries of the Redfish in the Southern Part of the Barents Sea and in the Kopytov Area, by V. I. Travin, 13 pp., processed. (Translated from Trudy Pinro, vol. 10, 1957, pp. 161-171.) Fisheries Laboratory, Lowestoft, England, 1959.

Sex and Age Composition of the Beaked Redfish (SEBASTES MENTELLA Travin) of the Kopytov Area, by YE. I. Surkova, 15 pp., processed. (Translated from Trudy Pinro, vol. 10, 1957, pp. 172-185.) Fisheries Laboratory, Lowestoft, England, 1959.

OCEANOGRAPHY:

Data Report for Two IGY Cruises, by Hugh J. McLellan, A. & M. Projects 137 & 24, Reference 59-15D, 117 pp., illus., processed. The Agricultural and Mechanical College of Texas, Department of Oceanography and Meteorology, College Station, Texas, April 1959.

Investigations of Climate and Oceanographic Factors Influencing the Environment of Fish (Covering Period July 1, 1959-September 30, 1959), by Dean F. Bumpus, Reference No. 59-49, 9 pp., illus., printed. Woods Hole Oceanographic Institution, Woods Hole, Mass., October 1959.

A Method for Measuring Eddy Diffusion in Coastal Embayments, by Frank W. Moon, Jr., Charles L. Bretschneider and Donald W. Hood, Series No. 84, 13 pp., illus., printed. (Reprinted from Institute of Marine Science, vol. 4, no. 2, July 1957). Department of Oceanography of the Agricultural and Mechanical College of Texas, Department of Oceanography and Meteorology, College Station, Texas, November 1957.

Net Weekly Variation of Vertical Temperature Structure in the Upper Ocean Layers (Autumn, North Atlantic), by Robert A. Gilcrest, A. & M. Project 24, Reference 57-2T, 77 pp., illus., processed. The Agricultural and Mechanical College of Texas, Department of Oceanography and Meteorology, College Station, Texas, January 1957.

Oceanography and Meteorology of the Gulf of Mexico (Annual Report, May 1, 1958-April 30, 1959), by Hugh J. McLellan, A & M Project 24, Reference 59-16A, 42 pp., processed. Agricultural and Mechanical College of Texas, Department of Oceanography and Meteorology, College Station, Tex., 1959.

Resultats Scientifiques des Campagnes de la CALYPSO (Scientific Results of Calypso Cruises), Annales de l'Institut Oceanographique (Records of the Oceanographic Institute), vol. 37, 342 pp., illus., printed in French. L'Institut Oceanographique, 120 Blvd. Saint-Germain, Paris, France, 1959. Covers the "Campagne 1956 dans le Golfe de Guinee et aux Iles Principe, Sao Tome et Annobon" (The 1956 Cruise in the Gulf of Guinea and on the Principal Islands of Sao Thome and Annobon); "Campagne 1956 sur les Cotes de Provence" (The 1956 Cruise off the Coasts of Provence); "Campagne 1957 dans le Golfe de Genes (The 1957 Cruise in the Gulf of Genoa); and "Campagne 1958 en Mer d'Alboran et dans la Baie Ibero-Marocaine" (1958 Cruise in the Sea of Alboran and in the Spanish Moroccan Bay).

OYSTERS:

"Oyster Farming," by George W. Allen, article, Alabama Conservation, vol. 31, no. 6, April-May 1960, pp. 4-6, illus., printed. Alabama Dept. of Conservation, 711 High St., Montgomery, Ala. Discusses various aspects of oyster farming--selection and preparation of oyster beds, method of sowing spat, predators and diseases of oysters, and outlook for the oyster industry.

"Oysters Year 'Round," article, Louisiana Conservationist, vol. 12, nos. 5-6, May-June 1960, pp. 10-11, illus., printed. Louisiana Wild Life and Fisheries Commission, Wild Life & Fisheries Bldg., 400 Royal St., New Orleans, La. Describes, in semi-humorous style, the culinary and nutritional attributes of the oyster and presents a number of recipes for preparing this gourmet's favorite.

Quality Determination of Mussels (MYTILUS EDULIS) and Oysters, by P. Korringa, Translation Series No. 76, 6 pp., illus., processed (Translated from Archiv fur Fischereiwissenschaft, vol. 6, no. 3/4, 1955, pp. 189-193.) Fisheries Research Board of Canada, Ottawa, Canada, 1956.

"Serological Studies on Relationships Among Oysters of Different Genus, Species, and Races," by Kenichi Numachi, article, The Tohoku Journal of Agricultural Research, vol. 10, no. 3, November 1959, pp. 313-319, illus., printed. The Faculty of Agriculture, Tohoku University, Sendai, Japan.

PEARL OYSTERS:

Survey of the Pearl Banks, Gulf of Mannar, 1955, by S. Sivalingam, Contribution No. 2, 19 pp., illus., pp. 308-325.) Fisheries Research Station, Colombo, Ceylon. Covers a survey of the Gulf of Mannar in

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

1955 to ascertain the presence of pearl oysters, location, and extent of oyster beds. The survey also determined the age composition of oysters, size of population, and value of the oysters collected. This report is based on the results of dredging operations only.

PHILIPPINES:

Observations on Philippine Fisheries, by Ole J. Heggem, 27 pp., processed. International Cooperation Administration, U. S. Operations to the Philippines, Manila, Philippines.

PRESERVATION:

Fish Preservation Simplified, by H. van Pel, 22 pp., illus., printed. South Pacific Commission, Literature Bureau, Box 5254, G.P.O., Sydney, Australia.

RAINBOW TROUT:

Delayed Mortality of Hatchery-Reared Rainbow Trout in Relation to Five Chemical Factors Encountered in Transporting Waters (Thesis of DeVon Wayne Linn for the M. S. Degree in Fisheries), 88 pp., illus., processed. Oregon State College, Corvallis, Oreg., June 1955.

REFRIGERATION:

Die Anwendung der Kalte in der Lebensmittelindustrie. Handbuch der Kältetechnik (Application of Refrigeration in the Food Industry. Handbook of Refrigeration), 690 pp., illus., printed in German, D. M. 114 (about US\$27.14). Springer Verlag, Heidelberger Platz 3, Berlin, Germany, 1960. Includes a chapter on fish--physical properties, keeping fish fresh above their freezing point, sanitary requirements for ice, complementary losses, freezing, and freezing of fish and crustacea on board ship.

RHODESIA:

Proceedings of the First Fisheries Day in Southern Rhodesia (Salisbury, August 1957), 88 pp., illus., printed. Federal Ministry of Agriculture, Salisbury, Rhodesia, 1959.

SALMON:

Behavior of Chinook and Silver Salmon, by George H. Allen, Contribution No. 24, 6 pp., illus., printed. (Reprinted from Ecology, vol. 40, no. 1, January 1959, pp. 108-113.) University of Washington, School of Fisheries, Seattle, Wash.

Biochemical Analysis of Young Salmon at the Time of Their Transformation to a Condition Close to the Smolt State, and During Retention of Smolts in Fresh Water, by E. M. Malikova, Translation Series No. 232, 19 pp., processed. (Translated from Trudy Latviiskovo Otdeleniia VNIRO, vol. 2, 1957, pp. 241-255.) Fisheries Research Board of Canada, Biological Station, St. Andrews, New Brunswick, Canada.

An Examination of Factors Affecting the Abundance of Pink Salmon in the Fraser River, by E. H. Vernon, 52 pp., illus., processed. International Pacific Salmon Fisheries Commission, New Westminster, British Columbia, Canada, 1958.

Transformation to Smolt Stage and Downstream Migration of Young Salmon, by N. V. Evropeitseva, Translation Series No. 234, 36 pp., processed. (Translated from Uchenye Zapiski Leningradskovo

Gosudarstvennovo Universiteta (LGU), No. 228, Seria Biologicheskikh Nauk No. 44, 1957, pp. 117-154.) Fisheries Research Board of Canada, Biological Station, St. Andrews, New Brunswick, Canada, 1959.

SARDINES:

"La Fabricacion de Conservas de Sardina con Pescado Congelado" (The Manufacture of Canned Sardines with Frozen Fish), article, Industria Conservera, vol. 26, no. 249, March 1960, pp. 70-72, printed in Spanish. Industria Conservera, Calle Marques de Valladares, 41, Vigo, Spain.

SCOTLAND:

"Results of Scottish Herring Fisheries in 1959 and Prospects for 1960," by B. B. Parrish and I. G. Baxter, article, Scottish Fisheries Bulletin, no. 13, June 1960, pp. 2-10, illus., printed. The Marine Laboratory, Department of Agriculture and Fisheries for Scotland, Victoria Road, Torry, Aberdeen, Scotland.

SEALS:

"Selangsten 1959" (Seal Catch in 1959), by Sverre Mollestad, article, Fiskets Gang, vol. 46, no. 18, May 1960, pp. 261-266, printed in Norwegian. Fiskets Gang, Postgiro Nr. 691 81, Bergen, Norway.

SHELLS:

"Shell Take and Prices Down," article, Fisheries Newsletter, vol. 19, no. 5, May 1960, pp. 13, 27, printed. Commonwealth Director of Fisheries, Department of Primary Industry, Canberra, Australia. The decline in production and consequent drop in pearl shell prices during the past two years was due to the development of cheaper plastic button, competitive with the shell buttons, and also to unfavorable weather. The Australian government and the industry have attempted to promote the use of pearl shells by means of a joint sales campaign.

SHRIMP:

Aspects of the Biology of the Tortugas Pink Shrimp, PENAEUS DUORARUM, by Edwin S. Iversen and C. P. Idyll, Contribution No. 246, 8 pp., illus., printed. (Reprinted from Transactions of the American Fisheries Society, vol. 89, no. 1, 1960.) The Marine Laboratory, University of Miami, #1 Rickenbacker Causeway, Miami 49, Fla. On the Tortugas grounds, off southern Florida, biologists tagged shrimp with Petersen disc tags. A general tendency was noted for adult shrimp to move in a northwesterly direction. Females attain larger sizes than males and growth of the carapace, which is more easily measured than total length, is related linearly to total length. Size-frequency distributions suggest that small shrimp move from shallow water at the end of the Florida peninsula to the Tortugas grounds. Some salinity and temperature data are given.

"Shrimps: the U. S. Industry," by W. Adair Stewart, article, Foreign Trade, vol. 114, no. 2, July 16, 1960, pp. 15-16, printed. Queen's Printer, Government Printing Bureau, Ottawa, Canada. The author describes the commercial importance of the frozen shrimp industry in the United States, management and conservation of the shrimp fishery, the search for new fishing grounds, and potential sources of foreign supplies.

SPAIN:

"La Produccion Conservera Espanola en 1958" (Spanish Canning Production in 1958), article, Boletin de

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

Informacion del Sindicato Nacional de la Pesca, no. 19, April 1960, pp. 10-11, printed in Spanish. Sindicato Nacional de la Pesca, Paseo del Prado, 18-20, 6^a Planta, Madrid, Spain.

SPINY LOBSTERS:

Lobster Fishing in Ceylon, by G. H. P. DeBruin, Bulletin No. 9, 19 pp., illus., printed. The Fisheries Research Station, Department of Fisheries, Colombo, Ceylon, 1960. Spiny lobsters are present in Ceylon waters, according to the author, but an established fishery does not exist due partly to the absence of efficient methods of capture. Gear efficiency tests were therefore conducted using lobster traps such as the Scottish creel, Canadian "parlour and bedroom," and the Cornish "ink-well" in order to find an efficient method of capturing lobsters. The Canadian "parlour and bedroom" type constructed of steel and hemp netting proved to be the most effective trap. Diving operations revealed the existence of spiny lobsters on both the east and west coasts of Ceylon but for some unknown reason traps were ineffective on the east coast. On the west coast, however, experiments with traps showed the presence of lobsters in commercial quantities in rocky areas and coral reefs.

Production and Distribution of Larvae of the Spiny Lobster, PANULIRUS INTERRUPTUS (Randall) with Records on P. GRACILIS Streets, by Martin W. Johnson, 52 pp., illus., printed, \$1. (Reprinted from Bulletin of the Scripps Institution of Oceanography, vol. 7, no. 6, May 23, 1960, pp. 413-462.) University of California Press, Berkeley, Calif., 1960. A study of the occurrence and distribution of the phyllosoma larvae of the spiny lobster. In this investigation the material consisted of phyllosoma larvae of Panulirus interruptus (and to a lesser extent of P. gracilis) sorted from a large number of plankton hauls taken with a 1-meter net, mainly along the coast of California and Baja California, by several vessels during all seasons over a period of seven years. Findings showed that: the height of the hatching season is August and September; only one brood is produced each year by the spawning female; the complete phyllosoma larval period is about 7-3/4 months; and recruitment of lobsters on the coast of California and Baja California must depend upon the development of large eddies, swirls, and counter-currents which retard the flushing out of larvae to the south with the California current.

STEELHEAD TROUT:

Factors Influencing the Seaward Migration of Smolt Steelhead Trout, SALMO GAIRDNERII GAIRDNERII Richardson, in the Alsea River, Oregon (Thesis of Rupert Earle Andrews for the M. S. Degree in Fish and Game Management), 99 pp., illus., processed. Oregon State College, Corvallis, Oreg., October 1958.

TILAPIA:

"Tilapia," by William R. Heard, article, Alabama Conservation, vol. 31, no. 5, February-March 1960, pp. 7-8, 23-24, illus., printed. Alabama Department of Conservation, Union St. Administration Bldg., Montgomery, Ala. During the past two years, Tilapia nilotica or T. mossambica have been added to 11 of Alabama's state-owned and managed lakes in an attempt to evaluate their usefulness in supplement-

ing bream and bass fishing, and to determine their effectiveness in controlling obnoxious algae, Pithophora. To date, good catches of Tilapia have been taken from these lakes, although its effectiveness in controlling the algae is still in doubt.

TRANSPORTATION:

Fish Packing Boxes for Sea Transportation, by S. R. Suntur, 5 pp., illus., printed. (Reprinted from General Fisheries Council for the Mediterranean, Proceedings and Technical Papers, Technical Paper 64, no. 5, pp. 459-463.) General Fisheries Council for the Mediterranean, Food and Agriculture Organization of the United Nations, Rome, Italy, 1959.

TRAWL FISHING:

Forecasting the Stock Available and the Conditions for Trawl Fishing, by N. A. Maslov, Translation Series No. 220, 24 pp., processed. (Translated from Trudy Piliarnovo N.-I. Institut Morskovo Rybnovo Khoz-iaistva i Okeanografii (PINRO), no. 10, 1957, pp. 5-29.) Fisheries Research Board of Canada, Biological Station, St. Andrews, New Brunswick, Canada, 1959.

TRAWLERS:

Resistance and Propulsion of Trawlers, by D. J. Doust and T. P. O'Brien (paper read at the North East Coast Institution of Engineers and Shipbuilders, Bolbec Hall, Newcastle-upon-Tyne 1, England, April 3, 1959, 82 pp., printed), from Journal of the British Shipbuilding Research Association, 5 Chesterfield Gardens, Curzon St., London W1, England, 1959.

TRAWLING:

"Midwater Trawling," article, Trade News, vol. 12, no. 11, May 1960, pp. 9-12, illus., printed. Trade News, Department of Fisheries, Ottawa, Canada. Midwater trawling is a fishing method which is attracting widespread interest at the present time. Basically it is an old method that was not particularly satisfactory until new electronic devices were added after World War II. Over the past decade and especially within the past three years, improvements have been superimposed one upon another with remarkable rapidity both in northern Europe and in North America. Because scientists and technologists have shared their findings, representing one continuous development, and especially as one of the most important steps was taken in Canada and interesting practical experiments are still under way, it is proposed to outline these advances, beginning with this summary of early developments outside of Canada. This article; the first of a series of articles on developments in mid-water trawling, discusses the development of the Larsen two-boat trawl, designed primarily for the Danish herring fishery; the French "Exocet" trawl device; Finland's pair-trawling; the Phantom trawl designed by a Swedish naval architect; and the German trawl with four otter boards. It also discusses the modification of these methods of midwater trawling by other countries to fit their own particular needs.

TRAWLS:

"An Improved Design for Small Trawl Doors," by W. A. King-Webster, article, World Fishing, vol. 8, no. 1, January 1959, pp. 40-42, printed. World Fishing, John Trundel (Publishers) Ltd., Temple Chambers, Temple Ave., London EC4, England.

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

"Das Schwimm-Schleppnetz (The Floating Trawl), by A. von Brandt, article, Die Bundesanstalt für Fischerei, vol. 5, nos. 22/23, October 1958, pp. 201-226, illus., printed in German. Die Bundesanstalt für Fischerei, Neuer Wall 72, Hamburg 36, Germany.

TUNA:

"Trolling and Longlining for Tuna," by Louis Devambe, article, South Pacific Bulletin, vol. 10, no. 2, April 1960, pp. 32-33, illus., printed, 30 U. S. cents. South Pacific Commission, Box 5254, G.P.O., Sydney, Australia. The French Institute of Oceania has published two illustrated booklets recording the results of experimental tuna fishing carried out by its fisheries research vessel Orsom III, over a period of several years. Two techniques for commercial use, trolling and longlining, were finally selected, and each is the subject of a separate report. Both are reviewed in the present article.

"Vers une Adaptation des Methodes de Prises aux Habitudes du Thon" (Towards an Adaptation of Catching Methods to the Habits of the Tuna), article, France Peche, vol. 5, no. 41, June 1960, pp. 21-22, illus., printed in French. France Peche, Tour Sud-Est, Rue de Guemene, Lorient, France.

UNITED STATES GOVERNMENT:

United States Government Organization Manual, 1960-61, 822 pp., illus., printed, \$1.50. Office of the Federal Register, National Archives and Records Service, Washington 25, D. C., June 1, 1960. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.) The official organization handbook of the Federal Government. Contains sections descriptive of the agencies in the legislative, judicial, and executive branches. Supplemental information includes brief descriptions of quasi-official agencies and selected international organizations, charts of the more complex agencies, and appendices relating to abolished or transferred agencies, to governmental publications, and to certain ancillary material. Also describes the agencies connected with fisheries: U. S. Fish and Wildlife Service, Bureau of Commercial Fisheries, Defense

Fisheries Administration, Fisheries Division of FAO, and Bureau of Sport Fisheries and Wildlife.

VENEZUELA:

Activades Pesqueras en Venezuela en el Año 1957-- Observaciones Generales de los Problemas Pesqueros Nacionales (Venezuelan Fishing Activities in 1957--General Observations of National Fishery Problems), 102 pp., illus., processed in Spanish. Ministerio de Agricultura y Cria, Direccion de Recursos Naturales Renovables, Division de Pesca y Caza, Caracas, Venezuela, May 1959.

VESSELS:

"Are 'Container' Fishing Vessels Practical?" by G. W. Lehmann, article, World Fishing, vol. 8, no. 4, April 1959, pp. 94-95, illus., printed. World Fishing, John Trundell (Publishers) Ltd., Temple Chambers, Temple Ave., London EC4, England. In a container fishing vessel, the movable containers are placed in the fish hold in such a way that they are filled on the fishing grounds with processed fish, and upon arrival at the home port they are immediately unloaded and distributed inland by truck or railroad car. As the containers remain open during the fishing period, a service alley between them must be provided and so arranged that the doors of the containers may be opened and closed leaving sufficient accessibility for loading. Such service alleys need hatches above them, located preferably forward. Containers are built with watertight openings in order to provide watertight buoyancy bodies within the space as a reserve buoyancy when a vessel is stricken in heavy weather. The fish space of a container fishing vessel need not be insulated since the containers themselves are. Each is equipped with a refrigerating unit, which is fed by the ship while at sea and connected to the truck on shore.

WALRUS:

Preliminary Investigation of the Atlantic Walrus, ODONENUS ROSMARUS ROSMARUS (Linnaeus), by Alan G. Loughrey, Wildlife Management Bulletin, series 1, no. 14, 127 pp., illus., processed. Department of Northern Affairs and National Resources, National Parks Branch, Canadian Wildlife Service, Ottawa, Canada, 1959.

