



FISH AND WILDLIFE SERVICE PUBLICATIONS

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

- CFS - CURRENT FISHERY STATISTICS OF THE UNITED STATES.
 FL - FISHERY LEAFLETS.
 SL - BRANCH OF STATISTICS LIST OF DEALERS IN AND PRODUCERS OF FISHERY PRODUCTS AND BYPRODUCTS.
 SEP. - SEPARATES (REPRINTS) FROM COMMERCIAL FISHERIES REVIEW.
 TL - TECHNICAL REPORT ON A SPECIFIC SUBJECT.

- | Number | Title |
|----------------------------|--|
| CFS-2478 | - South Atlantic Fisheries, 1960 Annual Summary, 6 pp. |
| CFS-2636 | - Frozen Fish Report, June 1961, 8 pp. |
| CFS-2648 | - Massachusetts Landings, April 1961, 5 pp. |
| CFS-2653 | - Maine Landings, June 1961, 4 pp. |
| CFS-2656 | - Shrimp Landings, March 1961, 6 pp. |
| CFS-2657 | - Frozen Fish Report, July 1961, 8 pp. |
| CFS-2658 | - New Jersey Landings, June 1961, 4 pp. |
| CFS-2661 | - Michigan Landings, June 1961, 2 pp. |
| CFS-2662 | - Wisconsin Landings, June 1961, 2 pp. |
| CFS-2663 | - Minnesota Landings, June 1961, 2 pp. |
| CFS-2664 | - Louisiana Landings, January 1961, 2 pp. |
| CFS-2665 | - New York Landings, June 1961, 5 pp. |
| CFS-2666 | - Virginia Landings, June 1961, 4 pp. |
| CFS-2667 | - Ohio Landings, June 1961, 2 pp. |
| CFS-2668 | - Texas Landings, May 1961, 3 pp. |
| CFS-2670 | - North Carolina Landings, July 1961, 4 pp. |
| CFS-2671 | - Maryland Landings, July 1961, 3 pp. |
| CFS-2672 | - Georgia Landings, July 1961, 2 pp. |
| CFS-2673 | - Fish Meal and Oil, July 1961, 2 pp. |
| CFS-2674 | - Florida Landings, July 1961, 9 pp. |
| CFS-2679 | - South Carolina Landings, July 1961, 2 pp. |
| FL-336uu | - Commercial Fisheries Outlook, January-March 1961, 44 pp. |
| FL-336 | - Commercial Fisheries Outlook, April-June 1961, 4 pp. |
| FL-336 | - Commercial Fisheries Outlook, July-September 1961, 4 pp. |
| FL-443 (Revised June 1961) | - Construction of a Garden Fish Pool, 4 pp., illus. |
| FL-505 | - Shipworms and Other Marine Borers, by Michael Castagna, 12 pp., illus., processed, June 1961. Gives the classification, description, reproduction and early life history, distribution, and damage of shipworms, boring clams, and marine-boring crustaceans. Control and prevention are also discussed. Includes a bibliography of publications on marine borers. |

FL-510 - Great Lakes Trawler Conversion, by William G. Gordon and Keith D. Brouillard, 14 pp., illus., March 1961. Commercial fishermen of the Great Lakes have been forced to reconsider the economic feasibility of their methods of operation because of a recent decline in availability of traditionally-used fish stocks and an explosive increase in noncommercial species. The future of the fishing industry depends on producing fishery products at competitive prices. More efficient harvesting of existing stocks is necessary. Methods of converting from traditional Great Lakes vessels to stern-set trawlers or draggers are being evolved. This leaflet discusses in detail vessel conversions, trawling gear, and economic considerations involved.

FL-517 - Ambergris, by Lola T. Dees, 7 pp., illus., May 1961.

Wholesale Dealers in Fishery Products, 1961 (Revised):
 SL- 1 - Maine.
 SL-19 - Louisiana (Coastal Area).
 SL-21 - California.

TL-16 - A Literature Review on Possible Uses for Dogfish, by Kathryn L. Osterhaug, 43 pp., February 1961.

Sep. No. 630 - An Interim Report of the Cape Canaveral Calico Scallop Bed.

Fisheries Loan Fund, Fiscal Year 1959, Fish and Wildlife Circular 113, 14 pp processed. Covers organization of the Office of Loans and Grants, operational changes, and status of the loan fund, and practical value of the program. Includes graphs showing number and value of loan applications received by areas, and number and value of loans approved by areas.

The Groundfish Industries of New England and Canada (A Comparative Economic Analysis), by Edward J. Lynch, Richard M. Doherty, and George P. Draheim, Circular 121, 192 pp., July 1961. This report is an attempt to qualify and list both internal and external causes of the decline of the New England groundfish industry. The study focuses on the comparative costs of production of New England groundfish vessels and those in the Canadian Atlantic Provinces. It deals with the economic, social, and biological factors which have affected both the New England and Canadian groundfish industries. Such topics as background and the problem areas; the Atlantic Provinces of Canada; haddock and other groundfish resources; costs and earnings of New England trawlers; comparative costs in the Canadian and New England groundfish industries; and resources and productivity are all discussed.

The Soft-Shell Clam Industry of Maine, by Robert L. Dow and Dana E. Wallace, Circular 110, 41 pp., illus., June 1961. This report examines the organization and problems of the Maine soft-shell clam industry as well as the physical factors which limit market supplies from this public resource. The influence of public opinion, conservation legislation, and current management practices upon the industry are discussed in detail. The effect of hydrological, geological, and meteorological conditions upon the clam flats and the problems of predation are discussed and illustrated by photographs. Also included are statistical tables covering U. S. production of soft-shell clams by states, 1954-58; production and price per pound of clams, 1887-1959; total landings; average daily catch; and related topics.

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

(Baltimore) Monthly Summary--Fishery Products, August 1961, 8 pp. (Market News Service, U. S. Fish and Wildlife Service, 103 S. Gay St., Baltimore 2, Md.) Receipts of fresh- and salt-water fish and shellfish at Baltimore by species and by states and provinces; total receipts by species and comparisons with previous periods; and wholesale prices for fresh fishery products on the Baltimore market; for the month indicated.

California Fishery Market News Monthly Summary, Part I - Fishery Products Production and Market Data, July 1961, 16 pp. (Market News Service, U. S. Fish and Wildlife Service, Post Office Bldg., San Pedro, Calif.) California cannery receipts of tuna and tunalike fish 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 and June 1961, 11 and 9 pp., respectively, 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 months indicated.

(Chicago) Monthly Summary of Chicago's Wholesale Market Fresh and Frozen Fishery Products Receipts, Prices, and Trends, August 1961, 14 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.

Field Tests of a Chemical Method for the Control of Marine Gastropods, by H. C. Davis, V. L. Loosanoff, and C. L. MacKenzie, Jr., Bulletin No. 3, vol. 25, pp. 3-15, illus., processed. U. S. Bureau of Commercial Fisheries, Biological Laboratory, Milford, Conn., August 7, 1961. A report presented at the convention of the National Shellfisheries Association on the method of chemical control of oyster

drills and other gastropods. During the summer of 1960 extensive field tests were conducted, using one of the basic formulae designed to control oyster drills and other gastropods. The purpose of these tests was fourfold: (1) to evaluate several methods of application of chemically-treated sand; (2) to determine the effectiveness of several variations of the method in the control of oyster drills and other gastropods; (3) to determine the effect of treatment on other fauna; and (4) to determine the effect of treatment on setting of oysters and starfish in treated areas. Materials and methods used as well as experimental results and conclusions are discussed. Also included are illustrations on the method of spreading treated sand, location of oyster grounds used in tests, and details of the test plots.

Gulf of Mexico Monthly Landings, Production and Shipments of Fishery Products, July 1961, 8 pp. (Market News Service, U. S. Fish and Wildlife Service, Rm. 609, 600 South St., 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; fishery imports at Port Isabel and Brownsville, Texas, from Mexico; and sponge sales; for the month indicated.

Monthly Summary of Fishery Products Production in Selected Areas of Virginia, North Carolina, and Maryland, August 1961, 4 pp. (Market News Service, U. S. Fish and Wildlife Service, 18 S. King St., Hampton, Va.) Landings of food fish and shellfish and production of crab meat and shucked oysters for the Virginia areas of Hampton Roads, Chincoteague, Lower Northern Neck, and Lower Eastern Shore; the Maryland areas of Crisfield, Cambridge, and Ocean City; and the North Carolina areas of Atlantic, Beaufort, and Morehead City; together with cumulative and comparative data on fishery products and shrimp production; for the month indicated.

New England Fisheries--Monthly Summary, July 1961, 22 pp. (Market News Service, U. S. Fish and Wildlife Service, 10 Commonwealth Pier, Boston 10, Mass.) Review of the principal New England fishery ports. Presents data on fishery landings by ports and species; industrial-fish landings and ex-vessel prices; imports; cold-storage stocks of fishery products in New England warehouses; fishery landings and ex-vessel prices for ports in Massachusetts (Boston, Gloucester, New Bedford, Provincetown, and Woods Hole), Maine (Portland and Rockland), Rhode Island (Point Judith), and Connecticut (Stonington); frozen fishery products prices to primary wholesalers at Boston, Gloucester, and New Bedford; and Boston Fish Pier and Atlantic Avenue fishery landings and ex-vessel prices by species; for the month indicated.

New York City's Wholesale Fishery Trade--Monthly Summary, June 1961, 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.

Parasites and Diseases of Warm-Water Fishes, Circular 112, 20 pp. (U. S. Fish and Wildlife Service,

Bureau of Sport Fisheries and Wildlife Fish Farming Experimental Station, Stuttgart, Ark.)

Progress Report on Chemical Methods of Control of Molluscan Enemies, by V. L. Loosanoff, C. L. MacKenzie, Jr., and H. C. Davis, Bulletin No. 8, vol. 24, 20 pp., processed. U. S. Bureau of Commercial Fisheries, Biological Laboratory, Milford, Conn., 1960.

(Seattle) Washington and Alaska Receipts and Landings of Fishery Products for Selected Areas and Fisheries, Monthly Summary, August 1961, 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.

(Upper Great Lakes Fishery Committee) Minutes - Annual Meeting, Minneapolis, Minnesota, 1959, 59 pp., illus., processed. (U. S. Fish and Wildlife Service, Regional Office, Bureau of Commercial Fisheries, 5 Research Dr., Ann Arbor, Mich.)

Use of Chemically-Treated Cultth for Increased Production of Seed Oysters, by C. L. MacKenzie, Jr., V. L. Loosanoff, and W. T. Gnewuch, Bulletin No. 5, vol. 25, 15 pp., illus., processed. U. S. Bureau of Commercial Fisheries, Biological Laboratory, Milford, Conn., August 21, 1961.

THE FOLLOWING ENGLISH TRANSLATIONS OF FOREIGN LANGUAGE ARTICLES ARE AVAILABLE ONLY FROM THE U. S. FISH AND WILDLIFE SERVICE, BUREAU OF COMMERCIAL FISHERIES, P. O. BOX 3830, HONOLULU, HAWAII.

The Commercial Fishery Situation on the Ivory Coast, by A. Lassarat, 58 pp., illus., processed, June 1961. (Translated from French, Republic of the Ivory Coast, Ministry of Animal Husbandry, Sea Fishery Service, Abidjan. B. P. 1849--T. 51-69, March 1961.) Covers the fishing fleet and its support, tonnage of fishery products landed, and commercial utilization; and the fishing techniques practiced--trawling, seining, and tuna fishing. Small-scale fishing is presently expanding vigorously because fish has become the principal source of cheap protein food. The establishment of the tuna fishery, which depends on putting into service vast refrigeration installations, may give rise to the development of a large canning industry and also a feed industry. The development of fishing and its related industries, which at present employ about 20,000 people, may create additional supplementary jobs. "The future of fisheries on the Ivory Coast is very promising in view of the extent of the market for local consumption and the prospects for development of the tuna industry," concludes the author.

Operations of Japanese Tuna Longliners and Tuna Fishing Conditions in the Equatorial Atlantic (Particularly 1960 Trends), by M. Nagai, K. Kawaguchi, and J. Nakagome, 10 pp., illus., processed, June 1961. (Translated from Japanese, Tuna Fishing, no. 77, April 1961, pp. 16-22.) The third report on the operations of Japanese tuna long-line vessels and the tuna fishing conditions in the equatorial Atlantic. The authors discuss the findings of the Kanagawa Prefecture Fishery Experiment Station. A comparison is made of the operating method with that of the preceding year, and the year-to-year changes in fishing conditions, particularly for yellowfin tuna, are explained. Included is a table showing arrivals and departures of Japanese tuna-fishing vessels from Atlantic ports, 1957-60.

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Fishway Research at the Fisheries-Engineering Research Laboratory, by Gerald B. Collins and Carl H. Elling, Circular 98, 20 pp., illus., printed, 20 cents, November 1960. Results of 4 years of research on fishway problems, data on rates of movement of salmonids ascending fishways, and of spatial requirements of fish are given and experiments to measure fishway capacity are described. Effect of fishway slope and fishway length on fish performance and biochemical state, experiments measuring swimming abilities of salmon, fish attraction to water velocities and light conditions, as well as effects of light and water velocity on rates of passage through channels and fishways are discussed. Experiments involving fingerling passage problems and the testing of full-scale prototype fishway designs are illustrated.

"Rapid Analysis of the Amino Acid Content of Fish Diets," by W. E. Shanks and J. E. Halver, article, Progressive Fish-Culturist, vol. 22, no. 2, 1960, pp. 51-58, processed, single copy 25 cents.

MISCELLANEOUS PUBLICATIONS

THESE PUBLICATIONS ARE NOT AVAILABLE FROM THE FISH AND WILDLIFE SERVICE, BUT USUALLY MAY BE OBTAINED FROM THE ORGANIZATION ISSUING THEM. CORRESPONDENCE REGARDING PUBLICATIONS THAT FOLLOW SHOULD BE ADDRESSED TO THE RESPECTIVE ORGANIZATION OR PUBLISHER MENTIONED. DATA ON PRICES, IF READILY AVAILABLE, ARE SHOWN.

ABALONE:

"Abalone Juice, Fractionation and Antibacterial Spectrum," by Benjamin Prescott and C. P. Li, article, Proceedings of the Society for Experimental Biology and Medicine, vol. 105, 1960, pp. 498-500, printed. Society for Experimental Biology and Medicine, 630 W. 168th St., New York 32, N. Y.

ALGAE:

"The Nutrient Value of Diatom Algae," by G. K. Barashkov, article, Priroda, vol. 49, no. 6, 1960, p. 100, printed in Russian. Priroda, Izdatel'stvo Akademii Nauk SSSR, Moscow, U.S.S.R.

AMINO ACIDS:

"On the Available Lysine in Protein of Fish and Algae," by Haruo Baba, article, Bulletin of the Japanese

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Society of Fisheries, vol. 26, March 1960, pp. 330-333, printed. Japanese Society of Scientific Fisheries, 6-chome, Shiba-Kaigandori, Minato-ku, Tokyo, Japan.

ANTIBIOTICS:

"Effect of Tetracycline Antibiotics on the Proteolysis of Fish Muscle," by Nihal N. De Silva and R. B. Hughes, article, Nature, vol. 188, November 19, 1960, p. 663, printed. Nature, St. Martin's Press, Inc., 175 Fifth Ave., New York 10, N. Y.

AUSTRALIA:

List of Publications, 1945-1961 (Replacing all Previous Lists), General Circular No. 9, 9 pp., processed. Fisheries and Wildlife Department, 605 Flinders Street Extension, Melbourne, C.3., Victoria, Australia, March 17, 1961.

BIOCHEMISTRY:

"Evidence for the Occurrence of Uridine Diphosphate N-Acetylglucosamine in Crustacean Tissues," by Mary R. Lunt and P. W. Kent, article, Biochemical Journal, vol. 78, January 1961, pp. 128-134, printed. Biochemical Journal, Cambridge University Press, 200 Euston Rd., London NW1, England.

"A Hypocholesterolemic Factor in Marine Sterols," by E. Reiner, D. R. Idler, and J. D. Wood, article, Canadian Journal of Biochemistry and Physiology, vol. 38, December 1960, pp. 1499-1500, printed. Canadian Journal of Biochemistry and Physiology, The National Research Council, Sussex St., Ottawa, Canada.

"Studies on the Biochemical Change in Fish Muscle. X--On the Amp-Deaminase Activity of Some Fractions Prepared from Fish Muscle," by Tomio Hidaka and Kaname Saito, article, Bulletin of the Japanese Society of Scientific Fisheries, vol. 26, October 1960, pp. 1001-1005, printed. Japanese Society of Scientific Fisheries, 6-chome, Shiba-Kaigandori, Minato-ku, Tokyo, Japan.

"The 3 S Fragments of Rabbit and Crayfish Myosin Obtained by Copper Cyanide Treatment," by D. R. Kominz and K. Maruyama, article, Archives of Biochemistry and Biophysics, vol. 90, September 1960, pp. 52-56, printed. Archives of Biochemistry and Biophysics, Academic Press, Inc., 111 5th Ave., New York 3, N. Y.

BIOSYNTHESIS:

Biosynthesis of Trimethylammonium Compounds in Aquatic Animals. I--Formation of Trimethylamine Oxide and Betaine from C¹⁴-Labelled Compounds by Lobster (Homarus americanus)" by E. Bilinski, article, Journal of the Fisheries Research Board of Canada, vol. 17, December 1960, pp. 895-897, printed. Fisheries Research Board of Canada, West Block, Ottawa, Canada.

CALIFORNIA:

Forty-Sixth Biennial Report, California Department of Fish and Game (July 1, 1958, through June 30, 1960), 77 pp., illus., printed. California Department of Fish and Game, 722 Capitol Ave., Sacramento 14, Calif. This report covers in detail the activities of the Department of Fish and Game during the period July 1, 1958, through June 30, 1960. Also included are reports of major policy decisions

by the Fish and Game Commission and activities of the Wildlife Conservation Board. The section on inland fisheries discusses trout hatcheries and the research and experimental programs, habitat improvement through chemical treatment of lakes and streams, Kokanee salmon, warm-water fish, and striped bass. The section on marine resources covers salmon and steelhead--lower river salmon project, upper river studies, coastal stream studies, silver salmon, and other activities; sportfisheries--party boat fishing, northern California sportfish, ocean fish habitat development, California bonito, barracuda, white sea bass, and kelp bass; pelagic fisheries--tuna, anchovy, mackerel, and sardines; bottom fisheries--rockfish and California halibut; shellfisheries--abalone, crab, oysters, ocean shrimp, and pismo clam; pollution studies; research vessels; seismic explorations; and biostatistics. Also included in the report are statistical summaries.

CANADA:

Fisheries Statistics of Canada (Nova Scotia), 1959, 42 pp., printed in French and English, C\$1. Queen's Printer and Controller of Stationery, Ottawa, Canada, August 1961. Consists of tables giving the quantity and value of fish and shellfish landed in Nova Scotia, 1944-1959; the quantity and value of fishery products by species and fisheries districts, 1958-1959; capital equipment employed and number of persons engaged in the primary operations by fisheries districts, 1958-1959; and classification of powered fishing craft by over-all length.

Fisheries Statistics of Canada, 1959 (Prince Edward Island), 22 pp., printed in English and French, 50 Canadian cents. Queen's Printer and Controller of Stationery, Ottawa, Canada, July 1961. Contains tables showing the quantity and value of fishery products landed in Prince Edward Island, 1944-1959, by species; quantity and value by species and fisheries districts, 1958-59; capital equipment employed in primary operations, 1958-59; classification of powered fishing craft by over-all length; and number of persons engaged in primary operations by fisheries districts and in the major fisheries of Prince Edward Island.

Fisheries Statistics of Canada, 1960 (British Columbia), 17 pp., illus., printed in French and English, 50 Canadian cents. Queen's Printer and Controller of Stationery, Ottawa, Canada, July 1961. Contains tables giving the quantity and value of fishery products landed in British Columbia in 1948-60, by species; landings and products, quantity and value by species and fisheries districts for 1959-60; capital equipment in the primary fisheries operations, 1959-60; and number of persons engaged in primary fisheries operations, 1959-60.

Fisheries Statistics of Canada, 1960 (Newfoundland), 24 pp., illus., printed in French and English, 50 Canadian cents. Queen's Printer and Controller of Stationery, Ottawa, Canada, July 1961. Presents tables giving the value of fishery products by species, 1956-60; quantity and value of fishery products by species and fisheries areas, 1959-60; capital equipment employed in primary operations by areas, 1959-60; and number of persons engaged in the fisheries by areas, 1959-60.

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Teeming Waters, by Mark Ronayne, Cat. No. Fs31-1960/1, 17 pp., illus., printed, 25 Canadian cents. (Reprinted from Canadian Geographical Journal.) Department of Fisheries of Canada, Ottawa, Canada. (Available from the Queen's Printer, Ottawa, Canada.) A brief but well illustrated article on Canada's marine and inland fisheries. The author states that "...after four and a half centuries, notable changes have come over the fisheries off our east coast, in the species sought, the ships that pursue them and in the catching methods. But one factor remains unchanged--from the earliest days of discovery to the present, the wealth of these waters continues to be a prize coveted by fishermen of many European as well as the two North American nations, and food from these teeming waters continues to follow multilaned routes to many parts of the globe. Richly endowed as she is on the east coast, Canada is no less fortunate in the resource of her Pacific waters. Here, too, are found the requisites of a great natural heritage replete with variety, quality and abundance. Based on the all-important salmon, the west coast fisheries also have access to important stocks of halibut, herring and various groundfish and shellfish species which support a rich and multi-faceted industry."

CARP:

"The Culture of Carp (Cyprinus carpio L.) in Ponds in Uganda," by A. G. Wurtz and C. J. H. Simpson, article, East African Agricultural and Forestry Journal, vol. 26, no. 2, October 1960, pp. 111-116, printed. East African Agricultural and Forestry Journal, Box 21, Kikuyu, Kenya.

"The Dependency of the Fat Content of the Liver of the Carp (Cyprinus carpio) on the Season, the Food, and the Sex, as Well as Its Relation to the Content of Fat-Soluble Vitamin A," by Gunter Ketz, article, Naturwissenschaften, vol. 46, 1959, p. 610, printed in German. Naturwissenschaften, Springer-Verlag, Reichpietschufer 20, Berlin W35, Germany.

CATFISH:

"Farmers Interested in Pelleted Catfish Food," article, Feedstuffs, vol. 33, April 8, 1961, pp. 1, 93, printed. Feedstuffs, Miller Publishing Co., 2501 Wayzata Blvd., Minneapolis 5, Minn.

CHEMICAL CONTENT:

"Biochemical Studies on Pteria (Pinctada) martensii (Dunker) and Hyriopsis schlegelii (V. Martens). XII--On the Apparent Ion Products of $(Ca^{++})_x(CO_3^{=})$, $(Ca^{++})_x(HPO_4^{=})$ and $(Ca^{++})_x(PO_4^{=})_2$ in Blood and Tissue Fluids of Shellfish," by Yoshishige Horiguchi, article, Bulletin of the Japanese Society of Scientific Fisheries, vol. 26, July 1960, pp. 701-707, printed. Japanese Society of Scientific Fisheries, 6-chome, Shiba-Kaigandori, Minato-ku, Tokyo, Japan.

"Inosinic Acid Content of Foodstuffs. III--Marine Products," by Takao Fujita, and Yoshiro Hashimoto, article, Bulletin of the Japanese Society of Scientific Fisheries, vol. 26, Sept. 1960, pp. 907-910, printed. Japanese Society of Scientific Fisheries, 6-chome, Shiba-Kaigandori, Minato-Ku, Tokyo, Japan.

"The Pantothenic Acid Content of Fish and Shellfish," by Hideo Higashi, Shigeo Murayama, Masaaki Yan-

ase, and Kikuko Tabei, article, Bulletin of the Japanese Society of Scientific Fisheries, vol. 24, no. 9, 1959, pp. 770-775, printed. Japanese Society of Scientific Fisheries, 6-chome, Shiba-Kaigandori, Minato-ku, Tokyo, Japan.

COD:

Preliminary Results of Grey Cod Tagging in Hecate Strait, in 1960 and 1961, by J. A. Thomson, Circular No. 62, 8 pp., illus., processed. Fisheries Research Board of Canada, Biological Station, Nanaimo, B. C., Canada, July 1961.

COMPOSITION:

"A Simple and Rapid Method for the Determination of Histamine in Fish Flesh," by Toshiharu Kawabata, Yutaka Uchida, and Taeko Akano, article, Bulletin of the Japanese Society of Scientific Fisheries, vol. 26, December 1960, pp. 1183-1191, printed. Japanese Society of Scientific Fisheries, 6-chome, Shiba-Kaigandori, Minato-ku, Tokyo, Japan.

"Sodium and Potassium in Puerto Rican Meats and Fish," by Marta Cancio, article, Journal of the American Dietetic Association, vol. 38, April 1961, pp. 341-343, printed. American Dietetic Association, 620 No. Michigan Ave., Chicago 11, Ill.

"Studies on the External Mucous Substance of Fishes. I--On the Chemical Properties of the Mucous Substance of Loach, Misgurnus anguillicadatus Cantor; II--On the Chemical Properties of the Mucous Substance of Conger, Astroconger myriaster Brevoort," by Noriyuki Enomoto and Yukio Tomiyasu, article, Bulletin of the Japanese Society of Scientific Fisheries, vol. 26, July 1960, pp. 739-748, printed. Japanese Society of Scientific Fisheries, 6-chome, Shiba-Kaigandori, Minato-ku, Tokyo, Japan.

"Studies on Muscle of Aquatic Animals. XXVIII--Protein Composition of Fish Muscle," by Yutaka Shimizu and Wataru Simidu, article, Bulletin of the Japanese Society of Scientific Fisheries, vol. 26, August 1960, pp. 806-809, printed. Japanese Society of Scientific Fisheries, 6-chome, Shiba-Kaigandori, Minato-ku, Tokyo, Japan.

"Studies on the Physiological Chemistry of Phosphorus Compounds in Fish Muscle. I--Distribution of Various Phosphorus Compounds in Fish Muscle; II--On the Individual and Regional Variations of Phosphorus Compounds Contents in Fish Muscle; III--On Phosphorus Compounds Not Hydrolyzed by n-HCl in 7 Min. at 100°C. (Examination on the RP)," by Tomoo Nakano and Yasuhiko Tsuchiya, articles, Bulletin of the Japanese Society of Scientific Fisheries, vol. 26, November 1960, pp. 1095-1098, 1192-1197, 1198-1199, respectively, printed. Japanese Society of Scientific Fisheries, 6-chome, Shiba-Kaigandori, Minato-ku, Tokyo, Japan.

CRAB MEAT:

Technology of Crabmeat Production--A Bibliography, by Melvin A. Benarde, 7 pp., printed. (Reprinted from Journal of Milk and Food Technology, vol. 24, no. 7, July 1961, pp. 211-217.) International Association of Milk and Food Sanitarians, Inc., Box 437, Shelbyville, Ind.

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CRUSTACEA:

"A New Deep-Water Species of *Lysiosquilla* (Crustacea, Stomatopoda) from the Gulf of Mexico," by Raymond B. Manning, Contribution no. 298, 7 pp., illus., printed. (Reprinted from *Annals and Magazine of Natural History*, Ser. 13, vol. iii, p. 693, November 1960.) The Marine Laboratory, University of Miami, #1 Rickenbacker Causeway, Miami 49, Fla.

Stomatopod Crustacea from the Atlantic Coast of Northern South America, by Raymond B. Manning, Allan Hancock Atlantic Expedition Report No. 9, 50 pp., illus., printed, \$1.25. The University of Southern California Press, Los Angeles, Calif., June 28, 1961. (Also Contribution no. 304 from The Marine Laboratory, University of Miami, #1 Rickenbacker Causeway, Miami 49, Fla.)

CUBA:

"Fishing at Cojimar (Cuba)," by P. W. Gilbert, article, *Sea Frontiers*, vol. 7, no. 1, February 1961, pp. 53-56, illus., printed. *Sea Frontiers*, Marine Laboratory, University of Miami, #1 Rickenbacker Causeway, Miami 49, Fla.

DEHYDRATION:

"Dehydration of Fish and Shellfish in Heated Air. I--Drying of Adductor Muscle of Scallop," by Tadaschi Kubo and others, article, *Hokusuishi Geppo*, vol. 16, 1959, pp. 312-316. Hokkaido Fisheries Scientific Institute, Yoichi, Hokkaido, Japan.

DELAWARE RIVER BASIN PROJECT:

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better understanding of marketing, brings about a wider appreciation of its significance, and indicates ways in which existing marketing practices may be improved. The introductory chapter discusses the importance of marketing and practical problems and programs. Chapter 2 deals with the main elements in marketing and their part in the marketing system. Assembly, distribution, transport, storage, grading and standardization, wholesale distributors, marketing margins, supply and demand, monopoly, and other related topics are covered in this chapter. Characteristic marketing problems are discussed in Chapter 3, beginning at farm level and continuing through to the wholesale and retail phases of marketing and the provision of facilitating services. Methods of introducing improvements are the subject of the final chapter. This chapter deals with private enterprise, marketing cooperatives, marketing boards, government regulatory programs, government facilitating programs, government marketing departments, and FAO assistance in marketing development. Also includes additional papers on marketing as well as a selected bibliography.

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"Fiskefartoyers Lonnsomhet i 1959, Arsresultater" (Fishing Vessel Profits in 1959--Annual Results), article, Fiskets Gang, vol. 47, no. 28, July 13, 1961, pp. 490-499; no. 29, July 20, 1961, pp. 511-516; and no. 30, July 27, 1961, pp. 527-532, printed in Norwegian. Fiskets Gang, Fiskeridirektoratet, Radstuepllass 10, Bergen, Norway.

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menu patterns are based upon the normal nutritional requirements of older people. Fish is included in some of the menus.

Step Lively and Control Weight, 6 pp., illus., printed, single copy 3 cents (discount for orders of 50 or more). The American Dietetic Association, 620 No. Michigan Ave., Chicago 11, Ill., August 1961.

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The Biology of Polluted Waters, by H. B. N. Hynes, 216 pp., illus., printed, \$3.50. Liverpool University Press, Liverpool, England, 1960.

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Torry Research Station Annual Report, 1960, on the Handling and Preservation of Fish and Fish Products, 49 pp., printed, 3s. (about 42 U. S. cents). Department of Scientific and Industrial Research, Charles House, 5-11 Regent St., London SW1, England, 1961. (Also available from Her Majesty's Stationery Office, 13A Castle St., Edinburgh 2, Scotland.) Describes accomplishments in research during 1960 on improvement in quality of iced fish, freezing and cold storage, smoke curing, drying, canning, and fishery byproducts. Also includes work on effect of temperature on the multiplication of marine bacteria, fish muscle proteins, fat oxidation, dielectric properties of cod muscle, heat transfer in plate freezers, and many others. Also contains a list of reports and papers published during 1960 on the handling and preservation of fish and fish products.

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"Ice-Making and Storage at New Fish Depot," article, Modern Refrigeration, vol. 63, no. 752, November 1960, pp. 1147-1148, illus., printed. Modern Refrigeration, Refrigeration Press Ltd., Maclaren House, 131 Great Suffolk St., London SE1, England.

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"USDA Runs Extensive Test on Linde's Liquid Nitrogen System for Trucks," article, Quick Frozen Foods, vol. 23, no. 6, January 1961, pp. 106-107, printed. Quick Frozen Foods, E. W. Williams Publications, Inc., 82 Wall St., New York 5, N. Y.

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"Changes in Plasma 17-Hydroxycorticosteroids Accompanying Sexual Maturation and Spawning of the Pacific Salmon (Oncorhynchus tshawytscha) and Rainbow Trout (Salmo gairdnerii)," by S. Hane and O. H. Robertson, article, Proceedings of the National Academy of Sciences of the United States of America, vol. 45, 1959, pp. 886-893, printed. National Academy of Sciences, 2101 Constitution Ave. NW., Washington 25, D. C.

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The Management Programme," article, Trade News, vol. 14, no. 1, July 1961, pp. 3-15, illus., printed. Trade News, Department of Fisheries, Ottawa, Canada. Part 1 gives an account of the extensive program of investigation of Atlantic salmon in Eastern Canada. It covers availability of adult salmon, distribution and use of salmon of known river origin, young salmon production, various environmental changes, and studies of the behavior of young salmon. Part 2, the report on the management program, consists of reviews prepared by personnel of fishery groups connected with river studies, pollution studies, hatcheries, hydro development, fresh-water fish populations, and other miscellaneous projects.

SARDINES:

Aspectos Biologicos y Economicos de la Pesqueria de Sardina SARDINOPS CAERULEA (Girard, 1854) en Aguas Mexicanas del Pacifico (Biological and Economic Aspects of the Sardine, Sardinops caerulea--Girard, 1854--), Fishery in Mexican Pacific Waters, by Rodolfo Ramirez Granados, 130 pp., illus., printed in Spanish. Secretaria de Marina, Direccion General de Pesca e Industrias Conexas, Mexico D. F., Mexico, 1958.

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Depreciation Costs - Don't Overlook Them, by Carl P. N. Jensen, Small Marketers Aid No. 68, 4 pp., printed. Small Business Administration, Washington 25, D. C., June 1961. A report on the importance of considering depreciation costs in managing a small firm. Discusses depreciation as a business expense. Explains how depreciation is determined and emphasizes the importance of periodically setting aside equipment-replacing funds. Included is a simple record form which the owner-manager can use to keep track of his depreciation expenses.

Designing for Higher Profits, by Robert B. Sleight, Technical Aids for Small Manufacturers No. 75,

4 pp., printed. Small Business Administration, Washington 25, D. C., July-August 1961. An aid for businessmen and technical executives. In summary, the author states that "Designing for higher profits often means building more comfort and convenience into equipment, work places, and methods. It means trying to arrange the physical things associated with a job in the best way for the operator. Well-designed products are more salable. Well-designed work places are more comfortable and efficient. Well-designed methods are less costly. Top technical people in small plants would do well to look for the chances to improve design." This aid tells of actual business situations and how they were handled. These situations suggest approaches which can be adapted by others to their own needs.

SOUTH CAROLINA:

Common Marine Fishes of South Carolina, by Charles M. Bearden, Contribution No. 34, 44 pp., illus., printed, 8 cents. Bears Bluff Laboratories, Wadmalaw Island, S. C., July 1961. At least 250 species of marine fish are found in South Carolina's marine waters. Many of these species are commonly taken by sports and commercial fishermen and some are important food and game fish. This publication contains information on the identities and habits of some of the more common salt-water fish. Approximately 20 species of salt-water fish, taken chiefly by otter trawl, haul seine, and gill net, enter the commercial catch annually. Spot, shad, and mullet have made up the bulk of the commercial catch in recent years and are the State's most valuable commercial fish.

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"Formation of Acetoin in Cod and Other Bottom-Fish Fillets during Refrigerated Storage," by H. S. Groninger, article, Food Technology, vol. 15, no. 1, January 1961, pp. 10-12, illus., printed. Food Technology, The Garrard Press, 510 N. Hickory, Champaign, Ill.

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STORAGE:

"Storage of Fried Hake," by G. M. Dreosti and A. M. Atkinson, article, Fishing Industry Research Institute, Thirteenth Annual Report for 1959, pp. 18-19, printed. Fishing Industry Research Institute, Cape Town, Republic of South Africa.

TIDES:

Tide Tables--Central and Western Pacific Ocean and Indian Ocean, 1962, 385 pp., printed, \$1. U. S. Department of Commerce, Coast and Geodetic Survey, Washington 25, D. C., August 1961. High and low water predictions.

TILAPIA:

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U. S. S. R.:

Kholodil'naia Tekhnika, no. 3, 1961, 80 pp., illus., printed in Russian with English table of contents and summaries. Kholodil'naia Tekhnika, c/o Four Continent Book Corp., 822 Broadway, New York 3, N. Y. Includes, among others, the following articles: "Low Temperature Storage of Cod and Ocean Perch," by A. I. Piskarev, A. P. Bornovalova, and L. G. Lukyanitsa; "All-Union Scientific Technical Conference of Specialists in the Fishing Industry;" and "Seminar of Technologists of the Estonian Fishing Industry."

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WEATHER CHARTS:

Coastal Warning Facilities Chart, Canadian Border to Eureka, Calif., and Alaska, 1961, 1 p., 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.) The 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.



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.

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YELLOW PIKE:

"Factors Related to Commercial Production of the Walleye in Red Lakes, Minnesota," by Lloyd L. Smith, Jr. and Richard L. Pycha, article, Transactions of the American Fisheries Society, vol. 90, no. 2, 1961, pp. 190-217, printed. Librarian, A & M College, Ft. Collins, Colo.

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