



RECENT FISHERY PUBLICATIONS

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 AND ALASKA.
SL - STATISTICAL SECTION LISTS OF DEALERS IN AND PRODUCERS OF FISHERY PRODUCTS AND BYPRODUCTS.
SSR - FISH. - SPECIAL SCIENTIFIC REPORTS--FISHERIES (LIMITED DISTRIBUTION).
SEP.- SEPARATES (REPRINTS) FROM COMMERCIAL FISHERIES REVIEW.

- | Number | Title |
|----------|--|
| CFS-1512 | - Fish Meal and Oil, February 1957, 2 pp. |
| CFS-1537 | - Fish Meal and Oil, March 1957, 2 pp. |
| CFS-1550 | - Fish Meal and Oil, Annual Summary, 1956, 4 pp. |
| CFS-1560 | - Rhode Island Landings, March 1957, 3 pp. |
| CFS-1561 | - Mississippi Landings, March 1957, 2 pp. |
| CFS-1563 | - Fish Meal and Oil, April 1957, 2 pp. |
| CFS-1564 | - Frozen Fish Report, May 1957, 2 pp. |
| CFS-1565 | - North Carolina Landings, April 1957, 2 pp. |
| CFS-1566 | - Alabama Landings, March 1957, 2 pp. |
| CFS-1569 | - New Jersey Landings, April 1957, 4 pp. |
| CFS-1570 | - Shrimp Landings, February 1957, 4 pp. |
| CFS-1571 | - New York Landings, April 1957, 4 pp. |
| CFS-1572 | - Texas Landings, April 1957, 3 pp. |
| CFS-1573 | - Maine Landings, April 1957, 3 pp. |
| CFS-1574 | - Alabama Landings, Annual Summary, 1956, 3 pp. |
| CFS-1575 | - Shrimp Landings, March 1957, 4 pp. |
| CFS-1578 | - Mississippi Landings, April 1957, 2 pp. |
| CFS-1579 | - Chesapeake Fisheries, Annual Summary, 1955, 6 pp. |
| CFS-1580 | - Pacific Coast States Fisheries, Annual Summary, 1955, 6 pp. |
| SL-13 | - Wholesale Dealers in Fishery Products, North Carolina, 1957 (revised). |

Firms Canning, 1956 (Revised):

- SL-102 - Maine Sardines (including sea herring).
SL-102A - Pacific Sardines.
SL-104 - Mackerel.
SL-105 - Alewives and Alewife Roe.
SL-110 - Oysters.
SL-112 - Shrimp.
SL-120 - Anchovies.

Firms Manufacturing, 1956 (Revised):

- SL-152 - Oyster Shell Products.
SL-155 - Marine Pearl Shell Buttons.

Firms Manufacturing, 1956 (Revised) (Contd.):
SL-159 - Fresh-Water Mussel-Shell Products.

SSR-Fish. No. 198 - Physical Oceanographic, Biological, and Chemical Data--South Atlantic Coast of the United States, Theodore N. Gill Cruise 2, by William W. Anderson, Jack W. Gehringer, and Edward Cohen, 270 pp., illus., December 1956.

SSR-Fish. No. 211 - Effects of Unialgal and Bacteria-Free Cultures of *Gymnodinium brevis* on Fish and Notes on Related Studies with Bacteria, by S. M. Ray and William B. Wilson, 50 pp., illus. Presents indirect evidence that strongly supports the contention that *Gymnodinium brevis*, commonly named "red tide," is the cause of fish kills when its concentration reaches the order of hundreds of thousands to millions of organisms per liter. This evidence includes (1) the presence of dead or dying fish in water containing great numbers of *Gymnodinium brevis*, (2) laboratory demonstrations that water containing great numbers of *Gymnodinium brevis* is toxic to fish, and (3) demonstration that substances toxic to fish may be extracted from water infested with *Gymnodinium brevis*.

SSR-Fish. No. 213 - History of the Great Fishery of Newfoundland, by Robert de Loture, translated from the French by Clyde C. Taylor, 147 pp., illus., April 1957. A complete history of the social, economic, and legal development of the fishery of Newfoundland.

Sep. No. 481 - How to Cook Frozen Fish Without Prethawing: Part II - The Effect of Oven Temperature on Cooking Time for Frozen Halibut Steaks.

Sep. No. 482 - Research in Service Laboratories (July 1957): Contains these articles---"Frozen Fishery Products Storage Life Extended by Glucose-Salt Brine Glaze;" "Nuclear Radiations for Preservation of Fish Quality Standards;" and "Technical Note No. 39 - Frozen Tuna Sampler."

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

Boston Fishery Products Monthly Summary, May 1957, 15 pp. (Market News Service, U. S. Fish and Wildlife Service, 10 Commonwealth Pier, Boston 10, Mass.) Landings and ex-vessel prices by species for fares landed at the Boston Fish Pier and sold through the New England Fish Exchange; and Boston frozen fishery products prices to wholesalers; for the month indicated.

California Fishery Products Monthly Summary, March 1957, April 1957, and May 1957 issues, 10 pp. each. (Market News Service, U. S. Fish and Wildlife Service, Post Office Bldg., San Pedro, Calif.) California cannery receipts of raw tuna and tunalike fish, herring, mackerel, anchovies, and squid; pack of canned tuna, herring, mackerel, anchovies, and squid; market fish receipts at San Pedro, Santa Monica, San Diego, and Eureka areas; California imports; canned fish and frozen fish prices; for the months indicated.

(Chicago) Monthly Summary of Chicago's Fresh and Frozen Fishery Products Receipts and Wholesale Market Prices, April 1957, May 1957, and June 1957 issues, 12 pp. each. (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; fresh-water fish, shrimp, and frozen fillet wholesale market prices; for the months indicated.

(Seattle) Monthly Summary - Fishery Products, April 1957, 4 pp.; May 1957, 5 pp.; and June 1957, 6 pp. (Market News Service, U. S. Fish and Wildlife Service, 421 Bell St. Terminal, Seattle 1, Wash.) Includes landings and local receipts, with ex-vessel and wholesale prices in some instances, as reported by Seattle and Astoria (Oregon) wholesale dealers; also Northwest Pacific halibut landings; for the months indicated.

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.

ALASKA:

(Fisheries Experimental Commission) Biennial Report, 1955-1957, 11 pp., printed. Fisheries Experimental Commission, Ketchikan, Alaska, 1957.

BEACH SEINING:

Ceylon's Beach Seine Fishery, by P. Canagaratnam and J. C. Medcof, Bulletin No. 4, 32 pp., illus., printed. Fisheries Research Station, Department of Fisheries, Galle Face, Colombo, Ceylon, December 1956. A report on the preliminary phases of a study of beach seining, Ceylon's most important single method of fishing. Illustrates the structure and describes operations of the beach seine, including reports on the following: changes, variations, and disposal of the catch; names and sizes of fish taken at various places in Ceylon; yield per unit of effort; and regulatory, financial, and other problems of the beach seine fishery.

BYPRODUCTS:

"Squalene Content of Various Shark Livers," by J. H. Heller, M. S. Heller, S. Springer, and E. Clark, letter to the editors, Nature, vol. 179, no. 4566, May 4, 1957, pp. 919-920, printed. Macmillan & Co., Ltd., St. Martin's Street, London, W. C. 2, England.

CEYLON:

General Features and Productivity of the Wadge Bank Trawl Fishery, by S. Sivalingham and J. Medcof, Bulletin No. 6, 23 pp., illus., printed. Fisheries Research Station, Department of Fisheries, Galle Face, Colombo, Ceylon, 1957. Summarizes the records covering the entire history (1928-1935 and 1945 to the present) of the commercial trawl fishery carried on off the Wadge Bank--a 3,000-square-mile trawlable area on the South Indian continental shelf. The following subjects, supplemented by tables and figures, discussed: physical features; trawler operation; general features of the catch, including details of composition and total landings and value; variations in catch-per-unit effort--year to year, seasonal, day to night, and irregular variation and relative productivity of Wadge Bank--comparisons with other tropical areas and with temperate zone areas which show that Wadge Bank is one of the best trawling areas in the tropics.

Progress Reports, Biological and Technological No. 2, 56 pp., illus., printed. Fisheries Research Station, Department of Fisheries, Galle Face, Colombo, Ceylon, July 1956. Contains the following biological reports: "Study of the Biology of the Sea Bream, Lethrinus nebulosus," "Wadge Bank Trawl Fishery, 1955," and "A Survey of the Balapitiya Lagoon Prawn Fishery," by S. Sivalingham; and "Observations on Some Sargassum Seaweeds of Ceylon," by M. Durairatnam. The technological reports contained are: "Exploratory Bottom Long-Lining along the North-East Coast of Ceylon during the South-West Monsoon of 1954 and 1955" and "Exploratory Bottom Trawling along the North-East Coast of Ceylon during the South-West Monsoon of 1955," by Y. Jean; "Mechanization of the Oru," by A. W. Lantz; "Mechanization of Fishing Craft," by E. R. A. Zylva and E. R. Kvaran; "Preservation of Fish in Chilled Brine Tanks during Transport--Exploratory Vessels," by A. W. Lantz; "Preservation of Fish by Salting and Drying," by C. Gunasekera, N. de Silva, and A. W. Lantz; "Physical Analysis of Trawler Fish," L. D. Gunasekera; A. W. Lantz; "An Investigation into the use of Salvinia for the Preservation of Fish during Storage and Transport," by N. de Silva and A. W. Lantz; and "Methods of Collection, Cost of Production and Bleaching of Gracilaria lichenoides" by M. Durairatnam.

CHESAPEAKE BAY STATES:

The Seafood Industry of the Chesapeake Bay States of Maryland and Virginia (A Study in Private Management and Public Policy), by Charles L. Quittmeyer, 315 pp., illus., processed. Advisory Council on the Virginia Economy, Division of Planning and Economic Development, Richmond, Va., March 1957. The introductory chapter has attempted to point out that the fishing industry of Maryland and Virginia has enough significance to warrant study, that there are some complex problems bearing on profitable marketing that face anyone concerned with developmental policy for this industry, and that there are certain conditions against which such policy might well be weighed before being undertaken as a guide to specific direction. The following chapters deal with the specifics of the factors of supply and distribution that determine, and are determined

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by, profitable marketing, with a final chapter on broad developmental suggestions. A very useful feature is the detailed bibliography. There is also a 50-page abstract prepared from this report for the Committee on Fisheries which contains a discussion of the fishing industry of the Chesapeake Bay region; an analysis of production; and chapters on the market for Chesapeake Bay seafood, channels of distribution, costs and prices, sales promotion, and developmental opportunities.

COMPOSITION:

"The Component Acids of Some Indian Fresh-Water Fish Fats," by S. P. Pathak and V. N. Ojha, article, *The Biochemical Journal*, vol. 66, no. 2, 1957, pp. 193-195, printed. Cambridge University Press, Bentley House, 200 Euston Road, London, N.W.1, England.

CRABS:

Oxygen Requirement and Mortality of the Blue Crab in the Chesapeake Bay, by James H. Carpenter and David G. Cargo, Technical Report XIII, 32 pp., illus., processed. Chesapeake Bay Institute, The Johns Hopkins University, Baltimore, Md., January 1957.

ECHO-SOUNDING:

Detection of Fish--Echo Sounding, by D. H. Cushing and I. D. Richardson, *Fishery Investigations* 1955, Series 2, No. 1, printed. Ministry of Agriculture and Fisheries, Chester Terrace, Regents Park, N.W.1, England, 1955. Describes investigations carried out with a triple-frequency echo-sounder for the detection of fish.

FISH CULTURE:

Some Aspects of the Problem of Rearing Marine Fishes, by Robert W. Morris, *Bulletin de l'Institut Oceanographique* No. 1082, 64 pp., illus., printed. Musee Oceanographique (Bulletin), Monaco-Ville (Pte), France, July 25, 1956.

FISHERIES EDUCATION:

Educacion Pesquera en Noruega (Fisheries Education in Norway), by Sven Somme, 76 pp., illus., printed. FAO Regional Office, Food and Agriculture Organization of the United Nations, Santiago, Chile.

FISH STICKS:

"Infra-Red Cooking of Fish Sticks," article, *Canner and Freezer*, vol. 123, p. 35, December 24, 1956, printed. Clissold Publishing Co., 105 W. Adams St., Chicago 3, Ill. Describes the cooking of fish sticks by infra-red heat at a plant in Wheatley, Ontario, Canada.

FREEZING:

Post-Mortem Changes in the Lenses of Fish Eyes. II.--Effects of Freezing, and Their Usefulness in Determining the Past History of the Fish, by R. M. Love, *DSIR Food Investigation Memoir* No. 1023, 7 pp., illus., printed. (Reprinted from *Journal of the Science of Food and Agriculture*, no. 3, 1956, pp. 220-226.) Torry Research Station, Department of Scientific and Industrial Research, Aberdeen, Scotland.

GEAR:

The Lampara Net in Turkish Waters (A Report from the Fishery Research Center, Meat and Fish Office), by Olav Aasen, Ilham Artuz, and Erdogan Akyuz, *Series Marine Research* vol. 1, no. 3, 19 pp., illus., printed in English with summary in Turkish. Fakulteler Matbaasi, Istanbul, Turkey, 1956.

GENERAL:

Man Under the Sea, by James Dugan, 332 pp., illus., printed. Harper & Brothers, 49 East 33rd St., New York 16, N. Y., 1956. A history of the courageous men who have pioneered, developed, and advanced undersea exploration from 415 B.C. to 1955. The author presents vivid stories of diving history, salvage, diving physiology, free diving, undersea warfare, submarine vehicles, underwater photography, oceanography, undersea archeology, and the deepest descents into the sea. This colorful history is enhanced by a generous amount of photographs and sketches. A list of the principal events in underwater history from 415 B.C. to 1955 and an undersea bibliography are included as appendices.

Names of Fishes and Charts of Statistical Areas, 9 pp., illus., printed. (Reprinted from *Bulletin Statistique*, International Council for the Study of the Sea.) Imprimerie Bianco Luno A/S, Copenhagen, Denmark.

Salt-Water Angling, by Michael Kennedy, 376 pp., illus., printed. Pitman Publishing Corporation, New York, N. Y., 1956. Deals with present-day sea angling. Discusses tackle and fishing methods; baits and practical fishlore; seamanship; and weather wisdom. The finer forms of sea angling and modern developments in equipment are fully covered.

GREENLAND:

"Fisket ved Vest-Grønland, 1956" (Fishing off West Greenland, 1956), by Knut Friis, article, *Fiskets Gang*, no. 19, May 9, 1957, pp. 249-253, illus., printed in Norwegian. *Fiskets Gang*, Postgiro nr. 691-81, Bergen, Norway. Describes the operations of 71 long liners and 2 trawlers off West Greenland. Presents statistics on the sizes of the vessels as well as detailed data on the type of gear used. Landings of salted cod, frozen halibut, salted cusk, and frozen redfish made by the vessels are also given.

HALIBUT:

"Contribution to the Life History of the Halibut at the West of Iceland in Recent Years (1936-1950)," by Adalsteinn Sigurdsson, article, *Meddelelser fra Danmarks Fiskeri- og Havundersogelser*, Ny Serie Bind I, Nr. 16, 24 pp., illus., printed. C. A. Reitzels Forlag, Copenhagen, Denmark, 1956.

IMPORTS:

Schedule A--Statistical Classification of Commodities Imported into the United States, January 1, 1954, Edition, revised and reprinted July 1, 1957, printed, \$3.50 domestic and \$4.50 foreign. Foreign Trade Division, Bureau of the Census, U.S.

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Department of Commerce, Washington, D. C. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C.) Schedule A is the statistical classification of commodities imported into the United States used in compiling the official United States import statistics. It shows for each commodity description (including fishery products and related commodities) the commodity code numbers to be shown on import entries and withdrawal forms. In addition it shows the country, customs district, subgroup, economic class, unit of quantity, and flag of vessel classifications used in compiling the statistics. The January 1, 1954, edition corrected to July 1, 1957, superseding the original issue of the January 1, 1954, edition, is printed in looseleaf form. The cost of the Schedule includes supplemental bulletins and pages to keep it up to date for at least a year from the time of issuance.

NORTH CAROLINA:

Commercial Fisheries of North Carolina--An Economic Analysis, by George M. Woodward, 153 pp., illus., printed, \$2. Bureau of Business Services and Research, School of Business Administration, University of North Carolina, Chapel Hill, N. C., 1956. Describes a study that has expanded, supplemented, and brought up to date previous economic research on the marine fisheries of North Carolina. The objectives of the study are: (1) to measure and assess the importance of commercial fishing in North Carolina; (2) to determine the rates of growth of the fisheries and the economic factors affecting these rates; and (3) to discover what economic advantages North Carolina has in the production of sea products. This book is divided into the five following parts, each of which is thoroughly covered: "Overview of the Fishing Industry--The Perspective and Setting"; "The Economic Outlook for the Finfisheries"; "The Oyster Fishery"; "The Shrimp Fishery"; and "Processing of Fishery Products." Many tables and charts and a technical appendix are included.

OYSTERS:

"Effect of Aureomycin Chlortetracycline in the Processing and Storage of Freshly Shucked Oysters," by Anthony Abbey, A. Richard Kohler, and Sidney D. Upham, article, Food Technology, vol. 11, no. 5, May 1957, pp. 265-271, illus., printed, single copies of periodical: domestic US\$1.50, foreign US\$1.75. (Published by the Institute of Food Technologists.) The Garrard Press, 119 West Park Ave., Champaign, Ill. A review of the literature and extensive experiments in prolonging the freshness of fish with antibiotics is given. The efficacy of antibiotics for maintaining freshness in shucked oysters has not been as well established as in fish. The present report evaluates the use of aureomycin chlortetracycline (CTC) in the processing of freshly-shucked oysters. The data presented indicate that shucked oysters treated with CTC remain organoleptically acceptable for longer storage periods when compared to the untreated controls. CTC was evaluated in concentrations ranging from 1 p.p.m. to 30 p.p.m. with varying exposure times. Several trials were conducted in cooperation with commercial processors. On a limited basis, production facilities

and schedules were employed wherever practical; the various proportions of freshly-shucked oysters and the treating solutions as well as exposure times were thus investigated. Comparatively unfavorable storage conditions were usually employed for the laboratory freshness studies. Under these conditions, the microbial counts and organoleptic findings indicated the usefulness of CTC in the processing of freshly-shucked oyster

Relative Intensity of Oyster Setting in Different Years in the Same Areas of Long Island Sound by V. L. Loosanoff and C. A. Nomejko, 6 pp., illus., printed. (Reprinted from Biological Bulletin, vol. 111, no. 3, December 1956, pp. 387-392.) Marine Biological Laboratory, Woods Hole, Mass. Discusses studies of variations in the intensity of setting of the Crassostrea virginica oyster in ten chosen areas over a twelve-year period--from 1944 through 1955.

PILCHARD:

The South African Pilchard (SARDINOPS OCELANATA) Migration, 1950-55, by D. H. Davies, Division of Fisheries Investigational Report No. 24, 52 pp., illus., printed. (Reprinted from Commerce and Industry, November 1956.) Division of Fisheries, Beach Rd., Sea Point, Cape Town, Union of South Africa.

PRESERVATION:

Antibiotic Tests were Successful (Experiments with Aureomycin Ice to Continue), by J. M. Shewan, DSIR Food Investigation Misc. Paper No. 17/56, printed. (Reprinted from Fishing News, Aug. 10, 1956.) Torry Research Station, Department of Scientific and Industrial Research, Aberdeen, Scotland.

Heat and Water Transfer During the Dehydration of Herring Fillets, by M. M. del Campo and C. Cutting, DSIR Food Investigation Memoir No. 1026, 8 pp., illus., printed. (Reprinted from Journal of the Science of Food and Agriculture 1956, no. 6, pp. 417-424.) Department of Scientific and Industrial Research, Torry Research Station, Aberdeen, Scotland.

Smoke-Curing Salmon and Trout in the Torry Controlled Kiln, by C. T. House and C. L. Cuttitt, DSIR Food Investigation Memoir No. 1027, 10 pp., illus., printed. (Reprinted from Food Manufacture, vol. XXXI, 1956, pp. 427-436.) Department of Scientific and Industrial Research, Torry Research Station, Aberdeen, Scotland.

"Uptake of Aureomycin Chlortetracycline by Fish and Its Heat Inactivation," by Tetuo Tomiyama, Yasuo Yone, and Kazuo Mikajiri, article, Food Technology, vol. 11, no. 5, May 1957, pp. 290-293, illus., printed, single copies of periodical: domestic US\$1.50, foreign US\$1.75. (Published by the Institute of Food Technologists.) The Garrard Press, 119 West Park Ave., Champaign, Ill. The purpose of this paper is to obtain more information on the uptake of aureomycin chlortetracycline (CTC) by several round fish and to study its distribution in fish muscle and its destruction by heat in fish muscle. Uptake, distribution, and heat destruction of CTC in four

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species of round fish and in fish fillets were determined by a modified pad plate assay. CTC did not penetrate into the muscle tissue of round fish from chilled sea water containing 10 p.p.m. within one day of immersion except in the case of small fish with incompletely developed scales, e.g., pilchard, common mackerel. Determination of CTC in various parts of fresh round fish "isaki" which were stored in chilled sea water containing 10 p.p.m. of CTC gave results which indicated that the penetration of CTC into meat or viscera did not occur after 27 hours' storage whereas a measurable uptake did occur rather rapidly into the skin and gills. Evidence was obtained that the surface part of bonito muscle (without skin) picked up as much as 2.4 p.p.m. CTC over a 5-hour period when immersed in sea water containing 10 p.p.m. at 4° C., whereas no CTC was found in the muscle deeper than 10 mm. The rate of heat destruction in bonito muscle increased remarkably as the temperature was raised. The change in residual CTC can be expressed as an exponential function of time of heating.

SALMON:

(International Pacific Salmon Fisheries Commission) Collection and Interpretation of Sockeye Salmon Scales, by R. I. Clutter and L. E. Whitesel, Bulletin IX, 159 pp., illus., printed. International Pacific Salmon Fisheries Commission, New Westminster, B. C., Canada, 1956.

SARDINES:

Studies and Researches on the Manufacture of Canned Moroccan Sardines, by R. Meesemaeker and Y. Sohler, 105 pp., printed. Cah. Lab. Froid Cons. Ain-Sebaa, Casablanca No. 2, Morocco, 1956.

SHRIMP:

"Objective Tests Applicable to Quality Studies of Ice Stored Shrimp," by M. E. Bailey, E. A. Fieger, and A. F. Novak, article, Food Research, vol. 21, November-December 1956, pp. 611-620, printed. The Garrard Press, 119-123 West Park Ave., Champaign, Ill. A study made to demonstrate the effectiveness of various tests for evaluating the organoleptic quality of iced shrimp.

SWEDEN:

A Study Tour of Fishery Developments in Sweden, September 1955, by C. J. McGrath, 27 pp. of text, 40 pp. diagrams and photographs, processed. Department of Lands, Fisheries Branch, 3 Cathal Brugha Street, Dublin, Ireland. A report, largely pictorial, on a study of fish conservation measures adopted for salmon and trout in the river systems of Sweden. Discusses the solutions to problems posed by electrical power plants to migration and spawning of fish. Principal subjects covered are fishways, tagging experiments, ponds, and hatcheries.

TERRITORIAL WATERS:

España Pesquera (Fishing Spain), vol. II, no. 12, 40 pp., illus., printed in Spanish. Sindicato Nacional de Pesca, Paseo del Prado, 20, sexta planta, Madrid, Spain, January 1957. This issue is devoted almost exclusively to international fishery problems confronting the United Nations. Included, among others, are the following articles:

"The Codification of the Law of the Sea"; "The Territorial Sea and the Continental Shelf"; "The Future International Conference on the Law of the Sea--Intervention of Mr. Castro-Rial, Spain's Delegate to the U.N."; and "The Submarine Platform," by Jose Luis de Azcarraga.

(International Law Commission) Report of the International Law Commission on the Work of its Eighth Session: (a) Final Report on the Regime of the High Seas, the Regime of the Territorial Sea and Related Problems, A/C.6/L.388, December 21, 1956, 6 pp., processed. United Nations, International Law Commission, New York, N. Y. Presents the texts of "Principles of Mexico on the Juridical Regime of the Sea" and of the "Resolution of Ciudad Trujillo."

TRADE LIST:

The following foreign trade list has been issued by the Office of Economic Affairs, Bureau of Foreign Commerce, U. S. Department of Commerce, Washington 25, D. C. Copies of the list may be purchased by firms in the United States at \$2 each from that office or from field offices of the Department.

Oils (Animal, Fish, and Vegetable)--Importers, Dealers, Producers, Refiners, and Exporters--Argentina, 10 pp. (April 1957). Contains the names and addresses, approximate daily production for producers, and type of product handled by each firm. Average annual consumption of edible oils is about 250,000 metric tons. Normally production is sufficient to supply domestic needs and provide a surplus for export. Some medicinal and occasional supplies of edible oils are imported whenever there is a decrease in domestic production. Imports of fish oils amounted to 89 metric tons from Norway during the first nine months of 1956.

TROPICAL FISH:

How to Keep and Breed Tropical Fish, by Dr. C. W. Emmens, 191 pp., illus., printed. T. F. H. Publications, Inc., T. F. H. Building, 57 Academy St., Jersey City 2, N. J., 1956.

TUNA:

(Inter-American Tropical Tuna Commission) Schooling Habits of Yellowfin Tuna (NEOTHUNUS MACROPTERUS) and Skipjack (KATSUWONUS PELAMIS) in the Eastern Pacific Ocean as Indicated by Purse-Seine Catch Records, 1946-1955, by Craig J. Orange, Milner B. Schaefer, and Fred M. Larmie, Bulletin vol. II, no. 3, 126 pp., illus., printed in English and Spanish. Inter-American Tropical Tuna Commission, La Jolla, Calif., 1957. A report, including 9 charts and 9 tables, on the results of investigations of the schooling habits of yellowfin and skipjack tuna. The report is based on logbook records kept by masters and fishermen of purse-seine fleet vessels. Yellowfin tuna is being fished at a greater intensity than skipjack. According to the authors, this report will be of particular interest in regard to formulating practical fishing regulations, limiting the catching of yellowfin without limiting the catching of skipjack, if it should become necessary.

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TURKEY:

A Contribution to the Fishery Investigations in the Sea of Marmara (A Report from the Fishery Research Center, Meat and Fish Office), by Olav Aasen, İlham Artuz, and Erdoğan Akyuz, Series Marine Research vol. 1, no. 2, 31 pp., illus., printed in English with summary in Turkish. Fakulteler Matbaası, Istanbul, Turkey, 1956.

Some Data Concerning the Fisheries in Iskenderun Bay, by Olav Aasen and Erdoğan Akyuz, Series Marine Research vol. 1, no. 4, 20 pp., illus., printed in English with summary in Turkish. Fakulteler Matbaası, Istanbul, Turkey, 1956.

UNITED KINGDOM:

Herring Industry Board, Twenty-Second Annual Report for the Year Ended 31st December, 1956, 41 pp., printed. Herring Industry Board, 1 Glenfinlas Street, Edinburgh 3, Scotland, June 1957. Reports on the following phases of the British herring industry: the fishing; commercial and statutory matters concerning the Herring Industry Board, the catchers, and shore-based sections of the industry; marketing; research and development; the fleet; and accounts. Contains statistical tables showing the landings and value of catches and disposal of landings, during the winter, summer, and fall seasons; composition of fleets in the Irish Sea area and East Anglia; curing strength and production of cured herring; imports of fresh and frozen herring; disposal of the United Kingdom's total herring landings, excluding imports; and applications for grants and loans.

A summary of pertinent rules and directions issued in 1956 and notes on trawling for herring included as appendices. The report as a whole particularly stresses that the proportion of young fish in the catches has increased considerably the last few years and that herring catches are becoming alarmingly smaller.

Scottish Sea Fisheries Statistical Tables, 1956, pp., printed. Her Majesty's Stationery Office, Castle Street, Edinburgh 2, Scotland, April 1957. Contains 23 statistical tables of the fish landed and cured, vessels and fishermen, and creek returns. Tables 1 through 16 cover quantity and value of fish landed by British and foreign vessels; landings of British vessels according to methods of fishing from 1938 through 1956; quantity, value, and average value of each kind of fish landed by British vessels in 1913, 1938, and 1956; quantity and value of each kind of fish landed in specific districts by British vessels of various types; quantity of each kind of fish landed from and expenditure of fishing effort in each fishing region by British vessels; quantity of each kind of fish landed by foreign vessels from each fishing region and quantity and value of fish landed by each nationality; and seasonal landings of herring. Tables 17 through 23 cover quantity of herring cured from 1913 through 1956; quantity and value of whitefish cured and herring cured in each district, according to method of cure; fishing vessels; fishermen employed; greatest number of vessels and persons employed by districts in herring fishing; and vessels, fishermen and quantity and value of fish landed in creeks.



INTERNATIONAL CODE FOR DESCRIBING THE STATE OF THE SEA

The internationally-recognized and commonly-used code for reporting the state of the sea is as follows:

Code Figure	Description of Sea	Height	
		Meters	Feet (approx.)
0	Calm-glassy	0	0
1	Calm-rippled	0 - 0.1	0 - $\frac{1}{3}$
2	Smooth-wavelets	0.1 - 0.5	$\frac{1}{3}$ - $1\frac{2}{3}$
3	Slight	0.5 - 1.25	$1\frac{2}{3}$ - 4
4	Moderate	1.25 - 2.5	4 - 8
5	Rough	2.5 - 4	8 - 13
6	Very rough	4 - 6	13 - 20
7	High	6 - 9	20 - 30
8	Very high	9 - 14	30 - 45
9	Phenomenal	over 14	over 45

In the October 1956 issue of Commercial Fisheries Review (p. 5), a different code was shown. However, we understand that the international code given above is more widely used and recognized.