

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.
 SEP. - SEPARATES (REPRINTS) FROM COMMERCIAL FISHERIES REVIEW.

Number	Title
CFS-1887	Rhode Island Landings, July 1958, 3 pp.
CFS-1901	California Landings, June 1958, 4 pp.
CFS-1902	Rhode Island Landings, August 1958, 3 pp.
CFS-1912	Alabama Landings, August 1958, 2 pp.
CFS-1918	New York Landings, September 1958, 4 pp.
CFS-1923	Shrimp Landings, July 1958, 6 pp.
CFS-1925	Frozen Fish Report, October 1958, 8 pp.
CFS-1927	Massachusetts Landings, July 1958, 5 pp.
CFS-1928	Louisiana Landings, June 1958, 2 pp.
CFS-1929	Louisiana Landings, July 1958, 2 pp.
CFS-1930	North Carolina Landings, October 1958, 3 pp.
CFS-1931	Fish Meal and Oil, October 1958, 2 pp.
CFS-1932	Ohio Landings, October 1958, 2 pp.
CFS-1933	New Jersey Landings, October 1958, 2 pp.
CFS-1934	Georgia Landings, October 1958, 2 pp.
CFS-1935	Mississippi Landings, September 1958, 2 pp.
CFS-1936	South Carolina Landings, October 1958, 2 pp.
CFS-1937	Florida Landings, October 1958, 7 pp.
CFS-1939	Maine Landings, October 1958, 3 pp.

Wholesale Dealers in Fishery Products (Revised):
 SL-6 - New York Coastal Area, 1958.
 SL-21 - California, 1958.

- Sep. No. 534 - A Survey of the American and Japanese Albacore Tuna Fisheries in the Pacific Through Examination of Catch Statistics.
 Sep. No. 535 - The European Common Market and the United States Fishing Industry.
 Sep. No. 536 - Research in Service Laboratories (January 1959): "Technical Note No. 49 - Measurement of Rancidity in Fishery Products by 2-Thiobarbituric Acid Method.

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

(Chicago) Monthly Summary of Chicago's Fresh and Frozen Fishery Products Receipts and Prices, November 1958, 12 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, November 1958, 6 pp. (Market News Service, U. S. Fish and Wildlife 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; and wholesale prices of fish and shellfish on the New Orleans French Market; for the month indicated.

Monthly Summary of Fishery Products Production in Selected Areas of Virginia, North Carolina, and Maryland, November 1958, 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, November 1958, 21 pp. (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 month indicated.

(New York) Monthly Summary of New York City's Wholesale Fulton Fish Market Fishery Products Receipts, October 1958, 14 pp. (Market News

Service, U. S. Fish and Wildlife Service, 155 John St., New York 38, N. Y.) Includes receipts by species by states and provinces and methods of transportation; states and provinces by species and methods of transportation; totals by species with comparisons, for salt-water finfish and shellfish. Also contains frozen fishery products prices by primary wholesalers for the month 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.

ALGAE:

"B-Complex Vitamins in Certain Brown and Red Algae," by A. E. Teeri and R. E. Bieber, article, *Science*, vol. 127, no. 3313, June 27, 1958, p. 1500, printed. American Association for the Advancement of Science, 1515 Massachusetts Ave., NW, Washington 5, D. C.

"Sublittoral Algal Population in Port Erin Bay, Isle of Man," by Elsie M. Burrows, article, *Journal of the Marine Biological Association of the United Kingdom*, vol. 37, no. 3, October 1958, pp. 687-703, illus., printed. Cambridge University Press, 32 East 57th St., New York 22, N. Y.

ANTIBIOTICS:

"Antibiotic Action of Fish Components," by Masamichi Toyomizu, article, *Nippon Suisan Gakkaishi*, vol. 22, 1956-57, pp. 368-373, printed in Japanese. Japanese Society of Scientific Fisheries, Tokaiku Suisan Kenkyujo, No. 3, Tsukijima, Chuo-Ku, Tokyo, Japan.

"Antibiotic Residues in Shellfish After Cooking," by M. A. Benarde, article, *Journal of the American Dietetic Association*, vol. 33, no. 11, November 1957, pp. 1145-1149, printed. American Dietetic Association, Room 410, 620 Michigan Ave., Chicago 11, Ill.

BIOCHEMISTRY:

"The Yield of Insulin from Fish," by N. A. McCormick and E. C. Noble, article, *Contributions to Canadian Biology*, vol. 2, no. 7, pp. 117-127, printed. University of Toronto Press, Toronto, Ontario, Canada, 1924.

CANADA:

Journal of the Fisheries Research Board of Canada, vol. 15, no. 5, September 1958, pp. 759-1126, illus., printed. Queen's Printer and Controller of Stationery, Ottawa, Canada. Contains, among others, the following articles: "Comparisons of the Index of Return for Several Stocks of British Columbia Salmon to Study Variations in Survival," by H. Godfrey; "Maximum Sustained Yields from Fluctuating Environments and Mixed Stocks," by W. E. Ricker; "Spawning Stock Size and Resultant Production for Skeena Sockeye," by M. P. Shepard and F. C. Withler;

and "Review of Certain Environmental Factors Affecting the Production of Pink and Chum Salmon," by W. P. Wickett.

The 1958 Herring Spawn Deposition in British Columbia Coastal Waters, by D. N. Outram, Circular no. 50, 13 pp., illus., processed. Fisheries Research Board of Canada, Biological Station, Nanaimo, British Columbia, Canada, September 1958. This is the fourth in an annual series of circulars on the success of herring spawning in British Columbia. "These reports," states the author, "are designed to inform the fishing industry on the status of the spawning stocks. The maintenance of an adequate spawning escapement is essential to ensure the perpetuation of the herring stocks. The amount of spawn deposited in any area is obviously related to the amount of fish that spawned, thus, annual assessments of the extent and intensity of all spawnings will form the basis for a qualitative index of the size of the spawning stock. The Pacific herring (*Clupea pallasii*) spawn in spring on marine algae and eel grass growing in or just below the intertidal zone. The boundaries of the spawn-laden vegetation become partially exposed during low tides and can be readily measured."

CANNING:

"Fish Canning. Part 1--Chilling of Pilchards," by C. E. B. Cooper, article, 9th Annual Report, pp. 13-14, printed. Fishing Industry Research Institute, University of Cape Town, Rondebosch, C. P., Union of South Africa, 1957.

"Manual Sorting of Pilchards for Canning," by M. K. Rowan, paper, Progress Report No. 29, 9 pp., printed. Fishing Industry Research Institute, University of Cape Town, Rondebosch, C. P., Union of South Africa.

The Potential Application of Antibiotics in the Salmon Canning Industry. 1--Organoleptic Evaluations, by Joseph A. Stern and others, Contribution No. 21, 9 pp., printed. School of Fisheries, University of Washington, Seattle, Wash., 1957.

COD-LIVER OIL:

"Production of Vitamin Concentrates from Baltic Cod-Liver Oil," by Henryk Niewiadomski and Bronislaw Drozdowski, article, *Roczniki Technol. i Chem. Zwynosci* (Annals of Food Technology and Chemistry), vol. 1, pp. 99-115, printed. Komitet Technologii i Chemii Zwynosci of the Wydzial Nauk Rolniczych i Lesnych of the Polska Akademia Nauk, Warsaw, Poland.

CONTAINERS:

"A New Fish Box Made of Plastic," article, *La Revue de la Conserve*, March 1957, p. 83, printed in French. *La Revue de la Conserve*, 1 Rue de la Reale, Paris 1, France.

COOKERY:

Choose Canadian Fish for Variety and Economy, 8 pp., processed. Department of Fisheries, Ottawa, Canada.

Favourite Fish Recipes, Consumer Bulletin No. 7, 11 pp., processed. Queen's Printer and Controller of Stationery, Ottawa, Canada, 1957.

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

Fish Recipes, 23 pp., processed. Queen's Printer and Controller of Stationery, Ottawa, Canada, 1958.

The Way to Cook Fish, 8 pp., processed. Queen's Printer and Controller of Stationery, Ottawa, Canada, 1958.

ELECTRICAL FISHING:

"Die Fanggerate der Elektrofischerei" (The Fishing Gear for Electrofishing), by E. Halsband, article Der Kescher, vol. 7, no. 1, January-February 1957, pp. 3-8, illus., printed in German. Verband deutsch Sportfischer, Hamburg 1, W. Germany.

ENGLISH SOLE:

Problems of Sampling a Puget Sound Population of English Sole, PAROPHRYS VETULUS, by Richard Van Cleve and Alonzo T. Pruter, Contribution No. 13, 7 pp., illus., printed. School of Fisheries, University of Washington, Seattle, Wash., 1956.

FACTORYSHIP:

"The Factoryship of the Future," by C. Birkhoff, article, Hansa, vol. 94, no. 12-13, March 23, 1957, p. 593, printed in German. Hansa Zeitschrift Schiffbau, Hafen, C. Schroedter & Co., Stubbenhuk 10, Hamburg 11, Germany.

World Fishing, vol. 7, no. 11, November 1958, 132 pp., illus., printed. John Trundell, Ltd., St. Richards House, Eversholt St., London N. W. 1, England. Includes, among others, a section entitled, "Factoryship Survey," which covers the following topics: "Is the Full-Scale Factory Trawler the Answer? A Modified View," by W. Lochridge; "Is the Mothership Idea Better," by C. Birkhoff; "Russians Will Have Over 90 Large Factory Trawlers;" "Fish Freezing Problems and Techniques," by M. B. F. Ranken; "Factory Deck Operations: The Russian Way;" "Factory Trawlers: the Crewing Position;" "The Two New Salvesen Vessels," by Norman James Cheater; and "Machine Filleting at Sea--Some of the Baader Range." In addition, there are smaller articles on: "How Many Factory Trawlers?;" "Fresh Water Supply for Factoryships;" "Fairtry Economics;" and "Factoryships: A Merchant's Views." These articles present trends in factoryship fishing and were contributed by authors in Russia, Poland, Germany, and the United Kingdom. The section deals with the design, operation, economics, and manning of factory trawlers. Many different opinions and ideas are described in an interesting and objective manner with a number of sketches and photographs included.

FILLETS:

"The Expressible Fluid of Fish Fillets" (VII. Freezing Damage and Protein Denaturation Under Pressure; VIII. Cell Damage in Slow Freezing; IX. Other Types of Cell Damage Caused by Freezing), by R. M. Love and O. Karsti, article, Journal of the Science of Food and Agriculture, vol. 9, May 1958, pp. 249-268, printed. Society of Chemical Industry, 9/10 Savile Row, W. 1, London, England.

"Should We Prewrap Fresh Fillets in Consumer Packages?" by C. H. Castell, article, Canadian Fisherman, vol. 15, June 1958, pp. 12, 15, printed. National Business Publications, Ltd., Gardenvale, Quebec, Canada.

FINGERLINGS:

A Factorial Study of the Response of Steelhead Trout, Chinook and Silver Salmon Fingerlings to Chain Barriers in Moving Water, by P. E. Fields and others, Technical Report No. 13, 7 pp., printed. School of Fisheries, University of Washington, Seattle, Wash., 1955.

FISH MEAL:

Feeding Trials with Skim Milk, Meat Meal, Fish Meal, and Soybean Oil Meal for Bacon Pigs, by A. Hellberg, O. Dahl, and K. I. Appelgren, National Animal Experiment Station, Royal Agricultural College Bulletin No. 62, 26 pp., printed in Swedish with English summary. Ultuna, Uppsala 7, Sweden, 1956.

"Fish Meal--Analysis," by D. Montequi and M. D. Garcia Pineda, article, Boletin del Instituto Espanol de Oceanografia (Bulletin of the Spanish Institute of Oceanography), No. 79, June 1956, p. 79, printed. Boletin del Instituto Espanola de Oceanografia, Alcalá 27, Madrid, Spain.

FISH OILS:

Animal and Vegetable Fats and Oils, 1957 (Facts for Industry), 48 pp., illus., processed, 20 cents. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.) Bureau of the Census, Department of Commerce, Washington 25, D. C., 1958. Includes data on cod, cod-liver, fish, and marine-mammal oils in relation to factory production and consumption, factory and warehouse stocks, imports and exports.

"Manufacture of Vitamin A Concentrate from Fish-Liver Oil. VII--Estrification of Vitamin A Concentrate. 2--Acetylation with Ketene," by Hideo Higashi and Toyosuke Kinumaki, article, Nippon Suisan Gakkaishi, vol. 22, 1956-57, pp. 500-503, printed in Japanese. Japanese Society of Scientific Fisheries, Tokaiku Suisan Kenkyujo, No. 3, Tsukijima, Chuo-Ku, Tokyo, Japan.

FISH PONDS:

Ranch Fish Ponds, by C. J. D. Brown and Nels Thoreson, Bulletin No. 544, 26 pp., illus., printed. Agricultural Experiment Station, Bozeman, Montana, 1958.

FLORIDA:

Summary of Florida Commercial Marine Fish Landings for 1957, by Albert Rosen and Robert W. Ellis, in collaboration with Lloyd Johnson and Pierre Serio, 65 pp., illus., printed. State Board of Conservation, Tallahassee, Fla., 1958.

FOOD AND AGRICULTURE ORGANIZATION:

Indoor Drying of Salt Fish in South Brazil, by S. A. Beatty, E. Barros, R. C. Lamprecht, and M. Furuya, FAO Fisheries Papers No. 13, 13 pp., illus., processed. Fisheries Division,

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Food and Agriculture Organization of the United Nations, Viale delle Terme di Caracalla, Rome, Italy, August 1958. The experiments carried out by the authors of this paper on indoor drying of salt fish in South Brazil is of practical interest to many semitropical and tropical countries where there is a need to introduce artificial drying of salt fish. As in other hot and humid countries, sun-drying of fish in southern Brazil is restricted for several reasons, chiefly that the sun is too hot for direct sun-drying in summer and climatic conditions are too humid in winter. Also, when fish are dried on racks, they often become dirty with sand and dust and the high summer temperatures favor the development of red halophilic bacteria, thus spoiling the fish. The authors constructed an experimental tunnel dryer which enabled them to obtain sufficient data to design a commercial dryer. A prototype was built with a capacity of 1,500-3,100 pounds of wet fish, depending on the size of fish, and operated through the hotter months of the Brazilian summer of 1957/58. It was found to be quite possible to dry the fish of South Brazil throughout the year in tunnels without dehumidification of the air. The fish were shown to withstand more heat than fish of the North Atlantic, none being visibly damaged by exposure to 120° F. Air temperatures of 97° - 102° F., and air velocity of 1.5 m. (5 ft.) a second, and a relative humidity of 50 percent maintained in the tunnel, were found to dry the fish rapidly.

FREEZING FISH AT SEA:

"Freezing at Sea is Successful," article, The Fishing News, no. 2318, September 1957, p. 3, printed. Arthur J. Heighway Publications, Ltd., Ludgate House, 110 Fleet St., London, E. C. 4, England.

"Quick Freezing at Sea," article, Modern Refrigeration, vol. 60, no. 716, November 1957, pp. 469-473, illus., printed. Refrigeration House, Victoria Rd., Woking, England.

FROZEN FOODS:

Frozen Food, Leaflet R-5, 15 pp., illus., processed. Massachusetts Extension Service, University of Massachusetts, Amherst, Mass. A guide for personnel handling frozen foods in modern retail food stores. It contains suggestions on how store managers and employees can increase sales and profits from frozen foods by improved maintenance of quality, handling efficiency, and turnover rate. This leaflet is designed especially for use in the educational programs conducted with food retailers by the Cooperative Extension Services of the New England State Universities.

GEAR:

"Behavior of Fishes Entering Trap Nets," by H. Miyamoto, article, Bulletin of the Tokai Regional Fisheries Research Laboratory, no. 15, January 1957, pp. 77-87, illus., printed. Tokai Regional Fisheries Research Laboratory, Tsukishima, Kuobashi, Tokyo, Japan.

"Dumping Deck Used to Chute Trash Overboard on Scallop, Dartmouth," article, National

Fisherman, vol. 38, no. 6, July 1957, p. 17, illus., printed. National Fisherman, Goffstown, N. H. A specially-constructed section of the deck of the 93-foot New Bedford scalloper Dartmouth can be raised hydraulically for dumping trash back into the sea. The captain of the Dartmouth claims that the hydraulic deck shortens the time at sea and makes more full trips possible. The device saves the work of shoveling overboard the debris brought up in the drags, and gives crew members more time for shucking and packing. When the deck raises, 16 feet of the side rails open at the same time and the upraised deck dumps its trash through the open rails.

"Maskanot rishonot al Avodat Reshet Kil ayim - Dgam B' b' Sefinat Hanisyonot Hatzvi" (Preliminary Results on the Operation of the Hybrid Net - Type B on the R/V Hatzvi), by E. Hamburger, article, Fishermen's Bulletin, no. 9, Sept. 1956, p. 43, printed in Hebrew. Fishermen's Bulletin, P. O. Box 699, Haifa, Israel.

Mechanization of Fishing Craft and the Use of Improved Fishing Gear, by E. R. A. de Zylva, Bulletin No. 7, 25 pp., illus., printed. Fisheries Research Station, Department of Fisheries, Colombo, Ceylon, 1958. In summary the author states that "Since the year 1925, attention has been focussed periodically on the stagnation in the local fishing industry, and those who have studied the subject have been unanimous about the need to introduce modern fishing craft capable of working more fishing gear. This report outlines the stages through which the evolution of more effective fishing operations has progressed, both in the gradually increasing use of mechanical propulsion for boats and in the adoption of more modern gear and techniques by local fishermen."

"Mivne Reshet Kil 'ayim - Dgam B'" (The Design of the Hybrid Net - Type B), by M. Ben-Yami, article, Fishermen's Bulletin, no. 9, Sept. 1956, 1 p., illus., printed in Hebrew. Fishermen's Bulletin, P. O. Box 699, Haifa, Israel.

"Tatzpiot tat-meymiot shell Reshet Kil ayim - Dgam B" (Underwater Observations of the Hybrid Net - Type B), by Y. Assaff, article, Fishermen's Bulletin, no. 9, Sept. 1956, pp. 41-42, illus., printed in Hebrew. Fishermen's Bulletin, P. O. Box 699, Haifa, Israel.

"Unterwasserantriebs-, Transport- und Mehrzweckgerät 'Jonas'" ('Jonas', a Multiple Gear for Underwater Observation, Transport, etc.), by O. Flössel, article, Gewässer, und Abwasser, Limnologische Schriftenreihe, no. 15/16, 1957, pp. 26-36, illus., printed in German. August Babel Verlag, Düsseldorf, W. Germany.

GENERAL:

Bulletin of Marine Science of the Gulf and Caribbean, vol. 8, no. 3, 1958, pp. 201-298, illus., printed. The Marine Laboratory, University of Miami, 1 Rickenbacker Causeway, Virginia Key, Miami 49, Fla. Contains, among others, the following articles: "A Review of Ciguatera, Tropical Fish Poisoning, with a

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Tentative Explanation of Its Cause," by John E. Randall; and "The Planktonic Larvae of *Polydora websteri* Hartman (Annelida, Polychaeta) and Their Settling on Oysters," by Sewell H. Hopkins.

United States Coast Pilot 5, 286 pp., printed, \$2.50. Coast and Geodetic Survey, U. S. Department of Commerce, Washington 25, D. C. The latest edition of this publication cancels two 1949 editions which formerly covered, in separate volumes, the Gulf Coast and West Indies. It has been more than two years in the making, covers the Gulf Coast of the United States from Key West to the Rio Grande and also Puerto Rico and the Virgin Islands in the West Indies. By eliminating certain duplicated material and adopting a radical new format, the new Coast Pilot now contains nautical information that previously required more than 800 pages. A Coast Pilot would probably be described by the layman as a combination atlas, encyclopedia, geography text, and nautical guidebook all rolled into one. Actually each book contains information required by the navigator that cannot be shown conveniently on the nautical charts. It is a welcome addition aboard anything that floats, from a 14-foot outboard to the mighty passenger liner. The Coast Pilots are published to supplement the 814 nautical charts covering the coasts of the United States and its possessions. They include data relative to the coastline such as port information, sailing directions for coasting and entering harbors, and general information as to weather conditions, navigation regulations, and radio service. New editions are published about every seven years. Supplements, containing changes and new information, are published annually and distributed free. The new volume is the first to be published using the new and more compact format. Eventually only six volumes instead of the present nine will be needed to cover the coasts of the United States and its possessions.

GERMANY:

Jahresbericht über die Deutsche Fischerei 1957 (Annual Report on German Fisheries, 1957), 282 pp., illus., printed, DM 23 (US\$5.50). Gebr. Mann, Berlin-Schöneberg, Germany, October 1958.

This interesting book contains the official annual fisheries report of the West German Government. It is issued by the Ministry of Food, Agriculture, and Forestry which contains the Fisheries Directorate. The Bureau of Statistics cooperated in preparation of the report, which is in the style of the Yearbook of the United States Department of Agriculture and Agricultural Statistics. The 282 pages are divided into three parts.

Part I contains detailed statistics on 1957 German fishery catch, craft, gear, imports, exports, prices and consumption. It opens with a general review by the Director of Fisheries, Dr. G. Meseck. The 1957 fish and shellfish landings amounted to 685,800 metric tons, valued at DM 252,940,000 (US\$60.2 million). Catches of

22,733 metric tons, valued at DM 11,732,000 (US\$2.8 million) were landed in foreign ports, directly from the fishing grounds. Herring, ocean perch, cod, and coalfish (pollock), in that order, were the most important species. The distant-water fisheries of the North Atlantic yielded less in 1957, and for the first time since 1950 the North Sea was the source of over 50 percent of the catch. A biological analysis of the statistical data is given. Other sections contain a detailed description of the fishing fleet and foreign trade.

Part II is devoted to detailed descriptions of biological, hydrographic, and meteorological research. Protective services are also described. Three protection vessels were operated. They handled about 2,000 patients. The fishery research vessel *Anton Dohrn* made 9 cruises. Research work is described, and a very interesting listing of available fisheries courses of instruction in various disciplines is given.

Part III contains reviews of activity during the year in various fishing and fish-processing segments of the industry. The German distant-water high-seas fishery, the herring fishery (lugger-type vessels), the near-water high-seas and coastal fisheries, inland fisheries, fish meal and oil, and fish-processing segments are covered.

Each of the three parts of the book are subdivided into sections, ranging in number from 5 for Part I to 7 for Part III. The sections consist of individual articles by government officials or members of the industry on the various subjects described above. This is a convenient arrangement and one that the reader welcomes, since none of the sections becomes laboriously long or too detailed.

The text is written in German. However, there is a short summary written in English at the end of each section. The tables also have subtitles in English. These subtitles adequately explain their contents. A knowledge of German is essential to get the most out of the book, but there is enough in the way of English summaries and subtitles to make it useful for reference purposes, especially for the statistical data.

The report should prove helpful to anyone interested in the fisheries of West Germany. It contains a wealth of current information on numerous subjects which are quite broad in scope.

--Walter H. Stolting

HAKE ROE:

"Determination of Moisture, Protein, Fat, Ash, and Chlorides in Hake Roe," by M. Muriel Ledesma, article, *Anales de Bromatologia*, vol. 8, no. 3, p. 313, printed. Sociedad Espanola de Bromatologia, Ciudad Universitaria, Edificio Facultad de Farmacia, Madrid, Spain, 1956.

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HERRING:

"Chemical Studies on Herring Meat," by Sasa Shigeo, article, Bulletin of the Faculty of Fisheries, Hokkaido University, vol. 8, no. 4, February 1958, pp. 319-345, printed. Faculty of Fisheries (Hokodate) Hokkaido University, Hokodate, Hokkaido, Japan.

"L'industrie du Hareng en Grande-Bretagne" (The Herring Industry in Great Britain): "La Campagne Harenguiere en Belgique en 1957-58" (The Herring Fishery in Belgium in 1957-58): and "La Peche du Hareng en Norvege" (The Herring Fishery in Norway), articles, La Peche Maritime, vol. 37, no. 968, November 1958, pp. 669-675, illus., printed in French. La Peche Maritime, 190, Boulevard Haussmann, Paris, France.

"Volatile Amines of Herring Flesh," by R. B. Hughes, article, Nature, vol. 181, May 3, 1958, pp. 1281-1282, printed. Macmillan and Company, Ltd., St. Martins St., London W. C. 2, England.

ISRAEL:

Fishermen's Bulletin, no. 17, September 1958, 81 pp., illus., printed in Hebrew. Ministry of Agriculture, Division of Fisheries, P. O. B. 699, Haifa, Israel. Contains, among others, the following articles: "The Fisheries and Its Potential," by Z. Tzur; "The Fisheries and the Development Programmes for the Coming 5 Years," by M. Shavit; "The Trawl Fishery and Its Role in the Fishing Industry in the Light of the Proposed Development Programme," by M. Kramer; "Inshore and Pelagic Fishery," by Y. Ariav; "The Tenth Anniversary of the Lake Tiberias Fishery," by M. Bar-Ilan; "The Future of the Sea Fisheries," by A. Welner; "The Israel Fishery in Lake Tiberias During the First Decade," by M. Nun; "Fishing Gear Research in Israel," by M. Ben-Yami; and "Investigations of Sardinella Fisheries," by A. Ben-Tuvia.

LABOR:

Memorandum on the 43rd Session of the International Labour Conference, 1959, 12 pp., printed. International Labour Organisation, Geneva, Switzerland, 1958. Included in the report are conditions of work of fishermen.

LAW OF THE SEA CONFERENCE:

United Nations Conference on the Law of the Sea, Official Records, United Nations, New York, N. Y. (Any of the following are sold by International Documents Service, Columbia University Press, 2960 Broadway, New York 27, N. Y.) The following reports have been issued:

A/CONF.13/38. _____ vol. II: Plenary meetings; summary records of meetings and annexes (Geneva, Feb. 24-Apr. 27, 1958), 183 pp., printed, US\$1.75, Sept. 1958. (Sales no.: 58.V.4, Vol. II).

A/CONF.13/38/Corr. 1. _____ 1 p., Oct. 22, 1958. English only.

A/CONF.13/39. _____ vol. III: 1st Committee (Territorial Sea and Contiguous Zone); summary records of meetings and annexes. (Geneva, Feb. 24-Apr. 27, 1958), 277 pp., printed, US\$3, Sept. 1958. (Sales no.: 58.V.4, Vol. III).

A/CONF.13/40. _____ vol. IV: 2nd Committee (High Seas: General Regime); summary records of meetings and annexes. (Geneva, Feb. 24-Apr. 27, 1958), 158 pp., printed, US\$1.75, Sept. 1958. (Sales No.: 58.V.4, Vol. IV).

A/CONF.13/41. _____ vol. V: 3rd Committee (High Seas: Fishing: Conservation of Living Resources); summary records of meetings and annexes. (Geneva, Feb. 24-Apr. 27, 1958), 174 pp., printed, US\$1.75, Sept. 1958. (Sales no.: 58.V.4, Vol. V).

A/CONF.13/42. _____ vol. VI: 4th Committee (Continental Shelf); summary records of meetings and annexes. (Geneva, Feb. 24-Apr. 27, 1958), 156 pp., printed, US\$1.50, Sept. 1958. (Sales no.: 58.V.4, Vol. VI).

A/CONF.13/43. _____ vol. VII: 5th Committee (Question of Free Access to the Sea of Landlocked Countries). Summary records of meetings and annexes. (Geneva, Feb. 24-Apr. 27, 1958), 94 pp., printed, US\$0.80, Sept. 1958. (Sales no.: 58.V.4, Vol. VII).

LOBSTERS:

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SALMON TRAVEL TO GREAT SLAVE LAKE

The immense distances traveled by Pacific salmon after they leave the sea and enter fresh water are well known in British Columbia, the Yukon, and Alaska. Recently, however, a commercial fisherman on Great Slave Lake in the Northwest Territories of Canada netted a salmon near the mouth of the Buffalo River. It was later identified as a three-year-old chum which had made the long journey up the Mackenzie River from the Arctic Ocean. Salmon have been found in Great Slave Lake before, but the occurrence is rare. (March 1958 Trade News of the Canadian Department of Fisheries.)

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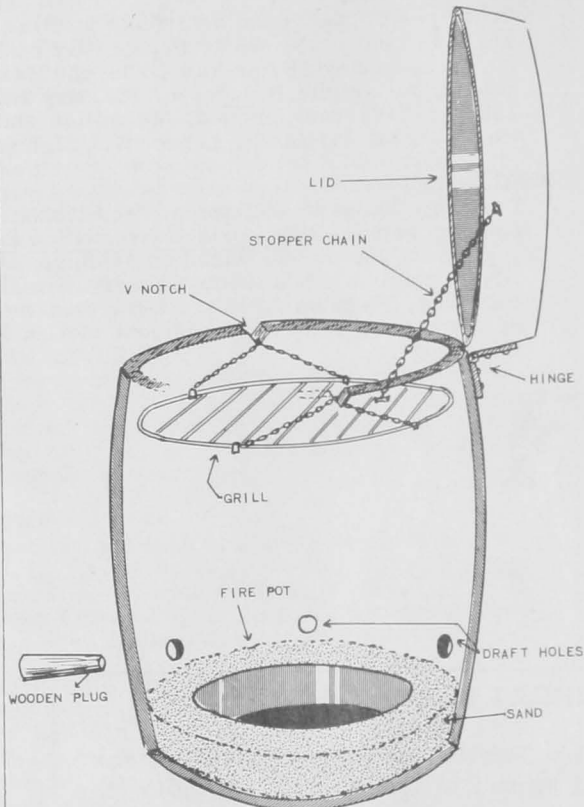
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SMOKE BARREL COOKERY

Making barrels for smoke-cooking fish is easy. Here's how it is done.

Start with a used 40-gallon charred oak whiskey barrel or anything similar. Saw around the barrel about 8 inches from the top. This is then used as the lid and is secured to the rest of the barrel with a heavy hinge. To keep the lid from toppling over backwards when salmon is removed, attach a chain stopper.



Because the two grill-supporting chains lap over the rim of the barrel and would prevent a complete closure of the lid, notch two shallow V's on either side of barrel. Attach hooks or pins at the base of the V's to fasten the chains.

Allow for 4 or 5 inches of sand in which the fire pot will eventually be imbedded, bore 5 or 6 draft holes, one-half inch in diameter, around the sides of the barrel just above the sand level. Make wooden plugs to fit the holes.

The fire pot can be any heavy metal cylinder such as the bottom of a dutch oven. An ideal pot is an old automobile brake drum. However, it should be small enough to allow for 3 or 4 inches of sand insulation between barrel and the pot.

The round grill for the top of the barrel can be purchased at any store that specializes in barbecue equipment.

The grill is supported by two Y-shaped chains. The upper legs of the Y are equipped with snap-ons to fasten the grill. The bottom leg of each Y fastens on the hooks at the base of the notched V's.

To use the barrel the sand at the bottom should first be soaked with water. The fire is started with charcoal briquets and then the smoke-producing wood is added.

While fish is smoking, care must be taken not to let the fire flare up. This is controlled by inserting the wooden plugs in the draft holes until an ideal balance between fire and smoke is achieved.

Wood used for smoking depends upon taste and availability. Any nonresinous hard wood such as alder, apple, maple, oak, birch, or beech can be used.

Wood should be cut into small chunks about 4 inches in length or just long enough so they can be pyramided in the fire pot.

Barrel is now ready for use. To prepare the salmon for smoking, fillet them and remove the backbone. Cut into chunks suitable for individual servings. Soak chunks in saturated brine solution for an hour and a half. (Soaking time can be varied to suit individual tastes.)

Remove the chunks from the solution and arrange a single layer on grill rack, avoiding crowding. Lower grill into smoke barrel about 8 inches. Close and cook for about an hour and a half or until done, making sure fire is smoking and not burning during entire cooking process.

If the barrel is not used for any length of time, it is necessary to remove fire pot, insert draft plug holes, and fill with water to keep barrel from warping.

Although salmon is often used, the "smoke barrel" method can also be used for many other kinds of fish like cod, whitefish, haddock, halibut, and lake trout. Method used is essentially the same as for the salmon. (*Institutions*, vol. 42, June 1958, pp. 41-43.)