

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-1567	South Carolina Landings, April 1957, 2 pp.
CFS-1568	Georgia Landings, April 1957, 2 pp.
CFS-1577	Fish Meal and Oil, May 1957, 2 pp.
CFS-1581	Rhode Island Landings, April 1957, 3 pp.
CFS-1585	North Carolina Landings, May 1957, 4 pp.
CFS-1587	California Landings, March 1957, 4 pp.
CFS-1593	New Jersey Landings, May 1957, 4 pp.
CFS-1594	Texas Landings, May 1957, 3 pp.
CFS-1596	California Landings, April 1957, 4 pp.
CFS-1597	Maine Landings, May 1957, 5 pp.
CFS-1598	Rhode Island Landings, May 1957, 3 pp.
CFS-1600	New York Landings, May 1957, 4 pp.
CFS-1601	Alabama Landings, May 1957, 2 pp.
CFS-1602	Fish Stick Report, April-June, 1957, 2 pp.
CFS-1605	North Carolina Landings, June 1957, 3 pp.
CFS-1606	Alabama Landings, June 1957, 2 pp.
CFS-1607	Georgia Landings, June 1957, 2 pp.
SL-161	Producers of Packaged Fish, 1956 (revised), 6 pp.
SSR-Fish. No. 203	Longline and Troll Fishing for Tuna in the Central Equatorial Pacific, January 1955 to February 1956, 43 pp., illus., February 1957.
SSR-Fish. No. 212	Central North Pacific Albacore Surveys, May to November 1955, by Joseph J. Graham, 44 pp., illus., April 1957. Describes an investigation of the albacore tuna,

Germo alalunga (Bonnaterre), resources to the north and northeast of the Hawaiian Islands, during May-November 1955. It was found that albacore were scarce in these areas during the late spring and were abundant during the late summer. The summer distribution was probably discontinuous from east to west with concentrations in the central and eastern North Pacific sectors and a lack of fish in between. During the fall albacore were relatively abundant in this intervening area suggesting that the discontinuity was either a transient condition or had diminished somewhat with the change in season. Catches of surface-swimming albacore were associated with the Polar Front, a transition zone between central and subarctic waters. Surface catches were also associated with a seasonal latitudinal change in surface temperature, particularly about the isotherms 55° to 65° F. Length frequencies of surface-caught albacore taken in the central and eastern sectors of the North Pacific showed that the same size ranges were sampled on either side of the east-west discontinuity noted above. A latitudinal shift in occurrence similar to that of the albacore was also displayed by other fishes.

SSR-Fish. No. 217 - Summary, Oceanographic and Fishery Data, Marquesas Islands Area, August-September, 1956 (EQUAPAC), by Thomas S. Austin, 191 pp., illus., May 1957. In the late summer (August-October of 1956), two Fish and Wildlife Service research vessels cooperated with those of three other organizations in a quasi-synoptic oceanwide survey of the Pacific Ocean. Operating in the area of the Marquesas Islands, the Hugh M. Smith made detailed physical, chemical, and biological observations in order to define features of oceanic circulation and to obtain information on the abundance and distribution of plant and animal life. Also operating in that area, the Charles H. Gilbert sought to evaluate the tuna resources by longline and live-bait fishing, by trolling, and by observation of fish schools and bird flocks. Data thus obtained are presented with a description of the field and laboratory procedures involved.

Sep. No. 485 - Maine Herring Explorations and Fishing Gear Experiments.

Sep. No. 486 - Body Fluid Losses of Northern and Southern Oysters.

Sep. No. 487 - Research in Service Laboratories (September 1957): Contains two articles-- Comparative Study of Fresh-Water and Salt-Water Ice as Preservatives for Haddock; and Standards.

Sep. No. 488 - Lobster and Oyster Culture at Prince Rupert, B. C.

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

Production of Fishery Products in Selected Areas of Alabama, Florida, Louisiana, Mississippi, and Texas, 1956, by L. A. Keilman, 34 pp., processed, July 1957. (Available free from the U. S. Fish and Wildlife Service, 609-611 Federal Building, 600 South Street, New Orleans, La.) In the first part the author discusses trends and conditions in Gulf Coast fisheries during 1956 and gives a resume of the individual fisheries. For the shrimp fishery a detailed account is given of general conditions, total landings, composition of the landings by species, increase in consumption, canned shrimp, sun-dried shrimp, "wagerized" shrimp, prices, imports, and data on cold-storage freezings and holdings. Production and market conditions for the oyster, blue crab, and finfish fisheries are discussed, as well as the Gulf tuna fishery and imports of fresh and frozen fish and shellfish. The second part includes shrimp closed seasons in effect in the Gulf States during 1956, minimum shrimp size regulations, conversion factors and container capacities, and shrimp sizes. The second part also contains statistical tables showing total fishery products landings by areas and species, by species and months, by areas and species by months; crab meat production by areas and months; fishery imports through the New Orleans Customs District and Port Isabel and Brownsville, Tex.; and LCL express shipments from New Orleans for 1956 by months and by destination. Also included are tables showing monthly range of wholesale prices of fishery products on the New Orleans French market; Gulf States weekly oyster and shrimp packs, 1955-56 season; Gulf States canned shrimp pack by seasons for a 5-year period; summary of Gulf shrimp landings for selected areas, 1951-56 and 5-year averages; and fishery products market classifications in the Gulf area. The areas covered by the report are: Mobile and Bayou LaBatre, Ala.; Pascagoula and Biloxi, Miss.; New Orleans and Lower Mississippi River, Golden Meadow, Houma, Chauvin, Dulac, Morgan City, Berwick, Patterson, and Delcambre, La.; and Port Arthur, Sabine Pass, Galveston, Freeport, Port Lavaca, Palacios, Aransas Pass, Rockport, Corpus Christi, Port Isabel, and Brownsville, Tex.

Boston Fishery Products Monthly Summary, July 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 primary wholesalers; for the month indicated.

California Fishery Products Monthly Summary, June 1957, 9 pp. (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 month indicated.

(Chicago) Monthly Summary of Chicago's Fresh and Frozen Fishery Products Receipts and Wholesale Market Prices, July 1957, 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; fresh-water fish, shrimp, and frozen fillet wholesale market prices; for the month indicated.

Monthly Summary of Fishery Products Production in Selected Areas of Virginia, North Carolina, and Maryland, July 1957, 4 pp. (Market News Service, U. S. Fish and Wildlife Service, 18 S. King St., Hampton, Va.) Fishery production for the Virginia areas of Hampton Roads, Lower Northern Neck, and Eastern Shore; the Maryland areas of Crisfield, Ocean City, and Cambridge; and the North Carolina areas of Atlantic, Beaufort, and Morehead City; together with cumulative and comparative data; for the month indicated.

(Alaska) Progress Report and Recommendations for 1957, 34 pp., illus., processed, November 1956. (Available free from the Administration of Alaska Commercial Fisheries, Fish and Wildlife Service, Juneau, Alaska). This summary provides a brief description of the important Alaskan fisheries, the trends in production, escapement, and fishing effort. Not only is the 1956 season discussed and compared with previous years, but the general recommendations for changes in the 1957 regulations of Alaska fisheries are included.

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Climatic Trends and the Distribution of Marine Animals in New England, by Clyde C. Taylor, Henry B. Bigelow, and Herbert W. Graham, Fishery Bulletin 115 (From Fishery Bulletin of the Fish and Wildlife Service, vol. 57), 55 pp., illus., printed, 40 cents, 1957. It is the purpose of this paper to examine temperature fluctuations in recent years, and to explore the relations which may exist between these fluctuations and the abundance and distribution of marine animals along the eastern coast of the United States and in the New England area in particular. In summary, the authors state that "(1) A long-term upward trend in air temperatures in New England is evident from the record. The increase has been greatest for the winter months. (2) Upward trends in winter sea temperatures are shown for St. Andrews, N. B., Boothbay Harbor, Me., and Woods Hole, Mass. The correlation of January water temperatures

at Boothbay Harbor with January water temperatures at New Haven, Conn., and Eastport, Me., indicates a long-term upward trend in surface temperatures corresponding to that for winter air temperatures. (3) Hydrographic data for the Gulf of Maine in 1953 and 1954 indicate an increase of from 1° to 5° F. throughout the water column since the period 1912-26 for most parts of the Gulf. (4) Northward shifts in the abundance and distribution of some important commercial species are indicated by a study of landing statistics and other data. These species include the mackerel, lobster, menhaden, whiting, and yellowtail flounder. (5) Numerous southern species of fishes and other marine forms have extended their recorded ranges northward since 1930. At least two of these, the striped mummichog and the green crab, have established resident populations north of their earlier recorded ranges. But the recent upswing in temperature has not been accompanied by any obvious general alteration in the composition of the fish or invertebrate fauna of the Gulf of Maine region."

New Calanoid Copepods of the Families Aetideidae, Euchaetidae, and Stephidae from the Gulf of Mexico, by Abraham Fleminger, Fishery Bulletin 117 (From Fishery Bulletin of the Fish and Wildlife Service, vol. 57), 11 pp., illus., printed, 15 cents, 1957.

New Genus and Two New Species of Tarybidae (Copepoda calanoida) from the Gulf of Mexico with Remarks on the Status of the Family, by Abraham Fleminger, Fishery Bulletin 116 (From Fishery Bulletin of the Fish and Wildlife Service, vol. 57), 10 pp., illus., printed, 15 cents, 1957.

Role of Coleman Hatchery in Maintaining a King Salmon Run, by Oliver B. Cope and Daniel W. Slater, Research Report 47, 25 pp., illus., printed, 1957, 25 cents. The experiments discussed in this paper concern releases of immature salmon both in the spring and in the fall, so that seasonal comparisons could be made of the numbers of fish which ultimately enter the fishery as adults or return to Coleman Hatchery as adults. According to the authors, "Coleman Hatchery was built on Battle Creek, a tributary of the Sacramento River in northern California, to compensate for losses of spawning areas of the king salmon (*Oncorhynchus tshawytscha*) that resulted from the construction of Shasta Dam. The river was blocked in 1943, and in 1944 studies were inaugurated at Coleman Hatchery to determine (1) how many of the fish entering the valuable sport and commercial salmon fisheries of California had originally been released from the hatchery, and (2) which was the better practice: to release immature salmon from the hatchery in the spring or to release them in the fall. Paired groups of immature salmon from the 1944, 1945, 1947, and 1948 broods were marked by amputating fins in certain combinations, and the fish were released in the Sacramento River--one group in the spring and the other in the fall. Fishery workers inspected the landings in the commer-

cial fishery, principally at Pittsburg, Calif., in the years 1947 through 1952, and others examined salmon taken in the sport fishery on the Sacramento River during some of these years. Records also were kept at the Coleman Hatchery on the marked and unmarked king salmon that returned as adults to the hatchery holding areas during the period 1946 to 1952. The study revealed that king salmon released in the spring from the hatchery were heavier than those released in the fall, but fall-released fish had entered the commercial fishery in greater numbers than had spring-released fish. Most spring-run stock recovered in the spring had been released from the hatchery in the spring, and the greatest proportion of fall-run stock caught in the fall had been released in the fall. Offspring of spring-run salmon tended to return as adults in the spring runs, and offspring of fall run salmon predominated in the fall runs. The average annual percentage of king salmon taken in the commercial gill-net fisheries of California from 1944 to 1948 that was attributable to the Coleman Hatchery was conservatively estimated to be 18.91."

Zooplankton Abundance in the Central Pacific--Part II, by Joseph E. King and Thomas S. Hida, Fishery Bulletin 118 (From Fishery Bulletin of the Fish and Wildlife Service, vol. 57), 34 pp., illus., printed, 30 cents, 1957.

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.

BYPRODUCTS:

"L'Ossidazione della Vitamina A nell'Olio di Fegato di Tonno e la sua Stabilizzazione per mezzo di Antiossidanti" (The Oxidation of the Vitamin A in Tuna Liver Oil and its Stabilization by means of Anti-Oxidants), by A. Buffa, article, *Conserven e Derivati Agrumari*, vol. 1, no. 4, pp. 10-12, printed in Italian. Centro Sperimentale per l'Industria delle Conserve Alimentari e dei Derivati Agrumari della Regione Siciliana, Palermo, Italy, 1952.

"Studies on Fish Oil--I. Extraction of Liver Oil from the Migrating Fishes," by W. Shimuzu and T. Yamada, article, *Bulletin of the Research Institute for Food Science*, no. 5, pp. 29-33, printed in Japanese with summary in English. Research Institute, Kyoto University, Kyoto, Japan, 1951. Discusses optimum conditions for the extraction of oil from the livers of migratory fishes which contain less oil than livers of other species.

"Studies on Fish Oil--II. Experiments on Deodorization of Fish Oil, especially on Polymerization by Heat," by W. Shimuzu and Y. Toyohara,

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article, Bulletin of the Research Institute for Food Science, no. 6, pp. 19-22, printed in Japanese with summary in English. Research Institute, Kyoto University, Kyoto, Japan, 1951.

"Sul Contenuto in Vitamina A dei Fegati di Tonno dei Mari di Sicilia" (The Vitamin A Content of the Livers of Tuna from Sicilian Waters), by A. Buffa, article, Conserve e Derivati Agrumari, vol. 1, no. 1, pp. 16-17, printed in Italian. Centro Sperimentale per l'Industria delle Conserve Alimentari e dei Derivati Agrumari della Regione Siciliana, Palermo, Italy, 1952.

"Sulla Utilizzazione delle Farine di Tonno dopo l'Estrazione del Complesso liposolubile" (The Utilization of Tuna Liver Meal after Extraction of the Liposoluble Complex), by A. Buffa, article, Conserve e Derivati Agrumari, vol. 1, no. 2, pp. 13-14, printed in Italian. Centro Sperimentale per l'Industria delle Conserve Alimentari e dei Derivati Agrumari della Regione Siciliana, Palermo, Italy, 1952. A note on the preparation of a dried meal from the material remaining after extraction of the oil from tuna liver. Also given are the composition and possible uses of the meal.

CALIFORNIA:

Forty-Fourth Biennial Report of the Department of Fish and Game for the Years 1954-1956, 96 pp., illus., printed. California Department of Fish and Game, Sacramento 14, Calif., 1957. This report covers a period of intense activity by state agencies and others interested in the development of California's water resources for varied purposes. It describes fully the role of the Department of Fish and Game in these activities. The report of the Director discusses, among other subjects, migratory fish loss, record salmon haul, change in crab laws, new shrimp fishery, pismo clam, Tracy fish screen, warm-water fisheries, increase in hatchery production, and rough fish control work. The section on marine fisheries discusses the work of the Pacific Marine Fisheries Commission; marine sport fisheries--party boat fishing, surf fishing, yellowtail, Salton Sea project; shellfisheries--red abalone, market crab, oysters, ocean shrimp and pismo clams; pelagic fisheries--tuna production, tagging program, albacore, sardines, mackerel fishery, anchovy, and Pacific herring; bottom fisheries--dover sole, rockfish, and sablefish; research vessels; and special activities. Detailed reports are also included on projects concerned with salmon and steelhead, and inland fisheries activities. Fisheries statistics are included in an appendix.

CANADA:

Fisheries Statistics of Canada, 1954, vol. 1, part 3-A, 34 pp. (tables), printed in English and French, 25 Canadian cents. Dominion Bureau of Statistics, Ottawa, Canada, 1957. (For sale by Queen's Printer and Controller of Stationery, Ottawa, Canada.) A review of the fishery statistics of Canada for 1953 and 1954 prepared in collaboration with Dominion and Provincial Fisheries Departments. It includes data on the

quantity and value of the catch of fishery products for Canada as a whole (excluding Newfoundland); production of frozen, smoked, salted, pickled, and canned fish; shellfish production; production of fish oils and fish meal; employment in fish-processing establishments; and value of exports and imports of fishery products. Also contains data on the value of the fisheries by provinces for 1952-1954; Canada's canned lobster pack by provinces for 1945-54; and fishing bounties paid to vessels and boats in 1954.

CANNING:

"Sulla Tecnologia delle Conserve Ittiche. Lavorazione industriale del Tonno" (The Technology of Fish Canning--Industrial Processing of Tuna), by A. Buffa, article, Conserve e Derivati Agrumari, vol. 1, no. 2, pp. 172-177, illus., printed in Italian with summary in English. Centro Sperimentale per l'Industria delle Conserve Alimentari e dei Derivati Agrumari della Regione Siciliana, Palermo, Italy, 1953. Describes the following procedures used in the canning of fresh and frozen tuna: cutting up the fish; washing the cut pieces in weak brine; cooking in brine; drying by centrifuging, and filling into the cans; addition of hot oil; and sterilization. Diagrams showing some of the equipment used are included.

CHEMICAL COMPOSITION:

"Relationship between Jelly Strength and Chemical Composition of Fish Meat Jelly," by M. Okada and A. Yamazaki, article, Bulletin of Tokai Regional Fisheries Laboratory, no. 13, pp. 85-90, printed in Japanese with summary in English. Tokai Regional Fisheries Research Laboratory, Tsukishima, Chuo-ku, Tokyo, Japan, 1956.

EELS:

Eels--A Biological Study, by Leon Bertin, 200 pp., illus., printed. Cleaver-Hume Press Ltd., London, England, 1956.

FLORIDA:

Early Diagenesis and Lithification of Shallow Water Carbonate Sediments in South Florida, by Robert N. Ginsburg, Contribution No. 156, 21 pp., illus., printed. Reprinted from Regional Aspects of Carbonate Deposition, a publication of the Society of Economic Paleontologists and Mineralogists. The Marine Laboratory, University of Miami, Coral Gables, Fla.

The Fishes of Alligator Harbor, Florida, with Notes on Their Natural History, by Edwin B. Joseph and Ralph W. Yerger, Contribution No. 71, 46 pp., illus., printed. Oceanographic Institute, Florida State University, Tallahassee, Fla.

Quarterly Report on Fisheries Research, June 1957, No. 57-19, 13 pp., processed. The Marine Laboratory, University of Miami, Coral Gables, Fla. A report to the Florida State Board of Conservation on fisheries research covering shrimp, spotted weakfish, tarpon, snook, gamefish, sailfish, black spot and spoilage control, and rancidity in fish.

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FOOD ADDITIVES:

General Principles Governing the Use of Food Additives (Report of the Joint FAO/WHO Expert Committee on Food Additives, First Session, Rome, Italy, 3-10 December 1956), (FAO Nutrition Meetings Report Series No. 15,) 29 pp., printed, 1s. 6d. (30 U. S. cents). Food and Agriculture Organization of the United Nations, Rome, Italy, 1957. (For sale by Columbia University Press, International Documents Service, 2960 Broadway, New York 27, N. Y.) The increase in the number of chemicals used or proposed for use in or on foods has imposed upon public health authorities and other governmental agencies the responsibility for deciding whether or not such substances should be employed. This paper discusses the circumstances governing the use of food additives and other factors to be taken into account in food additives control.

FOOD AND AGRICULTURE ORGANIZATION:

Canada: Small Fishing Inspection Regulations, Pursuant to the Canada Shipping Act, Food and Agricultural Legislation, vol. V, no. 4, XVI.4/56.1, 36 pp., printed. Food and Agriculture Organization of the United Nations, Rome, Italy, 1956. (For sale by Columbia University Press, International Documents Service, 2960 Broadway, New York 27, N. Y.)

New Zealand: The Fisheries (General) Regulations 1950 to 1955 Under the Fisheries Act, 1908, Food and Agricultural Legislation, vol. V, no. 4, XVI.5/56.1, 23 pp., printed. Food and Agriculture Organization of the United Nations, Rome, Italy, 1956. (For sale by Columbia University Press, International Documents Service, 2960 Broadway, New York 27, N. Y.)

GEAR:

The Selection and Care of Nylon Gill Nets for Salmon, by P. J. G. Carrothers, Industrial Memorandum No. 19. Fisheries Research Board of Canada, Technological Station, Vancouver, B. C., Canada. This informative and useful manual goes into great detail on the subject of nylon. The first section discusses the many different forms of this synthetic fiber and points out how their different properties adapt nylon to different jobs. Other sections deal with the strength and weight of nylon nets, the way in which nets should be ordered in view of the fact that all brands are not marked the same, the kinds of dyes to use and their application, the manner in which nets may become weaker, the various kinds of lines, floats and leads, and other materials for gill-net web, such as terylene, silk, glass fiber, orlon, rayon, and saran.

GENERAL:

Atlas de Peche de la Mer du Nord (Fishery Atlas of the North Sea), by Jean Furnestin, 12 maps, printed. Institute Scientifique et Technique des Peches Maritimes, 59 Avenue Raymond Poincare, Paris XVIIE, France, 1956.

Defense Guides for Commercial Food Facilities, Agriculture Information Bulletin No. 169, 15 pp., printed, 10 cents. Food and Materials Re-

quirements Division, U. S. Department of Agriculture, Washington, D. C. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.) This bulletin, issued as a guidebook, discusses factors for reducing the vulnerability of food facilities to attack or other enemy action. It was developed to provide "guidance and leadership in the development of plans and programs to insure continuity of operation of vital food facilities in event of attack." While the factors contained in this guidebook have applicability to many industrial concerns, it was developed primarily for use in the field of food processing and wholesale distribution.

A Naturalist in Palestine, by Victor Howells, 180 pp., illus., printed, \$6. Philosophical Library Inc., 15 East 40th St., New York 16, N. Y., 1957. A well-illustrated book describing the flora and fauna of Palestine--the area that is now Israel and Jordan. Of special interest is a chapter on Lake Tiberias (Israel) in which the author includes descriptions of the fish and shellfish that he found there.

The Physical Bases for an Index of Biological Productivity, by F. C. W. Olson, Contribution No. 66, 4 pp., printed. Oceanographic Institute, Florida State University, Tallahassee, Fla.

Small Business and the Federal Trade Commission, by David R. Reel, Small Marketers Aids No. 24, 4 pp., printed. Small Business Administration, Washington 25, D. C., June 1957.

HYDROGRAPHY:

Hydrography of a Positive, Shallow, Tidal Bar-Built Estuary (Report on the Hydrography of the Polluted Area of Biscayne Bay), by Ilmo Hela, Clarence A. Carpenter, Jr., and J. Kneeland McNulty, Contribution No. 175, 53 pp., illus., printed. (Reprinted from Bulletin of Marine Science of the Gulf and Caribbean, vol. 7, no. 1, pp., 47-99, March 1957.) The Marine Laboratory, University of Miami, Coral Gables, Fla.

JAPAN:

Technical Report of Fishing Boat, No. 10, 111 pp., illus., printed in Japanese with brief English abstracts. Fishing Boat Laboratory, Production Division, Ministry of Agriculture and Forestry, Kasumigaseki, Chiyodaku, Tokyo, Japan, April 1957. Contains, among others, the following reports, with very brief abstracts in English: "Analysis of Two-Boat Trawling Net by Automatic Net Height Meter by Measuring Simultaneously Two Points of the Net," by Chikamasa Hamuro; "Study on Pressure-Spring Thermometer," by Kenji Ishii; "Noise of Yellowtail when it comes into the Set Net--Relation between the Noise and Amount of Catch--Relation between the Intensity of Noise and Weather," by Tomiju Hashimoto, Minoru Nishimura, and Yoshinobu Maniwa; "Experiment on Difference between the 24 kc. Fish-Finder and the 200 kc. Fish-Finder," by Tomiju Hashimoto, Yoshinobu Maniwa, and Minoru Nishimura; and "Study on Simplified Record Type SONAR and Its Field Test," by Tomiju Hashimoto, Yoshinobu Maniwa, and Minoru Nishimura.

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MAINE:

Commercial Fisheries of Maine, by George H. Taylor, 43 pp., illus., printed. Department of Sea and Shore Fisheries, Augusta, Me., January 1957. A brief but comprehensive survey of Maine's oldest industry--its commercial fisheries. Some indication of the importance of this industry over the years and of its potential value for the future is included. This exceptionally well-written and beautifully-illustrated booklet gives in some detail the history of Maine's commercial fisheries and describes individually and briefly the developments in its various fish and shellfish industries.

MEXICO:

Los Peces del Valle de Mexico (The Fishes of the Valley of Mexico), by J. Alvarez del Villar and Leopoldo Navarro G., 62 pp., illus., printed in Mexican, 1957. Secretaria de Marina, Direccion General de Pesca e Industrias Conexas, Mexico City, Mexico.

MUSSELS:

Environmental Factors Governing the Infection of Mussels, MYTILUS EDULIS, by MYTILICOLA INTESTINALIS, by B. T. Hepper, Ministry of Agriculture, Fisheries and Food Fishery Investigations, Series II, vol. XX, no. 3, 24 pp., illus., printed. Her Majesty's Stationery Office, London, England, 1955.

NETHERLANDS:

Diagnose-Rapport Visserij, 1956 (Voorlopige Berekening van de Bedrijfsresultaten van de Visserij over 1956) (Survey of Costs and Profitability of the Dutch Fishing Industry), Rapport No. 270, 53 pp., illus., processed, in Dutch. Landbouw-Economisch Instituut, The Hague, Holland. A brief survey of costs and profitability of the Dutch fishing industry in the years 1951-56. The report begins with a general view of the landings and value. Before 1954 the landings increased slowly, and since 1954 the landings have decreased, due mainly to a decrease in the catch of herring. Total value, however, shows a gradual increase. The value (US\$30.8 million in 1956) of the Dutch exports of fish during the last few years exceeded the value of the landings. Herring (fresh, cured, smoked or canned in tins) is the main export product. Sole, oysters, mussels, and shrimp also depend on foreign demand. The earnings of the individual branches of the Dutch fisheries were variable. The value of middle-water fisheries, herring fisheries, and the fisheries on the Lake IJssel was unfavorable, due to lower catches and increased costs. The near-water and inshore fisheries (shrimp) were satisfactory.

Economic Research into Fisheries, by A. G. U. Hildebrandt, 14 pp., processed. Agricultural Economics Research Institute, Fisheries Department, Van Stolkweg 29, The Hague, Holland, June 1956. Discusses the reasons for economic research in the fisheries, the organization of economic research in the fisheries of the Netherlands, the method adopted, and the results achieved.

NIGERIA:

White Paper on Federal Fisheries Service, Sessional Paper No. 6 of 1957, 4 pp., printed. Federal Government Printer, Lagos, Federation of Nigeria. The Federal Government of Nigeria has considered the problem of fisheries research in the light of the many recommendations made, and this paper contains the details of the Government's proposals, which are based largely on a program drawn up by the Fisheries Technical Committee of the Council of Natural Resources. The aim of fisheries research, sea fisheries research, study and development of inland fisheries, and the marketing and processing of fish are discussed. This paper also contains a glossary of scientific and vernacular names of the various fishes mentioned.

OYSTERS:

Crabs as Predators of Oysters in Louisiana, by R. Winston Menzel and Sewell H. Hopkins, 8 pp., illus., processed. (Reprinted from Proceedings of the National Shellfisheries Association, vol. 46, pp. 177-184.) Oceanographic Institute, Florida State University, Tallahassee, Fla.

"Effect of Ionizing Radiations on Southern Oysters," by Elizabeth Ann Gardner and Betty M. Watts, article, Food Technology, vol. 11, no. 6, June 1957, pp. 329-331, printed, single copy--domestic, \$1.50; foreign, \$1.75. The Garrard Press, 510 North Hickory, Champaign, Ill. Describes a study involved in the determination of whether or not oysters can be irradiated at dosages high enough for partial or complete sterilization without producing undesirable side reactions. Also determined was the extent to which irradiation of the oysters inhibited souring and pH changes in uncooked oysters. These are believed to be due to enzymatic action. It was concluded that "Radiation of raw oysters with gamma rays up to doses of 3.5×10^5 rep produced an off-odor described as 'grassy.' Neither free sulfhydryl group nor catalase activity was noticeably reduced. Subsequent souring and fall in pH occurred both in irradiated oysters and in unirradiated controls, indicating that this type of spoilage is probably caused by enzymes within the oyster rather than by bacteria. The radiation of cooked oysters produced a somewhat different type of off-odor described as 'oxidized.' The development of off-odors was not prevented by the addition before radiation of various antioxidants and free radical acceptors. The most acceptable irradiated products after brief storage periods were those radiated raw but subsequently heated sufficiently to destroy enzymes. The heating eliminated the grassy odor as well as prevented subsequent enzymatic souring. Radiation of live oysters in the shell was not found to be an effective means of opening the shells for removal of oysters. Fairly high doses were required to kill the oysters and the shells did not open immediately after killing doses."

The Effect of Temperature on the Ciliary Action and Other Activities of Oysters, by R. Winston Menzel,

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Contribution No. 67, 12 pp., illus., printed. Oceanographic Institute, Florida State University, Tallahassee, Fla.

The 1951 Oyster Stock in the Rivers Crouch and Roach, Essex, Fishery Investigations Series II, vol. XXI, no. 2, 34 pp., illus., printed, \$1.53. (For sale by British Information Services, 45 Rockefeller Plaza, New York 20, N. Y.) Ministry of Agriculture, Fisheries and Food, London, England. The results of a preliminary stock survey of oyster population in the Rivers Crouch and Roach (England) in 1951, following the work which had been started in 1947 to help the industry regain its former prosperity, forms the first part of this paper. A description of experimental work designed to clarify the picture of oyster distribution arising from the survey and an account of efficiency tests on various types of dredges are also included.

Some Additional Differences between CRASSOSTREA VIRGINICA and OSTREA EQUESTRIS in the Gulf of Mexico Area, by R. Winston Menzel, Contribution No. 30, 6 pp., processed. (Reprinted from Proceedings of the National Shellfisheries Association, vol. 46, pp. 76-81.) Oceanographic Institute, Florida State University, Tallahassee, Fla.

PRESERVATION:

"Industries de Traitement des Produits de la Peche. Salage, Fumage, Sechage, et Semi-Conserves" (Industries Treating Fishery Products. Salting, Smoking, Drying, and Semi-Preserves), by D. Remy, article, Industries Agricoles et Alimentaires, no. 73, pp. 799-806, printed in French. Association des Chimistes et Ingenieurs de Sucrierie Distillerie et Industries Agricoles de France et de l'union Francaise, Paris (10^e), France, 1956. An account of materials and processes used in France for salting, drying, and smoking fish, and for preparing semi-preserves of herring, anchovies, sprats, and fish roes, and marinades.

"On the Preparation of Reversibly Dried Fish Meat," by M. Takei and T. Takahashi, article, Bulletin of Tokai Regional Fisheries Research Laboratory, no. 14, pp. 91-97, printed in Japanese with summary in English. Tokai Regional Fisheries Laboratory, Tsukishima, Chuo-ku, Tokyo, Japan, 1956

"Studies on Processing Squid Meat," by T. Takahashi and M. Takei, article, Bulletin of Tokai Regional Fisheries Research Laboratory, no. 14, pp. 31-90, printed in Japanese with summary in English. Tokai Regional Fisheries Laboratory, Tsukishima, Chuo-ku, Tokyo, Japan, 1956.

REFRIGERATED WAREHOUSES:

Materials Handling in Public Refrigerated Warehouses, by Theodore H. Allegri and Joseph F. Herrick, Jr., Marketing Research Report No. 145, 125 pp., illus., processed, 60 cents. (For sale by Superintendent of Documents, Government Printing Office, Washington 25, D. C.) Marketing Research Division, Agricultural Marketing Service, U. S. Department of Agriculture, Washington, D. C. This report, one of a series

on handling food, was developed primarily to guide operators of public refrigerated warehouses in reducing the labor and costs required for various physical handling and warehouse operations. It outlines some of the methods for obtaining increased productivity while minimizing worker fatigue. Although it deals with refrigerated warehouses, the results of the study are applicable to other types of warehousing. The report is intended as a manual or guide for plant managers and other supervisory workers. Therefore, the methods, types of equipment used, and conditions influencing their use are described in considerable detail.

ROCKFISH:

A Review of the Rockfishes of California (Family SCORPAENIDAE), by Julius B. Phillips, Fish Bulletin No. 104, 158 pp., illus., printed. Department of Fish and Game, Marine Fisheries Branch, 926 Jay St., Sacramento 14, Calif., 1957. This publication is designed to assist fishermen and processors in the proper identification of the rockfishes and scorpionfishes found in the ocean waters of California. Photographs of each of 52 species and 3 hybrids are presented with the common and scientific name; range; greatest depth in which taken and maximum size; distinguishing characteristics; detailed measurements; and other common names.

SAILFISH:

Studies on the Age and Growth of the Atlantic Sailfish, ISTIOPHORUS AMERICANUS (Cuvier), Using Length-Frequency Curves, by Donald P. DeSylva, Contribution No. 165, 20 pp., illus., printed. (Reprinted from Bulletin of Marine Science of the Gulf and Caribbean, vol. 7, no. 1, pp. 1-20, March 1957.) The Marine Laboratory, University of Miami, Coral Gables, Fla.

SALMON:

Statistics on Salmon Sport Fishing in the Tidal Waters of British Columbia, 1956, 12 pp., processed. Department of Fisheries, Pacific Area, 1110 Georgia St., West., Vancouver, B.C., 1957. Presents British Columbia's commercial and sports catch of salmon by species for 1953-56, summary of sport fishing catches by area, commercial catch of troll caught salmon, and the estimated monthly sports catch of salmon for each area.

SHELLFISH:

Manual of Recommended Practice for Sanitary Control of the Shellfish Industry (Part II: Sanitation of the Harvesting and Processing of Shellfish), 1957 Edition, PHS Publication No. 33, 29 pp., printed, 35 cents. Public Health Service, U. S. Department of Health, Education, and Welfare, Washington, D. C. (For sale by the Superintendent of Documents, Government Printing Office, Washington 25, D. C.) This guide outlines the basic sanitary standards for the cooperative state-industry-Public Health Service program for the certification of interstate shellfish shippers. The guide includes recommended sanitation practices for harvesting boats and establishments which process oysters, clams, or mussels. The manual is intended as a guide

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for (1) the preparation of state laws and regulations controlling the harvesting and processing of shellfish for shipment in interstate commerce, (2) the shellfish industry in the maintenance of sanitary conditions during the harvesting and processing of shellfish, and (3) persons who are responsible for evaluation and supervising sanitary conditions in the harvesting, shucking, processing, packing, and shipping of shellfish. The manual is also used by the Public Health Service in evaluating state shellfish-sanitation programs to determine whether or not the programs are acceptable for endorsement.

SHRIMP:

"Effect of Storage on Decomposed Canned Shrimp," by H. C. Barry, J. F. Weeks, Jr., and R. E. Duggan, article, Journal of the Association of Official Agricultural Chemists, no. 39, pp. 801-805, printed. Association of Official Agricultural Chemists, Box 540, Benjamin Franklin Station, Washington 25, D. C., 1956.

Notes on Rock Shrimp, SICYONIA BREVIROSTRIS (Simpson), from Exploratory Trawling off the South Carolina Coast, by G. Robert Lunz, Contributions from Bears Bluff Laboratories No. 25, 10 pp., illus., printed. Bears Bluff Laboratories, Wadmalaw Island, S. C., August 1957.

SPAIN:

Introduccion a una Estadistica de Pesca Fluvial 1954, (Introduction to Statistics on River Fisheries), by R. de Rada, 153 pp., illus., printed in Spanish. Ministerio de Agricultura, Direccion General de Coordinacion, Credito, y Capacitacion Agraria, Madrid, Spain. A report, mainly composed of charts and tables, which describes the organization of Spain's National Fluvial Fishery Service and presents its fundamental problems. Discusses, among others, the following: restocking the rivers; fishing licenses and regulatory measures; the salmon resources; comparison between 1953 and 1954 of salmon caught in rivers; the decline of the sturgeon fishery; total weight of fluvial catch in 1954; principal species of fish in Spanish rivers and where each may be found; the seasons for catching fish and crabs in various regions; and the minimum size regulations concerning the principal species.

SPOILAGE:

"Effect of Freezing on Coliform Bacteria and Method of Detection in Frozen Fish Fillets and Blocks," by H. P. Dussault, article, Progress Reports of the Atlantic Coast Stations, no. 65, pp. 12-14, printed. Fisheries Research Board of Canada, Ottawa, Canada, 1956.

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the Action of Bacteria. (2) On the Effect of H-Ion Concentration," by M. Kimata and A. Kawai, article, Memoirs of the Research Institute for Food Science, no. 5, pp. 25-54, printed. Research Institute, Kyoto University, Kyoto, Japan, 1953.

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"The Freshness of Fish and the Amount of Histamine Presented in the Meat, III.," by M. Kimata, A. Kawai, and M. Tanaka, article, Memoirs of the Research Institute for Food Science, no. 7, pp. 6-11, printed. Research Institute, Kyoto University, Kyoto, Japan, 1954.

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"A New Species of Bacterium which Produces Large Amounts of Histamine on Fish Meats, Found in Spoiled Fresh Fish," by M. Kimata and M. Kawai, article, Memoirs of the Research Institute for Food Science, no. 6, pp. 1-2, printed. Research Institute, Kyoto University, Kyoto, Japan, 1953. A description of a new species of bacterium, Achromobacter histamineum, isolated from spoiled fish.

"On the Bacteria Causing Spoilage of Fresh Fish, especially on their Activity which can Produce Histamine," by M. Kimata and M. Tanaka, article, Memoirs of the Research Institute for Food Science, no. 7, pp. 12-17, printed. Research Institute, Kyoto University, Kyoto, Japan, 1954.

"On the Urea-Splitting Bacteria Causing the Spoilage of Fresh Fish," by M. Kimata and Y. Hata, article, Memoirs of the Research Institute for Food Science, no. 5, pp. 54-64, printed in English. Research Institute, Kyoto University, Kyoto, Japan, 1953.

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"A Study whether the Bacteria Having an Activity which can Produce a Large Amount of Histamine Former, are Present or not, on the Surface of Fresh Fish," by M. Kimata and M. Tanaka, article, Memoirs of the Research Institute for Food Science, no. 8, pp. 7-16, printed. Research Institute, Kyoto University, Kyoto, Japan, 1954.

SPORT FISH:

The Charles F. Johnson Oceanic Gamefish Investigations, Summary of Investigation for the Period Comprising September 1956 through April 1957, by Gilbert L. Voss and C. Richard Robins, Progress Report No. 3, 12 pp., processed. The Marine Laboratory, University of Miami, Coral Gables, Fla.

TUNA:

"Volatile Acids, Succinic Acid, and Histamine, as Indices of Decomposition in Tuna," by F. Hillig, article, Journal of the Association of Official Agricultural Chemists, no. 39, pp. 773-800 printed. Association of Official Agricultural Chemists, Box 540, Benjamin Franklin Station, Washington 4, D. C.

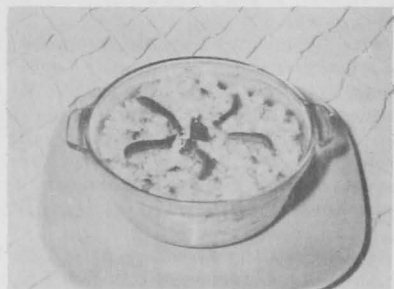
WHALING:

Gremio dos Armadores da Pesca da Baleia, Relatorio e Contas do Exercício de 1956 e Orcamento para 1957 (Whaling Vessel Owners' Guild, Statement of Operations for 1956 and Budget for 1957), 37 pp., illus., printed in Portuguese. A Comissao Revisora de Contas, Lisbon, Portugal.



CRAB CASSEROLE

Crab meat is the cooked meat from hard-shell crabs that is packed in cans and marketed either fresh, frozen, or canned. Crab meat is marketed from four principal kinds of crabs. They are the blue crabs from the Atlantic and Gulf coasts, the Dungeness crabs on the Pacific Coast from Alaska to Mexico, the king crabs from the North Pacific off Alaska, and the rock crabs taken on the New England and California coasts.



Crab meat is tender and possesses a distinctively sweet flavor. It is an excellent source of high-quality proteins, vitamins, and minerals needed for good nutrition. The meat

from any type of crab can be used interchangeably in all recipes.

The home economists of the United States Fish and Wildlife Service suggest that you serve "Quick Crab Casserole," a main dish which can be prepared by using fresh, frozen, or canned crab meat.

QUICK CRAB CASSEROLE

1 POUND CRAB MEAT	DASH PEPPER
$\frac{1}{2}$ CUP COOKED PEAS	$\frac{1}{2}$ CUP GRATED CHEESE
1 CAN ($10\frac{1}{2}$ OUNCES) CONDENSED MUSHROOM SOUP	PAPRIKA

Remove any shell or cartilage from crab meat. Combine peas, soup, pepper, and crab meat. Place in 6 well-greased individual 5-ounce custard cups. Sprinkle cheese and paprika over top of crab mixture. Bake in a moderate oven, 350° F., for 20 to 25 minutes or until brown. Serves 6.