



FISH AND WILDLIFE SERVICE PUBLICATIONS

THESE PROCESSED PUBLICATIONS ARE AVAILABLE FREE FROM THE OFFICE OF INFORMATION, U. S. FISH AND WILDLIFE SERVICE, WASHINGTON, D. C. 20240. TYPES OF PUBLICATIONS ARE DESIGNATED AS FOLLOWS:

CFS - CURRENT FISHERY STATISTICS OF THE UNITED STATES.
FL - FISHERY LEAFLETS.
MNL - REPRINTS OF REPORTS ON FOREIGN FISHERIES.
SEP. - SEPARATES (REPRINTS) FROM COMMERCIAL FISHERIES REVIEW.
SSR. - FISH. - SPECIAL SCIENTIFIC REPORTS--FISHERIES (LIMITED DISTRIBUTION).

Number	Title
CFS-3356	- Wisconsin Landings, September 1963, 2 pp.
CFS-3362	- California Landings, August 1963, 4 pp.
CFS-3369	- Virginia Landings, September 1963, 4 pp.
CFS-3370	- Frozen Fishery Products, November 1963, 8 pp.
CFS-3381	- California Landings, September 1963, 4 pp.
CFS-3383	- Gulf Coast Shrimp Data, August 1963, 21 pp.
CFS-3385	- Ohio Landings, September 1963, 3 pp.
CFS-3386	- Virginia Landings, October 1963, 4 pp.
CFS-3387	- Massachusetts Landings, June 1963, 10 pp.
CFS-3388	- Maryland Landings, October 1963, 4 pp.
CFS-3391	- Georgia Landings, November 1963, 3 pp.
CFS-3392	- New Jersey Landings, October 1963, 4 pp.
CFS-3393	- Fish Meal and Oil, November 1963, 2 pp.
CFS-3394	- Florida Landings, November 1963, 8 pp.
CFS-3395	- Frozen Fishery Products, December 1963, 8 pp.
CFS-3396	- Rhode Island Landings, October 1963, 4 pp.
CFS-3397	- South Carolina Landings, November 1963, 3 pp.
CFS-3398	- Michigan Landings, October 1963, 3 pp.
CFS-3399	- Wisconsin Landings, November 1963, 2 pp.
CFS-3400	- Fish Sticks and Fish Portions, October-December 1963, 2 pp.
CFS-3401	- Louisiana Landings, November 1963, 3 pp.
CFS-3402	- New York Landings, November 1963, 4 pp.
CFS-3403	- Virginia Landings, November 1963, 4 pp.
CFS-3404	- Maryland Landings, November 1963, 4 pp.
CFS-3405	- California Landings, October 1963, 4 pp.
CFS-3406	- Maine Landings, November 1963, 4 pp.
CFS-3410	- Georgia Landings, December 1963, 3 pp.
CFS-3411	- South Carolina Landings, December 1963, 3 pp.
CFS-3413	- Florida Landings, December 1963, 8 pp.
CFS-3418	- Alabama Landings, November 1963, 4 pp.
CFS-3419	- Rhode Island Landings, November 1963, 3 pp.
CFS-3422	- Ohio Landings, October 1963, 3 pp.
CFS-3427	- Wisconsin Landings, December 1963, 2 pp.

Sep. No. 701 - Gulf of Alaska Scallop Explorations--1963

FL-551 - Shrimp Farming, by Donald M. Allen, 8 pp., illus., October 1963. Gives an account of shrimp culture as it is practiced in Southeast Asia and suggesting possible application of techniques developed there to shrimp farming in the United States. Contains sections on the general life history of shrimp, culture methods, recommendations, and conclusions. In the United States, natural populations of shrimp occur in estuaries along the Gulf and South Atlantic coasts. This region appears well suited for shrimp farming, but commercial ventures in this field have been unsuccessful. If shrimp culture problems relating to seed supply, growth, survival, and harvesting can be resolved, and proven methods followed closely, Gulf and South Atlantic coastal marshes may support a new industry, states the author.

SSR-Fish. No. 443 - Progress Report Spring Chinook Salmon Transplantation Study 1955-61, by Paul D. Zimmer, Roy J. Wahle, and Eugene M. Malzef, 27 pp., illus., November 1963.

SSR-Fish. No. 451 - A Method for Tagging Immature Herring, by John E. Watson, 10 pp., illus., August 1963.

SSR-Fish. No. 457 - Physical Oceanographic Studies of Narragansett Bay, 1957 and 1958, by Steacy D. Hicks, 34 pp., illus., September 1963.

SSR-Fish. No. 460 - Natural Variation in Spotting, Hypothesis of Teeth Counts, and Coloration of Yellowstone Cutthroat Trout, *Salmo clarki lewisi* Girard, by Ross V. Bulkeley, 14 pp., illus., July 1963.

SSR-Fish. No. 462 - Mycobacteria in Adult Salmonid Fishes Returning to National Fish Hatcheries in Washington, Oregon, and California in 1958-59, by A. John Ross, 7 pp., July 1963.

Fishery Bulletin of the Fish and Wildlife Service, vol. 63, no. 1, 1963, 258 pp., illus., printed. Contains the following articles, which are also available as reprints: "Identification of New England Yellow-tail Flounder Groups," by Fred E. Lux; "Comparison of Growth of Four Strains of Oysters Raised in Taylors Pond, Chatham, Mass.," by William N. Shaw and James A. McCann; "Herring Tagging Experiments in Southeastern Alaska," by Bernard Eina; "Skud; "Model of the Migration of Albacore in the

North Pacific Ocean," by Tamio Otsu and Richard N. Ohida; "Further Studies on Fishway Slope and Its Effect on Rate of Passage of Salmonids," by Joseph Gauley and Clark S. Thompson; "Age, Growth, and Maturity of Round Whitefish of the Apostle Islands and Isle Royale Regions, Lake Superior," by Merryll M. Bailey; "Age and Growth of the Whitefish in Lake Superior," by William R. Dryer; "Influence of Water Velocity upon Orientation and Performance of Adult Migrating Salmonids," by Charles Weaver; "Development of a Mathematical Relationship between Electric-Field Parameters and the Electrical Characteristics of Fish," by Gerald Monan and Derek E. Engstrom; "Use of Plant Hemagglutinins in Serological Studies of Clupeoid Fishes," by Carl Sindermann; "Some Aspects of the Oceanography of Little Port Walter Estuary, Baranof Island, Alaska," by Charles F. Powers; "Early Larval Stages of the Seabob, *Xiphopeneus kroyeri* (Heller)," by William C. Renfro and Harry L. Cook; "Abundance, Age, and Fecundity of Shad, York River, Va., 1953-59," by Paul R. Nichols and William H. Massmann; "Cod Groups in the New England Area," by John P. Wise; "Distinguishing Tuna Species by Immunochemical Methods," by George J. Ridgway; "Theory on Development Mounds Near Red Bluff, Calif.," by Harold A. Gangmark and F. Bruce Sanford; and "Effect of Fishway Slope on Performance and Biochemistry of Salmonids," by Gerald B. Collins and others.

Publications of the Bureau of Commercial Fisheries under the Saltonstall-Kennedy Act, Fiscal Year 1962, 87 pp., illus., processed, August 1963. The eighth annual report to the Congress of the activities of the U. S. Bureau of Commercial Fisheries during the fiscal year ending June 30, 1962, under the provisions of the Saltonstall-Kennedy Act of July 1, 1954. Discusses commercial fishery progress in nationwide or international programs in technology, market news reporting, statistical reporting, marketing, foreign trade, and economics. In the Pacific Region, emphasis was placed on salmon and halibut abstention studies, the growing king crab fishery, biological studies of sockeye salmon, the salmon vs. dam controversy, grade standard development for sole and flounder fillets, bacteriological survey of Pacific filleting plants, and quality studies of Dungeness crab. The Gulf and South Atlantic Region reported a striped bass research program; menhaden research activities in sampling commercial catches for biostatistical and population analyses; research in shrimp biology, fishing gear and behavior; production of a shrimp trawling film; development of shrimp standards; shrimp quality studies; oyster and oyster drill studies; and scallop population studies. In the North Atlantic Region, activity centered around the Atlantic Herring Program encompassing early life history studies, age and growth studies, inshore habitat, herring migrations, disease research, development of blood group systems, and statistics of the catch. Other activities included Gulf of Maine temperature studies, ocean perch tagging, sea scallop stocks investigations, haddock and cod yield studies, research designed to improve trawling gear and methods, an effective oyster drill control program, oyster cultch studies, research on fish protein concentrate, school lunch and institutions programs, vessel safety activities, and participation in the FAO Fish in Nutrition Conference. Great Lakes and Central Region programs included Lake Erie biological research, limnology studies, Green Bay-Saginaw

Bay fish stocks research, technical assistance to trawl fisheries, technological work on thiaminase, technical advice on refrigeration and smoking techniques, establishment of the National Marketing Services Offices in Chicago, mink feed studies, and economic studies. Alaska Region activities emphasized sockeye salmon studies in Bristol Bay, Kvichak River, Nushagak River, Karluk Lake, and Kitoi Research Station; pink salmon studies at Little Port Walter and Olsen Bay; salmon streams and logging research; Southeast salmon stream catalog; Kasitsna Bay king crab studies; and research on crab meat production. In the California area, work went forward on sea surface temperature charts; sardine research in subpopulations, physiology, behavior, life history, and taxonomy; oceanographic and tuna contract research; tuna fishing strategy study; canned tuna specifications; and albacore catch analysis. There were no programs financed by S-K funds in the Hawaii Area during fiscal year 1962.

A Preview of the National Fisheries Center and Aquarium, 10 pp., illus., printed, 1963. Authorized by Act of Congress late in 1962, the Center is expected to be completed by about 1967. The \$10 million construction cost plus the annual costs of operating the Center will be recovered by admission fees. Research opportunities for scientists will be available in genetics, reproduction, nutrition studies, fish diseases, experimental ecology, behavior of aquatic organisms, antibiotics produced by marine animals, and other fishery problems. Fish will be displayed in pools and tanks. Movies and lectures on a variety of fishery subjects will be presented in the Center's auditorium.

Program of Research and Services for Alaska's Commercial Fisheries, Circular 171, 25 pp., illus., printed, October 1963. Discusses the Federal role in Alaska's fisheries, past and present; history of commercial fishing in Alaska; immediate problems--the international treaties situation, the declining salmon runs, the need for information, and the need for diversification of fishing effort; and foreseeable future problems--expansion of foreign fisheries, and human disturbance of salmon-spawning grounds. Outlines Bureau activities in Alaska in: biological research--knowledge of the environment, population dynamics, racial studies, and special studies of the effects of logging and other activities on fisheries; technological research; river basin studies; exploratory fishing and gear research; resource management; loans and grants; and statistics. Also covers planned future Bureau activities in marketing economics, information and education, and market news service; the tools to do the job; and what the Bureau's Alaska program will yield.

Your Recreation and the Fish and Wildlife Service, 8 pp., illus.

THE FOLLOWING ENGLISH TRANSLATION OF A FOREIGN LANGUAGE ARTICLE IS AVAILABLE ONLY FROM THE U. S. BUREAU OF COMMERCIAL FISHERIES BIOLOGICAL LABORATORY, BOX 3830, HONOLULU, HAWAII, 96812.

On the Oceanographic Conditions in the Southwestern Region of the Okhotsk Sea (2), by Makoto Wakao and Iori Kojima, 14 pp., illus., processed, November 1963. (Translated from the Japanese, Scientific Reports of the Hokkaido Fisheries Experimental Station, no. 1, March 1963, pp. 1-12.)

THE FOLLOWING MARKET NEWS LEAFLETS ARE AVAILABLE FROM THE FISHERY MARKET NEWS SERVICE, U. S. BUREAU OF COMMERCIAL FISHERIES, WYATT BLDG., SUITE 611, 777 14TH ST. NW., WASHINGTON, D. C. 20005.

Number	Title
MNL - 23	Fisheries of Chile. Part I--North Chile, 1960-62 and Jan.-Sept. 1963, 52 pp.
MNL - 52	Menhaden Fish Oil Prices--New York City, 1953-1963 and January 1964, 5 pp.

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

(Baltimore) Monthly Summary--Fishery Products, October 1963, 8 pp. (Market News Service, U. S. Fish and Wildlife Service, 103 S. Gay St., Baltimore, Md. 23369.) Receipts of fresh- and salt-water fish and shellfish at Baltimore by species and by states and provinces; total receipts by species and comparisons with previous periods; and wholesale prices for fresh fishery products on the Baltimore market; for the month indicated.

California Fishery Market News Monthly Summary, Part I - Fishery Products Production and Market Data, January 1964, 13 pp. (Market News Service, U. S. Fish and Wildlife Service, Post Office Bldg., San Pedro, Calif. 90731.) California cannery receipts of tuna and tunalike fish and other species used for canning; pack of canned tuna, tunalike fish, mackerel, and anchovies; market fish receipts at San Pedro, Santa Monica, and Eureka areas; California and Arizona imports; canned fish and frozen shrimp prices; ex-vessel prices for cannery fish; for the month indicated.

California Fishery Market News Monthly Summary, Part II - Fishing Information January 1964, 8 pp., illus. (U. S. Bureau of Commercial Fisheries, Biological Laboratory, P. O. Box 6121, Pt. Loma Station, San Diego, Calif. 92100.) Contains sea-surface temperatures, fishing and research information of interest to the West Coast tuna-fishing industry and marine scientists; for the month indicated.

(Chicago) Monthly Summary of Chicago's Wholesale Market Fresh and Frozen Fishery Products Receipts, Prices, and Trends, January 1964, 13 pp. (Market News Service, U. S. Fish and Wildlife Service, U. S. Customs House, 610 S. Canal St., Rm. 1014, Chicago, Ill. 60607.) Receipts at Chicago by species and by states and provinces for fresh- and salt-water fish and shellfish; and weekly wholesale prices for fresh and frozen fishery products; for the month indicated.

Gulf of Mexico Monthly Landings, Production and Shipments of Fishery Products, January 1964, 8 pp. (Market News Service, U. S. Fish and Wildlife Service, Rm. 609, 600 South St., New Orleans, La. 70130.) Gulf States shrimp, oyster, finfish, and blue crab landings; crab meat production; LCL express shipments from New Orleans; wholesale prices of fish and shellfish on the New Orleans French Market; fishery imports at Port Isabel and Brownsville, Texas, from Mexico; Gulf menhaden landings and production of meal, solubles, and oil; and sponge sales; for the month indicated.

List of Primary Receivers of Imported Fishery Products and Byproducts at New York, 1963, 22 pp., processed, January 1964. (Market News Service, U. S. Fish and Wildlife Service, 155 John St., New York, N. Y. 10038.)

Monthly Summary of Fishery Products Production in Selected Areas of Virginia, North Carolina, and Maryland, January 1964, 4 pp. (Market News Service, U. S. Fish and Wildlife Service, 18 S. King St., Hampton, Va. 23369.) Landings of food fish and shellfish and production of crab meat and shucked oysters in the Virginia areas of Hampton Roads, Chincoteague, Lower Northern Neck, and Lower Eastern Shore; Maryland areas of Crisfield, Cambridge, and Ocean City; and the North Carolina areas of Atlantic Beach, Beaufort, and Morehead City; together with cumulative and comparative data on fishery products and shrimp production; for the month indicated.

New England Fisheries--Monthly Summary, December 1963, 21 pp. (Market News Service, U. S. Fish and Wildlife Service, 10 Commonwealth Pier, Boston, Mass. 02210.) Review of the principal New England fishery port. Presents data on fishery landings by ports and species; industrial fish landings and ex-vessel prices; imports; cold-storage stocks of fishery products in New England warehouses, fishery landings and ex-vessel prices for ports in Massachusetts (Boston, Gloucester, New Bedford, Provincetown, and Woods Hole), Maine (Portland and Rockland), Rhode Island (Point Judith) and Connecticut (Stonington); frozen fishery products prices to primary wholesalers at Boston, Gloucester, and New Bedford; and Boston Fish Pier and Atlantic Avenue fishery landings and ex-vessel prices by species; for the month indicated.

New York City's Wholesale Fishery Trade--Monthly Summary--December 1963, 20 pp. (Market News Service, U. S. Fish and Wildlife Service, 155 John St., New York, N. Y. 10038.) Includes summaries and analyses of receipts and prices on wholesale Fulton Fish Market, including both the salt- and fresh-water sections; imports entered at New York custom district; primary wholesalers' selling prices for fresh, frozen, and selected canned fishery products; marketing trends; and landings at Fulton Fish Market docks and Stonington, Conn.; for the month indicated.

Progress Report on Chemical Methods of Control of Molluscan Enemies, 20 pp., vol. 74, Bulletin No. 8, processed; November 1960. (U.S. Department of the Interior, Fish and Wildlife Service, Bureau of Commercial Fisheries, Biological Laboratory, Milford, Conn.)

Report of Columbia River Fishery Program Office, Fiscal Years 1959-1960, 21 pp., illus., processed, 1961. (U. S. Department of the Interior, Fish and Wildlife Service, Bureau of Commercial Fisheries, Portland, Oreg.)

(Seattle) Washington and Alaska Receipts and Landings of Fishery Products for Selected Areas and Fisheries, Monthly Summary, January 1964, 7 pp. (Market News Service, U. S. Fish and Wildlife Service, 706 Federal Office Bldg., 909 First Ave., Seattle, Wash. 98104.) Includes Seattle's landings by the halibut and salmon fleets reported through the exchange

Landings of halibut reported by the International Pacific Halibut Commission; landings of otter-trawl vessels as reported by the Fishermen's Marketing Association of Washington; local landings by independent vessels; coastwise shipments from Alaska by scheduled and non-scheduled shipping lines and ferries; imports from British Columbia via rail, motor truck, shipping lines, and ex-vessel landings; and imports from other countries through Washington customs district; for the month indicated.

"A Utility Raft for Fishery Work," by Brian J. Rothchild, article, The Progressive Fish-Culturist, vol. 25, no. 4, October 1963, pp. 218-219, illus., printed, single copy 25 cents.

MISCELLANEOUS PUBLICATIONS

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

ALASKA:

Alaska's Animals and Fishes, by Frank Dufresne, 314 pp., illus., printed, 1946. A. S. Barnes and Company, 232 Madison Ave., New York 16, N. Y.

The Kingdom of the Seal, by Francis M. Menager, 222 pp., illus., printed, 1962. Loyola University Press, 3441 N. Ashland Ave., Chicago 13, Ill. An account of a missionary's experiences among Alaskan eskimos. Includes some information on sealing and a chapter on subsistence fishing.

ALMANAC:

The American Ephemeris and Nautical Almanac for the Year 1965, 519 pp., illus., printed, \$3.75, 1963. Nautical Almanac Office, U. S. Naval Observatory, Washington, D. C. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402.) Presents information relating to the sun, moon, planets, stars, eclipses, ephemerides, and satellites for the year 1964.

ASCORBIC ACID:

"Studies on Ascorbic Acid in Fish Tissues," by P. Ambuja Bai and M. Kalyani, article, Journal of Animal Morphology and Physiology, vol. 7, no. 2, 1960, pp. 162-166, printed. Journal of Animal Morphology and Physiology, Bombay, India.

AUSTRALIA:

Foreign Trade Regulations of Australia, by Dane M. Black, OBR 63-129, 12 pp., printed, 15 cents, October 1963. Bureau of International Commerce, U. S. Department of Commerce, Washington, D. C. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C., 20402.) A report on Australia's foreign trade regulations was issued recently by the U. S. Department of Commerce. The Government's policy is to offer protection under the customs tariff to "economic and efficient" local industries. The report discusses Australian trade policy, import tariff system, sales and other internal taxes, customs documentation, and labeling and marking requirements. It also covers special customs provisions, nontariff import trade controls, Australia's export controls, United States import and export controls, and diplomatic representation between the two countries.

Report by the Chief Secretary on Fisheries in New South Wales, for the Year Ended 30th June, 1962, 15 pp., printed, 1963. Office of the Chief Secretary (Parliament), Sydney, Australia.

Southern Pelagic Project Six-Monthly Review, No. 5 October 1963, 9 pp., processed. Southern Pelagic

U.S. Chemical Barriers to Protect Shellfish Beds from Predators, by V. L. Loosanoff, C. L. MacKenzie, Jr. and L. W. Shearer, 11 pp., vol. 23, Bulletin of the U. S. Department of the Interior, Fish and Wildlife Service, Bureau of Commercial Fisheries, Biological Laboratory, Milford, Conn.

THE FOLLOWING SERVICE PUBLICATIONS ARE FOR SALE AND ARE AVAILABLE ONLY FROM THE SUPERINTENDENT OF DOCUMENTS, U. S. GOVERNMENT PRINTING OFFICE, WASHINGTON, D. C. 20402.

"Artificial Light to Attract Young Perch: A New Method of Augmenting the Food Supply of Predaceous Fishes in Hatcheries," by George O. Schumann, article, The Progressive Fish-Culturist, vol. 25, no. 4, October 1963, pp. 172-174, printed, single copy 25 cents.

"Differential Survival of Rainbow Trout Fed Living Organisms and Hatchery Diets," by Edwin L. Cooper and Joseph H. Grosslight, article, The Progressive Fish-Culturist, vol. 25, no. 4, October 1963, pp. 193-197, printed, single copy 25 cents.

"Effects of Copper Sulfate on Microcystis and Zooplankton in Ponds," by Johnie H. Crance, article, The Progressive Fish-Culturist, vol. 25, no. 4, October 1963, pp. 199-202, illus., printed, single copy 25 cents.

I Equilibrium Yield and Management of Cutthroat Trout in Yellowstone Lake, by Norman G. Benson and Ross Bulkley, Research Report 62, 50 pp., illus., printed, 35 cents, 1963.

"New Ichthyosporidium Parasite of the Spot Leioscytus xanthurus: A Possible Answer to Recent Oyster Mortalities," by Frank J. Schwartz, article, The Progressive Fish-Culturist, vol. 25, no. 4, October 1963, pp. 181-186, illus., printed, single copy 25 cents.

"Salmon Pellets," by Wallace F. Hublou, article, The Progressive Fish-Culturist, vol. 25, no. 4, October 1963, pp. 175-180, printed, single copy 25 cents. Summarizes the production feeding results with the Oregon pellet (a fish food) from 1959 to 1963 at the Oregon Fish Commission's 16 salmon hatcheries.

"Survey of Licensed Commercial Trout Hatcheries in Ontario," by Hugh R. McCrimmon and A. H. Berst, article, The Progressive Fish-Culturist, vol. 25, no. 4, October 1963, pp. 187-192, illus., printed, single copy 25 cents.

"Unique Source of Warm-Water Fish for Restocking Managed Waters," by Russell A. Cookingham and Charles Hudson, article, The Progressive Fish-Culturist, vol. 25, no. 4, October 1963, pp. 208-210, illus., printed, single copy 25 cents.

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

Project Laboratory, Camberwell, Victoria, Australia. Discusses research vessel operations, field operations and intelligence unit, tuna research, Australian salmon research, spiny lobster research, and catch sampling.

BACTERIOLOGY:

"Las Bacterias y los Seres Marinos" (Bacteria and Marine Life), article, Puntal, vol. X, no. 113, August 1963, pp. 10-11, printed in Spanish, single copy 12 ptas. (about 20 U. S. cents). Puntal, Apartado de Correos 316, Alicante, Spain.

BASS:

Catch Records from the Striped Bass Sportfishery in California, by Harold K. Chadwick, 26 pp., illus., printed. (Reprinted from California Fish and Game, vol. 48, no. 3, July 1963, pp. 153-177.) Printing Division, Documents Section, Department of Fish and Game, N. Seventh St. at Richards Blvd., Sacramento 14, Calif.

BIOCHEMISTRY:

"Comparison of Chemical and Organoleptic Data Obtained on Thawed and Unthawed Frozen Cod, Haddock, and Perch Fillets," by Fred Hillig and others, article, Journal of the Association of Official Agricultural Chemists, vol. 46, June 1963, pp. 493-517, printed. Association of Official Agricultural Chemists, P. O. Box 540, Benjamin Franklin Station, Washington 4, D. C.

BIVALVES:

Common Marine Bivalves of California, by John E. Fitch, Fish Bulletin No. 90, 107 pp., illus., printed, 1953. Printing Office, Documents Section, No. Seventh St. at Richards Blvd., Sacramento 14, Calif.

BLACK CROAKER:

"Life-History and Ecologic Notes on the Black Croaker," by Conrad Limbaugh, 12 pp., illus., printed. (Reprinted from California Fish and Game vol. 47, no. 2, April 1961, pp. 163-174.) Printing Division, Documents Section, No. Seventh St. at Richards Blvd., Sacramento 14, Calif.

BRAZIL:

"Erradicacao de Piranhas no Acude Publico 'Pocoda Cruz'-Inaja, Pernambuco--Ostariophisi, Characidae, Serrasalminae. 1--Reconhecimento da Bacia Hidrografica (1)" (Eradication of Piranhas in the Poco da Cruz Public Dam--Inaja, Pernambuco--Ostariophisi, Characidae, Serrasalminae. 1--Survey of the Hydrographic Basin), by R. Adhemar Braga, article, Boletim do Museu Nacional, Zoologia no. 226, May 31, 1961, pp. 1-32, illus., printed in Portuguese with English summary. Servicio de Piscicultura do D.N.O.C.S., Av. do Imperador, 1313, Cx. Postal 25, Fortaleza, Ceara, Brazil. The general objective of the survey was to verify the possibility of eradicating piranhas in the Poco da Cruz Dam. Findings showed that eradication was possible and could be done in 3 to 4 months with 5 percent Rotenone.

BYPRODUCTS:

"Nutritional Value of Fish Products Told. Part I--Fish Products in Poultry Rations," by Elbert J. Day; "Part II--Amino Acid Adequacy, Protein Efficiency," by G. Richard Childs; and "Part III--Methodology in

the Nutritional Evaluation of Protein (for Poultry)" by Hans Fisher, articles, Feedstuffs, vol. 35, April 6, 1963, pp. 20, 75, printed. Miller Publishing Co. 2501 Wayzata Blvd., Minneapolis 5, Minn.

CALIFORNIA:

California Fish and Game, vol. 49, no. 4, October 1962, 97 pp., illus., printed, single copy 75 cents. Printing Division, Documents Section, Department of Fish and Game, Sacramento 14, Calif. "Food of Young-of-the-Year Striped Bass (*Roccus saxatilis*) in the Sacramento-San Joaquin River System," by William Heubach, Robert J. Toth, and Alan M. McCready; "Fishes Collected in the Eastern Pacific during Tuna Cruises, 1952 through 1959," by Harold B. Clemens and John C. Nowell; "Mass Mortality of Marine Organisms Attributed to the 'Red Tide' in Southern California," by Donald J. Reish; "Egg-Cases of Some Elasmobranchs and a Cyclostome from California Waters," by Keith W. Cox; "Age and Length Composition of the Sardine Catch Off the Pacific Coast of the United States and Mexico in 1960-61," by Robert S. Wolf and Anita E. Daugherty; "Preliminary Age Determination of Bluefin Tuna, *Thunnus thynnus*," by Robert R. Bell; and "Migration of a Tagged Bluefin Tuna Across the Pacific Ocean," by Craig J. Orange and Bernard D. Fink.

Common Ocean Fishes of the California Coast, by Phil M. Roedel, Fish Bulletin No. 91, 181 pp., illus., printed, 1953. Printing Office, Documents Section, No. Seventh St. at Richards Blvd., Sacramento 14, Calif.

"Estimating the Number of Angling License Purchasers," by Norman J. Abramson, 3 pp., printed. (Reprinted from California Fish and Game, vol. 48, no. 4, October 1962, pp. 253-255.) Printing Division, Documents Section, No. Seventh St. at Richards Blvd., Sacramento 14, Calif.

"Mission Bay, a Review of Previous Studies and the Status of the Sportfishery," by Gordon A. Chapman, 14 pp., printed. (Reprinted from California Fish and Game, vol. 49, no. 1, January 1963, pp. 30-43.) Printing Division, Documents Section, No. Seventh St. at Richards Blvd., Sacramento 14, Calif.

The Names of Certain Marine Fishes of California, by Phil M. Roedel, 18 pp., printed. (Reprinted from California Fish and Game, vol. 48, no. 1, January 1962, pp. 19-34.) Printing Office, Documents Section, No. Seventh St. at Richards Blvd., Sacramento, Calif.

Ocean Fishing Map of San Francisco, San Mateo and Santa Cruz Counties and the Elkhorn Slough Area of Monterey County, accordion-folded booklet, illus., printed. Conservation Education, Department of Fish and Game, 722 Capitol Ave., Sacramento, Calif.

"An Outline of California Fishing Gear," by W. L. Schofield, 10 pp., illus., printed. (Reprinted from California Fish and Game, vol. 37, no. 4, October 1951, pp. 361-370.) Printing Office, Documents Section, No. Seventh St. at Richards Blvd., Sacramento 14, Calif.

"A Sea Urchin, a Lobster and a Fish, New to the Marine Fauna of California," by John E. Fitch, 6 pp., illus., printed. (Reprinted from California Fish and Game, vol. 48, no. 4, October 1962, pp. 216-221.)

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

Printing Office, Documents Section, No. Seventh St. Richards Blvd., Sacramento 14, Calif.

CANADA:

"Canadian Summer Fisheries--1963," article, Trade Review, vol. 16, no. 4, October 1963, pp. 6-9, illus., processed. Information and Consumer Service, Department of Fisheries, Ottawa, Canada. In the Maritimes and Quebec, all the summer fisheries started well except lobstering and by the end of June the total catch was ahead in both volume and value. Plans were announced for the construction of 2 fish-processing plants in Nova Scotia and 2 in Prince Edward Island. Despite strikes on the Pacific Coast, good catches of halibut and other groundfish were made, although halibut prices were down because of large stocks carried over from the previous season. Salmon landings were fair but the season's pack to the end of August amounted to only a little more than half that of 1962. The fresh-water fisheries season ended with markets and prices firming and plans being made for more fish to be frozen and packed in the Arctic areas. Shipment of live food fish from northern Ontario to the United States failed to meet the demand because of short supply.

Review of the Strait of Georgia Trawl Fishery, by R. Forrester and K. S. Ketchen, Bulletin No. 139, 8 pp., printed, 1963. Fisheries Research Board of Canada, Sir Charles Tupper Bldg., Riverside Dr., Ottawa, Canada.

CANNING:

"Iskehermetikkindustrien i Spania Enkelte Andre Land" (Fish Canning Industry in Spain and a Few Other Countries), by B. Lovas-Svendsen, article, Tidsskrift for Hermetikindustri, vol. 49, no. 11, November 1963, pp. 431-432, 434, illus., printed in Norwegian. Norske Hermetikfabrikers Landsforening, Stavanger, Norway.

CARRAGEENIN:

"The Antithrombic Activity of Carrageenin in Human Blood," by W. W. Hawkins and Verna G. Leonard, article, Canadian Journal of Biochemistry and Physiology, vol. 41, May 1963, pp. 1325-1327, printed. National Research Council, Ottawa, Canada. Carrageenin is a sulfated galactan present in the red seaweeds Chondrus and Gigartina.

FISH:

"Close Look at One of Tennessee's Leading Families and Its Problems," by John Conder, article, Tennessee Conservationist, vol. XXXI, no. 11, November 1963, pp. 8-9, 13, illus., printed. Game and Fish Commission, 264 Cordell Hull Bldg., 436 Sixth Ave. N., Nashville, Tenn.

PHALOPODS:

Cephalopods of the Philippine Islands, by Gilbert L. Ross, Bulletin 234, 184 pp., illus., printed, \$1, 1963. Smithsonian Institution, U. S. National Museum, Washington, D. C. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C., 20402.)

CARRAGEENIN:

Damage Caused by Porpoises and Other Predatory Marine Animals, by C. Ravel, GFCM Studies and

Reviews No. 22, 10 pp., processed, November 1963. General Fisheries Council for the Mediterranean, Food and Agriculture Organization of the United Nations, Viale delle Terme di Caracalla, Rome, Italy. Discusses locations near Mediterranean countries where porpoises and dolphins are most often encountered; damage caused to nets by these animals; and methods used to control them. Since their meat is edible, market promotion of these species might result in a demand which would reduce their numbers.

CHLOROPHYLL:

Distribution of Chlorophyll in the Straits of Florida, by James E. Alexander and E. F. Corcoran, Contribution No. 450, 4 pp., illus., printed. (Reprinted from Limnology and Oceanography, vol. 8, no. 2, April 1963, pp. 294-297.) The Marine Laboratory, Institute of Marine Science, University of Miami, 1 Rickenbacker Causeway, Miami 49, Fla.

CLAMS:

"Histology of the Reproductive System of the Soft-Shell Clam (Mya arenaria)", by Alden P. Stickney, article, The Biological Bulletin, vol. 125, no. 2, October 1963, pp. 344-351, illus., printed, single copy \$2.50. Marine Biological Laboratory, Woods Hole, Mass.

"Low-Cost Clam Purification System is Promising," by R. Anthony Barnes, article, National Fisherman/Maine Coast Fisherman, vol. 44, June 1963, pp. 33, 37, printed. Journal Publishing Co., Belfast, Me.

"The Pismo Clam in 1960," by John L. Baxter, 5 pp., printed. (Reprinted from California Fish and Game, vol. 48, no. 1, January 1962, pp. 35-37.) Printing Office, Documents Section, No. Seventh St. at Richards Blvd., Sacramento, Calif.

"The Incidence of Malacobdella grossa in Hard Clams from Nantucket Sound, Massachusetts," by John W. Ropes, article, Limnology and Oceanography, vol. VIII, no. 3, July 1963, pp. 353-355, illus., printed. American Society of Limnology and Oceanography, Lawrence, Kans.

The Pismo Clam, by John E. Fitch, Marine Resources Leaflet No. 1, 24 pp., illus., processed, 1961. Department of Fish and Game, 722 Capitol Ave., Sacramento 14, Calif.

"Seasonal Variation in Chemical Composition of Clam (Tapes pullastra Mont)," by G. Alvarez-Seoane, article, Investigacion Pesquera, no. 17, 1960, pp. 3-32, printed in Spanish. Instituto de Investigaciones Pesqueras, Paseo Nacional, s/n, Barcelona-3, Spain.

COLOMBIA:

"Como Se Evade Nuestra Riqueza Pesquera" (How Our Fishery Wealth Is Wasted), by Tristan del Cauca, article, Puntal, vol. X, no. 113, August 1963, pp. 16-19, illus., printed in Spanish, single copy 12 ptas. (about 20 U. S. cents). Puntal, Apartado de Correos 316, Alicante, Spain.

CONTAINERS:

"Iron Sulfide Blackening in Canned Protein Foods: Oxidation and Reduction Mechanisms in Relation to Sulfur and Iron," by George M. Pigott and Alexander M. Dol-

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

lar, article, Food Technology, vol. 17, April 1963, pp. 115-118, printed. The Garrard Press, 510 N. Hickory, Champaign, Ill.

"The Mechanism of Iron Sulfide Discoloration in Cans of Shrimp," by Mary H. Thompson, article, Food Technology, vol. 17, May 1963, pp. 157-163, printed. The Garrard Press, 510 N. Hickory, Champaign, Ill.

DENMARK:

Fiskeriarbogen 1964 (The Fisheries Yearbook, 1964), edited by J. Fr. Simony, 815 pp., illus., printed in Danish, 14.17 kr. (about US\$2.05), December 1963. Iver C. Weilbach & Company, Amaliegade 30, Copenhagen, Denmark. A comprehensive collection of information on navigation, fishery rules and regulations, inspection, and related topics, primarily for Danish, Faroese, and Greenland fishermen, but it is also used by yachtsmen and small craft. Issued annually by the Ministry of Fisheries about the first of the year, the current issue is the 71st edition. The major sections are: (1) 1964 calendar--navigation tables, courses, and distances; (2) rules of navigation and carrying of lights--harbor bylaws, buoyage, precautions with respect to submarine cables, light and signal stations, radiotelephony and telegraphy; (3) acts and regulations governing the fishing industry--control of quality and exports of fish, fisheries statistics, and shipping; (4) index of fishing vessels, harbor signal letters; (5) acts and regulations governing inspection of ships, ship construction and equipment, medical supplies, and medical examination of crew; (6) fishery inspection, quarantine regulations; (7) accident insurance; (8) acts concerning loans to the fishing industry; (9) acts and regulations on hunting; (10) guidance on shipwrecks and accidents; (11) institutions and addresses; (12) fish names and market classifications, courses, measures and weights; and (13) stability of fishing vessels. There is also a detailed alphabetical index of the subject matter, and a list, by type of product, of the numerous fishery trade advertisements in the Yearbook. The final section is an article entitled "Stability of Fishing Vessels," by Leo Retvig, of the Directorate for the Government's Ship Inspection. This is a review of research on stability and stability conditions in fishing vessels, stimulated by the loss of a number of Danish steel fishing cutters in February and the Autumn of 1963. The article is divided into sections on stability, background, inclining tests and stability, rolling tests, wood and steel, and demand for stability research.

--Andrew W. Anderson

DRYING:

"New Fish Drying Plant," article, World Fishing, vol. 12, May 1963, pp. 37, 46, printed. John Trundell and Partners Ltd., St. Richard's House, Eversholt St., London NW., England.

ECOLOGY:

Marine Distributions, by M. J. Dunbar, 118 pp., illus., printed, \$5, 1963. University of Toronto Press, Toronto, Canada.

EELS:

A Smoked Eel Industry in Victoria, by D. D. Lynch, Fisheries Circular No. 8, 11 pp., illus., processed,

October 1962. Fisheries and Wildlife Department, 605 Flinders St., Melbourne C3, Australia.

ELECTRICAL FISHING:

"Apres le Congres Mondial des Peches (Suite): De la Technique Sovietique a la Peche a l'Electricite" (After the World Congress of Fisheries: On the Soviet Technique of Electrical Fishing), by R. Lemaire, article, France Peche, no. 77, October 1963, pp. 34-41, printed in French, single copy 2.5 F (about 50 U.S. cents). France Peche, Boite Postale 179, Louviers, France.

"Electric Fishing--A Practical Application," article, World Fishing, vol. 12, April 1963, p. 35, printed. John Trundell and Partners Ltd., St. Richard's House, Eversholt St., London NW1, England.

EUROPEAN ECONOMIC COMMUNITY:

Statistique des Peches (Fishery Statistics, 1950-1962), 75 pp., printed in French and German, 1963. Communauté Economique Européenne, Office Statistique, Brussels, Belgium.

FAUNA:

Life Along the Seashore, by Alan Solem, 32 pp., illus., printed, 99 cents, 1963. Encyclopaedia Britannica Press, 425 N. Michigan Ave., Chicago 11, Ill.

FINANCIAL ASSISTANCE:

Financial Assistance Policies and Administration for Fishery Industries, by E. S. Holliman, Fisheries Studies No. 11, 130 pp., printed, \$1, 1962. Fisheries Division, Food and Agriculture Organization of the United Nations, Viale delle Terme di Caracalla, Rome, Italy. This study was undertaken in response to a recommendation of the Technical Meeting on Credit for Fishery Industries held in Paris, October 17-22, 1960. The principal objective of this meeting organized by the Food and Agriculture Organization of the United Nations (FAO), was to provide a forum for an exchange of views and experience in the organization, administration, and evaluation of fishery credit systems in FAO member countries. The report covers objectives of fishery credit policies in developed and developing countries, implications of policy objectives on the nature and scope of credit assistance, and the measurement of needs. Also discusses the form of assistance, organization of financial assistance, administration of aid programs and coordination and review of fishery credit policies.

FISH BEHAVIOR:

"Concentrating Factors in Fisheries," by P.M.J. Woodhead, article, World Fishing, vol. 12, May 1963, pp. 63-64, 67-68, printed. John Trundell and Partners Ltd., St. Richard's House, Eversholt St., London NW., England.

Conditioned Avoidance Learning in Two Fish Species, by Leon S. Otis and Jean A. Cerf, 4 pp., printed, April 18, 1963. (Reprinted from Psychological Reports, vol. 12, 1963, pp. 679-682.) Stanford Research Institute, Menlo Park, Calif.

"Electronically Scanned Sonar in the Investigation of Fish Behaviour," by V. G. Welsby, J. H.S. Blaxter, and C.J. Chapman, article, Nature, vol. 199, no. 48, September 7, 1963, pp. 980-981, illus., printed, sin

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

4s. (about 55 U. S. cents). St. Martin's Press, 175 Fifth Ave., New York 10, N. Y.

Visual Sense of Pelagic Fishes Especially the Vertical Axis and Accommodation," by Tamotsu Taira and Warren J. Wisby, article, Bulletin of Marine Science of the Gulf and Caribbean, vol. 13, September 1963, pp. 433-447, printed in English with Spanish summary. Institute of Marine Science, University of Miami, 1 Rickenbacker Causeway, Virginia Key, Miami 49, Fla.

FOOD COOKERY:

Time-Temperature Studies of Baked Loaves (Meat, Fish, and Poultry)," by Karla Longree and others, article, Journal of the American Dietetic Association, vol. 42, June 1963, pp. 500-504, printed. American Dietetic Association, 620 North Michigan Ave., Chicago 11, Ill. Describes an investigation to study the effect of various time and temperature combinations used in baking: beef loaf with raw meat; salmon loaf made with canned fish; and turkey loaf made with cooked meat; whole egg solids were used as the binder. Purpose was to determine the bacteriological safety of products using whole egg solids.

FISHERY ECONOMICS:

Place of Economics in Fisheries," by G. M. Gerhard and others, article, Fishing News International, vol. 2, April-June 1963, pp. 198-200, printed. A. J. Heighway Publications Ltd., 110 Fleet Street, London EC4, England.

FISHERY RESEARCH:

Computer Programs for Fisheries Problems, 2 pp., Fisheries Circular No. 7, processed, 1963. Food and Agriculture Organization of the United Nations, Viale delle Terme di Caracalla, Rome, Italy.

FISH LIVER OIL:

Seasonal Variations in Cod Liver Oil," by K. W. Witt, article, Journal of the Science of Food and Agriculture, vol. 14, February 1963, pp. 92-98, printed. Society of Chemical Industry, 14 Belgrave Square, London SW1, England.

FISH MEAL:

Chemical and Nutritional Changes in Stored Herring Meal. 4--Nutritional Significance of Oxidation of Fish Oil," by K. J. Carpenter, article, British Journal of Nutrition, vol. 17, no. 2, 1963, pp. 151-159, printed. Cambridge University Press, 200 Euston Road, London NW1, England.

Simple Method for Producing Highly Nutritious Fish Meal," by A. Valente de Fonseca Alves da Costa, article, Boletim da Pesca, vol. 13, no. 72, 1961, pp. 5-56, printed in Portuguese. Gabinete de Estudos das Pescas, 644 R.S. Bento, Lisbon, Portugal.

Studies on the Value of Bone Meal and Fish Meal as Phosphatic Fertilizers," by M. O. Ghani, K. A. Hasan, and M. A. Mannan, article, Pakistan Journal of Biological and Agricultural Sciences, vol. 4, no. 1, 1962, pp. 44-52, printed. Pakistan Journal of Biological and Agricultural Sciences, Dacca, Pakistan.

FISH OILS:

"On the Structure of Highly Unsaturated Fatty Acids of Fish Oils by High Resolution Nuclear Magnetic Resonance Spectral Analysis," by Tetsutaro Hashimoto and others, article, Journal of the American Oil Chemists' Society, vol. 40, April 1963, pp. 124-128, printed. American Oil Chemists' Society, 35 E. Wacker Dr., Chicago 1, Ill.

FISH POPULATIONS:

Concerning the Causes of Fluctuations in the Abundance of Fishes, by G. V. Nikolsky, Translation Series No. 389, 11 pp., processed, 1962. (Translated from the Russian, Voprosy Ikhtiologii, vol. 1, no. 4 (21), 1961, pp. 659-665.) The Fisheries Research Board of Canada, Biological Station, Nanaimo, B. C., Canada.

Demographic Diagnosis on Fish Populations in Trout Streams, by R. Cuinat and R. Vibert, GFCM Studies and Reviews No. 21, 30 pp., illus., processed, October 1963. General Fisheries Council for the Mediterranean, Food and Agriculture Organization of the United Nations, Viale delle Terme di Caracalla, Rome, Italy.

FISH SOLUBLES:

"Unidentified Chick Growth Factor in Fish Solubles," by F. H. Steinke, H. R. Bird, and F. M. Strong, article, Journal of Nutrition, vol. 80, May 1963, pp. 60-68, printed. American Institute of Nutrition, 36th St. at Spruce, Philadelphia 4, Pa.

FOOD AND AGRICULTURE ORGANIZATION:

Bulletin of Fishery Statistics, vol. 1--Landings by Species, 1937-38, 1947-61, 205 pp., processed, 1963. Food and Agriculture Organization of the United Nations, Viale delle Terme di Caracalla, Rome, Italy. This publication will be issued from time to time in a limited number of copies to supplement the tables and text of the Yearbooks of Fishery Statistics, to circulate new tables on a trial basis prior to their incorporation in the Yearbooks, and also to present detailed statistics of regional interest, statistics on selected fishery commodities, and special tabulations for meetings and working parties. This issue contains, in an extensively revised form, for 2 prewar years and 15 postwar years, landings statistics for approximately 170 species items broken down by country. Includes summary data on landings of aquatic animals and plants by divisions and by groups of species and landings by groups of species and by species; and landings by species and by country of fresh-water and diadromous fish, marine fish, and crustaceans, molluscs, and other invertebrates. Data for whales, seals, and miscellaneous aquatic mammals, miscellaneous aquatic animals and residues, and aquatic plants are not covered.

The State of Food and Agriculture, 1963, 227 pp., printed, 1963. Food and Agriculture Organization of the United Nations, Viale delle Terme di Caracalla, Rome, Italy.

Yearbook of Fishery Statistics, 1962 (Production and Fishery Craft), vol. XV, 454 pp., illus., processed in French, Spanish, and English, \$8, 1963. Food and Agri-

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

culture Organization of the United Nations, Rome, Italy. (Sold in United States by Columbia University Press, International Documents Service, 2960 Broadway, New York 27, N. Y.) This edition contains fishery statistics on catch and landings by quantity and value, production of preserved and processed commodities, fishing craft, and whaling from all countries. The total nominal catch of fish, crustaceans and molluscs and other aquatic animals except seals and whales, residues and aquatic plants, throughout the world in 1962 is estimated at over 44 million metric tons, an increase of 7 percent over the nominal catch of 1961, and is once more greater than in any other year. Out of the total of over 44 million tons nearly 12 million tons were used for the manufacture of fish meals for animal feeding and about another million for miscellaneous purposes. The balance of about 32 million tons was used for human food in fresh, frozen, cured, or canned form.

The Food and Agriculture Organization has published reports describing that Agency's activities under the Expanded Program for Technical Assistance for developing the fisheries of many countries. These reports have been processed only for limited distribution to governments, libraries, and universities. Food and Agriculture Organization of the United Nations, Viale delle Terme di Caracalla, Rome, Italy.

Third Report to the Government of India on Fishing Boats, by Peter Gurtner, EPTA Report No. 1535, 105 pp., processed, 1963.

Report to the Government of the Philippines on Fresh-water Fisheries Investigations, by John W. Parsons, EPTA Report No. 1565, processed, 1962.

Report to the Government of Aden on the Crawfish Resources of Eastern Aden Protectorate, by R. W. George, EPTA Report No. 1696, 23 pp., processed, 1963.

Fourth Report to the Government of India on Fishing Boats, by Albert Sutherland, EPTA Report No. 1710, 24 pp., illus., processed, 1963.

Report to the Government of the Federation of Rhodesia and Nyasaland on the Fisheries Development Program for Lake Tanganyika (Northern Rhodesia), by Alphonse Collart, EPTA Report No. 1716, 20 pp., processed, 1963.

Second Report to the Government of Guatemala on Development on Inland Fisheries, by S. Y. Lin, EPTA Report No. 1719, 48 pp., processed, 1963.

Report on the Regional Training Center on Fish Processing Technology Held in Quezon City, Philippines 6 March-14 April, 1961, by Dr. Rudolf Kreuzer, EPTA Report No. 1725, 45 pp., processed, 1963.

Report to the Government of El Salvador on an Inland Fisheries Project, by S. Y. Lin, EPTA Report No. 1735, 26 pp., processed, 1963.

FRANCE:

Statistique des Peches Maritimes, 1958 et 1960 (Marine Fishery Statistics, 1958 and 1960), 2 vol., printed,

1963. Secretariat General de la Marine Marchande, Direction des Peches Maritimes, Paris, France.

FREEZE-DRYING:

"Developing and Testing Packages for Freeze Dried Foods," by H. E. Collins and R. L. Boegershausen, article, Package Engineering, vol. 8, no. 1, January 1963, pp. 55-61, printed. Angus J. Ray, 185 W. Wabash Ave., Chicago, Ill.

A Directory of Freeze-Drying: Food Processors, Equipment Firms, and Others, by Kermit Bird, 24 pp., processed, revised October 1963. Division of Information, Office of Management Services, U. S. Department of Agriculture, Washington, D. C., 20250. Lists the names and addresses of 13 United States and Canadian and 23 foreign freeze-dry food processors, together with a description of the types of foods processed. Also includes names and addresses of 16 United States and Canadian and 11 foreign freeze-dry equipment manufacturers, and a description of the type of equipment produced. The final section lists names and addresses and types of businesses of 22 miscellaneous domestic and foreign firms, including handlers of freeze-dried foods, processors of non-food items, manufacturers of controls, and others.

Freeze-Dried Foods and the Frozen Food Industry, by Kermit Bird, 24 pp., illus., processed, October 1963. Division of Information, Office of Management Services, U. S. Department of Agriculture, Washington, D. C., 20250. Discusses the freeze-drying process and its advantages and disadvantages; major markets for freeze-dried foods; quality of freeze-dried foods as compared with frozen foods; costs of the freeze-drying process; expected freeze-drying volumes; and the future of freeze-drying. Includes statistical tables presenting data on taste tests of freeze-dried and frozen shrimp, crab, and other foods; estimates of capacity, investment, and cost of a typical freeze-drying plant; average costs of freeze-dry processing of shrimp and 3 other foods; length of processing season and average freeze-drying costs per pound of water; and anticipated increase in refrigeration needs caused by freeze-drying industry in 1967.

"Freeze Dry Continuously," article, Food Processing, vol. 24, June 1963, pp. 68-72, printed. Putman Publishing Company, 111 E. Delaware Pl., Chicago Ill.

"Die kontinuierliche Gefrieretrocknung von Lebensmitteln" (Continuous Freeze Drying of Foodstuffs), U. Hackenberg, article, Dechema Monographien, 46, nos. 761-780, 1963, pp. 161-171, illus., printed in German. Rhengai-Allee 25, Frankfurt, Germany.

FREEZER TRAWLERS:

"Freezing Plants on Board Trawlers," by S. Rodebusch, article, Bulletin Technical Veritas, vol. 4, no. 4, April 1963, pp. 69-71, illus., printed in French. Bureau Veritas, 31 rue Henri-Rochefort, Paris, France.

FREEZING FISH AT SEA:

"Freezing at Sea with Vertical Plate Freezers," article, Modern Refrigeration, vol. 66, May 1963, pp. 422-423, printed. Refrigeration Press Ltd., Maclaren House, 131 Great Suffolk Street, London SE1, England.

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

"Modern Northern Pacific Halibut Gear;" "The Fish? Whose Sea? What Limits?;" "Halibut: The King of the Flatfishes;" "How Halibut is Harvested;" "Canadian Halibut Fleet, 1963;" "United States Halibut Fleet, 1963;" "Massive Bering Operations Put Leverage on Halibut;" "The Men Who Man the Boats;" "Asian Halibut Production Volume and Fishing Stir Markets in U. S. and U. K.;" and "Halibut Fishery of Norway."

HALIBUT:

"Fishing Inshore Fish, by J. J. Waterman, Torry Advisory Note no. 11, 3 pp., printed, 1963. Torry Research Station, 135 Abbey Rd., Aberdeen, Scotland.

HEMAGLOBIN:

"Studies on Fish Hemoglobins Chinook Salmon and Bow Trout," by Donald R. Buhler, article, Journal of Biological Chemistry, vol. 238, May 1963, pp. 1665-1674, printed. American Society of Biological Chemists, 428 East Preston St., Baltimore 20.

INTERNATIONAL COMMISSIONS:

International Commission for the Northwest Atlantic Fisheries, Statistical Bulletin for the Year 1961, vol. 11, 91 pp., illus., printed, C\$3, 1963. International Commission for the Northwest Atlantic Fisheries, Halifax, N. S., Canada. This bulletin is divided into two parts: Part 1 summarizes statistical fishery landings in the Convention Area, 1952-1961; and Part 2 includes statistical tables dealing with the fisheries in 1961. The presentation of the statistical data again has been designed to place emphasis on area and month of fishing. Contains a summary of all landings by species group, country, and statistical subdivision; landings of cod, haddock, ocean perch, halibut, and flounder for each type of gear; landings of each species by subarea; fishing effort and landings by country, gear, and subarea. Member countries include Canada, Denmark, France, Germany, Iceland, Italy, Norway, Poland, Portugal, Spain, U.S.S.R., United Kingdom, and the United States.

(International Pacific Fur Seal Commission) Proceedings of the Sixth Annual Meeting, November 26-December 6, 1962, Washington, D. C., 36 pp., processed. Secretary, North Pacific Fur Seal Commission, U. S. Fish and Wildlife Service, Washington, D. C., 20240. The North Pacific Fur Seal Commission was established in January 1958, during a meeting held in Washington, D. C. The Commission was organized pursuant to the Interim Convention on Conservation of North Pacific Fur Seals, signed in Washington, D. C., on February 9, 1957, by the Governments of Canada, Denmark, the U.S.S.R., and the United States. The Convention came into force on October 14, 1957. This report contains a summary of the proceedings of the Sixth Annual Meeting, a report of the Standing Scientific Committee, a list of participants attending the meeting, summaries of fur-seal investigations during 1962, plans for investigations during 1963, and an administrative report of the Secretary to the Sixth Annual Meeting.

IRRADIATION PRESERVATION:

"Changes in the Microflora of Haddock Fillets and Shucked Soft-Shell Clams After Irradiation with

Co⁶⁰ Gamma Rays and Storage At 0 C. and 6 C.," by E. B. Masurovsky, J. S. Voss, and S. A. Goldblith, article, Applied Microbiology, vol. 11, May 1963, pp. 229-234, printed. Williams and Wilkins Co., 428 East Preston St., Baltimore 2, Md. Data were previously presented on the micro-organisms obtained from shucked soft-shelled clams and haddock fillets before and, at various periods of time, after irradiation with Co⁶⁰ gamma rays and storage at 0° and 6° C. This report presents the changes that took place in the constitution of the microflora of these marine products as the microbial population increased, and then they correlated these findings with such deleterious effects as spoilage and discoloration. They also searched for micro-organisms of public health significance in the hope that any problems associated with such microbes in radiation-treated seafoods might be brought into clearer perspective.

"Effect of Substerilization Doses of Co⁶⁰ Gamma Radiation on the Cold-Storage Life Extension of Shucked Soft-Shell Clams and Haddock Fillet," by E. B. Masurovsky, S. A. Goldblith and J. T. R. Nikerson, article, Applied Microbiology, vol. 11, May 1963, pp. 220-228, printed. Williams and Wilkins Co., 428 East Preston St., Baltimore 2, Md.

"Food Preservation by Radiation, Its Present Status--Its Future Potential," by Samuel A. Goldblith, article, Food Engineering, vol. 35, May 1963, pp. 49-52, printed. Chilton Co., Chestnut and 56th Sts., Philadelphia 39, Pa.

JAPAN:

Bulletin of the Hokkaido Regional Fisheries Research Laboratory, no. 27, September 1963, 85 pp., illus., printed in Japanese with English summaries. Hokkaido Regional Fisheries Research Laboratory, Yoichi, Hokkaido, Japan. Contains, among others, articles on: "Male and Female Catches of the Pacific Salmon by the Japanese High Seas Fisheries," by T. Ishida; "Mesh Selective Biases on the Gill-Net Caught Sockeye and Chum Salmon," by T. Ishida; "Biochemical Studies on Squid. XXI--Re-Examination on the Crude Fat Content of Squid Meat," by K. Kitabayashi and others; "XXII--Inactivation of Trypsin by the Water Extract of Squid Meat," by S. Ishikawa and K. Kitabayashi; and "Studies on Fungi Isolated from Marine Products. III--Influence of Various Food Additives on the Growth of Fungi Isolated from Smoked Squid (1)," by Y. Okunda and T. Sato.

JELLYFISH:

Notes on Freshwater Jellyfish in Ontario, by Glenn B. Wiggins, R. E. Whitfield, and F. A. Walden, No. 45, 6 pp., printed, January 15, 1957. Contributions of the Royal Ontario Museum, Division of Zoology and Palaeontology, 100 Queen's Park, Toronto, Canada.

KELP:

"History of Kelp Harvesting in California," by W. L. Scofield, 24 pp., illus., printed. (Reprinted from California Fish and Game, vol. 45, no. 3, July 1959, pp. 135-157.) Printing Office, Documents Section, Section, No. Seventh St. at Richards Blvd., Sacramento 14, Calif.

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

FRESH FISH:

"L'Avenir de la Peche et de la Consommation du Poisson Frais" (The Prospects for the Fishery and for the Consumption of Fresh Fish), by M. Keller, article, France Peche, no. 77, October 1963, pp. 29-32, illus., printed in French, single copy 2.5 F (about 50 U.S. cents). France Peche, Boite Postale 179, Lorient, France.

GASTROPOD:

"A New Pleurotomariid Gastropod Trawled in the Straits of Florida by R/V Gerda," by Frederick M. Bayer, Contribution No. 494, 5 pp., illus., printed in English with Spanish summary. (Reprinted from Bulletin of Marine Science of the Gulf and Caribbean, vol. 13, no. 3, September 1963, pp. 488-492.) The Marine Laboratory, Institute of Marine Science, University of Miami, 1 Rickenbacker Causeway, Miami 49, Fla.

GEAR:

"Discharging Fish by Suction," article, World Fishing, vol. 12, April 1963, pp. 33-34, printed. John Trundell and Partners Ltd., St. Richard's House, Eversholt St., London NW1, England.

Drift and Set Line Fishing Gear in California, by W. L. Scofield, Fish Bulletin No. 66, 41 pp., illus., printed, 1947. Printing Office, Documents Section, No. Seventh St. at Richards Blvd., Sacramento 14, Calif.

"New Japanese Net-Finding Instrument," article, Canadian Fisherman, vol. 20, May 1963, p. 27, printed. National Business Publications Ltd., Gardenvale, Que., Canada.

Trolling Gear in California, by W. L. Scofield, Fish Bulletin 103, 45 pp., illus., printed, 1956. Printing Office, Documents Section, No. Seventh St. at Richards Blvd., Sacramento 14, Calif.

GENERAL:

Fins and Tails: A Story of Strange Fish, by Elizabeth A. Campbell, 60 pp., illus., printed, \$3, 1963. Little, Brown and Co., 34 Beacon St., Boston 6, Mass.

Identification of Sex in Fish, Fisheries Circular No. 10, 7 pp., illus., processed. Fisheries and Wildlife Department, 605 Flinders St., Melbourne C3, Australia.

"El Mar, Profanado" (The Sea, Desecrated), article, Puntal, vol. X, no. 113, August 1963, p. 1, printed in Spanish, single copy 12 ptas. (about 20 U. S. cents). Puntal, Apartado de Correos 316, Alicante, Spain.

GERMAN FEDERAL REPUBLIC:

Berichte der Deutschen Wissenschaftlichen Kommission für Meeresforschung, Neue Folge, Band XVII, Heft 2, July 1963, 91 pp., illus., printed in German with English summaries. E. Schweizerbart'sche Verlagsbuchhandlung (Nägele u. Obermiller), Stuttgart, Germany. Contains articles on: "Biologisch-Statistische Untersuchungen über die Deutsche Hochseefischerei. IV--Die Entwicklung der Hochseefischerei in Fangtechnischer, Raumlicher und Biologischer Hinsicht. 7--Ertrags- und Bestandsveränderungen bei den Nutzfischen" (Biological-Statistical Research on German Deep Sea Fishing. IV--Development of Deep

Sea Fishing with Regard to the Technique, the Area and Biological Considerations of the Catch. 7--Changes in Yield and Stock of Commercial Fisheries by Johannes Lundbeck; and "Über das Wachstum der Steinbutts (Scophthalmus maximus L.) in der Nordsee" (On the Growth of the Turbot--Scophthalmus maximus L.--in the North Sea), by Tekin Mengi.

GREECE:

Marine Science in Greece, by E. C. Haderlie and Alan F. Richards, 9 pp., printed, June 14, 1963. Office of Naval Research, London, England.

GROUND FISH:

"Discards of Fish at Sea by Northern New Brunswick Driggers," by Yves Jean, article, Journal of the Fisheries Research Board of Canada, vol. 20, March 1963, pp. 497-524, printed. Queen's Printer and Controller of Stationery, Ottawa, Canada.

GRUNION:

A Guide to the Grunion, by Boyd W. Walker, 12 pp., illus., printed. (Reprinted from California Fish and Game, vol. 38, no. 3, July 1952, pp. 409-420.) Printing Office, Documents Section, No. Seventh St. at Richards Blvd., Sacramento 14, Calif.

GUINEA:

Preparing Shipments to Guinea, OBR 63-130, 8 pp., printed, 15 cents, October 1963. Bureau of International Commerce, U. S. Department of Commerce, Washington, D. C. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C., 20402.) Gives information on requirements for shipping documents; import regulations; mail shipment rules; and labeling, marking, and packing requirements. Also discusses entry, transit, and warehousing of goods; reexportation and free admission; customs procedures; and Guinean Government representation in the United States.

GULF OF MEXICO:

Circulation and Water Mass Distribution in the Gulf of Mexico, by T. Ichiye, Contribution No. 190, printed, 1962. Oceanographic Institute, Florida State University, Tallahassee, Fla.

Surface Currents in the Northeastern Gulf of Mexico, by G. G. Salsman and W. H. Tolbert, Report No. 20, 43 pp., printed, \$4.60, August 1963. Navy Mine Defense Laboratory, Panama City, Fla.

HALIBUT:

Pacific Fisherman, vol. 61, no. 10, September 1963, 71 pp., illus., printed, single copy 50 cents. Pacific Fisherman, 500 Howard St., San Francisco, Calif. 94105. This issue, devoted to "Halibut--Fish of Distinction," includes, among others, articles on: "Halibut, an Oceanic Resource in Focus;" "1963--Halibut Year of Crisis;" "In 1913--Half a Century Ago Halibut Research and Management Was Born;" "American Halibut Markets Closed to Non-Treaty Fish;" "Fathoming Halibut Facts, and How the Resource Was Rebuilt on Them;" "Four Stand-Outs in Service to Pacific Halibut Resource;" "Halibut Association of North America--Promotion and Marketing;" "Halibut 'Lay' Governs Boat and Crew Relations;" "Halibut Climbs Economic Peaks and Dips into the Valley;" "The Pacific Halibut Fishery--Its Fleet and Its History."

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

KELP MEAL:

"Track of a Consistent Chick Growth Response to Mexican Kelp Meal," by E. L. Wisman and C. E. Hines, article, Poultry Science vol. 42, May 1963, pp. 77-790, printed. Poultry Science Association, Columbus 10, Ohio.

KENYA:

Report on Kenya Fisheries, 1962, 31 pp., printed, Ministry of Forest Development, Game and Fisheries, Fisheries Division, Nairobi, Kenya.

LABOR LEGISLATION:

Shellfish Processing on the Atlantic and Gulf Coasts--
Analysis of the Effects of Minimum Wage Coverage, 1962, illus., processed, December 1962. Wage and Hour and Public Contract Divisions, U. S. Department of Labor, Washington, D. C., 20210. This report was prepared in response to Congressional requests for an analysis of the special adjustment problems facing the shellfish-processing industry as a result of coming under the minimum wage provisions of the Fair Labor Standards Act in September 1961. Most of the information was obtained through a comprehensive survey covering all plants engaged in processing clams, crabs, oysters, and shrimp on the Atlantic and Gulf Coasts in June 1962. The survey obtained general data on employment and wage rates of shellfish production workers in occupations for which the Wage and Hour and Public Contracts Divisions had issued handicapped worker certificates to qualify employees. Data were also obtained on hours worked per week and on average weekly earnings. To obtain a picture of the labor force of this industry, data were obtained on age of workers and the characteristics of discharged employees. The report contains sections on the status of the shellfish industry under the Fair Labor Standards Act of 1938; special survey of employment, earnings, and related subjects; and general economic data on the industry.

LAKE ERIE:

Summary Review of the Lake Erie Commercial Fishery Since the Beginning of Records, 52 pp., printed, 1962. Water Resources Commission, Lansing, Michigan.

MARINE BIOLOGY:

Biological Bulletin, vol. 13, no. 5, October 1963, 107 pp., printed, single copy \$2. American Institute of Biological Sciences, 2000 P St. NW., Washington, D. C. This is a special issue devoted to various aspects of marine biology. The section on "National Science Foundation--interest and support," covers the Office of Marine Research, Bureau of Sport Fisheries and Wildlife, U. S. Atomic Energy Commission, Bureau of Commercial Fisheries, National Science Foundation, Smithsonian Institution, Public Health Service, and National Oceanographic Data Center. The section on research and education discusses needs for research and education, and the readiness of aquaculture for the computer age. The section on international cooperation gives information on the International Oceanographic cruises and the International Indian Ocean Expedition. The final section covers research on various aspects of marine organisms, marine bacteriology, plankton and primary production, zooplankton and the food cycle, the deep sea benthos, larval development, pelagic fishes, and the improvement of

world fisheries from the biologist's and from the oceanographer's viewpoints.

MARINE MAMMALS:

"The Sea Lions, Seals and Sea Otter of the California Coast," by Paul Bonnot, 19 pp., illus., printed. (Reprinted from California Fish and Game, vol. 37, no. 4, October 1951, pp. 371-389.) Printing Office, Documents Section, No. Seventh St. at Richards Blvd., Sacramento 14, Calif.

MARINE OILS:

"Progress in Marine Oil Research Conducted and Sponsored by the United States Bureau of Commercial Fisheries," by Neva L. Karrick, article, News Summary No. 10, December 1962, pp. 92-112, printed. International Association of Fish Meal Manufacturers, 70 Wigmore St., London W1, England.

MEETINGS AND PROCEEDINGS:

"North Pacific Treaty Negotiations," article, Trade News, vol. 16, no. 4, October 1963, p. 5, processed. Information and Consumer Service, Department of Fisheries, Ottawa, Canada.

MEXICAN SCAD:

"A Range Extension for the Mexican Scad to Monterey Bay, California," by Herbert W. Freay, 2 pp., printed. (Reprinted from California Fish and Game, vol. 48, no. 3, July 1962, pp. 210-211.) Printing Division, Documents Section, No. Seventh St. at Richards Blvd., Sacramento 14, Calif.

MOLLUSKS:

"The Effect of Salinity on the Temperature Tolerance of Eggs and Larvae of Some Lamellibranch Mollusks," by Harry C. Davis, 1 p., printed. (Reprinted from Proceedings of the XVI International Congress of Zoology, Washington, D. C., August 20-27, 1963, vol. 1.) U. S. Bureau of Commercial Fisheries Biological Laboratory, Milford, Conn.

"Observations on Pelagic Mollusks Associated with the Siphonophores *Velella* and *Physalia*," by Frederick M. Bayer, Contribution No. 488, 13 pp., illus., printed in English with Spanish summary. (Reprinted from Bulletin of Marine Science of the Gulf and Caribbean, vol. 13, no. 3, September 1963, pp. 454-466.) The Marine Laboratory, Institute of Marine Science, University of Miami, 1 Rickenbacker Causeway, Miami 49, Fla.

MUSSELS:

"Mussel Poisoning As a Biological Problem on the Basis of Recent Research on its Causes," by L. von Haraghy, Translation Series No. 379, 7 pp., processed, 1962. (Translated from the German, Helgolander Wissenschaftliche Meeresuntersuchungen herausgegeben von der Biologischen Anstalt Helgoland, vol. 2, no. 3, 1942; pp. 350-351.) Fisheries Research Board of Canada Biological Station, St. Andrews, B. C., Canada.

"Stimulation of Spawning in the Mussels, *Mytilus edulis* Linnaeus and *Mytilus californianus* Conrad," by Kraft Mill Effluent," by Wilbur P. Breese, Raymond E. Millemann, and Roland E. Dimick, article, The Biological Bulletin, vol. 125, no. 2, October 1963, pp. 197-205, illus., printed, single copy \$2.50. Marine Biological Laboratory, Woods Hole, Mass.

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

NAVIGATION:

A Report . . . Concerning Electronic Aids to Navigation for the Fisheries and Other Users, 80 pp., illus., processed, 1961. Ministry of Fisheries and Defense, Oslo, Norway.

NETS:

Fishermen's Knots and Nets, by Raoul Graumont and Elmer Wenstrom, 215 pp., illus., printed, 1948. Cornell Maritime Press, Box 386, Cambridge, Md. Discusses angler's and still fishermen's knots, commercial fishermen's knots, fishing traps and seines, and netmaking and repairing.

Purse Seines and Other Roundhaul Nets in California, by W. L. Scofield, Fish Bulletin No. 81, 87 pp., illus., printed, 1951. Printing Office, Documents Section, No. Seventh St. at Richards Blvd., Sacramento 14, Calif.

NEW ENGLAND:

"The Changing Face of the Seafood Industry," article, Frosted Food Field, vol. 36, no. 10, October 1963, pp. 22-25, 32-34, illus., printed, single copy \$1. The Olsen Publishing Co., 321 Broadway, New York, N.Y. 10007. Describes the outstanding progress achieved in the New England frozen fish industry during the past 10 years.

NEW ZEALAND:

Report on Fisheries for 1962, 24 pp., printed, 1963. Marine Department, Wellington, New Zealand. Discusses total landings by class and by year, 1945-1962; spiny lobster landings, 1953-1962; fish landings by species, 1961-1962; landings by port; foreign trade in fish and shellfish; sport fishing; fish-liver oil production; whaling, 1962 season; rock and dredged oysters; and production of toheroa (edible mollusk). Also covers whitebait fishing; angling licences; research and investigation--research vessel operations, grid pattern trawling, marine fish studies, marine mammal projects, shellfish studies, trout fisheries, Quinnet salmon, new game fish, introduction of the English mayfly for trout food, and use of insecticides; select committee to inquire into the fishing industry; Freshwater Fisheries Advisory Council; Fishing Industry Advisory Council; and legislation pertaining to fisheries. Includes statistical tables giving data on the number of fishing vessels and fishermen by port or district and method of fishing; quantity of fish and shellfish landed by port; quantity of fish landed by species and type of gear; landings by species and port; landings of fish and spiny lobsters by ports and months; and foreign trade in fishery products.

NIGERIA:

Foreign Trade Regulations of Nigeria, OBR-63-122, 12 pp., printed, September 1963. Bureau of International Commerce, U. S. Department of Commerce, Washington, D. C. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C., 20402.) Nigeria maintains an open system of imports, with controls imposed on only a few items in order to protect domestic producers, discourage smuggling, or assist indigenous traders. The report discusses Nigeria's trade policy, import tariff system, sales and other internal taxes, documentation and fees, and label-

ing and marking requirements. Also covers special customs provisions, nontariff import trade controls, Nigeria's export controls, United States export and import controls, and diplomatic representation between Nigeria and the United States.

Report of The Federal Fisheries Service, 1961-62 and 1962-63, 26 pp., illus., printed, 1963. Printing Division, Federal Ministry of Information, Lagos, Nigeria. Discusses administrative operations, including Fisheries Service vessels, legislation affecting fisheries, and port facilities; sea research program--oceanography, inventory of resources, bionomics and publications; Lake Chad research program--production survey and biological studies of lake fish; and brackfish-water fish culture.

NORTH ATLANTIC:

International Collaboration in Fisheries Research; a Historical Review, with Particular Reference to the North Atlantic Region. Fisheries Biology Technical Paper No. 33, 6 pp., processed, 1963. Food and Agriculture Organization of the United Nations, Viale Terme di Caracalla, Rome, Italy.

NUTRITION:

Man, Land, and Food--Looking Ahead at World Food Needs, by Lester R. Brown, Foreign Agricultural Economic Report No. 11, 161 pp., illus., processed 50 cents, November 1963. Regional Analysis Division, Economic Research Service, U. S. Department of Agriculture, Washington, D. C. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C., 20402.) This analysis seeks to assess the magnitude and direction of the effort which must be made during the remaining 4 decades of this century if the projected population, double today's figure, is to be sustained. The role of the United States agricultural sector, as a source of food capital and technical assistance for the food scarce, less developed regions, is growing steadily promising to achieve an importance without precedent.

OCEANOGRAPHY:

The Atlantic Equatorial Undercurrent, by W. G. Mearns, A. D. Voorhis, and M. C. Stalcup, Contributions in Oceanography, vol. 12, no. 1, printed, 1962. (Reprinted from Journal of Geophysical Research, vol. 67, no. 6, June 1962, pp. 2499-2508.) Woods Hole Oceanographic Institution, Woods Hole, Mass.

Corals and Sea Pens, Indicators of the Hydrological Profile and Caspian Fouling and Its Changes in the Past Ten Years (1951-61), by K. N. Nesis and G. I. Zevina, OTS 63-21646, 39 pp., printed, \$1.25, April 23, 1963. (Translated from the Russian, Okeanologiya, vol. 2, no. 4, 1962, pp. 705-726.) Office of Technical Services, U. S. Department of Commerce, Washington, D. C., 20235.

"The Delusion of 'Sea Level'," by D. E. Cartwright, article, New Scientist, vol. 20, no. 359, October 3, 1963, pp. 33-36, illus., printed. Cromwell House, Fulwood Pl., High Holborn, London WC1, England. Until recently mapmakers assumed that the mean level of the sea, observed at a chosen spot, provided a foolproof basis for measuring land heights. Now scientists know that sea level is influenced by a great variety of physical effects; even across the Straits of Dover there is a discrepancy of 8 cms.

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

HF Stability Seaborne Platforms for Range Instrumentation, by Samuel T. Carpenter, Report No. SR 52 pp., printed, December 1961. Mitre Corp., Bedford, Mass.

MF Natural Coloring Matter as an Indicator of Inshore Water Masses, by Thomas L. Hopkins, Contribution No. 162, printed, October 1961. Oceanographic Institute, Florida State University, Tallahassee, Fla.

OG Oceanographic Research, Progress Report No. 6, January 1-December 31, 1962, 20 pp., printed, 1962. Mount Geological Observatory, Palisades, N. Y.

OG Oceanographic Vessels of the World, vol. II, Publication G-2 in the NODC General Series, 417 pp., processed, \$4.50. National Oceanographic Center, Washington, D. C. This volume is essentially a continuation of the first volume of the same publication. Also includes photographs and lists of several of the unillustrated vessels in the first volume, errata to Vol. I, several ship specification revisions, and a revised ship index. Over 120 additional ships are described, including ships of 30 countries, so that the 2 volumes now include over 300 ships belonging to 32 countries. It is planned to issue periodic supplements to keep this publication updated.

OG Highlights of the IGY: Oceanography, by John A. Buss, article, *Science*, vol. 142, no. 3590, October 1963, pp. 418, 421, printed, single copy 35 cents. American Association for the Advancement of Science, 1515 Massachusetts Ave. NW., Washington 5, D. C.

OG Oceanographic Research in the Mediterranean, Indian and Atlantic Oceans, JPRS 12551, 27 pp., processed, February 19, 1962. (Translated from the Russian, *Okeanologiya*, vol. I, no. 4, pp. 745-761.) Office of Technical Services, U. S. Department of Commerce, Washington, D. C., 20235.

OTHERS:

HF Supplementary List of Useful Publications for Shellfish Farmers of the Maritimes, compiled by J. L. ... General Series Circular No. 41, 2 pp., printed, December 1963. Fisheries Research Board of Canada, Biological Station, St. Andrews, N. B., Canada.

HF Clam Dredge Does Excellent Job on Oysters, by Carl R. Brenner, article, *National Fisherman/Coast Fisherman*, vol. 44, April 1963, pp. 34-35, printed. Journal Publishing Co., Belfast, Me.

HF Observations on the Food Value of Seven Species of Larvae to the Larvae of *Ostrea edulis*. I--Feeding Experiments, by P. R. Walne, article, *Journal of the Marine Biological Association of the United Kingdom*, vol. 43, no. 3, November 1963, pp. 767-784, printed, single copy \$12. Cambridge University Press, 32 E. 57th St., New York 22, N. Y.

PARASITES:

HF Axosporean (Sporozoan) Parasite in the Red Sea, *Sciaenops ocellatus*, by E. S. Iversen and David Yokel, Contribution No. 487, 5 pp., illus., printed in English with Spanish summary. (Reprinted from *Bulletin of Marine Science of the Gulf and*

Caribbean, vol. 13, no. 3, September 1963, pp. 449-453.) The Marine Laboratory, Institute of Marine Science, University of Miami, 1 Rickenbacker Causeway, Miami 49, Fla.

PERU:

La Pesqueria Peruana en 1962 (The Peruvian Fishery in 1962), by Javier Iparraguirre Cortez, Serie de Divulgacion Cientifica 23, 54 pp., illus., printed in Spanish. Departamento de Economia Pesquera, Servicio de Pesqueria, Ministerio de Agricultura, Lima, Peru. Discusses the rise of Peru as a fishing nation: the position of Peru in the world fisheries; domestic consumption; processed fishery products--investment and personnel, freezing, canning, fish meal and oil, and salted fish; fishery byproducts production; and coastal production of fish and shellfish by ports and by species. Also presents data on national byproducts production and consumption of food fish, domestic and imported; fish supply in Greater Lima; quantity and value of fishery products consumed in Greater Lima, by species and source; landings of fish on the coast and its utilization; foreign trade in fishery products; world production of fish meal, fish solubles, and fish body oil; and domestic landings of whales.

PESTICIDES:

Facts for Consumers, Pesticide Residues, FDA Publication No. 18, 14 pp., illus., printed, 15 cents, October 1963. Food and Drug Administration, U. S. Department of Health, Education, and Welfare, Washington, D. C. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C., 20402.) Presents a summary of how the pesticide control system operates through 2 Federal laws: The Federal Insecticide, Fungicide, and Rodenticide Act (U. S. Department of Agriculture) and the Food, Drug, and Cosmetic Act (Food and Drug Administration). Also contains sections on setting safe tolerances, policing tolerances, the farmers' role, and other safety clearance requirements.

Pesticides, Public Health Service Publication No. 1081, 8 pp., printed, 5 cents, August 1963. Public Health Service, U. S. Department of Health, Education, and Welfare, Washington, D. C. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C., 20402.) Describes briefly what pesticides are, their importance in health and food protection, and what the hazards are when they are improperly used. Also contains a brief discussion on programs the Public Health Service, together with other Federal agencies, is conducting in the study of the effects of pesticides on men, animals, plants, food, soil, air, and water; and gives a listing of safety rules to follow when using pesticides. Most pesticides available today are chemical poisons, and the pests they kill may be weeds, insects, rats and mice, algae, worms, or other destructive forms of life.

PHILIPPINES:

Foreign Trade Regulations of the Philippines, by Dawn A. Wachtel, OBR 63-138, 8 pp., printed, 15 cents. Bureau of International Commerce, U. S. Department of Commerce, Washington, D. C. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C., 20402.) The need for foreign exchange to finance increasing import require-

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

ments makes vital the Philippine Government policy to expand and diversify exports and export markets. This report discusses this trade policy, import tariff system, sales and other internal taxes, documentation and fees, and labeling and marking requirements. Also covers special customs provisions, nontariff import trade controls, Philippine export controls, United States foreign trade controls, and diplomatic representation between the two countries.

"Philippine Fisheries Investigations," article, Food Technology, vol. 17, June 1963, 86 pp., printed. The Garrard Press, 510 North Hickory, Champaign, Ill. Scientists are looking to the natural resources of Laguna de Bay, the largest lake in the Philippines, to help meet the protein needs of the country's rapidly growing population.

PHYSIOLOGY:

Physiological Adaptations of Fishes to New Conditions of Existence, by T. I. Privolnev, Translation Series No. 422, 10 pp., processed, 1963. (Translated from the Russian, Trudy Soveshchaniia Ikhtiologicheskoi Komissii Akademii Nauk SSSR, no. 3, 1954, pp. 40-49.)

POLLUTION:

Acid Mine Drainage, a Report Prepared for the Committee on Public Works, House of Representatives, by the Division of Water Supply and Pollution Control, Public Health Service, U. S. Department of Health, Education, and Welfare, 24 pp., illus., printed, April 19, 1962. Documents Room, House of Representatives, Washington, D. C.

The Position of the Food and Agriculture Organization with Respect to Water Pollution Control, Fisheries Biology Technical Paper No. 34, 8 pp., processed, 1963. Food and Agriculture Organization of the United Nations, Viale delle Terme di Caracalla, Rome, Italy.

Water and Its Impurities, by Thomas R. Camp, 355 pp., illus., printed, \$18, 1963. Reinhold Publishing Corp., 330 W. 42nd St., New York 18, N. Y.

POND FISHERIES:

Fish Pond Development Planning with the Help of Linear Programming, by Gonzalo J. Arroyo, Fisheries Papers no. 21, 21 pp., printed, 1962. Food and Agriculture Organization of the United Nations, Viale delle Terme di Caracalla, Rome, Italy.

POND FISHERIES:

"Fishpond Improvement," by J. A. Bozeman and Floyd Fessler, article, The Tennessee Conservationist, vol. XXIX, no. 11, November 1963, pp. 10-11, illus., printed. Game and Fish Commission, 264 Cordell Hull Bldg., 436 Sixth Ave. N., Nashville, Tenn.

"Many Factors Figure in Building of Successful Shrimp Pond," by S. F. Manning, article, National Fisherman/Maine Coast Fisherman, vol. 44, May 1963, pp. 38-39, printed. Journal Publishing Co., Belfast, Me.

"Prawn Ponds Yield Proteins for Singapore," article, New Scientist, vol. 17, March 21, 1963, p. 619, printed. Harrison, Raison and Co. Ltd., Cromwell House, Fulwood Pl., High Holborn, London WC1, England.

Prudovoe Rybovodstvo (Pond Pisciculture--Textbook for Teachers at Agricultural Technical Schools), by S. M. Dorokhod and others, R.28475, printed in Russian, 1963. (Available on loan from the National Lending Library for Science and Technology, D.S.I., Boston Spa, Yorkshire, England.)

PREDATORS:

"Reproduction and Larval Development of the New England Clam Drill, Polinices duplicatus (Say) (Naticidae: Gastropoda)," by James E. Hanks, 1 p., printed. (Reprinted from Proceedings of the XVI International Congress of Zoology, Washington, D. C., August 20-27, 1963, vol. 1, p. 227.) Bureau of Commercial Fisheries Biological Laboratory, Milford, Conn.

PRESERVATION:

"Fish Preservation Inquiries. III--Fisheries Products: Fish Sausages (2)," by A. R. Prater and W. A. Montgomery, article, Fisheries Newsletter, vol. 22, April 1963, pp. 25-26, printed. Commonwealth Fisheries Office, Dept. of Primary Industry, Canberra, Australia.

PROCESSING:

"Feeding for Fish Dressing (German Patent No. 900-221)," by R. T. Baader, article, Food Manufacture, vol. 38, June 1963, p. 346, printed. Leonard Hill Ltd., 9 Eden St., London NW1, England.

PROCESSING PLANTS:

Fish Working Premises - Materials and Design, by J. J. Waterman. Torry Advisory Note no. 10, 7 pp., printed, 1963. Torry Research Station, 135 Abbey Rd., Aberdeen, Scotland.

QUALITY:

Increasing the Satisfaction from Fish and Shellfish, by Charles E. Eshbach and Kirby M. Hayes, Publication 387, 19 pp., illus., printed, August 1963. Cooperative Extension Service, College of Agriculture, University of Massachusetts, Amherst, Mass. The purpose of the leaflet is to present ways to select, store, prepare, cook, and serve fish so that the most satisfaction can be obtained from use of this highly nutritious food. Discusses selection at the retail counter, forms of fish available, how much to buy, edible percentages of various fish and shellfish, and seasonality of supply and price. Also covers grades of fish, handling and storage, nutritive values, preparation and cooking, and adding contrast in color and flavor.

RADIOACTIVE ISOTOPES:

Use of Radioactive Isotopes in Fishing Industry, USSR, by G. S. Karzinkin, OTS 63-31775, 79 pp., illus., printed, \$2, September 17, 1963. Office of Technical Services, U. S. Department of Commerce, Washington, D. C., 20235.

SALMON:

An Analysis of Gross Returns from Salmon Fishing in British Columbia by Seiners, Gillnetters, and Trollers for 1962, by B. A. Campbell and S. L. Young, 41 pp., printed, 1963. Department of Fisheries, Pacific Area, Vancouver, B. C., Canada.

"Chinook Salmon for the Selway," by Tom Welsh, article, Idaho Wildlife Review, vol. XVI, no. 3, November

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

December 1963, pp. 3-7, illus., printed. Idaho Fish and Game Commission, 518 Front St., Boise, Idaho. Presents a detailed explanation of the background work being carried on to restore spring and summer-run Chinook salmon to the Selway River (a tributary of the Columbia River) drainage in north Idaho. In 1961, the State of Idaho began its program means of eyed-egg plantings. Future plans call for the taking of about one million eggs annually for bars from fish removed from the ladders of Bonneville Dam on the Columbia River. In addition, about one million eggs will be taken annually from fish in the Salmon River drainage.

"Least and a Famine," article, Business Week, no. 11, September 14, 1963, pp. 116-118, illus., printed, single copy 50 cents. McGraw-Hill Publishing Co., Inc., 330 W. 42nd St., New York 36, N. Y. Pink salmon in Alaska and Puget Sound were abundant in 1911, while the shortage of the choicer red salmon and Bristol Bay was the worst in 50 years, states the author. Washington State's Department of Fisheries ascribes the boom in pink salmon largely to severe restrictions in commercial and sports fishing in 1961, and to efforts to clear spawning streams of log jams and other manmade obstructions.

Information on the Biology of Pink Salmon Acclimatized to the Basins of the White and Barents Seas, by V. V. Azbelev, S. S. Surkov and A. A. Yakovenko, Translation Series No. 437, 4 pp., processed, 1963. (Translated from the Russian, Nauchno-tekhnicheskii Biulleten PINRO, no. 23 (20-21), 1962, pp. 37-38.) Fisheries Research Board of Canada, Biological Station, Nanaimo, B. C., Canada.

Information on the Biology and Survival of Salmon of the Kola Peninsula, by V. V. Azbelev, Translation Series No. 440, 19 pp., processed, 1963. (Translated from the Russian, Trudy PINRO, no. 12, 1960, pp. 65-70.) Fisheries Research Board of Canada, Biological Station, Nanaimo, B. C., Canada.

Information on the Marine Period of Life and the Spawning Fishery of Pacific Salmon, by I. B. Birman, Translation Series No. 357, 14 pp., illus., processed, 1963. (Translated from the Russian, Trudy Sovetskoi Ikhtologicheskoi Komissii Akademii Nauk SSSR, no. 10, 1960, pp. 151-164.) Fisheries Research Board of Canada, Biological Station, Nanaimo, B. C., Canada.

Parasitic Diseases of Young Pacific Salmon in Fish Fisheries of the Far East, by E. A. Bogdanova, Translation Series No. 391, 5 pp., processed, 1962. (Translated from the Russian, Nauchno-Tekhnicheskii Biulleten GosNIORKh, no. 11, 1960, pp. 49-52.) Fisheries Research Board of Canada, Biological Station, Nanaimo, B. C., Canada.

"Potential Profits in the California Salmon Fishery," by Donald H. Frey, Jr., 12 pp., printed. (Reprinted in California Fish and Game, vol. 48, no. 4, October 1962, pp. 256-267.) Printing Division, Documents Section, Department of Fish and Game, N. 1st St. at Richards Blvd., Sacramento 14, Calif.

"Salmon Protection in Newfoundland," by J. J. Quigley, article, Trade News, vol. 16, no. 4, October 1963,

pp. 3-4, illus., processed. Information and Consumer Service, Department of Fisheries, Ottawa, Canada.

Sport Fishing for Pacific Salmon, by Harry W. Howard, 153 pp., illus., printed, 1954. Koke-Chapman Company, Eugene, Oreg.

SALMON AND TROUT:

Scottish Salmon and Trout Fisheries; First Report by the Committee Appointed by the Secretary of State for Scotland, Cmnd. 2096, 58 pp., printed, 1963. Her Majesty's Stationery Office, 13A Castle St., Edinburgh 2, Scotland.

SANITATION:

"Shellfish Chief Outlines Sanitary Control System," by Eugene T. Jensen, article, National Fisherman/Maine Coast Fisherman, vol. 44, June 1963, pp. 34, 39, printed. Journal Publishing Co., Belfast, Me.

SARDINES:

Sardine Fishery for Victoria, by D. D. Lynch, Fisheries Circular No. 9, 2 pp., illus., printed. (Reprinted from Victoria's Resources, vol. 4, no. 3, September-November 1962.) Fisheries and Wildlife Department, 605 Flinders St., Melbourne C3, Australia.

SCALLOPS:

Notes on a Scallop Fishery: A Guide for Development in Victoria, by D. D. Lynch, Fisheries Contribution No. 13, 18 pp., illus., processed, October 1963. Fisheries and Wildlife Department, 605 Flinders St., Melbourne C3, Australia.

SHELLFISH:

Cooperative Program for the Certification of Interstate Shellfish Shippers. Part I--Sanitation of Shellfish Growing Areas. Part II--Sanitation of the Harvesting and Processing of Shellfish, 66 pp., printed, 1962. U. S. Public Health Service, Department of Health, Education, and Welfare, Washington, D. C., 20201.

SHRIMP:

"FAO Prawn Breeding Problem," article, Food Technology, vol. 17, May 1963, pp. 54, 56, printed. Council of Australian Food Technology Associations, Inc., 12 O'Connell St., Sydney, Australia.

"Sound Production in the Snapping Shrimps Alpheus (Cragnon) and Synalpheus," by Robert E. Knowlton and James M. Moulton, article, The Biological Bulletin, vol. 125, no. 2, October 1963, pp. 311-331, illus., printed, single copy \$2.50. Marine Biological Laboratory, Woods Hole, Mass.

SMALL BUSINESS MANAGEMENT:

Advertising in International Markets, by Harry C. Thompson, Management Aid for Small Manufacturers No. 160, 4 pp., processed, January 1964. Small Business Administration, Washington, D. C., 20416. A report on the use of the valuable and final tool of advertising in overseas selling. International advertising supports overseas marketing by selling products directly to users, obtaining channels of distribution, fostering government-business relations establishing foreign credit and obtaining a good press in foreign countries. Small businessmen are urged to consult an advertising agency before initiating foreign advertising. Goals in overseas advertising

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

should be carefully defined. Media choices include United States magazines with foreign circulation, international periodicals, international trade papers, local language newspapers and magazines, international television and radio broadcasting, and movies. Costs of foreign advertising are discussed and a reference list of periodicals is included in the report.

Bank Loan Limitations: Living Within Them, by Robert K. Landrum, Management Aid for Small Manufacturers No. 158, 4 pp., processed, November 1963. Small Business Administration, Washington, D. C., 20416. Loan limitations and restrictions are designed to protect the lender against unnecessary risks. Knowing the reasons for limitations can help small business owners in understanding the nature of loan limitations as set by banks and other private lenders. Describing the loan agreement, the leaflet points out that limitations and restrictions can help the owner-manager. For example, the loan agreement protects him on his rate of repayment. Also, attention is called to the importance of keeping the lender informed about changes--good or bad--in the condition of the borrowers' business.

How Small Utah Firms Get and Keep Their Employees, by Reed C. Richardson and Barbara S. Stubblefield, Management Research Summary, 2 pp., processed, 1963. Small Business Administration, Washington, D. C., 20416. Recruiting sources most widely used by the 1,000 firms studied were: (1) referrals, (2) the State Department of Employment Security, (3) newspaper advertising, and (4) unsolicited applications. In general, the firms relied on personal interviews and statements from former employers rather than on more formal screening devices in selecting employees. Good employer-employee relations were rated the best single approach to reducing turnover.

Tax Compliance Costs in Small Firms, by Fred J. Mueller, Management Research Summary, 4 pp., processed, 1963. Small Business Administration, Washington, D. C., 20416. Businesses in all but 4 of 38 states having sales, use, and gross-receipts taxes serve essentially as tax-collection agents for the tax authority--in the majority of cases without reimbursement for the costs incurred. About two-thirds of the 34 states levying income taxes require withholding by the employer. The report showed that compliance by the study firms with regulations covering Federal payroll taxes required an average of 9.3 hours per employee per year. Collection of sales taxes from the customer required an average of 20 seconds a transaction; recording, reporting, and remitting required a total of 8.1 hours per year.

SMELT:

"Introduction of Pond Smelt from Japan into California," by Joseph H. Wales, 2 pp., printed. (Reprinted from California Fish and Game, vol. 48, no. 2, April 1962, pp. 141-142.) Printing Division, Documents Section, Department of Fish and Game, N. Seventh St. at Richards Blvd., Sacramento 14, Calif.

SOUTH AFRICA REPUBLIC:

Department of Nature Conservation, Report No. 19, 1962, 142 pp., illus., printed. Department of Nature

Conservation, Provincial Administration of the Cape of Good Hope, Cape Town, South Africa Republic. A section on accomplishments of the Division of Inland Fisheries discusses the Jonkershoek Fish Hatchery, Pirie Trout Hatchery, and stocking of public waters. Also covers tidal waters, report on investigational work on Tilapia mossambica, and eradication of undesirable water plants.

SOUTH ATLANTIC:

"Fishing Expeditions in the Southern Atlantic," by V. Paz-Andrade, article, Fishing News International, vol. 2, January-March 1963, pp. 71-73, printed. Highway Publications Ltd., 110 Fleet Street, London EC4, England.

SPAIN:

Establishing a Business in Spain, OBR 63-140, 12 pp., printed, 15 cents, November 1963. Bureau of International Commerce, U. S. Department of Commerce, Washington, D. C. (For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C., 20402.) Information of importance to Americans contemplating establishing a business in Spain is presented in this report. Since 1959 the Spanish Government has taken a number of steps toward a greater liberalization of foreign capital investments. These have included removal of restrictions on foreign ownership of Spanish companies and on the transfer abroad of earnings and the repatriation of capital. The report covers investment factors such as Spanish Government regulations on foreign investments, real estate purchases and investments, National Institute of Industry, mining legislation, treaty relations with United States, repatriation of capital and profits, and foreign trade policy. Also discusses business organization--types of organizations, the mercantile register, notaries fees and other charges, and industrial property protection; laws affecting employment--employment of aliens, syndicalism, and labor provisions; and tax system.

"Evolucion de la Industria Pesquera Espanola" (Growth of the Spanish Fishery Industry), by Agustin de Barcena y Reus, article, Boletin de Informacion, nos. 59-60, August-September 1963, pp. 3-5, printed in Spanish. Sindicato Nacional de la Pesca, Paseo de Prado, 18-20, 6.^a Planta, Madrid, Spain.

"La Pesca Espanola en Cifras" (The Spanish Fishery in Figures), by Alevin, article, Industria Conservadora, vol. XXIX, no. 290, pp. 211-212, printed in Spanish. Union de Fabricantes de Conservas de Galicia, Calle Marques de Valladares, 41, Vigo, Spain.

SPINY LOBSTER:

The Status of the Florida Spiny Lobster Fishery, 1963, by Richard K. Robinson and Dolores E. Dimitroff, Technical Series No. 42, 30 pp., illus., printed, August 1963. Florida State Board of Conservation, World Knott Bldg., Tallahassee, Fla.

STERN TRAWLERS:

"Stern Trawling with the 'Netzsonde'," article, World Fishing, vol. 12, June 1963, pp. 70-71, printed. John Trundell Ltd., St. Richards House, Eversholt Street London NW1, England. Describes use of headline echo-sounders which have a transducer fitted to the trawl.

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

STORAGE LIFE:

"The Storage Life of Frozen Foods," by G. C. Walker, article, Food Preservation Quarterly, vol. 23, no. 1, March 1963, pp. 20-21, printed. Commonwealth Scientific and Industrial Research Organization, Division of Food Preservation, P. O. Box 43, Ryde, N.S.W., Australia.

SUSQUEHANNA RIVER:

"Susquehanna River Fish Pots," by John M. Hershour, article, Pennsylvania Angler, vol. 32, no. 12, December 1963, pp. 2-6, illus., printed, single copy 25 cents. Pennsylvania Fish Commission, South State Bldg., Harrisburg, Pa.

SWORDFISH:

"Swordfishing in Newfoundland," article, Trade News, vol. 16, no. 4, October 1963, p. 10, illus., processed. Information and Consumer Service, Department of Fisheries, Ottawa, Canada. The Atlantic Coast's newest large-scale commercial fishery, long-line swordfishing, is having considerable success in Canada. The Newfoundland Department of Fisheries experimental and demonstration vessel Beinir landed 3 swordfish at a processing plant in Harbour Grace.

TACKLING:

"New Method of Attaching Peterson Disk Tags with Monofilament Nylon," by John E. Randall, 5 pp., illus., printed. (Reprinted from California Fish and Game, vol. 42, no. 1, January 1956, pp. 63-67.) Printing Office, Documents Section, No. Seventh St. at Richards Blvd., Sacramento 14, Calif.

TRANSPORTATION:

"The Problems in the Transport of Frozen Food, by L. Nicol, Torry Memoir No. 414, 6 p., processed, 1963. Torry Research Station, 135 Abbey Rd., Aberdeen, Scotland.

"Use of Anesthetics for the Handling and the Transport of Fishes," by William N. McFarland, 25 pp., printed. (Reprinted from California Fish and Game, vol. 46, no. 4, October 1960, pp. 407-431.) Printing Office, Documents Section, No. Seventh St. at Richards Blvd., Sacramento 14, Calif.

TRAWLERS:

"Periodic Protection of Trawlers Against Corrosion Damage," by M. G. Duff, article, Fishing News International, vol. 2, January-March 1963, pp. 65-67, printed. A. J. Heighway Publications Ltd., 110 Fleet Street, London EC4, England.

TRAWLING:

"Construction and Operation of a Small Boat Trawling Apparatus," by Wayne J. Baldwin, 9 pp., illus., printed. (Reprinted from California Fish and Game, vol. 46, no. 1, January 1961, pp. 87-95.) Printing Office, Documents Section, No. Seventh St. at Richards Blvd., Sacramento 14, Calif.

"Electro-Pneumatic Towing Block," article, Canadian Fisherman, vol. 50, May 1963, pp. 31, 34, printed. National Business Publications Ltd., Garden City, Que., Canada.

TRAWLS:

"Engins de Peche--L'Ouverture Verticale du Filet" (Fishing Gear--The Vertical Opening of the

Trawl), by A. Percier, article, France Peche, no. 77, October 1963, pp. 33-36, 38, illus., printed in French, single copy 2.5 F (about 50 U.S. cents). France Peche, Boite Postale 179, Lorient, France.

"Gallows Blocks from Norway," article, World Fishing, vol. 12, June 1963, p. 130, printed. John Trundell Ltd., St. Richards House, Eversholt Street, London NW1, England.

"Trawling Gear in California," by W. L. Scofield, Fish Bulletin 72, 63 pp., illus., printed, 1948. Printing Office, Documents Section, No. Seventh St. at Richards Blvd., Sacramento 14, Calif.

TREATIES:

"Declaration of Understanding Regarding the International Convention for the Northwest Atlantic Fisheries," Washington, April 24, 1961, Treaty Series No. 71, printed, 1963, 20 cents. British Information Services, 845 3rd Ave., New York 22, N. Y.

TROPICAL FISH:

"Florida's Fabulous Fish Industry," by John W. Anderson, article, The Aquarium, vol. 32, no. 11, November 1963, pp. 3-5, illus., printed, single copy 40 cents. The Aquarium Publishing Co., Box 832, Norristown, Pa., 19404.

TROUT:

"Brown Trout; its Life History, Ecology and Management," by O. M. Brynildson and others, Publication No. 234, 15 pp., printed, 1963. Wisconsin Conservation Department, Madison, Wis.

"Report Cottonseed Meal Causative Factor in Liver Cancer in Fish," article, Feedstuffs, vol. 35, June 1, 1963, p. 76, printed. Miller Publishing Co., 2501 Wayzata Blvd., Minneapolis 5, Minn.

"Some Effects of Impoundment on the Environment and Growth of Brown Trout (SALMO TRUTTA L.) in Loch Garry (Inverness-shire)," by R. N. Campbell, Freshwater and Salmon Fisheries Research, No. 30, 27 pp., illus., printed, \$2.10, 1963. British Information Services, 845 3rd Ave., New York 22, N. Y.

"Trout Survival in Taylor Creek, a Tributary of Lake Tahoe, California," by Garth I. Murphy, 4 pp., printed. (Reprinted from California Fish and Game, vol. 49, no. 1, January 1963, pp. 16-19.) Printing Division, Documents Section, Department of Fish and Game, No. Seventh St. at Richards Blvd., Sacramento 14, Calif.

TUNA:

"Economic Potential of Australian Tuna," by D. J. Hardman, article, Fishing News International, vol. 2, no. 138, April-June 1963, pp. 140-141, printed. A. J. Heighway Publications Ltd., 110 Fleet Street, London EC4, England.

"The 1960 Preseason Albacore Survey in the Northeastern Pacific Ocean," by William L. Craig and Robert H. Caneday, 20 pp., illus., printed. (Reprinted from California Fish and Game, vol. 48, no. 3, July 1962, pp. 179-198.) Printing Office, Documents Section, No. Seventh St. at Richards Blvd., Sacramento, Calif.