

# PUBLICATIONS

## FISH AND WILDLIFE SERVICE

These publications are available free from the Office of Information, U. S. Fish and Wildlife Service, Washington, D. C. 20402. Publications are designated:

- CFS --Current fishery statistics of the United States.  
 FFL --Reprints of reports on foreign fisheries.  
 FL --Fishery leaflets.  
 Sep. --Separates (reprints) from Commercial Fisheries Review.  
 SL --Statistical lists of dealers in and producers of fishery products and byproducts.

Number	Title
CFS-4166--	Frozen Fishery Products, June 1966, 8 pp.
CFS-4189--	New York Landings, May 1966, 4 pp.
CFS-4191--	Fish Meal and Oil, June 1966, 2 pp.
CFS-4192--	Rhode Island Landings, March 1966, 3 pp.
CFS-4194--	Massachusetts Landings, February 1966, 6 pp.
CFS-4197--	Maine Landings, May 1966, 4 pp.
CFS-4198--	Shrimp Landings, February 1966, 5 pp.
CFS-4201--	New Jersey Landings, June 1966, 3 pp.
CFS-4202--	California Landings, May 1966, 4 pp.
CFS-4204--	Virginia Landings, June 1966, 4 pp.
CFS-4209--	New York Landings, June 1966, 4 pp.
CFS-4210--	Alabama Landings, May 1966, 3 pp.
CFS-4215--	Florida Landings, July 1966, 8 pp.

### Wholesale Dealers in Fishery Products (Revised):

- SL-II--Washington, D. C., 1966, 1 p.  
 SL-32--Minnesota, 1966, 1 p.  
 SL-33--North Dakota (Mississippi River and Tributaries), 1966, 1 p.  
 SL-34--Wisconsin (Mississippi River and Tributaries), 1966, 2 pp.  
 SL-36--Iowa (Mississippi River and Tributaries), 1966, 2 pp.  
 SL-39--Tennessee (Mississippi River and Tributaries), 1966, 2 pp.

- SL-43--Alabama (Mississippi River and Tributaries), 1966, 1 p.  
 SL-44--Nebraska (Mississippi River and Tributaries), 1966, 1 p.  
 SL-49--South Dakota (Mississippi River and Tributaries), 1966, 1 p.

Sep. No. 772--Willapa Oyster Studies--Use of the Pasture Harrow for the Cultivation of Oysters.

FL-591--Fishery Motion Pictures, 24 pp., 1966. Lists commercial fishery motion pictures produced and distributed by BCF and gives instructions on how to borrow films and lists tentative titles of future films.

Annual Report of the Bureau of Commercial Fisheries Radiobiological Laboratory Beaufort, N. C. for the Fiscal Year Ending June 30, 1965, by T. R. Rice, Circular 244, 53 pp., illus., July 1966. Presents information on research carried on as part of a cooperative project by BCF and U. S. Atomic Energy Commission. Discusses estuarine ecology, biogeochemistry, pollution studies, and radiation effects programs.

Available from BCF, Branch of Current Economic Analysis, 1815 N. Ft. Myer Drive, Arlington, Va. 22209:

Shellfish Situation and Outlook, CEA-S2, 55 pp., September 1966. The second in series of quarterly publications designed mainly to assist fishery management in making decisions on short-run and intermediate production, distribution, and pricing. Available pertinent shellfish facts are assembled and analyzed to give picture of probable market conditions and price movements in the future.

The following Foreign Fishery Leaflets (formerly Market News Leaflets) are available from the Branch of Foreign Fisheries, Bureau of Commercial Fisheries, Room 801 U. S. Department of the Interior, Washington, D. C. 20240:

- FFL-8--"Portugal's Fishing Industry," 28 pp., Aug. 1966. Contains information on commercial catch by principal species; cannery production; consumption; fish meal, oils, and waste; and foreign trade.  
 FFL-13--"India's Fishing Industry, 1964," 8 pp., Nov. 1965. This pamphlet discusses

United States firm and Indian Government collaboration; Indo-Icelandic collaboration in Tuticorin and fishery production developments in 1964.

FFH 118--"Panama's Fisheries, 1965," 10 pp., Mar. 1966. The leaflet discusses shrimp production, trends, and exports; fish reduction industry and fish meal and oil exports; other fisheries; and fisheries legislation.

FFH 157--"Fisheries in the Federal Republic of Germany Annual Survey 1965," 8 pp., May 1966. Gives information on total catch landed in German ports and abroad in 1965; financial returns; imports of fish meal and fish oil; the fishing fleet; marketing and processing; foreign trade; EEC developments; and other interesting facts.

FFH 156--"Norwegian Fisheries, 1965," 36 pp., Aug. 1966. Discusses Norwegian cod and herring fisheries; fish species other than cod and herring; disposition of the catch; exports and imports, prices and aid to the industry; and outlook.

FFH 102--"Fisheries Development Potential of the Territory of Baja California Sur, Mexico," 11 pp., Sept. 1966. Discusses potential productive fishing areas, species, and status of fishing industries of Baja California Sur.

The following English translation of a foreign language article is available from the U. S. Bureau of Commercial Fisheries, 100 Beachside Avenue, Terminal Island, California 90731:

Page: Salmon in the Northern Waters, III. Conditions of Stocks, by Tomonari Matsushita, Translation No. 20, 45 pp., January 11, 1965. (Translated by Peter Miskin from the Japanese, Fisheries Research Series 6-3.)

The following publications are available from the specific office mentioned:

California Fishery Market News Monthly Summary, Part I--Fishery Products Production and Market Data, August 1966, 15 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, sardines, 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; prices for fish meal, oil, and solubles; for the month indicated.

California Fishery Market News Monthly Summary, Part II--Fishing Information, August 1966, 10 pp., illus. (U. S. Bureau of Commercial Fisheries, Tuna Resources Laboratory, P. O. Box 271, La Jolla, Calif. 92083.) Contains sea-surface temperatures, fishing and research information of interest to the West Coast tuna-fishing industry and marine scientists; for August.

Fish Farming--a Growing Industry, 40 pp., Aug. 1966, illus. (U. S. Department of the Interior, Bureau of Commercial Fisheries, 5 Research Drive, Ann Arbor, Mich. 48103.)

Investigations in Fish Control, illus., Jan. 1966. (Fish Control Laboratories, Bureau of Sport Fisheries and Wildlife, U. S. Department of the Interior, P. O. Box 862, La Crosse, Wis. 54602.) Contains Reports 3 through 11:

Report 3--"Minimum lethal levels of toxaphene as a piscicide in North Dakota lakes," by Dale L. Henegar, 16 pp. (Resource Publication 7.)

Report 4--"Effects of toxaphene on plankton and aquatic invertebrates in North Dakota lakes," by Robert G. Needham, 16 pp. (Resource Publication 8.)

Report 5--"Growth rates of yellow perch in two North Dakota lakes after population reduction with toxaphene," by Donald C. Warnick, 9 pp. (Resource Publication 9.)

Report 6--"Mortality of some species of fish to toxaphene at three temperatures," by Mahmoud Ahmed Mahdi, 10 pp. (Resource Publication 10.)

Report 7--"Treatment of East Bay, Alger County, Michigan, with toxaphene for control of sea lampreys," by William E. Gaylord and Bernard R. Smith, 7 pp. (Resource Publication 11.)

Report 8--"Effects of toxaphene on fishes and bottom fauna of Big Kitoi Creek, Afog-

nak Island, Alaska," by William R. Meehan and William L. Sheridan, 9 pp. (Resource Publication 12.)

Report 9--"Relation of chemical structure to fish toxicity in nitrosalicylanilides and related compounds," by Charles R. Walker, Roland J. Starkey, and Leif L. Marking, 12 pp. (Resource Publication 13.)

Report 10--"Evaluation of p, p'-DDT as a reference toxicant in bioassays," by Leif L. Marking, 10 pp. (Resource Publication 14.)

Report 11--"Evaluation of an electronic method of measuring hematocrits of fish," by Richard A. Schoettger and Arnold M. Julin, 11 pp. (Resource Publication 15.)

(Seattle) Washington and Alaska Receipts and Landings of Fishery Products for Selected Areas and Fisheries, Monthly Summary, August 1966, 10 pp. (Market News Service, U. S. Fish and Wildlife Service, 706 New Federal Office Bldg., 909 First Ave., Seattle, Wash. 98104.) Includes landings by halibut fleet reported by Seattle Halibut Exchange; salmon landings reported by primary receivers; landings of halibut reported by International Pacific Halibut Commission; landings and otter-trawl receipts reported by Fishermen's Marketing Association of Washington; local landings by independent vessels; coastwise shipments from Alaska by scheduled and non-scheduled shipping lines and airways; imports from British Columbia via rail, motor truck, shipping lines, and ex-vessel landings; and imports from other countries through Washington customs district for August.

## MISCELLANEOUS

These publications are not available from the Fish and Wildlife Service, but usually may be obtained from the organization issuing them. Correspondence regarding publications that follow should be addressed to the respective organization or publisher mentioned. Data on prices, if readily available, are shown.

### ALABAMA

"Commercial Fisheries Research Act aids Seafoods Division," by Johnie H. Crance, article, Alabama Conservation, vol. XXXVI, no. 4, June-July 1966, pp. 18-21, illus., printed. Alabama Department of Conservation, 64 No. Union St., Montgomery, Ala. 36104.

### AUSTRALIA:

"Victorian offshore scallop explorations," by M. J. Sanders, article, Australian Fisheries Newsletter, vol. 25, no. 8, August 1966, pp. 11 & 13, illus., printed. Fisheries Branch, Department of Primary Industry, Canberra, A.C.T., Australia.

### BOWFIN:

"Controversial bowfin found in many areas but Ox-Bow Lakes are his hangout," by Pete A. Hackney, article, Alabama Conservationist, vol. XXXVI, no. 4, June-July 1966, pp. 22-24, illus., printed. Alabama Department of Conservation, 64 No. Union St., Montgomery, Ala. 36104.

### CALIFORNIA:

California Fish and Wildlife Plan, vol. 1, Summary, 110 pp., printed, January 1, 1966. State of California Resources Agency, Department of Fish and Game, 1416 Ninth St., Sacramento, Calif. 95814. The plan is major step in management of California's fish and wildlife resources. Presents situations and conditions which face fish and wildlife resources through 1980--and suggestions for actions to maintain or improve State's wildlife resources. Information on species of fish in inland waters (except salmon and steelhead), amount and kind of habitat for various fish, potential fish production, accessibility, present use and yield. Seven categories of fish: trout, warm-water fish, striped bass, American shad, sturgeon, Salton Sea fish, and non-game fish. Types of inland fish habitat discussed are cold-water streams and canals, lakes, and reservoirs; combination cold-water and warm-water lakes and reservoirs; tidal channels; and unproductive waters. This plan should serve as guide and basis for all activities by government, business, industry, or private individuals which affect fish and wildlife resources.

### CANADA:

Journal of Fisheries Research Board of Canada reprints. Fisheries Research Board of Canada, Biological Station, Nanaimo, B. C., Canada: vol. 21 (1964), no. 5: "Ocean growth and mortality of pink and chum salmon," by W. E. Ricker, pp. 905-931; "Estimation of sea mortality rates for the 1960 brood-year pink salmon of Hook Nose Creek, British Columbia," by Robert P. Parker, pp. 1019-1034; "Ocean migrations of Pacific salmon," R

These publications are not available from the Fish and Wildlife Service, but usually may be obtained from the organization issuing them.

Erin Neave, pp. 1227-1244; "A quantitative estimate of the number of Pacific herring in a spawning population," by D. N. Oram and F. H. C. Taylor, pp. 1317-1320; "Further information on spawning stock and resultant production for Skeena herring," by M. P. Shepard, F. C. Withler, J. Donald, and K. V. Aro, pp. 1329-1331.

Vol. 22 (1965), no. 6: "Parasites as an auxiliary source of information about the biology of Pacific salmon (Genus *Oncorhynchus*)," by L. Margolis, pp. 1387-1395; "Estimation of sea mortality rates for the 11 brood-year pink salmon of the Bella Bella Area, British Columbia," by Robert Parker, pp. 1523-1553.

Journal of the Fisheries Research Board of Canada, vol. 23, no. 8, August 1966, pp. 1171-1288, illus., printed, single issue (Canada, U. S., and Mexico C\$1.00, all other countries C\$1.25. Fisheries Research Board of Canada, Sir Charles Tupper Building, Ottawa 8, Ontario, Canada. Includes articles on: "Depth distribution of benthic shrimps (Decapoda; Natantia) off Oregon," by William G. Percy and Carl Morss, pp. 1135-1143; "Oxygen dissociation curves of the blood of Atlantic salmon (*Salmo salar*) acclimated to summer and winter temperatures," by Edgar C. Bek, Harold H. Tucker, and Donald Kirkpatrick, pp. 1187-1195; "Food and growth of fishes. III. Relations among fish body size, and growth efficiency," by J. Paloheimo and L. M. Dickie, pp. 1211-1248; "Steroid transformations by muscles of stannius of the Atlantic cod (*Gadus morhua* L.)," by D. R. Idler and H. Creeman, pp. 1249-1255; "A portable aquarium for use at sea to photograph fish and aquatic life," by T. F. Pletcher, pp. 1261-1275; "Thermal resistance of bacteria isolated from a heat processed fish product," by J. W. Boyd and B. A. Southwood, pp. 1281-1283.

New chart of Nova Scotia Southeast Coast, Chart 4012, drawn to scale of 1:300,000 (1 cent at 4 miles to the inch), replaces Chart 4011, Halifax to Cape Sable. It is second in a series that will cover the Canadian Maritime coastal area. The first was Chart 4010, Bay of Fundy, published in 1965. The charts are designed for both offshore navigation and use by fishing industry. They show shape of ocean floor by closely spaced

blue contour lines. Chart 4012 is also available in two latticed versions: L(D7) 4012, which shows Decca lattice for Nova Scotia Chain 7; and 4012-L, which shows the three Loran-A rates covering area. Copies of Chart 4012 may be obtained for \$1 each, or \$2 each for latticed versions, from chart dealers or Chart Distribution Office, Canadian Hydrographic Service, 615 Booth Street, Ottawa, Canada.

#### CATFISH:

"Channel catfish show promise," by Robert M. Hatcher, article, The Tennessee Conservationist, vol. XXXII, no. 4, Apr. 1966, pp. 14-15, 38, illus., printed. Editorial Office, Suite 218, Department of Conservation, 2611 West End Ave., Nashville, Tenn. 37203.

#### CEYLON:

Bulletin of the Fisheries Research Station Ceylon, printed, single issue Rs. 5.00 (US\$0.70). The Fisheries Research Station, P. O. Box 531, Colombo, Ceylon; vol. 16, no. 1, June 1963, 93 pp., illus. Among others, contains these articles: "Bacteriology of chilled water during the preservation of fish," by N. N. de Silva and A. H. W. Mendis, pp. 1-8; "A guide to the freshwater fauna of Ceylon, Supplement I," by C. H. Fernando, pp. 29-38; "Small scale manufacture of crude agar from *Gracilaria* seaweeds," by C. Gunasekera, pp. 49-52.

Vol. 17, no. 1, June 1964, 150 pp., illus. Among others, contains these articles: "Socio-Economic Survey of Fisher Families, 1958-59," by G. N. de Silva, pp. 1-44; "Assessment and Possible Development of the Fishery Resources of Pedro Bank," by S. Sivalingam, pp. 133-150.

Vol. 18, no. 1, June 1965, 34 pp., illus. Includes articles on: "A preliminary survey of 21 Ceylon Lakes--1. Fisheries of two Lakes, Parakrama Samudra and Minneriya Wewa," by H. H. A. Indrasena, pp. 1-5; "A preliminary survey of 21 Ceylon Lakes--2. Limnology and fish production potential," by A. S. Mendis, pp. 7-16; "The ecology of *Gracilaria verrucosa* (Hudson) Papenfuss (Formerly *G. confervoides* (L.) Greville) in Koddiyar Bay, Trincomalee," by M. Durairatnam, pp. 29-34.

#### CHARTS:

The following charts are sold by Coast and Geodetic Survey sales agents, district offices, and the Washington office. New edi-

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tions contain information essential to safe navigation--and cancel former editions. Mariners are warned against using obsolete charts.

ALASKA--Port Malmesbury, 3rd edition of Chart No. 8299 issued Aug. 15, 1966, scale of 1:40,000. Price: 25 cents a copy.

CALIFORNIA--Santa Monica Bay, 10th edition of Chart No. 5144 issued Aug. 15, 1966; scale of 1:40,000 and 1:20,000. Price: 50 cents a copy.

#### FLORIDA

Estero Bay to Lemon Bay--Including Charlotte Harbor, 9th edition of Chart No. 1255 issued Aug. 1, 1966; scale of 1:80,000. Price: \$1.00 a copy.

Tampa Bay and St. Joseph Sound, 11th edition of Chart No. 1257; scale of 1:80,000. Price: \$1.00 a copy.

#### WASHINGTON

Puget Sound--Seattle to Bremerton, 3rd edition of Chart No. 6446 issued Aug. 8, 1966; scale of 1:25,000. Price: \$1.00 a copy.

Seattle Harbor, Elliott Bay and Duwamish Waterway; 2nd edition of Chart No. 6442 issued Aug. 8, 1966; scale of 1:10,000. Price: \$1.00 a copy.

Str. of Juan de Fuca to Str. of Georgia, 13th edition of Chart No. 6380 issued Aug. 1, 1966; scale of 1:20,000. Price: \$1.00 a copy.

WASHINGTON-OREGON--Sundale to Heppner Junction, 2nd edition of Chart No. 6160 issued Aug. 22, 1966; scale of 1:20,000. Price: 50 cents a copy.

#### CRAB(S)

"Observations on the Social Behavior of the Land Hermit Crab, *COENOBITA CLYPEATUS* (Herbst)," by Brian A. Hazlett, 2 pp., printed. (Reprinted from Ecology, vol. 47, no. 2, Early Spring 1966, pp. 316-317.) Ecological Society of America, Duke University Press, Box 6697, College Station, Durham, N. C.

"Osmoregulation in the Adult Blue Crab, *CALLINECTES SAPIDUS* Rathbun," Eng Chow Tan and W. A. Van Engel, 5 pp., illus., printed. (Reprinted from Chesapeake Science, vol. 7, no. 1, March 1966, pp. 30-35.) Natural Resources Institute, University of Maryland, Chesapeake Biological Laboratory, Solomons, Md. 20688.

"The Behavior of Some Deep-Water Hermit Crabs (Decapoda: Paguridea) from the Straits of Florida," by Brian A. Hazlett, 1 pp., illus., printed. (Reprinted from Bulletin of Marine Science, vol. 16, no. 1, March 1966, pp. 76-92.) Institute of Marine Science, 1 Rickenbacker Causeway, Virginia Key, Miami, Fla. 33129.

#### FOOD AND AGRICULTURE ORGANIZATION Catalogue of Films and Film Strips 1966

125 pp., illus., printed, 1966. Food and Agriculture Organization, Via delle Terme di Caracalla, Rome, Italy. Lists films and filmstrips covering various countries and subjects (including fisheries) available on loan from FAO. Films are 16 mm., mostly in color, with sound, and running time varies from 8 to 30 minutes.

Indo-Pacific Fisheries Council, Occasional Papers 66/1-66/10: contributed to the 11th Session of the Council, Kuala Lumpur, Malaysia. Oct. 16-31, 1964. Processed in English, 1966. Indo-Pacific Fisheries Council, FAO Regional Office for Asia and the Far East, Bangkok, Thailand:

66/1: Preliminary Bibliography of Fish and Fisheries Certain Parts of the Pacific, 68 pp.

66/2: Legislative and Administrative Aspects of Water Pollution Control, 14 pp.

66/3: Recent Activities in the Field of Fisheries Statistics in Japan, 7 pp.

66/4: A Brief Note on Fisheries Insurance in Japan, 9 pp.

66/5: A Note on the Technique of Spawning *Puntius javanicus* Blkr. for Fry Production, 5 pp.

66/6: Fish Population and Ecological Studies of Flood-Water Fisheries in Pra Nakorn Sri-Ayuthaya Province, 45 pp., illus.

66/7: The breeding of giant gouramy (*Osteophorus goramy* Lacepede) in Ceylon and the Rearing of Its Fry in the Departmental Fish Hatcheries, 16 pp., illus.

66/8: Culture of Brackishwater Fishes in Impoundments, 20 pp., illus.



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#### MARINE BIOLOGY:

"Florida biologist discovers fish grow three times as fast when fed with iron," article, National Maine Coast Fisherman, vol. 45, Feb. 1965, p. 25, printed. National Maine Coast Fisherman, 22 Main St., Camden, Maine 04843.

#### MEXICO:

"Algunas Observaciones Preliminares Relacionadas con el Estudio de los Problemas de Venta de Pescado en la Florida (Some Preliminary Observations Relating to the Problems of Selling Fish in Florida), Trabajos de Divulgacion, vol. X, no. 91, 12 pp., illus., processed in Spanish, Sept. 1964. Instituto Nacional de Investigaciones, Biologico-Pesqueras, Departamento de Estudios Biologicos Pesqueros, Direccion General de Pesca e Industrias Conexas, Secretaria de Industria y Comercio, Mexico D. F., Mexico.

#### MICROBIOLOGY:

"Microbiology and chemistry of fermented fish," by Prasert Saisithi and others, article, Journal of Food Science, vol. 31, Jan.-Feb. 1966, pp. 105-110, printed. The Garrard Press, 510-524 North Hickory St., Champaign, Ill. 61820.

#### NORWAY:

Fiskets Gang, vol. 52, illus., printed in Norwegian. Fiskeridirektoratet, Rådstuplass 10, Bergen, Norway, no. 16, April 21, 1966, pp. 290-309. Includes articles on: "Vintersildinnsigene 1966" (Shoreward movements of winter herring 1966), by Finn Devold, pp. 299-301; "Vandringer av merket pigghå i Nordvest-Atlanteren" (Movements of tagged dogfish in the Northwest Atlantic), by Olav Aasen, p. 302; "Merkeforsøk på gullflyndre (Pleuronectes platessa) i Norske farvann" (Marking experiments on plaice in Norwegian waters), by Olav Stålesen, pp. 303-307.

No. 20, May 19, 1966, pp. 386-403. Includes articles on: "Rapport om leitetjenesten under sildeinnsiget i Vesteralen 1966 med M/S Stalvard" (Report on searching for herring in Vesteriden in 1966 with M/S Stalvard), by Vermund Dahl, pp. 395-396; "Rapport om M/S Stalvard's leitetjenete under vintersildfisket utenfor Kristiansund 1966" (Report on M/S Stalvard's searching during

the winter herring fishery off Kristiansund in 1966), by Vermund Dahl, pp. 397-398; "Rapport vedrørende botnagarnsunderøkelsene under varsildfisket 1966" (Report on investigations of the bottom gill nets during the spring herring fishery in 1966), by Vermund Dahl, p. 399.

#### OCEANOGRAPHY:

"Oceanography in Britain: significant new support," article, Science, vol. 153, no. 3737, August 12, 1966, pp. 727-728, printed. single issue 35 cents. American Association for the Advancement of Science, 1515 Massachusetts Ave. NW., Washington, D. C. 20005.

"Oceanography of the Grand Banks Region of Newfoundland in 1965," by Ronald C. Kollmeyer, Thomas C. Wolford, and Richard M. Morse, Oceanographic Report no. 11, CG 373-11, 164 pp., illus., printed, June 1966. United States Coast Guard Oceanographic Unit, Washington, D. C. 20004.

"The role of UNESCO in international oceanography," by Mr. E. Highley, article, Information, vol. XVII, no. 3, May 1966, pp. 5-8, illus., printed. Australian National Advisory Committee for UNESCO, P. O. Box 189, North Sydney, Australia.

#### OYSTERS:

"Oyster Mortality Studies in Virginia. V. Epizootiology of MSX, a Protistan Pathogen of Oysters," by Jay D. Andrews, 13 pp., illus., printed. (Reprinted from Ecology, vol. 47, no. 1, Winter 1966, pp. 19-31.) Ecological Society of America, Duke University Press, Box 6697, College Station, Durham, N. C.

"Reproductive Cycle of American Oyster, CRASSOSTREA VIRGINICA in West Loch, Pearl Harbor, Hawaii," by Henry M. Sakud, 3 pp., illus., printed, 1966. (Reprinted from Transactions of the American Fisheries Society, vol. 95, no. 2, Apr. 1966, pp. 216-218.) American Fisheries Society, 1404 New York Ave. NW., Washington, D. C. 20005.

#### PARASITES:

"LOXOTHYLACUS PANOPAEI (Cirripedia, Sacculinidae) an Introduced Parasite on the Xanthid Crab in Chesapeake Bay, U. S. A.

These publications are not available from the Fish and Wildlife Service, but usually may be obtained from the organization issuing them.

W. A. Van Engel, and others, Contribution No. 181, 2 pp., printed. (Reprinted from *Crustaceana*, vol. 10, part 1, 1966, pp. 111-112.) Virginia Institute of Marine Science, Gloucester Point, Va.

Mar. 1966, pp. 11-19.) Natural Resources Institute, University of Maryland, Chesapeake Biological Laboratory, Solomons, Md. 20688.

"The fish's giddy anchovy hunt," by Hermann Larsson, article, *New Scientist*, vol. 26, no. 65, pp. 777-778, printed. Cromwell House, Fulwood Pl., High Holborn, London WC1, England.

#### PLANKTON:

"Marine Ostracoda from Western North Atlantic Ocean off the Virginia Coast," by Neil C. Hulings, 17 pp., illus., printed. (Reprinted from *Chesapeake Science*, vol. 7, no. 1, March 1966, pp. 40-56.) Natural Resources Institute, University of Maryland, Chesapeake Biological Laboratory, Solomons, Md. 20688.

Publications issued by Instituto del Mar del Peru, Apartado 3734, Lima, Peru, illustrated and processed in Spanish:

"Las Poblaciones de Aves Guaneras y su Situación Actual (Guano Bird Populations and Their Status)," by Romulo Jordan and Humberto Fuentes, Informe No. 10, 31 pp., April 1966.

"Informe Preliminar Del Crucero 6602 (Lago Blanco-Arica)--(Preliminary Data of Cruise 6602)," by Oscar Guillen and Francisco Vasquez, Informe No. 12, 27 pp., April 1966.

#### POND FISHERIES:

Ponds for Fishing (Revised), 33 pp., illus., printed, 1966. Missouri Department of Conservation, North Ten Mile Drive, Jefferson City, Mo. 65102. Discusses selection of site and planning for pond, care of new pond and its watershed, plants for pond and wildlife protection, clearing a muddy pond, pond sealing, stocking with fish, water fertilization, aquatic plant control, and aquatic weed illustrations. The booklet lists government agencies that give without cost expert assistance in building and managing a good pond.

"Report on the Effects of Fishing on the Peruvian Stock of Anchovy," by L. K. Boerema, H. Saetersdal, I. Tsukayama, J. E. Valdovinos, and B. Alegre, FAO Fisheries Technical Paper No. 55 (Fib/T55), 47 pp., illus., processed, December 1965, distribution restricted. Food and Agriculture Organization of the United Nations, Via delle Terme di Caracalla, Rome, Italy. Summarizes biological information available; analyzes length, catch, effort, and catch per unit of effort; estimates mortality; discusses conclusions; and gives recommendations.

#### PORTUGAL:

"O ano de 1965 melhor que 1964 para pesca do atum" (Tuna fishery better in 1965 than in 1964), article, *Jornal do Pescador*, vol. XXVIII, no. 330, July 1966, p. 63, printed in Portuguese. Junta Central dos Cosas dos Pescadores, R. de S. Bento, 644-4.º, Esq.º, Lisbon, Portugal.

#### PUERTO RICO:

Contributions from the Institute of Marine Biology, University of Puerto Rico, vol. V, Jan.-Dec. 1964, printed. Institute of Marine Biology, University of Puerto Rico, Mayaguez, Puerto Rico. Contains, among others, these reprints:

"Sediment-Producing Fishes," by John E. Randall, 2 pp., illus. (From *Underwater Naturalist*, vol. II, no. 1, Winter 1963/64, pp. 30-32.)

"Contributions to the Biology of the Queen Conch, STROMBUS GIGAS," by John E. Randall, 53 pp., illus. (From *Bulletin of Marine Science of the Gulf and Caribbean*, vol. 14, no. 2, June 1964, pp. 246-295.)

#### PHYTOPLANKTON:

"Phytoplankton Study of the Amazon Region," by E. J. Ferguson Wood, 22 pp., illus., printed. (Reprinted from *Bulletin of Marine Science*, vol. 16, no. 1, Mar. 1966, pp. 102-123.) Institute of Marine Science, 1 Rickenbacker Causeway, Virginia Key, Miami, Fla. 33129.

"The Implications of Nutrient Enrichment at Different Temporal Stages of a Phytoplankton Community," by Robert O. Fourqurean, 9 pp., illus., printed. (Reprinted from *Chesapeake Science*, vol. 7, no. 1,



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"A Revision of the Filefish Genera AMANSES and CANTHERHINES," by John E. Randall, 30 pp., illus. (From Copeia, no. 2, June 30, 1964, pp. 331-361.)

"Effects of Hurricane Edith on Marine Life in La Parguera, Puerto Rico," by Peter W. Glynn, Luis R. Almodóvar, and Juan G. González, 10 pp., illus. (From Caribbean Journal of Science, vol. 2, nos. 2 & 3, June & Sept. 1964, pp. 335-345.)

"Notes on the Biology of the Echinoid *Diaedema Antillarum*," by John E. Randall, Robert E. Schroeder and Walter A. Starck, 12 pp., illus. (From Caribbean Journal of Science, vol. 4, nos. 2 & 3, June & Sept. 1964, pp. 421-433.)

"A New Caribbean Muricid Mollusk, *TYPHIS PUERTORICENSIS*," by Germaine L. Warmke, 4 pp., illus. (From The Nautilus, vol. 78, no. 1, July 1964, pp. 1-3.)

"Notes on the Groupers of Tahiti, with Description of a New Serranid Fish Genus," by John E. Randall, 15 pp., illus. (From Pacific Science, vol. XVIII, no. 3, July 1964, pp. 281-296.)

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#### SALMON:

Underwater Guideposts: Homing of Salmon, by Arthur D. Hasler, 167 pp., illus., printed \$6.00. The University of Wisconsin Press, 114 North Murray St., Madison, Wis. 53715. A chronological account of studies of fish migration, in the stream phase and open water phase, and particularly the migration of Pacific salmon. Author's theories concerning the use of odor by salmon to locate parent streams during freshwater phases of salmon migration. Interesting chapter on "Sun-Compass Orientation" theorizes that salmon is capable of taking bearings from sun and compensating for inconstant rate of azimuthal change; it must know at what rate to compensate in order to maintain constant compass direction. It seems incredible that a fish is able innately to accomplish something for which men require instruments, charts, etc., but experimental observations reveal that this does occur and is strong evidence of a "biological clock." Contains bibliography of 119 references and a 3-page index.

#### TROUT:

"Trout stocking outside managed areas--1966," article, The Tennessee Conservationist, vol. XXXII, no. 4, Apr. 1966, p. 26, illus., printed. Editorial Office, Suite 218, Department of Conservation, 2611 West End Ave., Nashville, Tenn. 37203.

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