

# **Fishery Publication Index, 1955-64**

**Publications of the Fish and Wildlife Service  
by series, authors, and subjects**

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## INTRODUCTION

This index describes the publications of the Fish and Wildlife Service issued in 1955 and 1956 and those of the U.S. Fish and Wildlife Service issued in 1957-64.

The President's Reorganization Plan No. 3 established the Fish and Wildlife Service June 30, 1940, by consolidation of the Bureau of Fisheries and the Bureau of Biological Survey. The Fish and Wildlife Act of 1956 established the U.S. Fish and Wildlife Service, which comprises the Bureau of Commercial Fisheries and the Bureau of Sport Fisheries and Wildlife. The chief purposes of the U.S. Fish and Wildlife Service are to establish a sound and comprehensive national policy with respect to fish and wildlife and to strengthen the fish and wildlife segments of the national economy.

The index comprises a serial list of the numbers issued in each publication series (numbers that do not pertain to fisheries are omitted) and alphabetical indexes of authors and subjects. In the author index and in the subject index, the references are to numbers in the series lists.

This index does not list two Bureau of Commercial Fisheries periodicals--Commercial Fisheries Abstracts and Commercial Fisheries Review--and one Bureau of Sport Fisheries and Wildlife periodical--Sport Fishery Abstracts. These three periodicals have their own indexing systems.

Fish and Wildlife Price List 21 of the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, gives information on availability of sales items.

## PUBLICATION SERIES DESCRIPTION

A description of the series of publications follows. The period covered by each series is shown, absence of a second year means the series is still active.

### Circular (1941- )

Popular and semitechnical publications of general and regional interest intended to aid conservation and management. They are distributed free to libraries, research institutions both in this country and in foreign countries, Federal and State agencies, and scientists.

### Current Fishery Statistics (1941- )

Current statistical information on fishery production, manufacture, and domestic or foreign trade; issued monthly, quarterly, or annually by States, regions or larger areas. The Current Fishery Statistical publications are sent to private and Government industries in the United States, foreign industries, and United States embassies.

### Data Report (1964- )

Reports that include compilations of un-analyzed or partially analyzed data collected during biological, limnological, or oceanographic investigations. The reports are printed as 3- by 5-inch microfiches, each of which has up to 40 pages of material. The pages are reduced to one-eighteenth normal size; consequently, they can be read only through a microscope, microfiche "reader," or any similar device for enlarging. They are distributed free to a restricted mailing list of laboratories, libraries, State fishery agencies, research institutions, and research scientists. [Hard (full-size) copy is available from the Clearinghouse for Scientific and Technical Information, 5285 Port Royal Road, Springfield, Va. 22151 at \$3.00 per copy. Additional copies of microfiches are available from the same place at \$0.65 per set.]

### Fishery and Oceanography Translations (1964- )

Subject-indexed lists of translations that are available to fishery scientists and oceanographers; translations that are in progress; translated tables of contents of important foreign and oceanographic journals; and abstracts of pertinent foreign scientific literature. Limited distribution is made to laboratories, libraries, State fishery agencies, research institutions, and research scientists.

### Fishery Bulletin (1931- )

Technical reports on scientific investigations of fishery biology. The Bulletin of the United States Fish Commission was begun in 1881; it became the Bulletin of the Bureau of Fisheries in 1904 and the Fishery Bulletin of the Fish and Wildlife Service in 1941. Separates were

issued as documents through volume 46; the last document was No. 1103. Beginning with volume 47 in 1931 and continuing through volume 62 in 1963, each separate appeared as a numbered Bulletin. A new system began in 1963 with volume 63 in which papers are bound together in a single issue of the Bulletin instead of being issued only as individual papers. Bulletins are distributed free to libraries, research institutions, State agencies, and scientists. Some Bulletins are for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

#### **Fishery Industrial Research (1963- )**

Technical reports dealing with scientific investigations of fishery technology, economics, exploratory fishing, and gear research. They are distributed free to libraries, fishing industry, scientists, and technologists.

#### **Fishery Leaflet (1941- )**

Popular information on fishery subjects intended primarily for use in correspondence. They are distributed free to Federal and State agencies and scientists, libraries, and U.S. and foreign research institutions.

#### **North American Fauna (1889- )**

This series, begun by the U.S. Department of Agriculture's Bureau of Biological Survey, comprises technical reports of fundamental scientific investigations of primary interest to naturalists and researchers, relating to the biology of mammals, birds, reptiles, and amphibians. These reports include monographs and reports of regional biological surveys; studies of distribution, migration, life history, and ecology; contributions to the theory and methodology of research and papers on the scientific basis of natural resource management. This series is distributed to depository libraries. The Fish and Wildlife Service distributes copies without charge to official agencies, libraries, and researchers in fields related to the Service's work. Additional copies may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

#### **Regulatory Announcement (1941- )**

Informational pamphlets containing the text of current regulations. Only fishery Regulatory Announcements have been listed. Announcements and amendments to current regulations are issued throughout the year.

#### **Research Report (1941- )**

Technical papers reporting the results of scientific investigations with emphasis on

their practical application. Included are biological, technological, and economic subjects. These succeeded the Investigational Reports series (1931-39) and a former wildlife research series. They are for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, but are distributed free to libraries and a limited number of cooperators.

#### **Separate (1942- )**

Reprints of feature (authored) articles from the Bureau of Commercial Fisheries' monthly journal, "Commercial Fisheries Review." Available Separates may be obtained without charge from the Bureau of Commercial Fisheries, U.S. Fish and Wildlife Service, Washington, D.C. 20240.

#### **Special Scientific Report--Fisheries (1949- )**

Preliminary or progress reports and reports on scientific investigations of restricted scope. Established as Special Scientific Reports in 1940, Nos. 1 to 67 were issued from that date to 1949, when the new series, Special Scientific Report--Fisheries, with new serial numbering, was started. They are distributed free to scientists, libraries, Federal and State agencies, and U.S. and foreign research institutions.

#### **Statistical Digest (1942- )**

Annual statistics with detailed tabulations relating to fishery production, manufacture, and commerce. These succeeded the Administrative Report series (1931-40). Digests are for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402; some are distributed free to a limited mailing list.

#### **Test Kitchen Series (1950- )**

Information on buying, preparing, and cooking fish and shellfish, with tested recipes for institutions, home economists, and homemakers. This series is used to promote the use of fish and shellfish. They are distributed free by the Bureau of Commercial Fisheries.

#### **The Progressive Fish-Culturist (1934- )**

A periodical containing articles for fishery biologists and fish culturists. The periodical was issued monthly from 1934 through 1938 and bimonthly from 1939 through 1941; its publication was suspended from 1941 through

1946; it has been a quarterly since 1947. Many depository libraries receive it.

### Publication Distribution

Some printed publications of the U.S. Fish and Wildlife Service are sold by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. For such sales documents purchase orders should be sent direct to that Office (never to the U.S. Fish and Wildlife Service); remittances may be by money order, check, or cash.

Most publications that are issued by the U.S. Fish and Wildlife Service are distributed free to libraries that have been designated depository libraries for Government publications; a list of depository libraries may be obtained from the Superintendent of Documents, U.S. Government Printing Office.

### REFERENCE SYMBOLS

The several series are abbreviated as follows:

- Circ - Circular
- CFS - Current Fishery Statistics
- DR - Data Report
- FOT - Fishery and Oceanography Translations
- FB - Fishery Bulletin
- FIR - Fishery Industrial Research
- FL - Fishery Leaflet
- NAF - North American Fauna
- RA - Regulatory Announcement
- RR - Research Report
- Sep - Separate
- SSR-F - Special Scientific Report--Fisheries
- SD - Statistical Digest
- TKS - Test Kitchen Series
- PFC - The Progressive Fish-Culturist

## PUBLICATION SERIES NUMERICAL LIST

Publications preceded by asterisks are out of print, but can be borrowed from some college and public libraries.

The symbol (§) after a publication number indicates omission because it does not pertain to fisheries.

### PUBLICATION SERIES

#### Circular

- Circ 30. §
- Circ 31. This is a trout hatchery, rearing and distributing trout to help maintain sport fishing. 1955. 8 pp., illus.
- \*Circ 32. The seals, sea-lions, and sea otter of the Pacific Coast, by Karl W. Kenyon and Victor B. Scheffer. 1955. i + 34 pp., illus.
- Circ 33-34. §
- Circ 35. Raising bait fishes, by John Dobie, O. Lloyd Meehan, S. F. Snieszko, and George N. Washburn. 1956. iii + 123 pp., illus.
- Circ 36. Fishery publication index, 1920-54. Publications of the Bureau of Fisheries and fishery publications of the Fish and Wildlife Service, by series, authors, and subjects. 1955. x + 254 pp.
- Circ 37-39. §
- Circ 40. This is a pondfish hatchery: rearing and distributing warm-water fish to help maintain sport fishing. 1956. 8 pp., illus.
- Circ 41. Shrimp tips from New Orleans. 1956. 17 pp., illus.
- Circ 42. This is Cortland: fish-cultural station, experimental hatchery, trout-nutrition laboratory, in-service training school. 1956. 6 pp., illus.
- \*Circ 43. Glossary of marine conservation terms in English and Russian, compiled by Paul S. Galtsoff. June 1956. i + 129 pp.
- Circ 44. National survey of fishing and hunting; a report on the first nationwide economic survey of sport fishing and hunting in the United States, during the calendar year 1955. 1956. ii + 50 pp., illus.
- Circ 45. Household consumer preferences for canned fishery products, 1956. 1957. ii + 46 pp., illus.
- \*Circ 46. Survey of sport fishery projects, 1956, compiled in the Branch of Federal Aid. Jan. 1957. vi + 159 pp.
- Circ 47. §
- Circ 48. Commercial fishing vessels and gear, by Gustaf T. Sundstrom, illustrator. 1957. 48 pp., illus.
- Circ 49. Not issued.
- \*Circ 50. Tips on cooking fish and shellfish, by Bureau of Commercial Fisheries in cooperation with United States fishing industry. 1958. 10 pp., illus.
- Circ 51-52. §
- \*Circ 53. A market development plan for the New England groundfish industry, prepared by Tradeways, Incorporated, New York, N.Y. July 1958. iv + 22 pp.
- \*Circ 54. Research facilities of the United States Fishery Laboratory, Beaufort, North Carolina, by Gerald B. Talbot. 1959. 11 pp., illus.
- \*Circ 55. Conservation notes--fishing for food. 1959. 6 pp., illus.
- Circ 56. §
- \*Circ 57. Progress in sport fishery research, 1957-58, compiled in the Branch of Fishery Research. Apr. 1959. 89 pp., illus. Contents: Appalachian sport fishery investigations, by Robert E. Lennon, pp. 3-8; Atlantic salmon investigations, by Alden P. Stickney, pp. 9-15; California-Nevada sport fishery investigations, by Reid S. Nielson, pp. 15-20; Rocky Mountain sport fishery investigations, by Oliver B. Cope, pp. 20-28; Eastern Fish Disease Laboratory, by S. F. Snieszko, pp. 28-37; Western Fish Disease Laboratory, by Robert R. Rucker, pp. 37-42; Eastern Fish Nutrition Laboratory, by A. M. Phillips, Jr., pp. 42-46; Western Fish Nutrition Laboratory, by John E. Halver, pp. 46-78; Salmon-Cultural Laboratory, by Roger E. Burrows, pp. 78-81.
- Circ 58. Public fish culture in the United States, 1958, a statistical summary, by William Hagen and Joseph P. O'Connor. 1959. iv + 44 pp., illus.

- \*Circ 59. Alaska fisheries briefs, by Bureau of Commercial Fisheries. Sept. 1959. 20 pp., illus. Contents: Pink salmon migrations along the Alaska peninsula, by Fredrik V. Thorsteinson, pp. 1-7; Salmon migrations in southeastern Alaska, by Wallace H. Noerenberg, pp. 8-12; The unexpected appearance of pink salmon in the Kvichak River, by Clarence D. Becker, p. 13; Gravel removal and the fisheries, by Robert McVey, pp. 14-18; Estimating abundance of salmon fingerlings, by Howard S. Sears, pp. 19-20.
- Circ 60. Take a can of salmon, by Bureau of Commercial Fisheries. 1960. 17 pp., illus.
- Circ 61. §
- Circ 62. Galveston Biological Laboratory fishery research for the year ending June 30, 1959, by Bureau of Commercial Fisheries. Sept. 1959. iv + 127 pp., illus. Contents: Report of the Director, by George A. Rounsefell, pp. 1-5; Laboratory facilities, by Lawrence E. Wise, pp. 6-11; Shrimp fishery investigation, by Joseph H. Kutkuhn, p. 12; Migration and growth of pink shrimp, by Thomas J. Costello, Jr., and Donald M. Allen, pp. 13-18; Gulf shrimp abundance trends, by Joseph H. Kutkuhn, pp. 19-24; Distribution and density of larval shrimp, by Joseph H. Kutkuhn, pp. 25-27; Identification of juvenile penaeid shrimp, by Abraham Fleminger, pp. 28-31; Pink shrimp life history studies, by Edwin S. Iversen, pp. 32-33; Estuarine ecology investigation, by Edward Chin, p. 34; Migration of brown shrimp, by Anthony Inglis, pp. 35-37; Tolerance to insecticides, by Edward Chin, pp. 38-40; Nutritional studies of shrimp, by Zoula P. Zein-Eldin, pp. 41-44; Estuarine field studies, by Edward Chin, pp. 45-49; Predation on shrimp, by Anthony Inglis, pp. 50-53; Industrial fishery investigations, by Edgar L. Arnold, Jr., p. 54; Trawl-caught industrial fishes, by James P. Cating and Rupert E. Andrews, pp. 55-58; Menhaden, by Edgar L. Arnold, Jr., pp. 59-60; Menhaden populations, by J. Y. Christmas, Jr., pp. 61-65; Red tide investigation, by William B. Wilson, pp. 66-68; Physiological studies of red tide, by David V. Aldrich, pp. 69-71; Nutritional studies on red tide, by William B. Wilson, pp. 72-74; Screening chemicals for red tide control, by Kenneth T. Marvin, p. 75; Field ecology relating to red tide, by John H. Finucane, pp. 76-79; Environmental hydrology in relation to red tide, by Alexander Dragovich, pp. 80-85; Testing copper ore for red tide control, by Kenneth T. Marvin, pp. 86-94; Hydrological studies for the Corps of Engineers' proposed Mississippi River-Gulf Outlet Project, Louisiana, by Kenneth M. Rae, pp. 95-99; Evaluating toxicity of dissolved substances to micro-organisms using dialysis membranes, by William B. Wilson, pp. 100-102; The bait shrimp fishery of Galveston Bay, by Edward Chin, pp. 103-105; Plankton pigments in East Lagoon, by Zoula P. Zein-Eldin, pp. 106-107; Fixing and staining of dinoflagellates, by John H. Finucane, p. 108; Seasonal barnacle attachment in East Lagoon, by David V. Aldrich, pp. 109-110; The Gulf V plankton sampler, by Edgar L. Arnold, Jr., pp. 111-113; East Lagoon zooplankton, by Abraham Fleminger, pp. 114-118.
- Circ 63-64. §
- \*Circ 65. Tuna industry conference papers, May 1959, selected papers of the Government-Industry Tuna Conference at Scripps Institution of Oceanography, University of California, La Jolla, Calif., May 19-21, 1959. Nov. 1959. iv + 110 pp., illus. Contents: Part 1 - The world tuna resource and fishery. The tuna resource in relation to oceanographic features, by Vernon E. Brock, pp. 1-11; Tuna fishing methods and their application, by Vernon E. Brock, pp. 12-16; World tuna production, by Donald R. Johnson, pp. 17-36; Status of the fishery for tunas of tropical waters of the eastern Pacific, by Milner B. Schaefer, pp. 37-40; Status of the fishery for tunas of the temperate waters of the eastern north Pacific (abstract), by Harold B. Clemens, pp. 41-42; Some observations on present and future Japanese tuna fisheries, by Wilvan G. Van Campen, pp. 43-46. Part 2 - The domestic tuna-fishing industry. Harvesting the tuna resource, by Gerald V. Howard, pp. 47-59; Handling and transporting to the cannery, Part A, by Clarence J. Carlson, pp. 60-62; Handling and transporting to the cannery, Part B, by Sven Lassen, pp. 63-66; Fisheries loan and mortgage programs, by Lester T. Bradbury, pp. 67-69; Publications of the Bureau of Commercial Fisheries of interest to the tuna industry, by Donald R. Johnson,

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- \*Circ 65. Tuna industry conference papers (Continued)  
pp. 70-71; Part 3 - Processing and marketing tuna. Sources of tuna consumed in the United States, by Victor J. Samson and Anthony D. Sokolich, pp. 73-75; The processing of tuna, by Maurice E. Stansby, pp. 76-85; Marketing tuna in the United States, by Donald Y. Aska, pp. 86-96; Marketing tuna in foreign countries, by Arthur M. Sandberg, pp. 97-107; Trade agreements and how they are made, by Arthur M. Sandberg, pp. 108-110.
- \*Circ 66. Frozen processed fish and shellfish consumption in institutions and public eating places, survey methods and procedures, prepared in the Division of Industrial Research and Services, Branch of Market Development, Bureau of Commercial Fisheries. Nov. 1959. ii + 22 pp.
- \*Circ 67. Frozen processed fish and shellfish consumption in institutions and public eating places, Atlanta, Georgia, prepared in the Division of Industrial Research and Services, Branch of Market Development, Bureau of Commercial Fisheries. Nov. 1959. vii + 49 pp.
- \*Circ 68. Frozen processed fish and shellfish consumption in institutions and public eating places, Chicago, Illinois, prepared in the Division of Industrial Research and Services, Branch of Market Development, Bureau of Commercial Fisheries. Nov. 1959. vi + 58 pp.
- \*Circ 69. Frozen processed fish and shellfish consumption in institutions and public eating places, Cleveland, Ohio, prepared in the Division of Industrial Research and Services, Branch of Market Development, Bureau of Commercial Fisheries. Nov. 1959. vi + 46 pp.
- \*Circ 70. Frozen processed fish and shellfish consumption in institutions and public eating places, Denver, Colorado, prepared in the Division of Industrial Research and Services, Branch of Market Development, Bureau of Commercial Fisheries. Nov. 1959. vii + 48 pp.
- \*Circ 71. Frozen processed fish and shellfish consumption in institutions and public eating places, Houston, Texas, prepared in the Division of Industrial Research and Services, Branch of Market Development, Bureau of Commercial Fisheries. Nov. 1959. vii + 45 pp.
- \*Circ 72. Frozen processed fish and shellfish consumption in institutions and public eating places, Los Angeles, California, prepared in the Division of Industrial Research and Services, Branch of Market Development, Bureau of Commercial Fisheries. Nov. 1959. vi + 60 pp.
- \*Circ 73. Frozen processed fish and shellfish consumption in institutions and public eating places, New York, New York, prepared in the Division of Industrial Research and Services, Branch of Market Development, Bureau of Commercial Fisheries. Nov. 1959. vi + 55 pp.
- \*Circ 74. Frozen processed fish and shellfish consumption in institutions and public eating places, Omaha, Nebraska, prepared in the Division of Industrial Research and Services, Branch of Market Development, Bureau of Commercial Fisheries. Nov. 1959. vii + 46 pp.
- \*Circ 75. Frozen processed fish and shellfish consumption in institutions and public eating places, Portland, Oregon, prepared in the Division of Industrial Research and Services, Branch of Market Development, Bureau of Commercial Fisheries. Nov. 1959. vii + 47 pp.
- \*Circ 76. Frozen processed fish and shellfish consumption in institutions and public eating places, Springfield, Massachusetts, prepared in the Division of Industrial Research and Services, Branch of Market Development, Bureau of Commercial Fisheries. Nov. 1959. vii + 44 pp.
- Circ 77-79. §
- Circ 80. Annual report of the Biological Laboratory, Woods Hole, Mass., for the year ending June 30, 1959. Jan. 1960. iii + 52 pp., illus. Contents: Report of the Laboratory Director, by Herbert W. Graham, pp. 1-8; Vessels and shore facilities, by V. A. Mackesy, pp. 9-12; Cod investigation, by J. P. Wise and H. E. Murray, pp. 13-15; Flounder investigations, by F. E. Lux, pp. 16-17; Haddock investigation, by J. R. Clark, A. C. Jensen, J. R. McDermott, F. A. Dreyer, and P. L. Sargent, pp. 18-20; Hake investigation, by R. L. Fritz and W. L. Callahan, p. 21; Industrial fishery investigation, by R. L. Edwards and L. M. Lawday, pp. 22-24; Redfish investigation, by G. F. Kelly

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Circ 80. Annual report of the Biological Laboratory (Continued)

and A. M. Barker, pp. 25-27; Sea scallop investigation, by J. A. Posgay, A. S. Merrill, F. E. Nichy, and P. H. Chase, pp. 28-31; Bottom ecology investigations, by R. L. Wigley and R. B. Theroux, pp. 32-34; Plankton ecology, by J. B. Colton, R. R. Marak, and D. Miller, pp. 35-37; Fish behavior investigation, by R. Livingstone, Jr., pp. 38-39; Population dynamics investigation, by C. C. Taylor and R. R. Stoddard, p. 40; Shellfish Laboratory, by P. S. Galtsoff and W. N. Shaw, pp. 41-42; Instrumentation, by J. M. Crossen, pp. 43-44; Port samplers school, by L. H. Couture, p. 45.

- \*Circ 81. Progress in sport fishery research, 1959, compiled in the Branch of Fishery Research, 1960. ii + 80 pp., illus. Contents: Fish management research - Appalachian sport fishery investigations, by Phillip S. Parker, pp. 3-6; Atlantic salmon investigations, by Alden P. Stickney, pp. 6-17; California-Nevada sport fishery investigations, by Reed S. Nielson, pp. 18-22; Fish Control Laboratory, by Robert E. Lennon, pp. 23-26; Fish-Pesticide Research Laboratory, by Oliver B. Cope, pp. 27-33; Rocky Mountain sport fishery investigations, by Norman G. Benson, pp. 34-39. Fish disease research - Eastern Fish Disease Laboratory, by S. F. Snieszko, pp. 39-46; Western Fish Disease Laboratory, by Robert R. Rucker, pp. 47-51. Fish nutrition research-Eastern Fish Nutrition Laboratory, by Arthur M. Phillips, Jr., pp. 52-54; Western Fish Nutrition Laboratory, by John E. Halver, pp. 55-68. Research on fish cultural methods - Salmon-Cultural Laboratory, by Roger E. Burrows, pp. 68-73; Southeastern Fish Cultural Laboratory, by Kermit E. Sneed, p. 74.

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- \*Circ 83. Honolulu Biological Laboratory, past (1949-1958), present (1959), future (1960- ), by Bureau of Commercial Fisheries, Hawaii Area Office. Apr. 1960. ii + 62 pp., illus.

Circ 84. §

- \*Circ 85. International North Pacific Fisheries Commission, United States section meeting, March 1960, papers pre-

sented before a joint session of the Alaska Legislature, Juneau, Alaska, Mar. 4, 1960, Bureau of Commercial Fisheries. May 1960. iv + 28 pp., illus. Contents: Statement of the United States section, International North Pacific Fisheries Commission, presented by Milton E. Brooding, pp. 3-10; Scientific research by the United States, by J. L. McHugh, pp. 11-12; Research related to the case for abstention, by R. A. Fredin, pp. 13-17; Distribution and racial composition of salmon on the high seas, by Clinton E. Atkinson, pp. 18-23; Pacific salmon in international waters, by Allan C. Hartt, presented by William F. Royce, pp. 24-28.

- Circ 86. A survey of fishing, in 1959, in 1,000 ponds stocked by the Bureau of Sport Fisheries and Wildlife, conducted by the Branches of Fish Hatcheries and Fishery Management Services, reported by Willis King. May 1960. iv + 20 pp., illus.

- \*Circ 87. Program of research and development for the Pacific Coast tuna industry, Bureau of Commercial Fisheries. June 1960. ii + 7 pp.

- \*Circ 88. Who buys canned tuna, and why? A study of consumer motivation in three cities, prepared in the Branch of Economics, Bureau of Commercial Fisheries. June 1960. vii + 60 pp., illus.

- Circ 89. Who buys canned salmon, and why? A study of consumer motivation in three cities, prepared in the Branch of Economics, Bureau of Commercial Fisheries. June 1960. vii + 46 pp., illus.

- \*Circ 90. Who buys canned sardines, and why? A study of consumer motivation in three cities, prepared in the Branch of Economics, Bureau of Commercial Fisheries. June 1960. viii + 66 pp., illus.

- \*Circ 91. Research in fishery technology, annual report--East Boston Laboratory, June 30, 1959, by S. R. Pottinger. July 1960. iii + 13 pp., illus.

- Circ 92. Galveston Biological Laboratory fishery research for the year ending June 30, 1960. By Galveston Biological Laboratory, Bureau of Commercial Fisheries. July 1960. ii + 77 pp., illus. Contents: Report of the Director, by George A. Rounsefell, pp. 1-5;

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Circ 92. Galveston Biological Laboratory fishery research for the year ending June 30, 1960 (Continued)

Shrimp fishery investigation, by Joseph H. Kutkuhn, p. 6; Experiments in rearing shrimp larvae, by Ray S. Wheeler, pp. 7-8; Abundance and distribution of penaeid shrimp larvae, by William C. Renfro, pp. 9-10; The Sanibel-Tortugas shrimp fishery, 1956-1959, by Joseph H. Kutkuhn, pp. 11-15; Migration of pink shrimp, by Thomas J. Costello and Donald M. Allen, pp. 16-19; Industrial fishery investigation, by Bernard E. Skud, p. 20; Trawl-caught industrial fishes, by Winthrop A. Haskell, pp. 21-25; Menhaden populations, by J. Y. Christmas, Jr., pp. 26-28; Estuarine ecology investigation, by Edward Chin, p. 29; Insecticide studies, by Edward Chin, pp. 30-33; Nutrition and respiration, by Zoula P. Zein-Eldin, pp. 34-35; Field studies, by Edward Chin and Anthony Inglis, pp. 36-38; Red tide investigation, by William B. Wilson, p. 39; Physiology of the Florida red tide organism, by David V. Aldrich, pp. 40-42; Chemical control experiments, by Kenneth T. Marvin, pp. 43-45; Field chemistry, by Billie Z. May, pp. 46-47; Hydrology of Tampa Bay and adjacent waters, by Alexander Dragovich, pp. 48-51; Field ecology relating to red tide, by John H. Finucane, pp. 52-54; Effects of engineering projects on estuaries, by Ronald C. Naab, pp. 55-57; Biological and hydrological studies for the Corps of Engineers, Mississippi River - Gulf Outlet Project, Louisiana, by Kenneth M. Rae, pp. 58-62; Gross comparison of first nauplii of three penaeid shrimps, by William C. Renfro, pp. 63-64; Copper in Tampa Bay and adjacent neritic and river waters, by Alexander Dragovich, p. 65; Brown shrimp movements, by Anthony Inglis, pp. 66-69; Identification and distribution of pink shrimp larvae, by C. P. Idyll, F. F. Koczy, Albert C. Jones, M. O. Rinkel, and Sheldon Dobkin, pp. 70-71.

Circ 93. The National Aquarium, by Bureau of Sport Fisheries and Wildlife. 1960. 6 pp., illus.

Circ 94. §

\*Circ 95. A survey of conservation-education needs of the U.S. Fish and Wildlife Service. Summary of replies to questionnaires sent to field stations of the Service, compiled in the Office of Information. Sept. 1960. ii + 20 pp.

\*Circ 96. Index of fishery technological publications of the Fish and Wildlife Service and the former Bureau of Fisheries, 1918-55, compiled by M. E. Stansby and Rosemary Schairer, Technological Laboratory, Seattle, Wash. 1961. ii + 237 pp.

Circ 97. The United States Fish and Wildlife Service, its responsibilities and functions, by Edna N. Sater. Dec. 1960. iv + 44 pp., illus.

\*Circ 98. Fishway research at the Fisheries-Engineering Research Laboratory, by Gerald B. Collins and Carl H. Elling. Nov. 1960. ii + 17 pp., illus.

\*Circ 99. Annual report, Biological Laboratory, Woods Hole, Massachusetts, for the year ending June 30, 1960. Dec. 1960. iii + 63 pp., illus. Contents: Report of the Laboratory Director, by Herbert W. Graham, pp. 1-11; Cod investigation, by J. P. Wise and H. E. Murray, pp. 12-13; Flounder investigation, by F. E. Lux and E. M. Levangie, pp. 14-15; Haddock investigation, by J. P. Wise, J. R. Clark, A. C. Jensen, J. P. McDermott, F. A. Dreyer, R. N. Hersey, and P. L. Sargent, pp. 16-18; Hake investigation, by R. L. Fritz and W. H. Callahan, pp. 19-21; Industrial fishery, by R. L. Edwards, R. R. Stoddard, and L. M. Lawday, pp. 22-24; Redfish investigation, by G. F. Kelly, A. M. Barker, and G. M. Clarke, pp. 25-28; Sea scallop investigation, by J. A. Posgay, A. S. Merrill, F. E. Nichyparowich, and H. W. Jensen, pp. 29-33; Aquarium and experimental studies, by C. L. Wheeler and D. Miller, pp. 34-37; Benthic ecology investigation, by R. L. Wigley and R. B. Theroux, pp. 38-41; Fish behavior investigation, by R. Livingstone, Jr., pp. 42-43; Plankton ecology investigations, by R. R. Marak and R. R. Stoddard, pp. 44-46; Instrumentation, by James R. Crossen, pp. 47-49; Port samplers pool, by L. H. Couture, pp. 50-51; Fish tagging, by S. L. Cogswell, pp. 52-53; Shellfish Laboratory, by P. S. Galtsoff and W. N. Shaw, pp. 54-57.

\*Circ 100. Better hunting and fishing on small watershed projects, by Bureau of Sport Fisheries and Wildlife. 1961. 11 pp., illus.

\*Circ 101. Progress in sport fishery research, 1960, compiled in the Branch of Fishery Research. 1961. iii + 96 pp.,

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- \*Circ 101. Progress in sport fishery research (Continued)
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Circ 185. Investigations in fish control. 1. Laboratories and methods for screening fish-control chemicals, by Robert E. Lennon and Charles R. Walker. June 1964. ii + 15 pp., illus.

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- Circ 190. To keep fish fresh, by Bureau of Commercial Fisheries, Technological Laboratory, Gloucester, Mass. Aug. 1964. 14 pp., illus.
- Circ 191. Extent of acid mine pollution in the United States affecting fish and wildlife, by Edward C. Kinney. June 1964. iii + 27 pp., illus.
- Circ 192. Columbia River Fishery Program - 1963, prepared by Staff, Columbia Fisheries Program Office, Bureau of Commercial Fisheries. Nov. 1964. iii + 20 pp., illus.
- \*Circ 193. Annual report, exploratory fishing and gear research, Bureau of Commercial Fisheries, Region 2, for fiscal year 1963 ending June 30, 1963. Dec. 1964. iii + 68 pp., illus. Contents: Part 1 - An historical glance and overall view of exploratory fishing and gear research in Region 2, by Harvey R. Bullis, Jr., and J. R. Thompson, pp. 1-10; Part 2 - Exploratory fishing and gear research programs and projects. FY 1963. Gulf of Mexico exploratory fishing and gear research program, Pascagoula, Miss., by Richard A. Waller, pp. 13-17; Bottomfish project, by James S. Carpenter, p. 17; Pelagic fish project, by Tomio Iwamoto, pp. 17-18; Faunal survey project, by J. R. Thompson, p. 18; Caribbean and tropical Atlantic exploratory fishing and gear research program, by J. R. Thompson, pp. 19-20; Offshore shrimp gear research photoinstrumentation, by Paul Kruse, pp. 20-22; South Atlantic exploratory fishing and gear research program, by Robert Cummins, Jr., pp. 22-33; Gear research and development program, by Fred Wathne, pp. 33-37; Gear development project, by Fred Wathne, p. 37; Shrimp trawl mechanics project, by Fred Wathne and John K. Holt, pp. 38-40; Gear construction project phase, by John K. Holt and David G. Witherspoon, pp. 41-42; Shrimp behavior project, by Charles M. Fuss, Jr., and L. H. Ogren, pp. 42-47; Instrumentation development project, by John K. Holt, pp. 47-50; A sea-sled to towing-vessel voice communication system, by John K. Holt, pp. 51-53; Design of a biological sampling trawl for a specific application, by Fred Wathne, pp. 54-56; BCF/AID spiny lobster exploratory fishing project Republic of Panama, by Johnny A. Butler, pp. 56-60.
- \*Circ 194. Annual report for 1963, Division of Fishery Management Services, prepared by Edward C. Kinney. July 1964. v + 46 pp., illus.
- Circ 195. An electrofishing boat with a variable voltage pulsator for lake and reservoir studies, by F. Phillip Sharpe. Sept. 1964. iv + 6 pp., illus.
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- \*Circ 198. Annual report of the Bureau of Commercial Fisheries Biological Laboratory, Beaufort, N.C., for the fiscal year ending June 30, 1963. Nov. 1964. iii + 26 pp., illus. Contents: Report of the Director, by F. C. June, pp. 1-3; Blue Crab Program - by George H. Rees, p. 3; North Carolina studies, by Mayo H. Judy, Donnie L. Dudley, and Peggy M. Keney, pp. 3-6; Florida studies, St. Johns River, by Marlin E. Tagatz and Grady P. Frymire, pp. 6-8; Larval studies, by John D. Costlow, Jr., pp. 8-10; Menhaden Program - by John W. Reintjes, p. 10; Sampling the catch, by William R. Nicholson and Joseph R. Higham, pp. 10-11; Morphology and population studies, by John W. Reintjes, p. 11; Estimation of juvenile abundance, by Anthony L. Pacheco, p. 12; Methods of marking and recovery, by Frank T. Carlson, pp. 12-13; Shad Program - by Paul R. Nichols, p. 13; Dynamics of shad populations, by Randall P. Cheek and Robert M. Lewis, pp. 13-15; Fishway studies, by Robert B. Chapoton and Louis E. Vogeles, pp. 16-21; Atlantic Coast Striped Bass Program - by Paul R. Nichols, p. 21, Albemarle Sound cooperative study, by Robert M. Lewis and Randall P. Cheek, pp. 21-22; Chesapeake Bay cooperative study, by Robert B. Chapoton and Randall P. Cheek, pp. 22-23; Life history studies, by Randall P. Cheek and Robert B. Chapoton, pp. 24-25.

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- Circ 200. The Bureau of Commercial Fisheries Biological Laboratory, Oxford, Maryland: programs and perspectives. Oct. 1964. v + 47 pp., illus. Contents: A brief history of Federal shellfish investigations in Chesapeake Bay, by James B. Engle, pp. 1-7; The Bureau of Commercial Fisheries Biological Laboratory at Oxford, present and future, by Carl J. Sindermann, pp. 8-17; Environmental features of the laboratory site; the Tred Avon River, by Robert W. Hanks, pp. 18-23; Natural and artificial pond culture of oysters, by William N. Shaw, pp. 24-29; Studies of oyster microparasites, by Aaron Rosenfield, pp. 30-37; Progress in surf clam biological research, by Arthur S. Merrill and John R. Webster, pp. 38-47.
- Circ 202. Techniques for infrared survey of sea temperature, report of a workshop held at the U.S. Dept. of the Interior, Washington, D.C., April 27 and 28, 1964, John Clark, chairman, Bureau of Sport Fisheries and Wildlife, Sandy Hook Marine Laboratory, Highlands, New Jersey. Sponsored by the Geophysics Branch, Office of Naval Research in cooperation with the Committee for Scientific Exploration of the Atlantic Shelf. Nov. 1964. iii + 142 pp., illus.
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Results of planting catchable-size brown trout, *Salmo trutta fario* L., in a stream with poor natural reproduction, by John G. Hale and Lloyd L. Smith, Jr. pp. 14-19, illus. Paper No. 3165, Scientific Journal Series, Minnesota Agricultural Experiment Station, St. Paul, Minn.

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The effect of starvation upon brook trout of three sizes, by Harvey M. Adelman, Joseph L. Bingham, and Jack L. Maatch. pp. 110-112, illus.

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- \*Histopathology of fish. I. Techniques and  
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\*Winter survival of hatchery-reared and native brook trout, by Harvey M. Adelman and Joseph L. Bingham. pp. 177-180.

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\*Dispersal of stocked northern pike in Clear Lake, Iowa, by Kenneth D. Carlander and Richard Ridenhour. pp. 186-189, illus.

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\*A simple chemical test for rotenone in water, by George Post. pp. 190-191.

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\*A quick method of preparing permanent fin-ray and spine sections, by Richard L. Pycha. p. 192.

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