PUBLICATIONS OF THE UNITED STATES BUREAU OF FISHERIES 1871-1940



UNITED STATES DEPARTMENT OF T'"
FISH AND W:

EXPLANATORY NOTE

The series embodies results of investigations, usually of restricted scope, intended to aid or direct management or utilization practices and as guides for administrative or legislative action. It is issued in limited quantities for official use of Federal, State or cooperating agencies and in processed form for economy and to avoid delay in publication.

United States Department of the Interior, Fred A. Seaton, Secretary Fish and Wildlife Service, Arnie J. Suomela, Commissioner

PUBLICATIONS OF THE UNITED STATES BUREAU OF FISHERIES 1871 - 1940

Compiled by

Barbara B. Aller Office of Information

Special Scientific Report--Fisheries No. 284

Washington, D. C.
December 1958

The Library of Congress has cataloged this publication as follows:

·Aller, Barbara (Bartlett) 1891-

Publications of the United States Bureau of Fisheries, 1871-1940. Washington, U. S. Dept. of the Interior, Fish and Wildlife Service, 1958.

202 p. 27 cm. (U. S. Fish and Wildlife Service. Special scientific report; fisheries, no. 284)

1, U. S. Bureau of Fisheries—Bibl. 2, Fisheries—Bibl. 1, Title. (Series)

SH11.A335 no. 284

016.6392

59-60447

Library of Congress

The Fish and Wildlife Service series, Special Scientific Report--Fisheries, is cataloged as follows:

U. S. Fish and Wildlife Service. Special scientific report: fisheries. no. 1-[Washington] 1949-

no. ilius., maps, diagrs. 27 cm.

Supersedes in part the Service's Special scientific report.

1. Fisheries-Research.

SH11.A335 639.2072

639.2072

59-60217

Library of Congress [2]

CONTENT

| | | | | | | | | | | | | Pages |
|--------------------------------|--|---|---|---|---|---|---|---|---|---|---|-----------|
| Documents 1 - 1102 | | | | • | | | | | | | | 2 - 102 |
| Economic Circulars 1 - 74 | | | | • | | | | | | | | 103 - 108 |
| Administrative Reports 1 - 42 | | | | • | | | | • | | | • | 109 - 113 |
| Bulletins 1 - 34 | | | • | • | | • | • | • | • | • | • | 114 - 117 |
| Investigational Reports 1 - 44 | | | | • | • | • | • | • | • | • | | 118 - 122 |
| Fishery Circulars 1 - 28 | | • | | | | | | • | | | | 123 - 125 |
| Index | | | | | | | | | | ٠ | | 126 - 202 |



PUBLICATIONS OF THE UNITED STATES BUREAU OF FISHERIES 1871 - 1940

Compiled by

Barbara B. Aller Office of Information

The Bureau was known as the United States Commission of Fish and Fisheries from 1871 to 1903 and was an independent establishment of the Government. It was included in the new Department of Commerce and Labor in 1903 and designated the United States Bureau of Fisheries. In 1913, the Department of Labor was separated and the Bureau of Fisheries was retained in the Department of Commerce. The Bureau was transferred from the Department of Commerce to the Department of the Interior in 1939 and in 1940 was consolidated with the Biological Survey to form the Fish and Wildlife Service.

The first publications issued as separates by the Fish Commission did not have serial numbers printed on them, those being added later by Charles W. Scudder who began the list of publications of the organization. Others maintained the records through the years and among them Jessie L. Drayton deserves special credit. Only the publications that were issued as separates are recorded here. In the early bound volumes a number of historical papers appeared which dealt with the state of various fisheries both here and abroad. These were not published in the regular series and their titles are therefore omitted. References to them may be found in Document 899, "An analytical subject bibliography of the publications of the Bureau of Fisheries 1871 - 1920." by Rose M. E. MacDonald, Appendix 5 to the Report of the Commissioner for 1920 (1921).

With the consolidation of the Bureau of Fisheries and the Biological Survey into the Fish and Wildlife Service, the publications were renamed: Report of the Director; Statistical Digest:Research Report; Circular; with the biological bulletin series becoming the Fishery Bulletin, No. 34 being the last issued under the Bureau of Fisheries.

Publications that are out of print may be consulted in libraries, especially those that are Government depositories. Documents now available for purchase are listed in Price List 21 obtainable from the Superintendent of Documents, Washington 25, D. C.

THE SERIES

1871 - 1930

| Documents | 1 - 1102. | : | Administrative Reports | 1 - 42. |
|--------------------|-----------|---|-------------------------|---------|
| Economic Circulars | 1 - 74. | : | Bulletins (biological) | 1 34. |
| | | : | Investigational Reports | 1 - 44. |
| | | : | Fishery Circulars | 1 - 28. |

1930 - 1940

A key to abbreviations in the index is given on page 126.

To make the record of printed publications as complete as possible mention should be made of the Fisheries Service Bulletin which was published primarily for employees of the Bureau of Fisheries, June 1915 through December 1940, Nos. 1 - 307. It contained information concerning the various activities of the Bureau during the preceding month and served as a medium for official communication between the administrative officers and all employees.

COMMISSIONERS OF FISHERIES

| Changer E. Paind | 1071 | | 1887. |
|-----------------------------|------|---|-------|
| Spencer F. Baird | 10/1 | - | 1884. |
| G. Brown Goode | 1887 | • | 1888. |
| Marshall McDonald | 1888 | - | 1895. |
| Horbert A. Gill (acting) | 1895 | - | 1896. |
| John J. Brice | 1896 | - | 1898. |
| George M. Bowers | 1898 | - | 1913. |
| Hugh M. Smith | 1913 | - | 1921. |
| Honry O'Malley | 1922 | - | 1932. |
| Frank T. Bell | 1933 | - | 1939. |
| Charles E. Jackson (acting) | 1939 | _ | 1940. |
| | | | |

In accordance with the President's Reorganization Plan No. 2, the Bureau of Fisheries was transferred from the Department of Commerce to the Department of the Interior on July 1, 1939; and by Reorganization Plan No. 3 it was merged with the Bureau of Biological Survey on June 30, 1940, to form the Fish and Wildlife Service.

DOCUMENTS

This series includes Documents 1 - 1102. With a few exceptions, the Documents were assembled in volumes and bound in the Report of the Commissioner of Fisheries and in the Bulletin of the Bureau of Fisheries.

- 1. Memoranda of inquiry relative to the food-fishes of the United States.

 By Spencer F. Baird and Theodore Gill. Report of U. S. Commission of Fish and Fisheries for 1871-72, pp. 1-3, (1873).
- 2. Questions relative to the food-fishes of the United States. By Spencer F. Baird and Theodore Gill. Report of U. S. Commission of Fish and Fisheries for 1871-72 (1873), pp. 3-6.
- 3. Report on the condition of the sea fisheries of the south coast of New England in 1871 and 1872. By Spencer F. Baird. Report of U.S. Commission of Figh and Fisheries for 1871-72 (1873), pp. I-XLI.
- 4. Report of the Commissioner for 1872-73. A.-Inquiry into the decrease of the food-fishes. B.-The propagation of food-fishes in the waters of the United States. By Spencer F. Baird. Report of U. S. Fish Commission for 1872 and 1873, vol. II, (1874), pp. I-CII.
- 5. Crustacea of the fresh waters of the United States. By Sidney I. Smith. Report of the U. S. Fish Commission for 1872-73 (1874), pp. 637-665.
- 6. Sketch of the invertebrate fauna of Lake Superior. By Sidney I. Smith. Report of U. S. Fish Commission for 1872-73 (1874), pp. 690-707.
- 7. Food of fresh-water fishes. By Sidney I. Smith. Report of U. S. Fish Commission for 1872-73 (1874), pp. 708-709.
- 8. Synopsis of North American fresh-water leeches. By A. E. Verrill.
 Report of U. S. Fish Commission for 1872-73 (1874), pp. 666-689.
- 9. Natural and economical history of the Gourami. By Theodore Gill. Report of U. S. Fish Commission for 1872-73 (1874), pp. 710-728.
- 10-13 Plan of inquiry into the history and present condition of the fisheries of the United States. By G. Brown Goode. Report of U. S. Commission of Fish and Fisheries for 1880 (1883), pp. 1-52.
- 10. Questions relative to the cod and cod fisheries. By Spencer F. Baird. Report of U. S. Commission of Fish and Fisheries for 1880 (1883), pp. 31-36.
- 11. Questions relative to the mackerel and mackerel fisheries. By

 Spencer F. Baird. Report of U. S. Commission of Fish and Fisheries
 for 1880 (1883), pp. 36-40.
- 12. Questions relative to the alewife and alewife fisheries. By Spencer F. Baird. Report of U. S. Commission of Fish and Fisheries for 1880 (1883), pp. 40-44.

- 13. Questions relative to the smelt and the smelt fisheries. By Spencer F. Brird. Report of U.S. Commission of Lish and Fisheries for 1880 (1883), pp. 44-49.
- 14. List of marine algae of the United States. By W. C. Farlow.
 Report of U. S. Commission of Fish and Fisheries for 1873-75
 (1876), vol. III, pp. 691-718.
- 15. Report of the Commissioner for 1873-74 and 1874-75. A.-Inquiry into the decrease of the food-fishes. B.-The propagation of food-fishes in the waters of the United States. By Spencer F. Baird. Report of U. S. Commission of Fish and Fisheries for 1873-74 and 1874-75 (1876), pp. VII-LI.
- 16. Hints for emergencies. Prepared for the use of field parties of the United States Fish Commission By J. H. Kidder, 1877, pp. 1-7.
- 17. Report of the Commissioner for 1875-76. A.-Inquiry into the decrease of food-fishes. B.-The propagation of food-fishes in the waters of the United States. By Spencer F. Baird. Report of the U. S. Commission of Fish and Fisheries for 1875-76 (1878), pp. 1-50.
- 18. History of the menhaden fisheries. By Spencer F. Baird. Report of U. S. Commission of Fish and Fisheries for 1877 (1879), pp. 1-529, plates I-XXXI.
- 19. List of the fishes of Essex County, including those of Massachusetts
 Bay, according to the latest results of the work of the U.S.
 Fish Commission. By G. Brown Goode and Tarleton H. Bean.
 (From the Bulletin of the Essex Institute, vol. XI, p. 38.)
- 20. Statistics of the coast and river fisheries. 1/By Spencer F. Baird. 1879. 4 pp.
- 21. Cheap fixtures for hatching of salmor. By Charles G. Atkins.
 Report of U. S. Commission of Fish and Fisheries for 1878
 (1880), vol. VI, pp. 945-966, 15 figs.
- 22. Returns of circular relating to fish trade and consumption of fish. By Spencer F. Baird, Francis A. Walker, and G. Brown Goode. (Published by U. S. Census Bureau. No. 7-032, 2 eds., pp. 1-34, July 8, 1879.)
- 23. Plan of inquiry into the history and present condition of the fisheries of the United States. By G. Brown Goode. Report of U. S. Commission of Fish and Fisheries for 1880 (1883), vol. VIII, pp. 3-52.
- 24. Specifications for building the screw-steamer Fish-Hawk. 1/By
 C. W. Copeland. (Published by the U. S. Lighthouse Establishment.)
 1879, 46 pp., 4 pls.

^{1/}Issued as a pamphlet only.

- 25. Report of the Commissioner for 1877. A.-Inquiry into the decrease of food-fishes. B.-Propagation of food-fishes in the waters of the United States. By S. F. Baird. Report of U. S. Commission of Fish and Fisheries for 1877 (1879), vol. V. pp. 1-48.
- 26. On artificial refrigeration. By John Gamgee. Report of U.S. Commission of Fish and Fisheries for 1877 (1879), pp. 901-972.
- 27. The carp and its culture in rivers and lakes, and its introduction into America. By Rudolph Hessel. Report of U. S. Commission of Fish and Fisheries for 1875-76 (1878), vol. IV, pp. 865-900, 6 figs.
- 28. Report of the Commissioner for 1878. A.-Inquiry into the decrease of food-fishes. B.-Propagation of food-fishes in the waters of the United States. By Spencer F. Baird. Report of U. S. Fish Commission for 1878 (1880), vol. VI, pp. XV-LXIV.
- 29. Circular in reference to shipping fresh fish and other animals.

 By Spencer F. Baird. Report of U. S. Commission of Fish and
 Fisheries for 1881. (Published by the Smithsonian Institution,
 1881, pp. 1-4.) Smithsonian Miscellaneous Collections 384.
- 30. Directions for collecting and preserving fish. By Tarleton H. Bean. Bulletin of the U. S. Fish Commission for 1883, vol. III, pp. 197-200. (1883).
- 31. The winter haddock fishery of New England. By G. Brown Goode and J. w. Collins. Bulletin of the U.S. Fish Commission for 1881 (1882), vol. I. pp. 226-235.
- 32. Report on the marine Isopoda of New England and adjacent waters.

 By Oscar Harger. Report of the U. S. Fish Commission for

 1878 (1880), vol. VI, pp. 297-462, plates I-XIII:
- 33. A report on the history and present condition of the shore cod fisheries of Cape Ann, Massachusetts, together with notes on the natural history and artificial propagation of the species. By Edward R. Earll. Report of U. S. Fish Commission for 1878 (1880), vol. VI, pp. 685-740.
- 34. Reports on the pycnogonida of New England and adjacent waters. By Edmund B. Wilson. Report of U. S. Fish Commission for 1878 (1880), vol. VI, pp. 463-506, plates I-VII.
- 35. Specifications for the paddlewheel steam seine boat Canvas-Back, for service on the bay and river fisheries. By S. F. Baird. 1882, pp. 1-12.
- 36. The marine algae of New England. By W. G. Farlow. Report of the U. S. Commission of Fish and Fisheries for 1879 (1882), vol. VII, pp. 1-210, plates I-XV.

^{2/}Issued as a pamphlet only.

- 37. Gill note in the cod fishery. A description of the Mornegian code note, with directions for their use, and a history of their introduction into the United States. By J. W. Colline. Bulletin of the U.S. Fish Commission for 1881 (1882), vol. I, pp. 1-17, plates I-XII.
- 38. Specifications for building the screw-steamer Albatress for the United States Commission of Fish and Fisheries. By Charles W. Copeland, Nov. 8, 1881. (Published by the U.S. Light-house Establishment.) pp. 1-51.
- 39. Directory of officers, collaborators, and employes of the Smithsonian Institution, National Museum, Geological Survey, and Fish Commission 3/By S. F. Baird. Jan. 1882, pp. 1-8.
- 40. Popular extracts from the investigation of the Commission for the scientific examination of the German Seas. By H. A. Meyer, K. Mobius, G. Karsten, and V. Hensen. Report of U. S. Commission of Fish and Fisheries for 1879 (1882), vol. VII, pp. 525-557, 17 figs.
- 41. List of dredging stations of the U.S. Fish Commission from 1871 to 1879, inclusive, with temperature and other observations. By Sanderson Smith and Richard Rathbun. Report of U.S. Commission of Fish and Fisheries for 1879 (1882), vol. VII, pp. 559-601.
- 42. Report on the cephalopods of the northeastern coast of America.

 By A. E. Verrill. Report of U. S. Commission of Fish and
 Fisheries for 1879 (1882), vol. VII, pp. 211-455, plates I-XLVI.
- 43. The halibut fishery, Davis Strait. By Newton P. Scudder. Report of U. S. Commission of Fish and Fisheries for 1880 (1883), pp. 189-226.
- 44. Memorandum for the construction of a harbor of refuge at Woods Hole, Massachusetts 1 By Spencer F. Baird, April 28, 1882, pp. 1-6.
- 45. Statistics of the fisheries of Maine. 2/By R. Edward Earll. U.S. Census Bulletin No. 278, Washington, pp. 1-47.
- 46. Report of the Commissioner for 1879. A.-Inquiry into the decrease of the food-fishes. B.-The propagation of food-fishes in the waters of the United States. By Spencer F. Baird. Report of U. S. Commission of Fish and Fisheries for 1879 (1882), vol. VII, pp. XI-LI.
- 47. Report of a committee of the Wyoming Historical and Geological Society on the early shad fisheries of the north branch of the Susquehanna River. By Harrison Wright, (chairman of the committee) Bulletin of U. S. Fish Commission for 1891 (1882), vol. I, pp. 352-379.

I Issued as a pamphlet only.

- 48. Descriptions of mineteen new species of fishes from the Eay of Panama. By David S. Jordan and C. H. Gilbert. Eulletin of U. S. Fish Commission for 1831 (1892), vol. I, pp. 306-335.
- 49. U. S. Commission of Fish and Fisheries. Laws and regulations by S. F. Beird. Washington, 1862, pp. 1-32.
- 50. Classification of exhibits at London, England, Fishery Exhibition by Spencer F. Baird. U. S. Commission of Fish and Fisheries, May 5, 1882. pp. 1-3.
- 51. Materials for the history of the swordfishes. By G. Brown Goode.
 Report of U. S. Commission of Fish and Fisheries for 1880 (1893),
 vol. VIII, pp. 287-294, plates I=XXIV.
- 52. Materials for a history of the mackerel fishery. By G. Brown Coode, and J. W. Collins, R. E. Earll, and A. Howard Clark. Report of U. S. Commission of Fish and Fisheries for 1881 (1884), vol. IX, pp. 91-531, 1 plate.
- 53. Inducements offered fishermen to furnish shad eggs for the U. S. Commission of Fish and Fisheries. By Spencer F. Baird. Bulletin of the U. S. Fish Commission for 1882 (1883), vol. II, pp. 389-391.
- 54. Preliminary catalogue and synopsis of the collections exhibited by the United States Fish Commission and by special exhibitors, with a concordance to the official classification of the exhibition. 4/By S. F. Baird. London, England, Exhibition, part A, pp. 1-107.
- 55. Collection of economic crustaceans, worms, echinoderms, and sponges.

 By Richard Rathbun. Great International Fisheries Exhibition,

 London, England, 1883.
- 56. Catalogue of the aquatic and fish-eating birds. 4/By Robert Ridgway. Exhibited by the U. S. National Museum. London, England, Exhibition. Part C, pp. 1-46, May 22, 1883.
- 57. Catalogue of the economic mollusca and the apparatus and appliances used in their capture and preparation for market, exhibited by the United States National Museum. 4 By Lieut. Francis Winslow, U. S. Navy. London, England, Exhibition. Part D, pp. 1-86.
- 58. The whale fishery and its appliances 4/By James Temple Brown.

 June 14, 1883. London, England, Exhibition. Part E, pp. 1-116.
- 59. Catalogue of the collections of fishes exhibited by the United States National Museum. 4/By Tarleton H. Bean. Great International Fisheries Exhibition. London, England, 1883, part F, pp. 1-124.
- 60. The Spanish mackerel, Cybium maculatum (Mitchell) Agassiz; its natural history and artificial propagation, with an account of the origin and development of the fishery. By R. E. Earll. Report of U. S. Commission of Fish and Fisheries for 1880 (1883), vol. VIII, pp. 395-426, plates I-III.

^{4/} Issued as a pamphlet only.

- ol. Specifications for the superstructure of the fishway proposed for Great Falls, Potomac River, Maryland. By Marshall McDonald. July 13, 1883, pp. 1-3.
- of food-fishes. B.-Propagation of food-fishes in the waters of the United States. By Spencer F. Baird. Report of U. S. Commission of Fish and Fisheries for 1880 (1893), vol. VIII, pp. XVII-XLVI.
- 63. Fresh-water sponges; what, where, when, and who wants them. By Edward Potts. Bulletin of the U.S. Fish Commission for 1883, vol. III, pp. 389-391, 1 fig. (1883).
- 64. Answers to one hundred and eighteen questions relating to German carp. By Charles W. Smiley. Bulletin of the U.S. Fish Commission for 1883, vol. III, pp. 241-248, 8 figs. (1883).
- 65. Report of the Commissioner for 1881. By Spencer F. Baird. Report of the Commission of Fish and Fisheries for 1881 (1884), vol. IX, pp. XIII=LXXI.
- 66. Notes on the edible qualities of German carp, and hints about cooking them. By Charles W. Smiley. Bulletin of the U. S. Fish Commission for 1883, vol. III, pp. 305-332. (1883).
- 66. The German carp, and its introduction into the United States.

 By Charles W. Smiley. Bulletin of the U.S. Fish Commission for 1883, vol. III, pp. 333-336.
- 67. Rearing oysters from artificially fertilized eggs, with note on pond culture. By John A. Ryder. Bulletin of U. S. Fish Commission for 1883, vol. III, pp. 281-294.
- 68. The Annelida Chaetopoda from Provincetown and Wellfleet,
 Massachusetts. By H. E. Webster and James E. Benedict.
 Report of U. S. Commission of Fish and Fisheries for 1881
 (1884), vol. IX, pp. 699-747, plates I-VIII.
- 69. Descriptive catalogue of the collection illustrating the scientific investigation of the sea and fresh waters. 5/By Richard Rathbun, London, England, Exhibition, part G, pp. 1-109.
- 70. Report on the construction and work in 1880 of the Fish Commission steamer Fish Hawk. By Z. L. Tanner. Report of U. S. Commission of Fish and Fisheries for 1881 (1884), vol. IX, pp. 3-52, plates I-XVIII, 3 figs.
- 71. A contribution to the embryography of osseous fishes, with special reference to the development of the cod (Gadus morrhua). By John A. Ryder. Report of Commission of Fish and Fisheries for 1882 (1884), vol. X, pp. 455-605, plates I-XII, 11 figs.

Issued as a pamphlet only.

- 72. Annual report on the electric lighting of the United States steamer Albatross, December 31, 1883. By Past Assistant Engineer G. W. Baird, U. S. N. Bulletin of the United States Fish Commission for 1884, vol. IV, pp. 153-158, 8 figs.
- 73. Annual report on the electric lighting of the U.S. F. C. steamer

 Albatross, December 31, 1883, By G. W. Baird. Bulletin of the
 Fish Commission for 1884, vol. IV, pp. 153-158, 8 figs. (1336).
- 74. Catalogue of the aquatic mammals exhibited by the United States National Museum. By Frederick W. True. London, England, Exhibition. Part H, pp. 1-22.
- 75. The status of the U. S. Fish Commission in 1884. By G. Brown Goode. Report of U. S. Commission of Fish and Fisheries for 1884 (1886), vol. XII, pp. 1139-1184.
- 76. On the preservation of embryonic materials and small organisms, together with hints upon embedding and mounting sections serially. By John A. Ryder. Report of U. S. Commission of Fish and Fisheries for 1882 (1884), vol. X, pp. 607-629.
- 77. Report of the Commissioner for 1882. By Spencer F. Baird. Report of U. S. Commission of Fish and Fisheries for 1882 (1884), vol. X, pp. XVII-XCII.
- 78. Report on the decapod crustacea of the Albatross dredgings off the east coast of the United States in 1883. By Sidney I. Smith. Report of U. S. Commission of Fish and Fisheries for 1882 (1884), vol. X, pp. 345-426, plates I-X.
- 79. Report on the work of the United States Fish Commission steamer

 Fish Hawk for the year ending December 31, 1882, and on the

 construction of the steamer Albatross. By Z. L. Tanner. Report

 of U. S. Commission of Fish and Fisheries for 1882 (1884), vol. X,

 pp. 3-34, plates I-III.
- 80. A new system of fishway building. By Marshall McDonald. Report of U. S. Commission of Fish and Fisheries for 1882 (1884), vol. X, pp. 43-52, plates I-VII.
- 81. History of the tilefish. By J. W. Collins. Report of U. S. Commission of Fish and Fisheries for 1882 (1884), vol. X, pp. 237-294-a, plates I-II.
- 82. Notes on the habits and methods of capture of various species of sea birds that occur on the fishery banks off the eastern coast of North America, and which are used as bait for catching codfish by New England fishermen. By J. W. Collins. Report of U. S. Commission of Fish and Fisheries for 1882 (1884), vol. X, pp. 311-338, plate I.

^{6/}Issued as a pamphlet only.

- 83. Notice of the remarkable marine fauna occupying the outer banks off the southern coast of New England, and of some additions to the fauna of Vineyard Sound. By A. E. Verrill. Report of U. S. Commission of Fish and Fisheries for 1882 (1884), vol. X, pp. 641-669.
- 84. Physical character of the portion of the continental border, beneath the Gulf Stream, explored by the Fish Hawk, 1880 to 1882. By A. E. Verrill. Report of U. S. Commission of Fish and Fisheries for 1882 (1884), vol. X, pp. 1045-1057, plates I-V.
- 85. Report on the distribution of carp to July 1, 1881, from young reared in 1879 and 1880. By Charles W. Smiley. Report of U. S. Commission of Fish and Fisheries for 1882 (1884), vol. X, pp. 943-1008.
- 86. List of the fishes distributed by the United States Fish Commission.

 By Tarleton H. Bean. Report of U. S. Commission of Fish and

 Fisheries for 1882 (1884), vol. X, pp. 1039-1044.
- 87. List of the fishes collected by the United States Fish Commission at Woods Hole, Massachusetts, during the summer of 1881. By Tarloton H. Bean. Report of U. S. Commission of Fish and Fisheries for 1882 (1884), vol. X, pp. 339-344.
- 88. The influence of artificial propagation upon production, illustrated by the salmon work of the Sacramento River, California. By Charles W. Smiley. Bulletin of the U. S. Fish Commission for 1884, vol. IV, pp. 201-202.
- 89. Suggestions to the keepers of the United States lifesaving stations, light-houses and light-ships, and to other observers, relative to the best means of collecting and preserving specimens of whales and porpoises. By Frederick W. True. Report of U. S. Commission of Fish and Fisheries for 1883 (1885), vol. XI, pp. 1157-1182, figs. 5, plates I-XI.
- 90. The osteology of Amia calva, including certain special references to the skeleton of teleosteans. By R. W. Shufeldt. Report of U. S. Commission of Fish and Fisheries for 1883 (1885), vol. XI, pp. 747-878, plates I-XIV.
- 91. On the cause of the greening of oysters. By M. Puységur. With a supplementary note on the coloration of the blood corpuscles of the oysters. By John A. Ryder. Report of Commission of Fish and Fisheries for 1882 (1884), vol. X, pp. 793-800.
- 92. The first decade of the U.S. Fish Commission; its plan of work and accomplished results, scientific and economical. By G. Brown Goode. Report of U.S. Commission of Fish and Fisheries for 1880 (1883), vol. VIII, pp. 53-62; (also in Bulletin of U.S. Fish Commission for 1882 (1883), vol. II, pp. 169-178.)

- 93. Specifications for building a schooner-smack I/By J. W. Collins. September 18, 1885.
- 94. A catalogue of the fishes known to inhabit the waters of North America north of the Tropic of Cancer, with notes on the species discovered in 1883, and 1884. By David S. Jordan. Report of U. S. Fish Commission for 1885 (1887), vol. XIII, pp. 789-973.
- 95. Report of the Commissioner for 1883. By Spencer F. Baird. Report of U. S. Commission of Fish and Fisheries for 1883 (1885), vol. XI, pp. XVII-XCV.
- 96. Report on the work of the U. S. Fish Commission steamer Albatross for the year ending December 31, 1883. By Z. L. Tanner. Report of U. S. Commission of Fish and Fisheries for 1883 (1885), vol. XI, pp. 117-236, plates I-III.
- 97. Explorations on the Columbia River from the head of Clark's Fork to the Pacific Ocean, made in the summer of 1883, with reference to the selection of a suitable place for establishing a salmon-breeding station. By Livingston Stone. Report of U. S. Commission of Fish and Fisheries for 1883 (1885), vol. XI, pp. 237-258.
- 98. Contributions to the knowledge of the chemical composition and nutritive values of American food-fishes and invertebrates. By W. O. Atwater. Report of U. S. Commission of Fish and Fisheries for 1883 (1885), vol. XI, pp. 433-499, 2 colored plates.
- 99. Results of the explorations made by the steamer Albatross off the northern coast of the United States in 1883. By A. E. Verrill. Report of U. S. Commission of Fish and Fisheries for 1883 (1885), vol. XI, pp. 503-699, plates I-XLIV.
- 100. List of deep-water mollusca dredged by the U.S. Fish Commission Steamer Fish Hawk in 1880, 1881, 1882, with their range in depth. By Katherine J. Bush. Report of U.S. Commission of Fish and Fisheries for 1883 (1885), vol. XI, pp. 701-727.
- 101. Oligochaetological researches. By Gustav Eisen. Report of U. S. Commission of Fish and Fisheries for 1883 (1885), vol. XI, pp. 879-964, plates I-XIX.
- 102. The aqua-vivarium as an aid to biological research. By William P. Seal. Report of U. S. Commission of Fish and Fisheries for 1883 (1885), vol. XI, pp. 965-969, plates I-III.
- 103. Utilizing water by fish-culture. By Berthold Benecke. Report of U. S. Commission of Fish and Fisheries for 1883 (1885), vol. XI, pp. 1101-1131, plates I-V.

I/Issued as a pamphlet only.

- 104. An exposition of the principles of a rational system of eyster culture, together with an account of a new and practical method of obtaining eyster spat on a scale of commercial importance.

 By John A. Ryder. Report of U. S. Fish Commission for 1885 (1887), vol. XIII, pp. 381-423, plates I-IV.
- 105. Report on the decapod crustacea of Albatross dredgings off the east coast of the United States during the summer and autumn of 1884. By Sidney I. Smith. Report of U. S. Fish Commission for 1885 (1887), vol. XIII, pp. 605-705, plates I-XX.
- 106. On the development of osseous fishes, including marine and fresh water forms. By John A. Ryder. Report of the U. S. Fish Commission for 1885 (1887), vol. XIII, pp. 489-604, figs. 7, plates I-XXX.
- 107. Report on the construction and outfit of the United States Fish
 Commission Steamer Albatross. By Z. L. Tanner. Report of
 U. S. Commission of Fish and Fisheries for 1883 (1885), vol. XI,
 pp. 3-116, figs. 19, plates I-IV.
- 108. Report of the Commissioner for 1884. By Spencer F. Baird. Report of U. S. Commission of Fish and Fisheries for 1884 (1886), vol. XII, pp. XIII-LXXI.
- 109. Specifications for Albatross (new boilers) By Spencer F. Baird.
- 110. Report on the work of the U. S. Fish Commission steamer Albatross for the year ending December 31, 1884. By Z. L. Tanner.

 Report of the U. S. Commission of Fish and Fisheries for 1884 (1886), vol. XII, pp. 3-116, plates I-III.
- 111. Pond culture. By Carl Nicklas. Report of U. S. Commission of Fish and Fisheries for 1884 (1886), vol. XII, pp. 467-655, figs. 44.
- 112. Some results of carp-culture in the United States. By Charles W. Smiley. Report of U. S. Commission of Fish and Fisheries for 1884 (1886), vol. XII, pp. 657-890.
- 113. Report on the medusae collected by the U. S. Fish Commission steamer Albatross in the region of the Gulf Stream in 1883-54. By J. Walter Fewkes. Report of the U. S. Commission of Fish and Fisheries for 1884 (1886), vol. XII, pp. 927-980, plates I-X.
- 114. On the origin of heterocercy and the evolution of the fins and fin-rays of fishes. By John A. Ryder. Report of U. S. Commission of Fish and Fisheries for 1884 (1886), vol. XII, pp. 981-1107, figs. 8, plates I-XI.
- 115. Report of the Commissioner for 1885. By Spencer F. Baird. Report of U. S. Fish Commission for 1885 (1887), vol. XIII, pp. XIX-CXII.

^{8/}Issued as a pamphlet only.

- 116. Report on the therometers of the United States Commission of Fish and Fisheries. By J. H. Kidder. Report of the U. S. Fish Commission for 1885 (1887), vol. XIII, pp. 185-213, figs. 20.
- 117. The Annelida Chaetopoda from Provincotown and Wellfleet, Massachusetts.

 By H. E. Webster and James E. Benedict. Report of U. S. Commission of Fish and Fisheries for 1881 (1884), vol. IX, pp. 699-747.
- 118. Report on the work of the United States Fish Commission steamer,

 Albatross for the year ending December 31, 1885. By Z. L. Tanner.

 Report of the U. S. Fish Commission for 1885 (1887), vol. XIV,

 pp. 3-89, figs. 9, plates I-V.
- 119. Report of the discovery and investigation of the fishing grounds made by the Fish Commission steamer Albatross, during the cruise along the Atlantic Coast and in the Gulf of Mexico, with notes on the Gulf fisheries. By J. W. Collins. Report of the U. S. Fish Commission for 1885 (1887), vol. XIII, pp. 217-311, plates I-X.
- 120. On the development of the cetacea, together with a consideration of the probable homologies of the flukes of cetaceans and sirenians. By John A. Ryder. Report of the U. S. Fish Commission for 1885 (1887), vol. XIII, pp. 427-488, figs. 3, plates I-III.
- 121. Provisional regulations of the United States Commission of Fish and Fisheries. 9/By G. Brown Goode. November 1, 1887, pp. 1-12.
- 122. Report on the fishes observed in Great Egg Harbor Bay, New Jersey, during the summer of 1887. By Tarleton H. Bean. Bulletin of the U. S. Fish Commission for 1887 (1888), vol. VII, pp. 129⊶154, plates I-III.
- 123. The American sardine industry in 1886. By Edward R. Earll, and Hugh M. Smith. Bulletin of the U. S. Fish Commission for 1887 (1888), vol. VII. pp. 161-192.
- 124. List of the dredging stations of the U. S. Fish Commission, the U. S. Coast Survey, and the British steamer Challenger, in North American waters, from 1867 to 1887, together with those of the principal European government expeditions in the Atlantic and Arctic oceans. By Sanderson Smith. Report of the U. S. Fish Commission for 1886 (1889), vol. XIV, pp. 871-1017, charts 6, diagrams 3.
- 125. The sea fisheries of eastern North America. By Spencer F. Baird. Report of the U. S. Fish Commission for 1886 (1889), vol. XIV, pp. 3-224.
- 126. A review of the flounders and soles (Pleuronectidae) of America and Europe. By David S. Jordan and David K. Goss. Report of the U. S. Fish Commission for 1886 (1889), vol. XIV, pp. 225-342, plates I-IX.

Issued as a pamphlet only.

- 127. A review of the Sciaenidae of America and Europe. By David S.

 Jordan and Carl H. Eigenmann. Report of the U. S. Fish

 Commission for 1886 (1889), vol. XIV, pp. 343-451, plates I-IV.
- 128. Notes on entozoa of marine fishes of New England, with description of several new species. By Edwin Linton. Report of the U.S. Fish Commission for 1886 (1889), vol. XIV, pp. 453-511, plates I-VI.
- 129. Report on the medusae collected by the U. S. Fish Commission steamer

 Albatross in the region of the Gulf Stream in 1885-86. By

 J. Walter Fewkes. Report of the U. S. Fish Commission for

 1886 (1889), vol. XIV, pp. 513-536, plate I.
- 130. Report on the work of the U. S. Fish Commission steamer Albatross for the year ending December 31, 1886. By Z. L. Tanner. Report of the U. S. Fish Commission for 1886 (1889), vol. XIV, pp. 605-692, plates I=X.
- 131. Report of operations at the Wytheville Station, Virginia, from January 1, 1835, to June 30, 1887. By Marshall McDonald. Report of the U. S. Fish Commission for 1886 (1889), vol. XIV, pp. 793-800, plates I-VI.
- 132. The beam-trawl fishery of Great Britain, with notes on beam-trawling in other European countries. By J. W. Collins. Bulletin of the U. S. Fish Commission for 1887 (1889), vol. VII, pp. 289-407, figs. 34, plates I-XXIII.
- 133. The aquarium. A brief exposition of its principles and management.

 By William P. Seal. Bulletin of the U. S. Fish Commission for 1887 (1889), vol. VII, pp. 274-282.
- 134. Report of the Commissioner for 1886. By Spencer F. Baird. Report of the U. S. Fish Commission for 1886 (1889), vol. XIV, pp. IX-LVII.
- 135. Explorations of the fishing grounds of Alaska, Washington Territory, and Oregon during 1888 by the United States Fish Commission steamer Albatross. By Z. L. Tanner. Bulletin of the U. S. Fish Commission for 1888 (1890), vol. VIII, pp. 1-95, plates I-XII.
- 136. Report of explorations made during 1888, in the Allegheny region of Virginia, North Carolina, and Tennessee, and in western Indiana, with an account of the fishes found in each of the river basins of those regions. By David S. Jordan. Bulletin of the U. S. Fish Commission for 1888 (1890), vol. VIII, pp. 97-173, plates XIII-XV.
- 137. Suggestions for the employment of improved types of vessels in the market fisheries, with notes on British fishing steamers. By J. W. Collins. Bulletin of the U. S. Fish Commission for 1888 (1890), vol. VIII, pp. 175-192, plates XVI-XXVII.

- 138. Notes on the fishes collected at Cozumol, Yucatan, by the U.S. Fish Commission, with descriptions of new species. By Tarleton H. Bean. Bulletin of the U.S. Fish Commission for 1888 (1890), vol. VIII, pp. 193-206, plates XXVIII-XXIX.
- 139. The most recent method of hatching fish eggs. By William F. Page.
 Bulletin of the U. S. Fish Commission for 1888 (1890), vol. VIII,
 pp. 207-218, figs. 4, plates XXX-XXXVI.
- 140. Review of the fisheries of the Great Lakes in 1885, compiled by Hugh M. Smith and Merwin-Marie Snell, with introduction and description of fishing vessels and boats by J. W. Collins. Report of the U. S. Fish Commission for 1887 (1891), vol. XV, pp. 3-333, plates I-XLV.
- 141. A report upon the fishes of Kalamazoo, Calhoun, and Antrim counties, Michigan. By Charles H. Bollman. Bulletin of the U. S. Fish Commission for 1888 (1891), vol. VIII, pp. 219-225.
- 142. Notes on the fishes from the lowlands of Georgia, with a description of a new species (Opsopoeodus bollmani). By Charles H. Gilbert. Bulletin of the U. S. Fish Commission for 1888 (1891), vol. VIII, pp. 225-229.
- 143. The sturgeon and sturgeon industries of the eastern coast of the United States, with an account of experiments bearing upon sturgeon culture. By John A. Ryder. Bulletin of the U. S. Fish Commission for 1888 (1891), vol. VIII, pp. 231-328, plates XXXVII-LIX.
- 144. A review of the genera and species of the Serranidae found in the waters of America and Europe. By David S. Jordan and Carl H. Eigenmann. Bulletin of the U. S. Fish Commission for 1883 (1891), vol. VIII. pp. 329-441, plates LX-LXIX.
- 145. Report on the proposed introduction of the Jamaica mountain mullet into the United States. By Tarleton H. Bean. Bulletin of the U. S. Fish Commission for 1888 (1891), vol. VIII, pp. 443-451,
- 146. The transplanting of lobsters to the Pacific Coast of the United States. By Richard Rathbun. Bulletin of the U.S. Fish Commission for 1888 (1891), vol. VIII, pp. 453-472, plate LXXI.
- 147. Preliminary report on the invertebrate animals inhabiting Lakes
 Geneva and Mendota, Wisconsin, with an account of the fish
 epidemic in Lake Mendota in 1884. By S. A. Forbes. Bulletin
 of the U. S. Fish Commission for 1888 (1890), vol. VIII,
 pp. 473-487, plates LXXII-LXXIV.
- 148. Report of explorations in Colorado and Utah during the summer of 1889, with an account of the fishes found on each of the river basins examined. By David Starr Jordan. Bulletin of the U. S. Fish Commission for 1889 (1891), vol. IX, pp. 1-40.

- 149. A reconnaissance of the streams and lakes of the Yellowstone National Park, Wyoming, in the interest of the U.S. Fish Commission. By David S. Jordan. Bulletin of the U.S. Fish Commission for 1889 (1891), vol. IX, pp. 41-63, plates VI-XXII.
- 150. On two species of larval dibothria from the Yellowstone National Park. By Edwin Liuton. Bulletin of the U.S. Fish Commission for 1889 (1891), vol. IX, pp. 65-79, plates XXIII-XXVII.
- 151. The artificial propagation of sturgeon in Schleswig-Holstein,
 Germany. Bulletin of the U.S. Fish Commission for 1889 (1891),
 vol. IX, pp. 81-90.
- 152. Report upon the pearl fishery of the Gulf of California. By Charles H. Townsend. Bulletin of the U. S. Fish Commission for 1889 (1891), vol. IX, pp. 91~94, plates XXVIII XXX.
- 153. Report upon certain investigations relating to the planting of oysters in southern California. By Charles H. Gilbort.

 Bulletin of the U. S. Fish Commission for 1889 (1891), vol. IX, pp. 95-98, plates XXXI-XXXIV.
- 154. On certain wart-like excrescences occurring on the short minnow (Cyprinodon variegatus) due to processerms. By Edwin Linton. Bulletin of the U.S. Fish Commission for 1889 (1891), vol. IX, pp. 99-102, plate XXXV.
- 155. Notes on the crab fishery of Crisfield, Maryland. By Hugh M. Smith. Bulletin of the U. S. Fish Commission for 1889 (1891), vol. IX, pp. 103-112, plates XXXVI-XLI.
- 156. Report of explorations made in Missouri and Arkansas during 1889, with an account of the fishes observed in each of the river basins examined. By Seth Eugene Meek. Bulletin of the U.S. Fish Commission for 1889 (1891), vol. IX, pp. 113-141, plate XLII.
- 157. Report of explorations made in Alabama during 1889, with notes on the fishes of the Tennessee, Alabama, and Escambia rivers. By Charles H. Gilbert. Bulletin of the U. S. Fish Commission for 1889 (1891), vol. IX, pp. 143-159, plate XLIII.
- 158. Notes on an improved form of cyster tongs. By Hugh M. Smith.
 Bulletin of the U. S. Fish Commission for 1889 (1891), vol. IX,
 pp. 161-163, plate XLIV.
- 159. Report on the salmon and salmon rivers of Alaska, with notes on the conditions, methods, and needs of the salmon fisheries.

 By Tarleton H. Bean. Bulletin of the U. S. Fish Commission for 1889 (1891), vol. IX, pp. 165-208, plates XIV-LXXXVII.

- 160. The embryology of the sea bass (Serranus atrarius). By Henry V. Wilson. Bulletin of the U. S. Fish Commission for 1839 (1891), vol. IX, pp. 209-277, plates LXXXVIII-CVII.
- 161. The fishing-grounds of Bristol Bay, Alaska: A preliminary report upon the investigations of the U. S. F. C. steamer Albatross during the summer of 1890. By Z. L. Tanner. Bulletin of the U. S. Fish Commission for 1889 (1891), vol. IX, pp. 279-288, plates CVIII-CX.
- 162. Report upon an investigation of the fishing-grounds off the west coast of Florida. By A. C. Adams and W. C. Kendall. Bulletin of the U. S. Fish Commission for 1889 (1891), vol. IX, pp. 289-312, 2 figs., plate CKI.
- 163. The giant-scallop fishery of Maine. By Hugh M. Smith. Bulletin of the U.S. Fish Commission for 1889 (1891), vol. IX, pp. 313-335, plates CXII-CXVI.
- 164. A contribution to the life history of <u>Dibothrium cordiceps</u> Leidy, a parasite infesting the trout of <u>Yellowstone Lake.</u> By Edwin Linton. Bulletin of the U.S. Fish Commission for 1889 (1891), vol. IX, pp. 337-358, plates CXVII-CXIX.
- 165. Notice of the occurrence of protozoan parasites (psorosperms) on cyprinoid fishes in Ohio. By Edwin Linton. Bulletin of the U.S. Fish Commission for 1889 (1891), vol. IX, pp. 359-361, plate CXX.
- 166. Notes on the king-crab fishery of Delaware Bay. By Hugh M. Smith. Bulletin of the U. S. Fish Commission for 1889 (1891), vol. IX, pp. 363-570, plates CXXI-CXXIII.
- 167. Report upon a collection of fishes made in southern Florida during 1889. By James Henshall. Bulletin of the U.S. Fish Commission for 1889 (1891), vol. IX, pp. 371-389.
- 168. Report upon a physical investigation of the waters off the southern coast of New England, made during the summer of 1889 by the U. S. F. C. schooner Grampus. By William Libbey, Jr. Bulletin of the U. S. Fish Commission for 1889 (1891), vol. IX, pp. 391-459, 1 fig., plates CXXIV-CLVIII.
- 169. Notes on the oyster fishery of Connecticut. By J. W. Collins.
 Bulletin of the U. S. Fish Commission for 1889 (1891), vol. IX,
 pp. 461-497, plates CLIX-CLXVI.
- 170. Report on the work of the U.S.F.C. steamer Albatross, from January 1, 1887, to June 30, 1888. By Z. L. Tanner. Report of the U.S. Fish Commission for 1887-88 (1891), vol. XV, pp. 371-435, plates I-IV.

- 171. Report upon the construction and equipment of the schooner Grampus. By J. W. Collins. Report of the U. S. Fish Commission for 1887 (1891), vol. XV, pp. 437-490, 5 figs., plates I=XVIII.
- 172. Report of the operations of the U. S. Fish Commission schooner

 Grampus from March 15, 1887, to June 30, 1888. By J. W.

 Collins and D. E. Collins. Report of the U. S. Fish Commission for 1887 (1891), vol. XV, pp. 491-598, plates I-XVI.
- 173. A review of the labroid fishes of America and Europe. By David S. Jordan. Report of the U. S. Fish Commission for 1887 (1891), vol. XV, pp. 599-699, plates I-XI.
- 174. On some Lake Superior Entomostraca. By S. A. Forbes. Report of the U. S. Fish Commission for 1887 (1891), vol. XV, pp. 701-718, plates I-IV.
- 175. Notes on entozoa of marine fishes of New England, with description of several new species. By Edwin Linton. Part II. Report of the U.S. Fish Commission for 1887 (1891), vol. XV, pp. 719-899, plates I-XV.
- 176. Report of the Commissioner. By Marshall McDonald. Report of the U.S. Fish Commission for 1887 (1891), vol. XV, pp. I-IXIII,
- 177. Statistical review of the coast fisheries of the United States.

 By J. W. Collins. Report of the U. S. Commission of Fish
 and Fisheries for 1888 (1892), vol. XVI, pp. 271-378.
- 178. Report on the fisheries of the Pacific coast of the United States.

 By J. W. Collins. Report of U. S. Commission of Fish and
 Fisheries for 1888 (1892), vol. XVI, pp. 3-269.
- 179. Report of distribution of fish and eggs from July 1, 1888, to
 June 30, 1889. Report of U. S. Commission of Fish and Fisheries
 for 1888 (1892), vol. XVI, pp. 379-394.
- 180. Report upon the investigations of the U.S. steamer Albatross for the year ending June 30, 1889. By Z.L. Tanner. Report of the U.S. Commission of Fish and Fisheries for 1888 (1892), vol. XVI, pp. 395-512, plates L-LII.
- 181. Report of operations at the laboratory of the U. S. Fish Commission, Woods Hole, Mass., during the summer of 1888. By John A. Ryder. Report of the U. S. Fish Commission for 1888 (1892), vol. XVI, pp. 513-522.
- 182. Notes on entozoa of marine fishes, with description of new species (Acanthocephala). By Edwin Linton. Report of the U. S. Commission of Fish and Fisheries for 1888 (1892), vol. XVI, pp. 523-542, plates LIII-LX.

- 183. On the anatomy of Thysanocephalum crisnum, a parasite of the tiger shark. By Edwin Linton. Report of the U. S. Commission of Fish and Fisheries for 1888 (1892), vol. XVI, pp. 543-556, plates LXI-LXVII.
- 184. A preliminary review of the apodal fishes or eels inhabiting the waters of America and Europe. By David S. Jordan and Bradley Moore Davis. Report of the U. S. Commission of Fish and Fisheries for 1888 (1892), vol. XVI, pp. 531-677, plates LXXIII-LXXX.
- 185. The chemical composition and nutritive values of food-fishes and aquatic invertebrates. By W. O. Atwater. Report of the U. S. Commission of Fish and Fisheries for 1888 (1892), vol. XVI. pp. 679-868, plates LXXXI-LXXXIX.
- 186. Observations on the aquaria of the U. S. Fish Commission at Central Station, Washington, D. C. By William P. Seal. Bulletin of the U. S. Fish Commission for 1890 (1892), vol. X, pp. 1-12, figs. 2, plates I-IV.
- 187. The fishing vessels and boats of the Pacific coast. By J. W. Collins. Bulletin of U. S. Fish Commission for 1890 (1892), vol. X, pp. 13-48, figs. 4, plates V-XVII.
- 188. Observations upon fishes and fish-culture. By Tarleton H. Bean. Bulletin of the U. S. Fish Commission for 1890 (1892), vol. X, pp. 49-61.
- 189. Notes on a collection of fishes from the lower Potomac River.

 By Hugh M. Smith. Bulletin of the U. S. Fish Commission for 1890 (1892), vol. X, pp. 63-72, plates XVIII-XX.
- 190. A review of the Centrarchidae or fresh-water sunfishes of North America. By Charles H. Bollman. Report of the U. S. Commission of Fish and Fisheries for 1888 (1892), vol. XVI, pp. 557-579, plates LXVIII-LXXII.
- 191. Report upon the participation of the U.S. Fish Commission in the Centennial Exposition held at Cincinnati, Ohio, in 1888.

 By J. W. Collins. Report of the U.S. Commission of Fish and Fisheries for 1888 (1892), vol. XVI, pp. 869-885, plate XC.
- 192. Report of the Commissioner for 1888 (including divisional reports) for fiscal year ending June 30, 1889. By Marshall McDonald. Report of the Commission of Fish and Fisheries for 1888 (1892), vol. XVI, pp. IX-CXXVIII.
- 193. Report on the fisheries of the New England States. By J. W. Collins and Hugh M. Smith. Bulletin of the U. S. Fish Commission for 1890 (1892), vol. X, pp. 73-176.

- 194. Report on an investigation of the fisheries of Lake Cutario.

 By Hugh M. Smith. Bulletin of the U. S. Fish Commission
 for 1890 (1892), vol. X, pp. 177-215, plates XXI-L.
- 195. A report upon the fisheries of Iowa based upon observations and collections made during 1889, 1890, and 1891. By Seth E. Meek. Bulletin of the U. S. Fish Commission for 1890 (1892), vol. X, pp. 217-248.
- 196. Report of an examination of the rivers of Kentucky with lists of the fishes obtained. By Albert J. Woolman. Bulletin of the U. S. Fish Commission for 1890 (1892), vol. X, pp. 249-288, plate L.
- 197. Notes on the streams and fishes of Clinton County, Ky., with a description of a new darter. By Philip H. Kirsch. Bulletin of the U. S. Fish Commission for 1890 (1892), vol. X, pp. 289-292, 1 fig.
- 198. Report upon the rivers of central Florida tributary to the Gulf of Mexico, with lists of fishes inhabiting them. By Albert J. Woolman. Bulletin of the U. S. Fish Commission for 1890 (1892), vol. X, pp. 293-302, plates LII-LIII.
- 199. An investigation of the coast waters of South Carolina with reference to oyster culture. By John D. Battle. Bulletin of the U. S. Fish Commission for 1890 (1892), vol. X, pp. 303-330, plates LIV-IX.
- 200. Report on the salmon fisheries of Alaska. By Marshall McDonald. Bulletin of the U. S. Fish Commission for 1892 (1894), vol. XII, pp. 1-49, plates I-IX.
- 201. Observations on the hatching of the yellow perch. By S. G.
 Worth. Bulletin of the U. S. Fish Commission for 1890 (1892),
 vol. X, pp. 331-334, plate LXI.
- 202. The physical and biological characteristics of the natural oyster-grounds of South Carolina. By Bashford Dean. Bulletin of the U. S. Fish Commission for 1890 (1892), vol. X, pp. 335-361, plates LXII-LXVIII.
- 203. The present methods of oyster-culture in France. By Bashford Dean. Bulletin of the U. S. Fish Commission for 1890 (1892), vol. X, pp. 363-388, figs. 2, plates LXIX-LXXVII.
- 204. A contribution to our knowledge of the morphology of lamellibranchiate mollusks. By James L. Kellogg. Bulletin of the U. S. Fish Commission for 1890 (1892), vol. X, pp. 389-436, plates LXXIX-XCIV.

- 205. A reconnaissance of the streams and lakes of western Montana and northwestern Wyoming. By Barton W. Evermann. Bulletin of the U. S. Fish Commission for 1891 (1893), vol. XI, pp. 3-60, plates I-XXVII.
- 205. A report upon investigations made in Texas in 1891. By Barton W. Evermann. Bulletin of the U. S. Fish Commission for 1891 (1893), vol. XI, pp. 61-90, plates XXVIII-XXXVI.
- 205. Report on the establishment of fish-culture stations in the Rocky Mountain region and Gulf states. By Barton W. Evermann. Bulletin of the U. S. Fish Commission for 1891 (1893), vol. XI, pp. 1-90 plates XXVIII-XXXVI.
- 206. A statistical report on the fisheries of the Gulf States.

 By J. W. Collins and Hugh M. Smith. Bulletin of the U. S.

 Fish Commission for 1891 (1893), vol. XI, pp. 93-184.
- 207. Description of a new sucker, Pantosteus jordani, from the Upper Missouri Basin. By Barton W. Evermann. Bulletin of the U.S. Fish Commission for 1892 (1893), vol. XII, pp. 51-56, 1 fig.
- 208. Report on a collection of fishes from the Albemarle region of North Carolina. By Hugh M. Smith. Bulletin of the U.S. Fish Commission for 1891 (1893), vol. XI, pp. 185-200.
- 209. Observations on the spawning habits of the shad. By S. G. Worth. Bulletin of the U. S. Fish Commission for 1891 (1893), vol. XI, pp. 201-206.
- 210. A preliminary report on the aquatic invertebrate fauna of the Yellowstone National Park, Wyoming, and of the Flathead region of Montana. By S. A. Forbes. Bulletin of the U. S. Fish Commission for 1891 (1893), vol. XI, pp. 207-258, plates XXXVII-XLII.
- 211. Notes on a collection of fishes from the southern tributaries of the Cumberland River in Kentucky and Tennessee. By Philip H. Kirsch. Bulletin of the U. S. Fish Commission for 1891 (1893), vol. XI, pp. 259-267.
- 212. Report on the fisheries of the South Atlantic States. By
 Hugh M. Smith. Bulletin of the U. S. Fish Commission for
 1891 (1893), vol. XI, pp. 271-356, plates XLIII-LXXIV.
- 213. Report of the Commissioner for 1889 to 1890 and 1890 to 1891.

 By Marshall McDonald. Report of the Commission of Fish and
 Fisheries for 1889 to 1891 (1893), vol. XVII, pp. 1-204.

- 214. Report upon the European methods of ojetor-sulture. And Party J. Dean. Bulletin of the U.S. Fish Commission for 1891 (1863), vol. XI, pp. 357-406, figs. 2, plates I ZZV-LXXLVIII.
- 215. On the classification of the myxosporidia, a group of protogodo parasites infesting fishes. By R. R. Gurley. Bulletin of the U. S. Fish Commission for 1891 (1893), vol. 41, pp. 407-420.
- 216. Report upon the investigations of the U.S.F.C. steamer

 Albatross from July 1, 1889 to June 30, 1891. By Z.L.

 Tanner. Report of the U.S. Commission of Fish and Fisheries
 for 1889 to 1891 (1893), vol. XVII, pp. 207-241, plates I-II.
- 217. Report of observations respecting the oyster resources and oyster fishery of the Pacific coast of the United States. By C. H. Townsend. Report of the U. S. Commission of Fish and Fisheries for 1889-1891 (1893), vol. XVII, pp. 343-372, plates 3-12.
- 218. Report on the coast fisheries of Texas. By Charles H. Stevenson. Report of the U. S. Commission of Fish and Fisheries for 1889-1891 (1893), vol. XVII, pp. 373-420, plates 13-27.
- 219. A review of the sparoid fishes of America and Europe. By David S. Jordan and Bert Fesler. Report of the U. S. Commission of Fish and Fisheries for 1889-1891 (1893), vol. XVII, pp. 421-544, plates 28-62.
- 220. On fish entozoa of Yellowstone National Park. By Edwin Linton. Report of the U.S. Commission of Fish and Fisheries for 1889-1891 (1893), vol. XVII, pp. 545-564, plates 63-67.
- 221. Planktonic studies: A comparative investigation of the importance and constitution of the pelagic fauna and flora. By Ernst Haeckel. Report of the U. S. Commission of Fish and Fisheries for 1889-1891 (1893), vol. XVII, pp. 565-641.
- 222. Natural history of the useful aquatic reptiles and batrachians of the United States. By Frederick W. True. Extracted from section one of The Fisheries and Fishery Industries of the United States, (1884), pp. 141-162.
- 223. Natural history of mollusks in general. By Ernest Ingersoll.

 Extracted from section one of The Fisheries and Fishery
 Industries of the United States, (1884), pp. 687-710, plates
 253-258.
- 224. Natural history of economic crustaceans. By Richard Rathbun. Extracted from section one of The Fisheries and Fishery Industries of the United States, (1884), pp. 763-850, plates 260-277.

- 225. The fishes of Texas and the Rio Grande Lasin, considered chiefly with reference to their geographic distribution. By Fracon be Evermann and William C. Kendall. Bulletin of the U. S. Fish Commission for 1892 (1894), vol. XII, pp. 57-126, plates X to L.
- 226. The fyke-nets and fyke-net fisheries of the United States, with notes on the fyke-nets of other countries. By Hugh M. Salth. Bulletin of the U. S. Fish Commission for 1892 (1894), vol. XII, pp. 299-356, plates LXII-XCI.
- 227. The oyster industry of Maryland. By Charles H. Stevenson.

 Bulletin of the U. S. Fish Commission for 1892 (1894), vol. XII,

 pp. 203-299, plates LVI-LXXI.
- 228. Summary of the fishery investigations conducted in the North Pacific Ocean and Bering Sea, from July 1, 1888 to July 1, 1892, by The U. S. F. C. steamer Albatross. By Richard Rathbun. Bulletin of the U. S. Fish Commission for 1892 (1894), vol. XII, pp. 127-201, plates II to LV.
- 229. List of fishes collected at Sea Isle City, New Jersey, during the summer of 1892. By H. F. Moore, Bulletin of the U. S. Fish Commission for 1892 (1894), vol. XII, pp. 357-364.
- 230. Economic and natural-history notes on fishes of the northern coast of New Jersey. By Hugh M. Smith. Bulletin of the U. S. Fish Commission for 1892 (1894), vol. XII, pp. 365-380.
- 231. On the viviparous fishes of the Pacific coast of North America. By Carl H. Eigenmann. Bulletin of the U. S. Fish Commission for 1892 (1894), vol. XII, pp. 381-478, plates XCII-CXVIII.
- 232. Notes on two hitherto unrecognized species of American whitefishes.

 By Hugh M. Smith. Bulletin of the U. S. Fish Commission for 1894 (1895), vol. XIV, pp. 1-13, 1 plate.
- 233. Extension of the recorded range of certain marine and fresh-water fishes of the Atlantic coast of the United States. By W. C. Kendall and Hugh M. Smith. Bulletin of the U. S. Fish Commission for 1894 (1895), vol. XIV, pp. 15-21.
- 234. Notes on fishes from the basin of the MacKenzie River, in British America. By Charles H. Gilbert. Bulletin of the U. S. Fish Commission for 1894 (1895), vol. XIV, pp. 23-25.
- 234. An American fish in Finland. By Oscar Nordquist. Bulletin of the U. S. Fish Commission for 1894 (1895), vol. XIV, pp. 27-28.
- 234. Two fertile cyprinoid hybrids. By Karl Knauthe. Bulletin of the U. S. Fish Commission for 1894 (1895), vol. XIV, pp. 29-30.

- 235. Report upon explorations made in Eel River Basin, in the northeastern part of Indiana, in the summer of 1892. By Philip H. Kirsch. Bulletin of the U.S. Fish Commission for 1894 (1895), vol. XIV, pp. 31-41.
- 236. Notes on the fresh-water fishes of Washington County, Meine.
 By William C. Kendall. Bulletin of the U. S. Fish
 Commission for 1894 (1895), vol. XIV, pp. 43-54.
- 237. World's Fisheries Congress (Report of the Secretary of the General Committee). By Tarleton H. Bean. Bulletin of the U. S. Fish Commission for 1893 (1894), vol. XIII, pp. 1-14.
- 238. The assimilation of the fishery laws of the Great Lakes.

 By G. A. MacCallum. Bulletin of the U. S. Fish Commission for 1893 (1894), vol. XIII, pp. 17-20.
- 239. The decrease of food-fishes in American waters, and some of the causes. By A. M. Spangler. Bulletin of the U. S. Fish Commission for 1893 (1894), vol. XIII, pp. 21-35.
- 240. The sea and coast fisheries. By Daniel T. Church. Bulletin of the U.S. Fish Commission for 1893 (1894), vol. XIII, pp. 37-38.
- 241. Our ocean fishes and the effect of legislation upon the fisheries. By J. M. K. Southwick. Bulletin of the U. S. Fish Commission for 1893 (1894), vol. XIII, pp. 39-45.
- 242. The past, present, and future of trout culture. By W. L. Gilbert. Bulletin of the U. S. Fish Commission for 1893 (1894), vol. XIII, pp. 47-48.
- 243. The relation of scientific research to economic problems.

 By G. Brown Goode. Bulletin of the U. S. Fish Commission for 1893 (1894), vol. XIII, pp. 49-58.
- 244. Biological research in relation to the fisheries. By John A. Ryder. Bulletin of the U. S. Fish Commission for 1893 (1894), vol. XIII, pp. 59-63.
- 245. On the influence of light on the periodical depth migration of pelagic animals. By Jacques Loeb. Bulletin of the U. S. Fish Commission for 1893 (1894), vol. XIII, pp. 65-68.
- 246. The investigation of rivers and lakes with reference to fish environment. By B. W. Evermann. Bulletin of the U. S. Fish Commission for 1893 (1894), vol. XIII, pp. 69-73.

- 247. The habits and development of the lobster, and their bearing upon its artificial propagation. By Francis H. Herrick. Bulletin of the U. S. Fish Commission for 1893 (1894), vol. XIII. pp. 75-86.
- 248. The origin of the food of marine animals. By W. K. Brooks. Bulletin of the U. S. Fish Commission for 1893 (1894), vol. XIII, pp. 87-92.
- 249. Atmospheric and other influences on the migration of fishes.

 By J. J. Armistead. Bulletin of the U. S. Fish Commission for 1893 (1894), vol. XIII, pp. 93-99.
- 250. Some observations concerning fish parasites. By Edwin Linton. Bulletin of the U. S. Fish Commission for 1893 (1894), vol. XIII. pp. 101-126, plates 1-8.
- 251. On the food of the menhaden. By James I. Peck. Bulletin of the U. S. Fish Commission for 1893 (1894), vol. XIII, pp. 113-126, plates 1-8.
- 252. Some plankton studies in the Great Lakes. By Jacob E. Reighard. Bulletin of the U. S. Fish Commission for 1893 (1894), vol. XIII, pp. 127-142, plates 9 and 10.
- 253. The aquarium of the U.S. Fish Commission at the World's Columbian Exposition. By S. A. Forbes. Bulletin of the U.S. Fish Commission for 1893 (1894), vol. XIII, pp. 143-158.
- 253. Description of the fresh and salt water supply and pumping plants used for the aquarium. By I. S. K. Reeves. Bulletin of the U. S. Fish Commission for 1893 (1894), vol. XIII, pp. 159-161.
- 253. Observations and experiments on saprolegnia infesting fish.

 By G. P. Clinton. Bulletin of the U. S. Fish Commission for 1893 (1894), vol. XIII, pp. 153-172.
- 253. Report on a parasitic protozoan observed on fish in the aquarium.

 By Charles Wardell Stiles. Bulletin of the U. S. Fish

 Commission for 1893 (1894), vol. XIII, pp. 173-190, plates
 11 and 12.
- 254. Statistical review of fish-culture in Europe and North America.

 By N. Borodine. Bulletin of the U. S. Fish Commission for 1893 (1894), vol. XIII, pp. 193-196.
- 255. Some notes about American fish-culture. By Oscar Nordqvist.
 Bulletin of the U. S. Fish Commission for 1893 (1894),
 vol. XIII, pp. 197-200.

- 256. Fish-culture in Michigan. By Hoyt Post. Bulletin of the U.S. Fish Commission for 1893 (1894), vol. XIII, pp. 201-211.
- 257. History and methods of white-fish culture. By Frank N. Clark.
 Bulletin of the U. S. Fish Commission for 1893 (1894),
 vol. XIII. pp. 213-220.
- 258. Methods employed at Craig Brook Station in rearing young salmonoid fishes. By Charles G. Atkins. Bulletin of the U. S. Fish Commission for 1893 (1894), vol. XIII, pp. 221-228.
- 259. The propagation of black bass in ponds. By William F. Page.
 Bulletin of the U. S. Fish Commission for 1893 (1894),
 vol. XIII, pp. 229-236.
- 260. Fish and fishing in British Guiana. By J. J. Quelch.
 Bulletin of the U. S. Fish Commission for 1893 (1894), vol.
 XIII. pp. 237-240.
- 261. Fish-culture investigations at St. Andrews Marine Laboratory, Scotland. By W. C. McIntosh. Bulletin of the U. S. Fish Commission for 1893 (1894), vol. XIII, pp. 241-256.
- 261. Description of the marine hatchery at Dunbar, Scotland. By T. Wemyss Fulton. Bulletin of the U.S. Fish Commission for 1893 (1894), vol. XIII, pp. 257-262.
- 262. The past, present, and future of the cyster industry of Georgia.

 By A. Oemler. Bulletin of the U. S. Fish Commission for 1893
 (1894), vol. XIII, pp. 263-272.
- 263. Deep-water oyster culture. By Henry C. Rowe. Bulletin of the U. S. Fish Commission for 1893 (1894), vol. XIII, pp. 273-276.
- 264. Breeding natural food artificially for young fish artificially hatched. By A. Nelson Cheney. Bulletin of the U. S. Fish Commission for 1893 (1894), vol. XIII, pp. 277-279.
- 265. What we know of the lobster. By Fred Mather. Bulletin of the U. S. Fish Commission for 1893 (1894), vol. XIII, pp. 281-286.
- 266. Remarks on the maintenance and improvement of the American fisheries. By Hugh M. Smith. Bulletin of the U. S. Fish Commission for 1893 (1894), vol. XIII, pp. 287-292.
- 267. Reforms and improvements suggested for the fisheries of Great Britain and Ireland. By J. Lawrence-Hamilton. Bulletin of the U. S. Fish Commission for 1893 (1894), vol. XIII, pp. 293-310.
- 268. Foul fish and filth fevers. By J. Lawrence-Hamilton. Bulletin of the U. S. Fish Commission for 1893 (1894), vol. XIII. pp. 311-334.

- 269. Recent experiences in sturgeon hatching on the Delaware River.

 By Bashford Dean. Bulletin of the U.S. Fish Commission
 for 1893 (1894), vol. XIII, pp. 335-339, 1 fig.
- 270. The fisheries of Canada. By L. Z. Joncas. Bulletin of the U. S. Fish Commission for 1893 (1894), vol. XIII, pp. 341-348.
- 271. The fishing industry of Lake Erie, past, and present. By C. M. Keyes. Bulletin of the U. S. Fish Commission for 1893 (1894), vol. XIII. pp. 349-353.
- 272. Notes on the Irish mackerel fisheries. By William Spotswood Green. Bulletin of the U. S. Fish Commission for 1893 (1894), vol. XIII, pp. 357-360, plates 13-16.
- 273. Past and future of the fur-seal. By Joseph Stanley-Brown.
 Bulletin of the U. S. Fish Commission for 1893 (1894),
 vol. XIII, pp. 361-370.
- 274. Notes on the fisheries and fishery industries of Puget Sound.

 By James G. Swan. Bulletin of the U. S. Fish Commission
 for 1893 (1894), vol. XIII, pp. 371-380, plate 17.
- 275. Fish nets: Some account of their construction and the application of the various forms in American fisheries. By C. H. Augur. Bulletin of the U. S. Fish Commission for 1893 (1894), vol. XIII, pp. 381-388.
- 276. Statistics of the fisheries of the United States. By Hugh M. Smith. Bulletin of the U. S. Fish Commission for 1893 (1894), vol. XIII, pp. 389-417.
- 277. The fisheries of Japan. By the Japanese Bureau of Agriculture.
 Bulletin of the U.S. Fish Commission for 1893 (1894),
 vol. XIII, pp. 419-438.
- 278. On pearls, and the utilization and application of the shells in which they are found in the ornamental arts, as shown at the World's Columbian Exposition. By George Frederick Kunz. Bulletin of the U. S. Fish Commission for 1893 (1894), vol. XIII, pp. 439-457, plates 18-41.
- 279. Report on a collection of fishes from the rivers of central and northern Mexico. By Albert J. Woolman. Bulletin of the U. S. Fish Commission for 1894 (1895), vol. XIV, pp. 55-66, plate 2.
- 280. Report of investigations respecting the fishes of Arkansas, conducted during 1891, 1892, and 1893, with a synopsis of previous explorations in the same State. By Seth E. Meek. Bulletin of the U. S. Fish Commission for 1894 (1895), vol. XIV, pp. 67-94.

- 231. Notes on the capture of Atl Litic subman at los and in the coast raters of the Lastell States. By Hagh M. Chith. Balletin of the J. S. Fish Condition for 1894 (1898), 701. MT, pp. 95-100, plates 3 and 4.
- 282. Results of explorations in western Canada and north...stern United States. By Carl II. Ligarians. Bulletin of the U.S. Fish Commission for 1894 (1895), vol. MV, pp. 101-151, plates D=3.
- 283. Report of the Commissioner for the fiscal year ending June 20, 1892, including divisional reports. By Marshall Medenald. Report of the U. S. Commission of Fish and Fisheries for 1892 (1894), vol. XVIII, pp. VII to CCIV.
- 284. Report upon the investigations of the U.S. F. C. steamer Albatross, for the year ending June 30, 1892. By Z. L. Tanmer. Report of the U.S. Commission of Fish and Fisheries for 1892 (1894), vol. XVIII, pp. 1-64, plate A.
- 285. The myxosporidia or psorosperms of fishes, and the epidemics produced by them. By R. R. Gurley. Report of the U. S. Commission of Fish and Fisheries for 1892 (1894), vol. XVIII, pp. 65-304, plates 1-47.
- 286. A bibliography of publications in the English language relative to ogsters and the ogster industries. By Charles H. Stevenson. Report of U. S. Commission of Fish and Fisheries for 1892 (1894), vol. XVIII, pp. 505-559.
- 287. The fisheries of the Great Lakes. By Hugh M. Smith. Report of the U. S. Commission of Fish and Fisheries for 1892 (1894), vol. IVIII, pp. 361-464.
- 288. Notes on the fishes of western Iowa and eastern Mebrasha. By Seth E. Meek. Bulletin of the U. S. Fish Commission for 1894 (1895), vol. MIV, pp. 133-138.
- 298. List of fighes inhabiting Clear Lake, California. By Charles H. Gilbert. Bulletin of the U.S. Fish Commission for 1894 (1895), vol. MV, pp. 139-140.
- 288. Notes on the fresh-water species of San Louis Obispo County, California. By David S. Jordan. Bulletin of the U.S. Fish Commission for 1894 (1895), vol. XIV, pp. 141-142.
- 289. On the appliances for collecting pelagic organisms, with special reference to those employed by the U.S. Fish Commission. By Z. I. Tanner. Bulletin of the U.S. Fish Commission for 1894 (1895), vol. XIV, pp. 143-151, plates 9-12.

- 290. The salmon fisheries of Columbia River Basin. By Marshall McDenald. A report upon physical and natural history investigations in the region. By C. H. Gilbert and B. W. Everman. Bulletin of the U. S. Fish Commission for 1894 (1895), vol. XIV, pp. 153-168, plates 13-25.
- 291. Notes on the cyster industry of New Jersey. By Ansley Hall. Report of the U. S. Commission of Fish and Fisheries for 1892 (1894), vol. XVIII, pp. 463-523.
- 292. Notes on fishes collected in Florida in 1892. By James A. Henshall. Bulletin of the U. S. Fish Commission for 1894 (1895), vol. MIV, pp. 209-221.
- 293. Notes on a reconnoissance of the fisheries of the Pacific coast of the United States in 1894. By Hugh M. Smith. Bulletin of the U. S. Fish Commission for 1894 (1895), vol. AIC, pp. 223-288.
- 294. Feeding and rearing of fishes, particularly trout under domestication. By William F. Page. Bulletin of the U. S. Fish Commission for 1894 (1895), vol. XIV, pp. 289-314.
- 295. Report upon investigations in the Maumee River Basin during the summer of 1893. By Philip H. Kirsch. Bulletin of the U.S. Fish Commission for 1894 (1895), vol. XIV, pp. 315-357.
- 296. A statistical report on the fisheries of the Middle Atlantic States. By Hugh M. Smith. Bulletin of the U. S. Fish Commission for 1894 (1895), vol. MV, pp. 339-467.
- 297. The fishes of the Colorado Basin. By Barton W. Evermann and Cloud Rutter. Bulletin of the U. S. Fish Commission for 1894 (1895), vol. XIV, pp. 473-486.
- 297. A list of species of fishes known from the vicinity of Neosho, Mo. By Barton W. Evermann and W. C. Kendall. Bulletin of the U. S. Fish Commission for 1894 (1895), vol. XIV, pp. 469-472.
- 298. Report of the Commissioner for the fiscal year ending June 30, 1893, including divisional reports. By Marshall McDonald. Report of the U.S. Commission of Fish and Fisheries for 1893 (1895), vol. XIX, pp. 1-138.
- 299. Fisheries of the Pacific coast. By William A. Wilcox. Report of the U. S. Commission of Fish and Fisheries for 1893 (1895), vol. XIX, pp. 139-304, plates 1-14.
- 300. The American lobster: a study of its habits and development.

 By Francis Robert Herrick. Bulletin of the U. S. Fish

 Commission for 1895 (1896), vol. XV, pp. 1-252, plates A-J

 and 1-54.

- 301. A preliminary report upon salmon investigations in Idaho in 1894. By Barton W. Evermann. Bulletin of the U. S. Fish Commission for 1895 (1896), vol. XV, pp. 253-284.
- 302. Notes on an investigation of the menhaden fishery in 1894, with special reference to the food-fishes taken. By Hugh M. Smith. Bulletin of the U.S. Fish Commission for 1895 (1896), vol. pp. 285-302.
- 303. The fishes of the Neuse River Basin. By Barton W. Evermann and Ulysses O. Cox. Bulletin of the U. S. Fish Commission for 1895 (1896), vol. XV, pp. 303-310.
- 304. Notes on intensive pond culture at Sandfort (Germany). By S. Jaffe. Bulletin of the U. S. Fish Commission for 1895 (1896), vol. XV, pp. 311-316.
- 304. Notes on the rearing of yearling trout at Sandfort (Germany).

 By S. Jaffee. Bulletin of the U. S. Fish Commission for 1895
 (1896), vol. XV, pp. 317-319.
- 304. Fish-culture methods at the Agricultural School at Freising (Germany). Anonymous. Bulletin of the U. S. Fish Commission for 1895 (1896), vol. XV, pp. 320-321, plates 55.
- 304. The course of instruction of the Bavarian Fishery Association.
 Anonymous. Bulletin of the U.S. Fish Commission for 1895
 (1896), vol. XV, pp. 321-324.
- 305. Report on a reconnoissance of the oyster beds of Mobile Bay and Mississippi Sound, Alabama. By Homer P. Ritter. Bulletin of the U. S. Fish Commission for 1895 (1896), vol. XV, pp. 325-339, plates 56-63.
- 306. A list of fishes and mollusks collected in Arkansas and Indian Territory in 1894. By Soth Eugene Meek. Bulletin of the U. S. Fish Commission for 1895 (1896), vol. XV, pp. 341-349.
- 307. The sources of marine food. By James I. Peck. Bulletin of the U.S. Fish Commission for 1895 (1896), vol. XV, pp. 351-368, plates 64-71.
- 308. Contributions toward the improvement of the culture of salmonoids and crawfish in small water-courses (in Germany). By Karl Wozelka-Iglau. Bulletin of the U. S. Fish Commission for 1895 (1896), vol. XV, pp. 369-378, plate 72.
- 309. A review of the history and results of the attempt to acclimatize fish and other water animals in the Pacific States. By Hugh M. Smith. Bulletin of the U. S. Fish Commission for 1895 (1896), vol. XV, pp. 379-472, plates 73-83.

- for the year ending June 30, 1893. By Z. L. Talmer.
 Report of the U. S. Commission of Fish and Figherian
 for 1893(1896), vol. XIX. pp. 305-341, plates 15-18.
- 311. Report of the representative of the U. S. Fish Commission at the World's Columbian Exposition. By Tarleton H. Bean. Report of the U. S. Commission of Fish and Fisheries for 1894 (1896), vol. XX, pp. 177-196, plates 1-5.
- 312. Report upon ichthyological investigations in western Minnesota and eastern North Dakota. By Albert J. Woolman. Report of the Commission of Fish and Fisheries for 1893 (1896), vol. XIX, pp. 343-373, plate 19.
- 313. The food of the oyster, clam, and ribbed mussel. By John P. Lotsy. Report of the U. S. Fish Commission for 1893 (1896), vol. XIX, pp. 375-386, figs. 4.
- 314. Establishment of stations for the propagation of salmon on the Pacific coast. By John J. Brice. Report of the U.S. Commission of Fish and Fisheries for 1893 (1896), vol. XIX, pp. 387-392.
- 315. Report of the Commissioner for the fiscal year ending June 30, 1894, including divisional reports. By Marshall McDonald. Report of the U. S. Commission of Fish and Fisheries for 1894 (1896), vol. XX, pp. 1-175.
- 316. The Russian fur-seal islands. By Leonard Stejneger. Bulletin of the U. S. Fish Commission for 1896 (1897), vol. XVI, pp. 1-148, plates 1-66.
- 317. Remarks on the movements and breeding grounds of the fur-seal based on observations made while on the United States Maval Patrol of Boring Sea in 1894. By John J. Brice. Report of the U. S. Commission of Fish and Fisheries for 1894 (1896), vol. XX, pp. 573-577.
- 318. A report upon salmon investigations in the head waters of the Columbia River, in the State of Idaho, in 1895, together with notes upon the fishes observed in that State in 1894 and 1895. By Barton W. Evermann. Bulletin of the U. S. Fish Commission for 1896 (1897), vol. XVI, pp. 149-202, plates 67-72.
- 319. The artificial propagation of the rainbow trout. By George A. Seagle. Bulletin of the U. S. Fish Commission for 1896 (1897), vol. XVI, pp. 237-256, plates 88-94.
- 320. The artificial propagation of salmon on the Pacific coast of the United States, with notes on the natural history of the quinnat salmon. By Livingston Stone. Bulletin of the U.S. Fish Commission for 1896 (1897), vol. XVI, pp. 203-235, plates 73-87.

- 321. Report upon the operations of the U.S.F.C. steamer Albatross for the year ending June 30, 1894. By Z.L. Tanner and F. J. Drake. Report of the U.S. Commission of Fish and Fisheries for 1894 (1896), vol. XX, pp. 197-278, plates 6-8.
- 322. Description of a closing tow net for submarine use at all depths. By C. H. Townsend. Report of the U. S. Commission of Fish and Fisheries for 1894 (1896), vol. XX, pp. 279-282, plates 9=10.
- 323. The whitefishes of North America. By Barton W. Evermann and Hugh M. Smith. Report of the U. S. Commission of Fish and Fisheries for 1894 (1896), vol. XX, pp. 283-324, plates 11-28.
- 324. A report upon the fishes of the Missouri River Basin. By
 Barton W. Evermann and Ulysses O. Cox. Report of the U.S.
 Commission of Fish and Fisheries for 1894 (1896), vol. XX,
 pp. 325-429.
- 325. A review of the foreign fishery trade of the United States.

 By Charles H. Stevenson. Report of the U. S. Commission

 of Fish and Fisheries for 1894 (1896), vol. XX, pp. 431-571.
- 326. The ichthyological collections of the U.S.F.C. steamer

 Albatross during the years 1890 and 1891. By Charles H.

 Gilbert. Report of the U.S. Commission of Fish and

 Fisheries for 1893 (1896), vol. XIX, pp. 393-476, plates 20-35.
- 327. An annotated catalogue of the fishes known from the State of Vermont. By Barton W. Evermann and W. C. Kendall. Report of the U. S. Fish Commission for 1894 (1896), vol. XX, pp. 579-604.
- 328. A report upon the fishes of southwestern Minnesota. By Ulysses O. Cox. Report of the U. S. Commission of Fish and Fisheries for 1894 (1896), vol. XX, pp. 605-616.
- 329. List of publications of the U.S. Commission of Fish and Fisheries from its establishment in 1871 to February, 1896. By Charles W. Scudder. Report of the U.S. Commission of Fish and Fisheries for 1894 (1896), vol. XX, pp. 617-706.
- 330. Deep-sea explorations: a general description of the steamer Albatross; her appliances and methods. By Z. L. Tanner. Bulletin of the U. S. Fish Commission for 1896 (1897), vol. XVI, pp. 257-428, figs. 76, plates I-XL.
- 331. Report of the Commissioner for the fiscal year ending June 30, 1895, including divisional reports. By Marshall McDonald. Report of the U. S. Commission of Fish and Fisheries for 1895 (1896), vol. XXI, pp. 1-123.

- Albatross for the year ending June 30, 1895. (Abstract)
 By F. J. Drake. Report of the U. S. Commission of Fish
 and Fisheries for 1895 (1896), vol. XXI, pp. 125-163.
- 333. Notes on Biscayne Bay, Florida, with reference to its adaptability as the site of a marine hatching and experiment station. By Hugh M. Smith. Report of the U. S. Commission of Fish and Fisheries for 1895 (1896), vol. XXI, pp. 169-191.
- The transplanting of eastern oysters to Willapa Bay, Washington, with notes on the native oyster industry. By C. H. Townsend. Report of the U. S. Commission of Fish and Fisheries for 1895 (1896), vol. XXI, pp. 193-202, 1 plate.
- 335. Description of a new species of shad (Alosa alabamae) from Alabama. By Barton W. Evermann. Report of the U. S. Commission of Fish and Fisheries for 1895 (1896), vol. XXI, pp. 203-205.
- 336. A check-list of the fishes and fish-like vertebrates of North and Middle America. By David Starr Jordan and Barton Warren Evermann. Report of the U. S. Commission of Fish and Fisheries for 1895 (1896), vol. XXI, pp. 207-584.
- 337. Report of the Commissioner for the fiscal year ending June 30, 1896, including divisional reports. By John J. Brice.
 Report of the U. S. Commission of Fish and Fisheries for 1896 (1898), vol. XXI, pp 1-145.
- 338. Report of the representative of the U.S. F. C. at the Cotton States and International Exposition at Atlanta, Georgia, in 1895. By W. de C. Ravenel. Report of the U.S. Commission of Fish and Fisheries for 1896 (1897), vol. XXII, pp. 147-167, plates 11-21, figs. 3.
- 339. Notes on the extension of the recorded range of certain fishes of the United States coast. By Hugh M. Smith and William C. Kendall. Report of the U. S. Commission of Fish and Fisheries for 1896 (1898), vol. XXII, pp. 169-176.
- 340. Notes on the food of four species of the cod family. By William C. Kendall. Report of the U. S. Commission of Fish and Fisheries for 1896 (1898), vol. XXII, pp. 177-186.
- 341. The fisheries of Indian River Florida. By John J. Brice(and associates, Barton W. Evermann, Barton A. Bean, A. G. Maddren, W. A. Wilcox). Report of the U. S. Commission of Fish and Fisheries for 1896 (1898), vol. XXII, pp. 223-262, plates 22-60.

- 542. Report on the figh and fisheries of the contain above of Florida. By John J. Brice. Report of the U. S. Conf. don of Fish and Fisheries for 1890 (1893), vol. AMI, pp. 200-510.
- 343. Report of a survey of the oyster regions of St. Vincent Sound, Apalachicola Bay, and St. Gaorge Sound, Florida. By Franklin Swirt. Report of the U. S. Germission of Fish and hisheries for 1896 (1898), vol. XXII, pp. 187-231, plate 21.
- 344. Report of the Commissioner for the fiscal year ending June 30, 1897, including divisional reports. By John J. Brico.
 Report of the U. S. Commission of Fish and Fisheries for 1897 (1898), vol. XXIII, pp. I-CLXXI.
- 345. A manual of fish culture(based on the methods of the U.S. Commission of Fish and Fisheries). Prepared under direction of John J. Brice. Report of the U.S. Commission of Fish and Fisheries for 1897 (1898), pp. 1≈340.
- 346. Artificial propagation of the Atlantic salmon, rainbow trout, and brook trout. Report of the U.S. Commission of Fish and Fisheries for 1897 (1898), vol. XXIII, pp. 27∞101, plates 12-20, figs. 14.
- 347. Artificial propagation of the black bass, crappies, and rock bass. Report of the U. S. Commission of Fish and Fisheries for 1897 (1898), vol. XXIII, pp. 159-177, plates 43-49, figs. 2.
- 348. Notes on the edible frogs of the United States and their artificial propagation. By F. M. Chamberlain. Report of the U. S. Commission of Fish and Fisheries for 1897 (1898), vol. XXIII, pp. 249-261, figs. 6.
- 349. Oysters and methods of oyster culture (with notes on clam culture). By H. F. Moore. Report of the U. S. Commission of Fish and Fisheries for 1897 (1898), vol. XXIII, pp. 263-340, figs. 6., plates I-XVIII.
- 350. A manual of fish culture (based on the methods of the U.S. Fish Commission of Fish and Fisheries). Report of the U.S. Commission of Fish and Fisheries for 1897 (1898), vol. XXIII. pp. 1-247.
- 351. The fishes of the Klamath River Basin. By Charles H. Gilbert. Bulletin of the U.S. Fish Commission for 1897 (1898), vol. XVII, pp. 1-13; figs. 6.
- 352. A report upon salmon investigations in the Columbia River
 Basin and elsewhere on the Pacific coast in 1896. By
 Barton W. Evermann and S. E. Meek. Bulletin of the U. S.
 Fish Commission for 1897 (1898), vol. XVII, pp. 15-84,
 plates 1 and 2, figs. 6.

- 353. The fishes found in the vicinity of Woods Hole. By Hugh M. Smith. Bullatin of the U.S. Fish Commission for 1897 (1898), vol. XVII, pp. 85-111, plate 3, 1 fig.
- 354. Publications of the U.S. Commission of Fish and Fisheries available for distribution on June 30, 1897, 10
- 355. Reports of observations made on board the U. S. F. C. staamer Albatross during the year ending June 30, 1896. Report of the U. S. Commission of Fish and Tisheries for 1896 (1898), vol. XXIII, pp. 357-386.
- 356. Observations upon the herring and herring fisheries of the northeast coast, with special reference to the vicinity of Passamaquoddy Bay. By H. F. Moore. Report of the U. S. Commission of Fish and Fisheries for 1896 (1898), vol. XXII. pp. 387-442, plates 60~52.
- 357. The salmon fishery of Penobscot Bay and River in 1895 and 1896. By Hugh M. Smith. Bulletin of the U. S. Fish Commission for 1897 (1898), vol. XVII. pp. 113-124, plates 4 and 5.
- 358. Descriptions of new or little-known genera and species of fishes from the United States. By Barton W. Evermann and William C. Kendall. Bulletin of the U. S. Fish Commission for 1897 (1898), vol. XVII. pp. 125-133, plates 6-9.
- 359. Notes on the halibut fishery of the northwest coast in 1896.

 By A. B. Alexander. Bulletin of the U. S. Fish Commission for 1897 (1898), pp 141-144, vol. XVII.
- 360. The herring industry of the Passamaquoddy region, Maine. By Ansley Hall. Report of the U. S. Commission of Fish and Fisheries for 1896 (1897), pp. 443-489, vol. XXII.
- 361. Statistics of the fisheries of the interior waters of the United States. By Hugh M. Smith. Report of the U.S. Commission of Fish and Fisheries for 1896 (1898), pp. 489-574, vol. XXII.
- 362. Notes on the fisheries of the Pacific coast in 1895. By
 William A. Wilcox. Report of the U. S. Commission of Fish
 and Fisheries for 1896 (1898), pp. 575-659, vol. XXII.
- 363. Proceedings and papers of the National Fishery Congress.

 Bulletin of the U. S. Fish Commission for 1897 (1898),

 vol. XVII, pp. 145-371.
- 364. Proceedings of National Fishery Congress. Bulletin of the U. S. Fish Commission 1897 (1898), pp. 147-168, vol. XVII.
- 365. Methods of plankton investigation in their relation to practical problem. By Jacob Reighard. Eulletin of the U. S. Fish Commission for 1897 (1898), vol. XVII, pp. 169-175.

10/ Issued as a pamphlet only.

- 366. The importance of extended accontific investigation. By H. C. Bumpus. Bulletin of the U. S. Fish Commission for 1897 (1893), vol. XVII, pp. 177-180.
- 367. The utility of a biological station on the Florida coast in its relations to the commercial fisheries. By S. E. Moek. Bulletin of the U. S. Fish Commission for 1897 (1898), vol. XVII. pp. 181-183.
- 368. Establishment of a biological station on the Gulf Coast. By
 W. Edgar Taylor. Bulletin of the U. S. Fish Commission for
 1897 (1898), vol. XVII, pp. 185-188.
- 369. Some notes on American shipworms. By Charles P. Sigerfoos.
 Bulletin of the U. S. Fish Commission for 1897 (1898),
 vol. XVII, pp. 189-191.
- 370. An economical consideration of fish parasites. By Edwin Linton. Bulletin of the U. S. Fish Commission for 1897 (1898), vol. XVII. pp. 193-199.
- 371. The fish fauna of Florida. By B. W. Evermann. Bulletin of the U. S. Fish Commission for 1897 (1898), vol. XVII, pp. 201-203.
- 372. The lampreys of central New York. By H. A. Surface. Bulletin of the U. S. Fish Commission for 1897 (1898), vol. XVII, pp. 209-215, plates 10 and 11.
- 373. The protection of the lobster fishery. By Francis H. Herrick. Bulletin of the U. S. Fish Commission for 1897 (1898), vol. XVII, pp. 217-224.
- 374. The Florida commercial sponges. By Hugh M. Smith. Bulletin of the U. S. Fish Commission for 1897 (1898), vol. XVII, pp. 225-240, plates 12-31.
- 375. On the feasibility of raising sponges from the egg. By H. V. Wilson. Bulletin of the U. S. Fish Commission for 1897 (1898), vol. XVII, pp. 241-245.
- 376. The Hudson River as a salmon stream. By A. Nelson Cheney. Bulletin of the U. S. Fish Commission for 1897 (1898), vol. XVII, pp. 247-251.
- 377. A plea for the development and protection of Florida fish and fisheries. By James A. Henshall. Bulletin of the U.S. Fish Commission for 1897 (1898), vol. XVII, pp. 253-255.

- 578. International protection for the demizens of the sea and waterways. By Bushrod W. James. Bulletin of the U. S. Fish Commission for 1897 (1898), vol. XVII, pp. 257-233.
- 379. The restricted inland range of shad due to artificial obstructions, and its effect upon natural reproduction. By Charles G. Stevenson. Bulletin of the U.S. Fish Commission for 1897 (1898), vol. XVII, pp. 265:271.
- 380. The green turtle and the possibilities of its protection and consequent increase on the Florida coast. By Ralph M. Munroe. Bulletin of the U. S. Fish Commission for 1897 (1898), vol. XVII, pp. 273-274.
- 381. Some factors in the oyster problem. By H. F. Moore. Bulletin of the U. S. Fish Commission for 1897 (1898), vol. XVII, pp. 275-284.
- 382. The oyster grounds of the west Florida coast; their extent, condition, and peculiarities. By Franklin Swift. Bulletin of the U. S. Fish Commission for 1897 (1898), vol. XVII, pp. 285-287.
- 383. The cyster and cyster beds of Florida. By John G. Ruge.
 Bulletin of the U. S. Fish Commission for 1897 (1898),
 vol. XVII, pp. 289-296.
- 384. The Louisiana cyster industry. By F. C. Zacharie. Bulletin of the U. S. Fish Commission for 1897 (1898), vol. XVII, pp. 297-304.
- 385. The oyster bars of the west coast of Florida, their depletion and restoration. By H. A. Smeltz. Bulletin of the U. S. Fish Commission for 1897 (1898), vol. XVII, pp. 305-308.
- 386. Notes on the fishing industry of eastern Florida. By John Y. Datwiler. Bulletin of the U. S. Fish Commission for 1897 (1898), vol. XVII, pp. 309-312.
- 387. Oysters and cyster culture in Texas. By I. P. Kibbe. Bulletin of the U. S. Fish Commission for 1897 (1898), vol. XVII, pp. 313-314.
- 388. The methods, limitations, and results of whitefish culture in Lake Erie. By J. J. Stranahan. Bulletin of the U. S. Fish Commission for 1897 (1898), vol. XVII, pp. 315-319.
- 389. A brief history of the gathering of fresh-water pearls in the United States. By George F. Kunz. Bulletin of the U.S. Fish Commission for 1897 (1898), vol. XVII, pp. 321-330.

- 390. The red-snapper fisheries: their past, prosent, and future.

 By Andrew F. Warren. Bulletin of the U. S. Fish Cornission
 for 1897 (1898), vol. XVII, pp. 331-335.
- 391. Some brief reminiscences of the early days of fish culture in the United States. By Livingston Stone. Bulletin of the U.S. Fish Commission for 1897 (1898), vol. XVII, pp. 337-343.
- 392. The relations between State fish commissions and commercial fishermen. By W. E. Mochan. Bulletin of the U. S. Fish Commission for 1897 (1898), vol. XVII, pp. 345-348.
- 393. Possibilities for an increased development of Florida's fishery resources. By John N. Cobb. Bulletin of the U.S. Fish Commission for 1897 (1898), vol. XVII, pp. 349-351.
- 394. The utility and methods of mackerel propagation. By J. Percy Moore. Bulletin of the U. S. Fish Commission for 1897 (1898), vol. XVII, pp. 353-361.
- 395. The large-mouthed black bass in Utah. By John Sharp.
 Bullotin of the U. S. Fish Commission for 1897 (1898),
 vol. XVII. pp. 363-368.
- 396. Florida fur farming. By J. M. Willson, Jr. Bulletin of the U. S. Fish Commission for 1897 (1898), vol. XVII, pp. 369-371.
- 397. The fresh-water pearls and pearl fisheries of the United States.

 By George F. Kunz. Bulletin of the U. S. Fish Commission
 for 1897 (1898), vol. XVII, pp. 373-426, plates I-XXII.
- 398. Report of the Commissioner for the fiscal year ending June 30, 1898, including divisional reports. By Goorge M. Bowers. Report of the U. S. Commission of Fish and Fisheries for 1898 (1899), vol. XXIV, pp. I-CLXXV, plates I-XXI.
- 399. Report on mackerel investigations in 1897. By J. Percy Moore.
 Report of the U.S. Commission of Fish and Fisheries for
 1898 (1899), pp. 1-22.
- 400. Reports on fishes obtained by the steamer Albatross in the vicinity of Santa Catalina Island and Monterey Bay. By Charles H. Gilbert. Report of the U. S. Commission of Fish and Fisheries for 1898 (1899), vol. XXIV, pp. 23-29, plates 1 and 2.
- 401. Notes on the extent and condition of the alewife fisheries of the United States in 1896. By Hugh M. Smith. Report of the U. S. Commission of Fish and Fisheries for 1898 (1899), pp. 31-43.

- 402. Report on the oyster beds of Louisiana. By H. F. Moore.
 Report of the U. S. Commission of Fish and Fisherica
 for 1898 (1899), pp. 45-100, plate 3.
- 403. The shad fisheries of the Atlantic coast of the United States,
 By Charles H. Stevenson. Report of the U. S. Commission
 of Fish and Fisheries for 1898 (1899), pp. 101-269.
- 404. List of fishes collected at the Revillagigedo Archipelago and neighboring islands. By David Starr Jordan and Richard Crittenden McGregor. Report of the U. S. Commission of Fish and Fisheries for 1898 (1899), pp. 273-284, plates 4-7.
- 405. Report on investigations by the U. S. Fish Commission in Mississippi, Louisiana, and Texas in 1897. By Barton Warren Evermann. Report of the U. S. Commission of Fish and Fisheries for 1898 (1899), pp. 285-310, plates 8-36.
- 406. List of publications available for distribution March 1, 1899.
 Report of the U. S. Commission of Fish and Fisheries for 1898 (1899), vol. XXIV, pp. 311-323.
- 407. Report upon exhibit of the U. S. F. C. at the Tennessee Gentennial Exposition in 1897. By W. de C. Ravenel. Report of the U. S. Commission of Fish and Fisheries for 1898 (1899), pp. 329-339, plate 37.
- 408. The salmon and salmon fisheries of Alaska: report of the operations of the U.S.F.C. steamer Albatross for the year ending June 30, 1898. By Jefferson F. Moser, Commander U.S. Navy. Bulletin U.S. Fish Commission for 1898 (1899), vol. XVIII, pp. 1-178, 63 plates, charts, and text figures.
- 409. List of fishes known to inhabit the waters of the District of Columbia and vicinity. By Hugh M. Smith and Barton A. Bear Bulletin of the U. S. Fish Commission for 1898 (1899), vol. XVIII, pp. 179-187.
- 410. Notes on a collection of tide-pool fishes from Kadiak Island in Alaska. By Cloudsley Rutter. Bulletin of the U. S. Fish Commission for 1898 (1899), vol. XVIII, pp. 189-192.
- 411. The southern spring mackerel fishery of the United States.

 By Hugh M. Smith. Bulletin of the U. S. Fish Commission for 1898 (1899), vol. XVIII, pp. 193-271.
- 412. Notice of a filefish new to the fauna of the United States.

 By Hugh M. Smith. Bulletin of the U. S. Fish Commission for 1898 (1899), vol. XVIII, pp. 273-278, plate 64.
- 413. The pearly fresh-water mussels of the United States: their habits, enemies, and diseases, with suggestions for their protection. By Charles T. Simpson. Bulletin of the U. S. Fish Commission for 1898 (1899), vol. XVIII, pp. 279-288, 8 text figs.

39

- 414. The mussel fishery and pearl-button industry of the Liseis ippi River. By Hugh M. Saith. Bulletin of the U. S. Fish Commission for 1898 (1899), vol. KVIII, pp. 239-314, plates 65-55.
- 415. The peripheral nervous system of the tony fishes. By C. Judson Herrick. Bulletin of the U. S. Fish Commission for 1898 (1890), vol. XVIII, pp. 315-320.
- 416. The reappearance of the tilefish. By Herman C. Bumpus. Bulletin of the U. S. Fish Commission for 1898 (1899), vol. XVIII, pp. 321-333.
- 417. The preservation of fishery products for food. By Charles H. Stevenson. Bulletin of the U.S. Fish Commission for 1898 (1899), vol. XVIII, pp. 335-563, plates I-XLIII.
- 418. Notes on the foreign fishery trade and local fisheries of Porto Rico. By W. A. Wilcox. Report of the U. S. Commission of Fish and Fisheries for 1899 (1900), vol. XXV, pp. 1-34.
- 419. Check-list of the fishes of Florida. By Barton Warren Evermann and William Converse Kendall. Report of the U. S. Commission of Fish and Fisheries for 1899 (1900), vol. XXV, pp. 35-103.
- 420. Statistics of the fisheries of the Gulf States. By C. H. Townsend. Report of the U. S. Commission of Fish and Fisheries for 1899 (1900), vol. XXV, pp. 105-169.
- 421. Statistics of the fisheries of the South Atlantic States.

 By C. H. Townsend. Report of the U. S. Commission of Fish
 and Fisheries for 1899 (1900), vol. XXV, pp. 171-227.
- 422. An inquiry into the feasibility of introducing useful marine animals into the waters of Great Salt Lake. By H. F. Moore. Report of the U. S. Commission of Fish and Fisheries for 1899 (1900), vol. XXV, pp. 229-250, plates 7.
- 399. A review of the fisheries in the contiguous waters of the State of Washington and British Columbia. By Richard Rathbun. Report of the U.S. Commission of Fish and Fisheries for 1889 (1900), vol. XXV, pp. 251-350, plates 8-16.
- 4. Experiments in photography of live fishes. By R. W. Shufeldt. Bulletin of the U. S. Fish Commission for 1899 (1901), vol. XIX, pp. 1-5, plates 1-9.
- 425. Notes on the tide-pool fishes of California, with a description of four new species. By Arthur White Greeley. Bulletin of the U.S. Fish Commission for 1899 (1901), vol. XIX, pp. 7-20.

- 426. The synaptes of the New Magland coast. By Habert I, and Clark. Bulletin of the U.S. Fish Commission for 1899 (1900); vol. XIX, pp. 21-31, plates 10 and 11.
- 427. Descriptions of new genera and species of fishes from Porto Rico. By Barton Warron Evermann and Millard Caleb Marin. Report of the U.S. Commission of Fish and Fisheries for 1899 (1900), vol. XXV, pp. 351-362.
- 428. Descriptions of two new species of darters from Lake Muxinkuckee, Indiana. By Barton Warren Evermann. Report of the U.S. Commission of Fish and Fisheries for 1899 (1900), vol. XXV, pp. 351-362.
- 429. The sturgeon fishery of Delaware River and Bay. By John N. Cobb. Report of the U. S. Commission of Fish and Fisheries for 1899 (1900), vol. XXV, pp. 369-380, plates 18-21.
- 430. Report of the Commission for the fiscal year ending June 30, 1899, including divisional reports. By George M. Bowers. Report of the U. S. Commission of Fish and Fisheries for 1899 (1900), vol. XXV. pp. VI=CLXIII, plates I⊶XXIX.
- 431. The gas bubble disease of fish, and its cause. By F. P. Gordon. Bulletin of the U. S. Fish Commission for 1899 (1900), vol. XIX, pp. 35-37, plates 12.
- 432. The clam problem and clam culture. By James L. Kellogg.
 Bulletin of the U. S. Fish Commission for 1899 (1903),
 vol. XIX, pp. 39-44, plates 13.
- 433. Descriptions of new species of fishes from the Hawaiian Islands belonging to the families of Labridae and Scaridae. By Oliver P. Jenkins. Eulletin of the U. S. Fish Commission for 1899 (1901), vol. XIX, pp. 45-65.
- 434. Rotatoria of the United States, with especial reference to those of the Great Lakes. By H. S. Jennings. Bulletin of the U. S. Fish Commission for 1899 (1901), vol. XIX, pp. 67-104, plates 14-22.
- 435. A report of work on the Protozoa of Lake Erie, with especial reference to the laws of their movements. By H. S. Jennings. Bullotin of the U. S. Fish Commission for 1899 (1901), vol. XIX, pp. 105-114.
- 436. Notes on a collection of fishes from the rivers of Mexico, with description of 20 new species. By David Starr Jordan and John O. Snyder. Bulletin of the U. S. Fish Commission for 1899 (1901), vol. XIX, pp. 115-147, 22 figs.

- 437. Notes on the Florida sponge fishery in 1899. By Hugh M. Smith. Bulletin of the U. S. Fish Commission for 1899 (1901), vol. XIX, pp. 149-151.
- 423. Some chemical changes in the developing fish egg. By P. A. Levene. Bulletin of the U. S. Fish Commission for 1899 (1901), vol. XIX, pp. 153-155.
- 439. The free-swimming copepeds of the Woods Hole region. By
 William Morton Wheeler. Bulletin of the U. S. Fish Commission for 1899 (1901). vol. XIX, pp. 157-192, text figs. 30.
- 440. Observations on the life-history of the common clam, Myaarcharia. By James L. Kellogg. Bulletin of the U.S. Fish Commission for 1899 (1901), pp. 193-202.
- 441. The natural history of the starfish. By A. D. Mead. Bulletin of the U. S. Fish Commission for 1899 (1901), pp. 203-224, plates 23-26.
- 442. On the movements of certain lobsters liberated at Woods Hole.

 By Herman C. Bumpus. Bulletin of the U. S. Fish Commission for 1899 (1901), vol. XIX, pp. 225-230, plates 27.
- 443. Improvements in preparing fish for shipment. By Ralph W. Tower. Bulletin of the U. S. Fish Commission for 1899 (1901), vol. XIX, pp. 231-235.
- 444. Report of a dredging expedition off the southern coast of New England, September, 1899. By Freeland Howe, jr. Bulletin of the U. S. Fish Commission for 1899 (1901), vol. XIX, pp. 237-240.
- 445. The lobster fishery of Maine. By John N. Cobb. Bulletin of the U. S. Fish Commission for 1899 (1901), pp. 241-265, plates 28-32.
- 446. Fish parasites collected at Woods Hole in 1898. By Edwin Linton. Bulletin of the U. S. Fish Commission for 1899 (1901), vol. XIX, pp. 267-304, plates 33-43.
- 447. Biological notes, No. 1. (A contribution from the U. S. Biological Laboratory, Woods Hole, Mass.) Bulletin of the U. S. Fish Commission for 1899 (1901), vol. XIX, pp. 305-310.
- 448. The skeleton of the black bass. By R. W. Shufeldt. Bulletin of the U. S Fish Commission for 1899 (1901), vol. XIX, pp. 311-320, text figs, 8, plate 44.
- of the ocean sun-fish. By Erik H. Green. Bulletin of the U. S. Fish Commission for 1899 (1901), vol. XIX, pp. 321-324.

- 450. Report of the commissioner for the year ending June 30, 1900. By George M. Bowers. Report of the U. S. Commission of Fish and Fisheries for 1900 (1901), pp. 1-184.
- 451. Investigations of aquatic resources and fisheries of Porto
 Rico by the U.S.F.C. steamer Fish Hawk in 1899. By Earton
 W. Evermann, William A. Wilcox, and Millard C. Marsh.
 Bulletin of the U.S. Fish Commission for 1900, pt. 1 (1902),
 vol. 20, pp. 1-350, 49 plates, 3 maps, 112 text figs.
- 452. A method of recording egg development for use of fish-culturists. By Claudius Wallich. Report of the U. S. Commission of Fish and Fisheries for 1900 (1901), pp. 185-194, plate 1.
- 453. Statistics of the fisheries of the Middle Atlantic States (for 1897). By C. H. Townsend. Report of the Commission of Fish and Fisheries for 1900 (1901), pp. 195-310.
- 454. Statistics of the fisheries of the New England States (for 1898).

 By C. H. Townsend. Report of the U. S. Commission of Fish
 and Fisheries for 1900 (1901), pp. 311-386.
- 455. The hydroids of the Woods Hole region. By C. C. Nutting. Bulletin of the U. S. Fish Commission for 1899 (1901), vol. XIX, pp. 325-386.
- 456. Descriptions of 15 new species of fishes from the Hawaiian Islands. By Oliver P. Jenkins. Bulletin of the U. S. Fish Commission for 1899 (1901), vol. XIX, pp. 387-404.
- 457. Parasites of fishes of the Woods Hole regions. By Edwin Linton. Bulletin of the U. S. Fish Commission for 1899 (1901), vol. XIX, pp. 405-492, plates I-XXXIV.
- 458. The Mollusca of Porto Rico. By W. H. Dall and C. T. Simpson. Bulletin of the U. S. Fish Commission for 1900, pt. 1 (1902), vol. XX, pp. 351-524, plates 53-58.
- 459. The Brachyura and Macrura of Porto Rico. By Mary J. Rathbun.
 Bulletin of the U.S. Fish Commission for 1900, part 2 (1902),
 pp. 1-127, 2 plates.
- 460. The Anomuran collections made by the Fish Hawk expedition to Porto Rico. By J. E. Benedict. Bullotin of the U. S. Fish Commission for 1900, part 2 (1902), pp. 129-148, plates 3-6.
- 461. The Stomatopoda of Porto Rico. By R. P. Bigelow. Bulletin of the U. S. Fish Commission for 1900, part 2 (1902), vol. XX, pp. 149-160.
- 462. Report on Porto Rican Isopoda. By H. F. Moore. Bulletin of the U. S. Fish Commission for 1900, part 2 (1902), vol. XX, pp. 161-176, plates 7-11.

- 403. The Circipedia collected near Porto Rico by the Fish Mark expedition in 1898-99. By M. A. Bigelow. Bulletin of the U.S. Fish Commission for 1900, part 2 (1902), vol. XX, pp. 177-180.
- 464. The polychaetous Annelids of Porto Rico. By A. L. Treadwell. Bulletin of the U. J. Fish Commission for 1900, part 2, (1902), vol. XX, pp. 181-210.
- Moore. Bulletin of the U.S. Fish Commission for 1900, part 2 (1902), vol. MG, pp. 211-222, plates 12-13.
- 466. The numerteans of Porto Rico. By Wesley R. Coe. Bulletin of the U. S. Fish Commission for 1900, part 2 (1902), vol. XX, pp. 223-229.
- 467. The echinoderms of Porto Rico. By H. L. Clark. Bulletin of the U. S. Fish Commission for 1900, part 2 (1902), vol. XX, pp. 231-263, plates 14-17.
- Hargitt and C. G. Rogers.
 Bulletin of the U. S. Fish Commission for 1900, part 2 (1902),
 vol. IX, pp. 265-287, plates I-IV.
- 469. The stony corals of Porto Rican waters. By T. Wayland Vaughan.
 Bulletin of the U. S. Fish Commission for 1900, part 2 (1902),
 vol. XX, pp. 289-320, plates I-XXXVIII.
- 470. Actinaria from the vicinity of Porto Rico. By J. E. Duerden.
 Bulletin of the U. S. Fish Commission for 1900, part 2 (1902),
 vol. XX, pp. 321-374, plate A, I-XII.
- 471. The sponges collected in Porto Rico in 1899 by the U.S.F.C. steamer Fish Hawk. By H. V. Wilson. Bulletin of the U.S. Fish Commission for 1900, part 2 (1902), vol. XX, pp. 375-411.
- 472. Dredging and other records of the U.S.F.C. steamer Albatross, with bibliography relative to the work of the vessel. Compiled by C.H. Townsend. Report of the U.S. Commission of Fish and Fisheries for 1900 (1901), vol. XXVI, pp. 387-562, plates I-VII
- 473. The French sardine industry. By Hugh M. Smith. Bulletin of the U.S. Fish Commission for 1901 (1902), vol. XXI, pp. 1-26, 8 plates.
- 474. Biological notes No. 2. (A contribution from The U. S. Biological Laboratory, Woods Hole, Mass.) Bulletin of the U. S. Fish Commission for 1901 (1902), vol. XXI, pp. 27-33.
- 475. Description of a new oceanic fish found off southern New England.

 By Carl H. Eigenmann. Bulletin of the U.S. Fish Commission
 for 1901 (1902), vol. XXI, pp. 35-36.

- 476. The egg and development of the conger eel. By Carl H.
 Eigenmann. Bulletin of the U. S. Fish Commission for 1901
 (1902), vol. XXI, pp. 37-344.
- 477. Investigations into the history of the young squeteague. By Carl H. Eigenmann. Bulletin of the U. S. Fish Commission for 1901 (1902), vol. XXI, pp. 45-51.
- 478. A new isopod parasitic on the hermit crab. By Millet T. Thompson. Bulletin of the U. S. Fish Commission for 1901 (1902), vol. XXI, pp. 53-56, plates 9-10.
- 479. The plants of western Lake Erie, with observations on their distribution. By A. J. Pieters. Bulletin of the U. S. Fish Commission for 1901 (1902), vol. XXI, pp. 55-79, plates 11-20.
- 480. The Leptocephalus of the American eel and other American Leptocephali. By C. H. Eigenmann and C. H. Kennedy. Bulletin of the U. S. Fish Commission for 1901 (1902), pp. 81-92.
- 481. Report of the Commissioner for the year ending June 30, 1901, including divisional reports. By George M. Bowers. Report of the U. S. Commission of Fish and Fisheries for 1901 (1902), vol. XXVII, pp.1-166, plates 1-5.
- 482. Publications of the United States Commission of Fish and Fisheries available for distribution on December 1, 1901. Report of the U. S. Commission of Fish and Fisheries for 1901 (1902), vol. XXVII, pp. 177-192.
- 483. Notes on the fishes and mollusks of Lake Chautauqua, New York.

 By B. W. Evermann and E. L. Goldsborough. Report of the
 U. S. Commission of Fish and Fisheries for 1901 (1902), vol.

 XXVII. pp. 169-175.
- 484. The foraminifera of Porto Rico. By James M. Flint. Bulletin of the U.S. Fish Commission for 1900 part 2, (1902), vol. XX, pp. 415 and 416.
- 485. Description of a new species of blenny from Japan. By Hugh M. Smith. Bulletin of the U. S. Fish Commission for 1901 (1902), vol. XXI, pp. 93 and 94.
- 486. List of species of fishes known to occur in the Great Lakes or their connecting waters. By Barton Warren Evermann. Bulletin of the U. S. Fish Commission for 1901 (1902), vol. XXI, pp. 95-96.
- 487. Preservation of fishery products by drying and dry-salting.

 By Charles H. Stevenson. Bulletin of the U. S. Fish Commission for 1898 (1899), vol. XVIII, pp. 389-424.

- 488. Preparation of fish eggs for food. By Charles H. Stevenson. Eulletin of the U. S. Fish Commission for 1898 (1899), vol. XVIII, pp. 541-548.
- 489. Refrigeration, or preservation by low temperature. By Charles H. Stevenson. Bulletin of the U.S. Fish Commission for 1898 (1899), vol. XXIII, pp. 358-388.
- 490. Preservation of fishery products by smoking. By Charles H. Stevenson. Bulletin of the U.S. Fish Commission for 1898 (1899), vol. XXIII, pp. 474-506.
- 491. Notes on the tagging of four thousand adult cod at Woods Hole, Mass. By Hugh M. Smith. Report of the U. S. Commission of Fish and Fisheries for 1901 (1902), vol. XXVII, pp. 193-208.
- 492. Notes on the silversides of the genus Menidia of the east coast of the United States, with descriptions of two new subspecies. By W. C. Kendall. Report of the U. S. Commission of Fish and Fisheries for 1901 (1902), vol. XXVII, pp. 241-267.
- 493. Note on the Scotch methods of smoking haddocks. By Hugh M. Smith. Report of the U. S. Commission of Fish and Fisheries for 1901 (1902), XXVII, pp. 269-271.
- 494. Notes on the fishes of Lake Ontario. (An annotated list of the fishes known to occur in Lake Champlain and its tributary waters. An annotated list of the fishes known to occur in the St. Lawrence River.) By Barton W. Evermann and Warren C. Kendall. Report of the U. S. Commission of Fish and Fisheries for 1901 (1902), vol. XXVII, pp. 209-240.
- 495. A report on fishes collected in Mexico and Central America, with notes and descriptions of five new species. By B. W. Evermann and E. L. Goldsborough. Bulletin of the U. S. Fish Commission for 1901 (1902), vol. XXI, pp. 97-102.
- 496. The organic constituents of the scales of fish. By E. H. Green and R. W. Tower. Bulletin of the U. S. Fish Commission for 1901 (1902), vol. XXI, pp. 97-102.
- 497. The reactions of copepods to various stimuli and the bearing on their daily depth migrations. By G. H. Parker. Bulletin of the U. S. Fish Commission for 1901 (1902), vol. XXI, pp. 103-123.
- 498. The gas in the swim-bladder of fishes. Biliary calculi in the squeteague. By R. W. Tower. Bulletin of the U. S. Fish Commission for 1901 (1902), vol. XXI, pp. 125-135, plate XXI.

- 499. Description of a new species of shad (Alosa objects), with notes on other food-fishes of the Ohio River. By Barton Warren Evermann, Report of the U.S. Commission of Fish and Fisheries for 1901 (1902), vol. XXVII, pp. 273-288.
- The reproductive period in the lobster. By Francis H. Horrick. 500. Bulletin of the U. S. Fish Commission for 1901 (1902). vol. XXI. pp. 161-166.
- 501. Notes in five food-fishes of Lake Buhi, Luzon, Philippine Islands. By Hugh M. Smith. Bulletin of the U.S. Fish for 1901 (1902), vol. XXI, pp. 167-171, plate 22.
- Marine protozoa from Woods Hole. By Gary N. Calkins. Bulletin 502. of the U.S. Fish Commission for 1901 (1902), vol. XXI. pp. 413-468.
- Notes on a species of barnacle (Dichelaspis) parasitic on the 503. gills of edible crabs. By R. E. Coker. Bulletin of the U. S. Fish Commission for 1901 (1902), vol. XXI, pp. 399-412, 14 text figs.
- Preliminary report on the fishes and fisheries of the Hawaiian 504. Islands. By D. S. Jordan and B. W. Evermann. Commercial fishes of the Hawaiian Islands by J. N. Cobb. Report of the U. S. Commission of Fish and Fisheries for 1901 (1902), vol. XXVII, pp. 353-499, plates 21-27.
- Notes on the fisheries of the Pacific coast in 1899. By 505. Wm. A. Wilcox. Report of the U. S. Commission of Fish and Fisheries for 1901 (1902), vol. XXVII, pp. 501-574, plates 28 and 29.
- Statistics of the fisheries of the Great Lakes. Report of the 506. U. S. Commission of Fish and Fisheries for 1901 (1902), vol. XXVII, pp. 575-667.
- Statistics of the fisheries of the Mississippi River and 507. tributaries. Report of the U.S. Commission of Fish and Fisheries for 1901 (1902), vol. XXVII, pp. 659-740.
- The Pan-American Exposition. Report of representative of 508. the U. S. Fish Commission. By W. de C. Ravenel. Report of the U. S. Commission of Fish and Fisheries for 1901 (1902), vol. XXVII, pp. 289-351, plates 6-20.
- Notes on the boats, apparatus, and fishing methods employed by the natives of the South Sea Islands, and the results of fishing trials by the Albatross. By A. B. Alexander. Report of the U. S. Commission of Fish and Fisheries for pening 1901 (1902), vol. XXVII, pp. 741-829, plates 30-37.

47 Ex

- 510. The salmon and salmon fisheries of Alaska: salmon investigations of the U. F. F. C. steamer Allatross in 1900 and 1901. By Jefferson F. Hoser. Bulletin of the U. S. Fish Commission for 1901 (1902), vol. XXI, pp. 173-348 and 349-398. plates I-XLIV, plate A, charts A and B, text figs.
- 511. Observations on the herring fisheries of England, Scotland, and Holland. By Hugh H. Smith. Bulletin of the U.S. Fish Commission for 1902 (1903), vol. XXI, pp. 1-16, plates 1 and 2.
- 512. Japanese oyster culture. By Bashford Dean. Bulletin of the U. S. Fish Commission for 1902 (1903), vol. XXII,pp. 17-37, plates 3-7.
- 513. The habits and culture of the black bass. By Dwight Lydell. Bulletin of the U. S. Fish Commission for 1902 (1903), vol. AXII, pp. 39-44, plate 8.
- 514. Hearing and allied senses in fishes. By G. H. Parker. Bulletin of the U. S. Fish Commission for 1902 (1903), vol. XXII, pp. 45-64, plate 9.
- 515. Natural history of the quinnat salmon. A report on investigations in the Sacramento River, 1896-1901. By Cloudsley Rutter. Bulletin of the U. S. Fish Commission for 1902 (1903), vol. XXII, for 1902 (1903), pp. 65-141, plates 10-18.
- 516. Notes on fishes from streams and lakes of northeastern California and tributary to the Sacramento Basin. By Cloudsley Rutter. Bulletin of the U.S. Fish Commission for 1902 (1903), vol. XXII, pp. 145-148.
- 517. Breeding habits of the yellow cat-fish. By Hugh M. Smith and L. G. Harron. Bulletin of the U. S. Fish Commission for 1902 (1903), vol. XXII, pp. 151-154.
- 518. The destruction of trout fry by hydra. By A. E. Beardsley. Bulletin of the U. S. Fish Commission for 1902 (1903), vol. XXII, pp. 157-160.
- 519. Artificial propagation of the salmons of the Pacific coast.

 Revised edition of Manual of Fish Culture (formerly doc. 345), pp. 1-15, plates 3-10, 1903.
- 520. Artificial propagation of the lake trout, grayling, and whitefish. Revised edition of Manual of Fish Culture, pp. 91-120, plates 30-39, 1903.11
- 521. Artificial propagation of the shad, and pike perch. Revised edition of Manual of Fish Culture, pp. 121-145 and 165-179, plates 40-46 and 51-52, 1903.11/
- 522. Artificial propagation of marine species of fishes. Revised edition of Manual of Fish Culture, pp. 195-238, plates 54-63, 1903.11/

11 Revised edition issued as pamphlet only.

- 523. Discriptions of new genera and species of fishes from the Hawaiian Islands. By D. S. Jordan and B. W. Evermann. Bulletin of the U. S. Fish Commission for 1902 (1904), vol. 2011, pp. 161-208.
- S24. Report of the Commissioner for the year ending June 30, 1902 (including divisional reports). By George M. Bowers. Report of the U. S. Commission of Fish and Fisherios for 1902 (1904), vol. XXII, pp. 1-160, plates 1-5.
- 525. Descriptions of a new genus and two new species of fishes from the Hawaiian Islands. By David Starr Jordan and Barton Warren Evermann. Bulletin of the U.S. Fish Commission for 1902 (1904), vol. XXII, pp. 209-210.
- 526. The fresh-water fishes of western Cuba. By Carl H. Eigenmann. Bulletin of the U. S. Fish Commission for 1902 (1904), vol. XXII, pp. 211-236, plates 19-21.
- 527. The organ and sense of taste in fishes. By C. Judson Herrick. Bulletin of the U. S. Fish Commission for 1902 (1904), vol. XXII, pp. 237-272.
- 528. Rotatoria of the United States. II. A monograph of the Rattulidae. By H. S. Jennings. Bulletin of the U. S. Fish Commission for 1902 (1904), vol. XXII, pp. 273-352, plates I-XV.
- 529. The plankton algae of Lake Erie, with special reference to the Chlorophyceae. By Julia W. Snow. Bulletin of the U.S. Fish Commission for 1902 (1904), vol. XXII, pp. 369-394, plates I-IV.
- 530. Description of a new species of darter from Tippecaroe Lake.

 By William J. Moenkhaus. Bulletin of the U. S. Fish

 Commission for 1902 (1904), vol. XXII, pp. 395-398.
- 531. Notes on some fresh-water fishes from Maine. By W. C. Kendall. Bulletin of the U. S. Fish Commission for 1902 (1904), vol. XXII, pp. 353-368, 5 text figs.
- Habits of some of the commercial catfishes. By W. C. Kendall. Bulletin of the U. S. Fish Commission for 1902 (1904), vol. XXII, pp. 399-409.
- 533. More complete description of <u>Bacterium truttae</u>. By M. C. Marsh. Bulletin of the U. S. Fish Commission for 1902 (1904), vol. XXII, pp. 411-416, plates 2.
- 534. Report on collections of fishes made in Hawaiian Islands, with descriptions of new species. By Oliver P. Jenkins. Bulletin of the U. S. Fish Commission for 1902 (1904), vol. XXII, pp. 417-512, plates 50, text fig.

- Set. The sponge fishery of Florida in 1900. By J. M. Cobb.
 Report of the U. S. Commission of Fish and Fisheries for
 1902 (1904), vol. XXVIII, pp. 161-175, plates 6-9.
- 556. Aquatic products in arts and industries. By C. H. Stevenson. Report of the U. S. Commission of Fish and Fisheries for 1902 (1904), vol. XXVIII, pp. 177-279, plates 10-25.
- 537. The utilization of the skins of aquatic animals. By C. H. Stevenson. Report of the U. S. Commission of Fish and Fisheries for 1902 (1904), vol. XXVIII, pp. 281-352.
- 538. List of common names of the basses and sunfishes. By Hugh M. Smith. Report of the U. S. Commission of Fish and Fisheries for 1902 (1904), vol. XXVIII, pp. 353-366.
- 539. The fisheries and fish trade of Porto Rico. By W. A. Wilcox. Report of the U. S. Commission of Fish and Fisheries for 1902 (1904), vol. XXVIII, pp. 367-395.
- 540. Statistics of the fisheries of the Middle Atlantic States (for 1901). Report of the U. S. Commission of Fish and Fisheries for 1902 (1904), vol. XXVIII, pp. 433-540.
- 541. Records of dredging and other collecting stations of the U.S.F.C. steamer Albatross in 1901 and 1902. Report of the U.S. Commission of Fish and Fisheries for 1902 (1904), vol. XXVIII, pp. 397-432.
- 542. Isopods collected at the Hawaiian Islands by the U.S.F.C. steamer Albatross. By Harriet Richardson. Bulletin of the U.S. Commission of Fish and Fisheries for 1903, vol. XXIII, pt. III (1906), pp. 819-826.
- 543. Birds of Laysan and the Leeward Islands, Hawaiian group.

 By Walter K. Fisher. Bulletin of the U. S. Commission of
 Fish and Fisheries for 1903, part III (1906), vol. XXIII,
 pp. 769-807, plates 1-10.
- Notes on a perpoise of the genus Prodelphinus from the Hawaiian Islands. By Frederick W. True. Bulletin of the U.S. Commission of Fish and Fisheries for 1903, part III (1906), vol. XXIII, pp. 811-815, plates 1 and 2.
- 545. Supplement to list of publications of the United States Fish Commission, available for distribution. Report of the U.S. Commission of Fish and Fisheries for 1902 (1904), vol. XXVIII, pp. 541-543.
- 546. A catalogue of the shore fishes collected by the U.S.F.C. steamer <u>Albatross</u> about the Hawaiian Islands in 1902. By John Otterbein Snyder. Bulletin of the U.S. Commission of Fish and Fisheries for 1902 (1904), vol. XXII, pp. 513-538, 52 text figs.

- 547. Notes on fishes collected in the Tortugas Archipolago. By David Starr Jordan. Bulletin of the U.S. Commission of Fish and Fisheries for 1902 (1904), vol. XXII, pp. 533-514, plates 1 and 2.
- 548. Report of the Commissioner of Fisheries for the fiscal year ending June 30, 1903. Report of the U.S. Commission of Fish and Fisheries for 1903 (1905), vol. XXX, pp. 1-138.
- Records of the dredging and other collecting and hydrographic stations of the U.S.F.C. steamer Albatross in 1903. By Franklin Swift (compiled by Harry C. Fassett). Report of the U.S. Commission of Fish and Fisheries for 1903 (1905), vol. XXIX, pp. 123-134.
- 550. The echinoderms of the Woods Hole Region. By Hubert Lyman Clark. Bulletin of the U. S. Fish Commission for 1902 (1904), vol. XXII, pp. 545-576, plates 1-14.
- 551. List of fishes dredged by the U.S.F.C. steamer Albatross off the coast of Japan in the summer of 1900, with descriptions of new species and a review of the Japanese Macrouridae. By David Starr Jordan and Edwin Chapin Starks. Bulletin of the U.S. Fish Commission for 1902 (1904), vol. XXII, pp. 577-630, plates I to VII.
- 552. Publications of the U.S. Commission of Fish and Fisheries available for distribution on June 30, 1903. Report of the U.S. Commission of Fish and Fisheries for 1903 (1905), vol. XXIX, pp. 527-545.
- 553. Report of the Commissioner of Fisheries to the Secretary of Commerce and Labor for the year ending June 30, 1904. Report of Bureau of Fisheries for 1904, U.S. Department of Commerce and Labor (1905), pp. 1-162.
- 554. Report of the special commission for the investigation of the lobster and soft-shell clam. By Hugh M. Smith, George H. Sherwood, Frederick P. Garmon, and James L. Kellogg. Report of the U.S. Commission of Fish and Fisheries for 1903 (1905), vol. XXIX, pp. 139-224, plates I-X.
- 555. The commercial fisheries of the interior lakes and rivors of New York and Vermont. By John N. Cobb. Report of the U.S. Commission of Fish and Fisheries for 1903 (1905), vol. XXIX, pp. 225-246.
- 556. Investigations for the promotion of the oyster industry of North Carolina. By Caswell Grave. Report of the U.S. Commission of Fish and Fisheries for 1903 (1905), vol. XXIX, pp. 247-341, 11 plates.

- boy. A revision of Malaclermys, a genus of turtles. By am. Ferry Hay. Eulletin of the Europa of Fisheries for 1904, United States Department of Commerce and Labor (1905), vol. XXIV, pp. 1-20, plates I-XII.
- 558. The Modusae of the Woods Hole Region. By Charles W. Hargitt.

 Bulletin of the Bureau of Fisheries for 1904, United States

 Department of Commerce and Labor (1905), vol. XXIV, pp. 21-79,

 plates I-VII.
- 559. The osteology and immediate relations of the tilefish

 Louholatilus chamaeleonticeps. By Frederick A. Lucas. Bulletin
 of the Eureau of Fisheries for 1904, United States Department of
 Commerce and Labor (1905), vol. XXIV, pp. 81-86.
- 560. The blood vascular system of the tilefish, Lopholatilus chamoleonticeps. By C. F. Silvester. Bulletin of the Bureau of Fisheries for 1904, United States Department of Commerce and Labor (1905), vol. XXIV, pp. 87-114, plate 1.
- 561. The fish parasites of the genus Argulus found in the Woods Hole region. By Charles B. Wilson. Bulletin of the Bureau of Fisheries for 1904, United States Department of Commerce and Labor (1905), vol. XXIV, pp. 115-131.
- 562. The seaweed industries of Japan. The utilization of seaweeds in the United States. By Hugh M. Smith. Bulletin of the Bureau of Fisheries for 1904, U. S. Department of Commerce and Labor (1905), vol. XXIV, pp. 133-181, plates I-V.
- 563. The function of the laterial-line organs in fishes. By G. H. Parker. Bulletin of the Bureau of Fisheries for 1904, United States Department of Commerce and Labor (1905), vol. XXIV, pp. 183-207.
- 564. Isopods from the Alaska salmon investigation. By Harriet Richardson. Bulletin of the Bureau of Fisheries for 1904, United States Department of Commerce and Labor (1905), vol. XXIV, pp. 209-221.
- 565. List of fishes collected in Boulder County, Colorado, with description of a new species of Leuciscus. By Chauncey Juday. Bulletin of the Bureau of Fisheries for 1904, United States Department of Commerce and Labor (1905), vol. XXIV, pp. 223-227.
- 566. Biological relation of aquatic plants to the substratum. By Raymond H. Pond. Report of the Eureau of Fisheries for 1904, United States Department of Commerce and Labor (1905), pp. 483-526.

- 567. State ichthyology of Massachusetts. By Theodoro Gill.
 Report of the Bureau of Fisheries for 1904, United States
 Department of Commerce and Labor (1905), pp. 163-188.
- 568. The fish fauna of the Tortugas Archipelago. By David Starr Jordan and Joseph C. Thompson. Bulletin of the Eureau of Fisheries for 1904, United States Department of Commerce and Labor (1905), vol. XXIV, pp. 229-256.
- 569. Distribution of sewage in the waters of Narragansett Bay, with especial reference to the contamination of the oyster bods. By Caleb Allen Fuller. Report of the Bureau of Fisheries for 1904, U. S. Department of Commerce and Labor (1905), pp. 189-238.
- 570. Statistics of the fisheries of the South Atlantic States, 1902. By A. B. Alexander. Report of the U. S. Commission of Fish and Fisheries for 1903 (1905), pp. 343-410.
- 571. Statistics of the fisheries of the Gulf States, 1902. By A. B. Alexander. Report of the U. S. Commission of Fish and Fisheries for 1903 (1905), pp. 411-481.
- 572. New starfishes from deep water off California and Alaska.

 By Walter K. Fisher. Bulletin of the Bureau of Fisheries for 1904, United States Department of Commerce and Labor (1905), vol. XXIV, pp. 291-320.
- 573. Cultivation of marine and fresh-water animals in Japan. By K. Mitsukuri. Bulletin of the Bureau of Fisheries for 1904, United States Department of Commerce and Labor (1905), pp. 257-289, plates I-XI.
- 574. Notes on the fishes of the streams flowing into San Francisco Bay, California. Critical notes on Mylocheilus lateralis and Leuciscus caurinus. By John O. Enyder. Report of the Bureau of Fisheries for 1904, United States Department of Commerce and Labor (1905), pp. 327-342, 1 plate.
- 575. Statistics of the fisheries of the New England States, 1902.

 By A. B. Alexander. Report of the Bureau of Fisheries for 1904, United States Department of Commerce and Labor (1905), pp. 245-325.
- 576. Note regarding the promotion of fishery trade between the United States and Japan. By Hugh M. Smith. Report of the Bureau of Fisheries for 1904, United States Department of Commerce and Labor (1905), pp. 239-243.



- 588. Schizopods of the Hawaiian Islands collected by the steamer Albatross in 1902. By A. E. Ortmann. Bulletin of the U. S. Fish Commission for 1903 (1906), part III, vol. XXIII, pp. 961-973.
- 589. Nemerteans of the Hawaiian Islands collected by steamer Albatross in 1902. By Wesley R. Coe. Bulletin of the U. S. Fish Commission for 1903 (1906), part III, vol. XXIII, pp. 975-986, l plate, 7 text figs.
- 590. Commercial fisheries of Hawaiian Islands in 1903. By John N. Cobb. Report of the Bureau of Fisheries for 1904, United States Department of Commerce and Labor (1905), pp. 433-512.
- 591. Notes on the food and parasites of some fresh-water fishes from the Lakes at Madison, Wisconsin. By W. S. Marshall and N. C. Gilbert. Report of the Bureau of Fisheries for 1904, United States Department of Commerce and Labor (1905), pp. 513-522.
- 592. The German carp in the United States. By Leon J. Cole. Report of the Bureau of Fisheries for 1904, United States Department of Commerce and Labor (1905), pp. 524-641, plates I-III.
- 593. Statistics of the fisheries of the Great Lakes in 1903. By A. B. Alexander. Report of the Bureau of Fisheries for 1904, United States Department of Commerce and Labor (1905), vol. XXIX, pp. 643-731.
- 594. Report of the Commissioner of Fisheries for the year ending June 30, 1905. In Report of Commissioner of Fisheries (with special papers) for 1905, U.S. Department of Commerce and Labor, pp. 1-46.
- 595. The golden trout of the southern High Sierras. By Barton W.
 Evermann. Bulletin of the Bureau of Fisheries for 1905,
 United States Department of Commerce and Labor (1906), vol. XXV,
 pp. 1-51, plates I to XXV.
- 596. The physiological effects upon fishes of changes in the density and salinity of water. By F. B. Summer. Bulletin of the Bureau of Fisheries for 1905, United States Department of Commerce (1906), vol. XXV, pp. 53-108, 2 text figs.
- 597. Opisthobranchiate Mollusca from Monterey Bay, California, and vicinity. By F. M. MacFarland. Bulletin of the Bureau of Fisheries for 1905, United States Department of Commerce and Labor (1906), vol. XXV, pp. 109-151, plates XVIII-XXXI.

- by J. P. Moore. Bullotin of the Bureau of Ficheries for 1905, United States Department of Cormerce and Labor (1906), vol. EAV. pp. 163-171, plate XXXII, 6 text figs.
- 509. The starfishes of the Hauaiian Islands. By Walter K. Fisher.
 Bulletin of the United States Fish Commission for 1903 (1906),
 vol. XXIII, part III, pp. 987-1130, plates I-XLIX, 2 text figs.
- Medusae of the Hawaiian Islands collected by the steamer

 Albatross in 1902. By Alfred G. Mayer. Bulletin of the U.S.

 Fish Commission for 1903 (1906), vol. XXIII, pp. 1131-1143,
 plates I-III.
- 601. Polychaetous annelids of the Hawaiian Islands collected by the steamer Albatross in 1902. By Aaron L. Treadwell. Bulletin of the United States Fish Commission for 1903 (1906), vol. XXIII, part III, pp. 1145-1181, 81 text figs.
- The propagation and distribution of food fishes in 1905. By
 John W. Titcomb. Report of Bureau of Fisheries for 1905,
 United States Department of Commerce and Labor (1905), 64 pp.
- 603. The commercial fisheries of Alaska in 1905. By John N. Cobb.
 Report of the Commissioner of Fisheries for 1905, 46 pp.
- 604. Dredging and hydrographic records of the U. S. F. S. Albatross for 1904 and 1905. Report of the U. S. Commissioner of Fisheries for 1905 (1906), 78 pp.
- 605. The fishes of Samoa. Description of the species found in the archipelago, with a provisional list of the fishes of Oceania. By David Starr Jordon and Alvin Seale. Bullotin of the Bureau of Fisheries, Department of Commerce and Labor, 1905 (1906), vol. XXV, pp. 173-455, plates XXXIII-LIII.
- 606. Fishes of the islands of Luzon and Panay. By David Starr Jordan, and Alvin Seale. Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, vol. XXVI, 1906 (1907), pp. 1-48.
- 607. Fishes of the Philippine Islands. By Barton W. Evermann and Alvin Seale. Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, for 1906 (1907), vol. XXVI, pp. 49-110.
- 608. Report of the Commissioner of Fisheries for the fiscal year ended June 30, 1906. 28 pp., 1906.
- 609. Statistics of the fisheries of the Middle Atlantic States for 1904. Report of the Bureau of Fisheries for 1905 (1907), 122 pp.

- 610. Survey of oyster bottoms in Matagorda Bay, Texas. By
 H. F. Moore. Report of U. S. Bureau of Fisherics for
 1905 (1907), 86 pp., plates I-XIII, 1 chart.
- 611. A costode parasite in the flash of the butterfish. By
 Edwin Linton. Bulletin of the Eureau of Fisheries,
 Department of Commerce and Labor, 1906 (1907), vol. XXVI,
 pp. 111-131, plates 1-11.
- 612. The commercial fisheries of the Pacific Coast States in 1904. By W. A. Wilcox. Report of the Bureau of Fisheries for 1905, 74 pp.
- 613. The distribution of food fishes during the fiscal year 1906.

 Report of the Commissioner, Bureau of Fisheries, Department of Commerce and Labor, 1906. 78 pp.
- 614. List of publications of Bureau of Fisheries available for distribution. 20 pp., 1907.
- 615. Notes on Lake Tahoe, its trout and trout-fishing. By Chancey Juday. Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1906 (1907), vol. XXVI, pp. 133-146.
- 616. A study of Twin Lakes, Colorado, with especial consideration of the food of the trout. By Chancey Juday. Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1906 (1907), vol. XXVI, pp. 147-179, plates I-III.
- 617. Hawaiian Cirripedia. By H. A. Pilsbry. Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1906 (1907), vol. XXVI, pp. 179-204, plates IV-XI.
- 618. The fisheries of Alaska in 1906. (Comprising statistics and notes upon the fisheries in general.) By John M. Cobb: with report of inspection of the salmon fisheries. By Howard M. Kutchin, (1907), pp. 1-70.
- 619. The effects of some industrial wastes on fishes. By M. C.

 Marsh. Reprint from Water-Supply and Irrigation Paper
 No. 192, U. S. Geological Survey. 1907. Special edition
 obtained by Bureau of Fisheries.
- 620. Statistics of the fisheries of the New England States for 1905. Report of the Commissioner of Fisheries for the fiscal year 1906 and Special Papers, Bureau of Fisheries, Washington. 93 pp.
- 621. Dredging and hydrographic records of the U. S. F. S. Albatross for 1906. Report of the Commissioner of Fisheries for the fiscal year 1906 and Special Papers, Bureau of Fisheries,

 Washington. 49 pp.

17Issued as a pamphlet only.

- 622. Unutilized fishes and their relation to the fishing industries. By Irving A. Field. Report of the Commissioner of Fisheries for the fiscal year 1906 and Special Papers, Eureau of Fisheries, Washington. 50 pp.
- 623. Notes on fishes of Hawaii, with descriptions of now species.

 By David S. Jordan and John O. Snyder. Bulletin of the

 Bureau of Fisheries, Department of Commerce and Labor,

 1906 (1907), vol. XXVI, pp. 205-218, 4 text figs.

 plates XII-XIII.
- 624. The fishes of Alaska. By Barton Warren Evermann and Edmund Lee Goldsborough. Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1906 (1907), vol. XXVI, pp. 219-360, 144 text figs., plates XIV-XLII.
- 625. The physiology of the digestive tract of elasmobranchs. By Michael X. Sullivan. Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1907 (1908), vol. XXVII, pp. 1-27, 1 plate.
- 626. Whelebone: Its production and utilization. By C. H. Stevenson.
 Report of the Commissioner of Fisheries for the fiscal year
 1906 and Special Papers. Bureau of Fisheries, Washington.
 pp. 12, 3 plates.
- 627. Some observations on salmon and trout in Alaska. By F. M. Chamberlain. Report of the Commissioner of Fisheries for the fiscal year 1906 and Special Papers. Bureau of Fisheries, Washington. pp. 112, 1 map, 5 plates, diagrams A-E.
- 628. Culture of the Montana grayling. By James A. Henshall. Report of the Commissioner of Figheries for the fiscal year 1906 and Special Papers. Bureau of Fisheries, Washington. pp. 7.
- 629. Report of the Commissioner of Fisheries for the year ended June 30, 1907. Report of the Commissioner of Fisheries for the fiscal year 1906 and Special Papers. Bureau of Fisheries, Washington.
- 630. The distribution of fish and fish eggs during the fiscal year 1907. Report of the Commissioner of Fisheries for the fiscal year 1906 and Special Papers. Bureau of Fisheries, Washington.
- 631. Fishes of West Virginia. By E. L. Goldsborough and H. Walton Clark. Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1907 (1908), vol. XXVII, pp. 29-39, 1 text fig.
- 632. The fisheries of Alaska in 1907. By M. C. Marsh and J. N. Cobb. Report of the Commissioner of Fisheries for the fiscal year 1907 and Special Papers. Bureau of Fisheries, Washington. pp. 64.

- 633. The fishes of the Connecticut Lakes and neighboring waters, with notes on the plankton environment. By W. C. Kendall and E. L. Goldsborough. Report of the Commissioner of Fisheries for the fiscal year 1907 and Special Papers. Bureau of Fisheries, Washington. pp. 77, plates—1-XII, text 5 figs, 2 charts.
- 634. Devils Lake, North Dakota: A study of physical and biological conditions, with a view to the acclimitizations of fish. By Thomas E. B. Pope. Report of the Commissioner of Fisheries for the fiscal year 1907 and Special Papers. Bureau of Fisheries, Washington, pp. 22, plates 1-111, 1 map.
- 635. The photography of aquatic animals in their natural environment. By Jacob Reighard. Bulletin of the Bureau of Fisheries, Department of Commerce end Labor, 1907 (1908), vol. XXVII, pp. 41-68, plates V.
- 636. Relationships of the fish fauna of the lakes of southeastern Oregon. By John O. Snyder. Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1907 (1908), vol. XXVII, pp. 69-102, text figs. 1-4, 1 map.
- 637. The fishes of the Sacramento-San Joaquin basin, with a study of their distribution and variation. By Cloudsley Rutter. Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1907 (1908), vol. XXVII, pp. 103-152, text figs. 1-4, plates I-VI.
- 638. The fishes of the coastal streams of Oregon and northern California. By John O. Snyder. Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1907 (1908), vol. XXVII, pp. 153-190, 5 text figs., 1 map.
- 639. Natural history, organization, and late development of the Teredinidae, or shipworms. By Charles P. Sigerfoos. Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1907 (1908), vol. XXVII, pp. 191-231, plates VII-XXI.
- 640. Fishes from islands of the Philippine Archipelago. By
 David S. Jordan and Robert E. Richardson. Bulletin of
 the Bureau of Fisheries, Department of Commerce and Labor,
 1907 (1908), vol. XXVII, pp. 233-287, text figs. 1-12.
- 641. The United States Bureau of Fisheries: Its establishment, functions, organization, resources, operations, and achievements. By Hugh M. Smith. Paper presented to the International Fishery Congress: Washington, September 22-26, 1908. Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, part 2, pp. 1365-1411, plates CXIIII-CLVII.

- 642. Report of the Commissioner for the year ended June 30, 1903. Report of the Commissioner of Fisherics for the fiscal year 1908 and Special Lupers, (1910), pp. 1-23.
- 613. Aquatic plants and pond culture. By John W. Titecab.

 Hoport of the Commissioner of Fisheries for the riscal

 year 1907 and Special Papers (1909), plates 1-2, text
 fig. 1-32.
- 644. Distribution of fish and fish eggs during the fiscal year 1908. Report of the Commissioner of Fisheries for the fiscal year 1908 and Special Papers, (1910), pp. 3-92.
- The fisheries of Alaska in 1908. By M. C. March and J. N. Cobb. Report of the Commissioner of Fisheries for the fiscal year 1909 and Special Papers (1911), pp. 78.
- 646. International regulations of the fisheries on the high seas. By O. T. Olsen. (Proceedings of the Fourth International Fishery Congress, Washington, 1908.)

 Bulletin of the Eureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pp. 77-90.
- 647. International regulations of the fisheries on the high seas. By Charles E. Fryer. (Proceedings of the Fourth International Fishery Congress, Washington, 1908.)
 Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pp. 91-102, plate 1.
- 648. International regulations of the fisheries on the high seas. By Charles Hugh Stevenson. (Proceedings of the Fourth International Fishery Congress, Washington, 1908.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pp. 103-180, plate 1, 3 text figs.
- 649. Work of the International Fisheries Commission. By David Starr Jordan. (Proceedings of the Fourth International Fishery Congress, Washington.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pp. 181-186, plate 1.
- 650. Some reasons for failure of fish-protective legislation, and some suggested remedies. By Oregon Milton Dennis. (Proceedings of the Fourth International Fishery Congress, Washington, 1908.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pp. 187-192, plate 1.

- 651. National aspects of angling and the protection of game fishes. By H. Wheeler Perce. (Proceedings of the Yourth International Fishery Congress, Machington, 1908.)

 Bulletin of the Bureau of Fisheries, Department of Congress and Labor, 1908 (1910), vol. XXVIII, pp. 193-193, part 1.
- 652. Sport fishing in California and Florida. By Charles F. Helder. (Proceedings of the Fourth International Fishery Congress, Washington, 1908.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pp. 199-207, plates I-VI, pt. 1.
- 653. Lobsters and the lobster problem in Massachusetts. By George W. Field. With discussion. (Proceedings of the Fourth International Fishery Congress, Washington, 1908.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pp. 209-217, pt. 1.
- 654. A method of lobster culture. By A. D. Mead. (Proceedings of the Fourth International Fishery Congress, Washington, 1908.)
 Bulletin of the Bureau of Fisheries, Department of Commorce and Labor, 1908 (1910), vol. XXVIII, pp. 219-240, 7 text fig., plates VII-XI.
- 655. Sea mussels and dogfish as food. By Irving A. Field. With discussion. (Proceedings of the Fourth International Fishery Congress, Washington, 1908.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pp. 241-257, pt. 1.
- 656. On the wholesomeness of oysters as food. By Henry C. Rowe.

 (Proceedings of the Fourth International Fishery Congress,
 Washington, 1908.) Bulletin of the Bureau of Fisheries,
 Department of Commerce and Labor, 1908 (1910), vol. XXVIII,
 pp. 259-267, pt. 1.
- 657. Effects of menhaden fishing upon the supply of menhaden and of the fishes that prey upon them. By Walter E. Hathaway. With discussion. (Proceedings of the Fourth International Fishery Congress, Washington, 1908.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pp. 269-278, pt. 1.
- 658. Effects of the menhaden and mackerel fisheries upon the fish supply. By W. C. Kendall. (Proceedings of the Fourth International Fishery Congress, Washington, 1908.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pp. 279-293, pt. 1.
- 659. An improved and practical method of packing fish for transportation. By A. Solling. (Proceedings of the Fourth International Fishery Congress, Washington, 1908.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pp. 295-301.

- 660. A process for preserving the pearl-oyster fisheries and for increasing the value of the yield of pearls. By John I. Solomon. (Proceedings of the Fourth International Fishery Congress, Washington, 1908.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII. pp. 303-313, pt. 1, 3 text figs.
- 661. Fur seals and the seal fisheries. By Charles H. Townsend.
 (Proceedings of the Fourth International Fishery Congress,
 Washington, 1908.) Bulletin of the Bureau of Fisheries,
 Department of Commerce and Labor, 1908 (1910), vol. XXVIII,
 pp. 315-322, pt. 1.
- 662. Economic conditions of the fisheries in Italy. By Guido Rossati. (Proceedings of the Fourth International Fishery Congress, Washington, 1908.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pp. 323-332, pt. 1.
- 663. The fisheries and the guano industry of Peru. By Robert E. Coker. (Proceedings of the Fourth International Fishery Congress, Washington, 1908.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pp. 333-365, pt. 1, plates XII-XVII.
- 664. The fisheries of China. By W. W. Yen. (Proceedings of the Fourth International Fishery Congress, Washington, 1908.)
 Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pp. 367-373, pt. 1.
- 665. The fisheries of Japan considered from a geographical standpoint. By T. Kitahara. (Proceedings of the Fourth International Fishery Congress, Washington, 1908.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pp. 375-379, pt. 1.
- 666. Goldfish and their culture in Japan. By S. Matsubara.

 (Proceedings of the Fourth International Fishery Congress,
 Washington, 1908.) Bulletin of the Bureau of Fisheries,
 Department of Commerce and Labor, 1908 (1910), vol. XXVIII,
 pp. 381-397, pt. 1, 1 text fig., plates XVIII-XXVII.
- 667. Commercial sponges and the sponge fisheries. By H. F. Moore. (Proceedings of the Fourth International Fishery Congress, Washington, 1908.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pp. 399-511, pt. 1, 4 text figs., plates XXVIII-LXVI.
- 668. Abuse of scaphander in sponge fisheries. By Ch. Flegel.
 (Translation from the German. Proceedings of Fourth
 International Fishery Congress, Washington, 1908.) Bulletin
 of the Bureau of Fisheries, Department of Commerce and Labor,
 1908 (1910), vol. 28, pp. 513-543, pt. 1.

- 669. A practical method of sponge culture. By H. F. Moore.
 (Proceedings of the Fourth International Fishery Congress,
 Washington, 1908.) Bulletin of the Bureau of Fisheries,
 Department of Commerce and Labor, 1908 (1910), vol. XXVIII,
 pp. 545-585, pt. 1, 7 text figs., plates LXVII-LXXVI.
- 670. Sponge culture. Ty Jules Cotte. (Translation from the French. Proceedings of Fourth International Fishery Congress, Washington, 1908.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVII, pp. 587-614, pt. 1.
- 671. Experiments in artificial propagation of fresh-water mussels.

 By George Lefevre and W. C. Curtis. (Proceedings of Fourth
 International Fishery Congress, Washington, 1908.) Bulletin
 of the Bureau of Fisheries, Department of Commerce and Labor,
 1908 (1910), vol. XXVIII. pp. 615-626, pt. 1,
- 672. Plan for promoting whitefish production of Great Lakes. By S. W. Downing. (Proceedings of Fourth International Fishery Congress, Washington, 1908.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pp. 627-633, pt. 1.
- 673. Plan for promoting whitefish production of Great Lakes. By
 Frank N. Clark. (Proceedings of Fourth International Fishery
 Congress, Washington, 1908.) Bulletin of the Bureau of
 Fisheries, Department of Commerce and Labor, 1908 (1910),
 vol. XXVIII, pp. 635-642, pt. 1.
- 674. Plan for promoting whitefish production of Great Lakes. By Paul Reighard. (Proceedings of Fourth International Fishery Congress, Washington, 1908.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII. pp. 643-684, pt. 1. 5 text figs.
- 675. Fish-cultural practices in Bureau of Fisheries. By John W. Titcomb. (Proceedings of Fourth International Fishery Congress, Washington, 1908.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pp. 697-757, pt. 2, 13 plates, 13 text figs.
- 676. New principle of aquiculture and transportation of live fishes.

 By A. D. Mead. (Proceedings of Fourth International Fishery
 Congress, Washington, 1908.) Bulletin of the Bureau of
 Fisheries, Department of Commerce and Labor, 1908 (1910),
 vol. XXVIII, pp. 759-780, pt. 2, 11 plates, 1 text fig.
- 677. A method of cultivating rainbow trout and other Salmonidae.

 By Charles L. Paige. (Proceedings of the Fourth International Fishery Congress, Washington, 1908.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pp. 781-787, pt. 2, 3 text figs.

- 679. Comparative value of foods for rainbow trout and other salmonoids. By Gharles L. Paige. (Proceedings of Fourth International Fishery Congress, Washington, 1908.) Eulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pt. 2, pp. 795-798.
- 680. Apparatus and methods used at marine fish hatchery at Flodevig, Norway. By G. M. Dannevig. (Proceedings of Fourth International Fishery Congress, Washington, 1908.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pt. 2, pp. 799-209, 8 text figs.
- 681. Utility of sea-fish hatching. By C. M. Dannevig. (Proceedings of Fourth International Fishery Congress, Washington, 1908.)
 Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII: pt. 2, pp. 811-816.
- 682. Propagation and protection of Rhine salmon. By P. P. C. Hoek. With discussion. (Proceedings of Fourth International Fishery Congress, Lashington, 1908.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pt. 2, pp. 817-829, 2 text figs.
- 683. Fishes in their relation to mosquito problem. By William P. Soal. (Proceedings of Fourth International Fishery Congress, Washington, 1908.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pt. 2, pp. 831-838.
- 684. Foods for young salmonoid fishes. By Charles G. Atkins.
 (Proceedings of Fourth International Fishery Congress,
 Washington, 1908.) Bulletin of the Eureau of Fisheries,
 Dopartment of Commerce and Labor, 1908 (1910), vol. XXVIII,
 pt. 2, pp. 839-851.
- 685. Fresh-water shrimp, a natural fish food. By S. C. Worth.
 (Proceedings of Fourth International Fishery Congress,
 Washington, 1908.) Bulletin of the Bureau of Fisheries,
 Department of Commerce and Lubor, 1908 (1910), vol. XXVIII,
 part 2, pp. 853-858.
- 686. The cultivation of the turbot. By R. Anthony. (Translation from the French. Proceedings of the Fourth International Fishery Congress, Washington, 1908.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pt. 2, pp. 859-870, 2 text figs., plates CII-CIII.

- 687. The treatment of fish-cultural waters for the removal of algae. By M. C. Marsh and R. K. Robinson. (Proceedings of the Fourth International Fishery Congress, Washington, 1908.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pt. 2, pp. 871-890, 2 text figs.
- 688. Notes on the dissolved content of water in its effect upon fishes. By M. C. Marsh. (Proceedings of the Fourth International Fishery Congress, Washington, 1908.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pt. 2, pp. 891-906.
- 689. Causes of diseases in young salmonoids. By Eugene Vincent.

 (Translation from the French. Proceedings of the Fourth
 International Fishery Congress, Washington, 1908.) Bulletin
 of the Bureau of Fisheries, Department of Commerce and Labor,
 1908 (1910), vol. XXVIII, pt. 2, pp. 907-916.
- 690. Radical prevention of Costia necatrix in salmonoid fry. By
 Johann Franke. (Translation from the German. Proceedings
 of the Fourth International Fishery Congress, Washington,
 1908.) Bulletin of the Bureau of Fisheries, Department of
 Commerce and Labor, 1908 (1910), vol. XXVIII, pt. 2, pp. 917-928.
- 691. Treatment of fungus on fishes in captivity. By L. B. Spencer. (Proceedings of the Fourth International Fishery Congress, Washington, 1908.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pt. 2, pp. 929-932.
- 692. Methods of combating fungus on fishes in captivity. By Charles F. Holder. (Proceedings of the Fourth International Fishery Congress, Washington, 1908.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pt. 2, pp. 933-936.
- 693. A new method of combating fungus on fishes in captivity. By
 Paul Zirzow. (Translation from the German. Proceedings
 of the Fourth International Fishery Congress, Washington,
 1908.) Bulletin of the Bureau of Fisheries, Department of
 Commerce and Labor, 1908 (1910), vol. XXVIII, pt. 2, pp. 937-940.
- 694. Experience in abating disease among brook trout. By Albert Rosenberg. (Proceedings of the Fourth International Fishery Congress, Washington, 1908.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pt. 2, pp. 941-945.
- 695. American fishes in Italy. By G. Besana. (Translation from the German. Proceedings of the Fourth International Fishery Congress, Washington, 1908.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pt. 2, pp. 947-954.

- 696. Acclimation of American fishes in Argentina. By E. A. Tulian. (Proceedings of the Fourth International Fishery Congress, Washington, 1908.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pt. 2, pp. 955-965.
- 697. Introduction of American fishes into New Zealand. By L. F. Ayson. With discussion. (Proceedings of the Fourth International Fishery Congress, Washington, 1908.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pt. 2, pp. 967-975.
- 698. Naturalization of American fishes in Austrian waters. By
 Franz von Pirko. (Proceedings of the Fourth International
 Fishery Congress, Washington, 1908.) Bulletin of the Bureau
 of Fisheries, Department of Commerce and Labor, 1908 (1910),
 vol. XXVIII, pt. 2, pp. 977-982.
- 699. Causes of degeneration of American trouts in Austria. By
 Johann Franke. (Translation from the German. Proceedings
 of the Fourth International Fishery Congress, Washington,
 1908.) Bulletin of the Bureau of Fisheries, Department of
 Commerce and Labor, 1908 (1910), vol. XXVIII, pt. 2, pp. 983-989.
- 700. New and improved devices for fish culturists. By Alfred E. Fuller. (Proceedings of the Fourth International Fishery Congress, Washington, 1908.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pt. 2, pp. 991-1000, plates CIV-CVI.
- 701. A device for counting young fish. By Robert K. Robinson.

 (Proceedings of the Fourth International Fishery Congress,
 Washington, 1908.) Bulletin of the Bureau of Fisheries,
 Department of Commerce and Labor, 1908 (1910), vol. XXVIII,
 pt. 2, pp. 1001-1004, 1 text fig.
- 702. A method of transporting live fishes. By Charles F. Holder. (Proceedings of the Fourth International Fishery Congress, Washington, 1908.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pt. 2, pp. 1005-1007.
- 703. A method of measuring fish eggs. By H. von Bayer. (Proceedings of the Fourth International Fishery Congress, Washington, 1908.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pt. 2, pp. 1009-1014, 2 text figs.
- 704. An improvement in hatching and rearing-boxes; with notes on continuous feeding of the fry of Salmonidae. By G. E. Simms. (Proceedings of the Fourth International Fishery Congress, Washington, 1908.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pt. 2, pp. 1015-1023, 3 text figs.

- 705. Devices for use in fish hatcheries and aquaria. By Eugene Vincent. (Translation from the French. Proceedings of the Fourth International Fishery Congress, Washington, 1908.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pt. 2, pp. 1025-1035, 6 text figs.
- 706. New methods of transportings eggs and fish. By W. S. Kincaid. (Proceedings of the Fourth International Fishery Congress, Washington, 1908.) Bulletin of the Bureau of Fisheries, Dopartment of Commorce and Labor, 1908 (1910), vol. XXVIII, pt. 2, pp. 1037-1039.
- 707. Fishways. By H. von Bayer. (Proceedings of the Fourth International Fishery Congress, Washington, 1908.)

 Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pt. 2, pp. 1041-1057, 21 text figs.
- 708. A plea for observation of habits of fishes and against undue generalization. By Theodore Gill. (Proceedings of the Fourth International Fishery Congress, Washington, 1908.)
 Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pt. 2, pp. 1059-1069.
- 709. The habits and life history of the toadfish (Opsanus tau).

 By E. W. Gudger. (Proceedings of the Fourth International
 Fishery Congress, Washington, 1908.) Bulletin of the Bureau
 of Fisheries, Department of Commerce and Labor, 1908 (1910),
 vol. XXVIII, pt. 2, pp. 1071-1110, 1 text fig., plates CVII-CXIII.
- 710. Methods of studying the habits of fishes and recording their life histories; with an account of the breeding habits of the horned dace. By Jacob Reighard. (Proceedings of the Fourth International Fishery Congress, Washington, 1908.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pt. 2, pp. 1111-1136, plates CXIV-CXX.
- 711. A method of studying the life history of fishes. By Charles F. Holder. (Proceedings of the Fourth International Fishery Congress, Washington, 1908.) Bulletin of the Buroau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pt. 2, pp. 1137-1141.
- 712. Effects of changes in the density of water upon the blood of fishes. By G. G. Scott. (Proceedings of the Fourth International Fishery Congress, Washington, 1908.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pt. 2, pp. 1143-1150.
- 713. Internal parasites of the Sebago salmon. By Henry B. Ward.

 (Proceedings of the Fourth International Fishery Congress,
 Washington, 1908.) Bulletin of the Bureau of Fisheries,
 Department of Commerce and Labor, 1908 (1910), vol. XXVIII,
 pt. 2, pp. 1151-1194, plates CXXI.

- 714. Notes on the flesh par sites of narine food fishes. By Edwin Linton. (Proceedings of the Fourth International Fishery Congress, Lashington, 1908.) Eulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. CVIII, pt. 2, pp. 1195-1209.
- 715. Structure and functions of the sar of the squeteague. By G. H. Parker. (Proceedings of the Fourth International Fishery Congress, Washington, 1908.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pt. 2, pp. 1211-1224, plates CXXII.
- 716. An intensive study of the fauna and flora of a restricted area of sea bottom. By Francis B. Summer. (Proceedings of the Fourth International Fishery Congress, Washington, 1908.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pt. 2, pp. 1225-1263, text figs. 1-27, 2 charts.
- 717. Development of sponges from tissue cells outside the body of the parent. By H. V. Wilson. (Proceedings of the Fourth International Fishery Congress, Washington, 1903.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pt. 2, pp. 1265-1271.
- 718. Gases dissolved in the waters of Wisconsin Lakes. By E. A. Birgo. (Proceedings of the Fourth International Fishery Congress, Washington, 1908.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pt. 2, pp. 1273-1294, text fig. 1-20.
- 719. Volumetric studies of the food and feeding of oysters. By
 H. F. Moore. (Proceedings of the Fourth International
 Fishery Congress, Washington, 1908.) Bulletin of the
 Bureau of Fisheries, Department of Commerce and Labor,
 1908 (1910), vol. XXVIII, pt. 2, pp. 1295-1308, toxt figs.
 1-6, plates CXXV.
- 720. A plan for an educational exhibit of fishes. By Charles F. Holder. (Proceedings of the Fourth International Fishery Congress, Washington, 1908.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pt. 2, pp. 1309-1314.
- 721. A plan for an educational exhibit of fishes. By Roy W.
 Miner. (Proceedings of the Fourth International Fishery
 Congress, Washington, 1908.) Bulletin of the Bureau of
 Fisheries, Department of Commerce and Labor, 1908 (1910),
 vol. XXVIII, pt. 2, pp. 1315-1346, text figs. 1-9,
 plates CXXVI-CXLI.
- 722. Outline for an educational exhibit of fishes. By Frederic A. Luces. (Proceedings of the Fourth International Fishery Congress, Washington, 1903.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pt. 2, pp. 1341-1351.

- 723. A method of preparing fish for museum and exhibition pusposes. By Dwight Franklin. (Proceedings of the Fourth International Fishery Congress, Washington, 1908.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pt. 2, pp. 1353-1355, plates CXLII.
- 724. New methods of preparing fish for museum exhibits. By
 J. D. Figgins. (Proceedings of the Fourth International
 Fishery Congress, Washington, 1908.) Bulletin of the
 Bureau of Fisheries, Department of Commerce and Labor,
 1908 (1910), vol. XXVIII, pt. 2, pp. 1357-1363.
- 725. The United States Bureau of Fisheries: Its establishment, functions, organization, resources, operations and achievements. By Hugh M. Smith. Second edition. (Proceedings of the Fourth International Fishery Congress, 1908.) Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pt. 2, pp. 1365-1411, plates CXLIII-CLVI.
- 726. Organization and sessional business of the Fourth International Fishery Congress, Washington, 1908. Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1908 (1910), vol. XXVIII, pp. 1-76, pt. 2.
- 727. Report of the Commissioner of Fisheries for 1909. Report of the Commissioner of Fisheries for the fiscal year 1909 and special papers (1911), pp. 1-38.
- 728. Distribution of fish and fish eggs during the fiscal year 1909. Report of the Commissioner of Fisheries for the fiscal year 1909 and special papers (1911), pp. 103.
- 729. Condition and extent of the oyster beds of James River,
 Virginia. By H. F. Moore. Report of the Commissioner
 of Fisheries for the fiscal year 1909 and special papers
 (1911). 83 pp.
- 730. The fisheries of Alaska in 1909. By M. C. Marsh and John N. Cobb. Report of the Commissioner of Fisheries for the fiscal year 1909 and special papers (1911), pp. 58.
- 731. Oyster culture experiments and investigations in Louisiana.

 By H. F. Moore. Report of the Commissioner of Fisheries
 for the fiscal year 1910 and special papers (1911), pp. 54.
- 732. Laws and regulations relative to fur-seal fishing. Report of the Commissioner of Fisheries for the fiscal year 1909 with special papers (1911), pp. 7.

- 733. American catfishes: Habits, culture, and commercial importance.
 By William Converse Kendall. Report of the Commissioner of
 Fisheries for the fiscal year 1908 and special papers (1910);
 pp. 38, 10 plates.
- 734. Report of the Commissioner of Fisheries, 1910. Report of the Commissioner of Fisheries for the fiscal year 1910 and special papers (1911); pp. 40.
- 735. The fur-seal fisheries of Alaska in 1909. By Walter I. Lembkey.
 Report of the Commissioner of Fisheries for the fiscal year
 1909 and special papers (1911); pp. 53.
- 736. Marine isopods collected in the Philippines by the U. S. F. S.

 Albatross in 1907-8. By Harriet Richardson. pp. 44, text
 figs. 39 (1910).
- 737. A review of the salmonoid fishes of the Great Lakes, with notes on the whitefishes of other regions. By David Starr Jordan and Barton Warren Evermann. Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1909 (1911), vol. XXIX, pp. 1-42, plates I-VII, 23 text figs.
- 738. Influence of the eyes, ears, and other allied sense organs on the movements of the dogfish, <u>Mustelus canis</u> (Mitchill). By George H. Parker. Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1909 (1911), vol. XXIX, pp. 43-57.
- 739. Barnacles of Japan and Bering Sea. By Henry A. Pilsbry.

 Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1909 (1911), vol. XXIX, pp. 59-84, plates VIII-XVII, 11 text figs.
- 740. The distribution of fish and fish eggs during the fiscal year 1910. Report of the Commissioner of Fisheries for the fiscal year 1910 and special papers (1911); pp. 112.
- 741. Dredging and hydrographic records of the U. S. F. S. Albatross during the Philippine expedition, 1907-1910. Report of the Commissioner of Fisheries for the fiscal year 1910 and special papers (1911); pp. 97.
- 742. The food value of sea mussels. By Irving A. Field. Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1909 (1911), vol. XXIX, pp. 85-128, plates XVIII-XXV, 2 text figs.
- 743. The migration of salmon in the Columbia River. By Charles W. Greene. Bulletin of the Bureau of Fisheries, Department of Commerco and Labor 1909 (1911), vol. XXIX, pp. 129-148, plates XXVI-XXVII.

- 744. Anatomy and physiology of the wing-shell Atrina rigida.

 By Benjamin H. Grave. Bulletin of the Bureau of Fisheries,

 Department of Commerce and Labor 1909 (1911), vol. XXIX,

 pp. 409-440, plates XLVII-L, 15 text figs.
- 745. Condition and extent of the natural oyster beds of Delaware.

 By H. F. Moore. Report of the Commissioner of Fisheries
 for the fiscal year 1910 and special papers (1911); pp. 30,

 1 chart.
- 746. The fisheries of Alaska in 1910. By M. C. Marsh and John N. Cobb. Report of the Commissioner of Fisheries for the fiscal year 1910 and special papers (1911); pp. 72.
- 747. Natural history of the American lobster. By Francis H.

 Herrick. Bulletin of the Bureau of Fisheries, Department
 of Commerce and Labor 1909 (1911), vol. XXIX, pp. 149-408,
 plates XXVIII-XLVII, 42 text figs.
- 748. Special investigation of the fur-seal rookeries in 1910. By Harold Heath. Report of the Commissioner of Fisheries for the fiscal year 1910 and special papers (1911); pp. 22.
- 749. The fur-seal fisheries in 1910. By Walter L. Lembkey.

 Report of the Commissioner of Fisheries for the fiscal year
 1910 and special papers (1911), pp. 40.
- 750. Development of sponges from dissociated tissue cells. By
 H. V. Wilson. Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1910 (1912), vol. XXX, pp. 1-30,
 plates I-V.
- 751. The salmon fisheries of the Pacific coast. By John N. Cobb.
 Report of the Commissioner of Fisheries for the fiscal
 year 1910 and special papers (1911); pp. 182.
- 752. Effects of explosive sounds, such as those produced by motor boats and guns, upon fishes. By G. H. Parker. Report of the Commissioner of Fisheries for the fiscal year 1911 and special papers (1913); pp. 9.
- 753. Report of the Commissioner for 1911. Report of the Commissioner of Fisheries for the fiscal year 1911 and special papers (1913):
- 754. Fishes from Bering Sea and Kamchatka. By C. H. Gilbert and C. V. Burke. Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1910 (1912), vol. XXX, pp. 31-96, 37 text figs.

- 755. Sound as a directing influence in the movements of fishes.

 By G. H. Parker. Bulletin of the Eureau of Fisheries,

 Department of Commerce and Labor, 1910 (1912), vol. XXX,

 pp. 97-104.
- 756. Studies on reproduction and artificial propagation of fresh-water mussels. By George Lefevre and W. C. Curtis. Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1910 (1912), vol. XXX, pp. 105-201.
- 757. The mussel fauna of the Maumee River. By H. Walton Clark and Charles B. Wilson. Report of the Commissioner of Fisheries for 1911 and special papers (1913), pp. 72, 2 plates.
- 758. The mussel fauna of the Kankakee Basin. By Charles B. Wilson and H. Walton Clark. 52 pp., 1 plate, 1 chart.
- 759. The mussels of the Big Buffalo Fork of White River, Arkansas. By Seth E. Meek and H. Walton Clark. Report of the Commissioner of Fisheries for 1911 and special papers (1913), pp. 20.
- 760. The Bryozoa of the Woods Hole Region. By Raymond C. Osburn.
 Bulletin of the Bureau of Fisheries, Department of Commerce
 and Labor, 1910 (1912), vol. XXX, pp. 203-266, plates XVIIIXXXI.
- 761. A review of the cephalopods of western North America. By S. Stillman Berry. Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1910 (1912), vol. XXX, pp. 267-336, 18 text figs., plates XXXII-LVI.
- 762. Some hydroids of Beaufort, North Carolina. By C. McLean Fraser. Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1910 (1912), vol. XXX, pp. 337-388, 52 text figs.
- 763. Preliminary examination of halibut fishing grounds of the Pacific coast. By A. B. Alexander. With introductory notes on the halibut fishery. By H. B. Joyce. Report of the Commissioner of Fisheries for 1911 and special papers (1913), pp. 56.
- 764. Notes on a new species of flatfish from the coast of New England. By W. C. Kendall. Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1910 (1912), vol. XXX, pp. 389-394, plates LVII.
- 765. Mussel resources of the Holston and Clinch Rivers of eastern
 Tennessee. By J. F. Boepple and R. E. Coker. Report of the
 Commissioner of Fisheries for the fiscal year 1911 and
 special papers (1913); pp. 13.

- 766. Alaska fisheries and fur industries in 1911. By B. W.
 Evermann. Report of the Commissioner of Fisheries for
 for the fiscal year 1911 and special papers (1913); pp. 98.
- 767. Age at maturity of the Pacific coast salmon of the genus

 Oncorhynchus. By C. H. Gilbert. Bulletin of the Bureau
 of Fisheries, Department of Commerce and Labor, 1912 (1914),
 yol. XXXII. pp. 1-22, plates I-XVII.
- 768. A new species of trout from Lake Tahoe. By John Otterbein Snyder. Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1912 (1914), vol. XXXII, pp. 23-28.
- 769. Condition and extent of the natural oyster beds and barren bottoms of Mississippi Sound, Alabama. By H. F. Moore.

 Report of the Commissioner of Fisheries for the fiscal year 1911 and special papers (1913); pp. 61, 5 plates, 1 chart.
- 770. The distribution of fish and fish eggs during the fiscal year 1912. Report of the Commissioner of Fisheries for the fiscal year 1912 and special papers (1914); pp. 108.
- 771. Identification of the glochidia of fresh-water mussels. By
 Thaddeus Surber. Report of the Commissioner of Fisheries
 for the fiscal year 1912 and special papers (1914); pp. 10, 3 plates.
- 772. Report of the Commissioner for 1912. Report of the Commissioner of Fisheries for the fiscal year 1912 and special papers (1914); pp. 69.
- 773. Description of a new darter from Maryland. By Lewis Radcliffe and William W. Welsh. In Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1912 (1914), vol. XXXII, pp. 29-32, plates 18.
- 774. Condition and extent of natural cyster beds and barren bottoms of Mississippi east of Biloxi. By H. F. Moore. Report of the Commissioner of Fisheries for the fiscal year 1911 and special papers (1913); pp. 42, 6 plates 1 map.
- 775. Sense of smell in fishes. By G. H. Parker and R. E. Sheldon. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1912 (1914), vol. XXXII, pp. 33-46.
- 776. Fishes of streams tributary to Monterey Bay, Calif. By
 John O. Snyder. Bulletin of the United States Bureau of
 Fisheries, Department of Commerce, 1912 (1914), vol. XXXII,
 pp. 47-72, 6 plates, 3 text figs.
- 777. Anatomy and histology of alimentary tract of king salmon. By Charles W. Greene. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1912 (1914), vol. XXXII, pp. 73-100, 4 plates.

- 778. Notes on natural hosts of fresh-water mussels. By Thaddeus Surber. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1912 (1914), vol. XXXII, pp. 101-116, 3 plates, 1 text fig.
- 779. Observations on fish scales. By T. D. A. Cockerell. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1912 (1914), vol. XXXII, pp. 117-174, plates 9, 52 text figs.
- 780. Fishery and fur industries of Alaska for 1912. By Barton Warren Evermann. Report of the Commissioner of Fisheries for the fiscal year 1912 and special papers (1914); pp. 123.
- 781. Mussels of Cumberland River and its tributaries. By Chas. B. Wilson and H. Walton Clark. Report of the Commissioner of Fisheries for the fiscal year 1912 and special papers (1914); pp. 63, 1 plate.
- 782. Report of the Commissioner for 1913. Report Commissioner of Fisheries for 1913 and special papers (1914), 78 pp.
- 783. Fishes and fishing in Sunapee Lake. By William Converse Kendall.
 Report of the Commissioner of Fisheries for the fiscal year
 1912 and special papers (1914); pp. 96, plates 9, 4 text figs.
- 784. New method for determination of food value of proteins with applications to Cynoscion regalis. By George F. White and Adrian Thomas. Bulletin of the United States Bureau of Fisheries, Department of Commerce, vol. XXXII, pp. 175-182, 2 text figs.
- 785. Properties of fish and vegetable oil mixtures. By George F. White and Adrian Thomas. Bulletin of the United States Bureau of Fisheries, Department of Commerce, vol. XXXII, pp. 183-198, 9 text figs.
- 786. Effect of water-gas tar on oysters. By Philip H. Mitchell.
 Bulletin of the United States Bureau of Fisheries, Department
 of Commerce, vol. XXXII, pp. 199-206.
- 787. Oxygen requirements of shellfish. By Philip H. Mitchell.

 Bulletin of the United States Bureau of Fisheries, Department of Commerce, vol. XXXII, pp. 207-222, 1 text fig.
- 788. Anthozoa of Woods Hole Region. By Charles W. Hargitt. Bulletin of the United States Bureau of Fisheries, Department of Commerce, vol. XXXII, pp. 223-254, 4 plates, 5 text figs.
- 789. Cephalopoda of Hawaiian Islands. By S. Stillman Henry. Bulletin of the United States Bureau of Fisheries, Department of Commerce, vol. XXXII, pp. 255-362, 11 plates, 40 text figs.
- 790. Carcinoma of the thyroid in salmonoid fishes. By Harvey R. Gaylord and Millard C. Marsh. Bulletin of the United States Bureau of Fisheries, Department of Commerce, vol. XXXII, pp. 363-524, plates 55, 53 text figs.

- 791. Limnological study of Finger Lakes of New York. By Edward A. Birge and Chancey Juday. Bulletin of the United States Bureau of Fisheries, Department of Commerce, vol. XXXII, pp. 525-610, 6 plates (maps), 23 text figs.
- 792. Experimental study of growth and migration of fresh-wator mussels. By Frederick B. Isely. Appendix 3 to Report of the United States Commissioner of Fisheries for 1913 and special papers (1914); pp. 24, 3 plates.
- 793. The protection of fresh-water mussels. By R. E. Coker. Report of Bureau of Fisheries, U. S. Department of Commerce 1914. 23 pp., 2 plates.
- 794. Distribution of fish and fish eggs, fiscal year 1913. By Robert S. Johnson. Appendix 1 to Report of the U.S. Commissioner of Fisheries for the fiscal year 1913 with special papers (1914), pp. 122.
- 795. Embyrology and larval development of Bairdiella chrysura and Anchovia mitchilli. By Albert Kuntz. Bulletin of the U. S. Bureau of Fisheries, Department of Commerce, vol. XXXIII, 1913 (1915), pp. 1-20, 46 text figs.
- 796. Skeletal musculature of king salmon. By Charles Wilson Greene and Carl Hartley Greene. Bulletin of the U.S. Bureau of Fisheries, Department of Commerce, vol. XXXIII, 1913 (1915), pp. 21-60, 2 plates, 14 text figs.
- 797. Alaska fisheries and fur industries in 1913. Appendix 2 to Report of the U.S. Commissioner of Fisheries for the fiscal year 1913 with special papers (1914), pp. 172.
- 798. Directive influence of sense of smell in dogfish. By G. H.
 Parker. Bulletin of the U. S. Bureau of Fisheries, Department of Commerce, vol. XXXIII, 1913 (1915), pp. 61-68.
- 799. Storage of fat in muscular tissue of king salmon and its resorption during fast of spawning migration. By Charles W. Greene. Bulletin of the U. S. Bureau of Fisheries, Department of Commerce, vol. XXXIII, 1913 (1915), pp. 69-138, 9 plates.
- 800. Correlation of weight, length, and other body measurements in weakfish, Cynoscion regalis. By William J. Crozier and Selig Hecht. Bulletin of the U. S. Bureau of Fisheries, Department of Commerce, vol. XXXIII, 1913 (1915), pp. 139-148, 4 text figs.
- 801. Experiments in propagation of fresh-water mussels of Quadrula group. By Arthur Day Howard. Appendix 4 to Report of the U.S. Commissioner of Fisheries for the fiscal year 1913 with special papers (1914); pp. 52, 6 plates.

- 802. Fat-absorbing function of alimentary tract of king salmon.

 By Charles W. Greene. Bulletin of the U. S. Bureau of

 Fisheries, Department of Commerce, vol. XXXIII, 1913

 (1915), pp. 149-175, 4 plates.
- 803. Mussel fauna of central and northern Minnesota. By Charles B. Wilson and Ernest Danglade. Appendix 5 to Report of the United States Commissioner of Fisheries for 1913 (1914), pp. 26, 1 map.
- 804. Mussel resources of Illinois River. By Ernest Danglade.
 Appendix 6 to Report of the United States Commissioner
 of Fisheries for 1913 (1914), pp. 48, 1 chart, 5 plates,
 2 text figs.
- 804. The mussel fishery of Fox River. By John A. Eldredge.
 Appendix 7 to Report of the United States Commissioner
 of Fisheries for 1913 (1914), pp. 8.
- 805. Water-power development in relation to fishes and mussels of Mississippi. By Robert E. Coker. Appendix 8 to Report of the United States Commissioner of Fisheries for 1913 (1914), pp. 28, 6 plates.
- 806. Notes on habits, morphology of reproductive organs and embryology of viviparous fish Gambusia affinis. By Albert Kuntz. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1913 (1915), vol. XXXIII, pp. 177-190, 4 plates.
- 807. Report of Commissioner, 1914. Report of the United States
 Commissioner of Fisheries for 1914 (1915), pp. 81.
- 808. Distribution of fish and fish eggs, fiscal year 1914. By
 Robert S. Johnson. Appendix 1 to Report of the United
 States Commissioner of Fisheries for 1914 (1915), pp. 114.
- 809. Condition and extent of natural oyster beds and barren bottoms of Lavaca Bay, Tex. By H. F. Moore and Ernest Danglade.

 Appendix 2 to Report of the United States Commissioner of Fisheries for 1914 (1915), pp. 45, 5 plates, 1 chart.
- 810. Sporozoon parasites of certain fishes in vicinity of Woods

 Hole, Mass. By C. W. Hahn. Bulletin of the United States

 Bureau of Fisheries for 1914 (1915), pp. 191-214,

 2 plates.
- 811. Menhaden industry of Atlantic coast. By Rob Leon Greer.
 Appendix 3 to Report of the United States Commissioner of
 Fisheries for 1914 (1915), pp. 30, 7 plates.
- 812. Mussel resources in tributaries of upper Missouri River.

 By Robert E. Coker and John B. Southall. (With description of shell found in the James River, Huron, S. Dak., July 27, 1913.) Appendix 4 to Report of the U. S. Commissioner of Fisheries for 1914 (1915), pp. 19, 1 plate, 1 text fig.

- 813. Identification of glochidia of fresh-water mussels. By
 Thaddeus Surber. Appendix 5 to Report of the U.S.
 Commissioner of Fisheries for 1914 (1915), pp. 11, 1 plate.
- 814. Ecological reconnoissance of fishes of Douglas Lake, Cheboygan County, Mich., in midsummer. By Jacob Reighard. Bulletin of the United States Bureau of Fisheries, Department of Commerce 1913 (1915), vol. XXXII, pp. 215-249, 4 text figs.
- 815. Potamogetons in relation to pond culture. By Emmeline Moore.
 Bulletin of the U. S. Bureau of Fisheries, Department of
 Commerce 1913 (1915), vol. XXXII, pp. 251-291, 18 plates.
- 816. Otter-trawl fishery. By A. B. Alexander, H. F. Moore, and W. C. Kendall. Appendix 6 to Report of the U. S. Commissioner of Fisheries for 1914 (1915), pp. 99, 1 chart, 1 diag, 9 text figs.
- 817. Survey of fishing grounds on coast of Washington and Oregon in 1914. By Waldo L. Schmitt, E. C. Johnston, E. P. Rankin, and Edward Driscoll. Appendix 7 to Report of the U. S. Commissioner of Fisheries for 1914 (1915), pp. 32, 2 charts, 1 plate.
- 818. Fishes of Yellowstone National Park. By W. C. Kendall.
 Appendix 8 to Report of the U. S. Commissioner of Fisheries
 for 1914 (1915), pp. 30, 1 plate, 16 text figs.
- 819. Alaska fisheries and fur industries in 1914. By Ward T.
 Bower and Henry D. Aller. Appendix 9 to Report of the
 U. S. Commissioner of Fisheries for 1914 (1915), pp. 91.
- 820. Fur seals and other life of Pribilof Islands, Alaska, in 1914.

 By Wilfred H. Osgood, Edward A. Preble, and George H. Parker.

 Bulletin of the U. S. Bureau of Fisheries, Department of

 Commerce, 1914 (1916), vol. XXXIV, pp. 1-172, 18 plates,

 24 maps.
- 821. Changes in shade, color, and pattern in fishes, and their bearing on problems of adaptation and behavior, with especial reference to the flounders <u>Paralichthys</u> and <u>Ancylopsetta</u>.

 By S. O. Mast. Bulletin of the U. S. Bureau of Fisheries,
 Department of Commerce, 1914 (1916), vol. XXXIV, pp. 173-238,
 19 plates, 3 text figs.
- 822. Sharks and rays of Beaufort, N. C. By Lewis Radcliffe.
 Bulletin of the U. S. Bureau of Fisheries, Department of
 Commerce, 1914 (1916), vol. XXXIV, pp. 239-284, 12 plates,
 26 text figs.
- 823. Structure and growth of scales of squeteague and pigfish as indicative of life history. By Harden F. Taylor. Bulletin of the U.S. Bureau of Fisheries, Department of Commerce, 1914 (1916), vol. XXXIV, pp. 285-330, 10 plates, 8 text figs.

- 824. Copyrous profiles of fresh-ster files and their economic relations to nucled, tookdain. By Charle Branch Wilson. Bulletin of the U.S. Buran of Fisheries, Department of Commerce, 1914 (1916), vol. ECSIV, pp. 331-374, 15 plates.
- 825. Fishes of streams tributary to Tomales Bay, Calif. By
 John Otterbein Enyder. Bulletin of the U.S. Bureau of
 Fisheries, Department of Commerce, 1914 (1916), vol. XXXIV,
 pp. 375-381, 1 text fig.
- 826. Fish ponds on farms. By Robert S. Johnson and M. F. Stapleton.
 Appendix 2 to Report of the U. S. Commissioner of Fisheries
 for 1915 (1917), pp. 30, 19 plates.
- 827. Report of Commissioner, 1915. Report of the U.S. Commissioner of Fisheries for 1915 (1917), pp. 83.
- 828. Distribution of fish and fish eggs, fiscal year 1915. By
 Robert S. Johnson. Appendix 1 to Report of the U. S. Commissioner of Fisheries for 1915 (1917), pp. 138.
- 829. The Fairport biological station, its equipment, organization, and functions. By Robert E. Coker. Bulletin of the U.S. Bureau of Fisheries, Department of Commerce, 1914 (1916), vol. XXXIV, pp. 383-405, 8 text figs., plates IXXV-LXXXI.
- 830. Pacific cod fisheries. By John N. Cobb. Appendix 4 to Report of the U.S. Commissioner of Fisheries for 1915 (1917), pp. 113, 9 plates, 1 map.
- 831. Notes on embryology and larval development of five species of teleostean fishes. By Albert Kuntz. Bulletin of the U. S. Bureau of Fisheries, Department of Commerce, 1914 (1916), vol. XXXIV, pp. 407-429, 68 text figs.
- 832. Notes on fishes of East Tennessee. By Barton Warren Evermann and Samuel F. Hildebrand. Bulletin of the U. S. Bureau of Fisheries, Department of Commerce, 1914 (1916), vol. XXXIV, pp. 431-451, 13 text figs.
- 833. Explorations of United States Coast and Geodetic Survey steamer

 Bache in western Atlantic, January-March, 1914, under direction
 of Bureau of Fisheries. By Henry B. Bigelow. Appendix 5 to
 Report of the U. S. Commissioner of Fisheries for 1915 (1917),
 pp. 62, 1 chart, 53 text figs.
- 834. Alaska fisheries and fur industries in 1915. By Ward T. Bower and Henry D. Aller. Appendix 3 to Report of the U. S. Commissioner of Fisheries for 1915 (1917), pp. 140.

- 835. Survey of fishing grounds on coasts of Washington and Oregon in 1915. By Edward C. Johnson. Appendix 6 to Report of the U. S. Commissioner of Fisheries for 1915 (1917), pp. 22, 4 charts.
- 836. Report of Commissioner, 1916. Report of the U.S. Commissioner of Fisheries for 1916 (1917), pp. 114.
- 837. Distribution of fish and fish eggs, fiscal year 1916. By
 Henry O'Malley. Appendix 1 to Report of the U. S. Commissioner
 of Fisheries for 1916 (1917), pp. 112.
- 838. Alaska fisheries and fur industries in 1916. By Ward T. Bower and Henry D. Aller. Appendix 2 to Report of the U. S. Commissioner of Fisheries for 1916 (1917), pp. 118.
- 839. Pacific salmon fisheries (revised edition). By John N. Cobb.

 Appendix 3 to Report of the U. S. Commissioner of Fisheries
 for 1916 (1917), pp. 255, 29 plates.
- 840. Fish laws of Mississippi River States: Digest of Statutes relating to protection of fish and miscellaneous aquatic animals of States bordering on Mississippi River. By Emerson Stringham. Appendix 4 to Report of the U.S. Commissioner of Fisheries for 1916 (1917), pp. 16.
- 841. Condition and extent of natural oyster beds and barren bottoms in vicinity of Apalachicola, Fla. By Ernest Danglade.

 Appendix 5 to Report of the U. S. Commissioner of Fisheries for 1916 (1917), pp. 68, 8 figs.
- 842. Histological basis of adaptive shades and colors in flounders,
 Paraclichthys albiguttus. By Albert Kuntz. Bulletin of the
 U. S. Bureau of Fisheries, Department of Commerce, 1915-16
 (1918), vol. XXXV, pp. 1-29, 2 color plates, 8 text figs.
- 843. Fishes of Lahontan system of Nevada and northeastern California. By John Otterbein Snyder. Bulletin of the U. S. Bureau of Fisheries, Department of Commerce, 1915-16 (1918), vol. XXXV, pp. 31-86, 2 plates, 9 text figs.
- 844. Fishing in Pri-Amur district of Siberia. By John K. Caldwell.
 Appendix 6 to Report of the U. S. Commissioner of Fisheries
 for 1916 (1917), pp. 31.
- 845. Report of Commissioner, fiscal year 1917. Report of the U.S. Commissioner of Fisheries for 1917 (1919), pp. 104.
- 846. Distribution of fish and fish eggs, fiscal year 1917. By
 Henry O'Malley. Appendix 1 to Report of the United States
 Commissioner of Fisheries for 1917 (1919), pp. 99.

- 847. Alaska fishories and fur industries in 1917. By Ward T.
 Bower and Henry D. Allor. Appendix 2 to Roport of the
 U. S. Commissioner of Fisheries for 1917 (1919), pp. 123.
- 848. Mortality of fishes on west coast of Florida. By Harden F. Taylor. Appendix 3 to Report of the U. S. Commissioner of Fisheries for 1917 (1919), pp. 24, 4 plates.
- 849. Notes on embryology and larval development of 12 teleostean fishes. By Albert Kuntz and Lewis Radcliffe. Bulletin of the U.S. Bureau of Fisheries, Department of Commerce, 1915-16 (1918), vol. XXXV, pp. 87-134, 126 text figs.
- 850. Occurrence in Virginia of green-gilled oysters similar to those of Marennes. By Philip H. Mitchell and Raymond L. Barney. Bulletin of the U. S. Bureau of Fisheries, Department of Commerce, 1915-16 (1918), vol. XXXV, pp. 135-149.
- 851. Nutrition of oysters; Glycogen formation and storage. By Philip H. Mitchell. Bulletin of the U. S. Bureau of Fisheries, Department of Commerce, 1915-16 (1918), vol. XXXV, pp. 151-161.
- 852. Fish isinglass and glue. By George F. White. Appendix 4 to Report of the U.S. Commissioner of Fisheries for 1917 (1919), pp. 15, 2 plates.
- 853. The pikes: Their geographical distribution, habits, culture, and commercial importance. By William Converse Kendall.

 Appendix 5 to Report of the U. S. Commissioner of Fisheries for 1917 (1919), pp. 45, 6 text figs.
- 854. Economic relations, anatomy, and life history of genus Lernaea.

 By Charles Branch Wilson. Bulletin of the U. S. Bureau of
 Fisheries, Department of Commerce, 1915-16 (1918), vol. XXXV,
 pp. 163-198, 10 plates, 2 text figs.
- 855. Myxosporidia of the Beaufort region: Systematic and biological study. By H. S. Davis. Bulletin of the U. S. Bureau of Fisheries, Department of Commerce, 1915-16 (1918), vol. XXXV, pp. 199-243, 9 plates, 6 text figs.
- 856. Food of shore fishes of certain Wisconsin lakes. By A. S. Pearse. Bulletin of the U. S. Bureau of Fisheries, Department of Commerce, 1915-16 (1918), vol. XXXV, pp. 245-292, 1 text fig.
- 857. Notes on life history of minnows Cambusia affinis and Cyprinodon variegatus. By Samuel F. Hildebrand. Appendix 6 to Report of U. S. Commissioner of Fisheries 1917 with Appendixes (1919), pp. 15, 4 text figs.

- 858. Fishes of Kentucky and Tennessee: Distributional catalogue of known species. By Barton Warren Evermann. Bulletin of the U. S. Bureau of Fisheries, 1915-16 (1918), vol. XXXV, pp. 293-368.
- 859. Decaped crustaceans of Beaufort, N. C., and surrounding regions. By W. P. Hay and C. A. Shore. Bulletin of the U. S. Bureau of Fisheries, 1915-16 (1918), vol. XXXV, pp. 369-475, 15 plates, 20 text figs.
- 860. Nutrition of oysters: The nature of the so-called "fattening" of oysters. By Philip H. Mitchell. Bulletin of the U.S. Bureau of Fisheries, 1915-16 (1918), vol. XXXV, pp. 477-483.
- 861. The Rangeley Lakes, Maine, with special reference to habits of fishes, fish culture, and angling. By William Converse Kendall. Bulletin of the U.S. Bureau of Fisheries, 1915-16 (1918), vol. XXXV, pp. 485-594, 4 plates, 23 text figs.
- 862. Report of Commissioner 1918. Report of the United States Commissioner of Fisheries for 1918 (1920), pp. 94.
- 863. The distribution of fish and fish eggs during the fiscal year 1918. By Henry O'Malley. Appendix 1 to Report of the United States Commissioner of Fisheries for 1918 (1920),
- 864. Three new whitefishes from Bear Lake, Idaho, and Utah. By John Otterbein Snyder. Report of the United States Commissioner of Fisheries for 1918 (1920), pp. 1-10.
- 865. Fresh-water mussels and mussel industries of the United States.

 By Robert E. Coker. Bulletin of the United States Bureau
 of Fisheries, Department of Commerce, 1917-18 (1921),
 vol. XXXVI. pp 11-89, 46 plates, 5 text figs., 1 map.
- 866. Fish laws of States bordering on the Mississippi and Ohio Rivers; A digest of statutes relating to protection of fishes and other cold-blooded aquatic animals. By Emerson Stringham. Appendix 2 to Report of Commissioner of Fisheries for 1918 (1920), pp. 21.
- 867. Habits of black crappie in inland lakes of Wisconsin. By
 A. S. Pearse. Appendix 3 to Report of the United States
 Commissioner of Fisheries for 1918 (1920), pp. 16, 3 illus.
- 868. Crab industry of Chesapeake Bay. By E. P. Churchill, jr. Appendix 4 to Report of the United States Commissioner of Fisheries for 1918 (1920), pp. 25, 12 plates.
- 869. The flatworm as an enemy of Florida oysters. By Ernest
 Danglade. Appendix 5 to Report of the United States Commissioner of Fisheries for 1918 (1920), pp. 8, 2 plates.

- 870. Life history of the blue crab. By E. P. Churchill, jr.

 Bulletin of the United States Bureau of Fisheries,

 Department of Commerce, 1917-18 (1921), vol. XXXVI,

 pp. 91-128, 36 illus, 1 color plate.
- 871. Two species of menhaden occurring on the coast of North Carolina. By Samuel F. Hildebrand. Appendix 6 to Report of the United States Commissioner of Fisheries for 1918 (1920), pp. 8, 1 plate, 2 text figs.
- 872. Alaska fisheries and fur industries in 1918. By Ward T.

 Bower. Appendix 7 to Report of the United States Commissioner of Fisheries for 1918 (1920), pp. 128, 10 plates.
- 873. Migration of adult sockeye salmon in Puget Sound and Fraser River. By Henry O'Malley and Willis H. Rich. Appendix 8 to Report of the United States Commissioner of Fisheries for 1918 (1920), pp. 38, 1 plate, 1 chart.
- 874. Fishes in relation to mosquito control in ponds. By Samuel F. Hildsbrand. Appendix 9 to Report of the United States Commissioner of Fisheries for 1918 (1920), pp. 15, 9 illus.
- 875. Fishery industries of the United States; Report of Division of Statistics and methods of fisheries for 1918. By Lewis Radcliffe. Appendix 10 to Report of the United States Commissioner of Fisheries for 1918 (1920), pp. 167, 7 text figs.
- 876. Sponges of Beaufort (N.C.) Harbor and vicinity. By W. C.
 George and H. V. Wilson. Bulletin of the United States
 Bureau of Fisheries, Department of Commerce, 1917-18 (1921),
 vol. XXXVI, pp. 129-179, 49 illus.
- 877. Report of Commissioner for the fiscal year 1919. Report of the United States Commissioner of Fisheries for 1919 (1921), pp. 57.
- 878. Distribution of fish and eggs during fiscal year 1919. By Glen C. Leach. Appendix 1 to Report of the United States Commissioner of Fisheries for 1919 (1921), pp. 57.
- 879. Artificial propagation of salmons of Pacific opast. By Henry O'Malley. Appendix 2 to Report of the United States Commissioner of Fisheries for 1919 (1921), pp. 32, 20 illus.
- 880. Artificial propagation of sturgeon. Review of sturgeon culture in the United States, by Glen C. Leach, and the artificial propagation of sturgeon in Russia, by Nicolas A. Borodin. Appendix 3 to Report of the United States Commissioner of Fisheries for 1919 (1921), pp. 7.

- 881. Some plants of importance in pondfish culture. By Emmeline Moore. Appendix 4 to Report of the United States Commissioner of Fisheries for 1919 (1921), pp. 20, 1 illus.
- 882. Dragonflies and damselflies in relation to pondfish culture, with list of those found near Fairport, Iowa. By Charles Branch Wilson. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1917-18 (1921), vol. XXXVI, pr. 86, 67 illus.
- 883. Burrowing mayflies of our larger lakes and streams. By James G. Needham. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1917-18 (1921), vol. XXXVI, pp. 28, 13 illus.
- 884. Some considerations concerning salting of fish. By Donald K. Tressler. Appendix 5 to Report of the United States Commissioner of Fisheries for 1919 (1921), pp. 55, 8 illus.
- 885. Habits of yellow perch in certain Wisconsin Lakes. By A. S.

 Pearse and Henrietta Achtenberg. Bulletin of the United

 States Bureau of Fisheries, Department of Commerce, 1917-18

 (1921). vol. XXXVI, pp. 74, 36 illus.
- 886. Marine algae of Beaufort, N. C. and adjacent regions. By W. D. Hoyt. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1917-18 (1921), vol. XXXVI, pp. 195, 36 plates, 46 text figs.
- 887. Early history and seaward migration of chinook salmon in Columbia and Sacramento rivers. By Willis H. Rich. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1919-20 (1922), vol. XXXVII, pp. 73, 13 illus.
- 888. Frogs: Their natural history and utilization. By A. H. Wright. Appendix 6 to Report of the United States for 1919 (1921), pp. 44, 23 illus.
- 889. Fresh-water turtles: A source of meat supply. By H. Walton Clark and J. B. Southall. Appendix to Report of the United States Commissioner of Fisheries for 1919 (1921), pp. 20, 9 plates.
- 890. The oyster and oyster industry of Atlantic and Gulf coast.

 By E. P. Churchill, jr. Appendix 8 to Report of the United

 States Commissioner of Fisheries for 1919 (1921), pp. 51, 34 illus.
- 891. Alaska fisheries and fur industries in 1919. By Ward T.
 Bower. Appendix 9 to Report of the United States Commissioner of Fisheries for 1919 (1921), pp. 160, 6 illus.

- 892. Fishery industries of United States. By Lewis Radcliffe.

 Appendix 10 to Report of the United States Commissioner

 of Fisheries for 1919 (1921), pp. 191, 1 plate, 1 text fig.
- 893. Natural history and propagation of fresh-water mussels. Ey R. E. Coker, A. F. Shire, H. W. Clark, and A. D. Howard. Bulletin of the United States Bureau of Fisheries, Department of Commerce, (1919-1920), (1922), vol. XXXVII, pp. 107, 31 illus.
- 894. Report of Commissioner for 1920. Report of the United States Commissioner of Fisheries, appendixes 1920 (1921), 66 pp.
- 895. Fisheries biological station at Fairport, Iowa. By R. E. Coker. Appendix 1 to Report of the United States Commissioner of Fisheries for 1920 (1921), pp. 12, 3 plates, 4 text figs.
- 896. Progress in biological inquiries 1920. By R. E. Coker.

 Appendix 2 to Report of the United States Commissioner of
 Fisheries for 1920 (1921), pp. 32.
- 897. Dredging and hydrographic records of U. S. Fisheries steamer Albatross, 1911-1920. Appendix 3 to Report of the United States Commissioner of Fisheries for 1920 (1921), pp. 190.
- 898. Preservation of fish nets. By Harden F. Taylor. Appendix 4 to Roport of the United States Commissioner of Fisheries for 1920 (1921), pp. 35, 1 illus.
- 899. An analytical subject bibliography of the publications of the Bureau of Fisheries, 1891-1920. By Rose M. E. MacDonald. Appendix 5 to Report of the United States Commissioner of Fisheries for 1920 (1921), pp. 306.
- 900. Report of Commissioner for 1921. Report of the Commissioner of Fisheries with appendixes for 1921 (1922), pp. 50.
- 901. Peritoneal membranes, ovaries, and oviducts of salmonoid fishes and their significance in fish-cultural practices. By William Converse Kendall. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1919-20 (1922), vol. XXXVII, pp. 25, 11 illus.
- 902. Pacific salmon fisheries. By John N. Cobb. Appendix 1 to Report of the Commissioner of Fisheries for 1921 (1922), pp. 268, 31 illus, 3d ed.

- 903. Improvements in process of salting river herring, especially adapted to warm climates. By Harden F. Taylor. Appendix 2 to Report of the Commissioner of Fisheries for 1921 (1922), pp. 7.
- 904. Fishes of the Yellowstone National Park, with description of the park waters and notes on fishing. By Hugh M. Smith and William C. Kendall. Appendix 3 to Report of the United States Commissioner of Fisheries for 1921 (1922), pp. 30, 16 illus.
- 905. Further limnological observations on Finger Lakes of New York, with literature cited. By Edward A. Birge and Chancy Juday. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1919-20 (1922), vol. XXXVII, pp. 209-252, 5 text figs.
- 906. Distribution and food of the fishes of Green Lake, Wisc., in summer (with bibliography). By A. S. Pearse. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1919-20 (1922), vol. XXXVII, pp. 20, 1 illus.
- 907. Food of young winter flounders. By Edwin Linton. Appendix 4 to Report of the United States Commissioner of Fisheries for 1921 (1922), pp. 14.
- 908. Fishery industries of United States. [Report of division of statistics and methods of fisheries for 1920.] By Lewis Radcliffe. Appendix 5 to Report of the United States Commissioner of Fisheries for 1921 (1922), pp. 187, 9 illus.
- 909. Alaska fishery and fur-seal industries in 1920. By Ward T. Bower. Appendix 6 to Report of the United States Commissioner of Fisheries for 1921 (1922), pp. 154, 3 illus.
- 910. Danger to fisheries from oil and tar pollution of waters (with bibliography). By J. S. Gutsell. Appendix 7 to Report of the United States Commissioner of Fisheries for 1921 (1922), pp. 10.
- 911. Progress in biological inquiries, 1921. [Report of the division of scientific inquiry for the fiscal year 1921.] By R. E. Coker. Appendix 8 to Report of the United States Commissioner of Fisheries for 1921 (1922), pp. 38, 2 illus.
- 912. Propagation and distribution of food fishes, 1921. [Report of division of fish culture for fiscal year 1921.] By Glen C.

 Leach. Appendix 9 to Report of the United States Commissioner of Fisheries for 1921 (1922), pp. 96, 5 illus.
- 913. Report of Commissioner for the fiscal year 1922. Report of the United States Commissioner of Fisheries for 1922 (1923), pp. 50.
- 914. Fresh-water crustacea as food for young fishes (with bibliography).

 By William Converse Kendall. Appendix 1 to Report of the

 United States Commissioner of Fisheries for 1922 (1923),

 pp. 32, 10 illus.

- 915. Ecological study of aquatic midges and some related insects with special reference to feeding habits. By Adelbert I. Leathers. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1921-22 (1925), vol, XXXVIII, 63 pp., 54 illus.
- 916. Experiments in the culture of fresh-water mussels. By Arthur
 Day Howard. Bulletin of the United States Bureau of Fisheries,
 Department of Commerce, 1921-22 (1923), vol. XXXVIII, 29 pp., 10 illus,
- 917. Further notes on the natural history and artificial propagation of the diamond-back terrapin. By R. L. Barney. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1921-22 (1923), vol. XXXVIII, 23 pp., 9 illus.
- 918. Notes on habits and development of eggs and larvae of the silversides Menidia menidia and Menidia beryllina. By Samuel F. Hildebrand. Bulletin of the United States Bureau of Fisheries, Department of Commerce, vol. XXXVIII, 1921-22 (1923), 10 pp., 3 illus.
- 919. Principles involved in the preservation of fish by salt. By
 Harden F. Taylor. Appendix 2 to Report of the United States
 Commissioner of Fisheries for 1922 (1923), 24 pp.
- 920. Shellfish resources of the northwest coast of the United States.

 By Charles H. Edmondson. Appendix 3 to Report of the United

 States Commissioner of Fisheries for 1922 (1923), 23 pp., 11 illus.
- 921. Deductions concerning the air bladder and the specific gravity of fishes. By Harden F. Taylor. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1921-22 (1923), vol. XXXVIII, 8 pp.
- 922. Biology and economic value of the sea mussel Mytilus edulis.

 By Irving A. Field. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1921-22 (1923), vol. XXXVIII, 133 pp., 80 illus.
- 923. Use of fishes for control of mosquitoes in northern fresh waters of the United States. By J. Percy Moore. Appendix 4 to Report of the United States Commissioner of Fisheries for 1922 (1923), 62 pp., 7 illus.
- 924. A new bacterial disease of fresh-water fishes. By H. S. Davis.
 Bulletin of the United States Bureau of Fisheries, Department
 of Commerce, 1921-22 (1923), vol. XXXVIII, 22 pp., 7 illus.
- 925. Spiny lobster, Panulirus argus, of southern Florida: its natural history and utilization. By D. R. Crawford and W. J. J. DeSmidt. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1921-22 (1923), vol. XXXVIII, 32 pp., 11 illus.

- 926. Mortality in pike-perch eggs in hatcheries (with bibliography). By Franz Schrader and Sally Hughes Schrader. Appendix 5 to Report of the United States Commissioner of Ficheries for 1922 (1923), pp. 13, 32 illus.
- 927. Some embryonic and larval stages of the winter flounder.

 By C. M. Breder, jr. Bulletin of the United States

 Bureau of Fisheries, Department of Commerce, 1921-22

 (1923), vol. XXXVIII, pp. 7, 2 illus.
- 928. Salmon of Yukon River. By Charles H. Gilbert. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1921-22 (1923), vol. XXXVIII, pp. 18, 18 illus.
- 929. Sources, preparation, and properties of some algal gelatines.

 By Irving A. Field. Appendix 6 to Report of the United

 States Commissioner of Fisheries for 1922 (1923), pp. 9.
- 930. Trade in fresh and frozen fishery products and related marketing considerations in Seattle, Wash. By L. T. Hopkinson and W. P. Studdert. Appendix 7 to Report of the United States Commissioner of Fisheries for 1922 (1923), pp. 18.
- 931. Fisheries and market for fishery products in Mexico, Central America, South America, West Indies, and Bermudas (with selected bibliography). By Lewis Radcliffe. Appendix 8 to Report of the United States Commissioner of Fisheries for 1922 (1923), pp. 105, 1 illus.
- 932. Fishery industries of United States: [Report of division of fishery industries for 1921.] By Lewis Radcliffe.
 Report of the United States Commissioner of Fisheries for 1922 (1923), pp. 138, 1 plate, 6 text figs.
- 933. Alaska fishery and fur-seal industries in 1921. By Ward T. Bower. Appendix 10 to Report of the United States Commissioner of Fisheries for 1922 (1923), pp. 87, 11 illus.
- 934. Kentucky River and its mussel resources. By Ernest Danglade.
 Appendix 11 to Report of the United States Commissioner
 of Fisheries for 1922 (1923), pp. 10, 7 illus.
- 935. Goldfish: Their care in small aquaria. By E. C. Fearnow.
 Appendix 12 to Report of the United States Commissioner
 of Fisheries for 1922 (1923), pp. 12, 6 figs.
- 936. Progress in biological inquiries, 1922. (Report of division of scientific inquiry for fiscal year 1922.) By R. E. Coker. Appendix 13 to Report of the United States Commissioner of Fisheries for 1922 (1923), pp. 28.

- 937. Fisheries prosecuted by California fishermen in Mexican waters. By R. A. Coleman. Report of the United States Commissioner of Fisheries for 1922 (1923), pp. 11.
- 938. Life history and ecology of orange-spotted sunfish Lepomis humilis. By R. L. Barney and B. J. Anson. Appendix To to Report of the United States Commissioner of Fisheries for 1922 (1923), pp. 18, 4 illus.
- 939. Trade in fresh and frozen fishery products and related marketing considerations in Boston, Mass. By L. T. Hopkinson. Appendix 16 to Report of the United States Commissioner of Fisheries for 1922 (1923), pp. 29, 2 illus.
- 940. Annotated list of fishes collected in vicinity of Augusta, Ga., with description of a new darter. By Samuel F. Hildebrand.

 Bulletin of the United States Eureau of Fisheries, Department of Commerce, 1923-24 (1924), vol. XXXIX, pp. 10, 1 illus.
- 941. Propagation and distribution of food fishes, 1922: Report of division of fish culture for fiscal year 1922. By Glen C.

 Leach. Appendix 17 to Report of the United States Commissioner of Fisheries for 1922 (1923), pp. 118, 7 illus.
- 941a. Stocking interior waters of United States. By E. C. Fearnow.
 Report of the United States Commissioner of Fisheries for
 1922 (1923), pp. 18, 1 illus.
- 942. Life history of scavenger water beetle, Hydrous (Hydrophilus)

 triangularis, and its economic relation to fish breeding.

 By Charles Branch Wilson. Bulletin of the United States

 Bureau of Fisheries, Department of Commerce, 1923-24 (1924),

 vol. XXXIX, pp. 32, 21 illus.
- 943. Experiment in tagging adult red salmon, Alaska Peninsula
 Fisheries Reservation, summer of 1924. By Charles H. Gilbert.
 Bulletin of the United States Bureau of Fisheries, Department
 of Commerce, 1923-24 (1924), vol. XXXIX, pp. 14, 1 illus.
- 944. Northwestern lakes of United States: Biological and chemical studies with reference to possibilities in production of fish (with bibliography). By George Kemmerer, J. F. Bovard, and W. R. Boorman. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1923-24 (1924), pp. 92, 20 illus.
- 945. Contributions to life histories of Sciaenidae of eastern United States coast. By William W. Welsh and C. M. Breder, jr. Eulletin of the United States Bureau of Fisheries, Department of Commerce, 1923-24 (1924), vol. XXXIX, pp. 63, 60 illus.

- 946. Report of Commissioner for the fiscal year, 1923. Report of the United States Commissioner of Fisheries with appendixes, 1923 (1924). 49 pp.
- 947. Properties and value of certain fish-net preservatives. By
 Harden F. Taylor and Arthur W. Wells. Appendix 1 to Report
 of the United States Commissioner of Fisheries for 1923
 (1924), pp. 71, 32 illus.
- 948. Aquatic plants in pond culture. By John W. Titcomb. (2d ed.)
 Appendix 2 to Report of the United States Commissioner of
 Fisheries for 1923 (1924), pp. 26, 32 illus.
- 949. Artificial propagation of whitefish, grayling, and lake trout. By Glen C. Leach. Appendix 3 to Report of the United States Commissioner of Fisheries for 1923 (1924), pp. 34, 20 illus.
- 950. Significance of larval mantle of fresh-water mussels during parasitism with notes on a new mantle condition exhibited by <u>Lampsilis luteola</u>. By Chester N. Blystad. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1923-24 (1924), vol. XXXIX, pp. 19, 12 illus.
- 951. Alaska fishery and fur-seal industries in 1922. By Ward T. Bower. Appendix 4 to Report of the United States Commissioner of Fisheries for 1923 (1924), pp. 120, 9 illus.
- 952. Toxicities of coal tar creosote, creosote distillates, and individual constituents for marine wood borer Limnoria lignorum. By L. F. Shackell. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1923-24 (1924), vol. XXXIX, pp. 12, 4 illus.
- 953. Water beetles in relation to pondfish culture, with life histories of those found in fishponds at Fairport, Iowa. By Charles Branch Wilson. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1923-24 (1924), vol. XXXIX, pp. 117, 19 illus.
- 954. Fishery industries of United States for 1922. By Harden F. Taylor. Appendix 5 to Report of the United States Commission of Fisheries for 1923 (1924), pp. 113, 4 illus.
- 955. Artificial propagation of brook trout and rainbow trout, with notes on three other species. By Glen C. Leach.

 Appendix 6 to Report of the United States Commissioner of Fisheries for 1923 (1924), pp. 76, 21 illus.
- 956. Progress in biological inquiries, 1923. By Willis H. Rich. Appendix 7 to Report of the United States Commissioner of Fisheries for 1923 (1924), pp. 29.

- 957. A new myxosporidian parasite, the cause of "wormy" halibut.
 By H. S. Davis. Appendix 8 to Report of the United States
 Commissioner of Fisheries for 1923 (1924), pp. 7, 2 illus.
- 958. Limnological observations in upper Mississippi, 1921. By P. S. Galtsoff. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1923-24 (1924), vol. XXXIX, pp. 94, 16 illus.
- 959. Ichthyophthirius disease of fishes and methods of control.

 By Herbert F. Prytherch. Appendix 9 to Report of the
 United States Commissioner of Fisheries for 1923 (1924),

 pp. 7, 5 illus.
- 960. Oyster-cultural problems of Connecticut. By J. S. Gutsell.

 Appendix 10 to Report of the United States Commissioner of
 Fisheries for 1923 (1924), pp. 12, 2 illus.
- 961. Experiments in artificial propagation of oysters. By Herbert F. Prytherch. Appendix 11 to Report of the United States Commissioner of Fisheries for 1923 (1924), pp. 16, 9 illus.
- 962. Fisheries of Key West and clam industry of southern Florida.

 By William C. Schroeder. Appendix 12 to Report of the

 United States Commissioner of Fisheries for 1923 (1924),

 pp. 76, 29 illus.
- 963. Food and feeding in fresh-water mussels. By E. P. Churchill, jr., and Sara I. Lewis. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1923-24 (1924), vol. XXXIX, pp. 35, 13 illus.
- 964. Propagation and distribution of food fishes. By Glen C. Leach. Appendix 13 to Report of the United States Commissioner of Fisheries for the fiscal year 1923 (1924), pp. 110.
- 965. Fishes of Gulf of Maine. By Henry B. Bigelow and William W. Welsh. Bulletin of the United States Bureau of Fisheries, . Department of Commerce, 1924 (1923), part I, vol. XL, pp. 569, 278 illus.
- 966. Report of Commissioner for the fiscal year 1924. Report of the United States Commissioner of Fisheries for 1924 (1925), pp. 42.
- 967. Iodine content of sea foods. By Donald K. Tressler and Arthur W. Wells. Appendix 1 to Report of the United States Commissioner of Fisheries for 1924 (1925), pp. 14.
- 968. Plankton of offshore waters of Gulf of Maine. By Henry B.
 Bigelow. Bulletin of the United States Bureau of Fisheries,
 Department of Commerce, 1924 (1928), part II, vol. XL,
 pp. 511, 134 illus.

- 969. Physical oceanography of Gulf of Maine. By Henry B.
 Bigelow. Bulletin of the United States Bureau of
 Fisheries, Department of Commerce, 1924 (1928), part II,
 vol. XL, pp. 511-1027.
- 970. Variation in the maximum depth at which fish can live during summer in a moderately deep lake with thermocline.

 By Frank Smith. Eulletin of the United States Bureau of Fisheries, Department of Commerce, 1925 (1926), vol. XLI, pp. 9.
- 971. Progress in biological inquiries. By Willis H. Rich. Appendix 2 to Report of the United States Commissioner of Fisheries for 1924 (1925), pp. 36.
- 972. Black tumor of catfish. By Raymond C. Osburn. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1925 (1926), vol. XLI, pp. 7, 2 illus.
- 973. Alaska fishery and fur-seal industries in 1923. By Ward T. Bower. Appendix 3 to Report of the United States. Commissioner of Fisheries for 1924 (1925), pp. 96, 11 illus.
- 974. Growth and degree of maturity of chinook salmon in ocean. By
 Willis H. Rich. Bulletin of the United States Bureau of
 Fisheries, Department of Commerce, 1925 (1926), vol. XLI,
 pp. 78, 34 illus.
- 975. Seasonal distribution of plankton of Woods Hole Region. By Charles J. Fish. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1925 (1926), vol. XLI, 91 pp., 81 illus.
- 976. Fishery industries of United States, 1923. By Oscar E. Sette.
 Appendix 4 to Report of the United States Commissioner of
 Fisheries for 1924 (1925), pp. 221.
- 977. Digestive enzymes in poikilothermal vertebrates. An investigation of enzymes in fishes, with comparative studies on those of amphibians, reptiles, and mammals. By Walter A. Kenyon. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1925 (1926), vol. XII, pp. 22.
- 978. Propagation and distribution of food fishes, 1924. By Glen C.
 Leach. Appendix 5 to Report of the United States Commissioner
 of Fisheries for 1924 (1925), pp. 82, 2 illus.
- 979. Iodine content of preserved sea foods. By Arthur W. Wells.
 Appendix 6 to Report of the United States Commissioner of
 Fisheries for 1924 (1925), pp. 6.
- 980. Goldfish: Their care in small aquaria and ponds. By E. C. Fearnow. Appendix 7 to Report of the United States Commissioner of Fisheries for 1924 (1925), pp. 16, 6 illus.

- 981. Artificial propagation of shad. By Glen C. Leach. Appendix 8 to Report of the United States Commissioner of Fisheries for 1924 (1925), pp. 30, 8 illus.
- 982. Report of Commissioner for the fiscal year 1925. Report of the United States Commissioner of Fisheries for 1925 (1926),pp. 42.
- 983. Mild curing of salmon in California. By W. L. Scofield.
 Appendix 1 to Report of the United States Commissioner of
 Fisheries for 1925 (1926), pp. 16.
- 984. Growth and age at maturity of Pacific razor clam, Siliqua patula (Dixon). By F. W. Weymouth, H. C. McMillin, and H. B. Holmes. Bulletin of the United States Bureau of Fisheries, 1925 (1926), vol. XLI, pp. 38, 27 illus.
- 985. Fishes of Republic of El Salvador, Central America. By Samuel F. Hildebrand. Bulletin of the United States Bureau of Fisheries, 1925 (1926), vol. XLI, pp. 53, 20 illus.
- 986. Fur-seal industry of Commander Islands, 1897 to 1922. By Leonhard Stejneger. Bulletin of the United States Bureau of Fisheries, 1925 (1926), vol. XLI, pp. 46, 17 illus.
- 987. Schizamaeba salmonis, a new ameba parasitic in salmonid fishes.

 By H. S. Davis. Bulletin of the United States Bureau of
 Fisheries, Department of Commerce, 1926 (1927), vol. XLII,
 pp. 10, 3 illus.
- 988. Octomitus salmonis, a parasitic flagellate of trout (with bibliography). By H. S. Davis. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1926 (1927), vol. XLII, pp. 20, 4 illus.
- 989. Pearl essence: Its history, chemistry, and technology (with bibliography). By Harden F. Taylor. Appendix 2 to Report of the United States Commissioner of Fisheries for 1925 (1926), pp. 24, 1 illus.
- 990. Progress in biological inquiries, July 1 to Dec. 31, 1924.

 By Willis H. Rich. Appendix 3 to Report of the United States

 Commissioner of Fisheries for 1925 (1926), pp. 30.
- 991. Second experiment in tagging salmon in Alaska Peninsula Fisheries Reservation, summer of 1923. By Charles H. Gilbert and Willis H. Rich. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1926 (1927), vol. XLII, pp. 51, 15 illus.
- 992. Alaska fishery and fur-seal industries in 1924. By Ward T. Bower. Appendix 4 to Report of Commissioner for 1925(1926), pp. 107, 12 illus.

- 993. Distinguishing characters of two species of red snappers of Atlantic coast of North America. By Samuel F. Hildebrand and Isaac Ginsburg. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1926 (1927), vol. XLII, pp. 11, 3 illus.
- 994. Crayfishes of genus Cambarus in Nebraska and eastern Colorado.

 By Earl Theron Engle. Bulletin of the United States Bureau
 of Fisheries, Department of Commerce, 1926 (1927), vol. XLII,
 pp. 20, 5 illus.
- 995. Effect of oil pollution on marine and wild life. By F. W. Lane, A. D. Bauer, H. F. Fisher, and P. N. Harding. Appendix 5 to Report of the United States Commissioner of Fisheries for 1925 (1926), pp. 13.
- 996. Wholesale trade in fresh and frozen fishery products and related marketing considerations in New York City. By R. H. Fiedler and J. H. Matthews. Appendix 6 to Report of the United States Commissioner of Fisheries for year 1925 (1926), pp. 37, 13 illus.
- 997. Fishery industries of United States, 1924. By Oscar E. Sette. Appendix 7 to Report of the United States Commissioner of Fisheries for year 1925 (1926), pp. 192.
- 998. Further experiments on preservation of fish nets. By Harden F.
 Taylor and Arthur W. Wells. Appendix 8 to Report of the Commissioner of Fisheries for year 1925 (1926), pp. 31, 19 illus.
- 999. Propagation and distribution of food fishes, fiscal year 1925.

 By Glen C. Leach. Appendix 9 to Report of the United States

 Commissioner of Fisheries for year 1925 (1926), pp. 64, 8 illus.
- 1000. Nutritive value of fish and shellfish. By E. D. Clark, R. W. Clough, Donald K. Tressler, Arthur D. Holmes, Harden F. Taylor, and E. V. McCollum. Appendix 10 to Report of the United States Commissioner of Fisheries for year 1925 (1926), pp. 54.
- 1001. Fishing industry of Great Lakes. By Walter Koelz. Appendix 11 to Report of the United States Commissioner of Fisheries for 1925 (1926), pp. 67, 19 illus.
- 1002. Report of Commissioner for the fiscal year 1926. Report of the United States Commissioner of Fisheries for 1926 (1927), pp. 48.
- 1003. Progress in biological inquiries, 1925. By Willis H. Rich.
 Appendix 1 to Report of the United States Commissioner of
 Fisheries for 1926 (1927), pp. 38.
- 1004. New genus of darter from western North Carolina. By R. E. Coker. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1926 (1927), vol. XIII, pp. 6, 1 illus.

- 1005. Salmon-tagging experiments in Alaska, 1924 and 1925. By Willis E. Rich. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1926 (1927), vol. XLII, pp. 40, 1 illus.
- 1006. Fisheries of Siberia. By Boris Baievsky. Appendix 2 to
 Report of the United States Commissioner of Fisheries for
 1926 (1927), pp. 30, 2 illus.
- 1007. Development, growth, and food habits of white sucker, Catostomus commersonii (Le Seuer). By Norman Hamilton Stewart. Bulletin of the United States Bureau of 1926 (1927), vol. XLII, pp. 40, 39 illus.
- 1008. Alaska fishery and fur-seal industries in 1925. By Ward T. Bower. Appendix 3 to Report of the United States Commissioner of Fisheries for 1926 (1927), pp. 104, 15 illus.
- 1009. Preliminary report on marine fisheries of Texas. By Elmer
 Higgins and Russel Lord. Appendix 4 to Report of the United
 States Commissioner of Fisheries for 1926 (1927), pp. 35, 4 illus.
- 1010. Fishery industries of United States, 1925. By Oscar E. Sette.
 Appendix 5 to Report of the United States Commissioner of
 Fisheries for 1926 (1927), pp. 124.
- 1011. Propagation and distribution of food fishes, 1926. By Glen C. Leach. Appendix 6 to Report of the United States, Commissioner of Fisheries for 1926 (1927), pp. 64.
- 1012. Organic content of lake water. By Edward A. Birge and Chancey Juday. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1926 (1927), vol. XLII, pp. 23.
- 1013. Descriptions of two new species of fishes from Key West, Fla., with notes on nine other species collected in the same locality. By Samuel F. Hildebrand and Isaac Ginsburg. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1926 (1927), vol. XLII, pp. 11, 5 illus.
- 1014. Pacific cod fisheries. By John N. Cobb. Appendix 7 to Report of the United States Commissioner of Fisheries for 1926 (1927), pp. 117, 17 illus.
- 1015. Smelts. By William Converse Kendall. Bulletin of the United Bureau of Fisheries, Department of Commerce, 1926 (1927), vol. XLII, pp. 161, 25 illus.
- 1016. Refrigeration of fish. By Harden F. Taylor. Appendix 8 to Report of the United States Commissioner of Fisheries for 1926 (1927), pp. 135, 51 illus.

- 1017. Report of Commissioner for the fiscal year 1927. Report of the United States Commissioner of Fisheries for 1927 (1928), pp. 35.
- 1018. Artificial propagation of pike perch, yellow perch, and pikes.

 By Glen C. Leach. Appendix I to Report of the United States

 Commissioner of Fisheries for 1927 (1928), pp. 29, 7 illus.
- 1019. Examination of summer fisheries of Pamlico and Core Sounds, N.C., with special reference to destruction of undersized fish and protection of gray trout (Cynoscion regalis) (Bloch and Schneider). By Elmer Higgins and John C. Pearson. Appendix 3 to Report of the United States Commissioner of Fisheries for 1927 (1928), pp. 39, 15 illus.
- 1020. Preparation of fish for canning as sardines. By Harry R. Beard.
 Appendix 3 to Report of the United States Commissioner of
 Fisheries for 1927 (1928), pp. 159, 30 illus.
- 1021. Investigations concerning red salmon runs to Karluk River,
 Alaska. By Charles H. Gilbert and Willis H. Rich. Bulletin
 of the United States Bureau of Fisheries, Department of
 Commerce, 1927 (1929), vol. XLIII, part II, pp. 71, 34 illus.
- 1022. Salmon-tagging experiments in Alaska, 1926. By Willis H. Rich and Arnie J. Suomela. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1927 (1929), vol. XLIII, part II, pp. 36, 17 illus.
- 1023. Alaska fishery and fur-seal industries in 1926. By Ward T. Bower. Appendix 4 to Report of the United States Commissioner of Fisheries for 1927 (1928), pp. 114, 15 illus.
- 1024. Fishes of Chesapeake Bay. By Samuel F. Hildebrand and William C. Schroeder. Bulletin of the Bureau of Fisheries, Department of Commerce, 1927 (1928), part I, vol. XLIII, pp. 368, 211 illus.
- 1025. Fishery industries of United States, 1926. By Oscar E. Sette. Appendix 5 to Report of the United States Commissioner of Fisheries for 1927 (1928), pp. 149.
- 1026. Trade in fresh and frozen fishery products and related marketing considerations in greater St. Louis, Mo. By R. H. Fiedler.

 Appendix 6 to Report of the United States Commissioner of Fisheries for 1927 (1928), pp. 33, 2 illus.
- 1027. Annotated list of fishes collected in vicinity of Greenwood, Miss., with description of three new species. By Samuel F. Hildebrand and Irving L. Towers. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1926 (1929), vol. XLII, part II, pp. 34, 9 illus.

- 1028. Biological survey of upper Mississippi River with special reference to pollution. By A. H. Wiebe. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1927 (1929), vol. MIII, part II, pp. 33, 1 illus.
- 1029. Progress in biological inquiries, 1926, including proceedings of divisional conference, Jan. 4 to 7, 1927. By Elmer Higgins. Appendix 7 to Report of the United States Commissioner of Fisheries for 1927 (1928), pp. 167, 18 illus.
- 1030. Quantitative study of changes produced by acclimatization in tolerance of high temperatures by fishes and amphibians.

 By Edward S. Hathaway. Bulletin of the United States Eureau of Fisheries, Department of Commerce, 1927 (1929) part II, vol. XLIII, pp. 26, 9 illus.
- 1031. Nature and extent of fouling of ships' bottoms. By J. Paul Visscher. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1927 (1929), part II, vol. XLIII, pp. 62, 40 illus.
- 1032. Production and distribution of cod eggs in Massachusetts Bay in 1924 and 1925. By Charles J. Fish. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1927 (1929), part II, vol. XLIII, pp. 46, 16 illus.
- 1033. Propagation and distribution of food fishes, 1927. By Glen C. Leach. Appendix 8 to Report of the United States Commissioner of Fisheries for 1927 (1928), pp. 56, 5 illus.
- 1034. Statistics of catch of cod off east coast of North America to
 1926. By Oscar E. Sette. Appendix 9 to Report of the United
 States Commissioner of Fisheries for 1927 (1928), pp. 14, 1 illus.
- 1035. Experimental study of function of oyster gills and its bearing on problems of oyster culture and sanitary control of oyster industry. By Paul S. Galtsoff. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1928 (1929), vol. XLIV, 41 pp, 13 illus.
- 1036. Trade in fresh and frozen fishery products and related marketing considerations in Jacksonville, Fla. By R. H. Fiedler.

 Appendix 1 to Report of the Commissioner of Fisheries for 1928 (1929), part I, pp. 28, 2 illus.
- 1037. Food of bullheads. By Louella E. Cable. Appendix 2 to Report of the United States Commissioner of Fisheries for 1928 (1929), part II, pp. 17, 2 illus.

- 1038. Report of Commissioner for the fiscal year 1928. Report of the United States Commissioner of Fisheries for 1928 (1929), part I, pp. 34.
- 1039. Trade in fresh and frozen fishery products and related marketing considerations in Atlanta, Ga. By R. H. Fiedler.

 Appendix 3 to Report of the United States Commissioner of Fisheries for 1928 (1929), part I. pp. 20.
- 1040. Alaska fishery and fur-seal industries in 1927. By Ward T.

 Bower. Appendix 4 to Report of the United States Commissioner of Fisheries for 1928 (1929), part I. pp. 113, 17 illus.
- 1041. Statistical review of Alaska salmon fisheries. Part I:
 Bristol Bay and Alaska Peninsula. By Willis H. Rich and
 Edward M. Ball. Bulletin of the United States Bureau of
 Fisheries, Department of Commerce, 1928 (1929), vol. XLIV,
 pp. 57, 20 illus.
- 1042. Electric fish screen. By F. O. McMillan. Eulletin of the United States Bureau of Fisheries, Department of Commerce, 1928 (1929), pp. 34, 21 illus.
- 1043. Scallop industry of North Carolina. By James S. Gutsell.

 Appendix 5 to Report of the United States Commissioner of
 Fisheries for 1928 (1929), part II, pp. 27, 11 illus.
- 1044. Progress in biological inquiries, 1927. By Elmer Higgins.
 Appendix 6 to Report of the United States Commissioner
 of Fisheries for 1928 (1929), part II, pp. 51.
- 1045. Public aquarium: Its construction, equipment, and management.

 By Charles Haskins Townsend. Appendix 7 to Report of the
 United States Commissioner of Fisheries for 1928 (1929),

 part II, pp. 91, 47 illus.
- 1046. Natural history and conservation of redfish and other commercial Sciaenids on Texas coast. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1928 (1929), pp. 88, 44 illus. By John C. Pearson.
- 1047. Experiments in marking young chinook salmon on Columbia River, 1916-27. By Willis H. Rich and Harlan B. Holmes. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1928 (1929), vol. XLIV, pp. 52, 24 illus.
- 1048. Coregonid fishes of Great Lakes. By Walter Koelz. Bulletin of the United States Bureau of Fisheries, Department_of Commerce, 1927 (1929), vol. XLIII, part II, pp. 349, 26 illus.

- 1049. Propagation and distribution of food fishes, 1928. By Glen C. Leach. Appendix 8 to Report of Commissioner of Fisheries for 1928 (1929), part I, 63 pp., 4 illus.
- 1050. Fishery industries of United States, 1927. By Oscar E. Sette and R. H. Fiedler. Appendix 9 to Report of the United States Commissioner of Fisheries for 1928 (1930), part II, pp. 149.
- 1051. Report of Commissioner for the fiscal year 1929. Report of the United States Commissioner of Fisheries for 1929 (1930), pp. 32.
- 1052. Shrimp fishery of southeast Alaska by Frank W. Hynes. Appendix 1 to Report of the United States Commissioner of Fisheries for 1929 (1930), pp. 20, 8 illus.
- 1053. Life history of lake herring (Leucichthys artedi Le Sueur) of Lake Huron as revealed by its scales, with critique of scale method. By John Van Oosten. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1928 (1929), vol. XLIV, pp. 166, 28 illus.
- 1054. Investigation of physical conditions controlling spawning of oysters and occurrence, distribution, and setting of oyster larvae in Milford Harbor, Conn. By Herbert F. Prytherch. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1928 (1929), vol. XLIV, pp. 77, 32 illus.
- 1055. Check list of fishes and fishlike vertebrates of North and Middle America north of the northern boundary of Venezuela and Colombia. By David Starr Jordan, Barton Warren Evermann and Howard Walton Clark. Report of the United States Commissioner of Fisheries for 1928 (1930), part II, pp. 674.
- 1056. Propagation of pondfishes. By M. C. James. Report of the United States Commissioner of Fisheries for 1929 (1930), pp. 32, 16 illus.
- 1057. Salmon-tagging experiments in Alaska 1927 and 1928. By Willis H. Rich and Frederick G. Morton. Bulletin of the United States Bureau of Fisheries, 1929 (1930), vol. XLV, pp. 25, 2 illus.
- 1058. Review of weakfishes (cynoscion) of Atlantic and Gulf coasts of the United States, with description of a new species.

 By Isaac Ginsburg. Bulletin of the United States Bureau of Fisheries, 1929 (1930), vol. XLV, pp. 17, 7 illus.
- 1059. Fishing grounds of Gulf of Maine. By Walter H. Rich. Appendix 3 to Report of the United States Commissioner of Fisheries for 1929 (1930), pp. 69, 5 illus.

- 1060. Review of experiments on artificial culture of diamond-back terrapin. By Samuel F. Hildebrand. Bulletin of the United States Bureau of Fisheries, 1929 (1930), vol. XLV, pp. 48, 14 illus.
- 1061. Care and diseases of trout. By H. S. Davis. Appendix 4 to Report of the United States Commissioner of Fisheries for 1929 (1930), pp. 55, 6 illus.
- 1062. Whitefish, grayling, trout, and salmon of intermountain region. By S. B. Locke. Appendix 5 to Report of the United States Commissioner of Fisheries 1929 (1930), pp. 20, 19 illus.
- 1063. Keokuk Dam and fisheries of Upper Mississippi River. By Robert E. Coker. Bulletin of the United States Bureau of Fisheries, 1929 (1930), vol. XLV, pp. 55, 10 illus.
- 1064. Alaska fishery and fur-seal industries in 1928. By Ward T. Bower. Appendix 6 to Report of the United States Commissioner of Fisheries for 1929 (1930), pp. 144, 15 illus.
- 1065. Bibliography on cod-liver oil in animal feeding, with noncritical comments and abstracts. By John Ruel Manning. Appendix 7 to Report of the United States Commissioner of Fisheries for 1929 (1930), pp. 35.
- 1066. Oyster industry of Pacific coast of United States. By Paul S. Galtsoff. Appendix 8 to Report of the United States Commissioner of Fisheries for 1929 (1930), pp. 36, 13 illus.
- 1067. Fishery industries of United States, 1928. By R. H. Fiedler. Appendix 9 to Report of the United States Commissioner of Fisheries for 1929 (1930), pp. 227.
- 1068. Progress in biological inquiries, 1928, including extracts from proceedings of divisional conference, Jan. 2-5, 1929.

 By Elmer Higgins. Appendix 10 to Report of the United States Commissioner of Fisheries for 1929 (1930), pp. 115.
- 1069. Destruction of oyster bottoms in Mobile Bay by flood of 1929.

 By Paul S. Galtsoff. Appendix 11 to Report of the United

 States Commissioner of Fisheries for 1929 (1930), pp. 20, 3 illus.
- 1070. Propagation and distribution of food fishes, 1929. By Glen C. Leach. Appendix 12 to Report of the United States Commissioner of Fisheries, for 1929 (1930), pp. 67, 3 illus.
- 1071. Report of Commissioner, 1930. Report of the United States Commissioner of Fisheries for 1930 (1931), pp. 34.

- 1072. Studies of common fishes of Mississippi River at Keokuk.

 By Robert E. Coker. Bulletin of the United States Bureau
 of Fisheries, Department of Commerce, 1929 (1930), vol. XLV,
 pp. 87, 30 illus.
- 1073. Report of International Fisheries Commission appointed under northern Pacific halibut treaty. By John Pease Babcock, William A. Found, Miller Freeman, and Henry O'Malley. Appendix 1 to Report of the United States Commissioner of Fisheries for 1930 (1931), pp. 27, 11 illus.
- 1074. Statistics of haddock fishery in North American waters. By W. H. Needler. Appendix 2 to Report of the United States Commissioner of Fisheries for 1930 (1931), pp. 16, 2 illus.
- 1075. Net preservative treatments. By W. T. Conn. Appendix 3 to Report of the United States Commissioner of Fisheries for 1930 (1931), pp. 7.
- 1076. Improved methods for collection of seed oysters. By Herbert F. Prytherch. Appendix 4 to Report of the United States Commissioner of Fisheries for 1930 (1931), pp. 15, 9 illus.
- 1077. Oyster investigations in Georgia. By Paul S. Galtsoff and R. H. Luce. Appendix 5 to Report of the United States Commissioner of Fisheries for 1930 (1931), pp. 42, 23 illus.
- 1078. Utilization of shrimp waste. By F. C. Vilbrandt and R. F.
 Abernethy. Appendix 6 to Report of the United States
 Commissioner of Fisheries for 1930 (1931), pp. 24, 3 illus.
- 1079. Experiments with meats and meat substitutes as trout foods. By H. S. Davis and R. S. Lord, jr. Appendix 7 to Report of the United States Commissioner of Fisheries for 1930 (1931), pp. 27, 11 illus.
- 1080. Contribution to biology of Pacific herring, Clupea pallasii, and condition of fishery in Alaska. By George A. Rounsefell. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1929 (1930), vol. XLV, pp. 96, 53 illus.
- 1081. Migrations and other phases in life history of cod off southern
 New England. By William C. Schroeder. Bulletin of the
 United States Bureau of Fisheries, Department of Commerce,
 1930 (1931) vol. XLVI, pp. 138, 33 illus.
- 1082. Investigations on plankton production in fish ponds. By A. H. Wiebe. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1930 (1931), vol. XLVI, pp. 42, 6 illus.
- 1083. Investigations upon desterioration of nets in Lake Erie.

 By A. C. Robertson and W. H. Wright. Appendix 8 to Report

 of the United States Commissioner of Fisheries, 1930 (1931),

 pp. 30, 10 illus.

- 1084. Salmon-tagging experiments in Alaska, 1929. By Seton H. Thompson. Bulletin of the United States Bureau of Fisheries, 1930 (1931), vol. XLVI, pp. 21, 6 illus.
- 1085. Experiments in culture of black bass and other pondfish. By
 H. S. Davis and A. H. Wiebe. Appendix 9 to Report of the
 United States Commissioner of Fisheries 1930 (1931), pp. 29,
 6 illus.
- 1086. Alaska fishery and fur-seal industries in 1929. By Ward T. Bower. Appendix 10 to Report of the United States Commissioner of Fisheries, 1930 (1931), pp. 137, 14 illus.
- 1087. Review of fisheries of California. By R. H. Fiedler.

 Appendix 11 to Report of the United States Commissioner of Fisheries, 1930 (1931), pp. 31, 8 illus.
- 1088. An experimental study in production and collection of seed oysters. By P. S. Galtsoff, H. F. Prytherch, and H. C. McMillan. Bulletin of the United States Bureau of Fisheries, 1930 (1931), vol. XLVI, pp. 69, 40 illus.
- 1089. Commercial snappers (Lutianidae) of Gulf of Mexico. By Isaac Ginsburg. Bulletin of the United States Bureau of Fisheries, 1930 (1931), vol. XLVI, pp. 14, 2 illus.
- 1090. Fish meal in animal feeding, with bibliography. By John Ruel Manning. Appendix 12 to Report of the United States Commissioner of Fisheries, 1930 (1931), pp. 39,
- 1091. A biological study of offshore waters of Chesapeake Bay. By R. P. Cowles. Bulletin of the United States Eureau of Fisheries, 1930 (1931), vol. XLVI, pp. 107, 16 illus.
- 1092. Pacific salmon fisheries. By John N. Cobb. Appendix 13 to Report of the United States Commissioner of Fisheries for 1930 (1931), pp. 297, 48 illus.
- 1093. Development and life history of 14 teleostean fishes at Beaufort, N. C. By Samuel F. Hildebrand and Louella E. Cable. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1930 (1931), vol. XLVI, pp. 108, 101 illus.
- 1094. Oxygen consumption of normal and green oysters. By Paul S. Galtsoff and Dorothy V. Whipple. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1930 (1931), vol. XLVI, pp. 22, 4 illus.
- 1095. Fishery industries of United States, 1929. By R. H. Fiedler.
 Appendix 14 to Report of the United States Commissioner
 of Fisheries for 1930 (1931), pp. 366, 29 illus.

- 1097. Blood of North American fresh-water mussels under normal and adverse conditions. By M. M. Ellis, Amanda D. Merrick, and Marion D. Ellis. Billetin of the United States Bureau of Fisheries, Department of Commerce, 1930 (1931), vol. XLVI, 36 pp., 14 illus.
- 1098. Propagation and distribution of food fishes, 1930. By Glen C. Leach. Appendix to Report of the United States Commissioner of Fisheries for 1930 (1931), 71 pp., 5 illus.
- Relative growth and mortality of Pacific razor clam (Siliqua patula, Dixon) and their bearing on commercial fishery. By F. W. Weymouth and H. C. McMillin. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1930 (1931), vol. XLVI, 27 pp., 11 illus.
- 1100. Natural history of bay scallop. By James S. Gutsell. Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1930 (1931), vol. XLVI, 66 pp., 32 illus.
- 1101. The age and growth of the Pacific cockle (Cardium corbis, Martyn).

 By F. W. Weymouth and Seton H. Thompson. Bulletin of the

 United States Bureau of Fisheries, Department of Commerce,

 1930 (1931), vol. XLVI, 11 pp., 7 illus.
- 1102. Statistical review of the Alaska salmon fisheries. Part 2.

 Chignik to Resurrection Bay. By Willis H. Rich and
 Edward M. Ball. Bulletin of the United States Bureau of
 Fisheries, Department of Commerce, 1930 (1931), vol. XLVI,
 72 pp., 11 illus.
- 1103. Annual growth of fresh-water mussels by Thomas K. Chamberlain.

 Bulletin of the United States Bureau of Fisheries, Department of Commerce, 1930 (1931), vol. KLVI, 29 pp., 18 illus.

- Biological survey of waters of Woods Hole, Mass., and vicinity, Sec. 1. Physical and zoological. By Francis B. Sumner, Raymond C. Osburn, and Leon J. Cole. Sec. 2. Botanical. By Bradley M. Davis. Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1911 (1913), part I, vol. XXI, 544 pp., 274 illus.
- Biological survey of waters of Woods Hole, Mass., and vicinity.

 Sec. 3: Catalogue of marine fauna. By Francis B. Sumner, Raymond C.

 Osburn, and Leon J. Cole. Sec. 4: Catalogue of the marine flora.

 By Bradley M. Davis. Bulletin of the Bureau of Fisheries, Department of Commerce and Labor, 1911 (1913), part I, vol. XXI, 318 pp.

ECONOMIC CIRCULARS

This series includes Nos. 1-74 (1911-1931) and were issued as pamphlets only.

- 1. Mussel beds of Cumberland River in 1911. By Ernest Danglade.
 Bureau of Fisheries, United States Department of Commerce
 and Iabor, 1912, 4 pp.
- 2. Condition of mussel fishery of Illinois River in 1912. By
 Ernest Danglade. Bureau of Fisheries, United States Department of Commerce and Labor, 1912, 4 pp.
- 3. Mussels of central and northern Minnesota. By Charles B. Wilson and Ernest Danglade. Bureau of Fisheries, United States Department of Commerce and Labor, 1912, 6 pp.
- 4. Truth about fur seals of Pribilof Islands. By George A. Clark and David Starr Jordan. Bureau of Fisheries, United States Department of Commerce and Labor, 1912, 6 pp.
- 5. Artificial propagation of diamond-back terrapin. By William P. Hay and Henry D. Aller. Bureau of Fisheries, United States Department of Commerce, 1913, 14 pp., 3 figs.
- 6. Mussel fisheries of Caddo Lake and Cypress and Sulphur Rivers of Texas and Louisiana. By Austin F. Shira. Bureau of Fisheries, United States Department of Commerce, 1913, 10 pp.
- 7. Opportunity for new sea-scallop fishery off middle Atlantic Coast (Under direction H. P. Bigelow and W. W. Welsh.)
 Bureau of Fisheries, United States Department of Commerce, 1914. 5 pp.
- 8. Offshore fishing grounds of North Carolina. By Lewis Radcliffe.
 Bureau of Fisheries, United States Department of Commerce,
 1914, 6 pp.
- 9. Mussel streams of eastern Oklahoma. By F. B. Isely. Bureau of Fisheries, United States Department of Commerce, 1914, 6 pp.
- 10. Mussel resources in Missouri. (Based on report by W. I. Utterback).

 Bureau of Fisheries, United States Department of Commerce,

 1914, 6 pp.
- 11. Canned salmon: Cheaper than meats and why: including 50 tested recipes. Bureau of Fisheries, United States Department of Commerce, 1914, 6 pp.
- 12. Sea mussels: What they are and how to cook them, with 18 recipes. Bureau of Fisheries, United States Department of Commerce, 1914, 5 pp., 1 fig.

- 13. Commercial possibilities of goosofish, a neglected food, with 10 recipes. By Hugh M. Smith. Bureau of Fisheries, United States Department of Commerce, 1914, 5 pp.
- 14. Mussel resources of Tensas River of Louisiana. By Robert E. Coker. Bureau of Fisheries, United States Department of Commerce, 1915, 7 pp.
- 15. Common and scientific names of fresh-water mussels. By
 Robert E. Coker. Bureau of Fisheries, United States Department of Commerce, 1915, 4 pp.
- 16. Concerning mortality of soft clams at Essex, Mass. By Harold W. Nightingale. Bureau of Fisheries, United States Department of Commerce, 1915, 4 pp., 1 fig.
- 17. Fishes destructive to eggs and larvae of mosquitoes. By
 Lewis Radcliffe. Eureau of Fisheries, United States Department of Commerce, 1915, 19 pp., 28 figs.
- 18. Oysters: Food that has not "gone up": A little of their history and how to cook them. By H. F. Moore. Bureau of Fisheries, United States Department of Commerce, 1915, pp. 16.
- 19. The tilefish: A new deep-sea food fish. Bureau of Fisheries, United States Department of Commerce, 1915, 6 pp., 2 figs.
- 20. Caviar: What it is and how to prepare it. By Lewis Radcliffe. Bureau of Fisheries, United States Department of Commerce, 1916, 8 pp., 3 figs.
- 21. Information concerning parasitic worms in fish. Bureau of Fisheries, United States Department of Commerce, 1916, 4 pp.
- 22. The grayfish. Try it. Bureau of Fisheries, United States Department of Commerce, 1916, 8 pp., 1 fig.
- 23. Sablefish. Alias black cod. By H. F. Moore. Bureau of Fisheries, United States Department of Commerce, 1917, 6 pp., 1 fig.
- 24. Question of fishways. By R. E. Coker. Bureau of Fisheries, United States Department of Commerce, 1917, 6 pp., 1 fig.
- 25. Burbot: Fresh-water cousin to the cod. By H. F. Moore.
 Bureau of Fisheries, United States Department of Commerce,
 1917, 4 pp., 1 fig.
- 26. Bowfin: Old fashioned fish with new found use. By R. E. Coker. Bureau of Fisheries, United States Department of Commerce, 1917, 4 pp., 1 fig. (Revised 1918.)

- 27. Practical small smokohouse for fish: How to construct and operate it. Bureau of Elsheries, United States Department of Commerce, 1917, 12 pp., 11 figs.
- 28. Preserving fish for domestic use. By H. F. Moore. Bureau of Fisheries, United States Department of Commerce, 1917, 2 pp.
- 29. Why and how to use salt and smoked fish: Sixty-one ways of cooking them. By H. F. Moore, Bureau of Fisheries, United States Department of Commerce, 1917, 8 pp.
- 30. Possibilities of food from fish. By H. F. Taylor. Bureau of Fisheries, United States Department of Commerce, 1917, 4 pp.
- 31. The carp: Valuable food resource, with 23 recipes. By
 H. F. Taylor. Bureau of Fisheries, United States Department
 of Commerce, 1917, 7 pp., 1 fig.
- 32. The whiting: A good fish not adequately utilized. By H. F. Moore. Bureau of Fisheries, United States Department of Commerce, 1917, 4 pp., 1 fig.
- 33. The eulachon: A rich and delicious little fish. By H. F. Moore. Bureau of Fisheries, United States Department of Commerce, 1917, 4 pp., 1 fig.
- 34. Skates and rays: Interesting fishes of great food value, with 29 recipes for cooking them. By H. F. Moore, Bureau of Fisheries, United States Department of Commerce, 1918, 7 pp., 1 fig.
- 35. Sharks as food (with 30 recipes). By Lewis Radcliffe.
 Bureau of Fisheries, United States Department of Commerce,
 1918, 8 pp.
- 36. Fish roe and buckroe with 85 recipes. By Lewis Radcliffe.
 Bureau of Fisheries, United States Department of Commerce,
 1918, 11 pp.
- 37. How the angler may preserve his catch. By W. E. Kendell.
 Bureau of Fisheries, United States Department of Commerce,
 1918, 7 pp.
- 38. Whales and porpoises as food, with 32 recipes. By Lewis Radcliffe. Bureau of Fisheries, United States Department of Commerce, 1918, 10 pp.
- 39. The artificial propagation of carp. By Glen C. Leach. Bureau of Fisheries, United States Department of Commerce, 1919, 9 figs, 19 pp.
- 40. The capture and marketing of carp. By H. L. Canfield.
 Bureau of Fisheries, United States Department of Commerce,
 1918, 7 pp.

- 41. Culture of rainbow trout and brook trout in ponds. By Glen C. Leach. Bureau of Fisheries, United States Department of Commerce, 1919, 19 pp.
- 42. Parasites of fresh-water fishes. By H. S. Pratt. Bureau of Fisheries, United States Department of Commerce, 1919, 8 pp.
- 43. Fresh-water mussels: A valuable national resource without sufficient protection. By H. M. Smith. Bureau of Fisheries, United States Department of Commerce, 1919, 5 pp.
- 44. Groupers: Fishes you should try, with recipes for cooking them. By H. F. Moore. Bureau of Fisheries, United States Department of Commerce, 1919, 8 pp., 1 fig.
- 45. Marked Pacific salmon: Announcement regarding fish expected to return in 1919 and subsequent years. By Willis H. Rich.
 Bureau of Fisheries, United States Department of Commerce, 1919, 12 pp., 11 figs.
- 46. Clam resources of the 10,000 Islands, Florida. (Based on reports by W. C. Schroeder.) Bureau of Fisheries, United States Department of Commerce, 1920, 5 pp.
- 47. The haddock: One of the best salt-water fishes, with recipes for cooking it. By H. F. Moore. Bureau of Fisheries, United States Department of Commerce, 1920, 8 pp., 1 fig.
- 48. Canned salmon: Pink and chum, with 44 recipes. By Henry O'Malley. Bureau of Fisheries, United States Department of Commerce, 1921, 7 pp., 1 fig.
- 49. Habits of the mud-puppy Necturus, an enemy of food fishes.

 By A. S. Pearse. Bureau of Fisheries, United States

 Department of Commerce, 1921, 8 pp., 1 fig.
- 50. Trade in fresh and frozen fishery products and related market considerations in Louisville, Ky. By L. T. Hopkinson.
 Bureau of Fisheries, United States Department of Commerce, 1921, 8 pp.
- 51. Sources, preparation and properties of some algal gelatines.

 By I. A. Field. Bureau of Fisheries, United States

 Department of Commerce, 1921, 7 pp.
- 52. Trade in fresh and frozen fishery products and related market considerations in Pittsburgh, Pa. By L. T. Hopkinson.
 Bureau of Fisheries, United States Department of Commerce, 1921, 9 pp.
- 53. Brine freezing of fish. By Harden F. Taylor. Bureau of Fisheries, United States Department of Commerce, 1921, 8 pp.

- 54. Trade in fresh and frozen fishery products and related market considerations in Chicago, Ill. By L. T. Hopkinson. Bureau of Fisheries, United States Department of Commerce, 1921, 21 pp.
- 55. Trade in fresh and frozen fishery products and related market considerations in Minneapolis and St. Paul, Minn. By L. T. Hopkinson. Bureau of Fisheries, United States Department of Commerce, 1922, 21 pp.
- 56. Care and feeding of buffalofish in ponds. By H. L. Canfield.
 Bureau of Fisheries, United States Department of Commerce,
 1922, 3 pp.
- 57. Mussel survey of Lake Pepin in 1924. By J. B. Southall. Bureau of Fisheries, United States Department of Commerce, 1925, 3 pp.
- 58. Oysters: An important health food, with 98 recipes. By Lewis Radcliffe. Bureau of Fisheries, United States Department of Commerce, 1925, 15 pp.
- 59. Cooperative fish culture. By Glen C. Leach. Bureau of Fisheries, United States Department of Commerce, 1926, 8 pp.
- 60. Diamond-back terrapin culture at Beaufort, N. C. By Samuel F. Hildebrand and Charles Hatsel. Bureau of Fisheries, United States Department of Commerce, 1926, 20 pp., 8 figs.
- 61. An investigation of coastal waters of South Carolina, with reference to oyster culture. By P. S. Caltsoff and H. F. Prytherch. Bureau of Fisheries, United States Department of Commerce, 1927, 8 pp., 1 fig.
- 62. Containers and packages used in shipping shucked oysters. By
 Gerald Arthur Fitzgerald. Bureau of Fisheries, United States
 Department of Commerce, 1928, 16 pp., 5 figs.
- 63. Trade in fresh and frozen package fish products. Bureau of Fisheries, United States Department of Commerce, 1928, 12 pp., 1 fig.
- 64. Condition of razor-clam fishery of Washington. By H. C. McMillin. Bureau of Fisheries, United States Department of Commerce, 1928, 7 pp., 2 figs.
- 65. Stocking interior waters of United States. By E. C. Fearnow and M. C. James. Bureau of Fisheries, United States Department of Commerce, 1928, 16 pp., 6 figs.
- 66. Oyster bottoms of North Carolina (with bibliography). By
 Dr. Paul S. Galtsoff and H. R. Seiwell. Bureau of Fisheries,
 United States Department of Commerce, 1928, 11 pp.

- 67. Results of game-fish plantings by bureau. By E. C. Fearnow.
 Bureau of Fisheries, United States Department of Commerce,
 1929, 76 pp.
- 68. Coldfish industry. By Thomas Quast. Bureau of Fisheries,
 United States Department of Commerce, 1929, 14 pp., 4 figs.
- 69. Salmon, an economical and valuable food. By Ward T. Bower.
 Bureau of Fisheries, United States Department of Commerce,
 19 pp., 5 figs.
- 70. Control of common oyster drill. By Henry Federighi. Bureau of Fisheries, United States Department of Commerce, 1930, 7 pp., 5 figs.
- 71. Fur seal industry of Pribilof Islands, Alaska. By Henry O'Malley. Bureau of Fisheries, United States Department of Commerce, 1930, 15 pp., 6 figs.
- 72. The Bureau of Fisheries and its Biological Station at Beaufort,
 N. C. By Samuel F. Hildebrand. Bureau of Fisheries,
 United States Department of Commerce, 1930, 14 pp., 9 figs.
- 73. A cursory survey of the Blue River system of Nebraska. By
 H. L. Canfield and A. H. Wiebe. Bureau of Fisheries, United
 States Department of Commerce, 1931, 10 pp.
- 74. Application of preservatives to fishing nets. By W. T. Conn. Bureau of Fisheries, United States Department of Commerce, 1931, 6 pp., 5 figs.

ADMINISTRATIVE REPORTS

This series contained Administrative Reports 1-42 (1931-1940). The Report of the Commissioner of Fisheries (1931-1939) was a reprint from the Report of the Secretary of Commerce, but 1940 was a reprint from the Report of the Secretary of the Interior. These reprints carry the paging of the Report of the Secretary and have no serial number.

- 1. Annual report of the Commissioner of Fisheries, June 30, 1931. By Henry O'Malley. Report of the Commissioner of Fisheries with appendixes, Bureau of Fisheries, United States Department of Commerce, 1931 (1932), pp. 1-33.
- Alaska fishery and fur-seal industries in 1930. By Ward T. Bower. Appendix I to Report of the Commissioner of Fisheries, Bureau of Fisheries, United States Department of Commerce, 1931 (1932), pp. 1-108, 8 figs.
- Fishery industries of the United States, 1930. By R. H. Fiedler.
 Appendix 2 to Report of the Commissioner of Fisheries, Bureau of
 Fisheries, United States Department of Commerce, 1931 (1932),
 pp. 109-552, 23 figs.
- 4. Progress in biological inquiries, 1931. By Elmer Higgins. App. 3, Report of the Commissioner of Fisheries, Bureau of Fisheries, United States Department of Commerce, 1931 (1932), pp. 441-529.
- 5. Propagation and distribution of food fishes, 1931. By Glen C. Leach. Appendix 4 to Report of the Commissioner of Fisheries, Bureau of Fisheries, United States Department of Commerce, 1931 (1932), pp. 627-690, 2 figs.
- 6. Report Commissioner of Fisheries, June 30, 1932. Report of the Commissioner of Fisheries with appendixes, United States Bureau of Fisheries, Department of Commerce, 1932 (1933), pp. 1-27.
- 7. Alaska fishery and fur-seal industries in 1931. By Ward T. Bower. Appendix I to Report of the Commissioner of Fisheries, United States Department of Commerce, 1932 (1933), pp. 1-96.
- 8. Fishery industries of the United States, 1931. By R. H. Fiedler. Appendix II to Report of the Commissioner of Fisheries, United States Department of Commerce, 1932 (1933), pp. 97-440.
- 9. Progress in biological inquiries, 1931. By Elmer Higgins.
 Appendix III to Report of the Commissioner of Fisheries, United
 States Department of Commerce, 1932 (1933), pp. 441-529.
- 10. Propagation and distribution of food fishes, 1932. By Glen C. Leach. Appendix 4 to Report of United States Commissioner of Fisheries, Department of Commerce, 1932 (1933), pp. 531-569.

- Report of the Commissioner of Fisheries, June 30, 1933.

 Report of the Commissioner of Fisheries with appendixes,
 United States Bureau of Fisheries, Department of Commerce,
 1953 (1934), pp. 71-95.
- 11. Alaska fishery and fur-soal industries in 1932. By Ward T.

 Bower. Appendix I to Report of the Commissioner of Fisheries,
 Bureau of Fisheries, United States Department of Commerce,
 1933 (1934), pp. 1-78.
- 12. Progress in biological inquiries, 1932. By Elmer Higgins.

 Appendix II to Roport of the Commissioner of Fisheries,

 Bureau of Fisheries, United States Department of Commerce,

 1933 (1934), pp. 79-147.
- 13. Fishery industries of the United States 1932. By R. H. Fiedler.
 Appendix III to Report of the Commissioner of Fisheries,
 Bureau of Fisheries, United States Department of Commerce,
 1933 (1934), pp. 149-449.
- 14. Propagation and distribution of food fishes, 1933. By Glen C.

 Leach. Appendix IV to Report of the Commissioner of Fisheries
 Bureau of Fisheries, United States Department of Commerce,
 1933 (1934), pp. 451-484.
- -- Report of the Commissioner of Fisheries, June 30, 1934.

 Report of the Commissioner of Fisheries with appendixes,

 Bureau of Fisheries, United States Department of Commorce,

 1933 (1934), pp. 77-101.
- 15. Fishery industries of the United States, 1933. By R. H. Fiedler, John Ruel Manning, and F. F. Johnson. Appendix I to Report of the Bureau of Fisheries, Commissioner of Fisheries, United States Department of Commerce, 1933 (1934), pp. 1-237.
- 16. Alaska fishery and fur-seal industries in 1933. By Ward T.

 Bower. Appendix II to Report of the Commissioner of Fisheries,
 Bureau of Fisheries, United States Department of Commerce,
 1933 (1934), pp. 239-312.
- 17. Progress in biological inquiries, 1933. By Elmer Higgins.
 Appendix III to Report of the Commissioner of Fisheries,
 Bureau of Fisheries, United States Department of Commerce,
 1934 (1936), pp. 313-383.
- 18. Propagation and distribution of food fishes, 1934. By Glen C.

 Leach and M. C. James. Appendix IV to Report of the Commissioner of Fisheries, Bureau of Fisheries, United States
 Department of Commerce, 1934 (1936), pp. 385-417.

- -- Report of Commissioner of Fisheries, June 30, 1935.
 Report of the Commissioner of Fisheries, Bureau of Fisheries, United States Department of Commerce, 1935 (1936), pp. 87-111.
- 19. Alaska fishery and fur-seal industries in 1934. By Ward T. Bower. Appendix I to Report of the Commissioner of Fisheries, Bureau of Fisheries, United States Department of Commerce, 1935 (1936), pp. 1-73.
- 20. Fishery industries of the United States, 1934. By R. H. Fiedler. Appendix II to Report of the Commissioner of Fisheries, Bureau of Fisheries, United States Department of Commerce, 1935 (1936), pp. 75-330.
- 21. Progress in biological inquiries, 1934. By Elmer Higgins.

 Appendix III to Report of the Commissioner of Fisheries,

 Bureau of Fisheries, United States Department of Commerce,

 1935 (1936), pp. 331-399.
- 22. Propagation and distribution of food fishes, 1935. By Glen C. Leach and M. C. James. Appendix IV to Report of the Commissioner of Fisheries, Bureau of Fisheries, United States Department of Commerce, 1935 (1936), pp. 401-425.
- -- Report of the Commissioner of Fisheries, June 30, 1936.
 Report of the Commissioner of Fisheries with appendixes,
 United States Bureau of Fisheries, Department of Commerce,
 1935 (1936), pp. 81-107.
- 23. Alaska fishery and fur-seal industries in 1935. By Ward T. Bower. Appendix I to Report of the Commissioner of Fisheries, Bureau of Fisheries, United States Department of Commerce, 1936 (1938), pp. 1-71.
- 24. Fishery industries of the United States, 1935. By R. H. Fiedler. Appendix II to Report of the Commissioner of Fisheries, Bureau of Fisheries, United States Department of Commerce, 1936 (1938), pp. 74-348.
- 25. Propagation and distribution of food fishes 1936. By Glen C. Leach and M. C. James. Appendix III to Report of Commissioner of Fisheries, Bureau of Fisheries, United States Department of Commerce, 1936 (1938), pp. 349-379.
- 26. Progress in biological inquiries, 1935. By Elmer Higgins.

 Appendix IV to Report of Commissioner of Fisheries,

 Bureau of Fisheries, United States Department of Commerce,

 1936 (1938), pp. 381-452.

- -- Report of the Commissioner of Fisheries, June 30, 1937.
 Report of Commissioner of Fisheries with appendixes,
 Bureau of Fisheries, United States Department of Commerce, 1937 (1939).
- 27. Fishery industries of the United States, 1936. By R. H. Fiedler. Appendix 1 to Report of the Commissioner of Fisheries, Bureau of Fisheries, United States Department of Commerce, 1937 (1939), pp. 1-276.
- 28. Alaska fishery and fur-seal industries in 1936. By
 Ward T. Bower. Appendix II to Report of the Commissioner
 of Fisheries, Bureau of Fisheries, United States Department of Commerce, 1937 (1939), pp. 277-347.
- 29. Progress in biological inquiries, 1936. By Elmer Higgins.
 Appendix III to Report of the Commissioner of Fisheries,
 Bureau of Fisheries, United States Department of Commerce,
 1937 (1939), pp. 1-61.
- Report of the Commissioner of Fisheries, June 30, 1938.

 Report of the Commissioner of Fisheries with appendixes,

 Bureau of Fisheries, United States Department of Commerce,

 1938 (1940).
- 30. Progress in biological inquiries, 1937. By Elmer Higgins.
 Appendix I to the Report of the Commissioner of Fisheries
 Bureau of Fisheries, United States Department of Commerce,
 1938 (1940), pp. 1-70.
- 31. Alaska fishery and fur-seal industries, 1937. By Ward T. Bower. Appendix II to Report of the Commissioner of Fisheries, Bureau of Fisheries, United States Department of Commerce, 1938 (1940), pp. 71-150.
- 32. Fishery industries of the United States 1937. By R. H. Fiedler. Appendix 3 to Report of the Commissioner of Fisheries, Bureau of Fisheries, United States Department of Commerce, 1938 (1940), pp. 151-460.
- 33. Propagation and distribution of food fishes, fiscal year 1937. By Glen C. Leach and M. C. James. Appendix 4 to Report of Commissioner of Fisheries, Bureau of Fisheries, United States Department of Commerce, 1937 (1939), pp. 461-492.
- Report of the Commissioner for June 30, 1939. Report of the Commissioner of Fisheries with appendixes, 1939 (1941) pp. 135-163.

- 34. Propagation and distribution of food fishes, fiscal year 1938. By Glen C. Leach, M. C. James, and E. J. Douglass. Appendix 4 to Report of the Commissioner of Fisheries, Bureau of Fisheries, United States Department of Commerce, 1939 (1940), pp. 555-598.
- 35. Progress in biological inquiries 1938. By Elmer Higgins.
 Appendix I to Report of the Commissioner of Fisheries,
 Bureau of Fisheries, United States Department of
 Commerce, 1939 (1939) pp. 1-81.
- 36. Alaska fishery and fur seal industries, 1938. By Ward T. Bower. Appendix II to the Report of the Commissioner of Fisheries, Bureau of Fisheries, United States Department of Commerce, 1939(1940), pp. 83-168.
- 37. Fishery industries of the United States, 1938. By R. H. Fiedler. Appendix III to the Report of the Commissioner of Fisheries, Bureau of Fisheries, United States Department of Commerce, 1939 (1940), pp. 169-553.
- 38. Propagation and distribution of food fishes, fiscal year 1939. By Glen C. Leach, M. C. James, and E. J. Douglass. Appendix IV to the Report of the Commissioner of Fisheries, Bureau of Fisheries, United States Department of Commerce, 1939 (1940).
- -- Annual Report of the Commissioner of Fisheries, June 30, 1940.

 Report of the Commissioner of Fisheries, Bureau of Fisheries,

 United States Department of Commerce, 1940 (1950), pp. 291-329.
- 39. Progress in biological inquiries, 1939. By Elmer Higgins.

 Appendix I to Report of Commissioner of Fisheries for the fiscal year 1940, Bureau of Fisheries, United States Department of Commerce, 1940 (1940), pp. 1-96.
- 40. Alaska fishery and fur-seal industries in 1939. By Ward T. Bower. Appendix II to Report of the Commissioner of Fisheries, Bureau of Fisheries, United States Department of Commerce, 1939 (1941), pp. 97-184.
- 41. Fishery industries of the United States, 1939. By R. H. Fiedler. Appendix III to Report of the Commissioner of 1940, Bureau of Fisheries, United States Department of Commerce, 1940 (1941), pp. 185-554.
- 42. Propagation and distribution of food fishes, fiscal year 1940. By Glen C. Leach, M. C. James, and E. J. Douglass. Appendix IV to the Report of the Commissioner, 1940, Bureau of Fisheries, United States Department of Commerce, 1940 (1941), pp. 555-603.

BULLETINS

- 1. Temperature and the shell movements of oysters. By
 A. E. Hopkins. Bulletin of the Bureau of
 Fisheries, Department of Commerce, vol. XLVII,
 pp. 1-14, 10 figs., 1931 (1935).
- 2. Fluctuations in the supply of herring (Clupea pallasii) in Southeastern Alaska. By George A. Rounsefell.

 Bulletin of the Bureau of Fisheries, Department of Commerce, vol. XLVII, pp. 15-56, 26 figs, 1931 (1935).
- 3. Factors influencing the spawning and setting of oysters in Galveston Bay, Texas. By A. E. Hopkins. Bulletin of the Bureau of Fisheries, Department of Commerce, vol. XLVII, pp. 57-83, 18 figs., 1931 (1935).
- 4. Studies on the oyster drill (<u>Urosalpinx cinerea</u>, Say).

 By Henry Federighi. Bulletin of the Bureau of Fisheries,

 Department of Commerce, vol. XLVII, pp. 85-115, 7 figs.,

 1931 (1935).
- 5. Juvenile and sex characters of Evorthodus lyricus (Fam. Gobiidae). By Isaac Ginsburg. Bulletin of the Bureau of Fisheries, Department of Commerce, vol. XLVII, pp. 117-124, 2 figs., 1931 (1935).
- 6. Effects of pulp mill pollution on oysters. By A. E. Hopkins, Paul S. Galtsoff, and H. C. McMillin. Bulletin of the Bureau of Fisheries, Department of Commerce, vol. XLVII, pp. 125-186, 50 figs., 1932 (1935).
- 7. Statistical review of the Alaska salmon fisheries. Part III.
 Prince William Sound, Copper River, and Bering River. By
 Willis H. Rich and Edward M. Ball. Bulletin of the Bureau
 of Fisheries, Department of Commerce, vol. XLVII, pp. 187-247,
 10 figs., 1932 (1935).
- 8. Sensory stimulation of the oyster (Ostrea virginica) by chemicals. By A. E. Hopkins. Bulletin of the Bureau of Fisheries, Department of Commerce, vol. XLVII, pp. 249-261, ll figs., 1932 (1935).
- 9. Fluctuations in the supply of herring (Clupea pallasii) in Prince Williams Sound, Alaska. By George A. Rounsefell and Edwin H. Dahlgren. Bulletin of the Bureau of Fisheries, Department of Commerce, vol. XLVII, pp. 263-291, 15 figs., 1932 (1935).

- 10. Contributions to the early life histories of sixty-two species of fishes from Lake Erie and its tributary waters. By Marie Poland Fish. Bulletin of the Bureau of Fisheries, Department of Commerce, vol. XLVII, pp. 293-398, 144 figs., 1932 (1935).
- 11. Salmon-tagging experiments in Alaska, 1930. By Willis H. Rich. Bulletin of the Bureau of Fisheries, Department of Commerce, vol. XLVII, pp. 399-406, 1 fig., 1932 (1935).
- 12. Limnological studies of Karluk Lake, Alaska 1926-1930. By C. Juday, Willis H. Rich, G. I. Kemmerer, and Albert Mann. Bulletin of the Bureau of Fisheries, Department of Commerce, vol. XLVII, pp. 407-436, 6 figs., 1932 (1935).
- 13. Statistical review of the Alaska salmon fisheries. Part IV.

 Southeastern Alaska. By Willis H. Rich and Edward M. Ball.

 Bulletin of the Bureau of Fisheries, Department of Commerce,

 vol. XLVII. pp. 437-673, 55 figs., 1933 (1935).
- 14. Preliminary report on the life history of the common shrimp (Penaeus setiferus, Linn.). By F. W. Weymouth, Milton J. Lindner and W. W. Anderson. Bulletin of the Bureau of Fisheries, Department of Commerce, vol. XLVIII, pp. 1-26, 11 figs., 1933 (1940).
- 15. The homing instinct and age at maturity of pink salmon
 (Oncorhynchus gorbuscha). By Frederick A. Davidson.
 Bulletin of the Bureau of Fisheries, Department of Commerce,
 vol. XLVIII, pp. 27-39, 10 figs., 1934 (1940).
- 16. Reproduction and development of whitings or kingfishes, drums, spot, croaker, and weakfishes or sea trouts (family Sciaenidae) of the Atlantic coast of the United States. By Samuel F. Hildebrand and Louella E. Cable. Bulletin of the Bureau of Fisheries, Department of Commerce, vol. XLVIII, pp. 41-117, 44 figs., 1934 (1940).
- 17. Races of herring, (Clupea pallasii) in Southeastern Alaska.

 By George A. Rounsefell and Edwin H. Dahlgren.

 Bulletin of the Bureau of Fisheries, Department of Commerce, vol. XLVIII, pp. 119-141, 10 figs., 1935 (1940).
- 18. Effects of crude oil pollution on oysters in Louisiana waters. By Paul S. Galtsoff, Herbert F. Prytherch, Robert O. Smith, and Vera Koehring. Bulletin of the Bureau of Fisheries, Department of Commerce, vol. XLVIII, pp. 143-210, 20 figs., 1935 (1940).
- 19. Age and growth of the cisco Leucichthys artedi (Le Sueur) in the Northeastern Highlands, Wisconsin. By Ralph Hile.
 Bulletin of the Bureau of Fisheries, Department of Commerce, vol. XLVIII, pp. 211-317, 11 figs., 1936 (1940).

- 20. Supplemental notes on fishes of the Gulf of Maino. By Henry B. Bigelow and Milliam C. Schroeder. Bulletin of the Buroau of Fisheries, Department of Commerce, vol. MLVIII, pp. 319-343, 1936 (1940).
- 21. Adaptation of the feeding mechanism of the oyster (Ostrea gigas) to changes in salinity. By A. E. Hopkins. Bulletin of the Bureau of Fisheries, Department of Commerce, vol. XLVIII, pp. 345-364, 11 figs., 1936 (1940).
- 22. Detection and measurement of stream pollution. By M. M. Ellis. Bulletin of the Bureau of Fisheries, Department of Commerce, vol. XLVIII, pp. 365-437, 22 figs., 1936 (1940).
- 23. Experimental observations on spawning, larval development, and setting in the Olympia oyster Ostrea lurida. By A. E. Hopkins. Bulletin of the Bureau of Fisheries, Department of Commerce, vol. XLVIII, pp. 439-503, 41 figs., 1937 (1940).
- 24. Further notes on the development and life history of some teleosts at Beaufort, N. C. By Samuel F. Hildebrand and Louella E. Cable. Bulletin of the Bureau of Fisheries, Department of Commerce, vol. XLVIII, pp. 505-642, 159 figs., 1938 (1940).
- 25. The migration of pink salmon (Oncorhynchus gorbuscha) in the Clarence and Sumner Straits regions of Southeastern Alaska.

 By Frederick A. Davidson and Leroy S. Christey. Bulletin of the Bureau of Fisheries, Department of Commerce, vol. XLVIII, pp. 643-666, 5 figs., 1938 (1940).
- 26. The geographic distribution and environmental limitations of the Pacific salmon (Genus Oncorhynchus). By Frederick A. Davidson and Samuel J. Hutchinson. Bulletin of the Bureau of Fisheries, Department of Commerce, vol. XLVIII, pp. 667-692, 9 figs., 1938 (1940).
- 27. The salmon and the salmon fisheries of Swiftsure Bank, Puget Sound, and the Fraser River. By George A. Rounsefell and George B. Kelez. Bulletin of the Bureau of Fisheries, Department of Commerce, vol. XLVIII, pp. 693-823, 29 figs., 1938 (1940).
- 28. The life history of the striped bass, or rockfish, Roccus saxatilis (Walbaum). By John C. Pearson. Bulletin of the Bureau of Fisheries, Department of Commerce, vol. XLVIII, pp. 825-851, 26 figs., 1938 (1940).
- 29. Effect of currents on distribution and survival of the eggs and larvae of the haddock (Melanogrammus aeglefinus) on Georges Bank. By Lionel A. Walford. Bulletin of the Bureau of Fisheries, Department of Commerce, vol. XLIX, pp. 1-73, 50 figs., 1938 (1950).

- 30. The early life histories of some American Penaeidae, chiefly the commercial shrimp, Penaeus setiferus (Linn.). By John C. Pearson. Bulletin of the Bureau of Fisheries, Department of Commerce, vol. XLIX, pp. 1-73, 67 figs., 1939 (1950).
- 31. Natural history and method of controlling the starfish (Asterias forbesi, Desor). By Faul S. Galtsoff and Victor L. Loosanoff.

 Bulletin of the Bureau of Fisheries, Department of the Interior, vol. YLIX, pp. 75-132, 32 figs., 1939 (1950).
- 32. History and development of the fisheries of the Columbia River.

 By Joseph A. Craig and Robert L. Hacker. Bulletin of the

 Bureau of Fisheries, Department of the Interior, vol. XLIX,

 pp. 133-216, 15 figs., 1940 (1950).
- 33. Spawning and setting of oysters in Long Island Sound in 1937, and discussion of the method for predicting the intensity and time of oyster setting. By Victor L. Loosanoff and James B. Engle. Bulletin of the Bureau of Fisheries, Department, vol. XLIX, pp. 217-255, 10 figs., 1940 (1950).
- 34. Water conditions affecting aquatic life in Elephant Butte reservoir. By M. M. Ellis. Bulletin of the Bureau of Fisheries, Department of the Interior, vol. XLIX, pp. 257-304, 22 figs., 1940 (1950).
 - NOTE: -- FI SHERY BULLETIN 35 was issued as a publication of the Fish and Wildlife Service, Department of the Interior, following the consolidation of the Bureau of Fisheries and the Biological Survey in 1940.

INVESTIGATIONAL REPORTS

- 1. The menhaden industry. By Roger W. Harrison. Investigational Reports of the Bureau of Fisheries, Department of Commerce, vol. I, 1931 (1935), pp. 1-113, 30 figs.
- 2. Studies on the nutritive value of fish meals. By Esther
 Peterson Daniel and E. V. McCollum. Investigational
 Reports of the Bureau of Fisheries, Department of Commerce,
 vol. I, 1931 (1935), pp. 1-19, 6 figs.
- Vitamin D in menhaden fish oils. By John Ruel Manning, E. M. Nelson, and Chester D. Tolle. Investigational Reports of the Bureau of Fisheries, Department of Commerce, vol. I, 1931 (1935), pp. 1-5, 1 fig.
- 4. Commercial production of menhaden fish oil for animal feeding.

 By Roger W. Harrison and S. R. Pottinger. Investigational

 Reports of the Bureau of Fisheries, Department of Commerce,

 vol. I. pp. 1-11.
- 5. Spectographic analysis of marine products. By John M. Newell and E. V. McCollum. Investigational Reports of the Bureau of Fisheries, Department of Commerce, vol. I, 1931 (1935), pp. 1-9.
- 6. Survey of oyster bottoms in Texas. By Paul S. Galtsoff.
 Investigational Reports of the Bureau of Fisheries, Department of Commerce, vol. I, 1931 (1935), pp. 1-30, 15 figs.
- 7. Market for marine animal oils in the United States. By
 Roger W. Harrison. Investigational Reports of the Bureau
 of Fisheries, Department of Commerce, vol. I, 1932 (1935),
 pp. 1-78, 17 figs.
- 8. Studies in crab canning. By Kokichi Oshima. Investigational Reports of the Bureau of Fisheries, Department of Commerce, vol. I, 1932 (1935), pp. 1-8, 2 figs.
- 9. Reducing the shrinkage of frozen fish in cold storage. By James M. Lemon. Investigational Reports of the Bureau of Fisheries, Department of Commerce, vol. I, 1932 (1935), pp. 1-12, 2 figs.
- 10. Winter trawl fishery off the Virginia and North Carolina Coasts. By John C. Pearson. Investigational Reports of the Bureau of Fisheries, Department of Commerce, vol. I, 1932 (1935), pp. 1-31, 12 figs.

- 11. Controlling vegetation in fish ponds with sodium arsenite.

 By Eugene W. Surber. Investigational Reports of the
 Bureau of Fisheries, Department of Commerce, vol. I,

 1932 (1935), pp. 1-39, 23 figs.
- 12. Chemical and physical properties of burbot-liver oil and its vitamin content. By E. M. Nelson, Chester D. Tolle and George S. Jamieson. Investigational Reports of the Bureau of Fisheries, Department of Commerce, vol. I, 1932 (1935), pp. 1-6, 2 figs.
- 13. The fisheries of Puerto Rico. By Norman D. Jarvis. Investigational Reports of the Bureau of Fisheries, Department of Commerce, vol. I, 1932 (1935), pp. 1-41, 8 figs.
- 14. Fisheries of the Virgin Islands of the United States. By R. H. Fiedler and N. D. Jarvis. Investigational Reports of the Bureau of Fisheries, Department of Commerce, vol. I, 1932 (1935), pp. 1-32, 10 figs.
- 15. New methods of opening oysters and improving their condition for market. By V. Koehring and H. F. Prytherch. Investigational Reports of the Bureau of Fisheries, Department of Commerce, vol. I, 1932 (1935), pp. 1-25, 11 figs.
- 16. Developments in refrigeration of fish in the United States.

 By James M. Lemon. Investigational Report of the Bureau of Fisheries, Department of Commerce, vol. I, 1932 (1935), pp. 1-32, 3 figs.
- 17. Studies on the nutritive value of oysters. By E. J. Coulson.
 Investigational Reports of the Bureau of Fisheries, Department of Commerce, vol. I, 1933 (1935), pp. 1-30, 8 figs.
- 18. The iodine content of oysters. By E. J. Coulson. Investigational Reports of the Bureau of Fisheries, Department of Commerce, vol. I, 1934 (1935), pp. 1-10, 1 fig.
- 19. Statistics of the mackerel fishery off the east coast of North America 1908-1930. By Oscar E. Sette and A. W. H. Needler. Investigational Reports of the Bureau of Fisheries, Department of Commerce, vol. I, 1934 (1935), pp. 1-48, 6 figs.
- 20. Studies on the smoking of haddock. By Frances P. Griffiths and J. M. Lemon. Investigational Reports of the Bureau of Fisheries, Department of Commerce, vol. I, 1934 (1935), pp. 1-12, 1 fig.

- 21. Shrimp industry of the South Atlantic and Gulf States.

 By Fred F. Johnson and Milton J. Lindner. Investigational Reports of the Bureau of Fisheries, Department of Commerce, vol. I, 1934 (1935), pp. 1-83, 31 figs.
- 22. Care and diseases of trout. By H. S. Davis. Investigational Reports of the Eureau of Fisheries, Department of Commerce, vol. I, 1934 (1935), pp. 1-69, 15 figs.
- 23. Studies on the metabolism of copper. By E. J. Coulson,
 Roe E. Remington and Kenneth M. Lynch. Investigational
 Reports of the Eureau of Fisheries, Department of Commerce, vol. I, 1934 (1935), pp. 1-12, 2 figs.
- 24. Modifications in gear to curtail the destruction of undersized fish in otter trawling. By William C. Herrington.
 Investigational Reports of the Bureau of Fisheries,
 Department of Commerce, vol. I, 1934 (1935), pp. 1-48, 15 figs.
- 25. The iodine content of some American fishery products. By E. J. Coulson. Investigational Reports of the Bureau of Fisheries, Department of Commerce, vol. I, 1934 (1935), pp. 1-7.
- 26. Fishery for red snappers and groupers in the gulf of Mexico.

 By Norman D. Jarvis. Investigational Reports of the

 United States Bureau of Fisheries, Department of Com
 merce, vol. I, 1935, pp. 1-29, 4 figs.
- 27. Chemical and physical properties of haddock-liver oil and its vitamin content. By S. R. Pottinger, Charles F. Lee, Chester D. Tolle, and Roger W. Harrison. Investigational Reports of the United States Bureau of Fisheries, Department of Commerce, vol. I, 1935, pp. 1-16, 6 figs.
- 28. Studies on the utilization of swordfish livers. By Roger W. Harrison, S. R. Pottinger, Charles F. Lee, and Andrew W. Anderson. Investigational Reports of the United States Bureau of Fisheries, Department of Commerce, vol. I, 1935, pp. 1-10, 3 figs.
- 29. Condition of razor clam fishery in vicinity of Cordova,

 Alaska. By Seton H. Thompson and F. W. Weymouth. Investigational Reports of the United States Bureau of Fisheries,
 Department of Commerce, vol. I, 1935, pp. 1-14, 6 figs.
- 30. Effect of manufacture on the quality of nonoily fish-meal proteins. By S. R. Pottinger, Roger W. Harrison, and Andrew W. Anderson. Investigational Reports of the Bureau of Fisheries, Department of Commerce, vol. II, 1935 (194-), pp. 1-14, 1 fig.

- 31. Effect of method of manufacture on the composition of haddock fish-meal proteins. By S. R. Pottinger, Roger W. Harrison, and Andrew W. Anderson. Investigational Reports of the Bureau of Fisheries, Department of Commerce, vol. II, 1935(194-), pp. 1-14, 1 fig.
- 32. Studies on drying cod and haddock waste. By Andrew W. Anderson, Roger W. Harrison and S. R. Pottinger. Investigational Reports of the Bureau of Fisheries, Department of Commerce, vol. II, 1935(1914), pp. 1-41, 7 figs.
- 33. Physical and chemical changes in the pink salmon during the spawning migration. By Frederick A. Davidson and O. Eugene Shostrom. Investigational Reports of the Bureau of Fisheries, Department of Commerce, vol. II, 1936(194-), pp. 1-37, 15 figs.
- 34. The home canning of fishery products. By Norman D. Jarvis and Francis P. Griffiths. Investigational Reports of the Bureau of Fisheries, Department of Commerce, vol. II, 1936(1944), pp. 1-16, 5 figs.
- 35. Care and diseases of trout. By H. S. Davis. Investigational Reports of the Bureau of Fisheries, Department of Commerce, vol. II, 1937(194-), pp. 1-76, 15 figs.
- 36. Vitamin content of oils from cannery trimmings of salmon from the Columbia River and Puget Sound Regions. By Roger W. Harrison, Andrew W. Anderson, Arthur D. Holmes, and Medeleine G. Pigott, Investigational Report of the Bureau of Fisheries, Department of Commerce, vol. II, 1937(1941), pp. 1-8.
- 37. Preliminary report on the cause of the decline of the oyster industry of the York River, Va., and the effects of pulp-mill pollution on oysters. By Paul S. Caltsoff, Walter A. Chipman, Jr., Arthur D. Hasler, and James B. Engle. Investigational Reports of the Bureau of Fisheries, Department of Commerce, vol. II, 1938, pp. 1-42, 27 figs.
- 38. Marketing of shad on the Atlantic coast. By Fred F. Johnson. Investigational Reports of the Bureau of Fisheries, Department of Commerce, vol. II, 1938(194-), 44 pp, 9 figs.
- Trade in fresh and frozen fishery products and related marketing considerations in the San Francisco Bay area. By Barton DeLoach. Investigational Reports of the Bureau of Fisheries, Department of Commerce, vol. II, 1938(1914), 51 pp., 8 figs.
- 40. Pacific salmon oils. By Roger W. Harrison, Andrew W. Anderson, S. R. Pottinger, and Charles F. Lee. Investigational Reports of the Bureau of Fisheries, Department of Commerce, vol. II, 1939(194-), 21 pp.

- 41. The mineral content of the edible portions of some American fishery products. By Hugo W. Nilson and E. J. Coulson. Investigational Reports of the Bureau of Fisheries, Department of Commerce, vol. II, pp. 7, 1939 (194-).
- 42. A plan for the development of the Hawaiian fisheries. By Frank T. Bell and Elmer Higgins. Investigational Reports of the Bureau of Fisheries, Department of Commerce, vol. II, pp. 25, 2 figs., 1939(194-).
- 43. Some effects of ultraviolet irradiation of haddock fillets.

 By Joseph F. Puncochar, William B. Lanham, Jr., and Hugo W.

 Nilson. Investigational Reports of the Bureau of Fisheries,

 Department of Commerce, vol. II, 8 pp., 5 figs., 1939(194-)
- 44. Study of the metabolism of naturally occurring fluorine in canned salmon and mackerel. By Charles F. Lee and Hugo W. Nilson. Investigational Reports of the Bureau of Fisheries, Department of Commerce, vol. II, pp. 15, figs. 5, 1939(194).

FISHERY CIRCULARS

- 1. Sport fishing in Chesapeake Bay. By John C. Pearson.
 Bureau of Fisheries, United States Department of
 Commerce, 1931, pp. 1-19, 11 figs.
- 2. Review of the fish-farming industries of the United States.

 By Clarence R. Lucas. Bureau of Fisheries, United States

 Department of Commerce, 1931, pp. 1-16, 7 figs.
- 3. Market for fresh oysters in fourteen cities of the United States. By J. M. Lemon. Bureau of Fisheries, United States Department of Commerce, 1931, pp. 1-25, 6 figs.
- 4. Outlook for the mackerel fishery in 1931. By Oscar E. Sette.
 Bureau of Fisheries, United States Department of Commerce,
 1931, pp. 1-20, 4 figs.
- 5. A survey of conditions affecting fisheries in the upper Mississippi River. By M. M. Ellis. Bureau of Fisheries, United States Department of Commerce, 1931, pp. 1-18.
- 6. Goldfish: Their care in small aquaria and ponds. By E. C. Fearnow. Bureau of Fisheries, United States Department of Commerce, 1931, pp. 1-16, 6 figs.
- 7. Some factors affecting the replacement of commercial fresh-water mussels. By M. M. Ellis. Bureau of Fisheries, United States Department of Commerce, 1931, pp. 1-10.
- 8. Stocking interior waters of the United States. By E. C. Fearnow. Bureau of Fisheries, United States Department of Commerce, 1931, pp. 1-18, 7 figs.
- 9. A summary of game fish laws for 1932 with special reference to black bass. By Talbott Denmead. Bureau of Fisheries, United States Department of Commerce, 1932, pp. 1-48, 3 figs.
- Outlook for the mackerel fishery in 1932. By Oscar E. Sette.
 Bureau of Fisheries, United States Department of Commerce,
 1932, pp. 1-25, 6 figs.
- 11. Some unusual markets for fish and shellfish. By F. F.
 Johnson. Bureau of Fisheries, United States Department of
 Commerce, 1932, pp. 1-13, 3 figs.

- 12. Introduction of Japanese oysters into the United States.

 By Paul S. Galtsoff. Bureau of Fisheries, United States

 Department of Commerce, 1932, pp. 1-16, 4 figs.
- 13. Sport fishing in Alaska. By Henry O'Malley. Bureau of Fisheries, United States Department of Commerce, 1933, pp. 1-18, 12 figs.
- 14. Outlook for the mackerel fishery in 1933. By Oscar E. Sette. Bureau of Fisheries, United States Department of Commerce, 1933, pp. 1-23, 7 figs.
- 15. Aquatic shell industries. By F. F. Johnson. Bureau of Fisheries, United States Department of Commerce, 1934, pp. 1-17, 5 figs.
- 16. A summary of game fish laws for 1933-34 with special reference to black bass. By Talbott Denmead. Bureau of Fisheries, United States Department of Commerce, 1934, pp. 1-43.
- 17. Outlook for the mackerel fishery in 1934. By Oscar E. Sette. Bureau of Fisheries, United States Department of Commerce, 1934, pp. 1-6, 1 fig.
- 18. Conditions affecting the southern winter trawl fisherv.

 By Robert A. Nesbit and Wm. C. Neville. Bureau of Fisheries,

 Department of Commerce, 1935, pp. 1-12, 3 figs.
- 19. Practical fish cookery. By Agnes I. Webster and W. T. Conn.
 Eureau of Fisheries, United States Department of Commerce,
 1935, pp. 1-26.
- 20. A summary of game fish laws for 1935-36 with special reference to black bass. By Talbott Denmead. Bureau of Fisheries, United States Department of Commerce, 1935, pp. 1-48.
- 21. The story of oysters. By R. H. Fiedler. Bureau of Fisheries, United States Department of Commerce, 1936, pp. 1-29, 21 figs.
- 22. Organizing and incorporating fishery cooperative marketing associations. By L. C. Salter. Bureau of Fisheries, United States Department of Commerce, 1936, pp. 1-38.
- 23. Decline in haddock abundance on Georges Bank and practical remedy. By William C. Harrington. Bureau of Fisheries, United States Department of Commerce, 1936, pp. 1-22, 15 figs.

- 24. A summary of game fish laws for 1936-37 with special reference to black bass. By Talbott Denmead. Bureau of Fisheries, United States Department of Commerce, 1936, pp. 1-49.
- 25. Natural history and methods of controlling the common oyster drills (<u>Urosalpinx cinerea</u> Say) and (<u>Eupleura caudata</u> Say). By Paul S. Galtsoff, Herbert F. Prytherch, and James B. Engle. Bureau of Fisheries, United States Department of Commerce, 1937, pp. 1-24, 13 figs.
- 26. Instructions for conducting stream and lake surveys. By
 H. S. Davis. Bureau of Fisheries, United States Department
 of Commerce, 1938, 55 pp., 11 figs.
- 27. A summary of game-fish laws for 1937-38 with special reference to black bass. By Talbott Denmead. Bureau of Fisheries, United States Department of Commerce, 1938, 50 pp.
- 28. Propagation of bait and forage fish. By Henry C. Markus.
 Bureau of Fisheries, United States Department of Commerce,
 1939, 19 pp., 10 figs.

PRINTED PUBLICATIONS OF THE BUREAU OF FISHERIES June 30, 1871 - June 30, 1940

Key to Abbreviations

| Adm. Rept. A. R. Bull. E. C. F. C. I. R. Doc. | Annual Report. Bulletin (biological). Economic Circular. Fishery Circular, Investigational Report. |
|---|--|
| INDEX | |
| Abernethy, R. F. | Doc. 1078. |
| Acclimatization: American fishes abroad, | Doc. 234, 260, 695, 696, 697, 698, 699. |
| Argentina Austria British Guiana Finland Italy New Zealand (salmon) | Doc. 696. Doc. 698, 699. Doc. 260. Doc. 234. Doc. 695. Doc. 697. |
| Great Salt Lake Oysters, Willapa Bay Pacific States Tolerance of high temperature for fishes and amphibians | Doc. 422. Doc. 334. Doc. 309, 334. Doc. 1030. |
| Yellowstone National Park Achtenberg, H. Actinaria, Porto Rico Adams, A. C. Age and growth of cisco Age of Pacific salmons Fishes, by scale determination Air bladder, specific gravity, fishes, Alabama fishes, Oyster beds Shad | Doc. 818. Doc. 885. Doc. 470. Doc. 162. Bull. 19. Doc. 767. Doc. 823. Doc. 921. Doc. 157. Doc. 305, 769. Doc. 335. |
| Alaska: Birds of Pribilof Islands Clams Cod fisheries | Doc. 820. Doc. 971; Bull. 1009. Doc. 830. |

I.R. 29.

Cordova, razor clam conditions

```
Alaska (continued)
                            Doc. 603, 618, 632, 645, 730, 746, 766, 780,
   Fisheries
                        797, 819, 834, 838, 847, 872, 891, 909, 933, 951,
                        973, 992, 1008, 1023, 1040, 1064, 1086, 1102;
                        Adm. Rpt. 2, 7, 11, 16, 19, 23, 28, 31, 36, 40.
                            Doc. 624, 627. (See Salmon and other species.)
   Fishes
       Halibut grounds
                            Doc.
                                   763.
   Fur seal fisheries:
                            Doc. 661, 732, 735, 748, 749, 766, 780, 797,
     Pribilof Islands
                        819, 820, 834, 838, 847, 872, 891, 909, 933, 951,
                        1040, 1064: E.C. 71.
   Fur seal regulations
                            Doc. 732.
   Herring fishery
                            Doc. 1080.
   Herring fluctuations,
     southeastern
                            Bull.
                                    2, 9.
   Karluk Lake limnological
     studies
                            Bull.
                                  12.
   Isopods
                                  564.
                            Doc.
   Prince William Sound
                            Bull.
                                    9.
   Salmon
                            Doc. 200, 624, 627, 645, 951, 891, 971,
                                 1041, 1092, 1102. (See Alaska Fisheries.)
     Inspection
                            Doc. 618, 645.
     Statistical review
                            Bull.
                                    7, 13.
                            Doc. 943, 991, 1005, 1022; Bull. 11.
     Tagging
   Shrimp fishery of
     southeastern Alaska
                            Doc. 1052.
   Sport fishing
                            F.C.
                                   13.
   Starfishes
                            Doc .
                                  572.
   Tide-pool fishes
                            Doc. 410.
   Trout
                            Doc. 624, 627.
Albatross(vessel)
                                  41, 73, 78, 96, 105, 110, 113, 118, 119,
                            Doc.
                                129, 130, 135, 161,170, 180, 216, 228, 284,
                                321, 326, 330, 332, 355, 400, 472,509, 541,
                                549, 604, 621, 741, 817, 897.
   Bibliography
                            Doc. 472, 899.
                                   79, 107.
                            Doc.
   Construction
   Crustacea dredged
                            Doc.
                                  105.
   Gear and equipment
                                  330.
                            Doc.
   Decapod crustacea
                                   78.
     east coast U. S.
                            Doc.
   Deep-sea exploration
     and description
                                  330.
                            Doc .
                                   41, 118, 119, 124, 135, 321, 444, 472,
   Dredging records
                            Doc .
                                       541, 549, 604, 621, 741, 817, 897.
                                  124.
       Arctic
                            Doc.
       Atlantic and Challenger Doc. 124.
```

Doc. 124.

Coast survey

```
Albatross (continued)
        Oredging records:
         Fish commission Doc. 124, 472, 541, 549, 604, 621.
         North American
                              124. 444.
           waters
                       Doc.
         Southern New
                              444.
           England
                       Doc.
                              72, 73.
   Electric lighting
                       Doc.
   Explorations,
                              119.
           Atlantic
                       Doc.
           Bristol Bay Doc. 161.
           Gulf of
                              119.
         . Mexico
                       Doc.
                              110, 130, 135, 180, 216, 228, 284, 335, 355,
           Pacific .
                       Doc.
   Fishes collected by
                             Doc. 326, 400, 509.
   Fishing trials, coast
    of Wash. and Oregon.
                             Doc. 817.
             South Seas
                             Doc. 509.
   Gear and equipment
                             Doc. 330.
   Isopods, Philippine
                             Doc. 736
   List of work and voyages,
                              Doc. 472.
      1883-1901
                              Doc. 113, 129.
   Medusae
                              Doc. 355.
   Observations 1896
   Specifications for
                              Doc. 38
                             Doc. 41, 73, 96, 110, 113, 118, 119, 124,
      work of
                                   130, 135, 161, 180, 216, 228, 284, 310,
                                   321, 326, 330, 332, 355, 400, 472, 509,
                                   541, 604, 621, 741, 817.
Albemarle region, N.C., fishes
                                  Doc.
                                        208.
Alcyonaria of Porto Rico
                                  Doc.
                                        468.
Alewife and alewife fisheries
                                  Doc.
                                         12, 401.
                                        359, 509, 763, 816.
Alexander, A. B.
                                  Doc.
Algae of Lake Erie
                                  Doc.
                                        529.
   Beaufort, N. C.
                                  Doc.
                                        886.
  Marine, U. S., list of
                                  Doc.
                                         14, 36.
  New England
                                  Doc.
                                         36.
   Lake Erie plankton
                                  Doc.
                                        529.
   Removal from fish cultural
       waters
                                  Doc.
                                        687, 826, 1056.
Algal gelatines
                                         51; Doc. 929.
                                  E.C.
                                          5; Doc. 819, 834, 838, 847.
                                  E.C.
Aller, H. D.
Allegheny region, exploration
                                        136.
                                  Doc.
Alosa alabamae
                                        335.
                                  Doc.
   Ohioensis
                                        499.
                                  Doc.
American: eel, Leptocephalus of,
                                  Doc.
                                        480.
      Fisheries, maintenance of
                                  Doc.
                                        266.
      Fish in Finland
                                  Doc .
                                        234.
      Lobster, natural history
                                        300, 747.
                                  Doc.
      Shipworm, notes on
                                  Doc.
                                        369.
      Waters, decrease of food
                       fishes
                                  Doc.
                                        239.
```

```
Amia calva, osteology of
                              Doc.
                                      90.
Amphibians, tolerance of
  high temperature
                               Doc. 1030.
Amphipoda of southern
  New England
                               Doc.
                                     585.
Analytical subject bibliography of publications of
  U. S. Bureau of Fisheries
     1871-1920
                              Doc.
                                     899.
Anatomy:
   Bass skeleton
                              Doc.
                                     448.
   Amia calva, osteology of
                              Doc.
                                     90.
   Ear of squeteague
                              Doc.
                                     715.
   Lernasa
                              Doc.
                                     854.
                                     300, 747.
   Lobster, natural history, Doc.
   Salmon, alimentary tract
                              Doc.
                                     777.
         Skeletal
             musculature,
                              Doc.
                                     796.
   Thysanocephalum crispum
                              Doc.
                                     183.
   Tilefish
                                     559, 560; E.C. 19.
                              Doc.
   Wing-shell, Atrina rigida Doc.
                                     744.
Anchovia mitchilli,
          embryology,
                              Doc.
                                     795.
Anderson, Andrew W.
                              I.R.
                                     28, 30, 31, 32, 36, 40.
Anderson, W. W.
                              Bull. 14.
Angling:
         California
                              Doc.
                                     652.
         Connecticut Lakes
                              Doc.
                                     633.
         Florida
                              Doc.
                                     652.
         Maine
                              Doc.
                                    861.
         National aspects
                              Doc.
                                     651.
         Pikes, pickerel and
           other fishes
                              Doc.
                                    853; F. C. 1. 13.
         Protective
                                     650, 651, 818; F.C. 9, 16, 20, 24, 27.
           legislation
                              Doc.
         Sunapee Lake
                              Doc.
                                    783.
         Yellowstone
           National Park
                              Doc.
                                    818, 914.
Annelida chaetopoda,
                                      68, 117.
         report on
                              Doc.
Annelids, polychartons,
                                    601.
         Hawaiian Is.
                              Doc.
Annual Reports, Commissioner
                                    3, 4, 15, 17, 25, 28, 46, 62, 65, 77,
         of Fisheries:
                              Doc.
                                    95, 108, 115, 134, 176, 192, 213, 283,
                                    298, 315, 331, 337, 344, 398, 430, 450,
                                   481, 524, 548, 553, 594, 608, 629, 642,
                                   727, 734, 753, 772, 782, 807, 827, 836,
                                   836a, 836b, 845, 862, 877, 894, 900,
                                   913, 946, 966, 982, 1002, 1017, 1038, 1051, 1071.
Annual Report of Commissioner
         1931, 1932;
                              A.R.
                                    1, 6.
   Reprint from Report of Secretary of
      Commerce, 1933, 1934, 1935, 1936,
      1937, 1938, 1939. (Not numbered.)
```

```
Anomura of Porto Rico
                              Doc.
                                    460.
                                    938 .
Anson, B. J.
                              Doc.
                                    686.
Anthony, R.
                              Doc.
Anthozou of Woods Hole
                              Doc.
                                    788.
                                    141
Antrim Co., Mich., fishes of Doc.
Apalachicola Bay oyster
   grounds, survey of
                                    343, 841.
                              Doc .
                                    700, 701, 702, 703, 704, 705, 706,955.
Apparatus of fish culture
                              Doc.
Appliances for collecting
   pelagic organisms
                              Doc.
                                    289.
                                    184.
Apodal fishes, review of
                              Doc.
                                    186.
Aquaria, Central Station
                              Doc.
      World's Columbian
                                    253.
        Exposition
                              Doc.
Aquarium apparatus
                                    705.
                              Doc.
                              Doc. 1045.
      Public
      Principles and
        management
                              Doc.
                                    133, 1045.
      Supply and pumping
                                    253.
        plants for
                              Doc.
Aquatic animals, utilizing
                              Doc.
                                    537.
       skins,
                                    424, 635.
      Photography
                              Doc.
      Plants in pond-fish
                                    566, 643, 687, 815, 826, 848, 948.
        culture
                              Doc.
      In relation to
        substratum
                              Doc.
                                    566.
      Products in arts and
        industries
                              Doc.
                                    536; F. C. 15.
      Resources of U. S.
                              Doc.
                                    836a.
Aquatic life, Elephant
                              Bull. 34.
        Butte Reservoir
Aqua-vivarium in biological
        research
                              Doc.
                                    102.
Aquiculture, new principles
                              Doc.
                                    676.
Argentine, American fishes
        introduced
                              Doc.
                                    696.
      Fishes
                              Doc.
                                    931.
Argulus, Woods Hole
                                    561.
                              Doc.
Arkansas, fishes,
                                    156, 280, 306.
                              Doc.
      Mollusks
                              Doc.
                                    306.
Armistead, J. J.
                              Doc.
                                    249.
Artificial food for young
        fish
                              Doc.
                                    264.
Artificial propagation
                             (See Fish culture)
Arts, aquatic products in
                                    536.
                              Doc.
Atkins, Chas. G.
                              Doc.
                                     21, 258, 884.
Atlanta Exposition, report,
                              Doc.
                                    338
Atlantic coast fishes: range of Doc.
                                        233.
      Menhaden fishery
                                  Doc.
                                        811.
      Northern fishing banks
                                  Doc.
                                        816.
      Salmon in Hudson River
                                  Doc.
                                        376.
```

```
Atlantic coast fishes (continued)
                                   281, 965, 1024; F.C.1.
         Occurrence of
                             Doc.
                                   258, 346, 879.
         Propagation
                             Doc.
   Salmon
                             Doc.
                                   281. 357.
   Shad fisheries
                             Doc.
                                   403.
   Silversides
                             Doc. 492; F.C. 28.
Atrina rigida, anatomy and
     physiology
                             Doc.
                                  744.
                                   98, 185.
Atwater, W. O.
                             Doc.
Augur, C. H.
                             Doc.
                                   275.
Augusta, Ga., fishes in
                                   940.
     vicinity
                             Doc.
Austria, Amer. fishes
     introduced
                                   699.
                             Doc.
   Degeneration of American trout Doc.
                                         699.
Ayson, L. F.
                             Doc. 697.
Babcock, John Pease
                             Doc. 1073.
Bache, exploration, 1914
                             Doc. 833.
Bacterial disease '
                             Doc. 924.
                             Doc. 533.
Bacterium truttae
         Infecting trout
                             Doc. 533.
                             Doc. 1006.
Baievsky, Boris
                             Doc. 1, 3, 4, 10, 13, 15, 17, 18, 20, 22, 25,
Baird, Spencer F.
                                 28, 29, 35, 39, 44, 46, 49, 50, 53, 54, 62,
                                 65, 73, 77, 95, 108, 109, 115, 125, 134.
Bairdiella chrysura,
    embryology
                             Doc. 795.
Ball, E. M.
                             Doc. 1041, 1102; Bull. 7, 13.
Barbados,
                             Doc.
                                   931.
Barnacles, Bering Sea
                                   739.
                             Doc.
        Hawaiian Islands
                             Doc.
                                   617.
        Japan
                             Doc. 739.
         Pacific Coast
                             Doc. 617.
        Porto Rico
                             Doc. 463.
                             Doc. 503.
         On crabs
        On ships' bottoms
                             Doc. 1031.
                             Doc. 850, 917, 938.
Barney, R. L.
Bass, black, propagation
                             Doc. 259, 347, 513, 826, 1056, 1085.
  Common names
                             Doc. 538.
   Skeleton
                             Doc. 448.
   Rock, propagation
                             Doc. 347.
                             Bull. 28.
   Striped, life history
Battle, John D.
                             Doc. 199.
Batrachians, natural history Doc.
                                  222.
                             Doc. 995.
Bauer, A. B.
Bavarian Fishery Association Doc. 304.
Bay of Panama, new fishes
                             Doc.
                                   48.
                             Doc. 1100.
Bay scallop
                             Doc. 703, 707.
Bayer, Hector von
                                  132.
                             Doc.
Beam trawl fishery
                             Doc.
                                  409.
Bean, B. A.
                                   19, 30, 59, 86, 87, 122, 138, 145,
                             Doc.
Bean, T. H.
                                                   159, 188, 237, 311.
```

```
Bear Lake
                              Doc. 864.
Beard, H. F.
                              Doc. 1000, 1020.
Beardsley, A. E.
                                    518.
                              Doc.
Beaufort, N. C .:
    Decapod crustacea
                              Doc.
                                    859.
                                    1093.
    14 teleostean fishes
                              Doc.
    Fish parasites
                              Doc.
                                    583.
    List of fishes
                              Bull.
                                    24.
                                    762.
    Hydroids
                              Doc.
    Myxosporidia of region
                                    855.
                              Doc.
                                   822.
    Sharks and rays
                              Doc.
    Station
                              E.C.
                                    72.
                              Doc.
                                    876.
    Sponges of
                              Doc.
                                   942, 953.
Beetle, scavenger water
Bell, Frank T.
                              I.R.
                                    42.
Benecke, Berthold
                              Doc.
                                    103.
                                    68, 117, 460.
Benedict, J. E.
                              Doc.
Bering Sea barnacles
                                    739.
                              Doc.
                                   228.
    Exploration, Albatross
                              Doc.
                                   754.
    Fishes
                              Doc.
Bermuda fisheries
                                    931.
                              Doc.
Berry, S. S.
                             Doc.
                                   761, 789.
Besana, G.
                             Doc.
                                   695.
Bibliography:
    Albatross work
                             Doc.
                                    472.
    Bureau of Fisheries
      publications
                             Doc. 329, 899.
Bigelow, Henry B.
                             Doc. 833, 965, 969.
Bigelow, M. A.
                             Doc.
                                    463.
Bigelow, R. P.
                             Doc.
                                    461.
Bigelow, William C.
                             Bull. 20.
Biliary calculi in squeteague Doc. 498.
Biological inquiries; progress
                             Doc. 896, 911, 936, 956, 971, 990,1003;
                             Adm. Rpt. 4, 9, 12, 17, 21, 26, 29, 30, 35, 39.
    Notes, Woods Hole
                             Doc. 447, 474.
    Relation of plants to
             substratum
                                    566.
                             Doc.
    Research and economić
                             Doc. 243.
             problems
    Research, use of aqua-vivarium Doc.
                                            102.
    Station for Florida coast
                                     Doc.
                                            333, 367.
    Gulf of Mexico
                             Doc.
                                    367, 368.
Biological Survey of Woods Hole region, Bull. vol. 31 (1911)
Biological and chemical studies Northeastern Lakes Doc. 944.
    Study of Chesapeake Bay Doc. 1091.
Biology, habits of catfishes, Doc.
                                  517, 532, 733.
    Clam
                             Doc.
                                   554.
    Crab
                                   580, 870.
                             Doc.
    Fresh-water mussels
                             Doc.
                                   413, 893.
    Lobster
                                   300, 500, 747.
                             Doc.
    Salmon
                                  515, 965.
                             Doc.
    Squeteague
                             Doc. 477, 1024.
    Starfish
                             Doc.
                                   441.
```

```
Birds: fish-sating, catalog of,
                                   Doc.
                                           56.
     Guano of Poru
                                   Doc.
                                          663.
     Sea, bait
                                          82.
                                   Doc.
     Laysan and Leeward Islands
                                   Doc.
                                          543.
Birge, E. A.
                                        718, 791, 905, 1012.
                                   Doc.
Biscayne, Bay, notes on
                                   Doc.
                                        333.
Black bass, habits of
                                   Doc. 513.
     In Utah
                                   Doc.
                                        395.
                                         259, 347, 513, 826,1056, 1085.
     Propagation
                                   Doc.
     Skeleton of
                                   Doc.
                                         448.
                                            9, 16, 20.
     Law
                                   F.C.
Black drum
                                   Doc. 1046.
Blenny, n. sp., Japan
                                   Doc. 485.
Blind fishes
                                   Doc.
                                         579.
Blood of fishes affected by
        water density
                                   Doc.
                                         712.
Blood-vascular system of tilefish
                                   Doc.
                                         560.
Blue-crab, life industry
                                         580, 870.
                                   Doc.
   Industry of Maryland
                                   Doc.
                                         581.
   Chesapeake Bay
                                   Doc.
                                         868.
Blue Rivor, Nebraska
                                   E.C.
                                          73.
                                        950.
Blystad, Chester N.
                                   Doc.
Beopple, J. F.
                                         765.
                                   Doc.
Boilers for Albatross
                                   Doc. 109.
Bollman, Chas. H.
                                   Doc.
                                        141, 190.
Bony fishes, peripheral nervous
         system
                                   Doc.
                                        415.
Boorman, W. R.
                                   Doc.
                                         944.
Borodin, N. A.
                                   Doc.
                                        880.
Borodine, N.
                                   Doc.
                                         254.
Boston, trade in fishery products Doc.
                                        939.
Botany, Lake Erie
                                   Doc. 479.
  Aquatic plants in relation
    to substratum
                                   Doc.
                                         566.
Boulder County, Colo, fishes
                                   Doc.
                                         565.
Bovard, J. F.
                                   Doc.
                                         944.
Bower, Ward T.
                                   Doc.
                                         819, 834, 838, 847, 872, 891, 909,
                     933, 951, 973, 992, 1008, 1023, 1040, 1064, 1086;
                                   Adm. Rpt. 2, 7, 11, 16, 19, 23, 28, 31,
Brachyura, Hawaiian Islands
                                   Doc.
                                         587.
  Porto Rico
                                   Doc. 459.
Brazil
                                   Doc.
                                         931.
Breeding habits of Gambusia
                                         806.
                                   Doc.
        affinis
                                         710.
    Horned dace
                                   Doc.
                                   Doc.
                                         517.
     Yellow catfish
                                         927, 954.
Breder, C. M.
                                   Doc.
                                         314, 317, 337, 341, 342, 344.
Brice, J. J.
                                   Doc.
Bristol Bay, Alaska,
                                  Doc. 161.
         fishing grounds
```

```
I to . U lu bie, lichories
                                 Loc.
                                       453, 751.
                                        530.
Eniting Coinca, Riches
                                 Doc.
 licheries
                                 Loc.
                                        931.
                                       346, 955, 1061; E.C. 41; I.R. 22,35.
Drock trout, propagation
                                 Doc.
Brooks, ... H.
                                 Doc.
                                       248.
                                 Doc.
                                        58.
Drond, J. T.
                                 Doc. 760.
Bryogea or Loods Hole
                                       56.
                                 E.C.
Laffulofich in bonds
                                 Doc. 1037.
Bullheads, food of
Eurbot liver oil, chemical and
                                 I.R.
                                        12.
  thysical properties
                                 Doc. 641, 725; E.C. 72 (See Annual
Duracu of Fisheries, functions
                                                             Reports).
                                  Doc.
                                       100.
Eush, Hatherine J.
                                 Doc. 1037, 1093; Bull. 16, 24.
Cuble, Louella E.
                                  E.C.
Caddo Lake, Texas (mussels of)
                                      6.
Caldwell, John H.
                                 Doc. 844.
                                 Doc. 141.
Unlhoun County, Mich. fishes of
California:
                                  Dec. 652.
   Angling
                                 Doc. 1087; I.R. 39.
   Fisheries and trade
   Tishermen, fisheries in
                                  Doc.
      Mexican waters
                                      400, 425, 516, 574, 595, 615, 637,
                                  Doc.
   Tishes of
                                         638, 652, 776, 825, 1087.
       Coastal streems
                                  Doc.
                                         638.
                                  Doc. 516, 825.
       Fresh-water
       Came
                                  Doc.
                                         652.
       Sacramento-San Joaquin Basin Doc.
                                         637.
       Tomales Bay
                                 Doc. 825.
   Opisthobranchiate mollusca
                                 Doc. 597.
                                  Dec. 152.
   Pearl fishery of
   Sport fishing
                                 Doc. 652.
                                       572.
   Starfishes
                                  Doc.
                                  Doc. 825.
   Tomales Bay
                                  Doc. 425.
   Tide pool fishes
                                 Doc. 595, 615.
   Trouts
                                       502.
Calkins, Gary N.
                                 Doc.
Callinectes sapidus, life history Doc.
                                         580, 870.
                                       994.
Cambarus
                                 Doc.
                                       270, 423, 751.
Canada, fisheries of
                                  Doc.
                                       40, 56, 73.
Canfield, H. L.
                                  E.C.
                                        11, 58.
                                  I.C.
Canned salmon, uses
                                         8.
Canning, crab studies
                                  I.R.
                                         34 .
   Fishery products at home
                                  I.R.
                                  Doc. 1020.
Canning surdines
Canvas-back, steam seine boat,
                                        35.
      specifications
                                  Doc.
                                         33.
Cape Ann cod fisheries
                                  Doc.
                                       790.
Carcinoma of thyroid, in fishes
                                 Doc.
                                       27, 85, 112, 592; E.C. 31, 39, 40.
Carp
                                  Doc.
                                         27, 112; E.C. 39.
                                 Doc.
    Culture
    Capture and marketing
                                  E.C.
                                         40.
                                  E.C.
                                         31.
   Food resource
```

```
Carp (continued)
   German, answers to questions
                                   Doc.
                                          64.
                                         592.
   German, in U. S.
                                   Doc.
                                   Doc.
   Edible qualities
                                          66.
                                   Doc.
                                          66.
   Introduction into U.S.
   Report of distribution to July 1, 1881
     from young reared in 1879 and 1880 Doc. 85.
   Suggestions for cooking
                                   Doc.
                                          66; E.C. 31.
Catalogue
   Collection illustrating scientific
     investigation
                                   Doc.
                                          69.
   Aquatic mammals, exhibited by
     Fish Comm. in National Museum Doc.
                                          74.
   Collections, London exhibition Doc.
                                          54.
   Aquatic and fish-eating birds
                                   Doc.
                                          56.
Catfishes, culture, commercial
                                         517, 532, 733, 783.
     importance
                                   Doc.
Catfish, fisheries,
                                   Doc.
                                         405, 733.
   Black tumor of
                                   Doc. 972.
  Food of bullheads
                                   Doc. 1037.
                                         517, 532, 733..
                                   Doc.
  Habits of
  Yellow, breeding habits of
                                   Doc.
                                         517, 532.
                                   Doc. 1072; E.C.
                                                     20.
Cat, spoonbill
Cave fishes of North America
                                   Doc.
                                         579.
                                   E.C.
                                          20.
Caviar
                                         138, 495, 931, 985.
Central America, fishes of
                                   Doc.
Central Station aquaria,
     observations on
                                   Doc.
                                         186.
Centrarchidae, review of
                                         190.
                                   Doc.
Cephalopods of Hawaiian Islands
                                         789.
                                   Doc.
  Northeastern America
                                         42.
                                   Doc.
  Western North America
                                   Doc.
                                         761.
                                         611.
Cestode parasite of butterfish
                                   Doc.
Cetacea, anatomy, development, and
                                         120.
     embryology of
                                   Doc.
                                         68.
Chaetopoda, Annelida
                                   Doc.
                                   Doc.
                                         124.
Challenger dradging records
                                         348, 627.
                                   Doc.
Chamberlain, F. M.
                                         494.
                                   Doc.
Champlain Lake, fishes
                                   Doc. 1103.
Chamberlain, T. K.
                                   Doc. 483.
Chatauqua, Lake, fish of
   Mollusks of
                                   Doc.
                                         483.
Cheboygan County, Michigan, fishes Doc.
                                         814.
Check-list of fishes of North and
                                         336, 1055.
                                   Doc.
    Middle America
                                         98, 1000.
                                   Doc.
Chemical composition food fishes
Chemical studies, Northwestern
                                         944.
                                   Doc.
     lakes
Chemistry:
                                   Doc.
                                         498.
   Biliary calculi in squeteague
                                         438.
   Changes in developing fish egg Doc.
                                   Doc.
                                         185.
   Composition of fish
                                   Doc.
                                         784; I.R. 12, 27, 36, 40.
   Fish oils, properties
```

```
Chemistry: (continued)
    Gas in swim bladder
                                   Doc. 498.
                                   Doc. 496.
    Scales of fish
    Subdermal tissue, ocean sunfish Doc. 449.
                                   Doc. 264, 376.
Cheney, A. Nelson
Chesapeake Bay:
   Biological study of offshore
                                   Doc. 1091.
     waters
                                   Doc. 868.
    Crab industry of
                                   Doc. 1024.
   Fishes of
                                   F.C. 1.
    Fishing, sport.
                                   Bull.
                                         16.
   Marine fishes, young of
                                   Doc. 931.
Chile
                                   Doc. 664.
China, fisheries
Chinook salmon migration in
                                   Doc. 743, 887.
     Columbia River
                                   Doc.
                                         799, 802.
   Fat in tissues
                                   Doc.
                                         515.
   Natural history
                                   Doc. 584.
   Physiology
                                   Doc. 887.
    Sacramento River
                                   I.R.
                                         37.
Chipman, Walter A., Jr.
                                   Doc. 529.
Chlorophyceae of Lake Erie
Christey, Leroy S.
                                   Bull. 25.
Church, Daniel T.
                                   Doc. 240.
                                   Doc. 868, 870, 890, 963.
Churchill, E. P.
                                   Doc.
Cincinnati Exposition
                                         191.
Circular relating to fish trade and consumption of
                                         22.
     fish, returns
                                   Doc.
                                   Doc.
                                         739.
Cirripedia, Bering Sea
                                   Doc.
                                         739.
    Japan
                                   Doc. 503.
    Parasitic on crab
                                   Doc. 463.
    Porto Rico
Cisco, age and growth, Northeastern
      Highlands, Wisc.
                                   Bull. 19.
                                   Doc. 554.
Clam, biology.
                                   Doc. 1079.
    Clam head meal
                                   Doc. 349, 432, 554.
    Culture
                                   Doc. 432; E.C. 16.
    Essex
                                   Doc. 313.
    Food of
                                   Doc. 962; E.C. 64.
    Industry of southern Florida
                                   Doc. 440, 1099.
   Life history of
                                   Doc. 984, 1099.
Doc. 1099.
    Razor
    Razor, mortality and growth
   Soft, mortality
                                   E.C.
                                         16.
    10,000 Islands, Florida,
                                         46.
      investigation
                                   Doc.
                                          29.
    Razor, Cordova, Alaska
                                   I.R.
                                   Doc.
                                          52.
Clark, A. Howard
Clark, Frank N.
                                   Doc. 673.
Clark, Hubert Lyman
                                   Doc. 426, 467, 550.
                                   Doc. 631, 757, 758, 759, 781, 889, 893;
Clark, H. Walton
                                   E.C. 1.
```

```
Clear Lake, Calif., fishes
                                          288.
                                    Doc.
Clinton County, Kentucky, fishes
                                    Doc.
                                          197.
Clinton, G. P.
                                    Doc.
                                           253.
Coast and river fisheries, statistics Doc. 20.
Coast Survey dredging records
                                    Doc.
                                          124.
Cobb, John N.
                                          393, 429, 445, 504, 535, 555,
                                    Doc.
                      577, 590, 603, 632, 645, 730, 746, 830, 839, 902,
                     1014,1092.
Cockle, Pacific
                                    Doc. 1101.
                                           779.
Cockerell, T. D. A.
                                    Doc.
Cod, and cod fisheries
                                    Doc.
                                           10, 830, 1014.
    Bait, use of birds for
                                    Doc.
                                           82.
                                    Doc.
                                           33, 522.
    Culture
    Development and embryology
                                           71.
                                    Doc.
    Eggs, production and distribution,
     Mass. Bay
                                    Doc. 1032.
    Fisheries, California
                                    Doc. 1087.
         Cape Ann
                                    Doc.
                                           33.
                                    Doc. 830, 1014.
         Pacific
    Fishing with gill nets
                                    Doc.
                                           37.
                                    Doc. 340.
    Food of
                                    Doc. 1065.
    Liver oil in animal feeding
                                    Doc. 1081.
    Migrations off New England
    Natural history
                                    Doc.
                                            33.
    Nets, description of
                                    Doc.
                                            37.
    Statistics, east coast
                                    Doc. 1034.
                                         491.
    Tagging, Woods Hole
                                    Doc.
                                           32.
   Drying
                                    I.R.
                                    Doc. 466, 589.
Coe, Wesley R.
                      Doc. 503, 663, 765, 809, 812, 829, 865, 893, 895, 896,
Coker, Robert E.
Coker and Southall
                                    Doc. 812. 911, 936, 1004, 1062, 1072.
Cold storage for preserving fish
                                          489.
                                    Doc.
    Reducing shrinkage frozen fish
                                            9.
                                    I.R.
                                          592.
Cole, Leon J.
                                    Doc.
                                          973.
Coleman, R. A.
                                    Doc.
                                    Doc.
                                           30.
Collecting and preserving fish
Collecting outfit, U. S. Fish Commission Doc. 289.
    Pelagic organisms
                                    Doc.
                                          289.
    And preserving specimens of whales
                                           89.
    and porpoises
                                    Doc.
                                         172.
                                    Doc.
Collins, D. E.
                                          31, 37, 52, 81, 82, 93, 132,
                                    Doc.
Collins, J. W.
                      137, 140, 169, 171, 172, 177, 178, 187, 191, 192,
                      193, 206.
Colorado, Boulder County,
                                          565.
                                    Doc.
    Fishes
                                           297.
                                    Doc.
    River, fishes of
                                    Doc.
                                           616.
    Study of Twin Lakes
                                          615, 616.
                                    Doc.
Columbia River, exploration from head of Clark's Fork to
                                           97.
                                    Doc.
      Pacific Ocean, 1883,
                                    Doc.
                                          290.
      Fishes of
                                    Doc. 290, 301, 318.
      Salmon fisheries
```

```
Columbia River (continued)
                                        Doc .
                                               743.
    Salmon migration
    Selection of site for salmon
                                                97.
                                        Doc.
       station
    Fisheries, history and development Bull.
                                                 32.
Columbia, District of, fishes
                                               409.
                                        Doc.
Columbian Exposition, Chicago
                                        Doc.
                                               311.
                                               924.
                                        Doc .
Columnaris (Bacillus)
Commander Islands, the fur seals
                                               986.
                                        Doc.
Commercial Fisheries of U. S.
                                        Doc .
                                               836b.
                                               649.
Commission, International fisheries
                                        Doc.
Commissioner, Reports of (See Annual Reports)
Common names, basses and sunfishes
                                        Doc.
                                               538.
    Mussels, fresh water
                                        E.C.
                                                15.
Conference-Division of Inquiry 1927
                                              1039.
                                        Doc.
                                               476.
Conger cel. development
                                        Doc.
                                               237, 363, 364, 751.
                                        Doc.
Congresses, fishery
                                              1075; E.C. 74; F.C. 19.
Conn, W. T.
                                        Doc .
                                        Doc.
                                               633.
Connecticut lakes, fishes
                                        Doc.
                                               633.
    Plankton environment
Connecticut oyster fishery and
                                               169, 960.
       oyster culture
                                        Doc.
Conservation (See Protection).
                                        Doc.
                                                22.
Consumption of fish
                                               569.
                                        Doc.
Contamination of oysters,
                                               569, 619.
                                        Doc.
    Waters
                                               569.
    Narragansett Bay
                                        Doc.
Cookery, fish
                                        F.C.
                                                19.
                                        F.C.
                                                22.
Cooperative marketing associations
                                                24, 38.
Copeland, C. W.
                                        Doc.
                                        Doc.
                                               497.
Copepods, depth migrations
                                        Doc.
                                               824.
    Fresh-water fishes
                                               561, 824.
    Parasitic
                                        Doc .
                                               497, 824.
    Reactions of
                                        Doc.
                                               439, 561.
    Woods Hole species
                                        Doc.
                                                23.
Copper, metabolism
                                        I.R.
                                               762.
Coral reefs, Beaufort, N. C.
                                        Doc.
                                               469.
Corals, Porto Rico
                                        Doc.
                                        Doc.
                                              1019.
Core Sound, N. C.
                                               971, 1048.
                                        Doc.
Coregonidae of Great Lakes
                                                670.
Cotte, Jules
                                        Doc.
                                               931.
                                        Doc.
Costa Rica
                                        Doc.
                                                338.
Cotton States Exposition, Atlanta
                                                17, 18, 23, 25, 41.
                                        I.R.
Coulson, E. J.
                                        Doc.
                                                701.
Counting young fish
                                              1091.
                                        Doc.
Cowles, R. P.
                                                303, 324, 328, 579.
Cox, U. O.
                                        Doc.
Cozumel, Yucatan, fishes of
                                        Doc.
                                                138.
                                                155, 166, 478, 503, 580, 581,
Crabs
                                        Doc.
                                                868, 870.
                                        Doc.
                                                503.
    Barnacle on (Dichelaspis)
                                                166.
Crab fishery of Delaware Bay
                                        Doc.
                                        Doc.
                                                155.
    Crisfield, Md.
                                                478.
                                        Doc.
    Hermit, parasites on
                                                868.
                                        Doc.
     Industry of Chesapeake Bay
```

```
Crab fishery (continued)
   In Maryland
                                   Doc.
                                         581.
   Life history
                                   Doc.
                                         580, 870.
   Canning
                                   I.R.
                                           8.
Craig Brook Station, fish rearing
                                   Doc. 258.
Craig, Joseph A.
                                   Bull. 32.
Crappie
                                   Doc. 826.
Crappie, black, habits of inland
     lakes of Wisconsin
                                   Doc. 867.
                                   Doc. 347, 826, 1056.
   Propagation of
Crayfish (Spiny lobster)
                                   Doc. 924, 925.
Crayfish, culture of
                                   Doc. 308.
Crayfishes of Nebraska and Colo.
                                   Doc. 994.
Croosote distillates and coal tar
     for marine borers
                                   Doc. 952.
Croaker
                                   Doc. 1046.
Crozier. W. J.
                                   Doc. 685.
Crude oil pollution, effects on oysters
     in Louisiana waters
                                   Bull.
                                         18.
Crustacea
                                           5, 55, 78, 105, 224, 685, 859, 914.
                                   Doc.
   Decapod
                                   Doc.
         of Albatross
                                         78.
                                   Doc.
         Beaufort
                                   Doc. 859.
   Food for young fishes
                                   Doc. 914.
   Fresh waters of U.S.
                                  Doc.
                                          5.
   Natural history of
                                  Doc. 224.
   Albatross dredgings east coast
     of United States
                                  Doc. 105.
Ctenogobius stimaticus, embryology Doc. 831.
Cuba, fishes,
                                  Doc. 526, 931.
   Fisheries of
                                  Doc. 931.
Cumberland River, fishes of
                                  Doc. 211.
   Mussels
                                  Doc. 781.
Cunner, use of
                                  Doc. 622.
Curacao
                                  Doc. 931.
Curtis, W. C.
                                        671, 756.
                                  Doc.
Cynoscion regalis
                                        784.
                                  Doc.
Cyprinodon variegatus, psorosperms on, Doc. 154.
   Life history
                                  Doc. 857.
Dahlgren, Edwin H.
                                  Bull.
                                          9, 17.
Dall, W. H.
                                  Doc. 458.
Damselflies and dragonflies in relation
     to pond fish culture
                                  Doc. 882.
                                  Doc. 803, 804, 809, 841, 869, 934:
Danglade, E.
                                  E.C. 2. 3.
Daniel, Esther Peterson
                                  I.R.
                                        2.
                                        680. 681.
Dannevig, G. M.
                                  Doc.
                                       197, 428, 530, 773, 940, 1004.
Darter, description of
                                  Doc.
                                  Doc. 1004.
  New genus from N. C.
                                  Doc. 428, 530, 940.
  New species of
```

```
Doc.
                                           428.
Darters from Lake Maxinkuckee
                                           773.
                                     Doc.
  Maryland
                                           530.
                                     Doc.
    Tippecanoe Lake
                                     Bull. 15, 25, 26; I.R. 33.
Davidson, Fred. A.
                                     Doc.
                                           184.
Davis, Bradley Moore
                                           855, 924, 957, 987, 988, 1061,
                                     Doc.
Davis, H. S.
                                     1079, 1085: I.R. 22, 35; F.C. 26.
                                            43.
                                     Doc.
Davis Strait halibut fishery
                                           202, 203, 214, 269, 512.
                                     Doc.
Dean, Bashford
Decapod crustacea of Beaufort
                                     Doc.
                                           859.
                                             4, 15, 17, 25, 46, 62.
Decrease of food fishes
                                     Doc .
    In American waters
                                     Doc.
                                            239.
                                           15, 17, 25, 28.
                                     Doc.
    Inquiry into
Deep-sea explorations, description
                                           330.
                                     Doc.
                                           582.
                                     Doc.
    Fishes of Hawaiian Islands
                                           100.
                                     Doc.
Deep water mollusca
                                     Doc.
                                           166.
Delaware Bay, king-crab fishery of
                                     Doc.
                                           745.
    Ovster bods
    River and Bay, sturgeon fishery Doc.
                                           429.
De Loach, Barton
                                     I.R.
                                            39.
Demorsal fisheries, England and Wales Doc.
                                              816.
                                             9, 16, 20, 24, 27.
                                     F.C.
Denmead, Talbott
                                     Doc.
                                            650.
Dennis, Oregon Milton
                                            596.
Density of water, effect on fishes
                                     Doc.
                                     Doc.
                                            712.
    Effect on blood of fishes
Depth, maximum, at which fishes can
                                            970.
                                     Doc.
         live
                                            925.
                                     Doc.
DeSmidt, W. J. J.
                                     Doc.
                                            518.
Destruction of trout by hydra
Detwiler, John Y.
                                     Doc.
                                            386.
Dovelopment, larval
                                            795.
                                     Doc.
    Anchovia mitchilli
                                            795.
                                     Doc.
    Bairdiella chrysura
                                            71.
                                     Doc.
    Cod
                                     Doc.
                                            831.
    Ctenogobius stigmaticus
                                     Doc.
                                            831.
    Cyprinodon variegatus
                                            806.
                                      Doc.
    Gambusia affinis
                                            831.
                                     Doc.
    Gobiosoma bosci
                                     Doc.
                                            831.
    Kirtlandia vagrans
                                      Doc.
                                            831.
    Lucania parva
                                            106.
                                     Doc.
    Osseous fishes
    Sponges from dissociated tissue cells Doc.
                                                   750.
                                      Doc.
                                            849.
    Twelve Teleostan fishes
                                      Doc.
                                            634.
Davils Lake, N. Dak.
                                             557, 917, 1060; E.C. 5, 60.
                                      Doc .
Diamond-back terrapin
                                            313, 554, 610, 850.
                                      Doc.
Diatoms
                                      Doc.
                                            554.
Diatoms on lobster fry
                                      Doc.
                                            164.
Dibothrium caudiceps
 Dicholaspis, parasitic barnacle
                                            503.
                                      Doc.
          on crab
                                            625.
Digestive tract of elasmobranchs
                                      Doc.
```

```
Directions for collecting and
       preserving fish
                                     Doc.
                                             30.
Directory of officers:
     Smithsonian Institution
                                     Doc.
                                             39.
     National Museum
                                     Doc.
                                             39.
     Geological Survey
                                     Doc.
                                            39.
     Fish Commission
                                     Doc.
                                            39.
Disease of fishes
                                            431, 498, 533, 578, 1061; I.R. 25,
                                     Doc.
     Bacterial
                                     Doc.
                                            924.
                                                                          (35.
     Bacterium truttae
                                     Doc.
                                            533.
     Carcinoma of thyroid
                                     Doc.
                                            790.
     Fresh-water fishes
                                     Doc.
                                           824.
     Fungus
                                            691, 692, 693.
                                     Doc.
     Gas
                                     Doc.
                                           578.
     Halibut, mushy
                                     Doc.
                                           817, 957.
     Ichthyophthirius disease of fishes
          and methods of control
                                     Doc.
                                           959.
     Lobster frv
                                     Doc.
                                           554.
     Octomitus
                                     Doc.
                                           988.
     Pond fishes
                                     Doc.
                                           826.
     Schizamoeba
                                     Doc.
                                           987.
     Trout (See Parasites)
                                           533, 689, 690, 694, 699, 818,
                                     Doc.
                                           987, 988, 1061.
Distribution, fishes
                                     Doc.
                                            86.
Distribution of fish and fish eggs by
       U. S. Fish Commission
                                     Doc.
                                           179, 630, 644, 728, 740, 770,
                           794, 808, 828,
                                           837, 846, 863, 878, 906, 912,
                           941, 941a, 1011, 1098 (See Propagation)
    Method employed by Bureau
                                     Doc. 826, 1056; F.C.8.
District of Columbia fishes
                                     Doc.
                                           409.
Dogfish, destructiveness
                                     Doc.
                                          622.
     Directive influences, sense
       of smell
                                           798.
                                     Doc.
     Food value
                                     Doc. 622, 655.
     Sense organs
                                     Doc. 738. 798.
    Utilization of
                                     Doc. 622.
Doolittle, A. A.
                                     Doc. 633.
Douglas Lake, Mich., ecological
       survey, midsummer
                                     Doc. 814.
Douglass, E. J.
                                     Adm. Rpt. 34, 38, and 42.
Downing, S. W.
                                     Doc.
                                           672.
Drake, F. J.
                                     Doc.
                                           321, 332.
Dragonflies and damselflies in relation
      to pond fish culture
                                     Doc. 882.
Dredging apparatus, description of
                                     Doc. 289.
       expedition off coast of New England Doc. 444.
       Records (See Albatross)
                                            70.
Drill, oyster
                                     E.C.
                                     Bull.
                                            4; F.C. 25.
Drill studies, oysters
                                     Doc. 817.
Driscoll, Edward
                                           487; I.R. 9, 32,.
Drying fishery products
                                     Doc.
```

```
Ing - althi; fishery products
                                      Doc.
                                            487
Du. rdan, J. d.
                                      Doc .
                                            470.
Durbar, thotland, marine hatchery at Doc.
                                           261.
divil, P. de ard
                                      Doc .
                                            33, 45, 52, 60, 123.
                                            738.
ers of dogital
                                      Doc.
rere of squatosqua
                                      Doc.
                                           715.
.chinodarma, collection of
                                      Doc .
                                            55.
     Of Porto Rico
                                      Doc .
                                            467.
     Woods Hole region
                                      Doc.
                                           550.
reological study or aquatic midges
                                      Doc.
                                           915.
                                           938.
Loology, orange spotted sunfish
                                      Doc.
Teoncaic problems, relations of
                                      Doc.
                                           243.
                                      Doc.
                                           931.
Ear tdor
Eduondson, C. H.
                                      Doc.
                                            920.
                                           720, 721, 722, 723, 724.
Educational exhibit, fishes
                                      Doc.
Edvards, Vinal N.
                                      Doc.
                                            474.
Eal, egg and development, Conger
                                      Doc.
                                            476.
     Leptocephalus
                                      Doc.
                                            480.
Eal, River Basin, fishes
                                      Doc.
                                           235.
     Explorations in
                                      Doc. 235.
Eels, review of
                                      Doc.
                                            184.
Effects of pulp mill pollution
       on oysters
                                      Bull.
                                              6.
Egg and development of the Conger eel Doc. 476.
     Development, method of recording Doc. 452.
Eggs of fishes, chemical changes in Doc.
                                            438.
    Mortality in
                                      Doc.
                                            926.
     Preparation for food
                                      Doc.
                                            488.
Eggs, oyster, artificially fortilized Doc. 67.
                                      Doc. 127, 144, 231, 282, 475, 476,
Eigenmann, Carl H.
                                            477, 480, 526.
                                            101.
Eisen, Gustav
                                     , Doc.
Elasmobranchs, physiology of
                                            625.
      digestive tract
                                      Doc.
Eldridge, John A.
                                      Doc.
                                           804.
Electric lighting of Albatross
                                      Doc.
                                             73.
                                      Doc. 1042.
Electric fish screens
Elephant Butte Reservoir
                                      Bull.
                                             6, 34.
Ellis, M. M.
                                      Doc. 1097; F.G. 5, 7; Bull. 22, 31.
Ellis, M. D.
                                      Doc. 1097.
Embryology:
    Anchovia mitchilli
                                      Doc.
                                            795.
     Aquatic mammals
                                      Doc.
                                            120.
     Bairdiella chrysura
                                      Doc.
                                           795.
                                            438.
     Changes in developing fish egg
                                      Doc.
     Cod
                                            71.
                                      Doc.
     Ctanogobius stigmaticus
                                      Doc.
                                           831.
     Cypcinodon variegatus
                                      Doc.
                                            831.
                                           476, 480.
     Ecls
                                      Doc.
     Egg development, method of
                                           452.
                                      Doc.
       recording
     Cambusia affinis
                                      Doc.
                                            806.
     Gobiosoma bosci
                                      Doc.
                                            831.
     Kirtlandia vagrans
                                      Doc.
                                            831.
```

```
Embryology: (continued)
     Lucania parva
                                      Doc.
                                            831.
     Menidia |
                                      Doc.
                                            918.
     Menidia of fishes
                                      Doc.
                                            106.
     Of osseous fishes
                                      Doc.
                                            71.
     Sciaenidae
                                      Doc.
                                            945.
     Serranus atrarius (Sea bass)
                                     Doc.
                                            160.
     Sponges from dissociated tissue
            cells
                                      Doc.
                                            750.
     Squeteague
                                      Doc. 477.
     Teleostean fishes, Twelve
                                      Doc. 849.
     Teleostean fishes, Fourteen
                                     Doc. 1093.
     Vivaparous fishes of Pacific
            coast
                                      Doc.
                                            231.
     Whitefishes
                                     Doc. 949.
     White sucker
                                     Doc. 1007.
     Winter flounder, larval stages
                                     Doc.
                                           927.
Emergencies, hints for
                                     Doc.
                                            16.
England, fisheries
                                     Doc.
                                            267.
     Herring fisheries
                                     Doc.
                                            511.
                                     Doc.
                                           994.
Engle, E. T.
Engle. James B.
                                     F.C.
                                           25 ; I.R. 37 ; Bull.
                                                                    33.
Entomology (See Insects)
Entomostraca of Lake Superior
                                     Doc.
                                            174.
Entozoa of marine fishes
                                     Doc.
                                            128, 175, 182,
Entozoa, fishes in Yellowstone Park Doc.
                                            220.
Enzymes in poikilothermal vertebrates Doc. 977.
Erie, Lake, fishery, industry of
                                     Doc.
                                           271.
     Plankton algae
                                     Doc.
                                           529.
     Plants
                                           479.
                                     Doc.
     Protozoa
                                     Doc.
                                           435.
Escambia River fishes
                                           157.
                                     Doc.
Essex County, Mass., fishes
                                     Doc.
                                            19.
                                     Cir.
                                           16.
     Soft clam
European method of oyster culture
                                     Doc.
                                           214.
                                           254.
Europe, fish-culture in
                                     Doc.
Evermann, Barton W.
                                     Doc.
                                           205, 207, 225, 246, 290, 297,
                       301, 301, 303, 318, 323, 324, 327, 335, 336, 352, 358,
                       371, 405, 419, 427, 428, 451, 483, 486, 494, 495, 499,
                       504, 523, 525, 595, 607, 624, 737, 766, 832, 780, 1055.
                                     Doc. 352.
Evermann and Meek
Evorthodus lyricus, juvenile and sex
         characters
                                     Bull.
                                     Doc.
                                           154.
Excrescences on minnows
Exhibit of Fish Commission at Atlanta Doc. 338.
                                     Doc.
                                           508.
     Buffalo
                                           311.
                                     Doc.
     Chicago
                                     Doc.
                                           191.
     Cincinnati
                                           407.
                                     Doc.
     Nashville
                                     Doc.
                                           508.
     St. Louis
                                           720, 721, 722.
                                     Doc.
     Of fishes, educational
```

```
50, 54, 55, 57, 59, 69, 74.
Exhibition, London, 1883
                                     Doc.
                                           720, 721, 722, 723, 724.
     Of fishes
                                     Doc.
                                           335, 367.
Experiment Station, Florida
                                     Doc.
Experiments, aquatic resources of
                                     Doc.
                                           836a.
       U.S.
Experiments in photography of live
                                     Doc.
                                           424.
Explorations, Albatross, Alaska,
       Wash., Ore.
                                     Doc.
                                           135.
    Atlantic coast
                                     Doc.
                                           833.
                                     Doc.
                                           136.
    Allegheny region
     Colorado and Utah
                                     Doc.
                                           148.
     Steamer Bache Atlantic coast
                                     Doc.
                                           833.
Explosive sounds, effect upon fish
                                     Doc.
                                           752.
                                           338.
Exposition, Atlanta
                                     Doc.
                                     Doc. 508.
    Buffalo
                                     Doc.
                                           311.
     Columbian
                                           338.
    Cotton States
                                     Doc.
                                     Doc.
                                           508.
    Pan-American
                                     Doc. 407.
    Tennessee Centennial
Eyes of dogfish
                                     Doc. 738.
                                     Doc. 821.
    Of flounders
Fairport fisheries, biological
                                     Doc. 829, 895.
      station
                                     Doc.
                                           14, 36.
Farlow, W. G.
                                           549.
Fassett, Harry C.
                                     Doc.
                                     Doc.
                                           799, 802.
Fat in salmon tissues
Fauna of sea bottom, study
                                     Doc.
                                           716.
                                     Doc.
                                            83.
    Vineyard Sound
                                           935, 941, 94la, 980; E.C. 65, 67;
                                     Doc.
Fearnow, E. C.
                                     F.C.
                                             6, 8.
Farming, review of fish
                                     F.C.
                                             2.
                                            70 ; Bull. 4.
                                     E.C.
Federighi, Henry
Fertilizer Industry, Peru
                                     Doc.
                                           663.
                                     Doc. 1056, 1082, 1085.
Fertilization of ponds
Fesler, Bert
                                     Doc.
                                           219.
                                           113, 129.
Fewkes, J. Walter
                                     Doc.
                                     Doc. 996, 1026, 1039, 1050, 1067,
Fiedler, R. H.
                    1087, 1095; E.C. 63; I.R. 14; F.C. 21; Adm. Rpt. 3,
                    8, 13, 15, 20, 24, 27, 32, 37, 41.
Field, Geo. W.
                                     Doc.
                                           653.
                                           622, 655, 742, 922, 929; E.C. 51.
Field, I. A.
                                     Doc.
Field parties, hints for emergencies Doc.
                                            16.
Figgins, J. D.
                                     Doc.
                                           724.
File-fish new to fauna of United
                                           412.
       States
                                     Doc.
                                           791, 905.
Finger Lakes, N. Y., study
                                     Doc.
Finland, American fish in
                                     Doc.
                                           234.
                                     Doc.
                                           114.
Fins and fin rays, evolution of
                                           975, 1032.
Fish, Chas. J.
                                     Doc.
Fish acclimatization in Pacific
       States
                                     Doc.
                                           309.
```

```
Fish and fishing in British Guiana Doc. 260.
Fish blood, effect of water
        densities
                                  Doc.
                                        712.
Fish, cause of fevers
                                  Doc.
                                        268.
    Chemical composition of
                                        185.
                                  Doc.
Fish Commission
                                        179.
                                  Doc.
    Directory of officers, 1882
                                  Doc. 39.
    Laws and Regulations, 1882
                                  Doc. 49.
    Publications, list of
                                  Doc. 329, 406, 614.
    Relation to fishermen
                                  Doc.
                                        392.
Fish culture, algae in waters
                                  Doc.
                                        687.
 Apparatus:
      Counting young fish
                                  Doc.
                                        701.
      Hatcheries
                                  Doc.
                                        705.
      Improved, for ponds
                                        700. 826.
                                  Doc.
      Marine Norway
                                  Doc. 680.
      Measuring fish eggs
                                        703.
                                  Doc.
      Rearing boxes
                                  Doc. 704.
    Beetles, water
                                  Doc. 949, 953.
    Blue River system Nebr.
                                  E.C. 73.
                                  Doc. 1037.
    Bullheads, food of
    Crustacea as food for young
         fishes
                                  Doc.
                                        914.
    Dissolved contents of water
                                  Doc. 688.
    Feeding young fish
                                  Doc. 679, 684, 704, 826.
Fish-culture at St. Andrew's
       Laboratory, Scotland
                                  Doc. 251.
Fish cultura, methods:
    Atlantic salmon
                                  Doc. 21, 346.
                                  Doc.
    Black bass
                                        259, 347, 513, 826, 1056, 1085.
                                  E.C. 41; Doc. 346, 955.
    Brook trout
    Carp
                                  E.C.
                                         39.
                                        733.
    Catfishes
                                  Doc.
                                  Doc. 250, 349.
    Clams
                                  Doc.
    Cod
                                        522.
                                  E.C.
    Cooperative
                                        59.
                                  Doc. 347, 826.
    Crappies
    Egg development, recording
                                 Doc. 452.
                                  Doc. 391.
    Early days in United States
                                  Doc. 522.
    Flatfish
                                        671, 756.
                                  Doc.
    Fresh-water mussels
                                  Doc. 348, 888.
    Frogs
                                        573, 666, 935, 980.
    Goldfish
                                  Doc.
                                        346, 347, 519, 520, 521, 522, 675.
                                  Doc.
    Government practices
                                        520, 628, 949.
                                  Doc.
    Grayling
                                        205.
                                  Doc.
    Gulf States
                                        522.
                                  Doc.
    Haddock
                                  Doc. 391.
    History, early days in U.S.
                                        955, 1061, 1079; E.C. 41; I.R. 22, 35
                                  Doc.
    Trout (culture)
                                        254, 255, 391.
                                  Doc.
    In America
                                        254.
                                  Doc.
    In Europe
                                  Doc. 151.
    In Germany
                                  Doc. 256.
    In Michigan
                                  Doc. 46.
    In U.S.
```

```
Fish culture, methods: (continued)
     Lake trout
                                     Doc.
                                           520. 949.
     Lobster
                                     Doc.
                                           522, 654, 747.
                                           60, 394, 522.
    Mackerel
                                     Doc.
    Mackerel Spanish
                                     Doc.
                                            60.
    Manual (including culture of
       frogs and oysters)
                                     Doc.
                                           345.
    Manual (does not include frogs
                                     Doc.
       and oysters)
                                           350.
    Marine, Norway
                                     Doc.
                                           680.
                                           394, 522.
    Marine species
                                     Doc.
    Marine, utility
                                     Doc.
                                           681.
                                           452. 901.
    Methods
                                     Doc.
                                           671, 756, 757, 758, 759.
    Mussels
                                     Doc.
    New principle
                                     Doc.
                                           676.
    Observation on
                                     Doc.
                                           188.
     Oysters
                                     Doc.
                                           349.
                                           314, 519, 879.
    Pacific salmon
                                     Doc.
    Pail for transporting fish
                                     Doc. 941, 941a.
    Pike perch
                                     Doc.
                                           521, 1018.
    Pollock
                                     Doc.
                                           522.
                                     Doc. 1056, 1085.
    Pond fishes
                                           27, 103, 111, 259, 294, 319,
                                     Doc.
    Ponds
                                           346, 347.
    Possibilities in northwestern
       lakes
                                     Doc. 944.
     Rainbow trout
                                           901, 346, 677; E.C. 41, 955, 1062.
                                     Doc.
     Report of
                                     Doc.
                                            4, 15, 17, 25, 28, 46, 62, 65,
                    77, 95, 108, 115, 134, 176, 192, 283, 298, 315, 331, 337,
                       344, 398, 430, 450, 519, 520, 521, 522, 524, 548, 602,
                       613, 630, 644, 728, 740, 770, 794, 808, 828, 837, 846,
                       863, 878, 912, 941, 964, 999, 1011, 1033, 1049, 1070,
                      1098; Adm. Rpt. 5, 10, 14, 18, 22, 25, 33, 34, 38, 42.
     Review of
                                     Doc.
                                            75.
                                           347, 826.
     Rock bass
                                     Doc.
     In Rocky Mountain region
                                     Doc.
                                           205,1062.
                                           21, 314, 346, 519, 879.
                                     Doc.
     Salmon
                                           21, 346.
                                     Doc.
      Atlantic
                                     Doc.
                                           314, 519, 879.
      Pacific
                                     Doc.
                                           682.
      Rhino
                                           346, 677, 682, 879, 901.
     Salmonidae
                                     Doc.
     Scavenger water beetle, economic relation
                                     Doc.
                                           942.
          to fish breeding
                                     Doc.
                                           521.
                                     Doc. 678.
       Possible expansion of work
                                           522.
     Spanish mackerel
                                     Doc.
     Stations in Rocky Mountain region
                                           205.
          and Gulf States
                                     Doc.
                                           94la; E.C. 65.
     Stocking interior waters
                                     Doc.
                                           151, 269, 880.
     Sturgeon
                                     Doc.
       In Germany
                                     Doc.
                                           151.
                                     Doc. 880.
       In Russia
```

```
Fish culture, methoda: (continued)
                                   Doc.
                                         522.
     Tautog
                                   Doc.
                                         103.
     To utilize water
                                         347, 519, 521, 522, 675, 706.
                                   Doc.
     Transportation of eggs
                                         346, 347, 519, 520, 521, 522,
       Live fishes
                                   Doc.
                                   Doc. 346, 677, 955, 1061, 1079. I.R. 31,35.
     Trout
     Turbot
                                   Doc.
                                                                       (E.C. 41
                                         346, 347, 519, 520, 521, 522;
     U. S. Government methods
                                   Doc.
                                         675, 826.
                                         687, 826, 1056.
       Removal of algae
                                   Doc.
     Whitefish
                                   Doc. 388, 520, 949.
     Yellow perch
                                   Doc. 1018.
Fish cultural methods at the agricultural
       schools at Freising
                                   Doc.
                                         304.
Fish cultural stations for Pacific
       Coast
                                   Doc.
                                         314.
Fish diseases.
                 See Diseases, Fungus, Parasites.
Fish distributed
                                   Doc.
                                         630, 644.
                                         86, 178, 179, 728, 740, 770, 794,
Fish distribution (See Propagation)Doc.
                                    803, 828, 837, 846, 863, 878, 912, 941.
Fish eggs, chemical changes development
                                   Doc.
                                         438, 452, 831.
       recording
     Distribution (See Propagation)Doc.
                                         728, 740, 770, 794, 808, 828.
     Eggs for food
                                   Doc.
                                         488.
Fish eggs, method of hatching
                                   Doc.
                                         139.
    Measuring
                                   Doc.
                                         703.
                                         706.
     Transportation
                                   Doc .
Fish environment
                                         246.
                                   Doc.
     Epidemic in Lake Mendota
                                   Doc.
                                         147.
     Fauna of Florida
                                   Doc. 371.
     Fauna of Tortugas Archipelago Doc.
                                         568.
     Fevers
                                   Doc.
                                         268.
     Food (See Food)
                                   Doc. 431, 578.
     Gas bubble, disease of
     Hatchery at Dunbar, Scotland Doc.
                                         262.
                                   Doc.
                                         333.
       Location of
Fish Hawk
                                          70.
     Construction of
                                   Doc.
                                   Doc.
                                          84.
     Exploration Gulf Stream
                                   Doc.
                                         100.
     Mollusca dredged by
                                   Doc.
                                          24.
     Specifications for building
                                          70, 79.
     Work of
                                   Doc.
                                         234.
                                   Doc.
Fish: hybrids, fertility of
                                         852.
                                   Doc.
     Isinglass and glue
     Laws, Mississippi and Ohio
                                         866.
                                   Doc.
       River States
     Laws, Mississippi River States Doc. 840.
                                   Doc. 1079, 1090; I.R. 1, 2, 30, 31, 32.
     Meal
                                         245, 249.
                                   Doc.
     Migrations, influence on
                                   Doc.
                                         275.
     Nets, construction of
                                                     74.
                                         947; E.C.
     Nets, preservation of
                                   Doc.
                                         358.
     New and little known in U.S.
                                   Doc.
```

```
Fish (continued)
     Oils, properties of
                                   Doc.
                                         785.
     Ponds on farms
                                        826.
                                   Doc.
     Preparation for shipment
                                   Doc. 443.
    Preserving methods, haddock
                                   Doc. 493.
    Propagation
                                   Doc. 319, 346, 347, 519, 520, 521, 522,
                                   879, 1056, 1061, 1079, 1085; I.R. 22, 35.
    Protection, failure, reasons
                                         650.
       for
                                   Doc.
                                         377.
       Florida
                                   Doc.
                                         646, 647, 648, 649.
       International
                                   Doc.
      National aspects
                                   Doc.
                                         651.
       Salmon of Rhine
                                   Doc.
                                        682.
                                         11, 27, 258, 259, 294, 319, 346, 347.
     Rearing of
                                   Doc.
     Salting of
                                   Doc.
                                         884.
                                   Doc.
                                        496.
     Scales, chemistry
                                   Doc. 767, 779, 823.
       Studies
                                   Doc.
                                        491.
     Tagging of
     Tolerance of high temperature Doc. 1030.
     Trade, Porto Rico
                                   Doc. 539.
                                   Doc. 676, 702, 706, 826.
     Transportation, live
       Packing method
                                   Doc.
                                        659.
Fish, Chas. J.
                                   Doc. 975.
Fish, Marie Poland: Lake Erie
                                   Bull. 10.
       fishes
                                         995.
Fisher, H. F.
                                   Doc.
                                         543, 572, 599.
Fisher, Walter K.
                                   Doc.
                                         604, 618, 632, 645, 730, 749, 766,
                                   Doc.
Fisheries: Alaska
                     780, 797, 819, 834, 838, 847, 872, 891, 909, 933, 951,
                     973, 992, 1008, 1023, 1040. (See Alaska)
     Salmon rivers and fisheries
                                   Doc.
                                         159.
                                   Doc.
                                         401.
     Alewife
                                   Doc.
                                         816.
     American banks
     Biological research in
                                   Doc.
                                        244.
                                   Doc.
                                        423.
     British Columbia
     Bureau, history and functions Doc. 641, 725.
                                        751.
                                   Doc.
     California salmon
                                   Doc.
                                        270.
     Canada
                                        664.
     China
                                   Doc.
                                   Doc. 830, 1014, 1081.
     Cod
                                        290.
     Columbia River
                                   Doc.
       Salmon
                                   Doc.
                                         751.
                                   Doc. 836b.
     Commercial, U.S.
                                   Doc. 237, 363, 364, 751.
     Congress
                                         125.
     Of Eastern North America
                                   Doc.
                                        167, 341, 342, 377, 386, 393, 962.
                                   Doc.
     Florida
                                   Doc. 342.
       Coast
                                   Doc. 661.
     Fur seal
                                         735.
       1909
                                   Doc.
                                         749.
       1910
                                   Doc.
                                   Doc. 819, 820. (See Alaska)
       1914
```

```
Fisheries (continued)
                                 Doc. 929; E.C. 51.
    Gelatines
                                 Doc. 1019.
    Gray trout
    Great Britain and Ireland
                                 Doc. 267.
                                       140, 287, 506, 593, 1001.
    Great Lakes
                                 Doc.
Gulf of California, pearl fisheries Doc. 152.
                                       206, 420, 571.
Gulf States
                                 Doc.
Haddock
                                 Doc.
                                       31.
Halibut
                                 Doc.
                                       359, 763, 817,
   Notes
                                 Doc. 763.
    Coasts of Washington and
     Oregon, season
                                 Doc.
                                       817.
                                       504, 577, 590.
Hawaii
                                 Doc.
Herring in Alaska
                                 Bull. 2, 17.
                                       356, 360, 511.
Herring
                                 Doc.
Herring in England
                                 Doc.
                                       511.
   Holland
                                 Doc.
                                       511.
   Scotland
                                 Doc.
                                       511.
High seas, international
                                 Doc. 646, 647, 648. (See Alaska)
      regulations
Indian River, Florida
                                 Doc. 341.
Inquiry into
                                 Doc.
                                       10, 13, 15, 17, 18, 25, 28, 46, 62.
                                       361, 507, 555.
Interior waters -
                                 Doc.
International Commission
                                 Doc.
                                       649.
   Regulation
                                       646, 647, 648, 649.
                                 Doc.
Irish mackerel
                                 Doc. 272.
Italy
                                 Doc. 662.
Japan
                                 Doc. 277, 665.
Key West
                                 Doc. 962.
Lake Erie
                                 Doc. 271; Bull. 10.
Lake Ontario
                                 Doc. 194.
Lobsters
                                 Doc. 373.
Lobster, of Maine
                                 Doc. 445.
Lower California and West Coast
  of Mexico
                                 Doc. 937.
Spiny lobster of Florida
                                 Doc. 925
Mackerel
                                 Doc. 411.
   Effects on fish supply
                                 Doc. 658.
Maintenance of
                                 Doc. 226.
Menhaden
                                 Doc. 306.
                                 Doc. 657, 658.
   Effects on fish supply
                                 Doc. 811.
   Industry
                                 Doc. 296, 453, 540, 609.
Middle Atlantic States
Maine
                                 Doc. 356, 360.
Mississippi River
                                 Doc. 507.
                                 Doc. 3, 454, 575, 620.
New England coast
                                 Doc. 783.
New Hampshire
                                 Doc. 555.
New York interior
North America, eastern
                                 Doc. 125.
                                 Cir. 8.
North Carolina fishing grounds
                                 Doc. 751.
Oregon, salmon
                                 Doc. 816.
Otter-trawl
                                 Doc. 890.
Oyster
```

```
Fisheries (continued)
                                    Doc. 178, 293, 299, 359, 362, 505,
    Pacific coast
                                        612, 751, 763, 817, 839, 1092.
                                            830.
                                    Doc.
       Cod -
                                            763, 817.
                                    Doc.
       Halibut
                                            152, 389, 397, 573, 660:
                                    Doc.
    Pearl
                                            660.
                                    Doc.
    Pearl oyster, preserving
                                            357.
    Penobscot River and Bay
                                    Doc.
                                            663.
                                    Doc.
    Peruvian
                                            362, 451, 539.
                                    Doc.
    Porto Rico
    Products:
                                            487, 919, E.C. 27:
                                    Doc.
      Drying and salting
                                            536.
                                    Doc.
      In arts and industries
                                            537 •
                                     Doc.
      Leather and skins
                                            488.
                                     Doc.
      Preparation of eggs
                                            490, 493.
                                     Doc.
      Smoking
                                            390.
                                     Doc.
    Red snapper
                                            393, 962.
                                     Doc .
    Resources, Florida
                                            240, 290, 357, 817, 1092.
                                     Doc .
      Sea and coast
                                            817, E.C. 7.
                                     Doc.
    Sea scallop
    Seals
                                            661. 735.
      Alaska, 1909
                                     Doc.
               1910
                                     Doc.
                                            749.
                                            819, 820.
                                     Doc.
               1914
                                     Doc.
                                            732.
         Laws and regulations
                                     Doc.
                                             403.
    Shad
                                             212, 421, 570.
                                     Doc.
    South Atlantic States
                                             509 •
                                     Doc.
    South Seas
                                            411.
    Southern spring mackerel
                                     Doc.
                                             437, 535, 667.
                                     Doc.
    Sponge
                                     Doc.
                                             667, 669.
      Culture, Florida
                                     Doc .
                                             668.
      Diving, Mediterranean
                                     E. C.
                                              20.
     Sturgeon, caviar
    Trade:
                                     Doc.
                                             576.
      Japan
                                     I.R.
                                             39.
      In San Francisco
                                             325, 576.
                                     Doc.
       Review of foreign
          (See Trade in fresh and frozen fish)
    United States fishery statistics:
                                           176, 177, 192, 266, 276, 283,
                                     Doc.
            298, 315, 333, 337, 344, 398, 524, 540, 548, 570, 571, 575
            593, 609, 620, 875, 892, 908, 932, 954, 976, 982, 997, 1025,
            1034, 1050, 1095. (See Statistics.)
                                     Doc .
                                             555.
    Vermont, interior
                                             423.
     Washington
                                     Doc.
                                             817.
       Halibut
                                     Doc.
                                             751.
928.
       Salmon
                                     Doc.
                                                  (See salmon.)
    Yukon River
                                     Doc.
```

```
Fishes:
  Affected by density of water
                                      Doc.
                                              596, 712.
      Directive influence, sense
            of smell
                                              798.
                                      Doc.
      Dissolved contents of water
                                              688.
                                      Doc.
      Motor-boat noises
                                      Doc .
                                              752.
      Sounds
                                      Doc.
                                              755.
      Wastes
                                      Doc.
                                              619.
  Air bladder and specific gravity
                                      Doc.
                                              921.
  Alaska
                                      Doc.
                                              624. F.C. 13.
  Albatross collections
                                              326. 400. 509.
                                      Doc.
  Anchovia mitchilli
                                      Doc.
                                              795.
  Artificial feeding
                                      Doc.
                                              294.
                                              795.
  Bairdiella chrysura
                                      Doc.
  Beaufort (N.C.) fish parasites
                                      Doc.
                                              583.
  Carp
                                      Doc.
                                               27, 85, 112, 292;1056;
                                                 E. C. 31, 39, 40.
  Catfishes
                                              733. 1056.
                                      Doc.
  Chesapeake Bay
                                      Doc.
                                             1024: F.C. 1.
  Cod, Pacific
                                      Doc.
                                             830 -
  Chemical changes in eggs
                                      Doc.
                                             438.
  Collected, Woods Hole, 1881
                                      Doc.
                                              87.
  Constituents of scales
                                             496.
                                      Doc.
  Cyprinodon variegatus
                                      Doc.
                                              857.
  Decrease in
                                                4, 15, 17, 25, 28, 46,
                                      Doc.
                                              62, 65, 77, 95, 108, 115,
                                               134. 239.
  Destructive to mosquito eggs
                                      E.C.
                                               17.
     Other fishes
                                               622.
  Development of
                                      Doc. 106, 114.
     Tel costean.
                                              631.
          Fivo species
                                      Doc.
          Fourteen species
                                      Doc.
                                             1093.
          Twelve species
                                      Doc.
                                             1903.
  Directive influence.
          Sense of smell
                                      Doc.
                                             798.
                                             431, 498, 533, 578.
  Diseases
                                      Doc.
    Care and diseases
                                      Doc.
                                             1061; I.R. 22, 35; E.C. 41.
         Parasites
                                      E.C.
                                               42.
  East Coast
                                              965, 962, 1024; E.C. 24.
                                      Doc.
                                              F. C. 1.
                                              720, 721, 722, 723, 724.
  Educational exhibits
                                      Doc.
  Eggs:
                                              926.
    Mortality
                                      Doc.
    Preparation for food
                                      Doc.
                                              488: E.C. 20.
    Transportation
                                      Doc.
                                              706.
                                               71, 106, 795, 806, 831.
  Embryology
                                      Doc.
```

```
Fishes: (continued)
    Embryology and larval stages of winter
          flounder
                                      Doc.
                                             927.
    Entozoa of
                                      Doc.
                                             175. 182. 220.
   Extension of range
                                      Doc .
                                             233, 339.
   Fat in muscles
                                      Doc.
                                             799.
   Flatfish, new species
                                      Doc.
                                             764.
                                             294.
   Feeding of
                                      Doc.
                                             98, 264, 294, 340, 591, 616, 914,
   Food
                                      Doc.
       Chemical composition
                                      Doc.
                                             98.
      Fresh-water crustacea
                                             914.
                                      Doc.
      Of cod family
                                      Doc.
                                             340.
      Value
                                      Doc.
                                             98.
    Fourteen teleostean fishes of
                                      Doc. 1093.
          Beaufort, N. C.
                                      Doc. 431, 578.
   Gas disease
       In swim bladder
                                      Doc.
                                             498.
                                      Doc.
                                             122.
    Great Egg Harbor Bay, N. J.
    Gulf of Maine
                                      Doc.
                                             965.
                                      Doc.
                                             708, 733.
   Habits
       Breeding of horned dace
                                      Doc.
                                             710.
       Catfishes
                                      Doc.
                                             733.
                                             622.
      Dogfish, destructiveness
                                      Doc.
       Gambusia affinis
                                      Doc.
                                             806.
                                             573, 666, 980; F.C. 6.
       Goldfish
                                      Doc.
                                             709.
       Toadfish
                                      Doc.
                                             514, 752, 755.
   Hearing and allied senses of
                                      Doc.
                                      Doc.
                                             245.
    Influenced by light
    Inquiry into decrease of food
          fishes
                                      Doc.
                                             25.
    In relation to mosquito control
                                             874.
                                      Doc.
          in ponds
                                             378.
    International protection
                                      Doc.
                                             695, 696, 697, 698, 699.
    Introduced abroad
                                      Doc.
                                      Doc.
                                             696.
      Argentina
                                      Doc.
                                             698, 699.
      Austria
                                      Doc.
                                             695.
       Italy
                                             697.
       New Zealand
                                      Doc.
                                      Doc.
                                            1063, 1072.
   Keokuk Dam
       Common fishes observed at
                                      Doc.
                                            1072.
    Key West - new species and notes
                                      Doc. 1013.
          on 9 others
                                      Doo.
                                             172.
    Labroid, of America and Europe
                                             843.
    Lahontan system
                                      Dog.
                                             927.
                                      Doc.
    Larval stages of winter flounder
    Lateral line organs
                                      Doc .
                                             563.
    Life history (See also Natural
                                             708, 709, 710, 955, 1062, 1092.
                                      Doc.
                           History)
    Measurements, correlated with
                                             800.
          weight
                                      Doc.
                                      Doc. 1063, 1072.
    Mississippi River at Keokuk
    Mortality, West Coast of Florida
                                      Doc.
                                             848.
                                              708, 709, 710, 711, 733, 783, 826.
    Natural history
                                       Doc.
                                       Doc.
                                             415.
    Nervous system
                                             353.
    New and little known, U. S.
                                      Dog.
```

```
Fishes: (continued)
    New England Coast
                                      Doc.
                                              475.
    Nutritive values of
                                      Doc.
                                              185.
    Observations on
                                      Doc.
                                              188.
                                      Doc.
                                              106.
    Osteology of
                                              250, 253, 370, 591.
    Parasites
                                      Doc.
       Beaufort
                                      Doc.
                                              583.
                                              446, 457, 561, 611.
       Woods Hole
                                      Doc.
                                              424, 635, 710, 711.
    Photography of
                                      Doc.
                                              417, 487, 490, 919 (See Fish
    Preservation of
                                      Doc.
                                              519, 520, 521, 522. Culture.)
    Propagation of
                                      Doc.
    Protection of
                                      Doc.
                                              378.
    Range of east coast species
                                              339.
                                      Doc.
                                      Doc.
                                              294.
    Rearing of
    Refrigeration
                                      Doc.
                                              489.
                                              683 ; E.C. 17.
    Relation to mosquito problem
                                      Doc.
    Scales
                                      Doc.
                                              496.
                                              514, 752, 755.
    Sense of hearing
                                      Doc.
                                              245, 821.
       Sight
                                      Doc.
                                              527.
      Taste
                                      Doc.
                                              775, 798.
                                      Doc.
       Smell
                                             723, 724.
       Specimens, preparation
                                      Doc.
    Skins
                                      Doc.
                                              537.
                                              490, 493.
    Smoking
                                      Doc.
                                              723, 724.
    Specimens, preparation
                                      Doc.
    Swim bladder
                                              498.
                                      Doc.
    Unutilized
                                              622.
                                      Doc.
                                              231, 806.
    Viviparous
                                      Doc.
                                      Doc.
                                              907, 927, 1007, 1046, 1093.
    Young
Fishes, lists and description of species:
    Alaska
                                      Doc.
                                              624.
    Alabama River
                                      Doc.
                                              157.
                                              208.
    Albemarle Sound
                                      Doc.
    America
                                      Doc.
                                              336.
    Antrim County, Mich.
                                      Doc.
                                              141.
    And fish-like vertebrates of North
       and Widdle America
                                      Doc.
                                              336.
                                              156, 280, 306.
                                       Doc.
    Arkansas
    Atlantic coast, range of
                                              233.
                                       Doc.
                                              822.
    Beaufort, N. C. sharks and rays
                                      Doc.
    Boulder County, Colorado
                                      Doc.
                                              565.
    British Guiana
                                      Doc.
                                              260.
                                              141.
    Calhoun County, Michigan
                                       Doc.
                                              288, 400, 425, 516, 574,
    California
                                      Doc.
                                              595, 615.
                                              638, 825.
       Coastal streams
                                      Doc.
       Fresh water
                                       Doc.
                                              516.
       Sacramento-San Joaquin Basin
                                      Doc.
                                              637.
                                      Doc.
                                             425.
       Tide-pool
                                            825.
                                      Doc.
       Tomales Bay
                                      Doc.
                                             282.
    Canada
                                             579.
    Cave, North America
                                      Doc.
                                             495, 985.
                                      Doc.
    Central America
                                      Doc.
                                             483.
    Chatauqua Lake
```

```
Fishes, lists and description of species: (continued)
     Cheboygan County, Michigan
                                        Doc.
                                               814.
                                                148, 616.
     Colorado
                                        Doc.
     Colorado, Boulder County
                                        Doc.
                                                565.
                                                297.
     Colorado River
                                        Doc.
     Columbia River
                                        Doc.
                                                290.
                                                633.
     Connecticut Lakes
                                        Doc.
                                               138.
     Cozumel, Yucatan
                                        Doc.
                                               526.
     Cuba
                                        Doc.
     Cumberland River
                                        Doc.
                                               211.
                                               409.
     District of Columbia
                                        Doc.
                                               814.
     Douglas Lake, Michigan
                                        Doc.
                                               492.
     East Coast
                                        Doc.
                                        Doc.
                                              235.
     Eel River
     El Salvador
                                        Doc.
                                               985.
     Escambia River
                                        Doc.
                                               157.
                                                19.
     Essex County, Mass.
                                        Doc.
                                                905.
     Finger Lakes, N. Y.
                                        Doc.
                                               167, 198, 292, 341, 342, 358,
                                        Doc .
     Florida
                                                371, 377, 419, 962.
                                               419.
                                        Doc.
        Check list of species
                                                342.
                                        Doc.
        Coast
                                                292.
        Collections
                                        Doc.
                                        Doc.
                                               7377.
        Protection
     Fourteen teleostean fishes of
                                               1093; Bull 24.
           Beaufort, N. C.
                                        Doc.
                                               142.
                                        Doc.
     Georgia
                                               486, 494, 733, 737, 1048.
     Great Lakes
                                        Doc.
     Great Lakes, Wisconsin
                                        Doc.
                                                906.
                                        Doc.
                                                965.
     Gulf of Maine
                                                433, 456, 504, 523, 534, 546,
     Hawaiian Islands
                                        Doc.
                                                582, 623.
                                                376.
     Hudson River
                                        Doc.
                                                235, 295, 428, 530.
                                        Doc.
     Indiana
                                                341.
                                        Doc.
     Indian River
                                                306.
                                        Doc.
     Indian Territory
                                               195, 288.
                                        Doc.
     Iowa
                                                551.
                                        Doc.
     Japan
        New blenny
                                        Doc.
                                               485.
                                        Doc.
                                                410.
     Kadiak Island
     Kalamazoo County, Michigan
                                        Doc.
                                                141.
                                                196, 211, 858.
                                        Doc.
     Kentucky
                                                962.
                                        Doc.
     Key West
                                                351.
                                        Doc.
     Klamath River
                                        Doc.
                                                501.
     Lake Buhi, Luzon
                                        Doc.
                                               494.
        Champlain
                                        Doc.
                                               483.
        Chatauqua
                                               428.
                                        Doc.
       Maxinkuckee, darters
                                               494.
                                        Doc.
        Ontario
                                               636.
                                        Doc.
        Oregon
                                               615, 768.
        Tahoe, trout
                                        Doc.
                                        Doc.
                                               591, 885.
        Wisconsin
                                              358, 405.
                                        Doc.
     Louisiana
                                        Doc. 501, 606.
     Luzon
```

```
Fishes, lists and description of species: (continued)
    Mackenzie River
                                       Doc.
                                               234.
    Maine
                                       Doc.
                                               236, 360, 531, 861.
    Maryland, darter
                                       Doc.
                                               773.
    Maumee River
                                       Doc.
                                              295.
    Massachusetts
                                       Doc.
                                               19.
    Maxinkuckee Lake
                                       Doc.
                                            428.
                                            279, 436, 495.
    Maxico
                                       Doc.
        Rivers
                                       Doc.
                                            436.
                                             141, 814.
                                       Doc.
    Michigan
    Minnesota
                                       Doc.
                                              312, 328.
    Mississippi
                                       Doc. 405, 1072.
    Mississippi Valley
                                       Doc. 733, 1072.
    Missouri
                                       Doc.
                                             156, 297.
    Missouri River
                                              324.
                                       Doc.
                                            400, 776.
    Monterey Bay
                                       Doc.
    Nebraska
                                       Doc.
                                              288.
    Neosho. Mo.
                                       Doc.
                                              297.
    Neuse River, N. C.
                                       Doc.
                                              303.
    Nevada
                                       Doc.
                                            615.
                                              193, 353, 475, 494.
    New England
                                       Doc.
    New Hampshire, Sunapee Lake
                                       Doc.
                                              783.
                                              229, 230.
    New Jersey
                                       Doc.
    New York
                                       Doc.
                                              372, 483, 494.
                                       Doc.
       Lake Chatauqua
                                              483.
    North America
                                       Doc.
                                              94, 336, 579.
                                       Doc.
                                              579.
       Cavo
                                              208, 303, 822.
    North Carolina
                                       Doc -
       Sharks and rays
                                              822.
                                       Doc.
                                              312, 634.
    North Dakota
                                       Doc.
       Devils Lake
                                       Doc.
                                              634.
    Oceania
                                       Doc.
                                              605.
                                       Doc.
                                            295.
    Ohio
                                              499.
    Ohio River
                                       Doc.
                                              351, 636, 638.
                                       Doc.
    Oragon
                                              638.
       Coastal streams
                                       Doc.
                                       Doc.
                                              636.
       Lakes
                                              231, 326, 400, 425, 574.
    Pacific coast
                                       Doc.
                                              606.
                                       Doc.
    Panay
                                              501, 606, 607, 640, 647.
    Philippiness
                                       Doc.
                                              330, 427, 429, 451.
    Porto Rico
                                       Doc.
                                              189.
    Potomac River
                                       Doc.
                                              404.
    Revillagigedo
                                       Doc.
                                              225.
    Rio Grando Basin
                                       Doc.
                                              637.
    Sacramento-San Joaquin Basin
                                       Doc.
                                       Doc.
                                             605.
    Samoa
                                       Doc.
                                             400.
    Santa Catalina Island
                                              574.
    San Francisco Bay, tributaries
                                       Doc.
                                       Doc.
                                              229.
    Sea Isle City, N. J.
                                              492.
                                       Doc .
    Silversides, east coast
                                       Cir.
                                               17.
    Small streams
                                              475.
    Southern New England
                                       Doc.
                                              494.
                                       Doc.
    St. Lawrence River
    Streams flowing into San Francisco Bay Doc. 574.
                                       Doc.
                                              783.
    Sunapoe Lake, N. H.
```

```
Fishes, lists and description of species: (continued)
     Tubou Lake
                                        Doc .
                                               768.
                                               211, 832, 858.
     Termossee
                                        Doc .
                                               225, 405.
     Taxas
                                        Doc.
     Tippecance Lake, darter
                                        Doc.
                                               530.
     Tomales Bay
                                               825.
                                        Doc.
                                               547, 568.
     Tortugas
                                        Doc .
     Twin Lakes, Colorado
                                               61.6.
                                        Doc.
                                               359, 358.
     United States, ranges
                                        Doc.
                                        Doc.
                                               148, 395.
     Utah
     Vermont
                                               327.
                                        Doc.
     West Virginia
                                        Doc.
                                               631.
                                               806.
     Vivicarous, Gambusia affinis
                                        Doc.
                                               591, 856, 885.
     Wisconsin Lakes
                                        Doc.
     Woods Hole. Mass.
                                        Doc.
                                               353.
                                               149, 818, 904.
     Yellowstone Park
                                        Doc.
                                        Doc .
                                               138.
     Yucatan
Tishes:
     Morphological studies (See Morphology) --
                                               710. 711.
                                        Doc.
     Photography of
     Physiological studies (See Physiology) ---
                                               708, 709, 710, 711, 733,
     Natural history
                                        Doc.
                                               783, 826.
     Relation to mosquito problem
                                        Cir.
                                               17; Doc. 683.
     Sense of hearing
                                        Doc.
                                               514, 752, 755.
     Sense of sight
                                        Doc.
                                               821.
                                               775, 798.
                                        Doc.
     Sense of smell
     Specimens, preparation
                                        Doc.
                                               723, 724.
Fishing apparatus of South Sea Islands Doc.
                                               509.
                                               135.
     Grounds, Alaska
                                        Doc.
        Beaufort, N. C.
                                        E.C.
                                                8.
                                               161.
                                        Doc.
        Bristol Bay, Alaska
                                               162.
                                        Doc.
        Florida Coasts
                                        Doc. 1059.
        Gulf of Maine
                                               135, 835.
                                        Doc.
        Oregon
        Washington
                                        Doc.
                                               135, 835.
                                               509.
     Methods, South Seas
                                        Doc.
                                               140.
     Vessels and boats, description of Doc.
                                               137.
        Improved types of
                                        Doc.
                                               844.
        In Priamur district, Siberia
                                        Doc.
                                        Doc.
                                               187.
        Of Pacific Coast
                                        Doc.
                                               779.
Fish scales
     Screens, electric
                                        Doc. 1042.
                                              707.
                                        Doc.
Fishways
                                               80.
     Building, new system
                                        Doc.
                                        Doc.
                                                61.
     Great Falls
                                        E.C.
                                               62.
Fitzgerald, G. A.
                                        Doc.
                                               21.
Fixtures for hatching salmon
                                        Doc.
                                               522.
Flatfish, culture
                                               821.
     Color behavior
                                        Doc.
     New species
                                        Doc.
                                               764.
                                        Doc.
                                              869.
Flatworm, enemy of Florida oysters
                                               668.
                                        Doc.
Flegel, Ch.
                                        Doc.
                                               484.
Flint, James M.
```

```
Flora of sea bottom, study
                                        Doc.
                                              716.
     Suitable for fish pond
                                        Doc.
                                              826.
Florida:
     Angling
                                        Doc.
                                              652.
     Biological station for
                                        Doc.
                                              333, 367.
     Catfishes
                                        Doc.
                                              733.
     Check list
                                        Doc.
                                              419.
     Clam: introduction into Florida
                                        Doc.
                                              386.
        Investigation 10,000 Islands
                                        Cir.
                                               46.
        Of southern Florida
                                        Doc.
                                              962.
     Coast fisheries
                                              341, 342, 962,
                                        Doc.
        Fishing grounds of
                                        Doc.
                                              162.
     Commercial sponges (See sponges)
                                        Doc.
                                              374.
     Crabs (stone) of So. Florida
                                        Doc.
                                              962.
     Crayfish (spiny lobster) So. Fla.
                                        Doc. 962.
     Experiment station
                                        Doc.
                                              333.
     Fishes of Key West region
                                        Doc.
                                              962.
     Fisheries
                                        Doc.
                                              341, 342, 371, 377, 386, 393, 962.
        Davelopment of
                                        Doc.
                                              377.
     Fishes, game
                                        Doc.
                                              652.
                                              167, 198, 292, 341, 342, 371, 377,
     Fishes
                                        Doc.
                                              652, 962.
     Fishing grounds
                                        Doc.
                                              162.
        Industry, notes on
                                        Doc.
                                              386.
     Fur farming in
                                        Doc.
                                              396.
     Green turtle in
                                              380, 962.
                                        Doc.
     Oyster culture, experimental
                                        Doc.
                                              386.
     Oyster grounds of
                                              343, 382, 383, 385.
                                        Doc.
     Oyster flatworm as an enemy
                                        Doc.
                                              869.
     Protection of fishes
                                              162, 167, 198, 292, 333, 341, 342,
                                        Doc.
                               343, 358, 367, 368, 371, 374, 377, 380, 382, 383,
                               385, 386, 393, 419, 437, 535, 652, 667, 669, 841,
                               869, 892; E.C. 46.
     Site of marine hatching and
        experiment station
                                        Doc.
                                              333.
     Spiny lobster, fishery,
                                        Doc.
                                              925, 962.
     Sponge culture
                                        Doc.
                                              669.
                                              437, 535, 667, 962.
     Sponge fishery
                                        Doc.
     Sport fishing
                                        Doc.
                                              652.
                                              962.
     Turtle fishery of So. Florida
                                        Doc.
Flounders and soles of America
                                              126.
        and Europe
                                        Doc.
     Color study, adaptation to
                                              821, 842.
        background
                                        Doc.
     Culture
                                        Doc.
                                              522.
     Embryology and larval stages of
                                              927.
                                        Doc.
        winter flounder
                                              907.
                                        Doc.
     Food of young winter flounders
                                        Doc.
                                              964.
     New Species
                                        Doc .
                                              15, 17, 25, 28, 239.
Food fishes, decrease of
                                        Doc.
                                              239.
     In American waters, decrease
                                        Doc.
                                                1, 2, 3, 4,
     Of United States
                                        Doc.
                                              612, 613.
     Propagation and distribution
```

```
Food:
                                       Doc. 7, 264, 294, 307, 340, 591, 618
     Of fishes
                     622, 826, 856, 906, 907, 914, 942, 948, 949, 953, 955,
                     971, 980, 981, 1079; E.C. 39, 41, 56.
                                             340.
     Cod family
                                       Doc.
                                       Doc. 622.
     Dogfish
     Fish ponds on farms
                                            826, 867, 1056.
                                       Doc.
     Freshwater crustacea
                                       Doc.
                                            914.
     Freshwater shrimp
                                       Doc. 685.
     Flounder, young winter
                                       Doc. 907.
     Marine animale
                                       Doc.
                                            248.
     Menhaden .
                                       Doc. 251.
     Mussels, fresh-water
                                       Doc. 963.
Food of fishes:
     Meat and meat substitutes
                                       Doc. 1079.
     Natural and artificial
                                       Doc. 826.
                                       Doc. 313, 556, 610, 719.
     Oyster
     Oyster, clam and mussel
                                       Doc.
                                            313.
     Rainbow trout
                                       Doc. 679, 684, 704.
                                       Doc. 679, 684, 704.
     Salmonoide
     Shrimp, fresh-water
                                       Doc. 685.
     Skate
                                       Doc. 622.
     Sources of marine
                                       Doc. 307.
     Sunapee Lake
                                       Doc. 783.
     Trout in Twin Lakes
                                       Doc. 616.
     Wisconsin Lakes
                                       Doc. 591, 906.
                                       Doc. 719.
Food of oysters
Food value of proteins
                                       Doc. 784, 826.
                                       Doc. 1000.
Food value of fish and shellfish
Foraminifera of Porto Rico
                                       Doc. 484.
                                       Doc. 147, 174, 210, 253.
Forbes, S. A.
Foreign fishery trade
                                       Doc. 325, 418.
Fouling ships bottoms
                                       Doc. 981, 1031.
Fourteen teleostan fishes of
                                       Doc. 1093; Bull. 24.
       Beaufort, N. C.
Foxes on Pribilofs
                                       Doc. 946.
Fox River, mussels
                                       Doc. 804.
France, oyster culture in
                                       Doc.
                                            203.
                                       Doc. 473.
     Sardine industry of
                                            690, 699.
Franke, Johan
                                       Doc.
Franklin, Dwight
                                       Doc.
                                            723.
Fraser, C. McLean
                                       Doc.
                                            762.
French sardine industry
                                       Doc.
                                            473.
Fresh-water crustacea, U. S.
                                       Doc.
                                               5.
                                       Doc.
                                               7.
Freshwater fishes, food of
                                       Doc.
                                               8.
     Leeches
     Mussels (See Mussels, freshwater).
                                       Doc. 279, 389, 397.
Fresh-water pearls of United States
                                       Doc.
                                            685.
     Shrimp as fish food
                                       Doc. 190.
     Sunfishes of North America
                                       Doc.
                                            348, 888.
Frog culture
Frogs, Natural history and
        utilization
                                       Doc. 888.
                                       Doc. 647.
Fryer, Charles E.
```

```
fullor, Alfred E.
                                      Doc.
                                            700.
Fuller, Caleb Allen
                                      Doc.
                                            569.
Fulton, T. Wenyss
                                      Doc.
                                            261.
Fungus (Saprolognia) infesting fish
                                      Doc.
                                            253.
Fungus on fishes in captivity
                                            689, 691, 692, 693; I. R. 31, 35.
                                      Doc.
Fur-bearing animals, Pribilof Islands Doc.
                                            819, 820, 951.
Fur farming in Florida
                                      Doc.
                                            396.
                                            749, 766, 780, 797, 819, 834,
     Industries, Alaska
                                      Doc.
                                            838, 847, 872, 891, 909, 1023.
     Of aquatic animals
                                            537
                                      Doc.
Fur-seal, breeding grounds of
                                            317, 747, 748, 797, 819, 820, 986.
                                      Doc.
     Fisheries of Alaska
                                      Doc.
                                            661, 732, 735, 748, 749, 766, 780,
                        797, 819, 820, 834, 838, 847, 872, 891, 909, 951, 973,
                         992, 1008, 1023,;
                                            E.C. 4.
                                            732, 820.
    Fishery laws and regulations
                                      Doc.
    Commander Islands
                                      Doc.
                                            986.
    History of
                                      Doc. 273.
     Industry of Pribilof Islands
                                      E.C.
                                            71.
     Islands, Russian
                                            316.
                                      Doc.
    Movements of
                                      Doc. 317.
Fur Seal Industries, Alaska
                                      Adm. Rpt. 2, 7, 11, 16, 19, 23, 28,
                                                31, 36.
Fyko-net fisheries
                                            226.
                                      Doc.
Fyke nets, description of
                                      Doc.
                                            226.
Galtsoff, Paul S.
                                      Doc. 958, 1035, 1066, 1069, 1077,
                    1088, 1094; Bull. 6, 18, 31; I.R. 6, 37; F.C. 12, 25.
Galveston Bay oysters
                                      Bull. 3, 31.
Gambusia affinis, embryology and
       breeding habits
                                      Doc.
                                            806.
     Life history of
                                      Doc. 857.
Game fishes, California and Florida
                                      Doc. 652.
                                      E.C.
                                             67.
    Planting
                                      Doc.
                                            650, 651, 783, 818.
    Protection
                                            783.
    Sunapee Lake
                                      Doc.
                                      Doc. 818.
    Yollowstone National Park
                                      F.C.
                                              9, 16, 20, 24, 27.
Game Laws
                                      Doc.
                                             26.
Gamgoo, John
                                      Doc. 431, 578.
Gas disease of fish
     In swim-bladder of fishes
                                      Doc. 498.
                                            628, 718.
Gases dissolved in water
                                      Doc.
                                      Doc.
                                            790.
Gaylord, Harvey R.
                                      Doc.
                                            929; E.C. 51.
Gelatines from seaweeds
                                      Doc. 147.
Geneva Take, invertebrate animals of
Geological Survey, directory of
                                             39.
                                      Doc.
        officers, 1832
                                            876.
                                      Doc.
George, W. C.
                                      Doc. 142.
Georgia, fishes of
                                      Doc. 262.
     Oyster industry of
                                      Doc. 1077.
        Investigations
                                      Doc. 592.
German carp
                                      Doc. 64.
     Answers to questions
German sea, scientific examination of Doc.
```

```
Germany, artificial propagation of
                                       Doc. 151.
        sturgeon in
                                       Doc. 151, 304.
     Fish culture in
                                       Doc.
                                             163.
Giant scallop fishery of Maine
Giant scallop fishery - Middle
       Atlantic coast
                                       E.C.
                                               7.
                                       Doc.
                                             48, 142, 157, 234, 288, 290,
Gilbert, Charles H.
                       326, 351, 400, 582, 767, 754, 928, 943, 991, 1021.
Gilbert, N. C.
                                       Doc. 591.
                                       Doc.
                                             242.
Gilbert, W. L.
                                       Doc.
                                              37.
Gill nets, description of
    In the cod fishery
                                       Doc.
                                              37.
Gill, Theodore
                                              1, 2, 9, 567, 708.
                                       Doc.
                                       Doc. 993, 1013, 1058, 1089; Bull. 5.
Ginsburg, Isaac
                                       Doc.
Glaser, O. C.
                                             556.
Glochidia of freshwater mussels,
                                       Doc. 771.
        identification
Glue
                                       Doc. 852.
                                       Doc.
                                             831.
Gobiosoma bosci, embryology
Goby (Evorthodus lyricus)
                                       Bull.
                                               5.
Golden trout
                                       Doc.
                                             595.
                                             573, 666, 935, 980; F.C. 6.
Goldfish
                                       Doc.
                                       Doc.
    Culture in Japan
                                             666.
                                       E.C.
                                              68.
     Industry
                                       Doc.
                                            483, 495, 624, 631, 633.
Goldsborough, E. L.
                                       Doc.
                                             10, 13, 18, 19, 22, 23, 31, 51,
Goode, G. Brown
                                              52, 75, 92, 121, 243.
Goode, G. B.
                                       Doc.
                                              75.
                                            622 ; E.C. 13.
Goosefish, use of
                                       Doc.
                                             431, 554, 578.
Gorham, F. P.
                                       Doc.
                                             126.
Goss, D. K.
                                       Doc.
Gourami, natural and economic
                                              9.
       history of
                                       Doc.
                                             168, 172.
                                       Doc.
Grampus
Grampus investigations 1889, south
        coast New England
                                       Doc.
                                             168.
Grove, B. H.
                                       Doc. 744.
                                       Doc.
                                             556.
Grave, Caswell
                                       Doc.
                                             520, 628.
Grayling culture
                                       Doc. 1062.
     Of intermountain region
Gray trout, protection of
                                       Doc. 1019.
Great Britain beam-trawl fishery
                                       Doc. 132.
     Fisheries of
                                       Doc. 267.
                                       Doc.
                                             122.
Great Egg Harbor Bay, N.J., fishes
Great Falls, construction of fishway at Doc. 61.
Great Lakes:
                                       Doc. 140, 287, 494, 506, 593, 1001.
     Fisheries
                                       Doc. 486, 494, 737, 1048, 1053; Bull. 10.
     Fishes
                                       Doc. 1048.
     Fishes, coregonid
                                       Doc. 238.
     Fishery laws of
                                       Doc.
                                            598.
    Hirudinea
                                       Doc. 598.
     Leeches
                                       Doc. 598.
     Oligochaeta
                                       Doc. 252, 529.
     Plankton
                                       Doc. 479.
     Plants
```

```
Great Lakes: (continued)
    Protozon
                                      Doc.
                                            435.
     Rotatoria
                                      Doc.
                                            434.
    Salmonoids
                                      Doc. 737, 1001.
    Whitefishes
                                      Doc. 737, 1001, 1048.
    Whitefish production
                                      Doc. 388, 672, 673, 674.
Great Salt Lake, introduction of
       marine animals into
                                      Doc. 422.
     Oysters
                                      Doc. 422.
Greely, Arthur White
                                      Doc. 425.
Green, Erik H.
                                      Doc. 449, 496.
Green, Wm. Spotswood
                                      Doc. 272.
Greene, Carl H.
                                      Doc. 796.
Greene, Chas. W.
                                      Doc. 584, 743, 777, 796, 799, 802.
Green gilled oysters
                                      Doc. 850, 1094.
Green Lake, Wisconsin, fishes
                                      Doc. 906.
Green turtle on Florida coast
                                      Doc. 380, 962.
    Protection
                                      Doc. 380.
Greenwood, Miss., fishes
                                      Doc. 1027.
Greer, Rob Leon
                                      Doc. 663, 811.
Griffiths, Francis P.
                                      I.R. 20, 34.
Groupers, Gulf of Mexico
                                      I.R.
                                           26.
                                      Doc. 663.
Guano industry of Peru
    Birds of Peru
                                      Doc. 663.
Guatemala
                                      Doc. 931.
Gudger, E. W.
                                      Doc. 709.
Gulf coast fisheries
                                      Doc. 206, 420, 571.
                                      Doc. 965, 969, 1059.
     Of Maine
                                      Doc. 962, 1009.
     Of Mexico
     Of Mexico, biological station for Doc. 368.
                                      Doc. 1058.
     Saueteague
     Stream, exploration by Fish Hawk Doc. 84.
                                            26.
Gulf of Mexico groupers
                                      I.R.
                                      Doc. 215, 285.
Gurley, R. R.
Gunshots, effect of sound upon fishes
                                      Doc. 752.
                                      Doc. 910, 960, 1043, 1100.
Gutsell, J. S.
Habits of Fishes:
                                      Doc. 708.
     Black crappie in inland lakes
                                      Doc. 867.
        of Wisc.
                                      Doc. 517, 532, 733, 783.
     Catfishes
                                      Doc. 821.
    Flounders
                                      Doc. 806.
     Cambusia affinis
                                      Doc. 710.
    Horned dace, breeding
                                      Doc. 710, 711.
    Methods of study
                                      Doc. 709.
     Toadfish
                                      Bull. 32.
Hacker, Robert L.
Haddock, culture (Melanogrammus
                                      Doc. 522.
                   aeglifinus)
                                            31.
                                      Doc.
     Fishery of New England
     Scotch method of smoking
                                      Doc. 493.
     Statistics of North American
                                      Doc. 1074.
        waters
                                      E.C. 47.
     Use as food
```

```
Haddock: ( dind )
       Docline in haddock and practical
          romedy
                                          F.C.
                                                 23.
       Fillets, effect of ultraviolet
          irradiation
                                          I.R.
                                                 43.
       Fish Meal, offect of manufacturing
          en composition
                                          I.R.
                                                 31.
       Larvae and oggs, effects of
          currents on
                                          Bull.
                                                 29.
       Liver oil, chemical and physical
          properties
                                          I.R.
                                                 27.
                                          I.R.
       Smoking
                                                 20
                                          I.R.
      Waste
                                                 32.
 Hasckel, Ernst
                                         Doc.
                                                221.
 Hahn, C. W.
                                         Doc.
                                               810.
 Halcyon, cruise
                                         Doc.
                                               971.
                                                359, 763, 817.
 Halibut: fishery
                                         Doc.
      Davis Strait
                                         Doc.
                                                43.
                                                763, 817.
      Fishing grounds, Pacific
                                         Doc.
      Mushy
                                         Doc. 817, 957.
      N. Pac. halibut treaty
                                         Doc. 1073.
      Washington and Oregon
                                         Doc.
                                               817.
                                               817, 957.
      Wormy
                                         Doc.
 Hall, Ansley
                                         Doc.
                                               291, 360.
 Harbor of Refuge, Woods Hole
         Construction of
                                         Doc.
                                               44.
 Harding, P. H.
                                         Doc.
                                                995.
· Harger, Oscar
                                         Doc.
                                                32.
                                                468, 558, 788.
 Hargitt, C. W.
                                         Doc.
 Harrison, Roger W.
                                                 1, 4, 7, 27, 28, 30, 31, 32,
                                         I.R.
                                                 36, 40.
 Harron, L. G.
                                         Doc.
                                               517.
                                         I.R.
 Hasler, Arthur D.
                                                 37.
 Hatchery apparatus
                                         Doc.
                                                21, 700, 701, 703, 705.
 Hatching fish eggs
                                         Doc.
                                                139.
 Hathaway, E. S.
                                         Doc. 1030.
 Hathaway, Walter E.
                                         Doc.
                                               657.
 Hawaiian Islands:
                                         Doc.
                                               601.
      Annelids
                                         Doc.
                                                587.
      Brachyura
      Cephalopods
                                         Doc.
                                               789.
                                                617.
      Cirripedia
                                         Doc.
      Fisheries
                                         Doc.
                                                504, 577, 590.
                                                433, 456, 504, 523, 525, 534,
      Fishes
                                         Doc.
                                                546, 577, 582, 623
                                         Doc.
                                                586.
      Hydroids
                                         Doc.
                                                542.
      Isopoda
                                         Doc.
                                                587.
      Macrura
                                               600.
                                         Doc.
      Medusae
                                         Doc.
                                                589.
      Nemerteans
      Plan for development of
          fisheries
                                         I.R.
                                               42.
```

```
Hawaiian Islands: (continued)
    Polychaetus annelids
                                        Doc. 601.
    Porpoise
                                        Doc.
                                              544.
    Schizopods
                                        Doc.
                                              588.
    Starfishes
                                        Doc.
                                              599.
Hay, W. P.
                                        Doc.
                                              557, 580, 859; E.C. 5.
Hearing in fishes
                                        Doc.
                                              514.
    Motor boat noises and gunshots
                                        Doc.
                                              752.
    Sounds influencing movements
                                              755.
                                        Doc.
    Squeteague
                                        Doc. 715.
Heath, Harold
                                             748.
                                        Doc.
Hecht, Selig
                                        Doc. 800.
                                        Doc. 167, 292, 377, 628.
Henshall, James A.
Hermit crab, new isopod parasitic
       on the
                                        Doc. 478.
Herrick, C. Judson
                                        Doc.
                                              415, 527.
Herrick, Francis H.
                                              247, 300, 373, 500, 747.
                                        Doc.
Herring fisheries
                                        Doc. 356, 360; Bull. 17.
   Holland
                                        Doc.
                                             511.
   Lake Huron
                                        Doc. 1053.
   N. E. Coast
                                        Doc. 356.
   Of England
                                        Doc. 511.
   Pacific herring
                                        Doc. 1080.
    Passamaquoddy Bay
                                        Doc. 356, 360.
    Preservation, salting
                                        Doc. 903.
    Scotland
                                        Doc. 511.
   Herring, river, salting
                                        Doc. 903.
Herring, life history of
                                        Doc. 1053, 1080.
Herring:
    Fluctuations in supply S.E. Alaska Bull. 2.
        In Prince William Sound
                                        Bull. 9.
        Races of
                                        Bull. 17.
                                        I.R. 24; F.C. 23.
Herrington, William C.
Hessel, Rudolph
                                        Doc.
                                              27.
Heterocercy, origin of
                                        Doc. 114.
                                        Doc. 1009, 1019, 1029, 1044, 1068,
Higgins, Elmer
                                             1096; I.R. 42; A.R. 4, 9, 12,
                                             17, 21, 26, 29, 30, 45.
                                        Doc. 832, 857, 871, 874, 918, 940,
Hildebrand, Samuel F.
                                             985, 993, 1013, 1024, 1027, 1060,
                                             1093; E.C. 60; Bull. 16, 24.
Hints for emergencies
                                        Doc.
                                              16.
Hirudinea, Great Lakes Region
                                        Doc. 598.
History of the common clam
                                        Doc. 440.
Hoek, P. P. C.
                                        Doc.
                                              682.
                                        Doc. 652, 692, 702, 711, 720.
Holder, Charles F.
                                        Doc. 511.
Holland, herring fisheries of
                                        I.R.
                                              36.
Holmes, Arthur D.
                                        Doc. 984, 1047.
Holmes, H. B.
                                        Doc. 585.
Holmes, S. J.
```

```
Dec. 931.
Honimas,
                                       Bull.
                                             1, 3, 6, 8, 21, 23.
Horidas, A. D.
                                       Doc. 930, 939; E.C. 50, 52, 54, 55.
Hopkinson, L. I.
                                       Doc.
Hornet date, breeding habits
                                             710.
                                       Doc. 778, 901, 824.
Hosts of fresh water mussels
                                       Doc. 801, 893, 916.
Homani, A. D.
                                       Doc. 444.
Ho s, Froeland, Jr.
                                       Doc. 885.
Hoyn, W. D.
                                       Dec. 376.
Eudoon River, salmon in
Eutohinson, Samuel J.
                                       Bull.
                                             25.
                                       Doc. 234.
Eybrids, fertility of
                                       Doc. 518.
Eydra, destruction of trout fry by
                                       Doc. 762.
Egárciás, Besufort
    Hamaiist
                                       Doc. 586.
                                       Doc. 455.
    Toods Hole
                                       Doc. 1052.
Ermes, F. T.
Ichthyological collections of the
        steamer Altatross
                                       Doc. 326.
    Investigation in Western Minnesota Doc. 312.
                                       Doc. 567.
Tehthyology, Massachusatts
                                     Doc. 959.
Ichthyophthirius disease
                                            301, 318.
Idaho, salmon investigations in
                                       Doc.
Improvements in preparing fish for
                                            443.
                                       Doc.
      shipment
                                       Doc. 235, 295, 428, 530.
Indiana, fishes
                                       Doc. 428, 530.
   Darters
   Emploration
                                       Doc. 136.
Indian Piver, Fla., fisheries of
                                       Doc. 341.
                                       Doc. 306.
   Tarritory, fishes of
    Mollusks of
                                       Doc. 306.
Industrial wastes, effects on fishes
                                      Doc. 619.
Industries, aquatic products in
                                      Doc. 536.
                                       Doc. 875.
   Fishery, of the U.S.
    Fresh-water mussel, of U.S.
                                      Doc. 865.
Industry, orab, Chesapeake Bay
                                       Doc. 868.
                                       Doc. 1066.
    Oyster, Facific Coast
Influence, artificial propagation
                                       Doc. 88.
Ingersoll, Ernest
                                       Doc. .223.
Inquiry into history and present
       condition of food fishes
                                            23.
                                       Doc.
    Into history and conditions of
       fisheries of J. S.
                                       Doc.1013.
                                       Doc .
                                              25.
   Into the decrease of food fishes
                                            1, 2, 4, 10, 13, 15, 17, 25, 28.
                                       Doc.
    Relative to food fishes, U. S.
                                             591, 616, 856, 882, 883, 915, 942,
                                       Dog.
Insacts
                                             953.
                                       Doc. 507, 733, 818; E.C. 65, 67.
Interior waters, fisheries
   Taters, fishery statistics of
                                       Doc.
                                            361.
                                      F.C.
Interior Maters, stocking
                                             8.
                                      Doc. 1062.
Intermountain trout
                                      Doc. 364, 726.
Intermational fishery congress
                                       Doc. 1073.
    Gomission
                                      Doc. 378, 646, 647, 648, 649.
   Protection of fish
Invertebrates animals of lakes
                                      Doc. 147.
      Geneva and Mendota
```

```
I da, Isla Superior
                                Dag. 95.
                                 Doc. 6.
  Oblical composition Doc.
Investigation of commission for scientific eranination
   of the Garman Seas Doc. 40.
  Michoral
                                Doc. 399.
   Spientific importance of
                                 Doc. 366.
   3-1 -22 -113
                                 Doc. 477.
Tulifue in sua foods
                                  Doc. 967, 979.
Ichina content, cysters
                                 I.R. 18.
I.R. 25.
  Some American flahery products
Iowa, Tainport Fisheries biological
   station
                                 Doc. 829.
  Fishes of
                                 Doc. 195. 288.
Irelai, fisheries of
                                 Doc. 257.
Trish maskerel fisheries
                                Doc. 272.
Isely, Fraderick S.
                                 Doc. 792.
Isinglass, fish, and glue
                                Dec. 852.
Isopods, Alaska
                                Doc. 564.
   Espaisa Islanis
                                 Doc. 542.
  New England
                                 Doc.
                                       32.
                                 Doc. 475.
   Parasitic on hermit crab
                                 Doc. 735.
   Fhilippines
   Porto Rico
                                 Doc. 462.
Italy, American fishes introduced
                                 Doc. 695.
  Fisheries
                                 Doc. 662.
Jacksonville, Fla., fishery trade
                                 Dec. 1039.
                                 Doc. 304.
Jaffa, S.
Jamaica, fisheries,
                                 Dec. 931.
Jamaica mountain mullet, proposed
 introduction of
                                 Dec. 145.
                                                        (38, 42,
James, Eushrod W.
                                 Dec. 378.
                                 Dec. 1056; Adm. Rpt. 16, 22, 25, 33,34,
James, M. C.
James River, S. Dak., mussels
                                 Doc. 812.
James River, Va., oyster beds
                                 Doc. 729.
                                 I.R. 12.
Jamieson, George S.
Japan:
                                 Dec. 739.
   Barracles
   Blenny, new species
                                 Doc. 485.
   Cultivation of marine animals in Doc. 573.
                                 Doc. 277, 551, 665.
   Fisheries
                                 Doc. 576.
   Fishery trade with United States
                                 Dec. 551.
   Fishes
                                 Dec. 573.
   Fresh-mater mussels of
                                 Doc. 666.
   Goldfish cultura
                                 Doc. 551.
  Macrouridae
                                 Doc. 485.
 New species of blanny
                                Doc. 512.
  Oyster culture
 Seaweed industries
                                 Doc. 552.
Japanese cysters introduced to U. S. F.C. 12.
                                  I.R. 13, 14, 26, 34.
Jarvis, Norman D.
                                 Doc. 435, 456, 534.
Jenkins, Oliver P.
                                 Doc. 434, 435, 588.
Jennings, H. S.
                                 I.R. 21, 38 ; F.C. 11, 15;
Johnson, F. F.
                                       Adm. Ept. 15.
```

```
Johnson, Robert S.
                                       Doc. 826.
Johnston, E. C.
                                       Doc. 817, 835.
Jonces, L. Z.
                                       Doc.
                                             270.
Jordan, David Starr
                                       Doc.
                                             48, 94, 126, 127, 136, 144,
                    148, 149, 173, 184, 219, 288, 336, 404, 436, 504, 523,
                    525, 547, 551, 568, 605, 606,623, 640, 649, 737,1055.
Joyce, H. B.
                                       Doc. 763.
Juday, Chancey,
                                       Doc. 565, 615, 616, 791, 905,1012;
                                       Bull. 12.
Juvenile and sex characteristics of
     (Evorthodus lyricus)
                                       Bull.
Kadiak Islands, tide-pool fishes
                                       Doc. 410.
Kalamazoo County, Mich., fishes of
                                       Doc. 141.
Kamchatka, fishes
                                       Doc. 754.
                                       Doc. 1021.
Karluk River salmon runs
Kelez, George B.
                                       Bull. 27.
Kellogg, James L.
                                       Doc. 204, 432, 440, 554.
Kemmerer, George I.
                                       Doc. 944; Bull. 12.
                                       Doc. 162, 225, 233, 236, 297, 327,
Kendall, William C.
                     339, 340, 358, 419, 492, 493, 494, 531, 532, 633, 658,
                     733, 764, 783, 816, 818, 853,861, 901, 904, 914, 1015,
Kennedy, C. H.
                                       Doc. 480.
Kentucky, fishes of
                                       Doc. 196, 197, 211, 858.
Kentucky River mussel resources
                                       Doc.
                                             934.
Kenyon, Walter
                                       Doc. 977.
Keokuk Dam and fisheries of Upper
                                       Doc. 1063.
       Miss. River
   Fishes of Mississippi River
                                       Doc. 1072.
Keyes, C. M.
                                       Doc. 271.
Kibbe, I. P.
                                       Doc. 387.
Kidder, J. H.
                                             16, 116.
                                       Doc.
Killifish, use of
                                       Doc.
                                             622.
                                             706.
Kincaid, W. S.
                                       Doc.
King-crab fishery of Delaware Bay
                                       Doc. 166.
                                       Doc. 197, 211, 235, 295.
Kirsch, Philip H.
Kirtlandia vagrans, embryology
                                       Doc. 831.
Kitahara, T.
                                       Doc. 665.
Klamath River, fishes of
                                       Doc.
                                             351.
                                       Doc.
                                             234.
Knauthe, Karl
                                       Bull. 18; I.R. 15.
Koehring, Vera
                                       Doc. 1001, 1048.
Koalz, W.
                                       Doc. 795, 806, 831, 842, 849.
Kunz. Albert.
Kunz, George F.
                                       Doc. 278, 389, 397.
Kutchin, H. M.
                                       Doc.
                                             618.
Labroid, fishes, review of
                                       Doc. 173.
                                            843.
                                       Doc.
Lahontan system
                                       Doc. 501.
Lake Buhi, Luzon, fishes
                                       Doc.
Lake Bear
                                             864.
                                       Doc. 494.
Lake Champlain, fishes
                                       Doc. 483.
    Chautauqua, fishes and mollusks
                                       Doc. 634.
    Devils
    Erie, fisheries
                                       Doc. 529.
        Plankton algae
                                       Doc. 479.
        Plants
```

```
Lake (continued)
    Erie, fisheries (continued)
        Protozoa
                                           Doc.
                                                  435.
        Whitefish culture
                                           Doc.
                                                  388.
Lake Erie, early life history 62
           species fishes
                                           Bull.
                                                   10.
Lake, Geneva, invertebrate animals
                                           Doc.
                                                  147.
     Great Sale, examination
                                           Doc.
                                                  422.
     Green Lake, Wisconsin
                                           Doc.
                                                  906.
    Huron, herring,
                                           Doc.
                                                 1053.
    Maxinkuckee, darters
                                           Doc.
                                                  428.
    Mendota, invertebrate animals
                                           Doc.
                                                  147.
        Fish epidemic in
                                           Doc.
                                                  147.
    Ontario, fishes
                                           Doc.
                                                  194, 494.
    Pepin mussel survey
                                           E.C.
                                                   57.
    Sunapee, fishes and mullusks
                                           Doc.
                                                  783.
    Superior, entomostraca
                                                  174.
                                           Doc.
        Invertebrate fauna
                                           Doc.
                                                    6.
        Trout, propagation of
                                                  520.
                                           Doc.
    Tahoe trout and trout fishing
                                           Doc.
                                                  615.
       New species of
                                           Doc.
                                                  768.
Lake trout propagation
                                           Doc.
                                                  520.
Lakes: Connecticut
                                           Doc.
                                                  633.
     Gas content of waters, Wisconsin
                                           Doc.
                                                  718.
     Great, fishes
                                           Doc.
                                                  486, 506.
    Investigation of
                                           Doc.
                                                  246, 1001, 1048; Bull. 10.
    Northwestern
                                           Doc.
                                                  944.
    Of New York (Finger), study
                                           Doc.
                                                  791, 905.
     Organic content of lake water
                                           Doc.
                                                 1012.
     Twin, Colorado, Fishes of
                                           Doc.
                                                  616.
Lakes and streams of Montana and Wyoming Doc.
                                                  205.
     Oregon, fish fauna
                                           Doc.
                                                  636.
                                           Doc.
    Wisconsin
                                                  591, 856.
     Yellowstone National Park
                                           Doc.
                                                  149.
Lamellibranchiate mollusks, morphology of Doc.
                                                  204.
Lampreys of New York
                                           Doc.
                                                  372.
Lane, F. W.
                                           Doc .
                                                  995.
Lanham, Wm. B., Jr.
                                           I.R.
                                                   43.
Larval and embryology development of Bairdiella chrysura
       and Anchovia mitchilli
                                           Doc.
                                                  795.
    Ctenogobius etigmaticus
                                           Doc.
                                                  831.
                                           Doc.
                                                  831.
    Cyprinodon variegatus
                                           Doc.
     Gobiosoma bosci
                                                  831.
                                           Doc.
                                                  831.
    Kirtlandia vagrans
                                           Doc.
                                                  831.
    Lucania parva
                                                  927.
                                           Doc.
    Pseudopluronectes americana
Larval development, twelve teleostan
                                           Doc.
                                                  849.
                                                  150.
     Dibothria from Yellowstone Nat. Pk.
                                           Doc.
                                           Doc.
                                                  971.
    Fishes, Woods Hole
                                           Doc.
                                                  563.
Lateral line organs in fishes
                                           Doc.
                                                  809.
Lavaca Bay, Texas, oyster grounds
                                                  267,268.
                                           Doc.
Lawrence-Hamilton, J.
```

```
Laws, Alaska fisheries
                                           Doc.
                                                  746, 819.
    Fishery
                                           Doc.
                                                  238.
       Of Mississippi and Ohio
         River States
                                                  866.
                                           Doc.
        Of Mississippi River States
                                           Doc.
                                                  840.
    Seal fisheries
                                           Doc.
                                                  732, 820.
    And regulations, Bur. Fisheries
                                           Doc.
                                                   49.
                                           F.C.
                                                     9, 16, 20, 24, 27.
Laws, black bass
Laysan, birds of
                                           Doc.
                                                  543.
Leach, Glen C.
                                           Doc.
                                                  878, 880, 912, 941, 941a, 949
                                                 1018, 1049, 1070, 1098; E.C. 59
                      955, 964, 978, 981, 1011,
                                  5, 10, 14, 18, 22, 25, 33, 34, 38, 42.
                      Adm. Rpt.
Leather from aquatic animals
                                           Doc.
                                                  537.
Leathers, Adelbert L.
                                           Doc.
                                                  915.
Lee, Charles F.
                                           I.R.
                                                   27, 28, 40, 44.
Leeches, American, freshwater
                                           Doc.
                                                    8, 465, 598.
Leeches of Great Lakes
                                           Doc.
                                                  598.
                                           Doc.
                                                  465.
    Porto Rico
Leeward Islands, birds of
                                           Doc.
                                                  543.
                                           Doc.
                                                  241, 646, 647, 648, 649,
Legislation
                                                  650, 651, 840, 866.
                                                  671, 756.
Lefevre, George
                                           Doc.
Lembkey, W. I.
                                           Doc.
                                                  735, 749, 766.
Lemon, James M.
                                           I.R.
                                                  9, 16, 20, 45; F.C.
Leptocephali, American
                                           Doc.
                                                  480.
Leptocephalus of the American eel.
                                           Doc.
                                                  480.
Lernaea
                                           Doc.
                                                  854.
Leucichthys
                                           Doc.
                                                 1001, 1048.
Leuciscus caurinus, critical notes
                                           Doc.
                                                  574.
    New species
                                           Doc.
                                                  565.
Levene, P. A.
                                           Doc.
                                                  438.
Lewis, Sara I.
                                           Doc.
                                                  963.
Libbey, Wm., Jr.
                                           Doc.
                                                  168.
Life history:
                                                  554.
    Clam
                                           Doc.
                                                  580, 870.
    Crab
                                           Doc.
    Gambusia affinis and Cyprinodon
                          variegatus
                                           Doc.
                                                  857.
                                           Doc.
                                                 1053.
    Lake herring
    Lernaea
                                           Doc.
                                                  854.
                                                  413.
    Mussels
                                           Doc.
    Salmon (See Salmon)
                                                  515.
                                           Doc.
                                                  369, 639.
    Shipworms (See Shipworms)
                                           Doc.
                                                  477.
    Squeteague (See Squeteague)
                                           Doc.
                                           Doc.
                                                  441.
    Starfish (See Starfishes)
    Toadfish
                                           Doc.
                                                  709.
                                           Doc.
                                                   89.
Life saving stations, U.S.
    Suggestions to keepers for preserving
                                                   89.
                                           Doc.
       whales and porpoises
Light houses and lightships, keepers of
                                           Doc.
                                                   89.
Light, influence on fish and other
                                                  245.
       pelagic animals
                                           Doc.
                                                  958.
                                           Doc.
Limnological study upper Mississippi
                                                  791.
Limnological study Finger Lakes, N.Y.
                                           Doc.
Limnoria, toxicity of coal tar creosote for Doc. 952.
```

U.J. Fish and Wildlife Service: Special Scientific Report-Fisheries No. 284 PUBLICATIONS OF THE UNITED STATES BUREAU OF FISHERIES, 1871-1940 Insert between page 168 and page 169

```
Lindner, Milton J.
                                         Bull.
                                                   14; I.R. 21.
                                                  128, 150, 154, 164, 165, 175,
Linton, Edwin
                                         Doc .
                                                  182, 183, 220, 250, 370, 446,
                                                  457, 583, 611, 714, 907.
Lists of publications
                                                  406, 614, 899.
                                         Doc.
Lists of fishes
    Bay of Panama
                                         Doc.
                                                  48.
Lobster culture
                                                  247, 300, 522, 554, 654.
                                         Doc.
    Death of fry
                                         Doc .
                                                  522, 554.
    Development of
                                         Doc.
                                                  247.
    Fishery of Maine
                                         Doc.
                                                  445.
      Protection
                                                  373, 653.
                                         Doc .
   Habits of
                                                  247, 300, 747.
                                         Doc.
    Infested with diatoms
                                                  554.
                                         Doc.
   Movements, Woods Hole
                                                  442.
                                         Doc.
                                                 265, 300, 747.
   Natural history
                                         Doc.
    Protection
                                         Doc.
                                                  653.
    Reproductive period
                                                  500.
                                         Doc.
    Spiny - natural history and
     utilization
                                         Doc.
                                                  925.
    Tagging
                                         Doc.
                                                  442.
                                                 146.
    Transplanting to Pacific coast
                                         Doc.
                                                 1062.
Locke, S. B.
                                         Doc.
Loeb, Jacques
                                         Doc.
                                                 245.
                                                  50, 54, 55, 57, 59, 69, 74.
London Exhibition
                                         Doc.
                                                   31, 33.
Loosanoff, Victor L.
                                         Bull.
                                                 416, 559, 560.
Lopholatilus chamaeleonticeps
                                         Doc.
    Blood-vascular system
                                         Doc.
                                                  560.
                                                  19.
                                         E. C.
    Deep-sea food fish
                                                  559.
                                         Doc.
    Osteology
                                                 1009, 1079.
Lord, Russell
                                         Doc.
Lotsy, John P.
                                        Doc.
                                                 313.
                                                 405, 733.
Louisiana, fishes
                                        Doc.
                                                  405.
                                        Doc.
   Investigations in
                                        Doc.
                                                  731.
    Oyster culture
                                                  402.
    Oyster grounds
                                         Doc.
                                        Doc .
                                                  384.
     Industry
                                        E. C.
                                                  50.
Louisville, Ky., fishery trade
                                                  937.
                                         Doc.
Lower California fisheries
                                                  831.
Lucania parva, embryology
                                         Doc.
                                                    2.
Lucas, Clarence R.
                                         F. C.
                                                  559, 722.
Lucas, Frederic A.
                                         Doc.
                                         Doc.
                                                 1077.
Luce, R. H.
                                                 501., 606.
                                         Doc.
Luzon, fishes
                                                  513.
                                         Doc.
Lydell, Dwight
                                                  23.
                                         I.R.
Lynch, Kenneth M.
                                                  899.
                                         Doc.
MacDonald, Rose M. E.
                                                  597.
MacFarland, F. M.
                                         Doc.
                                                  234.
                                         Doc.
Mackenzie River, fishes of
Mackerel:
                                                  658.
    Effects on supply
                                        Doc.
                                                  11, 272, 411, 658.
                                         Doc.
    Fisheries
                                                   2, 9.
                                         Bull.
    Fluctuations in supply
                                                  399.
                                        Doc.
    Investigations in 1897
                                         Doc.
                                                   52.
   Materials for history
                                                   44.
                                         I. R.
   Metabolism in canned
                                                                       53161
                                                   4, 10, 14, 17.
                                         F. C.
    Outlook
```



```
Mackarel (continued)
   Propagation
                                    Doc. 394, 522.
   Spanish, history and artificial
      propagation of
                                     Doc.
                                           60.
   Statistics, for east coast of N.A. I.R.
                                           19.
                                    I.R. 45.
Doc. 551.
Doc. 587.
   Studies on handling
Macruridae, Japanese
Macrura of Hawaiian Islands
   Porto Rico
                                    Doc. 459.
Madison, Wisconsin, fishes
                                    Doc. 591.
Maine, fisheries
Fishes of
                                    Doc. 45, 356, 360, 1015.
Doc. 236, 531.965; Bull. 20.
   Fishes of
   Giant scallop fishery
                                    Doc. 163.
   Lobster fishery
Dangalay Lakes
                                    Doc. 445.
   Rangeley Lakes
                                    Doc. 861.
Malaclemnys, revision of genus
                                   Doc. 557.
Marmals, aquatic embryology
Wann, Albert
                                    Eull. 12.
                                    Doc. 1065, 1090; I.R. 3; Adm. Rot.
Manning, John Ruel
Wantle of fresh-water mussels
                                   Doc. 950.
                                                               (15.
                                    Doc. 345, 350.
Manual of Fish Culture
Marine algae of U. S., list of
                                   Doc.
                                           14.
   Animals, food of
                                    Doc. 248.
                                    Doc. 422.
      For Great Salt Lake
   Apparatus, Norway
                                    Doc. 680, 681.
   Borers
                                    Doc. 952.
   Fauna of southern New England
                                   Doc.
                                           83.
                                    Doc. 714.
   Fish parasites
                                    Doc. 522.
   Fish propagation
                                    Doc. 307.
   Food, sources of
   Hatching and experiment station on
                                    Doc. 333.
      Biscayne Bay, Fla.
   Isopoda of New England
                                   Doc.
                                           32.
     In Philippines
                                         736.
                                    Doc.
   Protozoa
                                    Doc.
                                           502.
Marine animal oils, market in U.S. I.R.
                                          7.
Marine products, spectographic analysis I.R.
Markets, trade in frozen fishery products:
                                    Doc. 939.
   Boston
                                    E.C.
   Chicago
                                           54.
   Louisville
                                    E.C.
                                           50.
                                         55.
52.
   Minneapolis and St. Paul
                                    E.C.
   Pittsburgh
                                    E.C.
   Saint Louis
                                    Doc. 1025.
                                    Doc. 930.
   Sesttle
Markets, trade in Mexico, Central America, South America,
                                    Doc. 951.
      Bermuda and West Indies
                                    F.C.
                                           28.
Markus, Henry C.
                                    Doc. 427, 451, 533, 578, 619, 632, 645, 687, 688, 730, 746, 790.
Marsh, Millard Caleb
Marshall, W. S.
                                    Doc. 591.
                                    Doc. 581, 868.
Maryland crab industry
                                    Doc. 773.
   Darter
   Cyster industry
                                    Doc. 227.
```

```
Doc.
                                              1032.
Massachusetts Bay, cod
                                       Doc.
                                                19.
Massachusetts, fishes
                                       Doc.
                                                567.
    Ichthyology
    Lobster problem
                                       Doc.
                                                653.
                                       E.C.
                                                16.
    Soft clam
                                       Doc.
                                                821.
Mast. S. O.
                                               610.
                                       Doc.
Matagorda Bay oysters
                                       Doc.
                                                265.
Mather, Fred
                                       Doc.
                                              666.
Matsubara, S.
                                       Doc.
                                                295.
Maumee River, fishes of
                                       Doc.
                                               757.
    Mussels of
                                               428.
Maxinkuckee Lake, new darters
                                       Doc.
                                                600.
                                       Doc.
Mayer, A. G.
                                        Doc.
                                                883.
Mayflies, the burrowing
                                                238.
McCallum, G. A.
                                        Doc.
                                                 2, 5.
                                        I.R.
McCollum, E. V.
                                                61, 80, 131, 176, 192, 200,
                                        Doc.
McDonald, Marshall
                                                283. 290. 298, 331.
McGregor, Richard Crittenden
                                        Doc.
                                                404.
McIntosh, W. C.
                                        Doc.
                                                261.
                                                984, 1042; 1099; Bull 6.
McMillin, H. C.
                                        Doc.
                                              441, 654, 676.
                                        Doc.
Mead, A. D.
Meals, nonoily, effect of manufacture
                                        I. R.
                                                30.
       on quality
  Effect of manufacture on haddock
                                        I.R.
                                                 31.
Measurements of fishes, correlation
                                        Doc.
                                                800.
                                        Doc.
                                               703.
Measuring fish eggs
Meat and meat substitutes as fish food Doc.
                                             1079.
                                               667, 668.
Mediterranean sponge fisheries
                                        Doc.
Medusae collected by Albatross
                                        Doc.
                                                113, 129.
                                                600.
    Hawaiian Islands
                                        Doc.
                                                558.
    Woods Hole
                                        Doc.
                                        Doc.
                                                392.
Meehan, W. F
Meek, S. E., and others
                                                156, 195, 280, 288, 306, 352,
                                        Doc.
                                                367, 759.
Mendota Lake, fish epidemic in
                                        Doc.
                                                142.
     Invertebrate animals of
                                        Doc.
                                                147.
                                                302, 307; I.R. 1,3,4.
Menhaden fishery, investigations of
                                        Doc.
                                        Doc.
    Fishery, statistics
                                                18.
                                                657, 658, 811.
    Fishing, effects
                                        Doc.
                                        Doc.
                                                251.
    Food.of
                                        Doc.
                                                871.
     Two species
Menhaden, fish oils, production for
                                                  3, 4.
       animal feeding vitamin-D
                                        I.R.
                                        I.R.
                                                 1.
     Industry
 Menidia, east coast
                                        Doc.
                                                492.
    Habits and development
                                        Doc.
                                                918.
                                                492.
                                        Doc.
    New species of
                                        Doc.
                                               1097.
 Merrick, Amanda D.
                                        Bull.
                                                 35.
Marriman, Daniel C.
                                               297, 436, 495.
                                        Doc.
Mexico fishes
                                               931, 937.
 Mexico fisheries of west coast
                                       Doc.
                                        Doc.
                                                40.
Meyer, H. A.
```

```
Michigan, Douglas Lake
                                     Doc.
                                            814.
    Fish-culture in
                                     Doc.
                                            256.
    Fishes of
                                     Doc.
                                            141.
Middle Atlantic coast, sea scallop
                                     E.C.
      fishery
   Atlantic States, fisheries
                                            296, 340, 453.
                                     Doc.
     Statistics of
                                     Doc.
                                            540, 609.
Midges, aquatic
                                     Doc.
                                            915.
                                          245, 249, 743, 1081.
Migration of fishes
                                     Doc.
    Copepods
                                     Doc.
                                            497.
   Salmon, Columbia River
                                            743.
                                     Doc.
    Salmon, Chinook
                                     Doc.
                                            887.
   Sockeye salmon
                                     Doc.
                                            873.
                                     Doc.
                                            312, 328, 721.
Miner, Roy W.
Minneapolis, trade in fishery products E.C.
                                            55.
                                            312, 328.
Minnesota, fishes of
                                     Doc.
   Mussels of
                                     Doc.
                                           803.
Minnows, life history of
                                     Doc. 857.
    Cyprinodon variegatus
                                          857.
                                     Doc.
                                          857
    Gambusia affinis
                                     Doc.
Minnows, propagation
                                     F.C.
                                            28.
Mineral content of some American
     fishery products
                                     I.R.
                                            41.
                                           405.
Mississippi, investigations in
                                     Doc.
   Biological survey of Upper Miss. Doc. 1028.
                                     Doc. 405, 733, 1027, 1028, 1063,
   Fishes
                                           1072.
      At Keokuk
     And Ohio River States fish laws Doc. 866.
                                     Doc. 1027.
     Greenwood, Miss., fishes
                                          958.
                                     Doc.
     Mississippi River
                                     Doc. 774.
     Oyster investigations
     River, fisheries
                                     Doc. 507, 1072; F.C. 5.
                                     Doc. 840.
     River States, fish laws
     Sound, oyster beds
                                     Doc. 305, 744, 769.
     Upper Miss. River, fisheries,
                                     F.C.
                                             5.
       conditions affecting
                                             5.
                                     F.C.
Mississippi River survey, fisheries
                                     Doc.
                                            156, 297.
Missouri, fishes
   Basin fishes
                                     Doc.
                                            324.
                                           156, 297.
   River, fishes
                                     Doc.
                                     Doc.
                                           812.
     Mussels
   Trade, fishery
                                     Doc. 1026.
                                           786, 787, 850, 851, 860.
                                     Doc.
Mitchell, P. H.
                                     Doc.
                                           573.
Mitsukuri, K
Mobile Bay, oyster beds of
                                     Doc.
                                            305.
                                     Doc.
                                          530.
Moenkhaus, Wm. J.
Mollusca:
                                            57.
    Apparatus used for capture
                                    Doc.
                                            483.
                                     Doc.
   Arkansas
                                     Doc.
                                            761.
   Cephalopods of W. North America
                                          483.
                                     Doc.
    Chatauqua Lake
                                     Doc.
                                           100.
   Dredged by Fish Hawk
                                            57.
                                     Doc.
   Economic
                                     Doc. 313.
    Food of
```

```
Mollusca: (continued)
    Hawaiian, cephalopods
                                        Doc.
                                                789.
    Indian Territory
                                        Doc.
                                                306.
    Lamellibranchiate, morphology of
                                        Doc.
                                                204.
    Monterey Bay
                                        Doc.
                                                597.
    Natural history
                                        Doc.
                                                223.
    Opisthobranchiate
                                        Doc.
                                                597.
    Porto Rico
                                        Doc .
                                                458.
    Wing shell, Atrina rigida
                                        Doc.
                                                744.
                                        Doc.
                                                210.
Montana, fauna of
                                        Doc.
                                                628.
    Grayling
    Reconnaissance of streams and lakes Doc.
                                                205.
                                                400. 776.
Monterey Bay, fishes
                                        Doc.
    Opisthobranchiate Mollusca
                                        Doc.
                                                597.
Monroe, Ralph M.
                                        Doc.
                                                380.
Moore, Emmeline
                                        Doc.
                                                815, 881.
                                                229, 349, 356, 381, 402, 422,
Moore, H. F.
                                        Doc.
                                                462, 610, 667, 669, 719, 729,
                                                731, 745, 769, 774, 809, 816;
                                                18, 29, 32, 33, 34.
                                        E.C.
                                                394, 399, 465, 598, 923.
Moore, J. Percy
                                        Doc.
Morphology:
    Dogfish, sense organs
                                        Doc.
                                                738, 798.
    Ear of squeteague
                                        Doc.
                                                715.
    Fishes, lateral line organs
                                        Doc.
                                                563.
    Fishes, nervous system
                                                415.
                                        Doc.
                                                806.
    Gambusia affinis
                                        Doc.
                                                514.
    Hearing
                                        Doc.
                                                204.
    Mollusks
                                        Doc.
    Salmon, alimentary tract
                                        Doc.
                                                777.
                                                738, 798.
    Sense organs of dogfish
                                        Doc.
                                               715.
    Squeteague
                                        Doc.
                                                560, 595, 599.
    Tilefish
                                        Doc.
Mortality of fishes, West coast of
      Florida
                                        Doc.
                                               848.
    Eggs of pike perch
                                        Doc.
                                                926.
Morton, Fred G.
                                        Doc.
                                               1057.
Moser, Jefferson F.
                                        Doc.
                                                408.
Mosquito control in ponds, fishes in
                                                874, 971.
      relation to
                                        Doc.
    Control in northern fresh waters
                                        Doc.
                                                923.
    Fishes destructive to eggs and
                                                857, 874; E.C. 17.
                                        Doc.
      larvae
                                                                            17.
    Problem, relation of fishes
                                        Doc.
                                                683, 806, 857, 874; E.C.
Motorboat noises, effect on fishes
                                        Doc.
                                                752.
Mounting epecimens serially
                                        Doc.
                                                 76.
                                        E.C.
                                                 49.
Mud-puppy (Necturus)
                                                145.
                                        Doc.
Mullet, Jamaica mountain
                                                720, 721, 722, 723, 724.
                                        Doc.
Museum exhibit of fishes
                                        Doc.
                                                723, 724.
    Specimens of fishes
                                               817, 957.
Mushy halibut
                                        Doc.
Mussel blood, under normal and
```

Doc. 1097.

adverse conditions

```
Mussel:
    Culture
                                        Doc.
                                               671, 756, 950.
  Exploration of resourcee:
    Big Buffalo Fork, White River, Ark. Doc.
                                               759.
    Caddo Lake, Texas
                                        E.C.
                                                6.
    Clinch River, Tennessee
                                        Doc.
                                               765.
    Cumberland River
                                        E.C.
                                                 1; Doc. 781.
    For River
                                        Doc.
                                               804.
    Holston River, Tennessee
                                        Doc.
                                               765.
    Illinois River
                                        Doc.
                                               804.
    James River, S. Dak.
                                        Doc.
                                               812.
    Kankakee Basin
                                               758.
                                        Doc.
    Kentucky River
                                        Doc.
                                               934.
    Lake Pepin Survey
                                        E.C.
                                                57.
                                                6, 14.
    Louisiana
                                        E.C.
   Maumee River
                                        Doc.
                                               757.
   Minnesota
                                        Doc.
                                               803; E.C.
                                                            3.
    Missouri
                                        E.C.
                                                10.
   Missouri River, upper tribs.
                                        Doc.
                                               812.
    Oklahoma
                                        E.C.
                                                 9.
    South Dakota Rivers
                                        Doc.
                                               812.
    Tensas River, La.
                                        E.C.
                                                14.
    Texas, Caddo Lake
                                        E.C.
                                                 6.
    Vermillion River, S. Dak.
                                        Doc.
                                               812.
Mussel, fishery and pearl button industry
      of Mississippi River
                                               414.
                                        Doc.
Mussel, food and feeding
                                        Doc.
                                               963.
Mussel, freshwater
                                        Doc.
                                               413, 414, 671, 756, 757, 758,
                          759, 765, 771, 778, 781, 792, 793, 801, 803, 804,
                          805, 812, 813, 824, 865, 893, 895, 916, 934, 950;
                          E.C. 15, 57.
                                        Doc.
                                               671, 756, 792, 801, 824, 893,
   Artificial propagation
                                               895, 916, 971.
    Common and scientific names
                                        E.C.
                                                15.
    Growth
                                        Doc.
                                               792, 1103.
    Hosts
                                        Doc.
                                               778, 801, 824.
    Identification of Glochidia
                                               771.
                                        Doc.
    Industries of U.S.
                                        Doc.
                                               865.
                                               771, 813, 824.
    Larvae, identification
                                        Doc.
    Larval mantle
                                        Doc.
                                               950.
    Life history
                                               413, 893.
                                        Doc.
    Migration
                                               792.
                                        Doc.
    Mytilus edulis, biology and
      economic value
                                               922.
                                        Doc.
    Natural history and propagation
      fresh-water mussels
                                        Doc.
                                               893.
    Natural propagation, flood stages,
      James River, South Dakota
                                        Doc.
                                               812.
                                        Doc.
    Parasites, copepod, glochidae
                                               824.
    Pollution, effect on mussel blood
                                        Doc. 1097.
                                               671, 756, 893, 916.
    Propagation
                                        Doc.
                                               793.
    Protection
                                        Doc.
    Replacement
                                        F.C.
                                                 7.
    Ribbed, food of
                                               313.
                                        Doc.
                                               655, 742, 922; E.C. 12.
    Saltwater, as food
                                        Doc.
    Sex distinction, growth
                                        Doc.
                                               893, 1103.
```

```
Mussel, fresh-water (continued)
    Shell description, James River, S.D. Doc. 812.
    Significance of larval mantle
                                         Doc.
                                                950.
      during parasitism
                                                976.
    Statistics
                                         Doc.
    Water power development, effects
                                         Doc.
                                                805.
                                                738, 798.
                                         Doc.
Mustelus canis, sense organs
                                         Doc.
                                                554. .
Mya aranaria, life history
Mylocheilus lateralis, critical notes
                                         Doc.
                                                574.
                                                215.
                                         Doc.
Myxosporidia, classification of
                                         Doc.
                                                855.
    Of Beaufort region
                                         Doc.
                                                285.
    Of fishes
                                         Doc.
                                                817, 957.
    Of halibut
Names, common and scientific, of
                                                892, 908, 932, 954, 976, 997,
      common commercial fishes
                                         Doc.
                                               1025, 1095.
    Common and scientific names of
      some Texas fishes
                                         Doc.
                                               1009.
Narragansett Bay, contamination of
                                         Doc.
                                                569.
      oyster beds
                                         Doc.
                                                407.
Nashville Exposition
National Fisheries Congress, papers
                                         Doc.
                                                363, 364, 396.
National Museum, catalogue of collections
                                         Doc.
                                                 59.
      of fishes
    Directory of officers 1882.
                                         Doc.
                                                 39.
                                                708, 709, 710, 711, 733, 783,
Natural history, fishes
                                         Doc.
                                                806, 826. (See other species.)
    Catfishes
                                         Doc.
                                                733.
    Gambusia affinis
                                         Doc.
                                                806.
                                                965.
    Gulf of Maine
                                         Doc.
                                         Doc.
                                                710.
    Hornod dace
                                         Doc.
                                                747.
    Lobster
                                                500.
      Reproduction
                                         Doc.
    Orange spotted sunfish
                                         Doc.
                                                938.
                                         Doc.
                                                349.890.
    Oyster
                                                515, 743, 767, 1092; Bull. 32.
                                         Doc.
    Salmon, chinook
    Spotted or sea trout, red drum, black drum,
                                               1046.
      croaker, spot (of Texas)
                                         Doc.
                                                      Bull.
    Squeteague
                                         Doc .
                                                477:
    Toadfish
                                         Doc.
                                                 709.
                                                288.
                                         Doc.
Nebraska, fishes of
                                                 49.
                                         E.C.
Necturus (mud-puppy)
                                                883.
                                         Doc.
Needham, James G.
                                                             19.
                                               1074;
                                                      I.R.
                                         Doc.
Needler, A. W. H.
Nelson, E. M.
                                         I.R.
                                                  3, 12.
Nemerteans, Hawaiian Islands
                                         Doc.
                                                589.
                                               466.
                                         Doc.
    Porto Rico
                                                 297.
                                         Doc.
Neosho, Mo., fishes near
                                                415.
                                         Doc.
Nervous system of fishes
                                                 37.
Nets, cod, description of
                                         Doc.
                                               1083.
    Deterioration of in Lake Erie
                                         Doc.
                                         Doc.
                                                275.
    For fish, construction of
                                                898, 947, 1075; E.C.
                                                                        74.
                                         Doc.
    Preservation of
                                                322.
                                         Doc.
    Submarine, description of
                                                303.
                                         Doc.
Neuse River, fishes of
                                         F.C.
                                                  18.
Neville, W. O.
                                                   5.
Newell, John M.
                                         I.R.
```

```
New England:
                                        Doc.
                                               585.
    Amphipoda
    Coast, physical investigation off
                                       Doc.
                                               168.
                                        Doc.
                                              1081.
    Cod, migration
    Dredging expedition
                                        Doc.
                                              444.
    Fish, new oceanic
                                        Doc.
                                               475.
    Fisheries
                                        Doc.
                                                 3, 454, 555, 575, 620.
                                               353, 475, 494, 531, 633.
    Fishes
                                        Doc.
    Fishes, Gulf of Maine
                                       Doc.
                                               965.
    Freshwater fishes
                                               531, 633.
                                        Doc.
    Haddock fishery
                                        Doc.
                                               31.
    Investigations, Grampus, southern
                                               168.
      coast, 1889
                                        Doc.
    Marine isopods of
                                       Doc.
                                               32.
                                        Doc.
                                              426.
    Marine synaptas of
                                        Doc.
                                              475.
    New fishes
                                              764.
    New species
                                        Dec.
                                        Doc.
                                              620.
    Statistics
                                       Doc.
                                              426.
    Synaptas
    Winter haddock, fishery of
                                       Doc.
                                               31.
                                       Doc.
                                               783.
New Hampshire, fishes
New Jersey, fishes of
                                              229, 230.
                                       Doc.
    Great Egg Harbor Bay
                                       Doc.
                                               122.
                                               291.
    Oyster industry of
                                       Doc.
                                               555.
New York, fisheries, interior
                                       Doc.
                                       Doc.
                                               122, 483, 494.
    Fishes
    Fishes, Lake Champlain
                                       Doc.
                                              494.
            Lake Chatauqua
                                       Doc.
                                               483.
                                              494.
            Lake Ontario
                                       Doc.
                                               494.
            St. Lawrence River
                                       Doc.
                                               791, 905.
    Lakes, Finger
                                        Doc.
                                               372.
    Lampreys
                                       Doc.
    Mollusks, Lake Chatauqua
                                        Doc.
                                               483.
New Zealand, American fishes introduced Doc. 697.
                                               111.
Nicklas, Carl
                                        Doc.
                                               41, 43, 44.
                                        I.R.
Nilson, Hugo W.
                                               234, 255.
Nordquist, Oscar
                                        Doc.
                                               231.
North America
                                        Doc.
                                               42, 761.
                                        Doc.
    Cephalopods
    Committee on fishery investigations Doc.
                                               971.
                                               254.
    Fish culture in
                                        Doc.
                                               94, 323, 336, 1055.
                                        Doc.
    Fishes of
                                               323.
    Whitefish of
                                        Doc.
North Carolina:
                                        Doc.
                                               208, 303.
    Fishes of
                                                8.
                                        Cir.
    Fishing grounds
                                               871.
                                        Doc.
    Menhaden
                                        Doc.
                                               556.
    Oysters
    Oyster culture
                                        Doc.
                                               556.
                                               822.
    Sharks and rays
                                        Doc.
    Sponges of Beaufort, and vicinity Doc.
                                              876.
    Summer fisheries of Pamlico and
                                        Doc.
                                              1019.
      Core Sounds
North Carolina, winter trawl fishery
                                        I.R.
North Dakota:
                                        Doc.
                                               634.
    Devils Lake
                                        Doc.
                                               312, 634.
    Fishes of
```

```
Northeastern coast of America, cephalopods
                                               42.
Northwestern United States and western
        Canada, explorations in
                                       Doc.
                                              282.
Northwestern Lakes, biological and
        chemical studies
                                       Doc.
                                              944.
Norway, fish culture
                                       Doc.
                                              680, 681.
Norwegian cod nets
                                        Doc.
                                               37.
Nudibranchs of Monterey Bay
                                       Doc.
                                             597.
Nutritive value of fish and shellfish
                                       Doc. 1000.
Nutting, C. C.
                                       Doc.
                                             455, 586.
Observations upon fish
                                       Doc.
                                             188.
Obstruction of shad streams
                                       Doc.
                                             379.
Ocean fishes and effect of legislation
        upon the fisheries
                                       Doc.
                                             241.
    Sun-fish, chemical composition of subdermal
        connective tissue of
                                       Doc.
                                             449.
Oceania, fishes
                                       Doc.
                                             605.
    Fish, description, found off
        southern New England
                                       Doc.
                                             475, 965.
Oceanography, western Atlantic
                                       Doc.
                                             833. 971.
        Gulf of Maine
                                       Doc.
                                             969.
Odors, elimination of obnoxious, in
        rendoring fish
                                       Doc. 811.
Oemler, A.
                                       Doc.
                                             262.
Ohio and Mississippi River States,
        fish laws
                                       Doc.
                                             866.
Ohio fishes
                                       Doc.
                                             295.
Ohio River fishes
                                       Doc.
                                             499, 733.
011:
    Burbot liver
                                       I.R.
                                              12.
   Haddock liver
                                       I.R.
                                              27.
   Market for marine animal
                                               7.
                                       I.R.
                                       I.R.
                                              40.
    Vitemin-D in menhaden
                                       I.R.
                                              36.
Oil and tar pollution
                                       Doc.
                                             910.
Oil pollution
                                             910. 995.
                                       Doc.
Oligochaeta, Great Lakes region
                                       Doc.
                                             598.
Oligochaetological researches
                                       Doc.
                                             101.
Olsen. O. T.
                                             646.
                                       Doc.
                                       Doc. 982, 1002, 1017, 837, 846, 863,
O'Malley, Honry
                     873, 879, 913, 946, 982, 1038, 1051; E.C. 71; F.C. 13.
Ontario Lake fishes
                                             494.
                                       Doc.
Opisthobranchiate Mollusca, Monterey
                                       Doc.
                                             597.
       Bay
                                       Doc.
                                             709.
Opsanus tau, habits
                                             351, 636, 638.
Oregon fishes
                                       Doc.
   Halibut survey, 1914
                                       Doc.
                                             817.
   Survey of fishing grounds
                                       Doc.
                                             835.
                                       Doc.
                                             598.
Ortmann, A. E.
                                       Doc.
                                             760, 972.
Osburn, R. C.
Osgood, Wilfred H.
                                       Doc.
                                             820.
Oshima, Kokichi
                                       I.R.
                                               8.
Osseous fishes, development of
                                       Doc. 106.
                                       Doc. 71.
    Embryology of
```

```
Osteology of Amia calva
                                        Doc.
                                                 90.
   Black bass
                                        Doc.
                                                448.
   Tilefish
                                        Doc.
                                                559.
Otter-trawl fishery
                                               816.
                                        Doc.
Oxygen requirements of shellfish
                                        Doc.
                                               787.
Oysters:
   Acclimatization, Willapa Bay
                                        Doc.
                                               334.
   Adaptation of feeding mechanism
                                        Bull.
                                                21.
   Affected by water-gas tar
                                               786.
                                        Doc.
   Apalachicola Bay
                                        Doc.
                                               343, 841.
   Artificial
                                               961, 1035.
                                        Doc.
   Atlantic Coast and Gulf Coast
      industry
                                        Doc.
                                               890.
   Blood corpuscles, color
                                        Doc.
                                                91.
   Collection of seed
                                        Doc.
                                             1076, 1088.
   Connecticut
                                               960, 961, 971, 1054.
                                        Doc.
   Containers and packages used in
                                        E.C.
                                                62.
      shipping
   Contamination
                                        Doc.
                                               569.
   Culture
                                        Doc.
                                                 67, 104, 263, 349, 422, 731,
                                           890, 961, 1035, 1054, 1076, 1088.
   Destruction by flood, Mobile Bay
                                        Doc.
                                              1069.
   Distribution
                                              1054.
                                        Doc.
                                                70; Bull. 4; F.C. 25.
   Drill
                                        E.C.
   Europe
                                        Doc.
                                               203, 214.
   Fattening experiments, Lynnhaven
                                        Doc.
                                               524.
   Fishery of Connecticut
                                               169.
                                        Doc.
   Flatworm, enemy of Florida cysters Doc.
                                               869.
   Food of
                                               321, 556, 610, 719, 890.
                                        Doc.
   France
                                        Doc.
                                               203.
   Function of gills (ciliary action) Doc.
                                              1035.
   Georgia
                                        Doc.
                                              1077.
   Gills, ciliary action
                                        Doc.
                                              1035.
   Great Salt Lake
                                               422.
                                        Doc.
   Great South Bay, L. I.
                                               896, 911, 936, 956, 971; E.C. 70
                                        Doc.
   Green
                                        Doc.
                                                 91, 850, 1094.
     In Virginia
                                        Doc.
                                               850.
                                               305, 769, 1069.
   Grounds in Alabama
                                        Doc.
   Health food
                                        E.C.
                                                58.
              Connecticut
   Industry:
                                        Doc.
                                               169.
     Atlantic and Gulf coast .
                                        Doc.
                                               890.
     Georgia
                                        Doc.
                                               262.
     Gulf coast
                                               890.
                                        Doc.
     Louisiana
                                        Doc.
                                               384.
     Maryland
                                               227.
                                        Doc.
     Narragansett Bay (sewage)
                                               569.
                                        Doc.
     New Jersey
                                               291.
                                        Doc.
     North Carolina
                                        Doc.
                                               556.
     Pacific coast
                                        Doc.
                                               217, 334, 1066.
     Rhode Island
                                        Doc.
                                               569.
     Willapa Bay
                                        Doc.
                                               334.
   Investigations:
     Apalachicola Bay, St. Vincent Sound, and
        St. George Sound
                                               343, 841.
                                        Doc.
     California
                                        Doc.
                                               153.
     Delaware
                                        Doc.
                                               745.
     Drill
                                        E.C.
                                                70; Bull. 4.
```

```
L - 1 , 1 - -
  Introd, sicks: (continued)
      llorida
                                                345, 332, 333, 305, 531,
                                         Doc.
                                                841, 869.
      James River
                                         Doc.
                                                729.
      Lavaca Bay, Texas
                                         Doc.
                                                £09.
                                                305, 402, 731.
      Louisiana
                                         Doc.
      Matagorda Bay
                                         Doc.
                                                610.
      Liseissippi Sound
                                                305, 769, 774.
                                         Doc.
      Mobile Euy, Alabama
                                                305, 1069.
                                         Doc.
      Narragansett Bay, (pollution)
                                         Doc.
                                                569.
      North Carolina
                                         Doc.
                                               556; E.C. 66.
                                         Doc. 1066, F.C. 12.
      Pacific Coast
      Planting investigations in Calif.
                                         Doc.
                                                153.
      St. Goorge Sound, Fla.
                                                343, 841.
                                         Doc.
      St. Vincent Sound, Fla.
                                         Doc.
                                                343, 841.
      South Carolina
                                         Doc.
                                              199, 202;
                                                           E.C. 61.
      Southern California
                                         Doc.
                                                153.
      Toxas
                                         Doc.
                                                387, 610.
                                                512.
    Japan
                                         Doc.
    Louisiana
                                         Doc.
                                                384, 402, 731.
                                                305, 769, 774.
    Mississippi Sound
                                         Doc.
    Natural history
                                         Doc.
                                                349, 890; E.C.
                                                                 18.
      Consumption of oxygen by normal
        and green oysters
                                         Doc.
                                               1094.
      Function of gills
                                         Doc. 1035.
      Green-gilled in Virginia
                                         Doc.
                                              850.
      Tongs, improved
                                         Doc.
                                                153.
      Nutrition:
                                                860.
        Fattening
                                         Doc.
        Clycogen formation
                                         Doc.
                                                851.
        Oxygen requirement.
                                         Doc.
                                               787.
        Recipes for cooking
                                         E.C.
                                                18, 53.
        Wholesomeness
                                         E.C.
                                                 58.
                                                556; E.C. 65.
    North Carolina
                                         Doc.
    Observations on spawing and setting
      of Olympia oysters
                                         Bull.
                                                 23.
    Oxygen requirements
                                         Doc.
                                                787.
    Pacific Coast
                                               1066; F.C. 12.
                                         Doc.
                                               153.
    Planting in California
                                         Doc.
    Predictions, conditions controlling
                                        Doc. 1054.
    Principles of
                                         Doc.
                                               104.
    Problems, factors in
                                         Doc.
                                               381.
    Production of seed oysters
                                         Doc. 1088.
    Rearing from artificially
                                                67, 961. .
      fortilized eggs
                                         Doc.
                                               1054, 1076, 1088.
                                         Doc.
    Setting
    Spat, method of collecting
                                         Doc.
                                               104.
                                         Doc. 1054.
    Spawning
                                         E.C.
      South Carolina
                                                6l.
                                         Doc.
                                                387.
                                         Doc.
                                               856.
      Tuckerton, New Jersey
```

Survey, Texas

I.R.

6.

```
Crude oil pollution in Louisiana
                                        Bull.
      waters
                                                18.
    Decline of oyster industry of
      York River, Va.
                                        I.R.
                                                37.
    Iodine content
                                        I.R.
                                                18.
    Japanese, introduction to U.S.
                                        F.C.
                                                12.
                                        Bull.
    Long Island Sound, 1937
                                                33.
    Market for fresh oysters
                                        F.C.
                                                 3.
    Nutritive value
                                        I.R.
                                                17.
    Olympia, spawning, and setting
                                        Bull.
                                                23.
    Opening, new methods
                                        I.R.
                                                15.
    Pulp mill pollution-effect of
                                        Bull.
                                                    I.R.
                                                 6;
                                                           37.
    Sensory stimulation by chemicals
                                        Bull.
                                                 8.
    Shell movements
                                        Bull.
                                                 1.
    Spawning and setting in Galveston
      Bay. Texas
                                        Bull.
                                                 3.
    Spawning and setting in Long Island
      Sound, 1937
                                        Bull.
                                                33.
    Spawning, larval development and
                                        Bull.
                                                23.
      setting
                                                12, 21.
                                        F.C.
    Story
    Studies on the oyster drill
                                        Bull.
                                                 4.
    Survey oyster bottoms, Texas
                                        I.R.
                                                 6.
    Temperature and shell movements
                                        Bull.
                                                 ı.
Otter trawling, modification in gear to curtail the
      destruction of undersized fish
                                        I.R.
Pacific coast, acclimatization of fishes Doc. 309.
Pacific coast, fish-cultural
                                        Doc.
                                               314.
      stations on
                                               178, 290, 293, 299, 359, 362,
    Fisheries
                                        Doc.
                                               505, 603, 612, 618, 751, 763,
                                               817, 830, 816, 839, 902, 920,
                                               984, 1066, 1092. (See Alaska.)
    Fisheries, cod
                                        Doc.
                                               830, 1014.
    Fisheries, halibut
                                               763, 817.
                                        Doc.
                                               231, 326, 400, 425, 574, 1087.
    Fishes
                                        Doc.
    Herring
                                        Doc.
                                              1080; Bull. 2, 9, 17.
    Lobsters for
                                        Doc.
                                               146.
                                               217, 334, 1066.
    Oyster industry
                                        Doc.
    Razor clams
                                       Doc.
                                               984.
    Salmon:
                                               767; Bull. 15.
                                        Doc.
      Age
      Anatomy
                                        Doc.
                                               777, 796.
      Canned, uses
                                        E.C.
                                                11, 48.
                                               519, 879
      Culture
                                        Doc.
                                               799, 802.
      Fat in tissues
                                        Doc.
                                               178, 515, 624, 627, 751, 767,
      Fisheries
                                        Doc.
                                               817, 839, 891, 902, 971, 1092.
                                               743; Bull. 32.
      Migration, Columbia River
                                        Doc.
      Natural history
                                        Doc.
                                               515, 624, 627, 767.
                                        Doc.
                                               584, 743, 799, 802.
      Physiology
                                               314, 320, 519, 879.
                                        Doc.
      Propagation
```

```
Pacific coast vessels
                                       Doc.
                                             187.
Pacific ocean, explored by Albatross
                                             110, 130, 180, 216, 228, 234.
                                       Doc.
    Salmon, natural history
                                       Doc.
                                             515, 624, 627.
    States, acclimatization of fish in Doc.
                                             309.
Packing fish for transportation
                                       Doc.
                                             443, 659, 677,
Paddlefish, caviar
                                       Cir.
                                              20.
Page, Wm. F.
                                       Doc.
                                            139, 259, 294.
Paige, Charles L.
                                       Doc. 677, 679.
Pail for transporting fishes
                                       Doc. 941, 941a.
Pamlico Sound, N. C., destruction
                                       Doc. 1019.
       of fish
Panama, fishories
                                       Doc. 931.
Panama Bay, fishes
                                       Doc.
                                             48.
Pan-American Exposition, report on
                                       Doc. 508.
Panay fishes
                                       Doc. 606.
Paraguay
                                       Doc.
                                             931.
Parasite on hermit crab
                                       Doc.
                                             478.
    Ameba in trout, Schizamoeba salmonis Doc. 987.
    Edible crabs
                                       Doc.
                                             503.
                                       Doc. 164, 165, 183, 220, 250, 253,
Parasites of fishes
                         370, 583, 591, 611, 957, 987, 988 ; E.Cir. 21 ; E.C.42.
    In Chio River
                                       Doc. 165.
Parasites, protozoan, classification of Doc. 215.
Parasites, protozoan on fish in
                                       Doc.
                                             253.
        aquarium
    Bacterium truttae
                                       Doc.
                                             533.
    Beaufort fishes
                                       Doc.
                                             583.
    Butterfish
                                       Doc.
                                             611.
    Copepod, glochidia
                                       Doc.
                                             824.
                                       Doc. 987, 988.
    Flagellate of trout
                                             691, 692, 693.
                                       Doc.
    Fungus
                                       Doc. 801, 824.
    Glochidia
    Marine food fishes
                                       Doc. 714.
    Mushy halibut
                                       Doc.
                                             817, 957.
    Now myxosporidian
                                       Doc.
                                             957.
    Sebago salmon
                                       Doc. 713.
                                       Doc. 810.
    Sporozoan
                                             183.
                                       Doc.
    Tigor shark
                                             987, 988.
    Trout
                                       Doc.
    Wisconsin Lakes
                                       Doc.
                                             591.
    Woods Hole fishes
                                       Doc. 446, 457, 561, 611, 810.
    Yellowstone National Park fishes
                                       Doc.
                                             164, 818.
Parasitic worms in fishes
                                       E.C.
                                              21, 42.
Parasitism of mussels
                                       Doc .
                                             950.
                                             497, 498, 514, 563, 715, 738,
Parker, G. H.
                                       Doc.
                                             752, 755, 775, 798, 820.
Passamaquoddy Bay herring fisheries
                                       Doc. 356, 360.
Pathology, biliary calculi in
                                             498.
                                       Doc.
        squetesgue
                                             971.
                                       Doc.
    Fishes
                                             431, 578.
               in fishes
                                       Doc.
    Gas diseas
                                       Doc.
                                             554.
    Lobster
                                       Doc.
                                             414, 865.
Pearl button industry
                                       Doc. 946, 989.
    Masenco
                                       Doc. 152, 389, 397, 660.
    Fisheries
```

```
F of industry: (continued)
    Pleasey of California
                                       Doc. 152.
        United States
                                       Doc. 152, 389, 397.
   Oyater fishery, preserving
                                       Doc. 660.
Fourls at Columbian Exposition
                                       Doc. 278.
    Fresh-water, of United States
                                       Doc. 389, 397.
Pearly fresh-water mussels of the
                                       Doc. 413.
        United States
    Japan
                                       Doc. 573.
                                       Doc. 856, 867, 885, 906; E.C. 49.
Pearse, A. S.
                                       Doc. 1019, 1046; I.R. 10; F.C.
Pearson, J. C.
                                       Bull. 28, 30, 54.
                                       Doc. 251, 307.
Pack, James I.
Pelagic animals, migration of
                                       Doc. 245.
    Organisms, collecting of
                                       Doc. 289.
Penacidao, American early life
                                       Bull. 30.
       histories
Penobscot Bay salmon fisheries
                                       Doc. 357.
Perce, H. Wheeler
                                       Doc. 651.
Perch, pike and yellow, propagation
                                       Doc. 1018.
Peripheral nervous system of the
       bony fishes
                                       Doc. 415.
Peritoneal membranes, ovaries,
        in Salmonoids
                                       Doc.
                                             901.
Poru, fisheries
                                       Doc. 663, 931.
    Guano industry
                                       Doc. 663.
Philippine expedition, dredging
        records, Albatross
                                       Doc.
                                             741.
                                             501, 606, 607, 640, 647.
    Islands, fishes
                                       Doc.
    Isopods
                                       Doc.
                                            736.
Photography of aquatic animals
                                       Doc. 424, 635, 710, 711.
                                       Doc. 424, 635, 710, 711.
    Live fishes, experiments in
    Subaquatic
                                       Doc. 635, 710.
Physical investigations, New England
        coast
                                       Doc. 168.
Physiology:
                                            596, 712, 799.
    Fishes
                                       Doc.
        Color changes in flounders
                                       Doc.
                                            821.
                                       Doc. 415. 584.
       Nervous system
       Sense of hearing
                                       Doc.
                                            752, 755.
       Sense of smell
                                             775, 798.
                                       Doc.
        Sense of taste
                                       Doc.
                                            743.
        Sonse of vision
                                            821.
                                       Doc.
                                             584.
                                       Doc.
    Blood pressures in salmon
                                            584.
    Blood and sorous liquids in salmon Doc.
                                       Doc. 584, 743, 799.
    Chinook salmon
                                             625.
                                       Doc.
    Digestive track of elasmobranchs
                                            738, 798.
   . Dogfish, sense organs
                                       Doc.
    Effects on fishes of changes in
                                       Doc. 596.
        density of water
                                       Doc. 821.
    Floundars, sense of vision
                                       Doc. 806.
    Cambusia affinis
    Cas in swim-bladder of fishes
                                       Doc. 498.
                                       Doc. 563.
    Lateral-line organs in fishes
                                       Doc. 584, 799.
    Salmon, chinook
```

```
Physiology: (continued)
    Salmon, nervous system
                                        Doc.
                                              584.
    Squeteague, ear
                                        Doc. 715.
    Nervous system of Protozoa
                                        Doc. 435.
        Salmon
                                        Doc.
                                             584.
    Copopods, reaction
                                        Doc. 497, 824.
    Wing sholl
                                       Doc. 744.
Pictors, A. J.
                                        Doc.
                                             479.
Pigfish, life history
                                       Doc. 823.
    Scale study, age determination
                                       Doc.
                                             823.
Pigott, Madeleine G.
                                       I.R.
                                              36.
Pike perch, propagation
                                             521, 1018.
                                       Doc.
    Eggs, mortality in
                                       Doc.
                                             926.
Pikes
                                       Doc.
                                             853, 1018,
Pilchards (fishery) of California
                                       Doc. 1087.
Pilsbry, Henry A.
                                       Doc. 617, 739.
Pirko, Franz von
                                       Doc.
                                             698.
Pittsburgh, Pas, trade in fishery
        products, 1921
                                       E.C.
                                              54.
Plankton algae of Lake Erie
                                       Doc.
                                             529.
    Limnological observations, Upper Miss.
        River
                                       Doc.
                                             958.
    Environment of fishes,
        Connecticut Lakes
                                       Doc.
                                             633.
    Production in fish ponds
                                       Doc. 1082.
    Investigation, methods
                                       Doc.
                                             365.
    Of offshore waters of Gulf of Maine Doc.
                                               968.
    Studios
                                       Doc. 221, 252, 365.
    Of Woods Hole
                                       Doc.
                                            975.
       In Great Lakes
                                       Doc. 252.
        Marine
                                       Doc. 971.
Plants, aquatic, relation to
        substratum
                                       Doc. 566.
    In pond culture
                                       Doc.
                                             643, 881, 948.
    Of western Lake Erie
                                       Doc.
                                             479.
Poikilothermal vertebrates (cold blooded),
        digestive enzymes in fishes
                                             977.
                                       Doc.
Pollock culture
                                       Doc.
                                            522.
Pollution:
                                            619, 910; Bull.
                                       Doc.
                                                               22.
    Oil and tar pollution
                                       Doc.
                                            910.
    Oil, effects on marine life
                                       Doc. 995.
   Narragansett Bay
                                       Doc. 569.
    Oysters
                                       Doc. 569.
    Upper Mississippi River survey
                                       Doc. 1023.
Pollution problems,
    Crude oil pollution, La.
                                       Bull.
                                              18.
  Detection and measurement
                                       Bull.
                                              22.
    Pulp mill pollution, oysters
                                       Bull.
                                               6.
Polychaetous annelids, Hawaiian Is.
                                       Doc. 601.
   Porto Rico
                                       Doc. 464.
Pond culture
                                       Doc.
                                             30, 67, 103, 111, 304, 346, 347,
                                             643, 687, 815, 820, 1056, 1085.
    Dragonflies and damselflies in
        relation to
                                       Doc. 882.
                                       Doc. 1056; E.C. 41. (See fish culture.)
    Fishes, propagation of
```

```
Pond culture: (continued)
    Note on
                                       Doc.
                                             67.
                                       Doc. 643, 687, 815, 881.
    Plants in
Ponds, fish on farms
                                       Doc. 826, 1056.
    Construction
                                       Doc. 826, 1056.
    Plankton production
                                       Doc. 1082.
Pond, R. H.
                                             566.
                                       Doc.
Pope. T. E. B.
                                       Doc. 634, 731.
Porpoise, Hawaiian Islands
                                       Doc.
                                            544.
    And whales, preserving specimens
                                       Doc.
                                             89.
    Collecting of
                                       Doc.
                                            89.
Porto Rico, actinaria of
                                       Doc. 470.
    Alcyonaria of
                                       Doc. 468.
    Annelids
                                       Doc. 464.
    Anomura of
                                       Doc. 460.
    Brachyura and macrura of
                                       Doc. 459.
    Cirrepedia of
                                       Doc. 463.
    Corals of
                                       Doc. 469.
   Echinoderms of
                                      Doc. 467.
   Fish trade
                                      Doc. 418, 539.
   Fisheries of
                                       Doc. 362, 418, 451, 539; I.R. 13.
   Fishes of
                                      Doc. 427, 451.
   Foraminifera
                                      Doc. 484.
    Investigations of the aquatic resources
        and fisheries of
                                      Doc. 451.
   Isopods of
                                      Doc. 462.
   Leeches of
                                      Doc. 465.
   Macrura
                                      Doc. 459.
   Mollusca of
                                      Doc. 458.
   Nemerteans of
                                      Doc. 466.
   Polychaetous annelids of
                                      Doc. 464.
   Sponges of
                                      Doc. 471.
   Stomatopods of
                                      Doc. 461.
   Stony corals
                                      Doc. 469.
Post, Hoyt
                                      Doc. 256.
                                      Doc. 815, 881.
Potamogetons
Potomac River, fishes of
                                      Doc.
                                           189, 409.
                                      Doc. 619.
    Pollutions
                                              4, 27, 28, 30, 31, 32, 40
Pottinger, S. R.
                                      I.R.
Potts, Edward
                                      Doc.
                                             63.
Proble, E. A.
                                      Doc. 820.
                                           488.
Preparation of fish eggs for food
                                      Doc.
                                      Doc. 723, 724.
   Museum purposes
                                      Doc. 443, 659.
    Shipment
Preservation: Embryonic material.
       mounting sections serially
                                      Doc.
                                            76.
                                           903, 919.
   Fish by salt
                                      Doc.
                                      Doc. 417, 487, 488, 489, 490,493, 919.
   Fish and fishery products
                                      Doc. 898, 947, 998.
   Fish nets
                                      Doc.
                                            493.
   Haddock
                                            76.
                                      Doc.
   Small organisms
Priamur, fishing in, district of
       Siberia
                                      Doc. 844.
Pribilof Islands, fur seals and
                                      Doc. 748, 749, 820.
        other life
```

```
Products of fisheries in arts
                                       Doc. 536, 626.
                                       Doc.
                                            488.
    Fish eggs
                                       Doc. 487, 489, 490, 493.
    Preservation
                                       Doc. 896, 911, 936, 956, 971, 990,
Progress in Biological Inquiries
                                            1003, 1029, 1044, 1068, 1096.
Propagation of fish (See Fish Culture)
    Frash water mussels (See Mussels) Doc. 778, 801, 824.
Propagation and distribution of
        food fishes (See Distribution) Adm. Rpt. 5, 10, 14, 18, 22, 25, 33,34,
Propagation of bait and forage fishes F.C.
                                             28.
                                                                      (38, 42.
Proteins, food value
                                       Doc.
                                             784.
Protection: Florida fishes,
                                       Doc.
                                             377.
    Fishes
                                             238, 241, 271, 377, 378, 392,
                                       Doc.
                    618, 632, 646, 648, 649, 650, 651, 766, 780, 783, 818,
                    840, 866, 872, 910.
    Green turtle
                                       Doc.
                                             380.
    International
                                       Doc. 378, 646, 647, 648, 649.
    Lobster
                                       Doc. 373, 653.
    Mussels
                                       Doc. 793.
    North Carolina fisheries
                                       Doc. 1019.
    Rhine salmon
                                       Doc.
                                             682.
    Sunapce Lake
                                       Doc. 783.
    Texas fisheries
                                       Doc. 1009, 1046.
    Water power development in relation
        to fishes and mussels
                                            805.
                                       Doc.
    Whitefish
                                       Doc.
                                            672, 673, 674.
    Yellowstone National Park
                                       Doc.
                                            818.
Protozoa: Marine, from Woods Hole
                                            379, 502.
                                       Doc.
    Of Lake Erie
                                       Doc.
                                            435.
    On fish in aquarium
                                       Doc.
                                            253.
Protozoan parasites (on classification of
                                            215, 253, 379, 435, 502, 959,
        the myxosporidia)
                                      Doc.
                                             987, 988.
                                            959, 961, 1054, 1076, 1088;
Prytherch, Herbert F.
                                       Doc.
                                     61,; Bull. 18; I.R. 15; F.C. 25.
                               E.C.
Psorosperms of fishes
                                       Doc.
                                             285.
    On short minnow
                                      Doc.
                                            154.
Publications of U. S. Fish Commission,
                                             329, 354, 406, 482, 545, 552,
       list,
                                       Doc.
                                             614, 899.
                                            274.
Puget Sound Fisheries
                                       Doc.
   Migration of salmon
                                       Doc.
                                            873.
Puerto Rico fisheries
                                       I.R.
                                             13.
Puncochar, Joseph F.
                                       I.R.
                                             43.
                                      Doc.
Puysfgur, M.
                                             91.
Pycnogonida of New England coast
                                      Doc.
                                             34.
Quast, Thomas
                                      E.C.
                                            68.
                                      Doc.
                                            260.
Quelch, J. J.
                                      Doc.
                                            320, 515.
Quinnat salmon, natural history of
                                      Doc.
                                            584.
    Physiology of
                                      Doc. 773, 822, 849, 875, 892, 931, 932;
Radcliffe, L.
                                      E.C. 17, 20.
                                            319, 346, 677, 955, 1061, E.C.41.
                                      Doc.
Rainbow Trout, propagation
                                      Doc.
    Food
                                            679.
```

```
Rangeley Lakes, Maine, fishes
                                        Doc.
                                              861.
Rankin, E. P.
                                         Doc.
                                              817.
                                              459, 587.
Rathbun, Mary J.
                                         Doc.
                                               41, 55, 69, 146, 192, 224, 223,
Rathbun, Richard
                                         Doc.
                                                   283, 298, 315, 331, 377, 423.
                                               528.
Rattulidae, monograph of
                                         Doc.
Ravenel, Wm. de C.
                                               338, 407, 430, 450, 503, 524.
                                        Doc.
Rays and sharks
                                         Doc.
                                              822.
                                         Doc.
                                              984.
Razor clam, Pacific
Razor clam, vicinity of Cordova, Alaska I.R.
                                               29.
Recording fish-egg development
                                         Doc.
                                              452.
Rodfishes - Texas
                                        Doc. 1046.
                                         Doc. 1046.
Red drum
Red snapper fisheries
                                        Doc.
                                              390.
                                        I.R.
Red snappers, Gulf of Mexico
                                                26.
Reducing shrinkage frozen fish
                                        I.R.
                                                 9.
Reeves, I. S. K.
                                        Doc.
                                              253.
                                        Doc.
                                               26, 489, 1016.
Refrigeration
Refrigeration, developments of fish
                                        I.R.
                                               16.
                                        Doc. 840, 856.
Regulations, laws,
Regulations, Bureau of Fisheries
                                        Doc.
                                               49.
     Fishery international,
                                              646, 647, 648, 649.
                                        Doc.
     Of U. S. Fish Commission
                                        Doc.
                                              121.
     Seal fisheries
                                              732, 820.
                                        Doc.
                                              252, 365, 735, 710, 814.
Reighard, Jacob E.
                                        Doc.
Reighard, Paul
                                        Doc.
                                              674.
                                              891, 946.
Reindeer
                                        Doc.
Relations between State fish commissions and
        commercial fishermen
                                        Doc.
                                              392.
Remington, Roe E.
                                        I.R.
                                                23.
                                                 3, 4, 15, 17, 25, 28, 46, 62,
Reports of Commissioner
                                        Doc.
                         65, 77, 95, 108, 115, 134, 176, 192, 213, 283, 298,
                      315, 331, 337, 344, 398, 430, 450, 481, 524, 548, 553,
                      594, 608, 629, 642, 727, 734, 753, 772, 782, 807, 827,
                      836, 836a,836b,845, 862, 877. 894, 900. 913. 946. 966.
                      982, 1002, 1017, 1038, 1051, 1071. (See Annual Reports.)
Reproductive organs of Gambusia affinis Doc. 806.
Reptiles, natural history of
                                        Doc. 222.
Research, oligochaetological
                                        Doc. 101.
Rovillagigedo, fishes of
                                        Doc.
                                              404.
                                        Doc. 1059.
Rich. Walter H.
                                        Doc. 873, 887, 965, 971, 974, 990,
Rich, Willis H.
                       991, 1003, 1005, 1021, 1022, 1041, 1047, 1057, 1102;
                       Bull. 7, 11, 12, 13.
Richardson, Harriet
                                         Doc.
                                              542, 564, 736.
                                               640.
Richardson, R. E.
                                        Doc.
Ridgeway, Robert
                                        Doc.
                                               56.
Rio Grande Basin, fishes
                                        Doc.
                                              225.
Ritter, H. P.
                                        Doc.
                                              305.
River herring, salting of
                                        Doc. 903.
                                        Doc. 159.
Rivers of Alaska, salmon
                                        Doc. 581.
Roberts, W. A.
```

```
--- ---
                                     10. 10.0.
                                     Doe. 607, 701.
----
                                     Doc. 347.
1102 01
. .., 3. 0.
                                     Doc. 468.
. . . . . ij, alutt
                                     Dec. 694.
E. -.1, 1410
                                     Doc. 562.
Country of the Unital States
                                    Doc. 434.
Total Dill, Duc. A.
                                     Dec. 1080; Bull. 2, 9, 17, 27.
E. ., E. C.
                                     Dec. 263, 656.
. ., . . . . G.
                                     Dos. 383.
                                     Doc. 880, 1006.
Table Top Seal Islands
                                     Doc. 316.
                                     Dec. 297, 410, 515, 516, 637.
Titter, Ulcanaler
                                     Dec.
                                         57, 71, 91, 104, 106, 114, 120, 23, (143, 181, 244,
Toha 1.
Sablefish
                                     E.C
Bur Toronia Basia, fishes
                                     Doc. 837.
In a line is leboratory, Scorland,
    Ach online et
                                     Doc. 261.
St. Corne Count, survey of
                                     Doc. 343.
Dr. L. Turce River, fishes of
                                     Doc. 494.
at. Pull, trude in fishery products,
        11.2
                                     E.C. 55.
                                     Doc. 343.
St. Tindent Sound, survey
Sulinity of water, effects or fishes
                                     Doc. 596.
Dalmon: Albatross investigations
                                     Doc. 510.
                                     Doc. 767.
    Alo at materity
                                     Doc. 777, 796.
    -----
                                     Doc. 159, 408, 510, 603, 618, 624,
    Alanca
                       527, 545, 891, 923, 946, 971, 991, 1005, 1022, 1102.
                                     Eull. 7, 13.
    Alaska, statistical review
                                     Doc. 777.
    alimontary tract
     Probling station, selection of site,
                                          97.
                                     Doc.
        Columbia River
                                     E.C.
                                         11, 48, 69,
    Carret, mees
    Carmed, metabolism of fluorize in
                                     I.E.
                                           44.
                                          20.
                                     E.C.
    Ceriar
     Carroos, natural bistory
                                     Doc. 515.
    Growth and degree of maturity of
                                     Doc. 974.
       To store salmon
                                     Doc. 1047.
     mining.
                                     Doc. 290, 301, 318, 352, 743, 887.
     Gol_Bis River investigations
     Collis Hiver
                                     Bull. 32.
                                     Doc. 290.
      Timeries
                                     Doc. 743, 887, 911, 936.
      _lgration
                                     Doc. 887, 911, 936, 1047.
      Repulte of markings
                                     Doc. 258, 346, 879.
     Dul tame
                                     Doc. 1087.
     Disharies, Calif. and Alaska
                                     Doc. 290.
     Discernes, Columbia River
    Floheries, Swiftsure Bank, Paget
                                     Bill. 27.
     Count, Fraser River
```

```
Salmon: (continuod)
                                       Doc.
                                             21.
Hatching apparatus
   Hudson River
                                       Doc.
                                             376.
   Ideho investigations
                                       Doc. 301, 318.
   Influence of artificial propagation Doc.
                                             88.
   Internountain region
                                      Doc. 1062.
   Introduced into New Zealand
                                      Doc. 697.
                                      Doc. 1021, 1044.
   Harluh Piver
   liarking
                                       Doc. 748, 887, 911, 988, 948, 991,
                                       1005, 1022, 1044, 1047, 1087, 1081.
                                       I.B. 44.
Doc. 743, 887, 1047; Sull. 32.
  Metabolism of fluorine
   Migrations, Columbia River
                                      Doc.
      Tarluk River
      Paget Sound and Fraser River
                                      Doc. 573.
  Mild curing in California
                                      Doc. 983.
                                       Doc. 515.
   Natural history of quinnat
                                      I.E.
   Pacific salmon cils
                                             40.
                                      Doc. 357.
   Penobscot Bay investigation
                                      Doc. 584, 743, 777, 799, 802.
   Physiology
   Pink:
      Geographic distribution
                                      Bull. 26.
      Homing instinct and age at
                                              15.
       maturity
                                       Eull.
     Migration of
                                      Bull.
                                             25.
      Faysical and chemical changes
                                      I.R.
        during spawn migration
                                             33.
                                      Doc.
  Quinnet, natural history
                                             515.
                                       Doc. 682.
   Phine salmon
   Pivers of Alaska
                                      Doc. 159.
                                      Doc. 515, 887.
Doc. 767, 974, 1021, 1047.
   Sacramento River investigations
   Scales, age, and maturity
                                      Dec. 713.
   Sebago salmon parasites
   Skeletal miscalature
                                      Doc. 796.
                                      Dec. 314.
   Stations
                                      Doc. 923.
Doc. 308, 901.
Doc. 659, 890, 790.
   Yakon River
Salmonoids, culture of
   Diseases
                                      Doc. 258.
Doc. 679, 684, 704.
Doc. 737.
   Fishes, rearing of
   Food
   Great Lakes, species
   Peritoneal membranes, ovaries
                                       Doc. 901.
    and oviduots
Salt Lake, eramination of waters
                                       Doc. 422.
                                      Doc. 422.
     Oysters
                                      Doc. 919.
Salt, preservation of fish by
Salter, L. C.
                                       F.C.
                                             22.
                                      F.C. 22.
Doc. 884, 903.
Salting of fish
Salt-water mussels as food
                                      Doc. 655; E.C. 12.
                                      Doc. 985.
Salvador, Central America
                                      Dec. 605.
Samoa, fishes of
                                      Doc. 304.
Sandfort, fish-culture at
                                      Doc. 57-,
San Francisco Bay tributaries
Santa Catalina, fish of
                                             255.
Saproleguia infesting fish
                                      Doc.
                                      Doc. 1087.
Sardine fishery of California
Sardine industry of America
                                       Doc. 183.
                                      Doc. 475.
   France
Scales -- fish, chemistry
                                       Doc. 496.
```

157

```
Scales: (continued)
                                                 496, 767, 779, 823, 974, 1021,
                                          Doc.
     Studies
                                                 1047, 1053.
                                                  163.
 Scallop fishery of Maine
                                           Doc.
 Scallop fishery of North Carolina
                                                 1043.
                                           Doc.
     Opportunity for fishery, Middle
       Atlantic Coast
                                           E.C.
                                                    7.
 Scallop natural history
                                           Doc.
                                                 1100.
                                           Doc.
                                                  668.
 Scaphander in sponge fisheries
 Scavenger water beetle, life history and
                                           Doc.
                                                  942.
       its relation to fish breeding
                                           Doc.
                                                  588.
 Schizopods, Hawaiian Islands
                                           Doc.
                                                  151.
 Schloswig-Holstein, Germany
                                           Doc.
                                                  817.
 Schmitt, Waldo L.
 Schrader, Franz and Sallie Hughes
                                                  926.
                                           Doc.
        Schrader
                                                  962, 1024, 1081; Bull.
                                           Doc.
 Schroeder, Lim. C.
                                                                            20.
 Sciaenidae
                                           Doc.
                                                 1046.
                                           Doc.
                                                  127.
 Sciaenidae, review of
 Sciaenidae, life histories
                                                  945.
                                           Doc.
 Sciaenidae, reproduction and development Bull.
                                                   16.
 Scientific, examinations of the
                                           Doc.
                                                   40.
        German Seas
                                           Doc.
                                                   84.
     Gulf Stream
                                                  176, 192, 283, 298, 315, 331,
                                           Doc.
     Inquiry, report on
                                                  337, 344, 398, 430, 524, 548.
                                                  243, 366.
     Investigation, importance of
                                           Doc.
                                                    69
     London Exhibition, catalogue
                                           Doc.
     Research
                                           Doc.
                                                  243, 366.
                                                  102.
     Research, use of aqua-vivarium in
                                           Doc.
 Scofield, W. L.
                                           Doc.
                                                  983.
 Scotch method of smoking haddock
                                           Doc.
                                                  493.
 Scotland, herring fisheries of
                                           Doc.
                                                  511.
 Scott, G. G.
                                                  712.
                                           Doc.
Screons, electrical, for fish
                                                 1042.
                                           Doc.
 Scudder, Charles W.
                                           Doc.
                                                  329.
 Scudder, Newton P.
                                           Doc.
                                                   43.
 Sea and coast fisheries
                                                  240.
                                           Doc.
     Sea base, embryology
                                           Doc.
                                                  160.
     Bottom, fauna and flora
                                                  716.
                                           Doc.
                                           Doc.
                                                  681.
     Fish, hatching, utility
     Fisheries of the coast of
                                                    3.
       Now England
                                           Doc.
     Isle City, fishes of
                                                  229.
                                           Doc.
     Lions, destruction of
                                           Doc.
                                                  524.
       Fooding habits
                                           Doc.
                                                  524.
     Mussels as food
                                                  655, 742, 922; E.C.
                                           Doc.
                                                                         12.
       And dogfish as food
                                           Doco
                                                  655.
                                           E.C.
                                                    7.
     Scallop bods
                                           Doc.
                                                 1056.
     Trout (Texas) pondfishes
                                           Doc.
                                                  319.
 Seagle, George A.
                                                  317.
                                           Doc.
 Seal breeding grounds
```

```
Seal breeding grounds: (continued)
                                              661, 735, 748, 749, 766, 797,
     Fisheries, Alaska
                                        Doc.
                                              819; E.C. 4.
       Laws and regulations
                                        Doc.
                                              732, 819.
     Islands, Alaska, 1910
                                              748, 820.
                                        Doc.
       Russian
                                        Doc.
                                              316.
                                              735, 766, 780, 797, 819, 834,
 Seals
                                        Doc.
                     838, 847, 972, 891, 909, 933, 661, 748, 749, 820, 951,
                     973, 986, 992.
 Seale, Alvin
                                        Doc.
                                              605, 606, 607.
                                              102, 133, 186, 683.
 Scale, Wm. P.
                                        Doc.
 Scattle, trade in fishery products
                                        Doc.
                                              930.
 Seaweeds, Japan and U.S.
                                        Doc.
                                              562.
 Seaweeds, algal gelatines from
                                              929; E.C. 51.
                                        Doc.
 Seaweeds, marine algae of Beaufort, N.C. Doc. 886.
 Sebago salmon, parasites
                                              713.
                                        Doc.
 Secretary of Commerce, reports to
                                        Doc.
                                              946.
Seiwell, H. R.
                                        E.C.
                                              66.
Senses in fishes:
                                              775, 798.
     Smell
                                        Doc.
     Taste
                                        Doc.
                                              527.
     Vision
                                        Doc.
                                              245, 738, 821.
                                              738, 798.
     Dogfish
                                        Doc.
                                              514, 715, 738, 752, 755.
     Hearing
                                        Doc.
     Lateral line
                                        Doc.
                                              563.
                                              715.
     Squeteague, ear
                                        Doc.
     Vision, flounders
                                        Doc.
                                              821.
 Serranidae, review of
                                        Doc.
                                              144.
                                              976, 997, 1025, 1034, 1050;
 Sette, Oscar E.
                                        Doc.
                                               19 : F.C. 4, 10, 14, 17.
                                        I.R.
                                              569.
 Sewage, Narragansett Bay
                                        Doc.
 Shackeli, L. F.
                                              952.
                                        Doc.
 Shad
                                               47, 209, 335, 379, 403, 499,
                                        Doc.
                                              521, 678, 981.
     Canning
                                        Doc.
                                              946.
     Eggs, inducements offered fishermen
       to furnish
                                        Doc.
                                               53.
     Fisheries of Atlantic Coast
                                        Doc.
                                              403. I.R. 38.
       Susquehanna River
                                        Doc.
                                               47.
     Hatchery, work, expansion
                                        Doc.
                                              678.
     New species of
                                        Doc.
                                              335, 499.
       Ohio River
                                        Doc.
                                              499.
     Propagation of
                                        Doc.
                                              521, 981.
     Range of, and obstruction of streams Doc. 379.
     Spawning habits of
                                              209.
                                        Doc.
 Shad marketing of, on Atlantic coast
                                        I.R.
                                               38.
 Sharks and rays of Beaufort, N. C.
                                        Doc.
                                              822.
                                        Doc.
                                              622, 655, 738, 798.
     Dogfish
     Utilization
                                        Doc.
                                              622, 822.
     Destructiveness (dogfish)
                                              622.
                                        Doc.
                                        Doc.
                                              395.
 Sharp, John
                                        Doc.
                                              775.
 Sheldon, R. E.
 Shell description, James River, So.
                                              812.
       Dakota mussels
                                        Doc.
                                              313, 556, 610, 787, 920.
 Shellfish, food of
                                        Doc.
```

```
Shellfish,
    Oxygen requirements
                                              Doc.
                                                      787, 1094.
    Resources of N. W. States
                                             Doc.
                                                      920.
    Unusual markets
                                             F. C.
                                                      11.
Shorwood, George H.
                                             Doc.
                                                      474, 554.
Shipment, improvements in preparing
      fish for
                                             Doc.
                                                      443.
    Or fish, packing
                                             Doc.
                                                      659.
    Fresh fish, and other animals
                                             Doc .
                                                      29.
Chipworns.
                                             Doc.
                                                      369, 639, 1031.
Shira, A. F.
                                             Doc.
                                                      893
Shore, C. A.
                                             Doc.
                                                      859.
Shostroa, O. Eugene
                                             I.R.
                                                       33.
Shrimp:
    Alaska fishery
                                             Doc.
                                                     1052.
    As fish food
                                             Doc.
                                                     685, 914.
    Industry, So. Atlantic and Gulf
                                             I.R.
                                                       21.
    Life history
                                             Bull.
                                                       14, 30.
    Waste, utilization
                                                     1078.
                                             Doc.
Shufeldt, R. W.
                                             Doc.
                                                      90, 424, 448.
Siberia, fisheries of
                                             Doc.
                                                      844, 1006.
Sigerfcos, Charles P.
                                             Doc.
                                                      369, 639.
Silversides, notes on
                                                      492.
                                             Doc.
Silversides, habits and development
                                             Doc.
                                                      918.
Silverter, C. F.
                                             Doc.
                                                      560.
Sims, G. E.
                                             Doc.
                                                      704.
Simpson, Charles T.
                                                      415, 458.
                                             Doc.
Skate, food of summer skate
       (Raja erinacea)
                                                      622.
                                             Doc.
Skeleton of black bass
                                             Doc.
                                                      448.
    Toleosteans
                                             Doc.
                                                      90.
    Tilefish
                                                      559.
                                             Doc.
Skins of aquatic animals, utilization of
                                                      537.
                                             Doc .
Smallest known fish
                                             Doc.
                                                      501.
Smell, sense of, in fishes
                                                      775, 798.
                                             Doc.
                                                      13, 946, 1015.
Smelt and smelt fisheries
                                             Doc.
Smultz, H. A.
                                             Doc. .
                                                      385.
Smiley, Chas. W.
                                                      64, 66, 85, 88, 112.
                                             Doc.
Smith, Prof. Frank
                                             Doc.
                                                      970.
Smith, Hugh M.,
    Sardine industry in 1886
                                             Doc.
                                                      123.
    Fisheries of Great Lakes in 1885
                                             Doc.
                                                      140.
    Crab fishery of Crisfield, Md.
                                             Doc.
                                                      155.
    Oyster tongs
                                             Doc.
                                                      158.
    Giant scallop fishery of Maine
                                             Doc.
                                                      163.
    King crab fishery, Delaware Bay
                                             Doc.
                                                     166.
    Fishes from lower Potomac
                                             Doc.
                                                     189.
    Fisheries of New England States
                                             Doc.
                                                      193.
    Fisheries of Lake Ontario
                                             Doc.
                                                      194.
    Fisheries of Gulf Stream
                                             Doc.
                                                      206.
    Fishes from the Albemarle
       region, N. C.
                                             Doc.
                                                      208.
```

```
Smith, Hugh M.
                             'continued)
    Fisheries South Atlantic States
                                        Doc.
                                              212.
    Fyko-nots and fyko-not fisheries,
                                              226.
      U.S. and other countries
                                        Doc.
    Fishes, northern coast of New Jersey Doc. 230.
    Two new species, American whitefishes Doc. 232.
    Extension of recorded range of certain marine and
      fresh-water fishes of Atlantic coast Doc. 233.
   Maintenance and improvement of the
      American fisheries
                                        Doc.
                                              266.
    Statistics, fisheries of U.S.
                                        Doc.
                                              276.
   Fisheries of Japan
                                        Doc.
                                              277.
   Atlantic salmon
                                        Doc.
                                              281.
   Report (Scientific Inquiry) year ending
      June 30, 1922
                                              283.
                                        Doc.
   Fisheries Great Lakes
                                        Doc.
                                              287.
   Fisheries Pacific coast
                                        Doc.
                                              293.
    Fisheries Mid. Atlantic coast
                                              296.
                                        Doc.
   Report of Commissioner for 1893
      (Scientific Inquiry)
                                              298.
                                        Doc.
   Menhaden fishery
                                        Doc.
                                              302.
   Acclimatization, Pacific coast
                                        Doc.
                                              309.
   Report, 1894
                                        Doc.
                                              315.
    Whitefishes of North America
                                        Doc.
                                              323.
   Report, 1895
                                        Doc.
                                              331.
    Biscayne Bay, Florida, experiment
                                              333.
      station
                                        Doc.
    Smallest known fish (1901)
                                        Doc.
                                              501.
    Report, 1896
                                        Doc.
                                              337.
    Recorded range of certain fishes
      U. S. Coast
                                        Doc.
                                              339.
    Fishes, Woods Hole
                                        Doc.
                                              353.
   Salmon fishery, Penobscot River
      and Bay, 1895 and 1896
                                        Doc.
                                              357.
   Statistics, fisheries, interior
      waters
                                        Doc.
                                              361.
    Florida sponges
                                        Doc.
                                              374.
    Alewife fishery
                                        Doc.
                                              401.
    Fishes of District of Columbia
                                        Doc.
                                              409.
    Southern spring mackerel fishery
                                        Doc.
                                              411.
    File-fish
                                        Doc.
                                              412.
   Mussel fishery and pearl button in-
      dustry of Mississippi River
                                        Doc.
                                              414.
    Report, 1899
                                              430.
                                        Doc.
    Florida sponge fishery in 1899
                                        Doc.
                                              437.
    Report, 1900
                                              450.
                                        Doc.
    Sardine
                                        Doc.
                                              473.
    Biological notes, No. 2, Woods Hole
                                               474.
                                         Doc.
                                              485.
    Blenny from Japan
                                        Doc.
    Smallest vertebrate (Mistichthys
                         luzonensis)
                                        Doc.
                                              501.
    Tagging of 4,000 cod
                                        Doc.
                                              491.
    Scotch methods of smoking haddock
                                        Doc.
                                              493.
    Five food-fishes, Lake Buhi, P. I. Doc.
                                              501.
    Herring, England, Scotland, Holland Doc.
    Breeding habits, yellow catfish
                                        Doc.
                                              517.
```

```
(continued)
Smith, Huch M.
    Common names, basses, and sunfishes Doc. 538.
    Seauced, Japan and U. S.
                                        Doc.
                                              562.
    Fishery trade, U. S., and Japan
                                        Doc.
                                              576.
    Premotion fishery trade between
                                        Doc.
                                              676.
      U. S. and Japan
    U. S. Bureau of Fisherics, its
                                        Doc.
                                              641, 725.
      establishment
                                        Doc.
                                              904.
    Yollowstone National Park
                                        Bull.
                                               18.
Smith, Robert O.
                                               41, 124.
                                        Doc.
Smith, Sunderson
                                        Doc.
                                                5,6,7, 78, 105.
Smith, S. I.
Smithsonian Institution, directory of
                                               39.
                                        Doc.
      officers in 1882
                                        Doc.
                                              490, 493.
Smoking haddock in Scotland
                                        Doc.
                                              490.
      Wishery products
                                        Doc.
                                              390.
Snapper, red, fisheries
                                        Doc. 1089.
    Commorcial of Gulf of Mexico
                                        Doc.
                                              993.
    Differences in two species
                                        Doc.
                                              140.
Snell, Merwin-Marie
                                        Doc.
                                              529.
Snow, Julia W.
                                        Doc. 436, 546, 574, 623, 636, 638,
Snyder, John O.
                                              768, 776, 825, 843, 864.
Sodium arsenite-control vegetation in
                                        I.R.
                                               11.
     fish pends
Soles and flounders, of America and
                                        Doc.
                                              126.
      Turops
                                        Doc.
                                              659.
Solling, A.
                                        Doc.
                                               660.
Solomon, John L.
                                               514, 715, 752, 755.
                                        Doc.
Sound effect on fishes
South American birds, Guano, fisheries Doc.
                                               663.
                                        Doc.
                                               931.
    Fisheries
                                               212, 421, 570.
South Atlantic States, fisheries of
                                        Doc.
                                        Doc.
                                               199, 202; E.C. 61.
South Carolina oyster culture
                                              812.
South Dakota Rivers
                                        Doc.
                                              812, 889.
                                        Doc.
Southall, John B.
                                               475.
Southern New Ingland, fish of
                                        Doc.
                                        Doc.
                                               411.
    Spring mackerel fishery
                                        Doc.
                                               241.
Southwick, J. M. K.
South Sea Islands, fishing apparatus of Doc. 509.
                                               239.
                                        Doc.
Spangler, A. M.
                                               522.
Spanish mackerel, culture
                                         Doc.
                                                60.
                                         Doc.
    Fishory
                                                60.
                                         Doc.
    History of
    Propagation of
                                         Doc.
                                                60.
                                        Doc.
                                               219.
Sparoid fishes, review of
Specifications:
                                         Doc.
                                                38.
    Building of Albatross
                                               109.
                                         Doc.
    Boilors for Albatross
                                                35.
                                         Doc.
    Canvas-back
                                                24.
                                         Doc.
    Fish Hawk
    Fishway at Great Falls
                                         Doc.
                                                61.
                                               93.
    For building schooner smack
                                         Doc.
                                               921.
                                         Doc.
Specific gravity of fishes
```

```
Specimens of fishes, museum preparations Doc.
                                          Doc.
                                                 691.
 Spencer, L. B.
                                                 925, 962.
 Spiny lobster
                                          Doc.
 Sponges:
                                                 876.
     Beaufort and vicinity
                                          Doc.
                                                  55, 471, 669, 670.
     Collections of
                                          Doc.
                                                 374, 667, 962.
     Commercial, of Florida
                                          Doc.
     Culture
                                          Doc.
                                                 375, 669, 670.
     Development from tissue cells
                                                 717, 750.
                                          Doc.
     Fresh-water sponges
                                          Doc.
                                                  63.
                                                 437, 535, 667, 668, 962.
     Fisheries
                                          Doc.
       Diving abuses
                                          Doc.
                                                 668.
       Florida
                                          Doc.
                                                 437, 535, 667, 962.
       Key West
                                          Doc.
                                                 962.
      Mediterranean
                                          Doc.
                                                 667, 668.
       Scaphander, abuse of
                                          Doc.
                                                 668.
     Porto Rican sponges
                                          Doc.
                                                 471.
     Raising from eggs
                                          Dcc.
                                                 375.
 Spoonbill cat
                                          Doc.
                                                1072; E.C. 20.
     Caviar
                                          E.C.
                                                  20.
 Sport fishing in Alaska
                                          F.C.
                                                  13.
 Sport fishing, California, and Florida
                                         Doc.
                                                 652.
     National aspects
                                                 651.
                                          Doc.
     Sunapee Lake
                                          Doc.
                                                 783.
     Yellowstone National Park
                                          Doc.
                                                818.
 Spot
                                          Doc.
                                                1046.
 Spotted trout
                                          Doc. 1046.
 Spring mackerel fishery of United
        States
                                          Doc.
                                                 411.
 Squeteague, biliary calculi
                                          Doc.
                                                493.
     Destruction of, Pamlico Sound
                                          Doc. 1019.
     Ear, structural function
                                          Doc.
                                                 715.
     Life history
                                          Doc.
                                               477, 823.
     Review of species, Atlantic and
       Gulf coasts
                                          Doc.
                                                1058.
     Scales, age determination
                                          Doc.
                                                 823.
                                                  42, 761, 789.
 Squid
                                          Doc.
 Stanley-Brown, Joseph
                                          Doc.
                                                 273.
  Stansby, Morris E.
                                          I.R.
                                                  45.
 Stapleton, M. F.
                                          Doc.
                                                 826.
[Starbuck, Alexander: History of American Whale Fishery
     in Report of Commissioner for 1875-1876.
 Starfishes, Alaska
                                          Doc.
                                                 572.
     Atlantic
                                          Doc.
                                                 890; Bull.
                                                               31.
     California
                                          Doc.
                                                 572.
     Hawaiian Islands
                                                 599.
                                          Doc.
     Natural history of
                                                 441.
                                          Doc.
 Starks, Edwin Chapin
                                          Doc.
                                                 551.
 State Commissions and Fishermen
                                                 392.
                                          Doc.
 Station, biological, Beaufort, N.C.,
     Report for 1901, 1903, 1915:
                                          Doc.
                                                 829, 895.
       Fairport
                                                 367.
       Florida
                                          Doc.
                                                 368
       Gulf
                                          Doc.
```

```
Doc.
                                                314.
Stations, salmon
Statistical Review of Alaska Salmon
                                         Bull.
                                                  7, 13.
       Fisheries
Statistics:
                                                645, 730, 746. (See Alaska.)
    Alaska fisheries
                                         Doc.
    Bermuda, fisheries and market
                                         Doc.
    Central America, fisheries and
                                         Doc.
                                                931.
       market
                                         Doc.
                                                 20.
    Coast and river fisheries
                                               1034.
                                         Doc.
                                         Doc.
                                               581.
    Crab industry
                                                 45.
                                         Doc.
    Fisheries of Maine
                                         Doc.
                                                931.
       Merrico
                                                176, 192, 206, 283, 298, 315,
                                         Doc.
    Fisheries of U. S.
                           331, 333, 337, 344, 398, 524, 540, 548, 570, 571,
                            575, 593, 609, 620, 875, 892, 908, 933, 954, 976,
                           997, 1025, 1034, 1050, 1067, 1095; A.R. 3, 8,
                           13, 15, 20, 24, 27, 32, 37, 41.
                                                735, 749, 820. (See Alaska.)
                                         Doc.
    Fur seal
                                         Doc.
                                                506, 593.
    Great Lakes
                                                206, 420, 571.
                                         Doc.
    Gulf States
                                                504, 590.
                                         Doc.
    Hamaiian Islands
                                                361, 507.
                                         Doc.
    Interior waters
                                                296, 453, 540, 609.
    Middle Atlantic States
                                         Doc.
                                                507, 976.
    Mississippi River
                                         Doc.
                                                807, 836, 827, 845, 862, 976.
                                         Doc.
    Mussels, fresh water
                                                454, 575, 620.
                                         Doc.
    Now England
                                                555.
                                         Doc.
    New York, interior
                                                505, 612, 751.
                                         Doc.
    Pacific Coast
                                         Doc.
                                                751, 1041, 1047, 1092, 1102.
    Salmon, Pacific coast
    South America, fisheries and
                                                931.
                                         Doc.
       market
                                                421, 570.
                                         Doc.
    South Atlantic States
                                                555.
                                         Doc.
    Vermont
    West Indies, fisheries and market
                                         Doc.
                                                931.
                                         Doc.
                                                 75.
Status of U. S. Fish Commission
                                                316, 986.
                                         Doc.
Steineger, Leonhard
                                                218, 227, 325, 379, 403, 417,
                                         Doc.
Stevenson, C. H.
                                      487, 488, 489, 490, 536, 537, 626, 648.
                                         Doc. 1007.
Stewart, N. H.
                                         Doc.
                                                253.
Stiles, C. W.
                                                941a; E.C. 65; F.C. 8.
                                         Doc.
Stocking interior waters of U.S.
                                         Doc.
                                                461.
Stematopoda of Porto Rico
                                                 97, 320, 391.
                                         Doc.
Stone, Livingston
                                                469.
                                         Doc.
Stony corals of Porto Rico
                                         Doc.
                                                343.
St. Georgo Sound oyster grounds
                                         Doc.
                                                494.
St. Lawrence River fishes
                                               1026.
                                         Doc.
St. Louis, trade in fishery products
                                         Doc.
                                                343.
St. Vincent Sound oyster grounds
                                         Doc.
                                                388.
Stranahan, J. J.
                                                 26.
Stream and lake surveys, instructions
                                         F.C.
                                                 22.
                                         Bull.
Stream pollution, detection
                                         Doc. 840, 866.
Stringham, Emerson
```

```
Studdert, W. P.
                                       Doc. 930.
Sturgeon caviar
                                       E.C.
                                             20.
    Fisheries
                                       Doc.
                                            143.
    Fishery, Delaware
                                       Doc. 429.
    Hatching on the Delaware
                                       Doc. 269.
      In Germany
                                       Doc. 151.
    Culture in United States and
                                       Doc. 880.
        Russia
    Industry
                                       Doc. 143.
                                       Doc. 143, 151, 269, 880.
    Propagation
Submarine tow net
                                       Doc. 322.
Suckor, description of new species
                                       Doc. 207.
    White
                                       Doc. 1007.
Sullivan, M. X.
                                       Doc. 625.
Summer, skate, use of
                                       Doc.
                                            622.
Sumner, F. B.
                                       Doc. 596, 716.
    Biological studies of waters of Woods Hole
      and vicinity, Part 1 and 2, Bulletin 31,
      for 1911.
Sunapes Lake, fishes
                                       Doc.
                                             783.
Sunfish, common names of
                                       Doc. 538.
   Composition of subdermal connective
     tissue of
                                       Doc. 449.
   Life history and ecology of
                                             938.
                                       Doc.
   Propagation
                                       Doc. 347.
Sunfishes, review of
                                       Doc. 190.
Suomela, A. J.
                                       Doc. 1022.
Surber, Eugene W.
                                             11.
                                       I.R.
Surber, Thaddeus
                                       Doc. 771, 778, 813.
Surface, H. A.
                                       Doc. 372.
Surveys, aquatic resources of U.S.
                                       Doc. 836a.
Susquehanna, N. branch, early shad
     fisheries
                                       Doc. 47.
Swan, James G.
                                       Doc. 274.
Swift, Franklin
                                       Doc. 343, 383, 549.
Swim bladder of fishes, gas
                                       Doc. 498.
Swordfishes, material for history of
                                       Doc.
                                             51.
Swordfish, livers, utilization
                                       I.R.
                                             28.
Synaptas of the New England coast
                                       Doc. 426.
                                       Doc. 497, 743, 873.
Tagging
Tagging cod, Woods Hole
                                       Doc. 491.
Tagging salmon
                                             743, 873, 887, 943, 991, 1005,
                                       Doc.
                                             1021, 1022, 1044, 1047, 1057.
Tahoe trout
                                             615.
                                       Doc.
                                             70, 79, 96, 110, 130, 135, 161,
Tanner, Z. L.
                                       Doc.
                                    170, 180, 216, 284, 289, 310, 321, 330.
Tar pollution
                                       Doc. 910.
Tar, effect on oysters
                                       Doc. 786.
Taste, senses in fishes
                                       Doc. 527.
Tautog culture
                                       Doc. 522.
Taylor, W. Edgar
                                       Doc. 368.
                                      Doc. 883, 848, 898, 903, 919, 921,
Taylor, Harden F.
                                            947, 954, 989, 998, 1016.
Teleosts, development
                                       Bull. 24.
```

```
Teleostean fishes, embryology of
                                       Doc. 631.
      five species
    Fourteen species
                                       Doc. 1093.
                                       Doc. 849.
    Twolve species
   Skeleton of
                                       Doc.
                                              90.
Temperature and other observation studies by
      U. S. Fish Commission
    Tolerance of fishes and amphibians Doc. 1030.
Temperature and shell movements of
                                       Bull.
                                               1.
      oysters
Tennessee, notes on fishes
                                       Doc.
                                             832.
    Centennial Exposition
                                       Doc.
                                             407.
    Fishes of
                                             211, 832, 858.
                                       Doc.
    River fishes
                                             157.
                                       Doc.
Tensas River, mussel resources
                                       E.C.
                                              14.
Teredinidae, shipworms
                                             639.
                                       Doc.
Terrapin, diamond-back
                                       Doc.
                                             557, 917, 971, 1060; E.C. 5, 60.
Texas, fisheries of
                                             218.
                                       Doc.
    Fishes of
                                       Doc. 225, 405, 1046.
    Fishes of, commercial species,
      listed in
                                       Doc. 1009.
    Investigations in
                                       Doc. 405.
                                       Doc. 1046.
    Natural history of redfishes
                                       Doc. 205, 387.
    Oysters of
                                       Doc. 610, 809.
    Oyster grounds
Texas, Culveston Bay, spawning of cysters Bull.
    Ovster bottom survey
                                       I.R.
                                               6.
Thermometers, U.S. Fish Commission,
    Report on
                                       Doc.
                                             116.
                                       Doc. 784 785.
Thomas, Adrian
                                       Doc.
                                             568.
Thompson, J. C.
Thompson, Millet T.
                                       Doc. 478.
Thompson, Seton H.
                                       Doc. 1084, 1101; I.R. 29.
Thyroid tumor in trout
                                       Doc.
                                             790.
Thysanocephalum crispum, anatomy of
                                       Doc. 183.
Tide-pool fishes of California
                                       Doc. 425.
                                       Doc. 410.
    Of Kodiak Island
                                       Doc. 183.
Tiger shark, parasites of
Tilefish, blood-vascular system
                                       Doc. 560.
                                       E.C.
                                              20.
    Deep-sea food
                                       Doc.
                                             559.
    Osteology
                                       Doc. 416.
   Reappearance
   History of
                                       Doc.
                                             81.
                                             530.
Tippecanoe Lake, darter from
                                       Doc.
                                       Doc. 643, 675, 948.
Titcomb, J. W.
                                       Doc. 622, 709.
Toadfish,
                                       Doc. 1030.
Tolorance of high temperature
                                       I.R.
                                               3, 12, 27.
Tolle, Chester D.
Tomales Bay, Cal., tributaries, fishes Doc.
                                             825.
                                       Doc. 547, 568.
Tortugas, Archipelago, fishes of
                                       Doc. 443, 496, 498.
Tower, Ralph W.
                                       Doc. 1027.
Towers, Irving L.
                                       Doc. 322.
Tow net, description of
```

```
Townsend, Charles H.
                                     Doc. 152, 217, 322, 334, 420, 421,
                                           453, 454, 472, 661, 1045.
   Dredging records, Albatross
                                     Doc. 472.
   Fur seals and the seal fisheries
                                     Doc. 661.
   Oysters, transplanting sastern
     oysters to Willapa Bay
                                     Doc. 334.
   Oysters, Pacific Coast
                                     Doc. 217.
   Pearl fishery, Gulf of California Doc. 152.
   Public aguarium
                                     Doc. 1045.
   Statistics, Gulf States
                                     Doc. 420.
     Middle Atlantic
                                     Doc. 453.
     New England
                                     Doc. 454.
     South Atlantic
                                     Doc. 421.
   Tow net for submarine use
                                     Doc. 322.
Toxicity of coal-tar creosote, for
     limnoria
                                     Doc. 952.
Trade in fishery products in Atlanta, Ga. Doc. 1036.
   Boston, Mass.
                                     Doc. 939.
                                     E.C.
   Chicago, Illinois
                                          54.
                                     E.C.
   General
                                            63.
                                    Doc. 1026.
   Greater St. Louis
   Jacksonville, Florida
                                    Doc. 1036.
   Louisville, Kentucky
                                    E.C.
                                          50.
   Minneapolis, Minnesota
                                            55.
                                    E.C.
   New York City
                                    Doc. 996.
                                          52.
   Pittsburgh, Pa.
                                     E.C.
                                          55.
   St. Paul, Minn.
                                    E.C.
   Seattle, Washington
                                     Doc. 930.
Transplanting eastern oysters to
     Willapa Bay
                                     Doc. 334.
                                     Doc. 676, 702, 706.
Transportation, live fishes
   Packing fish
                                     Doc. 430, 659.
Trawl Fishery, winter, off Virginia
    and N. C. Coasts
                                     I.R.
                                           10.
Trawling, otter, modifications in gear to curtail the
     the destruction of undersized fish I.R. 24.
Treadwell. A. L.
                                     Doc. 464, 601.
Tressler, Donald K.
                                     Doc. 884, 967.
Trout, Alaska
                                     Doc. 627.
   Bacterium
                                     Doc. 533.
   Brown
                                     Doc. 1062.
   Culture
                                     Doc. 242, 346, 520, 677, 1061, 1079;
                                     E.C. 41. (See fish culture.)
                                     Doc. 346, 955, 1062; E.C. 41.
   Brook
   Lake
                                     Doc. 520.
   Rainbow
                                    Doc. 319, 346, 677, 679, 955; E.C. 41.
   American trout in Austria
                                    Doc. 699.
   Destroyed by Hydra
                                    Doc. 518.
                                    Doc. 689, 690, 694, 790, 818, 1061.
   Disease
     Bacterium truttae
                                    Doc. 533.
   Experiments with meat and meat substitutes
     as trout food
                                     Doc. 1079.
```

```
Trout, Alaska: (continued)
                                                294, 1061, 1079.
                                        Doc.
    Feeding
    Fishing in Lake Tahoe
                                        Doc.
                                                615.
                                                615.
                                        Doc.
    Food in Lake Tahoo
    Food in Twin Lakes
                                        Doc.
                                                616.
    Food, rainbow
                                        Doc.
                                                679, 1061, 1079.
    Fry destroyed by hydra
                                                518.
                                        Doc.
    Golden trout, California
                                        Doc.
                                                595.
     Sunapee Lake
                                        Doc.
                                              1062.
                                        Doc.
                                              1062.
    Intermountain regions
                                               615, 768.
                                        Doc.
    Lake Tahoe
    New species, Lake Tahoe
                                         Doc.
                                                768.
    Parasites of in Yellowstone Lake
                                                164.
                                        Doc.
    Peritoneal membranes, ovaries,
                                         Doc.
                                                901.
        oviducts
                                                294, 304, 319, 346, 1061, 1079.
                                         Doc.
    Rearing
    Twin Lakes, Colorado
                                         Doc.
                                                616.
                                                 22, 35; Doc. 1061.
Trout, care and diseases
                                         I.R.
                                                74, 89, 222, 544.
True, Frederick W.
                                         Doc.
                                                696.
                                         Doc.
Tulian, E. A.
                                                972.
Tumor in catfish
                                         Doc.
                                         Doc.
                                                790.
Tumor in salmon and trout
Tuna fishery in California
                                         Doc. 1087.
                                              869.
Turbellarian worm, enemy of oyster
                                         Doc.
Turbot culture in France
                                         Doc.
                                               686.
                                                889.
Turtles, frash-water, a meat supply
                                         Doc.
                                               380.
Turtles, green on Florida coast
                                         Doc.
                                         Doc.
                                                557.
    Malaclemmys, revision of genus
Twin Lakes, Colo., biological study
                                         Doc.
                                                616.
    Trout and trout food
                                         Doc.
                                                616.
United States:
                                         Doc.
                                                391.
    Fish culture in
                                                177, 276, 401. (See Statistics.)
    Fisheries of
                                         Doc.
    Fishes, description of new
                                         Doc.
                                                358.
                                         Doc.
                                                339.
     Range of
                                                325.
                                         Doc.
    Foreign fishery trade of
    Fresh-water pearls and pearl
                                                278, 389, 397.
                                         Doc.
        fishory of
                                                89.
                                         Doc.
    Live-saving stations
                                                336.
    List of fishes in
                                         Doc.
                                                413.
                                         Doc.
    Pearly fresh-water mussels
                                                434.
                                         Doc.
    Rotatoria of
                                                411.
    Southern spring mackerel fishery of Doc.
United States Bureau of Fisheries,
                                         Doc.
                                                641.
        history
                                         Doc.
                                                412.
    File-fish new to fauna of
                                                562.
                                         Doc.
    Seaweed industry
United States Fish Commission:
                                                41.
                                         Doc.
    Dredging stations
                                         Doc.
                                                92.
    First decade of
                                                329, 406, 614.
                                         Doc.
    Publications
                                         Doc.
                                                75.
    Status of
                                                75, 92.
                                         Doc.
    Work of
```

```
Unutilized fishes
                                        Doc.
                                              622.
Upper Mississippi, limnological study
                                       Doc.
                                             958.
Urosalpinx
                                        E.C.
                                               70; Bull. 4.
Uruguay
                                        Doc.
                                              931.
Utah, black bass in
                                        Doc.
                                              395.
Utilization waste farm land, fish ponds Doc. 826.
Van Oosten, John
                                        Doc. 1053.
Variation in maximum depth at which
                                              970.
      fishes can live
                                        Doc.
Vaughan, T. Wayland
                                        Doc.
                                              469.
Vegetation in fish ponds, control with
      sodium arsenite
                                        I.R.
                                               11.
Venezuela
                                        Doc.
                                              931.
Vermillion River, S. Dakota
                                        Doc.
                                              812.
Vermont, fisheries, interior
                                        Doc.
                                              555.
Vermont, fishes of
                                        Doc.
                                              327.
Verrill, A. E.
                                              8, 42, 83, 84.
                                        Doc.
Vertebrates of North and Middle America Doc. 336.
Vessels, improved types of
                                        Doc.
                                              137.
    Pacific coast
                                        Doc.
                                              187.
Vilbrandt, F. C.
                                        Doc. 1078.
Vincent, Eugene
                                              689, 705.
                                        Doc.
Vineyard Sound, additions to fauna
                                        Doc.
                                              83.
Virginia oyster beds, James River
                                        Doc.
                                              729.
Virginia, winter trawl fishery off
      the coast
                                        I.R.
                                               10.
Virgin Islands fisheries
                                        I.R.
                                               14.
                                        Doc. 1031.
Visscher, J. P.
Vitamin content of oils from cannery
                                        I.R.
      trimmings of salmon
                                               36.
Viviparous fishes of Pacific Coast
                                        Doc .
                                              231.
                                              806.
                                        Doc.
    Fish, Cambusia affinis
                                              703, 707.
                                        Doc.
Von Bayer, H.
Von Pirko, Franz
                                        Doc.
                                              698.
Walford, Lionel A.
                                        Bull. 29.
Walker, F. A.
                                        Doc.
                                               22.
Wallich, Claudius
                                              450, 452.
                                        Doc.
                                        Doc.
                                              713.
Ward, Henry B.
                                        Doc.
                                              390.
Warren, Andrew F.
                                        Doc.
                                              236.
Washington County, Mains, fishes of
Washington (State of):
                                        Doc.
                                              423.
    Fisheries of
                                        Doc.
    Halibut survey, 1914
                                              817.
                                              334, 1066.
    Oysters
                                        Doc.
    Survey of fishing grounds
                                        Doc.
                                              835.
Water, density and salinity, effects
                                        Doc.
                                              596, 712.
      on fishes
    Dissolved content
                                        Doc.
                                              688.
                                              688.
    Gas content, effect on fishes
                                        Doc.
    Gas content, Wisconsin lakes
                                        Doc.
                                              718.
    Great Salt Lake
                                        Doc.
                                              422, 428.
    Investigations with reference to
                                             246.
      fish environment
                                        Doc.
                                        Doc. 643, 687, 815, 826; E.C. 41.
    Plants
```

```
Luce ( Dilleca)
 rollusion
                                       Doc. 569, 619; Bull. 6,22.
     Namangansott Bay
                                       Doc. 509.
   Removal or algae
                                       Doc.
                                             687.
Water power development, Mississippi
                                       Doc.
                                            805.
   Supply for aquarium
                                        Doc.
                                             253.
   Utilization by fish culture
                                        Doc. 103.
                                       Doc. 1019, 1058; Bull. 16.
Wealitishes
Medifich, proteins
                                        Doc.
                                             784.
   Moight and measurements
                                        Doc.
                                             800.
                                       F.C.
                                              19.
Webster, Amos
                                               63, 117.
albotor, H. E.
                                       Doc.
...i ht and measurements of fishes
                                       Doc.
                                              800.
                                             947, 967, 979, 998.
wells, A. W.
                                       Doc.
                                        Doc.
                                              773, 945, 965.
Wolsh, W. W.
Western Canada and northwestern U. S.,
                                              292.
     explorations in
                                        Doc .
                                              931.
West Indies
                                        Doc.
                                              631.
West Virginia fishes
                                        Doc.
                                        Doc.
                                              984, 1099, 1101; Bull 14; I.R. 29.
Logicouth, F. W.
Uhalobono
                                        Doc.
Whales and porpoises, preserving
                                               89.
      specimens
                                        Doc.
                                               89.
   Collecting of
                                        Doc.
   Freservation of
                                        Doc.
                                               89.
Thal 3 and whaling:
  [History in Report of Commissioner for 1875-76]
                                               58.
                                        Doc.
   Appliances
                                        Doc.
                                             439.
Libelor, William Morton
. mipple, Dorothy V.
                                        Doc. 1094.
                                        Doc. 784, 785, 852.
Laite, George F.
                                        Doc. 1001, 1048.
initerish
                                        Doc. 520, 949.
Lhitefish, culture
                                        Doc. 949.
   Labryology
                                        Doc. 388.
   In Lake Eric
                                        Doc. 1062.
    Intermountain region
                                        Doc. 257.
   Methods of culture
                                        E.C.
                                              20.
   Caviar
                                        Doc. 232.
   New species of
                                              323.
                                        Doc.
   North America
                                              672, 673, 674, 100].
                                        Doc.
    Production, Great Lakes
                                              737, 1048.
                                        Doc.
    Species, Great Lakes,
                                              864.
     Bear Lake
                                        Doc.
                                              1028, 1082, 1085; E.C. 73.
                                        Doc.
Wiebe, A. H.
                                        Doc.
                                              299, 362, 418, 451, 505, 539, 612.
Wilcox, W. A.
                                              334.
Willapa Bay, oyster industry
                                        Doc.
    Oysters, transplanted to
                                              334.
                                        Doc.
                                              396.
Willson, J. M., Jr.
                                        Doc.
                                              561, 757, 758, 781, 803, 824,
Wilson, C. B.
                                        Doc.
                                              854, 882, 942, 953.
                                        Doc.
Wilson, Edmund B.
                                              160, 375, 471, 717, 750, 876.
                                        Doc.
Wilson, H. V.
                                              744.
                                        Doc.
Wing-shell, anatomy and physiology
                                               57.
                                        Doc.
.:inslow, Francis
Winter haddock fishery of New England
                                        Doc.
                                               31.
Wisconsin:
                                        Doc. 591, Bull. 19.
    hishes, lake region
```

```
Wisconsin: (continued)
    Food
                                       Doc. 591.
    Lakes, food of shore fishes
                                       Doc. 856.
    Lakes, gases in water
                                             718.
                                       Doc.
    Lakes, Green
                                        Doc.
                                             906.
    Lakes, habits black crappie in
                                       Doc. 867.
      inland
    Lakes, investigations
                                       Doc. 1012.
    Parasites of some fresh-water
      fishes
                                             591.
                                       Doc.
Woods Hole:
   Anthozoa
                                       Doc.
                                              788.
                                             561.
    Argulus
                                       Doc.
    Biological notes
                                              447, 474.
                                       Doc.
    Biological survey Bulletin, vol.
                                      31 for 1911,
                  Parts 1 and 2.
                                       (See page 102.)
    Bryozoa
                                       Doc. 760.
    Cod-tagging experiments
                                       Doc. 491.
                                       Doc.
                                             439, 561.
    Copepods
    Donation of site by colleges and
      individuals
                                       Doc.
                                               95.
                                              550.
    Echinodorms
                                       Doc.
                                              446, 457, 561.
    Fish parasitos
                                       Doc.
   Fishes
                                       Doc.
                                             353.
   Harbor of refuge, construction of
                                       Doc.
                                              44.
   Hydroids
                                        Doc.
                                              455.
    Laboratory operations
                                       Doc.
                                             181, 474.
    Lobster movements
                                       Doc.
                                             442.
    Medusae
                                        Doc.
                                             558.
    Parasites of fishes
                                             446, 457, 561, 810.
                                       Doc.
                                             502.
    Protozoa
                                       Doc.
                                        Doc.
    Tagged cod
                                             491.
                                       Doc. 196, 198, 279, 312.
Woolman, A. J.
Work of Fish Commission, list of fishes
    Of Essex County, Mass.
                                       Doc.
                                              19.
Work of International Fisheries
      Commission
                                        Doc.
                                              649.
World's Columbian Exposition: aquaria at Doc. 253.
    Pearls at
                                        Doc.
                                              278.
    Report on
                                        Doc.
                                              311.
World's Fisheries Congress, report of
                                       Doc.
                                              273, 363.
                                              201, 209, 678, 685.
Worth, S. G.
                                        Doc.
Worms
                                        Doc.
                                              55.
                                                   E.C.
                                                          21, 42.
                                             869;
    Parasitic
                                        Doc.
                                             817, 957.
                                        Doc.
Wormy halibut
Wozelka~Iglau, Karl
                                        Doc.
                                              308.
Wright, A. H.
                                        Doc. 888.
                                               47.
Wright, Harrison
                                        Doc.
                                        Doc. 1083.
Wright, W. H.
Wyoming, aquatic invertebrate fauna of Doc.
    reconnaissance of streams and lakes Doc. 205.
                                              131.
Wytheville Station, operations of
                                        Doc.
                                              517.
Yellow catfish, breeding habits of
                                       Doc.
                                        Doc.
                                              201.
    Perch, hatching of
```

| Habits of Propagation Yellowstone Lake, parasites of trout in National Park, fishes Aquatic fauna of Entozoa of Explorations in Larval dibothria from Yen, W. W. York River, Va., oyster decline Young fishes Yukon River, salmon of Zacharie, F. C. Doc. 1018. Doc. 1018. Doc. 164. Doc. 818, 904. Doc. 210. Doc. 220. Doc. 220. Doc. 220. Doc. 149, 904. Doc. 664, 945. I.R. 37. Young fishes Doc. 138. Yukon River, salmon of Doc. 927, 1007, 1046, 1093. Doc. 693. | Yellow catfish: (continued) | |
|---|--|-----------------------------|
| Yellowstone Lake, parasites of trout in National Park, fishes Aquatic fauna of Entozoa of Explorations in Larval dibothria from Yen, W. W. York River, Va., oyster decline Young fishes (See Embryology) Yucatan fishes Yukon River, salmon of Zacharie, F. C. Doc. 164. Doc. 818, 904. Doc. 220. Doc. 220. Doc. 149, 904. Doc. 150. I.R. 37. Young fishes (See Embryology) Doc. 927, 1007, 1046, 1093. Doc. 138. Zacharie, F. C. Doc. 384. | Habits of | Doc. 885. |
| trout in National Park, fishes Doc. 818, 904. Aquatic fauna of Entozoa of Explorations in Larval dibothria from Yen, W. W. York River, Va., oyster decline Young fishes (See Embryology) Yucatan fishes Yukon River, salmon of Zacharie, F. C. Doc. 818, 904. Doc. 210. Doc. 220. Doc. 149, 904. Larval dibothria from Doc. 150. I.R. 37. Young fishes (See Embryology) Doc. 927, 1007, 1046, 1093. Doc. 928. Zacharie, F. C. Doc. 384. | Propagation | Doc. 1018. |
| National Park, fishes Aquatic fauna of Entozoa of Explorations in Larval dibothria from Yen, W. W. York River, Va., oyster decline Young fishes (See Embryology) Yucatan fishes Yukon River, salmon of Zacharie, F. C. Doc. 818, 904. Doc. 220. Doc. 149, 904. Doc. 150. I.R. 37. Doc. 664, 945. I.R. 37. Doc. 927, 1007, 1046, 1093. Doc. 928. Doc. 384. | Yellowstone Lake, parasites of | |
| Aquatic fauna of Doc. 210. Entozoa of Doc. 220. Explorations in Doc. 149, 904. Larval dibothria from Doc. 150. Yen, W. W. Doc. 664, 945. York River, Va., oyster decline I.R. 37. Young fishes (See Embryology) Doc. 927, 1007, 1046, 1093. Yucatan fishes Yukon River, salmon of Doc. 384. | trout in | Doc. 164. |
| Entozoa of Doc. 220. Explorations in Doc. 149, 904. Larval dibothria from Doc. 150. Yen, W. W. Doc. 664, 945. York River, Va., oyster decline I.R. 37. Young fishes (See Embryology) Doc. 927, 1007, 1046, 1093. Yucatan fishes Doc. 138. Yukon River, salmon of Doc. 928. Zacharie, F. C. Doc. 384. | National Park, fishes | Doc. 818, 904. |
| Entozoa of Doc. 220. Explorations in Doc. 149, 904. Larval dibothria from Doc. 150. Yen, W. W. Doc. 664, 945. York River, Va., oyster decline I.R. 37. Young fishes (See Embryology) Doc. 927, 1007, 1046, 1093. Yucatan fishes Doc. 138. Yukon River, salmon of Doc. 928. Zacharie, F. C. Doc. 384. | Aquatic fauna of | Doc. 210. |
| Larval dibothria from Doc. 150. Yen, W. W. Doc. 664, 945. York River, Va., oyster decline I.R. 37. Young fishes (See Embryology) Doc. 927, 1007, 1046, 1093. Yucatan fishes Doc. 138. Yukon River, salmon of Doc. 928. Zacharie, F. C. Doc. 384. | | Doc. 220. |
| Yen, W. W. York River, Va., oyster decline Young fishes (See Embryology) Yucatan fishes Yukon River, salmon of Zacharie, F. C. Doc. 664, 945. I.R. 37. Young 11.R. 37. Doc. 927, 1007, 1046, 1093. Doc. 928. Doc. 384. | Explorations in | Doc. 149, 904. |
| York River, Va., oyster decline Young fishes (See Embryology) Yucatan fishes Yukon River, salmon of Doc. 928. Zacharie, F. C. Doc. 384. | Larval dibothria from | Doc. 150. |
| York River, Va., oyster decline Young fishes (See Embryology) Yucatan fishes Yukon River, salmon of Zacharie, F. C. I.R. 37. Doc. 927, 1007, 1046, 1093. Doc. 138. Doc. 928. Doc. 384. | Yen, W. W. | Doc. 664, 945. |
| Yucatan fishes Yukon River, salmon of Zacharie, F. C. Doc. 138. Doc. 928. Doc. 384. | The state of the s | I.R. 37. |
| Yukon River, salmon of Doc. 928. Zacharie, F. C. Doc. 384. | Young fishes (See Embryology) | Doc. 927, 1007, 1046, 1093. |
| Yukon River, salmon of Doc. 928. Zacharie, F. C. Doc. 384. | Yucatan fishes | Doc. 138. |
| Zacharie, F. C. Doc. 384. | | Doc. 928. |
| | · · | Doc. 384. |
| MAANUT AND | Zirzow, Paul | Doc. 693. |



