13.—Chronological list of pamphlet publications of the U.S. Fish commission from its organization in 1871 to Jan-Uary, 1885.

By CHAS. W. SMILEY and CHAS. W. SCUDDER.

1872.

1. *†[36] BAIRD, SPENCER F. Memoranda of inquiry relative to the food-fishes of the United States.

[From Report for 1871-72, pp. 1-3; also by Smithsonian Institution No. 231, in Misc. Coll. X.]

2. *[37] BAIRD, SPENCER F. Questions relative to the food-fishes of the United States.

[From Report for 1871-72, pp. 3-6; also by Smithsonian Institution No. 234, in Misc. Coll. X.]

1873.

3. *[35] BAIRD, SPENCER F. Report on the condition of the sea fisheries of the south coast of New England in 1871 and 1872.

[From Report for 1871-'72, pp. i-xli.]

1874.

4. [48] BAIRD, SPENCER F. Report of the Commissioner for 1872 and 1873. A.—Inquiry into the decrease of food-fishes. B.—The propagation of food-fishes in the waters of the United States.

[From Report for 1872-73, pp. i-xcii.]

5. *[880] SMITH, SIDNEY I. The crustacea of the fresh waters of the United States.

From Report for 1872-'73, pp. 637-665, pl. 3.]

6. *[881] SMITH, SIDNEY I. Sketch of the invertebrate fauna of Lake Superior.

[From Report for 1872-773, pp. 690-707.]

7. *[882] SMITH, SIDNEY I. Food of fresh-water fishes.

[From Report for 1872-'73, pp. 708, 709.]

8. *[968] VERRILL, A. E. Synopsis of the North American fresh-water leeches.

[From Report for 1872-'73, pp. 666-689.]

^{*}This and all other items marked with the asterisk are out of print, and copies cannot be furnished.

[†]Figures in brackets denote the numbers of the papers in the "List of papers relating to the work of the U. S. Fish Commission," &c., by Charles W. Smiley, in Bulletin of the Commission. Vol. III, 1883, pp. 1-84.

1875.

9. *[283] GILL, THEODORE. Natural and economical history of the gourami.

[From Report for 1872-73, pp. 710-728, pl. 2.]

1876.

- 10. [52] BAIRD, SPENCER F. Questions relative to the cod and cod fisheries. Pp. 4.
- 11. [53] BAIRD, SPENCER F. Questions relative to the mackerel and mackerel fisheries. Pp. 4.
- 12. [54] BAIRD, SPENCER F. Questions relative to the alewife and alewife fisheries. Pp. 4.
- 13. [56] BAIRD, SPENCER F. Questions relative to the smelt and the smelt fisheries. Pp. 4.
- 14. [248] FARLOW, W. G. List of marine algæ of the United States. [From Report for 1873-'74 and 1874-'75, pp. 691-717.]
- 15. [57] BAIRD, SPENCER F. Report of the Commissioner for 1873–774 and 1874–775. A.—Inquiry into the decrease of food-fishes, B.—The propagation of food-fishes in the waters of the United States.

 [From Report for 1873–774 and 1874–775, pp. vii–xlvi.]

1877.

16. *[625] Kidder, J. H. Hints for emergencies. Prepared for the use of field parties of the U.S. Fish Commission. Pp. 7.

1878.

17. [60] BAIRD, SPENCER F. Report of the Commissioner for 1875-1876.

A.—Inquiry into the decrease of food-fishes. B.—The propagation of food-fishes in the waters of the United States.

[From Report for 1875-'76, pp. 1*-50,*]

1879.

18. *[64] BAIRD, SPENCER F. Statistics of menhaden fisheries, &c. Circular and questions.

[From Report for 1877, pp. 268-271.]

19. †Goode, G. Brown and Tarlton H. Bean. List of the fishes of Essex County, including those of Massachusetts Bay, according to the latest results of the work of the United States Fish Commission.

[From the Bulletin of the Essex Institute, vol. xi, 8°, pp. 38.]

[†]Not published by the United States Fish Commission, but copies for distribution are on hand.

- 20. [55] BAIRD, SPENCER F. Statistics of coast and river fisheries Pp. 4.
- 21. [21] ATKINS, CHARLES G. Cheap fixtures for the hatching of salmon.

[From Report for 1378, pp. 944-965.]

22. [80] BAIRD, SPENCER F., FRANCIS A. WALKER, and G. BROWN GOODE. Returns of circular relating to fish trade and consumption of fish.

[Published by census, No. 7-032, 2 eds., pp. 3.]

23. *[334] GOODE, G. BROWN. Plan of inquiry into the history and present condition of the fisheries of the United States.

[From Report for 1880, pp. 3-52.]

24. [190] COPELAND, CHARLES W. Specifications for building the screw-steamer Fish-Hawk for the United States Commission of Fish and Fisheries.

[By the United States Light-House Establishment, pp. 46.]

25. [63] BAIRD, SPENCER F. Report of the Commissioner for 1877.

A.—Inquiry into the decrease of food-fishes. B.—The propagation of food-fishes in the waters of the United States.

[From Report for 1877, pp. 1*-48*.]

26. *[275] GAMGEE, JOHN. On artificial refrigeration.
[From Report for 1877, pp. 901-972, pl. 3, figs. 5]

1880.

27. [410] HESSEL, RUDOLPH. The carp and its culture in rivers and lakes, and its introduction into America.

[From Report for 1875-76, pp. 865-900, figs. 6.]

28. [65] BAIRD, SPENCER F. Report of the Commissioner for 1878.

A.—Inquiry into the decrease of food-fishes. B.—The Propagation of food-fishes in the waters of the United States.

[From Report for 1878, pp. xv-lxiv.]

1881.

29. *[70] BAIRD, SPENCER F. Circular in reference to shipping fresh fish and other animals.

[Published by the Smithsonian Institution, pp. 4.]

30. [116] BEAN, TARLETON H. Directions for collecting and preserving fish.

[Published by the Smithsonian Institution, pp. 6.]

31. [360] GOODE, G. BROWN and J. W. COLLINS. The winter haddock fishery of New England.

[From Bulletin for 1881, pp. 226-235.]

32. [387] HARGER, OSCAR. Report on the marine Isopoda of New England and adjacent waters.

[From Report for 1878, pp. 297-462, pl. 13, index.]

33. *[230] EARLL, R. EDWARD. 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.

[From Report for 1878, pp. 685-740, pl. 3, index.]

34. [1005] WILSON, EDMUND B. Report on the *Pycnogonida* of New England and adjacent waters.

[From Report for 1878, pp. 463-506, pl. 7, index.]

- 35. BAIRD, GEORGE W. Specifications for the paddle-wheel steam seine boat Canvas-back, for service in the bay and river fisheries. Pp. 12.
- 36. *[251] FARLOW, W. G. The marine algæ of New England.
 [From Report for 1879, pp. 1-210, pl. 15, index.]
- 37. [174] COLLINS, J. W. Gill nets in the cod-fishery; a description of the Norwegian cod-nets, with directions for their use, and a history of their introduction into the United States.

[From Bulletin for 1881, pp. 1-17.]

38. [191] COPELAND, CHARLES W. Specifications for building the screw-steamer Albatross for the United States Commission of Fish and Fisheries.

[By the United States Light-house Establishment, pp. 51.]

1882.

39. *[71] BAIRD, SPENCER F. Directory of the officers, collaborators, employés, &c., of the Smithsonian Institution, National Museum, Geological Survey, and Fish Commission.

[Published by the Smithsonian Institution, 8°, No. 3961, pp. 8]

40. *[482] JACOBSON, H. Translator. Popular extracts from the investigations of the commission for the scientific examination of the German seas. Published by the royal ministry of agriculture, domains, and forests. [H. A. Meyer, K. Möbius, G. Karsten, and V. Hensen.]

[From Report for 1879, pp. 525-557.]

- 41. [879] SMITH, SANDERSON, and RICHARD RATHBUN. Lists of the dredging stations of the United States Fish Commission from 1871 to 1879, inclusive, with temperature and other observations. [From Report for 1879, pp. 559-601.]
- 42. [972] VERRILL, A. E. Report on the cephalopods of the northeastern coast of America.

[From Report for 1879, pp. 211-455, pl. 46, index.]

- 43. [850] SCUDDER, NEWTON P. The halibut fishery, Davis' Strait. [From Report for 1880, pp. 189-228, index.]
- 44. [76] BAIRD, SPENCER F. Memoranda for the construction of a harbor of refuge at Wood's Holl, Mass.

[In circular form, type-written and lithographed, 4°., pp. 6.]

- 45. *[231] EARLL, R. EDWARD. Statistics of the fisheries of Maine.
 [Census Bulletin No. 278, p. 47.]
- 46. [72] BAIRD, SPENCER F. Report of the Commissioner for 1879.

 A.—Inquiry into the decrease of food fishes. B.—The propagation of food-fishes in the waters of the United States.

[From Report for 1879, pp. xi-li.]

47. *[1019] WRIGHT, HARRISON, chairman of the committee. Report of a committee of the Wyoming Historical and Geological Society on the early shad fisheries of the north branch of the Susquehanna River.

[From Bulletin for 1881, pp. 352-359.]

- 48. *[588] JORDAN, DAVID S., and CHARLES H. GILBERT. Descriptions of nineteen new species of fishes from the Bay of Panama.

 [From Bulletin for 1881, pp. 306-335.]
- 49. [74] BAIRD, SPENCER F. Laws and regulations of the United States Fish Commission, pp. 32.
- 50. [75] BAIRD, SPENCER F. Classification of exhibits at London Fishery Exhibition, pp. 3.

1883.

- 51. [336] GOODE, G. BROWN. Materials for a history of the swordfishes.

 [From Report for 1880, pp. 287-392, pl. 24, index.]
- 52. [1067] GOODE, G. BROWN, JOSEPH W. COLLINS, R. E. EARLL, and A. HOWARD CLARK. Materials for a history of the mackerel fishery.
- 53. *[77] BAIRD, SPENCER F. Inducements offered fishermen to furnish shad eggs for the United States Commission of Fish and Fisheries.

[From Bulletin for 1882, pp. 389-391.]

54. BAIRD, SPENCER F. 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.

[London Exhibition, part A, pp. 107.]

55. RATHBUN, RICHARD. Collection of economic crustaceans, worms, echinoderms, and sponges.

[London Exhibition, part B, pp. 31.]

- 56. RIDGWAY, ROBERT. Catalogue of the aquatic and fish eating birds, exhibited by the United States National Museum.
 - [London Exhibition, part C, pp. 46.]
- 57. WINSLOW, FRANCIS. 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.
 [London Exhibition, part D, pp. 86.]
- 58. Brown, James Temple. The whale fishery and its appliances.
 [London Exhibition, part E, pp. 116.]
- 59. BEAN, TARLETON H. Catalogue of the collections of fishes exhibited by the United States National Museum.

[London Exhibition, part F, pp. 124.]

- 60. [232] EARLL, R. EDWARD. The Spanish mackerel, *Cybium maculatum* (Mitch.) Ag.; its natural history and artificial propagation, with an account of the origin and development of the fishery.

 [From Report for 1880, pp. 395-426.]
- 61. *McDonald, Marshall. Specifications for the superstructure of the fish-way proposed for the Great Falls, Potomac River, Maryland, pp. 3.
- 62. [78] BAIRD, SPENCER F. Report of the Commissioner for 1880.

 A.—Inquiry into the decrease of food-fishes. B.—The propagation of food-fishes in the waters of the United States.

[From Report for 1880, pp. xvii-xlvi.]

63. *[789] POTTS, EDWARD. Fresh water sponges. What, where, when, and who wants them.

[From Bulletin for 1883, pp. 389-391.]

64. SMILEY, CHARLES W. Carp and carp ponds: (1) Answer to 118 questions relative to German carp; (2) Directions concerning the construction of carp ponds.

[From Bulletin for 1883, pp. 241-256.]

1884.

65. BAIRD, SPENCER F. Report of the Commissioner for 1881. A.—
Inquiry into the decrease of food-fishes. B.—The propagation of food-fishes in the waters of the United States.

[From Report for 1881, pp. xiii-lxxi.]

66. SMILEY, CHARLES W. Special Bulletin: (1) Notes on the edible qualities of German carp and hints about cooking them; (2) The German carp and its introduction in the United States.

[From Bulletin for 1883, pp. 305-336.]

67. RYDER, JOHN A. Rearing oysters from artificially fertilized eggs, together with notes on pond-culture, &c.

[From Bulletin for 1883, pp. 281-294.]

68. Webster, H. E. and James E. Benedict. The Annelida chatopoda from Provincetown and Wellfleet, Massachusetts.

[From Report for 1881, pp. 699-747.]

69. RATHBUN, RICHARD. Descriptive catalogue of the collection illustrating the scientific investigation of the sea and fresh waters.

[London Exhibition, part G, pp. 109,]

70. TANNER, Z. L. Report on the construction and work in 1880 of the Fish Commission steamer Fish Hawk.

[From Report for 1881, pp. 3-53.]

71. Ryder, John A. A contribution to the embryography of osseous fishes, with special reference to the development of the Cod (Gadus Morrhua).

[From Report for 1882, pp. 455-605.]

- 72. McDonald, Marshall. Report submitting plans and specifications of the fishways for the Great Falls of the Potomac River, pp. 1-22.
- 73. BAIRD, G. W. Annual report on the electric lighting of the United States steamer Albatross, December 31, 1883.

[From Bulletin for 1884, pp. 153-158.]

74. TRUE, FREDERICK W. Catalogue of the aquatic mammals exhibited by the United States National Museum.

[London Exhibition, Part H, pp. 22.]

75. Goode, G. Brown. The status of the United States Fish Commission in 1884. A review of what has been accomplished in fish-culture, and the investigation of the American fisheries.

[From Report for 1884, pp. 1-42.]

76. RYDER, JOHN A. On the preservation of embryonic materials and small organisms, together with hints upon embedding and mounting sections serially.

[From Report for 1882, pp. 607-629.]

77. BAIRD, SPENCER F. Report of the Commissioner for 1882. A.—
Inquiry into the decrease of food-fishes. B.—The propagation of food-fishes in the waters of the United States.

[From Report for 1882, pp. xvii, xcii.]

78. Smith, Sidney I. Report on the decapod crustacea of the Albatross dredgings off the east coast of the United States in 1883.

[From Report for 1882, pp. 345-426.]

79. TANNER, Z. L. Report on the work of the U. S. Fish Commission steamer Fish Hawk, for the year ending December 31, 1882, and on the construction of the steamer Albatross.

[From Report for 1882, pp. 3-34.]

- 48 BULLETIN OF THE UNITED STATES FISH COMMISSION.
- 80. McDonald, Marshall. A new system of fishway building.
 [From Report for 1882, pp. 43-52.]
- 81. Collins, J. W. History of the tile-fish.
 [From Report for 1852, pp. 237-294.]
- 82. Collins, J. W. Notes on the habits and methods of capture of various species of sea birds that occur on the fishing banks of the eastern coast of North America, and which are used as bait for catching codfish by New England fishermen.

[From Report for 1882, pp. 311-338.]

83. VERRILL, A. E. 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.

[From Report for 1882, pp. 641-669.]

84. VERRILL, A. E. Physical characters of the portion of the continental border beneath the Gulf Stream explored by the Fish Hawk, 1880 to 1882.

[From Report for 1882, pp. 1045-1057.]

85. SMILEY, CHARLES W. Report on the distribution of carp to July 1, 1881, from young reared in 1879 and 1880.

[From Report for 1882, pp. 943-988.]

86. Bean, Tarleton H. List of the fishes distributed by the United States Fish Commission.

[From Report for 1882, pp. 1039-1044.]

87. Bean, Tarleton H. List of fishes collected by the United States Fish Commission at Wood's Holl, Mass., during the summer of 1881.

[From Report for 1882, pp. 339-344.]

88. SMILEY, CHARLES W. The influence of artificial propagation upon production. Illustrated by the salmon work of the Sacramento River, California.

[From Bulletin for 1884, pp. 201, 202.]

89. True, Frederick W. Suggestions to the keepers of the United States life saving stations, light-houses, and light-ships, and to other observers, relative to the best means of collecting and preserving specimens of whales and porpoises.

[From Report for 1884, pp. 1-26.]

90. Shufeldt, R. W. The Osteology of Amia calva: including certain special references to the skeleton of Teleosteans.

[From Report for 1883, pp. 1-132.]