## William Henry Holmes

[originally published in American Anthropologist, 35:752-764, 1933]

## WALTER HOUGH

U. S. National Museum

WILLIAM HENRY HOLMES died at Royal Oak, Michigan, on April 20, 1933, at the age of 86 years. Born near Cadiz, Ohio, December 1, 1846, son of Joseph and Mary Heberling Holmes, his education was cared for according to the best local lines of the period with a view to teaching as a career. Along with his education he fancied drawing, and early developed a precocity of line that was to influence his whole life. The urge for art expression in due course pushed him into the world of science. As a visitor to the Smithsonian the youth's talent was recognized and he found employment and association of scientific men. With the idea of an art career yet in mind he studied art in Germany and visited the great museums of Europe in 1879-80, and many early reports show the quality of his illustrations. This talent drew him into the work of the U.S. Geological Survey, and in 1872 he took the field as an artist under F .V. Hayden. Interesting himself deeply in geology he became assistant geologist in 1874. The vast landscapes of the Far West lying bare to the sun were traced by his pencil, and there remain from this period hundreds of drawings showing physiographic features of which those of the Grand Canyon are classics in geology. Assigned to the survey of the San Juan region of Colorado about 1875, this fortunate event brought together the man and the subject that was largely to dominate his scientific life. The cliff dwellings and pueblos of this region were fallow to his researches after a millennium of solitude in the deep canyons and on the high mesas. Here we find him writing the first report on the ancient remains of the San Juan results of his surveys and clambering in the dusty, smokeblackened rooms of the ancient people.

During Mr. Holmes' service in the U. S. Geological Survey from 1872 to 1889 he found time to keep up his interest in the works of man initiated, as was said, by his surveys in the region of the Cliff Dwellers. Thus we find traces of his artistic skill in the first volume of the Report of the Bureau of American Ethnology in 1879-80 and an important paper on the art in shell in the second report, showing that he was keenly studying the stream of accessions coming into the Smithsonian from the various

explorations conducted by the Government. In following reports are other papers of his, especially in the Fourth, where three papers of his appear. They show that at this period he was deeply interested in aboriginal decorative art. In 1882, while still with the Survey, he was appointed Curator of Aboriginal Ceramics in the U. S. National Museum. In 1889 he was definitely transferred to the Bureau of American Ethnology of the Smithsonian.

Among the disturbing dreams of the infant Anthropology was the correlation of European and American archaeology. Chipped implements resembling European types were labelled in museums American paleolithic implements. Dr. Holmes' knowledge of technique came in handy at this time. He found that none of the so-called implements showed wear by use or of specialization of form fitting them for any ordinary use. He carried on work in numerous Indian village sites and quarries where implements had been made. This study demonstrated that all these chipped stones labelled Paleoliths were only the rejects of the native implement makers thrown away on the workshops because of flaws in the stone or shapes not suitable for making finished implements. Those who believed in the great antiquity of man in America were thus deprived of their best argument, and a long and bitter fight ensued. Dr. Holmes scored a complete victory, however, and archaeologists now agree that there are no American paleolithic implements.

Dr. Holmes' interest in the antiquity of man was paramount, and he led the opposition to the previously generally accepted belief in the existence of a glacial age man in America. His scientific interests became concentrated in the field of American archaeology. It is in this field that he achieved most fame. He comprehended the whole American field, carrying on explorations in the various areas and studying the collections brought in by other workers. Twice did Dr. Holmes receive concrete recognition of his major work in archaeology. In 1898 he was awarded the Loubat prize of \$1,000 by Columbia University for the most important work in American archaeology in the three year period, also a prize of \$400 for the most outstanding publication in this field for the five year period ending with 1920.

Interrupting his work in the Smithsonian, Dr. Holmes from 1894 to 1897 served as Head Curator of Anthropology in the Field Museum, Chicago, and Professor of Anthropic Geology in the University of Chicago. During this assignment he accompanied Mr. Allison Armour on an exploration to Yucatan. Here he gathered materials for a volume on the ancient ruins of Maya civilization in Yucatan and Central America, with numerous illustrations from his pen of the remarkable ruined buildings and works of sculpture and with maps and plans of the cities.

Returning to the Smithsonian in 1897, Dr. Holmes accepted the Head Curatorship of Anthropology in the U.S. National Museum, this department covering ethnology, archaeology, technology, and history. This service was interrupted in 1902, when he succeeded Major J. W. Powell as Chief of the Bureau of American Ethnology. He applied himself assiduously to the work of the Bureau and during his intendency brought out the important volumes of the Handbook of the American Indians. He continued as chief till 1909, when he resigned to devote himself entirely to Museum work. During the subsequent years he supervised the classification and installation of the great collections of American archaeology and the establishment of the Division of Physical Anthropology with Dr. Ales Hrdlicka [sic] as Curator. In museum science Dr. Holmes was preeminent. His impeccable good taste and his mastery of composition made for outstanding results in the anthropological exhibits of the National Museum. Especially this is seen in the racial groups, which have remained the best of their class.

Toward the close of his long life Dr. Holmes returned to his first affiliations with art. The art materials aggregating to the Smithsonian were always subject to his care. In 1920 he was made Director of the newly established National Gallery of Art, then having become by additions of considerable importance. This work he carried on actively for the rest of his life, establishing the foundation of the National Gallery eventually to be housed by the Government.

Dr. Holmes received numerous honors both here and abroad. He was a National Academician, member and former president of the Washington Academy of Sciences, a charter member of the Cosmos Club and past president, member of the Archaeological Institute of Great Britain and Ireland, and of the National Institute of Fine Arts, of which he was president in 1909. His name is indelibly fixed in the Geography of the West, two mountains having been named for him. He was a noted mountain climber, having been first to ascend several high peaks in the Rockies, including the Mount of the Holy Cross. Dr. Holmes was always sparse in physique and seemingly delicate, but his agility was remarkable. In mountain climbing no one could keep up with him.

On his seventieth birthday his friends and admirers presented him with a unique publication of 500 pages of essays titled the Holmes Anniversary Volume. On his eightieth he was given a bound volume of letters from his fellow scientists in various parts of the world. Dr. Holmes was slender, erect, with brown eyes and pointed beard. He was never too busy to be polite, but he was always busy. His thoroughness stands out in high relief. He had a broad foundation in general culture. He always said that "the broader your foundation, the better your results will be." Another typical expression was "Make it tell the story." In 1883 he was married to Katherine Osgood, who bore him two sons.

To sum up, Dr. Holmes was an eminent man of science in whom the various phases of art and science were fused to a degree seldom given in one man. Art, science, and technic were the agencies he applied to the elucidation of his favorite science, anthropology. His passion for pure art is seen in his paintings, which are poetical transcriptions of nature, not only portraying nature but revealing his inmost soul.

## BIBLIOGRAPHY

The major part of this bibliography is taken from the Holmes Anniversary Volume prepared by Ella Leary, Librarian of the Bureau of American Ethnology, under the direction of F. W. Hodge.

- 1875. 1. First ascent of the Mountain of the Holy Cross, Colorado. Expedition of 1874. Christian Weekly, May 1, 1875.
- 1876. 2. Report on the geology of the north-western portion of the Elk range. Eighth Annual Report of the United States Geological and Geographical Survey of the Territories, 1874; 59-71, Washington, 1876.

3. A notice of the ancient ruins of southwestern Colorado, examined during the summer of 1875. Bulletin of the United States Geological and Geographical Survey of the Territories, II: 3-24, Washington, 1876.

1877. 4. Report on the geology of the district examined by the southwestern or San Juan division during the season of 1785. Ninth Annual Report of the United States Geological and Geographical Survey of the Territories, 1875; 237-276, Washington, 1877.

1870. 5. Report on the geology of the Sierra Abajo and West San Miguel mountains. Tenth Annual Report of the United States Geological and Geographical Survey of the Territories, 1876; 187-195, Washington, 1878.

6. Report on the ancient ruins of southwestern Colorado, examined during the summers of 1875 and 1876. *Ibid* : 383-408.

1880. 7. Fossi1 forests of the volcanic tertiary formations of the Yellowstone National Park. Bulletin of the United States Geological and Geographical Survey of the Territories, 1879--80, v; 125-132, Washington, 1880.

1881. 8. Glacial phenomena in the Yellowstone Park. American Naturalist, xv; 203-208, Philadelphia, 1881.

1883. 9. Report on the geology of the Yellowstone National Park. Twelfth Annual Report of the United States Geological and Geographical Survey of the Territories, 1878, II; 1-57, Washington, 1883.

10. Art in shell. Transactions of the Anthropological Society of Wash 1882-1883, II: 94-119, Washington, 1883.

11. The use of the cross symbol by the ancient Americans. *Ibid*.: 161-172.

12. Art in shell of the ancient Americans. Second Annual Report of the Bureau of Ethnology, 1880--81: 179-305, Washington, 1883.

1884. 13. Prehistoric textile fabrics of the United States, derived from impressions on Pottery. Third Annual Report of the Bureau of Ethnology, 1881-82; 393-425, Washington, 1884.

14. Eccentric figures from southern mounds. Science, III; 436--438, Cambridge, Mass. 1884.

15. Appearance of the cyclone cloud at Rochester, Minn., 1883. *Ibid* .: 304.

16. Burial-masks of the ancient Peruvians. *Ibid*., IV; 10--11.

17. Illustrated catalogue of a portion of the collections made by the Bureau of Ethnology during the field season of 1881. Third Annual Report of the Bureau of Ethnology, 1881-82:427-510, Washington, 1884.

1885. 18. Report [of the Geologist] to the Director of the United States Geological Survey, 1884-85. Sixth Annual Report of the United States Geological Survey, 1884-85: 94-97, Washington, 1885.

19. Monoliths of San Juan Teotihuacan, Mexico. American Journal of Archaeology, I: 361-371, Baltimore, 1885.

20. Examples of iconoclasm by the conquerors of Mexico. American Naturalist, XIX:1031-1037, Philadelphia, 1885.

21. Evidences of the antiquity of man on the site of the City of Mexico. Transactions of the Anthropological Society of Washington, Ill: 68-81, Washington, 1885.

22. Origin and development of form and ornament in ceramic art. [Abstract.] *Ibid.*: 112-114. [See No.30.]

23. [Quoted on] The glaciers in the Rocky mountains. Fifth Annual Report of the United States Geological Survey, 1883-84.344-347, Washington, 1885.

1886. 24. The trade in spurious Mexican antiquities. Science, VII: 170-172, 264, New York, 1886.

25. Sketch of the great Serpent mound. *Ibid*., VIII: 624-628, New York, 1886.

26. Textile art in prehistoric archaeology. American Antiquarian, VIII: 261-266, Chicago, 1886.

27. Report on the section of American prehistoric pottery in the United States National Museum. Annual

Report of the United States National Museum, 1885, pt. 2:69, Washington, 1886.

28. Pottery of the ancient Pueblos. Fourth Annual Report of the Bureau of Ethnology, 1882-83:257-360, Washington, 1886.

- 29. Ancient pottery of the Mississippi valley. *Ibid* : 361-436.
- 30. Origin and development of form and ornament in ceramic art. *Ibid* : 437-465.

31. Ancient pottery of the Mississippi valley. Proceedings of the Davenport Academy of Natural Sciences, 1882-84, IV: 123-196, Davenport Iowa, 1886.

- 1887. 32. The use of gold and other metals among the ancient inhabitants of Chiriqui, Isthmus of Darien. Bulletin 3, Bureau of Ethnology, Washington, 1887. 27 pp.
- 1888. 33. Ancient art of the province of Chiriqui, Colombia. Sixth Annual Report of the Bureau of Ethnology, 1884-85: 13-187, Washington, 1888.

34. A study of the textile art in its relation to the development of form and ornament. *Ibid*.: 189-252.

35. Report [of the Geologist-in-charge] to the Director of the United States Geological Survey, 1885-86. Seventh Annual Report of the United States Geological Survey, 1885-86: 136-137. Washington, 1888.

36. Use of gold and other metals in ancient Chiriqui. Jeweler's Circular and Horological Review, XIX: 34: 37-38; 65-68; 88; 91-92, New York, 1888.

1889. 37. Textile fabrics of ancient Peru, Bulletin 7, Bureau of Ethnology, Washington, 1889. 17pp.

38, Report [of the Geologist-in-charge] to the Director of the United States Geological Survey, 1886-87. Eighth Annual Report of the United States Geological Survey, 1886-87, pt. I: 202-203, Washington, 1889.

39. Report [of the Geologist-in-charge] to the Director of the United States Geological Survey, 1887-88. Ninth Annual Report of the United States Geological Survey, 1887-88. 143-144, Washington, 1889.

40. On some spurious Mexican antiquities and their relation to ancient art. Annual Report of the Smithsonian Institution, 1886. pt. I: 319--334, Washington, 1889.

41. [Review of] Pitt Rivers' Excavations in Cranborne Chase, near Rushmore, on the borders of Dorset and Wilts, 1880-88. Vol. II. Printed privately, 1888. American Anthropologist, II: 172, Washington, 1889.

42. Pottery of the Potomac tide-water region. *Ibid* : 246-252.

43. Debasement of Pueblo art. *Ibid* .: 320.

44. Archaeological collections from Alabama. *Ibid* : 350.

1890. 45. A quarry workshop of the flaked-stone implement makers in the District of Columbia, American Anthropologist, III: 1-26. Washington, 1890.

46. The Potomac valley as a field for archaeologic research. *Ibid* : 26.

47. On the evolution of ornament – an American lesson. *Ibid* :: 137-146.

48. A West Virginia rock shelter. Ibid .: 217-223.

49. Recent work in the quarry workshops of the District of Columbia. *Ibid* .: 224--225.

50. Excavations in an ancient soapstone quarry in the District of Columbia. *Ibid*.: 321-330.

51. Collections of the Missouri Historical Society. *Ibid* : 384.

52. Report on the department of American aboriginal Pottery in the United States National

Museum, 1888. Annual Report of the United States National Museum, 1888. 105, Washington, 1890.

53. Report [of the Geologist-in-charge] to the Director of the United States Geological Survey, 1888-1889. Tenth Annual Report of the United States Geological Survey, 1888-89, pt. I: 189-190, Washington, 1890.

54. On the evolution of ornament, an American lesson. [Abstract.] Proceedings of the Thirty-eighth Meeting of the American Association for the Advancement of Science, Toronto, August, 1889: 363, Salem, 1890.

1891. 55. Manufacture of stone arrow-points. American Anthropologist, IV: 49-58; Washington, 1891.

56. Thruston tablet. Ibid .: 161-165.

57. Aboriginal novaculite quarries in Garland County, Arkansas. *Ibid*.: 313-316.

58. Report on the department of American prehistoric Pottery in the United States National Museum. Annual Report of the United States National Museum, 1890. 135-136, Washington, 1891.

59. Aboriginal stone implements of the Potomac valley. [Abstract] Proceedings of the Thirty-ninth Meeting of the American Association for the Advancement of Science, Indianapolis, August, 1890; 391, Salem, 1891.

1892. 60. Report as delegate to Congrès Géologique International. American Anthropologist, v: 50-51, Washington, 1892.

61. Studies in aboriginal decorative art I. Stamped ornament of South Appalachian earthenware. *Ibid*.: 67-72.

61a. Studies in aboriginal decorative art II. The rocking stamp or roulette in Pottery decoration. *Ibid*.: 149-152.

62. On the distribution of stone implements in the tide-water province. [Abstract] Proceedings of the Fortieth Meeting of the American Association for the Advancement of Science, Washington, August, 1891: 366, Salem, 1892.

63. Aboriginal novaculite quarries in Arkansas. [Abstract] *Ibid* :: 366-367.

64. Evolution of the aesthetic. Proceedings of the Forty-first Meeting of the American Association for the Advancement of Science, held at Rochester, August, 1892: 239-255, Salem, 1892.

65. Sacred pipestone quarries of Minnesota and ancient copper mines of Lake Superior. [Abstract.] *Ibid* : 277-279.

66. Aboriginal quarries of flakable stone and their bearing upon the question of palaeolithic man. [Abstract.] *Ibid.*: 279-280.

67. On the so-called palaeolithic implements of the upper Mississippi. [Abstract.] *Ibid*.: 280-281.

68. Report on the department of American aboriginal pottery in the United States National Museum, 1891. Annual Report of the United States National Museum, 1891: 145, Washington, 1892.

69. Notes upon some geometric earthworks, with contour maps. American Anthropologist, v: 363--373, Washington, 1892.

70. Modern quarry refuse and the paleolithic theory. Science, xx: 295-297, New York, 1892. [See No.77.]

71. Report on the department of American aboriginal pottery in the United States National Museum. Annual Report of the United States National Museum, 1892: 109, Washington, 1893.

72. Distribution of stone implements in the tidewater country. American Anthropologist, VI: 1-14,

Washington, 1893. [Reprinted in the Archaeologist, I: 41-50, Waterloo, Indiana, 1893.]

73. Geographic nomenclature of the District of Columbia. *Ibid.*: 29-53.

1893. 74. [Review of] Pitt Rivers' Excavations in Bokerly and Wansdyke, Dorset and Wilts. 1888-1891. With observations on the human remains, by J. G. Garson. Vol. III [London]. 1892. *Ibid*.: 344.

75. The World's Fair Congress of Anthropology. *Ibid* .: 423.

76. Obituary of Charles Colcock Jones. *Ibid* .: 457-458.

77. Modern quarry refuse and the paleolithic theory. The Archaeologist, I: 21-27, Waterloo, Indiana, 1893. [Reprint of No.70.]

78. Traces of glacial man in Ohio. *Ibid*.: 161-170. [See No.81.]

79. Gravel man and paleolithic culture; a preliminary word. Science, XXI: 29-30, New York, 1893.

80. Are there traces of glacial man in the Trenton gravels? Journal of Geology, I: 15-37, Chicago, 1893.

81. Traces of glacial man in Ohio. *Ibid.*, 147-163. [See No.78].

82. Vestiges of early man in Minnesota. American Geologist, XI: 219-240, Minneapolis, 1893. [See No.89.]

1894. 83. An ancient quarry in Indian Territory. Bulletin 21, Bureau of American Ethnology, Washington, 1894. 19 pp.

84. Introductory note [to archeologic investigations in James and Potomac valleys, by Gerard Fowkes]. Bulletin 23, Bureau of American Ethnology: 7-8, Washington, 1894.

85. Earthenware of Florida. Collections of Clarence B. Moore. Journal of the Academy of Natural Sciences of Philadelphia, 2d series, x: 105-128, Philadelphia, 1894.

86. Order of development of the primal shaping arts. Proceedings of the Forty-second Meeting of the American Association for the Advancement of Science, Madison, August, 1893: 289-300, Salem, 1894.

87. Natural history of flaked stone implements. Memoirs of the International Congress of Anthropology: 120-139. Chicago, 1894.

88. Caribbean influence in the prehistoric art of Southern states. American Anthropologist, VII: 71-79, Washington, 1894.

80. Vestiges of early man in Minnesota. The Archaeologist, 11: 65-79, Waterloo, Indiana, 1894. [See No.82.]

- 1895. 90. Archaeological studies among the ancient cities of Mexico. Part 1: Monuments of Yucatan. Part 2: Monuments of Chiapas, Oaxaca, and the valley of Mexico. Publications of the Field Columbian Museum, Anthropological series, I: 338, Chicago, 1895-1897.
- 1896. 91. Prehistoric textile art of eastern United States. Thirteenth Annual Report of the Bureau of Ethnology, 1891-92: 3-46, Washington, 1896.
- 1897. 92. Stone implements of the Potomac-Chesapeake tidewater province. Fifteenth Annual Report of the Bureau of American Ethnology, 1893-94: 13-152, Washington, 1897.

93. Preservation and decorative features of Papuan crania. Publications of the Field Columbian Museum, Anthropological series, 11: 41-48, Chicago, 1897.

94. Primitive man in the Delaware valley. Science, VI: 824-829, New York, 1897. [See No.97.] 1898. 95. Anthropological exhibit of the U. S. National Museum at the Omaha Exposition. Science, VIII: 37-40, New York, 1898.

96. The building of a Zapotec city. Proceedings of the Forty-sixth Meeting of the American Association for the Advancement of Science, Detroit, August, 1897: 340, Salem, 1898.

97. Primitive man in the Delaware valley. *Ibid*.: 364-370. [See No. 94.]

98. Museum presentation of anthropology. Proceedings of the Forty-seventh Meeting of the American Association for the Advancement of Science, Boston, August, 1898: 485-488, Salem, 1898.

- 1899. 99. Preliminary revision of the evidence relating to auriferous gravel man in California. American Anthropologist, n. s., I: 107-121,614-645, New York, 1899. [See No.105.]
- 1900. 100. Report on the department of anthropology for the year 1897-1898. Annual Report of the United States National Museum, 1898: 19--33, Washington, 1900.

101. Ancient monuments of Yucatan. Monumental Records, I: 140--142, New York, 1900.

102. The ancient Aztec obsidian mines of the State of Hidalgo, Mexico. [Abstract.] Proceedings of the Forty-ninth Meeting of the American Association for the Advancement of Science, New York, June, 1900: 313, Easton, Pa., 1900.

103. Remarks on Frank Hamilton Cushing. American Anthropologist, n. s., 11: 356-360, New York, 1900.

104. Obsidian mines of Hidalgo, Mexico. *Ibid*.: 405-416.

1901. 105. Review of the evidence relating to auriferous gravel man in California. First paper. Annual Report of the Smithsonian Institution, 1899: 419-472, Washington, 1901. [See No.99.]

106. Report on the department of anthropology for the year 1898-1899. Annual Report of the United States National Museum, 1899: 17-24, Washington, 1901.

107. Use of textiles in Pottery making and embellishment. American Anthropologist, n. s., III. 397--403, New York, 1901.

108. Aboriginal copper mines of Isle Royale, Lake Superior. *Ibid*.: 684-696.

1902. 109. Order of development of the primal shaping arts. Annual Report of the Smithsonian Institution, 1901: 501-513, Washington, 1902.

110. Flint implements and fossil remains from a sulphur spring at Afton, Indian Territory. American Anthropologist, n. s., IV: 108-129, New York, 1902. [See No.123.]

111. Sketch of the origin, development, and probable destiny of the races of men. *Ibid.*, 369-391.

112. [Review of] Brower's Memoirs of Explorations in the Basin of the Mississippi. Volume v, Kakabikansing. With a contributed section by N. H. Winchell. St. Paul, 1902. *Ibid* : 517-520.

113. [Review of] Moore's Certain Aboriginal Remains of the Northwest Florida Coast. Part I. *Ibid*.: 521-523.

114. Fossil human remains found near Lansing, Kansas. *Ibid*.: 743-752. [See No.125.]

115. Classification and arrangement of the exhibits of an anthropological museum. Science, XVI: 487-504, New York, 1902. [See No.124.]

116. Instructions to collectors of historical and anthropological specimens. Especially designed for collectors in the insular possessions of the United States, by W. H. Holmes and O. T. Mason. Bulletin 39 of the United States National Museum, part Q, Washington, 1902. 16 pp.

117. Report on the department of anthropology for the year 1899-1900. Annual Report of the United States National Museum, 1900: 21-29, Washington, 1902.

118. Anthropological studies in California. *Ibid* .: 155-187.

1903. 119. Aboriginal pottery of the eastern United States. Twentieth Annual Report of the Bureau of American Ethnology, 1898-1899: 1-201, Washington, 1903.

120. Report on the department of anthropology for the year 1900-1901. Annual Report of the United States National Museum, 1901: 51-61, Washington, 1903.

121. The exhibit of the department of anthropology. *Ibid*.: 200-218.

122. Report on the exhibit of the United States National Museum at the Pan-American Exposition, Buffalo, New York, 1901. By F. W. True, W. H. Holmes, and G. P. Merrill. *Ibid.*, 177-231.

123. Flint implements and fossil remains from a sulphur spring at Afton, Indian Territory. *Ibid*.: 237-252. [See No. 110.].

124. Classification and arrangement of the exhibits of an anthropological museum. *Ibid.*: 253--278. [See No.115.]

125. Fossil human remains found near Lansing, Kansas. Annual Report of the Smithsonian Institution, 1902: 455-462, Washington, 1903. [See No.114.]

126. Traces of aboriginal operations in an iron mine near Leslie, Missouri. American Anthropologist, n. s., 503-507, Lancaster, Pa., 1903. [See No.130.]

127. Shell ornaments from Kentucky and Mexico. Smithsonian Miscellaneous Collections, vol. XLV {Quarterly Issue, vol. I) : 97-99, Washington, 1903. [Reprinted in Scientific American Supplement, LVII1: 23828, New York, 1904.]

1904. 128. Report on the department of anthropology for the year 1901-1902. Annual Report of the United States National Museum, 1902: 53--58, Washington, 1904.

129. Report of the [Chief of the] Bureau of American Ethnology to the Secretary of the Smithsonian Institution [for the fiscal year ending June 30, 1903.] Annual Report of the Smithsonian Institution, 1903: 34-48, Washington, 1904.

130. Traces of aboriginal operations in an iron mine near Leslie, Mo. *Ibid*.: 723--726. [See No.126.]

131. The exhibits of the Smithsonian Institution in the Government Building [at the St. Louis Exposition]. American Anthropologist, n. s., VI: 754, Lancaster, Pa., 1904.

132. [Letter as Chief of the Bureau of American Ethnology, dated Washington, November 19, 1904, addressed to Edgar L. Hewett, respecting the preservation of antiquities.] In Hewett, Edgar L., Circular Relating to Historic and Prehistoric Ruins: 16, Washington, 1904. Also in Hewett, Edgar L., Government Supervision of Historic and Prehistoric Ruins: 10-11 of reprint, New York, 1904.

1905. 133. Report of the [Chief of the] Bureau of American Ethnology to the Secretary of the Smithsonian Institution [for the fiscal year ending June 30, 1904.] Annual Report of the Smithsonian Institution, 1904: 46-54, Washington, 1905.

134. Report on the Congress of Americanists held at Stuttgart, Germany, August 18-23, 1904. Smithsonian Miscellaneous Collections, XLVII (Quarterly Issue, vol. II): 391-395, Washington, 1905. 135. Contributions of American archaeology to human history. *Ibid.*, pp. 412-420. Published also in Annual Report of the Smithsonian Institution, 1904: 551-558, Washington, 1905.

136. [Review of] Farrand's The American Nation: A History. Vol.II. Basis of American History, 1500-1900. New York, 1904. American Anthropologist, n. s., VII: 114-117, Lancaster, Pa., 1905.

137. Notes on the antiquities of Jemez valley, New Mexico. *Ibid* : 198-212.

1906. 138. Report of the [Chief of the] Bureau of American Ethnology to the Secretary of the Smithsonian Institution [for the fiscal year ending June 30, 1905.] Annual Report of the Smithsonian Institution, 1905: 40-52, Washington, 1906.

139. Decorative art of the aborigines of northern America. Anthropological Papers written in Honor of Franz Boas: 179-188, New York, 1906.

140. Certain notched or scalloped stone tablets of the mound-builders. American Anthropologist, n. s., VIII: 101-108, Lancaster, Pa., 1906.

1907. 141. Twenty-fourth annual report of the [Chief of the) Bureau of American Ethnology to the Secretary of the Smithsonian Institution [for the fiscal year 1902-03]. Washington, 1907. xl pp.

142. Twenty-fifth annual report of the [Chief of the] Bureau of American Ethnology to the Secretary of the Smithsonian Institution [for the fiscal year 1903-04]. Washington, 1907. xxix pp.

143. Report of the [Chief of the] Bureau of American Ethnology to the Secretary of the Smithsonian Institution [for the fiscal year ending June 30, 1906.] Annual Report of the Smithsonian Institution, 1906: 47-50, Washington, 1907.

144. [Articles on] Abrading implements, Actinolite, Adzes (with Gerard Fowke), Amber, Anchor stones, Andesite, Antiquity, Anvils, Archaeology, Architecture, Argillite, Arrowheads (with Gerard Fowke), Art, Axes (with Gerard Fowke), Baking stones, Banner stones, Basalt, Batons, Bells, Birdstones, Boat-stones (with Gerard Fowke), Bone-work, Bureau of American Ethnology, Cache disks and blades, Calaveras Man, Calcite, Catlinite (Red pipestone), Caves and rock shelters, Celts (with Gerard Fowke), Chalcedony (with G. P. Merrill), Chisels (with Gerard Fowke), Chlorite, Cinnabar, Cliff-dwellings, Cones (with Gerard Fowke), Copper, Cross, Daggers, Duck tablets, Engraving, Flakes, Flaking implements, Flint (with Gerard Fowke), Flint disks, Footprint sculptures, Galena, Gold, Gorgets, Granite, Graphic art, Gypsum, Hammers, Hatchets, Hematite, Hemispheres, Hoes and spades (with Gerard Fowke), Hook-stones, Iron, Jasper, Jet, Knives, Lignite (Anthracite, Cannel coal), Marble, Metalwork, Metate, Mica, Mines and quarries, Mortars, Mosaic, Mullers. In Handbook of American Indians Bulletin 30, Bureau of American Ethnology, pt. I, Washington, 1907. [See No.162.]

145. Aboriginal shell-heaps of the middle Atlantic tidewater region. American Anthropologist, n. s., IX: 113-128, Lancaster, Pa., 1907.

146. [Review of] Mills' Certain Mounds and Village Sites in Ohio. Vol. I. Columbus, 1907. *Ibid*.: 614-618.

147. On a nephrite statuette from San Andres Tuxtla, Vera Cruz, Mexico. *Ibid.*: 691-701. [See No. 178.]

148. [Review of] Moore's Moundville Revisited. Crystal River Revisited. Mounds of the Lower Chattahoochee and Lower Flint Rivers. Notes on the Ten Thousand Islands, Florida. *Ibid* :: 741-742. 149. On the origin of the cross symbol. Proceedings of the American Antiquarian Society, n. s., XVIII: 98-105, Worcester, Mass., 1907.

150. Twenty-sixth annual report of the [Chief of the] Bureau of American Ethnology to the Secretary of the Smithsonian Institution [for the fiscal year 1904-05]. Washington, 1908. xxxi pp.

1908. 151. Report of the [Chief of the] Bureau of American Ethnology to the Secretary of the Smithsonian Institution [for the fiscal year ending June 30, 1907]. Annual Report of the Smithsonian Institution, 1907: 48-55, Washington, 1908.

152. [Review of] Saville's Contributions to South American Archeology. The George G. Heye Expedition. The Antiquities of Manabi, Ecuador. A Preliminary Report. New York, 1907. American Anthropologist, n. s., x: 122-128, Lancaster, 1908.

153. [Review of] Hartman's Archeological Researches on the Pacific Coast of Costa Rica. Pittsburgh, 1907. *Ibid*.: 128-133.

154. The tomahawk. Ibid.: 264-276.

1909. 155. Report of the [Chief of the] Bureau of American Ethnology to the Secretary of the Smithsonian Institution [for the fiscal year ending June 30, 1908]. Annual Report of the Smithsonian Institution, 1908: 44-52, Washington, 1909.

156. Biographical memoir of Lewis Henry Morgan, 1818-1881. Read before the National Academy of Sciences, November 20, 1907. Biographical Memoirs of the National Academy of Sciences, VI: 219-239, Washington, 1909.

157. First Pan-American scientific congress, held in Santiago, Chile, December, 25, 1908-January 6,1909, Science, n. s., XXIX: 441--448, New York, 1909. [See No.161.]

1910. 158. Report of the [Chief of the] Bureau of American Ethnology to the Secretary of the Smithsonian Institution [for the fiscal year ending June 30, 1909]. Annual Report of the Smithsonian Institution, 1909: 40--48, Washington, 1910.

159. Some problems of the American race. American Anthropologist, n. s., XII: 149-182, Lancaster, Pa., 1910.

160. Remarks on the study of aboriginal American history. Proceedings of the Mississippi Valley Historical Association, 1908-1909, vol. II: 182-189, Cedar Rapids, Iowa, 1910.

161. The first Pan-American scientific congress, held in Santiago, Chile, December 25, 1908 - January 6, 1909. Annual Report of the Smithsonian Institution, 1909: 86-95, Washington, 1910. [See No.157.]

162. [Articles on] Nampa image, Neolithic age, Nephrite, Notched plates, Novaculite, Obsidian, Ornament, Painting, Paleolithic implements, Pearls, Pecking implements, Pectolite, Perforated stones, Pestles, Picks, Pierced tablets, Pile dwellings, Plummets, Polishing implements, Porphyry, Pottery, Problematical objects, Pyrite or Iron Pyrites, Quartz, Quartzite, Receptacles, Rhyolite, Saws, Schist, Scrapers, Sculpture and carving, Serpentine, Shell, Shell-work, Shell-heaps, Sienite, Silver, Sinkers, Slate, Spade-stones, Spine-back stones, Steatite, Stonework, Teshoa, Tomahawk, Trachite, Turquoise, Wedges. In Handbook of American Indians, Bulletin 30, Bureau of American Ethnology, pt. 2, Washington, 1910. [See No.144.]

163. Twenty-seventh annual report of the [Chief of the] Bureau of American Ethnology to the Secretary of the Smithsonian Institution [for the fiscal year 1905--06]. Washington, 1911. 14 pp.

1912. 164. Twenty-eighth annual report of the [Chief of the] Bureau of American Ethnology to the Secretary of the Smithsonian Institution [for the fiscal year 1906-07]. Washington, 1912. 21 pp.

165. Stone implements of the Argentine littoral. Bulletin 52 of the Bureau of American Ethnology: 125--151, Washington, 1912.

166. Bearing of archeological evidence on the place of origin and on the question of the unity or plurality of the American race. American Anthropologist, n. s., XIV: 30--36, Lancaster, Pa., 1912.

- 1913. 167. The relations of archeology to ethnology. [Discussion.] *Ibid.*: xv: 566-567; Lancaster, Pa., 1913.
- 1914. 168. Areas of American culture characterization tentatively outlined as an aid in the study of the antiquities. American Anthropologist, n. s., XVI: 413-446, Lancaster, Pa.; 1915.
- 1915. 169. Thirtieth annual report of the [Chief of the] Bureau of American Ethnology to the Secretary of the Smithsonian Institution [for the fiscal year 1908-{)9.] Washington, 1915. 24pp.

170. Masterpieces of aboriginal American art. I. – Stucco work. Art and Archaeology, I : 1-12, Washington, 1914.

171. Masterpieces of aboriginal American art. II. – Mosaic work, minor examples, *Ibid*.: 91-102.

- 172. Problems of the twin cups of San Juan Teotihuacan, Mexico. *Ibid*.: 210.
- 173. Masterpieces of aboriginal American art. III. – Mosaic work, major examples. *Ibid*.: 243-255.

174. Ancient America at the Panama-California exposition, San Diego. *Ibid*.: u: 30--31, Washington, 1915.

175. Introduction [to Ancient America at the Panama-Califorina exposition, by Edgar L. Hewett]. *Ibid* : 65-66.

1916. 176. Dighton Rock. *Ibid.*: III: 53-55, Washington, 1916.

177. Masterpieces of aboriginal American art. IV. – Sculpture in the round. *Ibid*.: 71-85.

178. The oldest dated American monument, a nephrite figurine from Mexico. *Ibid.*: 275-278. [See No.147.]

179. Examples of spurious antiquities. 1. – Guatemalan pottery. *Ibid* .: 287-288.

180. The place of archeology in human history. [Abstract.] Nineteenth International Congress of Americanists, December 27-31, Washington, 1915. [See No.184.]

181. Masterpieces of aboriginal American art. V.-The great dragon of Quirigua, Part I. Art and Archaeology, IV, no.6: 269-278, Washington, December, 1916.

182. A Quirigua mystery. *Ibid* .: 342-344.

- 183. The great dragon of Quirigua. Annual Report of the Smithsonian Institution, 1916: 447-460. Reprinted in Art and Archaeology, 4, no.6, December 1916.
- 1917. 184. The place of archeology in human history. Proceedings of the Nineteenth International Congress of Americanists, Washington, 1917: 5-11.

185. Handbook of American Antiquities. Part I – Introduction. Bulletin 60 of the Bureau of American Ethnology, Washington, 1917.

186. Archeological explorations in Guatemala and Honduras. Smithsonian Miscellaneous Collection, LX, no.17, pp. 73-76, Washington 1917.

187. Las Casa del Advino, Uxmal, Yucatan. Art and Archaeology 6, bo. 1, July, 1917.

1918. 188. On the antiquity of man in America. Science, n.s., 47, no.1223, June 7, 1918.

189. Organization of the Committee on Anthropology of the National Research Council and its activities for the year 1917. American Journal of Physical Anthropology, I, no.1: 77-90, May 16, 1918.

- 1919. 190. Masterpieces of aboriginal American art. VI. Work of the goldsmith. Art and Archaeology, 8, no.6, 349--300, Nov.-Dec., 1919.
- 1920. 191. On the race history and facial characteristics of the aboriginal Americans. *Ibid*.: 9, no.2: 77-89, Feb., 1920.

U. S. NATIONAL MUSEUM. WASHINGTON, D.C.