

THE COMPOSITION AND ORIGIN OF MONK'S MOUND

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Six miles east of St. Louis, in the rich bottom lands of the Mississippi Valley, are a series of about seventy mounds called the Cahokia Mounds. They vary in height from a few feet to ninety feet and in horizontal dimensions from fifteen to one thousand feet. They are scattered for more than one mile in an east to west direction. The largest of them, known as Monk's Mound, is ninety feet in height, seven hundred feet in breadth and one thousand feet in length.

For over one hundred years these mounds have been visited, studied and described by various writers, who have called them artificial mounds, built by the so-called "mound builders," or by the Indians.

The men who first expressed this idea were not physiographers or geologists. Their followers for the most part have been archaeologists rather than students of soils, of strata, of topographic forms or of fossils. Almost no opportunity has been afforded them to investigate the subject. These conditions added to the very human habit of choosing the unusual or mysterious in preference to every day matters of fact have, in my opinion, contributed to the persistence of a false conclusion.

In August, 1914, the writer was courteously permitted by the Ramey heirs to bore twenty-five holes in the north and

- One of the earliest writers on the subject, Brackenridge, in a letter to Thomas Jefferson, calls Monk's Mound "the most stupendous monument of antiquity."
- 1813, H. M. Brackenridge, *Trans. American Phil. Soc. Vol. 1, New Series 1818, Antiquities of the Mississippi Valley*, page 151; 1814, H. M. Brackenridge "Views of Louisiana," *Pittsburg*, 1814, page 181; *Baltimore*, 1817, page 72. Latrobe, *Vol. 2*, page 250. Featherstonhaugh's "Travels in North America," page 66.
- Squier called it an "Ancient monument to human labor and skill," and says "it is of course much rounded and its regularity to a great degree destroyed by the storms and changes of centuries; its original plan is however so represented as to be still sufficiently obvious."
- "Smithsonian Contribution to Knowledge," 1848, Squier, *Vol. 1, Preface*, page XXXL; also page 174, and E. G. Squier, "Aboriginal Monuments of the Mississippi Valley," *Bartlett and Welford*, 1847, page 30.
- "The most magnificent of all the mound builder's art."
- 1880, J. T. Short, "North Americans of Antiquity." *Harper Bros.* 1880, page 41.
- "Cahokia Mound is the largest of the artificial mounds."
- 1885, J. S. Kingsley, "Standard Natural History," *Cassinolo*, 1885, *Vol. 6*, page 210.
- "Giant structure known as Monk's Mound."
- 1890, 12th Annual Report of the American Bureau of Ethnology, J. W. Powell, 1890-91, *Thomas*, page 131-134 and 595.
- "Cahokia Mound is itself a truncated pyramid, the type of a series of mounds constructed in the rich soil of the Mississippi valley."
- Harlan I. Smith, "The Great American Pyramid," *Harper's Magazine*, *Vol. 104*, 1901, page 198.
- "The most imposing prehistoric monument in North America."
- 1903, J. P. MacLean, "Mound Builders," *Robert Clark Co.*, page 42, and H. M. Baum, "Records of the Past," *Vol. 2*, page 215.
- "The largest artificial work in the United States."
- D. I. Bushnell, "Scientific American," *March 19, 1904*, page 236, also "Science," *November 27, 1914*, page 782.
- "The builders of Cahokia are gone."
- 1907, Clark McAdams, "Achaecology of Illinois," page 39, *Trans. of the Ill. State Hist. Soc.*, 1907.
- "We now know that these works were constructed by the immediate ancestors of the American Indian."
- 1908, N. S. Shaler, "Nature and Man in America," *Scribner*, 1908, page 182.
- "At present it is positively known that the mounds are genuine antiquities made long ago. * * * by American Indians."
- 1909, Dr. John F. Snyder, *Journal Illinois Historical Society*, *Vol. 2*, page 88, also *Vol. 5*.
- "The largest mass of earth artificially heaped up in the world."
- 1910, Warren K. Morehead, *Trans. Ill. State Historical Soc.*, page 184.
- "The largest prehistoric work in America."
- Encyclopedia Britannica*, *Vol. 4*, page 947 d. See also Lucien Carr, *Memoirs Geological Survey of Kansas*, P. R. Ray, *Trans. Wisconsin Academy Science*, *Vol. 6*, p. 81; *Science*; *American Anthropologist*; *American Antiquarian*.

most abrupt face of Monk's Mound and from them to take samples of the earth of which it is constituted. The bluffs of the river, two miles away, and the surrounding mounds, were similarly examined and the materials compared. The top of Monk's Mound (from the 500 to 490 foot contour) consists of earth similar to the loess on the bluffs at similar levels about two miles further east. It contains less calcareous materials than does the bluff earth, since the overlying soils on the bluffs, rich in lime, are wanting, and it has been thoroughly leached. Thirty feet farther down (from 460 feet to 450 feet contour) the earth is richer in sand and at one place a stratified bed of sand is in evidence. Twenty feet below this (from 430 feet to 420 feet contour) the material is a tough blue clay. The soil composing the floor of the "American Bottoms" is a loam containing sand, lime and clay.

The fact that the constituent materials are different at different levels in the large mound; that they are the same at the same elevation in mounds a mile apart and in the bluff two miles away; that they are stratified, and that they are in different order than they would be if heaped up by human labor, all show beyond doubt that Monk's Mound and neighboring mounds are natural remnants of waterborne glacial materials which once filled the valley

Further at an elevation of 485 feet is a bed of fossil hackberry seeds. These beds and other fossiliferous layers* show that the materials containing them were deposited by water.

Again, the location and physiography of the mounds clearly indicate their origin. They form the divide or water shed between Cahokia Creek on the north and the small streams flowing westward along the southern side. The contours of the mounds are typical of water carved land.

Finally it is to be doubted that Indians who were kept busy with the struggle for existence and who were naturally disinclined towards unnecessary work would erect a great mound in a region where nature had already produced an abundance of rounded hills and bold bluffs.

All of which shows that Monk's Mound was not built by man.

Dr. Snyder reports the finding of *Physa heterostropha*, *Limnea humilis*, *Helix concava* and *striatella*, and *Succinea obliqua*.

The writer found a number of shells which were determined by Dr. Pillsbury of Philadelphia to be *Pyramidula perspectiva*; *Succinea Grosvenori* Lea; *Helicina occulta* Say., *Physa gyrina*.