



Photo: Courtesy of Kentucky State Parks

Name of Property: Big Bone Lick Site

City, State: Union, Kentucky

Period of Significance: 1739-1868

NHL Criteria: 1

NHL Theme: VI. Expanding Science and Technology
3. scientific thought and theory

Previous Recognition: 1972 National Register of Historic Places
2009 National Natural Landmark
Lewis and Clark National Historic Trail

National Historic Context: XIII. Science
C. Biological Sciences
3. Paleontology

NHL Significance:

- Big Bone Lick Site is eligible because of the unique significance and major contributions that fossils from the site have made toward the development of paleontology as a science, both nationally and internationally in the late eighteenth and early nineteenth centuries.



- Not only has this location long been considered a world-class collection site for large Pleistocene epoch mammal fossils (ca. 2.6 million years to 11,700 years before present [BP]), but it also is the first nationally recognized site for fossil collection from which the fossils were scientifically studied.
- Big Bone Lick has been referred to as the birthplace of vertebrate paleontology in North America. Vertebrate paleontology is the study of ancient animals that have a spine (vertebral column), most often seen or found as fossilized remains. The finds at Big Bone Lick in early modern studies of geology and vertebrate paleontology and their relationship as developing scientific fields in the United States and the world is of immense importance.
- The fossils themselves played a significant role in the development of scientific thought regarding the idea of extinction and the fossil beds at Big Bone Lick have produced the type specimens for at least four Pleistocene epoch mammals, including Harlan's musk ox (*Bootherium bombifrons*), American bison (*Bison antiquus*), American mastodon (*Mammut americanum*), and stag moose (*Cervalces scotti*).
- Often referred to as the “first major New World fossil locality known to Europeans,” collections from Big Bone Lick influenced many of the important scientific minds of the period, such as Thomas Jefferson, Benjamin Franklin, George Cuvier, Charles Lyell, and Nathaniel Southgate Shaler.
- The period of significance is from the first recorded European visit in 1739 to the last known major nineteenth-century digging expedition in 1868. This is the period when Big Bone Lick was most active in its nationally significant contributions to scientific knowledge and aided in the creation of the field of paleontology.

Integrity:

- Early expeditions reportedly removed fossil and archaeological remains from holes averaging 20 ft (6 m) in diameter and 10 ft (3 m) in depth. It is the professional opinion of scholars who have worked at the site that paleontological deposits remain possible.
- Beginning in the 1860s, the property owner(s) limited fossil collection and excavation, helping to protect the area from non-systematic collections prior to transfer to the state of Kentucky.
- Since 1960, the relevant part of the Big Bone Creek valley has been managed as the Big Bone Lick State Historic Site. The formation of the park has served to preserve and protect the site.
- The original tract of Big Bone Creek remains unaltered with a landscape setting similar to what early explorers who visited the area would have experienced.
- Big Bone Lick continues to be visited by local wildlife seeking its mineral rich waters.

Owner of Property: Kentucky State Parks

Acreage of Property: 205



Origins of Nomination: An initial nomination was submitted in 2007 by Dr. Joanne Kluessendorf (Weis Earth Science Museum) and Dr. Donald G. Mikulic (Illinois State Geological Survey). A revised nomination was prepared in 2011 by Dr. John D. Rockaway (Department of Physics and Geology, University of Kentucky). The final nomination was prepared by Jeannine Kreinbrink (K&V Cultural Resources Management) on behalf of Kentucky State Parks.

Potential for Positive Public Response or Reflection on NHL Program: The site is managed as a state park, which attracts heritage tourism. The designation will ensure that all park visitors are made aware of the National Historic Landmark and National Natural Landmark programs through the national significance of this unique paleontological site.

Potential for Negative Public Response or Reflection on NHL Program: None known

Public Comments Favoring Designation (received as of December 21, 2023):

- Greta Gay, Park Manager, and Claire Kolkmeier, Park Interpreter, Big Bone Lick State Historic Site
- U.S. Representative Thomas Massie, 4th District, Kentucky
- Jennifer Spence, Parks Museum Curator; Robert Myers, State Naturalist, Kentucky Department of Parks
- Gary W. Moore, County Judge/Executive, Boone County
- Laurie Risch, Executive Director, Behringer-Crawford Museum
- Mark Jacobs, Director of Conservation Programs, Boone County Conservation District
- Joshua D. Quinn, Product Development Director, Northern Kentucky Convention and Visitor's Bureau
- John Boh, Board of Trustees, Behringer-Crawford Museum (via email)
- Hillary Delaney, President, Boone County Historical Society
- Bridget B. Striker, Boone County Historic Preservation Officer
- Glenn W. Storrs, Associate Vice President for Science & Research, Cincinnati Museum Center
- James L. Mallory, Vice Chairman, Lewis and Clark Trust, Inc.
- Carol Whitson Kirkwood (via email)
- Kelly Engell (via email)
- Evan Davis (via email)
- Kiernan Wolery (via email)
- Joseph Daugherty (via email)
- Graham Sargee (via email)
- Brent M. Johansen, Burlington, KY (rec'vd after meeting)
- Greg McDonald, Ph.D., former curator of vertebrate paleontology, Cincinnati Museum of Natural History (rec'vd after meeting)

Landmarks Committee Comments:

- Revise terminology from Paleo American to Paleo Indian
- Clarify comparative analysis to mention additional sites such as Agate Fossil Beds National Monument and Florissant Fossil Beds National Monument
- Add discussion of role of Native Americans in bringing European American attention to the site, and in the emergent science of paleontology



Landmarks Committee Recommendation: The Committee recommends that the National Park System Advisory Board recommend to the Secretary of the Interior designation of the Big Bone Lick Site in Union, Kentucky, as a National Historic Landmark with any additions and corrections as noted by the Committee being made prior to the nomination being forwarded to the Secretary of the Interior for action.

Advisory Board Recommendation: