



# Examining Southern Ohio's Prehistoric Past



*Revealing Evidence of Long-Term  
Native American Occupation at the  
Hanging Rock Energy Facility,  
Lawrence County, Ohio*

***Examining Southern Ohio's Prehistoric Past: Revealing Evidence of Long-Term Native American Occupation at the Duke Energy Hanging Rock Energy Facility, Lawrence County, Ohio***

*Prepared For:*  
Duke Energy North America, LLC.  
Ohio Historic Preservation Office  
U.S. Army Corps of Engineers  
ENSR Corporation

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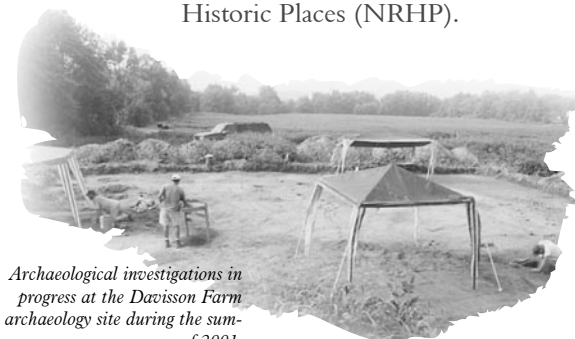
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*"The archaeological sites of the world, and the knowledge we gain from them, are no one nation, or individual's, property. They belong to us all, for they are part of the collective fabric of human history, providing us with a vision of diversity and commonality in an increasingly crowded and challenging world... To study archaeology is to study ourselves."*

Brian Fagan, from *Snapshots of the Past*

## PROJECT INTRODUCTION

In 2001, a series of archaeological projects commenced in southern Lawrence County, Ohio, as part of Duke Energy North America, LLC's planned Hanging Rock Energy Facility. The impetus for this work was the National Historic Preservation Act (NHPA), a federal law enacted to balance development and historic preservation. The Act reflects a national consensus that cultural resources (archaeological sites, historic buildings, or historic properties) are an important part of the American heritage and that the federal government, along with private industry, should manage these resources in the most effective manner possible. As part of NHPA, cultural resources meeting certain criteria are eligible to be listed on the National Register of Historic Places (NRHP).



*Archaeological investigations in progress at the Davisson Farm archaeology site during the summer of 2001.*

In order to comply with the NHPA, Duke Energy through its agent ENSR Corporation, contracted with Gray & Pape, Inc., to undertake cultural resource investigations for the project. Results of these studies identified several important cultural resources within the project area.

Through coordination with Duke Energy, the Ohio Historic Preservation Office, and the U.S. Corps of Army Engineers, the project was able to avoid several sites and preserve them in place. One large archaeological site, referred to as Davisson Farm (in honor of the original land owner), was determined to contain significant archaeological resources holding clues to nearly 10,000 years of prehistoric life in southern Ohio. Davisson Farm was determined eligible to the NRHP, but could not be avoided due to spatial constraints of the project. In order to preserve the information Davisson Farm could offer about the area's prehistory, extensive archaeological investigations and analysis (referred to as Phase III) were undertaken. This document provides a summary of this research and presents new and important information regarding southern Ohio's early inhabitants.

## ESTABLISHING A TIME LINE FOR PREHISTORY (12,000 B.C. THROUGH A.D. 1650)

Over the past 200 years, archaeologists have been studying ancient Native American culture in the "New World." This research has generated a wealth of information for North America's storied prehistoric, or precontact, past. Current evidence suggests that human populations have been living in North America for nearly 14,000 years, perhaps even longer. Migrating from Asia across the Bering Land Bridge around 14,000 B.C., the first Native Americans were highly mobile and quickly spread across the continents, including into present day Ohio. Over the next 14,000 years, Native Americans prospered and adapted to a changing environment. Population size increased, groups became more parochial and less mobile, new technologies such as fired-clay ceramics and the bow and arrow were developed, mortuary behavior and ceremonialism became more complex, and finally, true sedentary village life based on agriculture was adopted.

Because no written records exist for this period (hence the term prehistoric), archaeologists rely on the remains of a people's material culture, such as artifacts, to reconstruct past lifeways. North American research has detected several broad trends based on cultural similarities in lifestyle and technology for the prehistoric period. Archaeologists have ordered these trends into a basic time line consisting of four distinct periods: Paleoindian, Archaic, Woodland, and Mississippian (Table 1). In addition, archaeologists recognize two historic periods: Protohistoric (A.D. 1650 - 1800) and Historic (A.D. 1800 to present). The Protohistoric period refers to the initial time of contact between Native Americans and Europeans. By the Historic period, Native Americans generally were no longer living within Ohio.

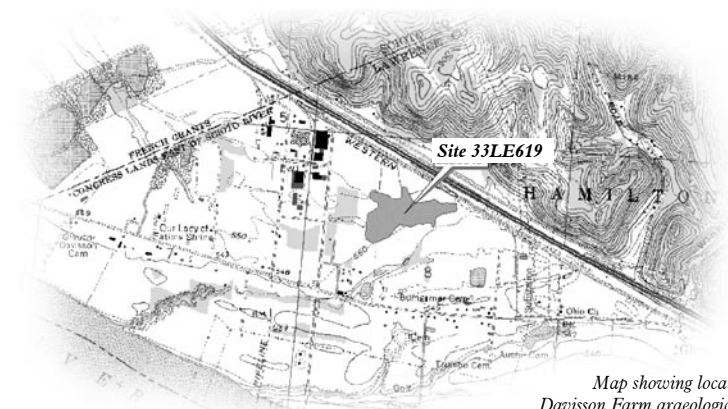
**Table 1. Prehistoric Time Line for Native Americans in Southern Ohio**

Archaeological Period		Age in BC or AD	Major Cultures	Lifestyle and Major Developments
Historic		1800 to present		Ohio becomes a State in 1803. Lawrence County is created in 1817.
Protohistoric		A.D. 1650 - 1800		Much of Ohio is depopulated due to results of the so-called "Beaver Wars" with Iroquoian populations to the northeast. Ohio is used as hunting grounds by groups and eventually repopulated by remnants of displaced tribes (Shawnee, Miami, Delaware, Mingo, etc.).
Mississippian		A.D. 1000 - 1650	Fort Ancient	Corn-beans-squash agriculture is predominately practiced although hunting and collecting still occur. Groups living in year-round villages.
Woodland	Late	A.D. 450 - 1000		Year-round, or seasonal village life evident early in this period. By A.D. 800 - 1000, however, no large villages are known in southern Ohio. Bow and arrow is invented and crop agriculture (corn, beans, squash) is important.
	Middle	100 B.C. - A.D. 450	Hopewell	Fluorescence of "mound building" culture. Construction of large, elaborate burial mounds and geometric earthworks. Long-range trade networks for exotic materials such as conch shells and mica are established. Incipient agriculture is present but is secondary to hunting and collecting.
	Early	1,000 - 100 B.C.	Adena	Incipient agriculture begins although hunting and gathering dominates. Fired-clay pottery use is widespread. Elaborate ceremonialism and mortuary behavior culminates in mound construction for burial of dead.
Archaic	Late	4,000 - 1,000 B.C.		Large populations are evident. Larger sites are occupied for significant portions of the year. Several inventions such as the atlatl (dart thrower) and fired-clay pottery are invented. Groups largely rely on hunting and gathering but experimental horticulture is practiced.
	Middle	6,000 - 4,000 B.C.		Xerothermal Interval - a general climatic warming trend - is in full effect. Hunting and collecting is primary method of living. Some limited experimenting with weedy plant horticulture.
	Early	8,000 - 6,000 B.C.		Small, nomadic populations. Increasingly warm environments provides a wider variety of food items. Megafauna die off and game animals such as white-tailed deer and elk become more abundant.
Paleoindian		10,000 - 8,000 B.C.		Small, nomadic populations. Hunting mainly of large megafauna and limited collecting are practiced.

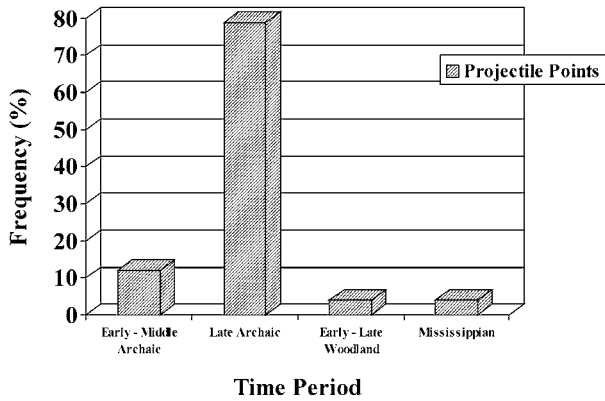
#### EVIDENCE OF HUMAN OCCUPATION IN LAWRENCE COUNTY: THE FIRST 10,000 YEARS AT DAVISSON FARM

Present-day Lawrence County contains abundant evidence of prehistoric human populations that once lived, hunted, and collected in the area over a span of 12,000 years. Early historic accounts of the area attest to southern Ohio's rich environment. Prehistoric groups encountered ample edible plant and animals, drinking water, as well as chert (or flint) and hematite (a natural iron-ore) suitable for tool manufacture. In addition, the Ohio River itself acted as a major transportation route prehistorically, as well as historically. Undoubtedly, the combination of these factors attracted prehistoric occupants to southern Ohio for thousands of years.

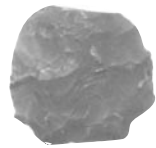
The Davisson Farm archaeology site is located along the terrace system of the Ohio River. The site rests on a high, flat terrace overlooking a small tributary to the south and covers at least 22 acres of land. This location provided easy access to several different environmental zones (and their associated resources) including the Ohio River, its terraces, and the uplands. To date, work at Davisson Farm represents the most extensive archaeological research undertaken in Lawrence County. To maximize the site's data potential, a multidisciplinary research team of archaeologists, physicists, geologists, and paleoethnobotanists was assembled to study the site. As discussed below, research has provided invaluable information regarding many aspects of prehistoric life including site function, season of use, and length of occupation.



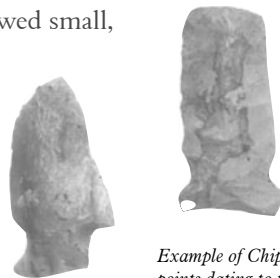
Map showing location of Davisson Farm archaeological site (Designated as 33LE619).



Frequency of projectile points through time at Davisson Farm.



By around 6000 to 4000 B.C., however, a climatic warming trend referred to as the Xerothermic Interval was in full effect. A warmer, drier environment allowed for the northern expansion of hardwood forests (oaks, hickories, walnuts). In addition, megafauna animals were now extinct and replaced by smaller, more typical woodland game such as white-tailed deer, elk, rabbit, etc. The warmer and drier environment also resulted in increased forest fires that served to open-up the forest canopy. These factors increased available sunlight to forest floors and allowed small, disturbed-habitat weedy plants such as ragweed to populate the area. Native American tool kits reflect the increasing climatic diversity and include a variety of chipped and ground stone artifacts such as spear points, knives, scraping tools, and axes (among others).



Example of Chipped-Stone spear points dating to the Early and Middle Archaic Period at the Davisson Farm.

*Initial Occupations (8000 - 4000 B.C.)*

The earliest evidence of site occupation at Davisson Farm is limited to a few spear points (called projectile points by archaeologists) dating to the Early and Middle Archaic periods. This period is characterized by small, highly mobile populations that moved to different localities to exploit seasonal foods. By 8000 B.C., the climate was considerably cooler and tree species consisted primarily of firs and pines. Animal populations were dominated by megafauna such as mastadons, mammoths, and giant sloths, among others.

At Davisson Farm, the low frequency of artifacts dating to this time suggests that site occupation, although present, was limited in scope. Overall, Native Americans only utilized the site as a temporary camp, probably during hunting and collecting forays. Although groups may have camped at the site for several days at a time, no evidence for a longer term settlement exists.

Wild poke weed (*Phytolacca*) plant with fruits.



*A Population Explosion between 4000 B.C. and 700 B.C.*

Beginning around 4000 B.C., Native American groups began occupying the site much more frequently with larger populations for longer periods of time. By 1000 B.C., the climate and forest composition had assumed roughly modern conditions. This environment was especially rich for Native groups who exploited the abundant plant and animal resources they encountered.

Late Archaic peoples tended to live along major waterways, such as the Ohio River during periods of the spring, summer, and early fall. At these sites, large base camps were occupied and acted as coordination centers for various secondary hunting and collecting parties. Late fall and winter months were spent at smaller, upland camps located to hunt game animals such as the white-tailed deer. Late Archaic groups also began to harvest and process edible nut remains

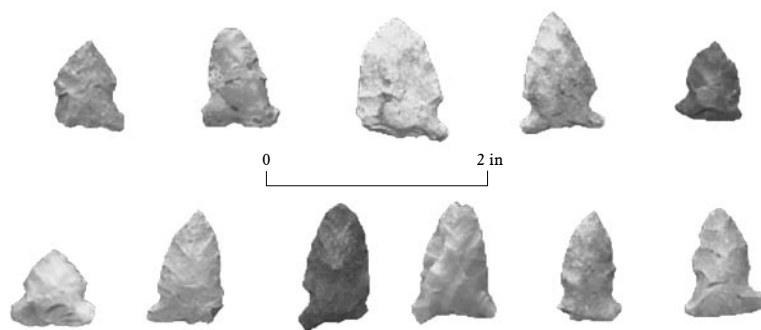


Microscopic view of Pokeweed seed. (Reprinted with permission from Evidence for Medicinal Plants in the Paleoethnobotanical Record of Eastern United States during the Late Woodland through Mississippian Periods, by Michele Williams).

7 (hickory, black walnuts, and acorns) that were suddenly abundant in the area due to the warming climate. Native groups began to experiment in garden-plot horticulture by promoting the growth of several large weedy plants such as goosefoot, knotweed, pokeweed, and chenopodium. Although we consider many these species as “weeds” today, Native Americans learned how to process these plants to remove harmful toxins and make them edible.

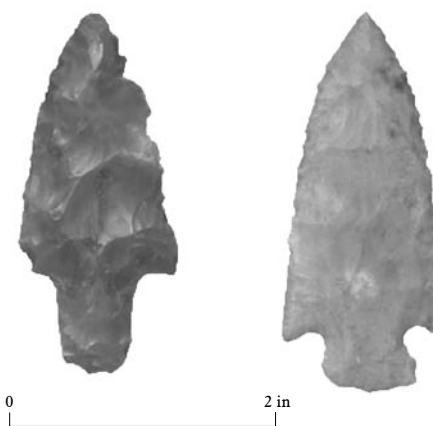
Late Archaic and Early Woodland populations employed a greater variety of tools than ever before. For the first time, bowls carved from a soft stone known as steatite were used for food preparation. Hunting technology also improved with the introduction of the atlatl, or dart-thrower. This allowed the hunter to hurl a short spear with greater force and accuracy than ever before.

At Davisson Farm, increased site use is evident from the dramatic proliferation of Late Archaic artifacts recovered. In addition, the first evidence for the construction of structures, drying or cooking racks, underground cooking pits or earth ovens (see Insert on page 9), and fire hearths occur during this time. The presence of these features are interpreted by archaeologists as signs of more intensive, and longer term, site use. All together, archaeologists identified over 50 earth ovens in limited excavations. Based on current estimates, at one time the entire site area may have contained over 800 of these pits! Radiocarbon (Carbon14) dating of burned wood samples from several of these features indicate that most of them were used between 1500 and 700 B.C.



Late Archaic chipped stone points (likely dart points) recovered from Davisson Farm.

8 Specialized soil analysis from earth ovens indicate that Late Archaic populations were eating a range of foods including nuts (black walnuts, hickories, acorns), wild plants (e.g., wild grape, pokeweed, chenopodium), cultivated squash, and animals (predominately deer). Using the season of maturity for recovered plants as an indicator of when groups visited the site, archaeologists have determined that the site was primary occupied between the late summer through fall months. This important information indicates that rather than living at Davisson Farm for the full year, groups only visited the site on a seasonal basis to gather available plants, practice some minor planting/harvesting of squash, and to hunt game animals.

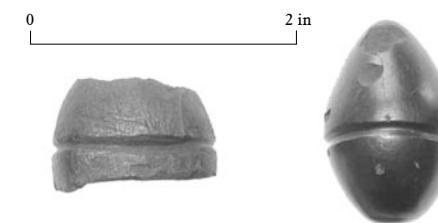


Large chipped stone points dating to the Late Archaic/Early Woodland transition at the Davisson Farm.



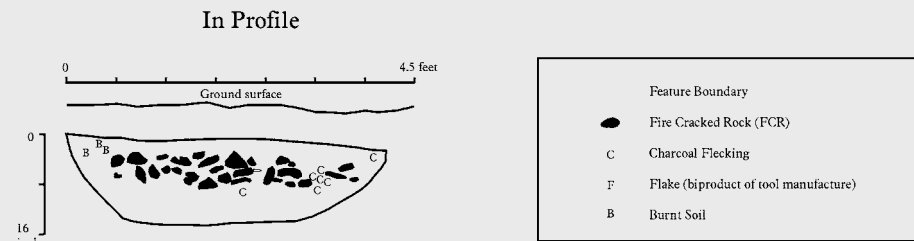
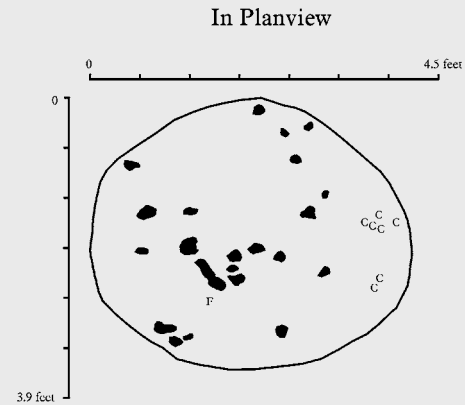
Microscopic view of a small piece of burned twine, or rope, recovered from an earth oven. This piece was dated to approximately 850 B.C.

Analysis of both chipped and ground stone tools also indicates a variety of domestic activities were being undertaken at Davisson Farm during this time. High powered, microscopic analysis of a sample of chipped stone tools (projectile points, knives, scraping tools) indicates that these tools were used for general animal butchering and animal hide scraping to provide clothing.



Late Archaic hematite plummets. these unusual, polished, artifacts likely were used during ceremonial practices.

### The Anatomy of a Earth Oven



Prehistoric populations made use of underground cooking features referred to as earth ovens. These features provided a controlled, insulated environment in which to cook or roast a variety of food items such as nuts, seeds, squash, corn, and even selected animal cuts. Features were typically oval in size and between 12 and 36 inches in depth. To generate heat, portions of the feature were often lined with preheated rocks (called fire-cracked rocks, or FCR, by archaeologists). Some features show evidence of fires being built directly in them. Features such as these provide valuable information to archaeologists as their contents can reveal clues about types of eaten foods and what time of year populations were at a location.

### Early through Middle Woodland Site Use (Ca. 700 B.C. through A.D. 450)

The Early through Middle Woodland times in Ohio represents one of the most spectacular and unusual periods in Native American prehistory. During Early Woodland times, a pan-regional cultural system, known as the Adena tradition, spread from Kentucky to West Virginia, Ohio, and eastern Indiana. Groups during this time began to construct conical, earthen burial mounds and provide elaborate grave offerings. Adena groups used a variety of chipped and ground stone tools such as large, stemmed spear points, leaf-shaped blades, stone axes, and adzes. During the Early Woodland, fired-clayed pottery was developed and quickly adopted across the continent. Pottery was an especially significant technological improvement as it allowed people to prepare and store food in a more efficient manner.

By Middle Woodland times, the Adena tradition was replaced by the much more elaborate Hopewell tradition that spread throughout much of the Midwest. Groups participating in the Hopewell tradition constructed immense geometric earthworks and multiple burial mounds. These ceremonial centers often contained hundreds of burials and exotic grave goods such as marine shell, barracuda jaws, turtle shell, shark and alligator teeth, mica, meteoric iron, silver, and copper. Materials used in the manufacture

of these ceremonial items were traded from various regions of North America. Exotic flint types also were imported in large quantities from as far away as Wyoming and North Dakota. Middle Woodland tools included triangular points, long flint “lamellar” blades, and decorated ceramics. Hopewell groups typically lived in small hamlets consisting of a few families. Often, these hamlets were located in the immediate area of the earthwork sites. Although increasing sedentism is noted, current evidence does not suggest that Middle Woodland groups occupied year-round villages.



*Hopewell lamellar bladelets. These tools were used for a variety of cutting and scraping tasks.*

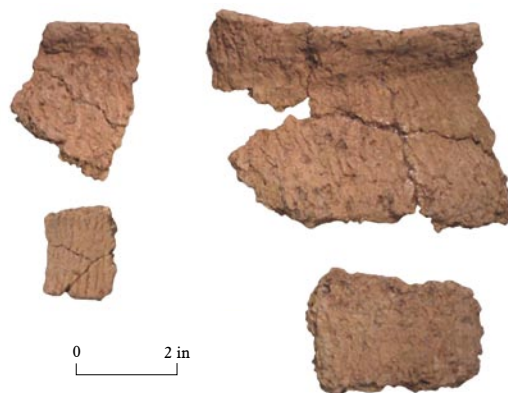
Evidence at Davisson Farm documents little site use between 600 B.C. and A.D. 100. In general, site occupation during this time was similar to that of the previous Early and Middle Archaic periods. No structural remains, earth ovens, or other features were identified. Overall, it appears that Early Woodland groups only occasionally visited the site area, probably for short-term collecting or hunting activities.

During the Middle Woodland period, however, increased site use is evident. Sometime around A.D. 240, Native Americans again occupied the site more intensively and for longer periods. A small hamlet was occupied during the late summer through fall months. This hamlet contained



*Archaeologist carefully excavate a Hopewell earth oven (top). Several pieces of prehistoric clay-fired pottery were recovered during excavations (right), these fragments represent at least four pots dating to approximately A.D. 240.*

several earth ovens, trash pits, and trash middens suggesting a range of domestic activities by the site occupants. One trash pit, in particular, contained fragments of four ceramic cooking pots. A greater frequency of domesticated squash in Middle Woodland features over preceding periods suggest that agriculture was becoming more pervasive during this time. The recovery of white-tailed deer remains, nutshell, and wild plants, however, indicate that collecting and hunting were still practiced.



### *The End of Prehistory (A.D. 450 and 1650)*

Between A.D. 450 and 1650, many of the cultural processes first identified in the Early and Middle Woodland periods, such as increasing sedentism and adoption of agriculture, became well developed. The continuing improvement of projectile technology resulted in the replacement of the atlatl with the bow and arrow around A.D. 700. By the end of prehistory (ca. A.D. 1650), most populations lived in permanent, year-round villages and were heavily dependent on corn/bean/squash agriculture. In southern Ohio, village-dwelling groups are often described as belonging to the Fort Ancient tradition. At Davisson Farm, only limited evidence of site use was identified after the Hopewell occupation. Throughout the remainder of prehistory, and up until the time of European exploration and settlement, Davisson Farm was used for short-term visits, likely by small hunting and collecting groups operating away from main camps or villages.

### A CONTINUING STORY

Although much has been learned through archaeological research at Davisson Farm, the story is far from over. Archaeologists are using the results of this research, along with results from other projects, to develop accurate cultural models of Native American life in southern Ohio and beyond. Finally, because of an arrangement to permanently curate project artifacts and paperwork at the Ohio Historic Center in Columbus, Ohio, future researchers will have access to the collections to undertake new studies of the site. In this way, information from Davisson Farm can continue to shed light on Ohio's rich prehistoric past for many years to come.

### ***Further Reading On Ohio Archaeology***

Cowan, C. Wesley, *First Farmers of the Middle Ohio Valley*. Cincinnati Museum of Natural History. Cincinnati, Ohio. 1987.

Glotzhober, Robert C. and Bradley T. Lepper, *Serpent Mound: Ohio's Enigmatic Effigy Mound*. Ohio Historical Society, Columbus, Ohio. 1994.

Gray & Pape, Inc., *10,000 Years in Adams County, Ohio: The History of Land Use at the J.M. Stuart Station Generating Plant, Adams County, Ohio*. On file at the J.M. Stuart Station, Adams County, Ohio. No date.

Hooge, Paul E. and Bradley T. Lepper (editors), *Vanishing Heritage: Notes and Queries about the Archaeology and Culture History of Licking County, Ohio*. The Licking County Archaeology and Landmarks Society. 1992.

Potter, Martha, *Ohio's Prehistoric Peoples*. The Ohio Historical Society, Columbus, Ohio. 1968.

### ***Websites of Interest***

#### *Ohio Archaeology:*

Ohio Historical Society:  
[www.ohiohistory.org](http://www.ohiohistory.org)

Ohio Archaeological Council (OAC):  
[www.ohioarchaeology.org](http://www.ohioarchaeology.org)

Ohio Archaeology at Hopewell Culture National Historical Park, Chillicothe, Ohio  
[www.nps.gov/hocu/](http://www.nps.gov/hocu/)

Ohio Archaeology for Kids:  
[www.ohiokids.org](http://www.ohiokids.org)

Cleveland Museum of Natural History:  
[www.cmnh.org](http://www.cmnh.org)

#### *Preservation Laws, Agencies, and Private Companies of Note:*

Federal, National, Regional & State Archaeology-Related Sites:  
[www.arch.dcr.state.nc.us/linkothr.htm](http://www.arch.dcr.state.nc.us/linkothr.htm)

Ohio Historical Preservation Office:  
[www.ohiohistory.org/resources/histpres](http://www.ohiohistory.org/resources/histpres)

U.S. Army Corps of Engineers, Huntington District:  
[www.lrh.usace.army.mil](http://www.lrh.usace.army.mil)

Duke Energy North America, LLC:  
[www.dena.duke-energy.com](http://www.dena.duke-energy.com)

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