

**Adena in Ohio and Hopewell in Kentucky:
In Honor of R. Berle Clay**

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Cleveland Museum of Natural History**

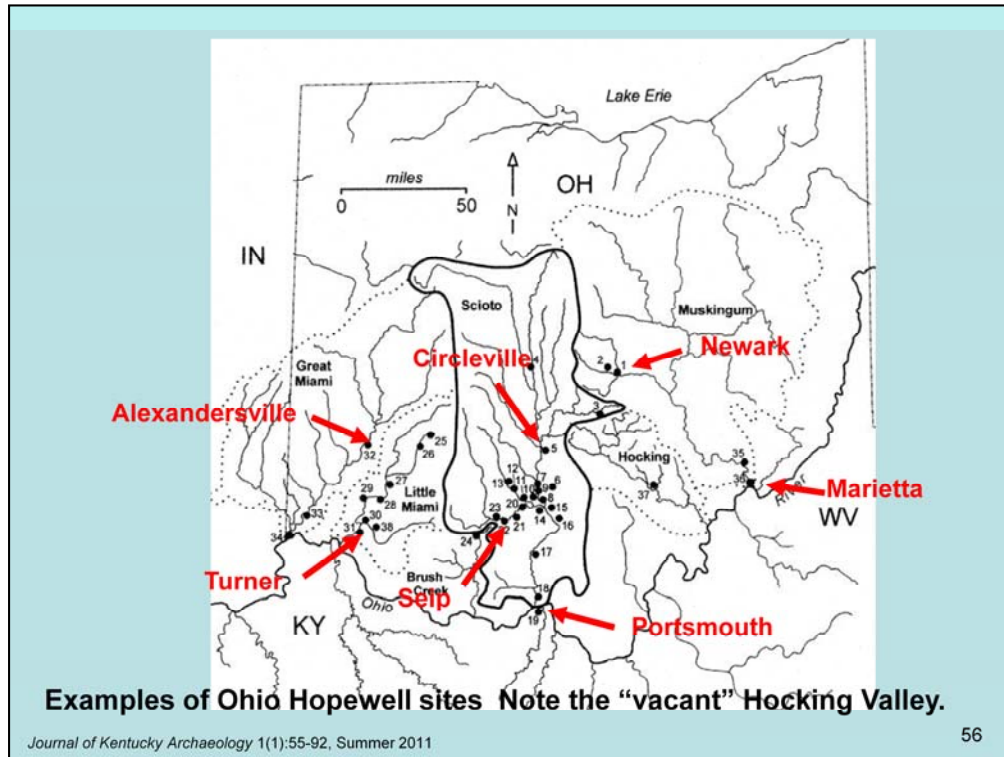


Journal of Kentucky Archaeology 1(1):55-92, Summer 2011

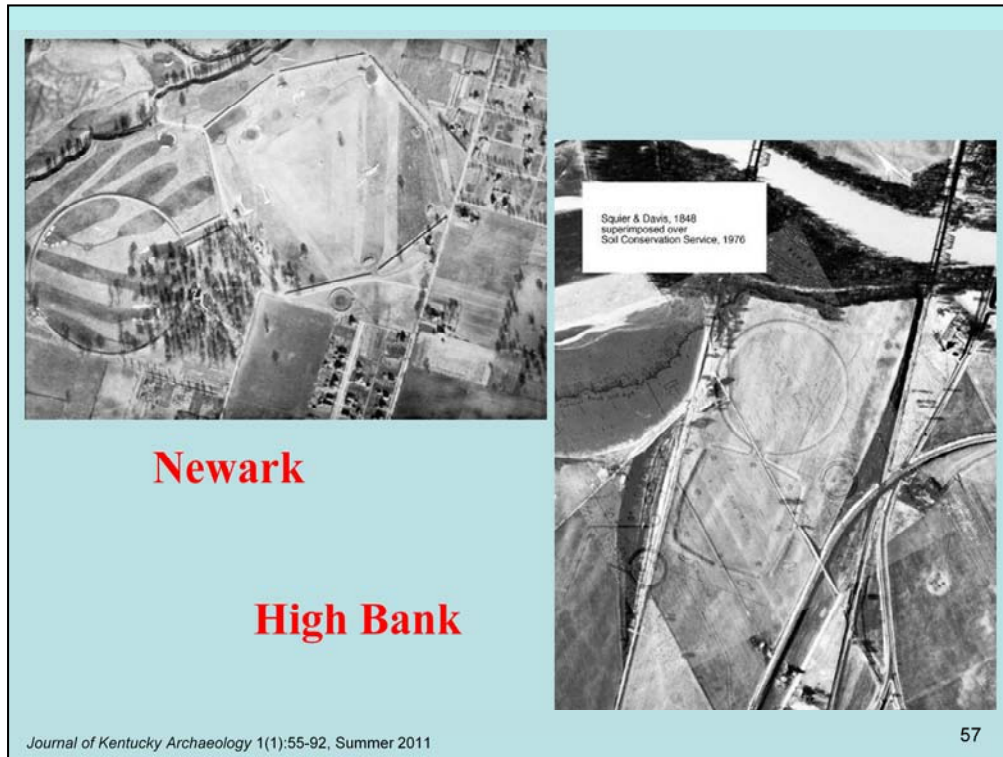
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I have been fortunate to have Berle as a colleague and friend since the Dark Ages before the rise of geophysical surveys. We shared thoughts and ideas about the happenings in the Middle Ohio Valley during the Early and Middle Woodland Time periods (e.g. Greber and Clay 1993). We still do this today.

Archaeologists deal with space, time, and form. Historically the name of the Adena Mound in Ross County Ohio became the name of an archaeological culture in the Ohio River drainage that stretched from the panhandle of West Virginia to the falls of the Ohio (Clay 1991, Dragoo 1963, Greenman 1932, Mills 1901-02, Webb and Snow 1945). This was based largely on form by adding together attributes from each local geographical region to identify a common “archaeological culture” usually assigned to an Early Woodland time period. The utility of this concept came into question as more chronological data show an overlap in time between sites identified as “Hopewell” and attributed to a Middle Woodland time period and sites labeled “Adena” (Swartz 1970, Applegate and Mainfort 2005). To consider questions concerning changes and/or variations in cultural manifestations, and, in particular, possible relationships between “Adena” and “Hopewell”, it is useful to begin with local geographic regions, that is, to restrict space.



Questions asking "Where does "Adena" exist?" have counterparts in "Where does "Hopewell" exist?" In **Ohio** I consider valleys from the Great Miami on the west to the Muskingum drainage on the east, skipping over the Hocking, to be a reasonable choice for an Ohio Hopewell homeland. Significant variations exist in archaeological remains across and within these valleys. However one attribute they share is great monumental walled enclosures that contain more than ten acres. The narrow banks of the Hocking do not allow space for series of such enclosures. I **assume** these large monuments were built in the Hopewell Era. Is this true? Relatively recently field work to test this assumption has taken place, and Berle has been a part of this. He was a welcome participant in the initial work by the Cleveland Museum of Natural History at High Banks Earthworks (Greber 1999).



In Ohio, walls of only two large circular enclosures, High Bank Great Circle and Newark Observatory Circle, form a "very close approximation to a true circle" as surveyed by James Middleton in an 1882 survey for the Smithsonian (Thomas 1894). These are also the only circles connected to adjusted octagonal shapes (Greber and Horn 2010). Ongoing work has shown that High Bank Great Circle really is an Ohio Hopewell construction (Greber 1999, 2002, 2005a; Greber and Shane 2009).

The Remains of the Great Circle are under the alfalfa



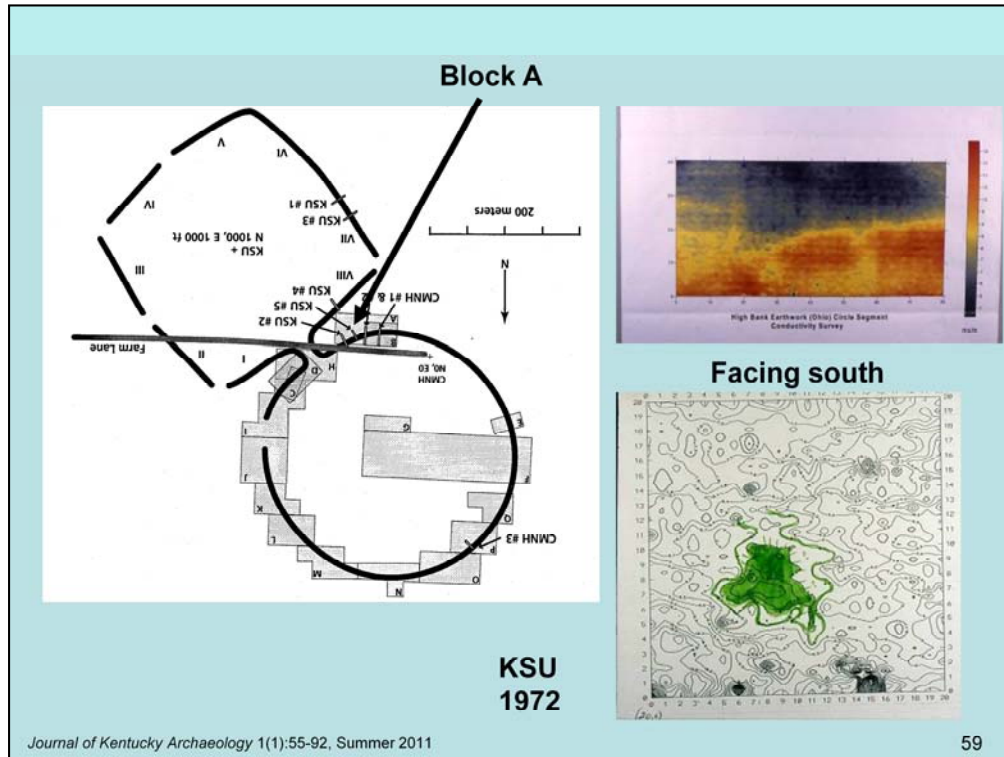
**Conductivity
Meter**



Journal of Kentucky Archaeology 1(1):55-92, Summer 2011

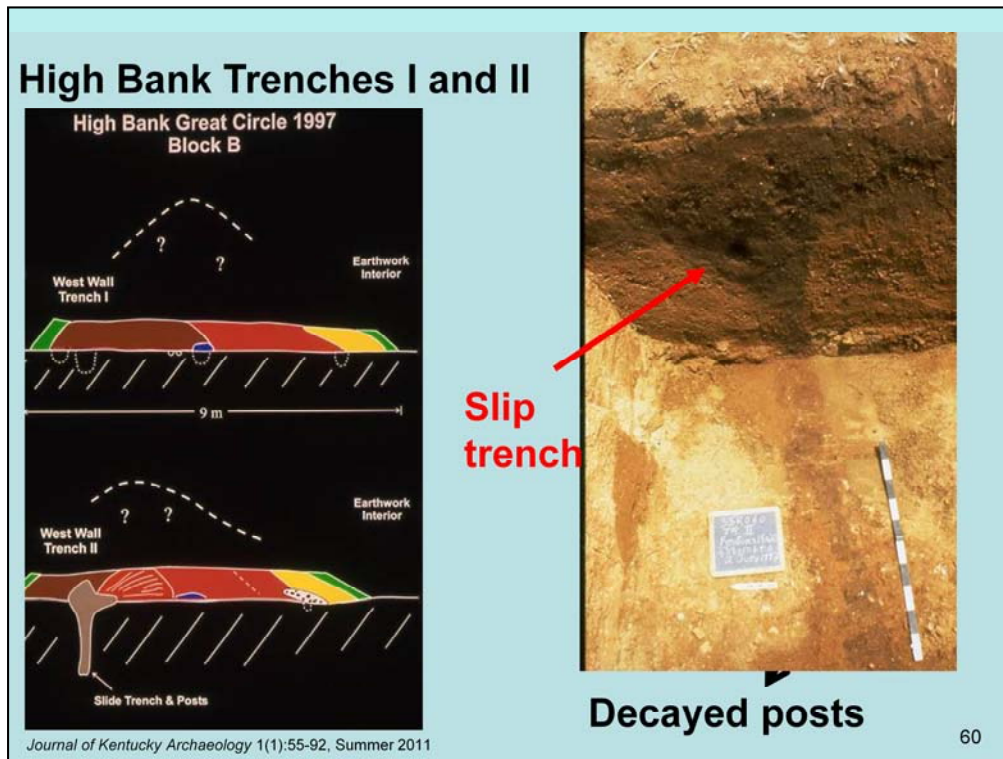
58

An instrument of choice in the Early Geophysics Era was a conductivity meter. The Cleveland Museum of Natural History instrument, shown here, was by the time Berle came to High Bank out dated since it required hand recording of data. His survey with an updated model, helped us locate the trenches cut across the Great Circle wall in 1972 under Orrin Shane's direction. Orrin was then at Kent State University.

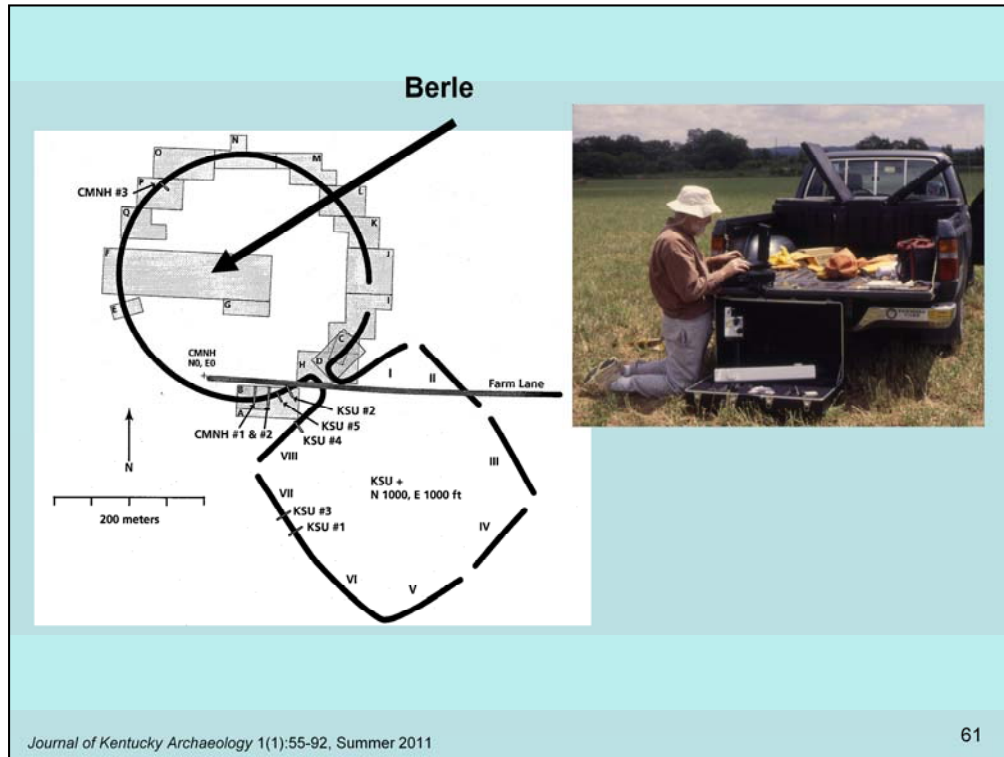


The farm road that crosses the site was the boundary of our first survey block (Block A). Berle started his survey transects on the road side, thus the survey maps have South at the top.

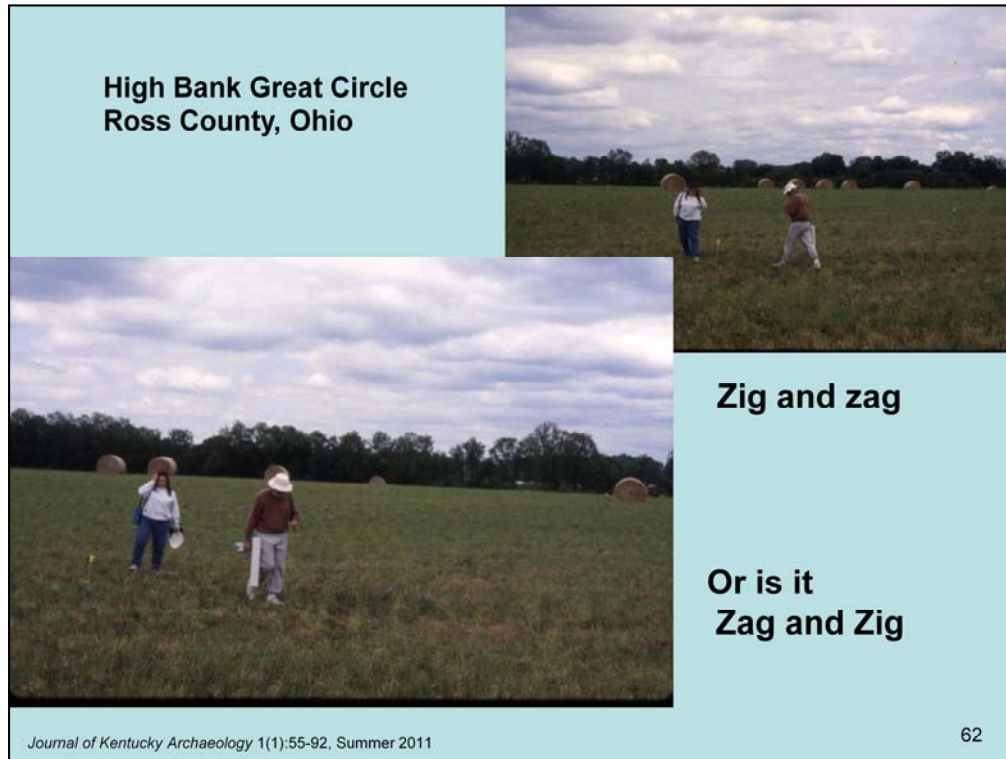
In 1997 we were able to avoid the KSU units when we placed our trenches in a small area (Block B) set aside within Block A by Alva McGraw in his corn field. Alvie sponsored both Orrin's work and ours.



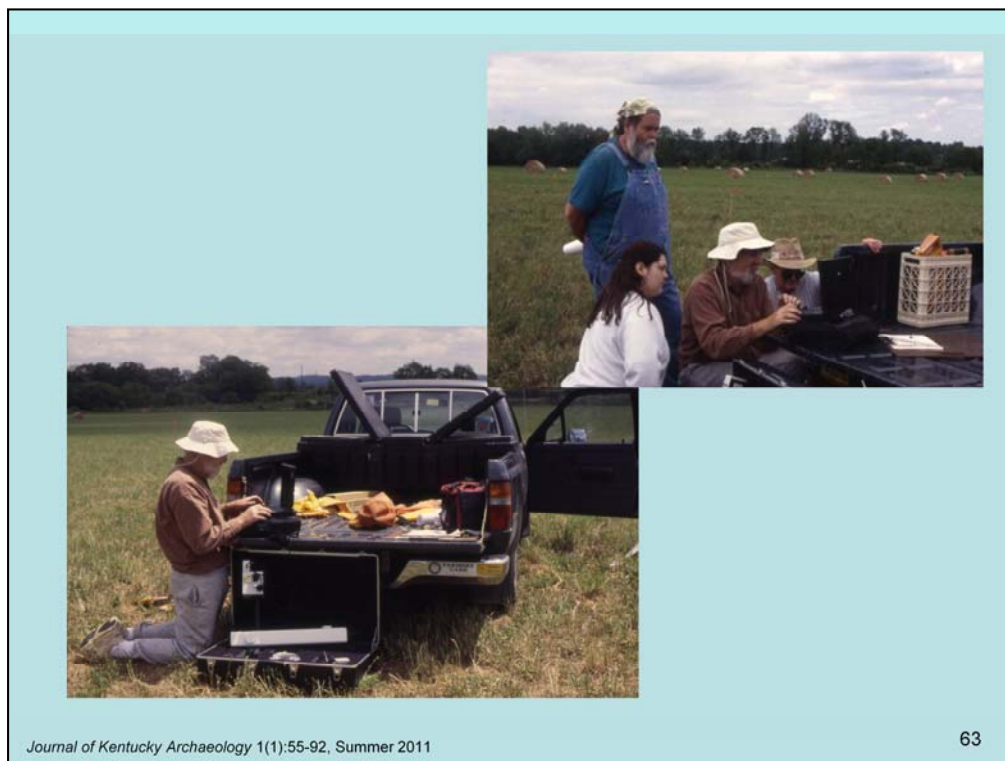
These trenches revealed the wall construction pattern and some special activities associated with the wall building process, and, by chance, we recovered pieces of charred oak for dating (Greber 1999, 2002). A short line of oak posts was decommissioned prior to wall construction. The locations of the remains of other activities that took place prior to raising the wall were also cleared and mantled with carefully chosen soils.



The interior of the Great Circle appears singularly empty. Berle returned to High Bank with a different instrument and demonstrated within Block F, the fastest gradiometer in the Midwest.



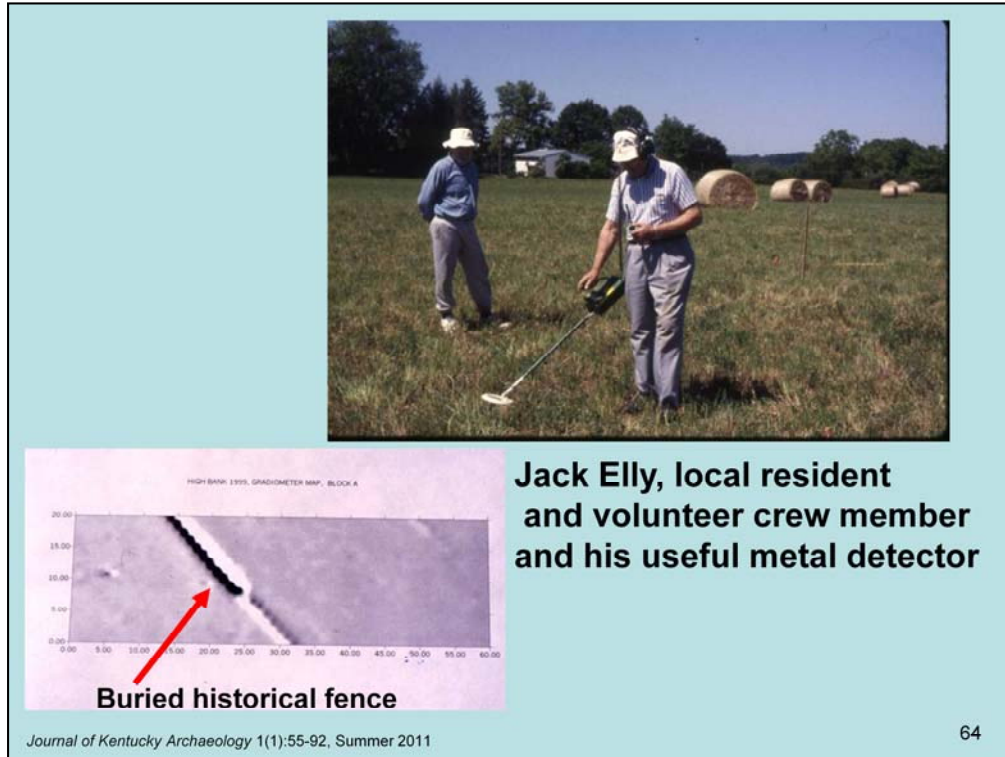
Here is Berle at work efficiently walking **both** north and south taking advantage of computer software to produce proper magnetic maps.



Journal of Kentucky Archaeology 1(1):55-92, Summer 2011

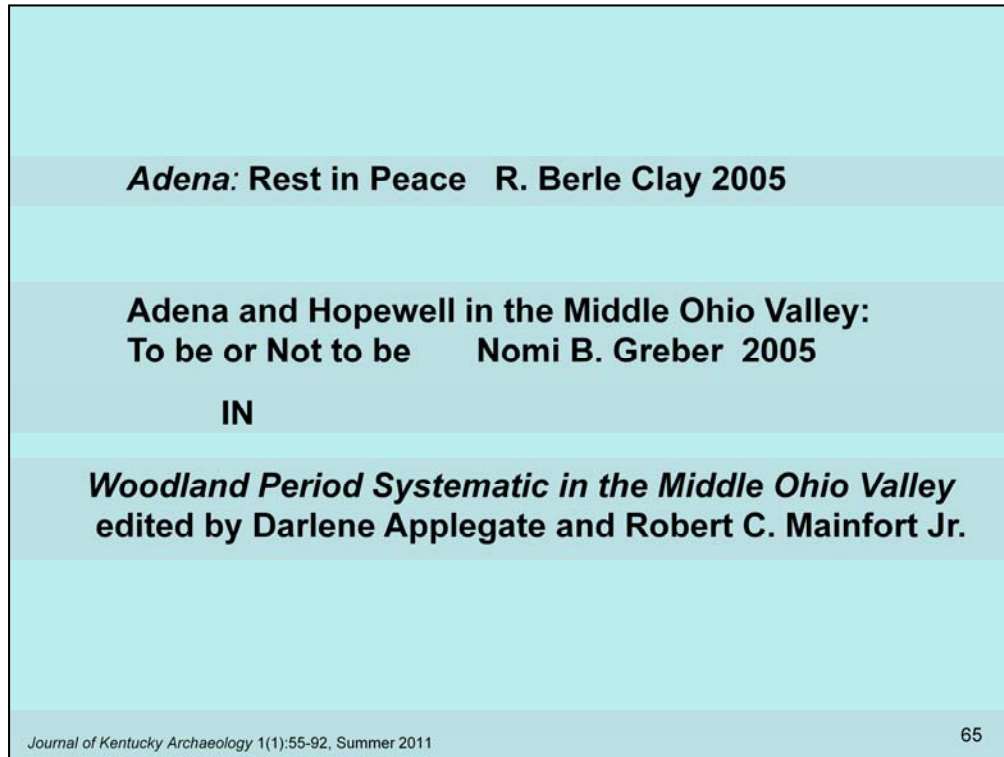
63

Checking data in the field.



The major find was the remains of a buried historic fence.

The interior of the enclosure had been stripped of top soil and kept clean by the Great Earthmovers who had built the walls. We are still working to find all elements of this complex ground plan (Greber 2009). Berle would be welcomed back with or without an instrument in hand.



Berle and I have frequently discussed the conundrum that is partly an historical accident of words used by William Mills in pre-radiocarbon times: the relationship between the archaeological cultures represented by the labels Adena and Hopewell. Elements of our discussions even became chapters in the same volume noted on this slide (Applegate and Mainfort 2005).

To quote part of Berle's conclusions (this may not be his favorite part):

"Now it may be best to move ahead, minus Adena as an integrating concept, although it may have *local* applications. Perhaps started with the best of intentions to order local archaeological matters in conceptual space, it has been hopelessly confused by conflicting interests." (Clay 2005: 95-96).

(I emphasize the word "local")

And mine:

"We might find a new naming system that recognizes both the diversity and the unity of the archaeological cultural remains that overlap in space, time or both across the Central Ohio Valley, although such a scenario is unlikely. An elegant single word name that combines space *and* time could complicate cross-region comparisons. Because knowledge of space is more readily available, for many purposes longer phrases would at least define a local region (*for example*): Middle Muskingum Adena, Middle Muskingum Hopewell." (Greber 2005: 39).

Contemplating relationships **between** the two phenomena, it is most useful to begin at a local level. There is no reason to assume that the historical trajectories were the same within or across river valleys, and considerable evidence that indicates that they were not. It is easiest for me to deal with the Central Scioto area, where conveniently the "type" sites are found.



Slip scrapers and hand work, Adena Mound 1901. Photograph courtesy of the Ohio Historical Society. Photo Adena 22

Journal of Kentucky Archaeology 1(1):55-92, Summer 2011

66

This **is** Adena, in the Central Scioto

The excavations of the Adena Mound directed by William Mills in 1901 illustrate field techniques that became a model for later Ohio Historical Society mound explorations. (Mills 1901-02). Excavations were done by slip scrapers and teams combined with hand work. The 26 foot high mound was divided into five vertical segments beginning at the top. The first four were each excavated as one unit.



Trenching across the floor, Adena Mound 1901. Photograph courtesy of the Ohio Historical Society. Photo Adena 19

Journal of Kentucky Archaeology 1(1):55-92, Summer 2011

67

When the diggers reach about six feet from the floor of the mound the technique changed. The top foot was removed as a unit. Then five foot wide trenches were cut across the mound and back dirt piled onto the floor of the previous trench.

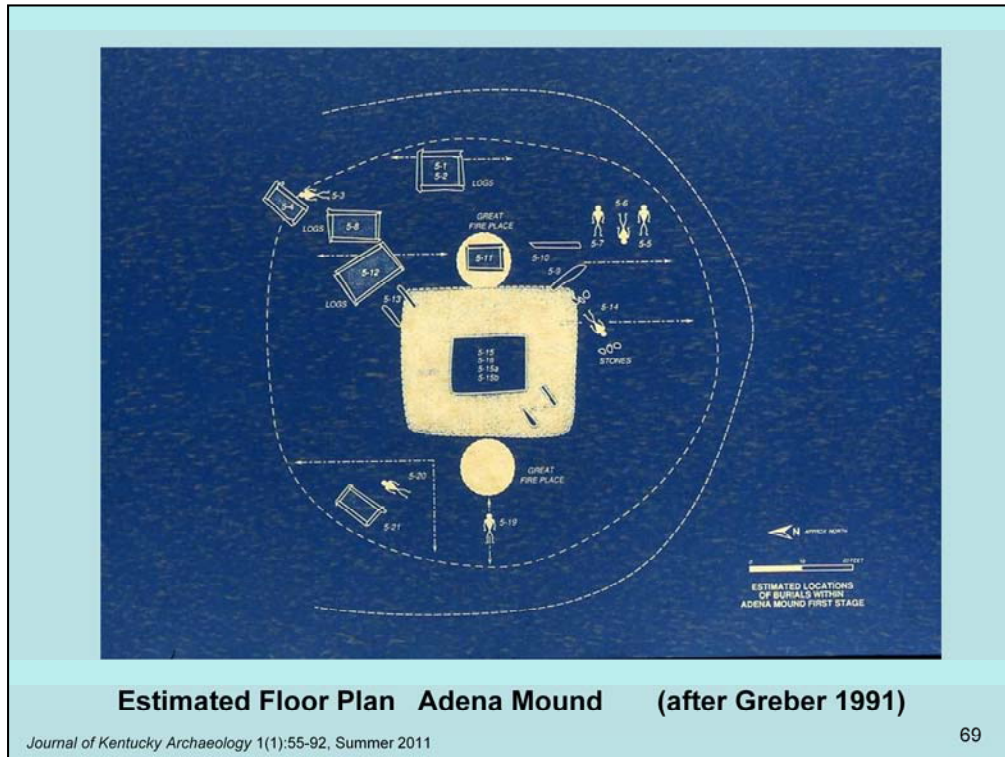


Post Holes on the floor of the Adena Mound. Photograph courtesy of the Ohio Historical Society. Photo Adena 39-1.

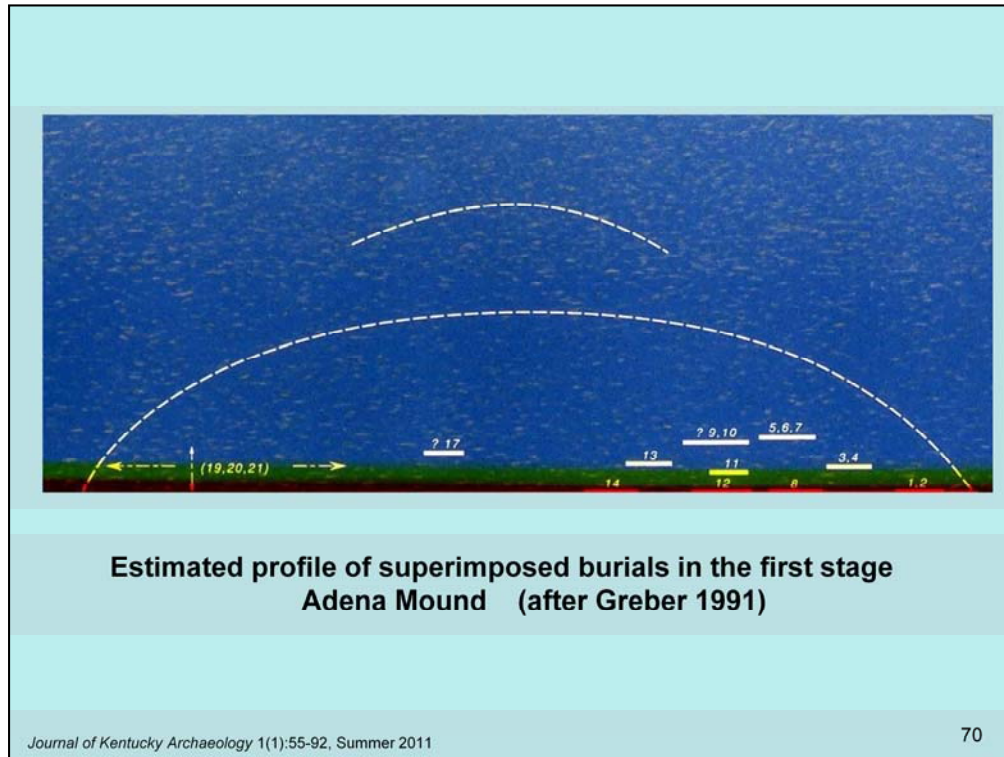
Journal of Kentucky Archaeology 1(1):55-92, Summer 2011

68

Likely a structure was built on the original prepared floor, as evidenced by these substantial post holes. The location of this trench is not known. Two types of mound fill were encountered. The inner mound fill was a distinctive compacted black sand that did not show loadings. Perhaps it was soil from the near-by Lake Ellsenmere. The upper stage contained discontinuous lenses of loams and gravels. These soils are commonly found in this region. Two stages can be seen in photographs but the internal stratigraphy of each is not clear. There is today a hump in a road that goes through a sub-division of Chillicothe that appears to be associated with the mound remnant. However, the nature of the sub-surface physical remains is not known.



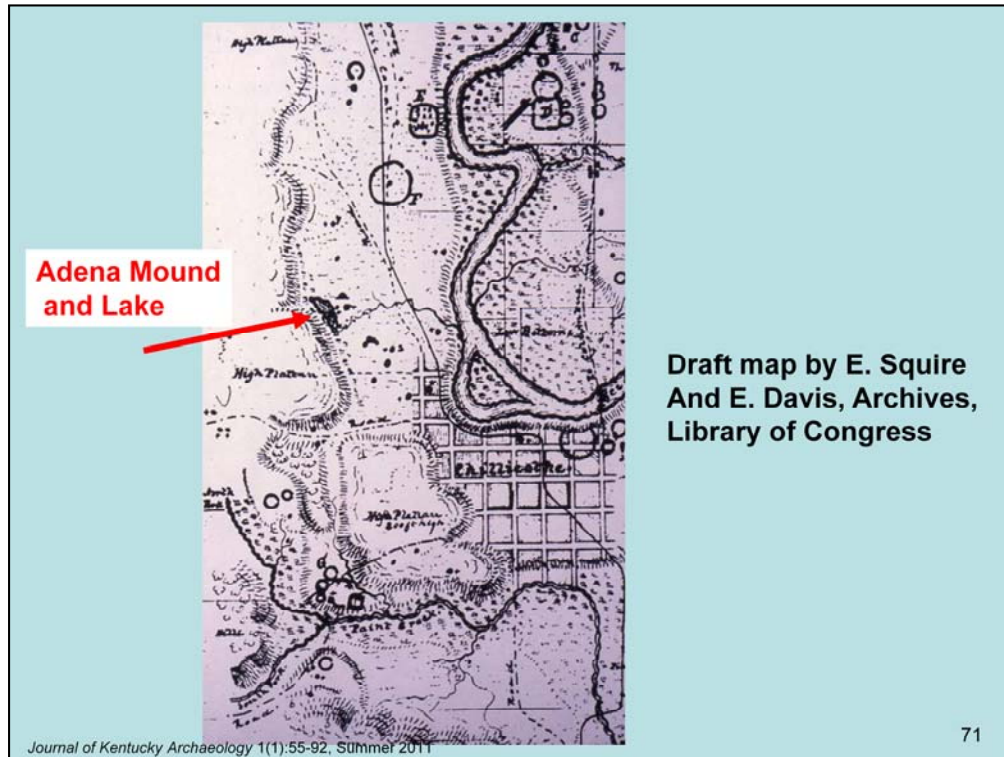
This is an estimate of the original floor plan based on Mills' publication and photographs and artifacts curated by the Ohio Historical Society (see also Greber 1991)



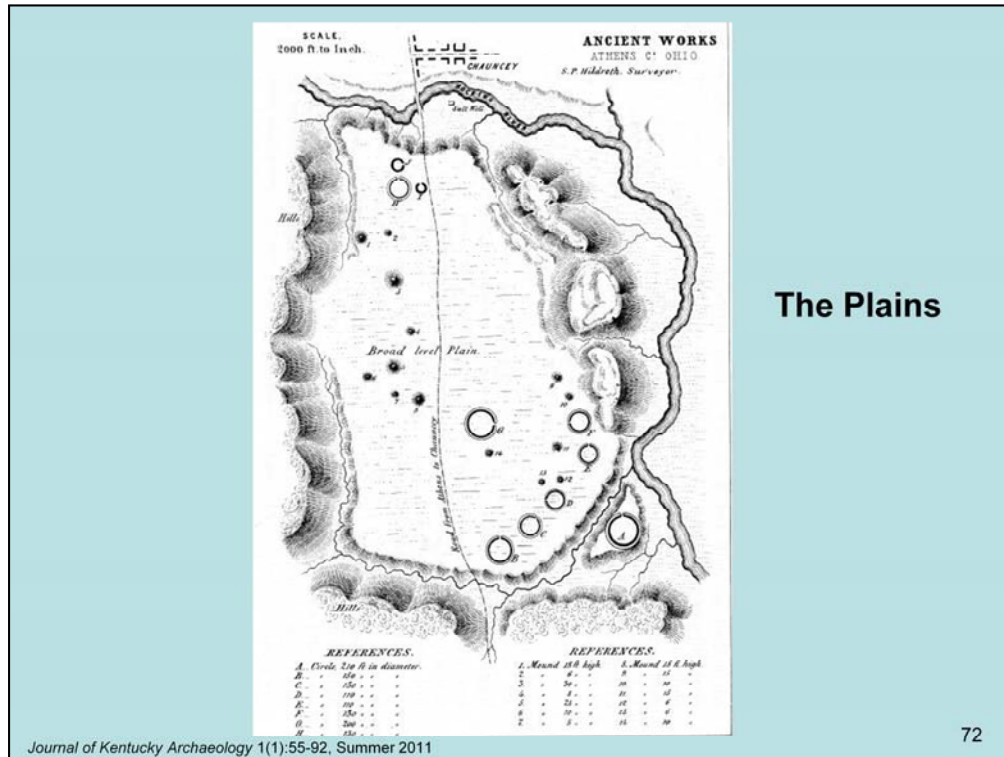
An estimated profile shows a common attribute of “Adena” mound construction: vertical super-positioning of additions.

A small mound covered the original activity floor and features built and used on it. Later, tombs and features are piled on the primary mound in small additions. Here there were apparently two separate stages of mound construction. Burials were found in the upper stage.. Their exact locations are not known.

Two construction stages have also been identified in Story Mound. Similar in size to Adena Mound, Story Mound is part of a group of twelve mounds within 2.4 km of the Adena Mound. For convenience, I have called these, the Chillicothe Northwest Group (Greber 1991, 2005). Within this small area, variations in mound construction can be seen that illustrate possible differences in group relationships in the use of defined horizontal ritual spaces contrasted with vertical super positioning of burials and features as in the Adena Mound. There are also differences in relationships for horizontal defined ritual spaces that are single or conjoined. An end point of this range is seen in Hopewell Big Houses in the Scioto drainage (e.g. Greber 1979, Greber and Ruhl 1989).



Comparing the mounds of the Chillicothe Northwest Group with mounds at the Hopewell Site, and the Adena Mound burials with a similar size group of burials within a section of a Big House at the base of Mound 25, yields a frame work for comparing “Hopewell” and “Adena” contexts in the Central Scioto. Here I assume Hopewell to be a descendent of Adena, though not necessarily in a single straight line. Details have been given elsewhere (Greber 1991, 2005). Some aspects of this framework provide suggestions for interpreting Adena and Hopewell in a wider sense; in particular, for considering sites in the Hocking Valley where typical “Hopewell” remains have not been found, but sites are dated to the Middle Woodland time period (e.g. Skinner and Norris 1981, Abrams and Freter 2005). Wide spread symbolic use of copper suggests that it is reasonable to use the range of copper objects found in a limited geographic area as a comparative framework outside the Central Scioto.

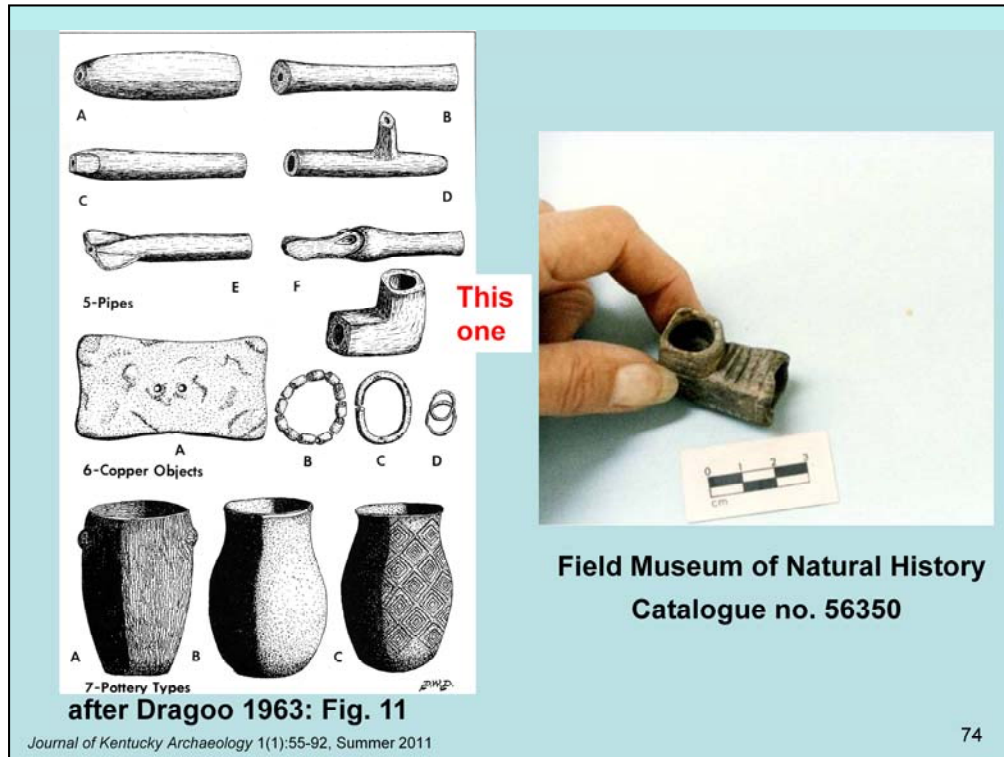


The Plains

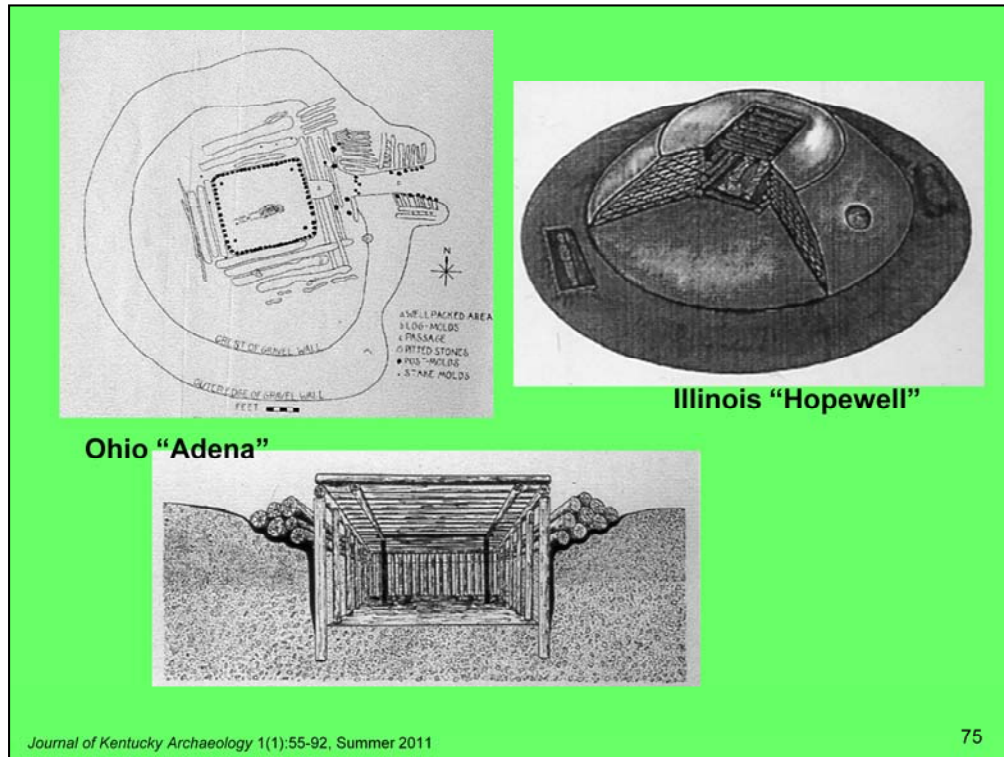
Contents of the Connett Mounds on The Plains, in Athens County provide examples. The Plains is an unusually large section of relative flat land in the mature and narrow Lower Hocking Valley (Squier and Davis 1848: Plate XXIII). Over 20 mounds and 7-9 circles have been recorded by various investigators since the 1840s. Copper objects have been found. Ohio Historical Society salvage excavations of the small Connett Mound 3 recovered two fragmentary copper plates (gorgets?) hit by both a sharp and a blunt object laying beneath the cremated bones of an adult female (Skinner and Norris 1981). Their rectangular shape differs from the incurvate shape of copper plaques commonly found in the Central Scioto. They resemble those found at the Cresap and Natrium mounds in West Virginia (Dragoo 1963).



An intriguing object found by E.B. Andrews in the 1880s from a log tomb in Connett Mound 7 is now in the collections of the Harvard Peabody Museum of Archaeology and Ethnology (Putnam 1882, PMAE catalogue number 76-7-10/8893). This appears to be a copper effigy flared end tubular pipe, a style considered diagnostic of Adena. (In Connett Mound 5 Andrews recovered a more typical stone version of this shape.) More than 450 rolled copper beads (PMAE catalogue number 76-7-10/8892) were found placed around the burial in a manner similar to lines of pearls, or in one instance copper ear spools, placed about some Scioto Hopewell burials (Greber 2005). Perhaps the beads were attached to a fabric cover smaller in size but similar in cultural use to the covering found over a sub-mound at Seip-Pricer, the second largest known Ohio Hopewell mound..

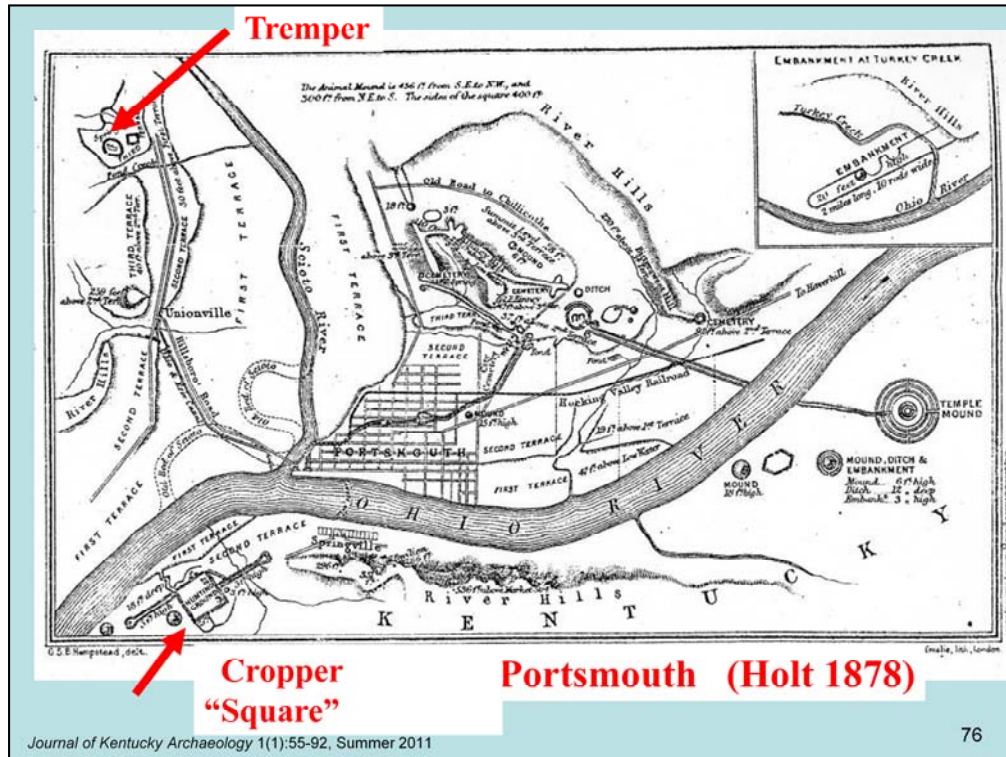


As an aside comment, note the diagnostic Adena shaped pipe marked on this slide. On the right is one of my favorite Hopewell pieces. It was found within an ash pit on the floor of the great Hopewell Mound 25 and is now in the collections of the Field museum (FMNH 56350, Greber and Ruhl 1989). This piece was probably associated with a small scale figure or image. It is one example of the overlap between “Hopewell” and “Adena” artifact styles.



Using verbal modifiers that identify the geographic area being discussed is as important for “Hopewell” as for “Adena”. The Ohio Hopewell home land is only a part of the area customarily identified with “Adena” in the Middle Ohio Valley. (e.g. Dragoo 1963: Maps 3, 4; Swartz 1970). In addition, groups of peoples scattered across Eastern North America, who apparently shared some ideas during the Middle Woodland Time period, did not express these ideas in the same way or necessarily in the same solar years, even though they are frequently all given the name “Hopewell” (Greber 2010).

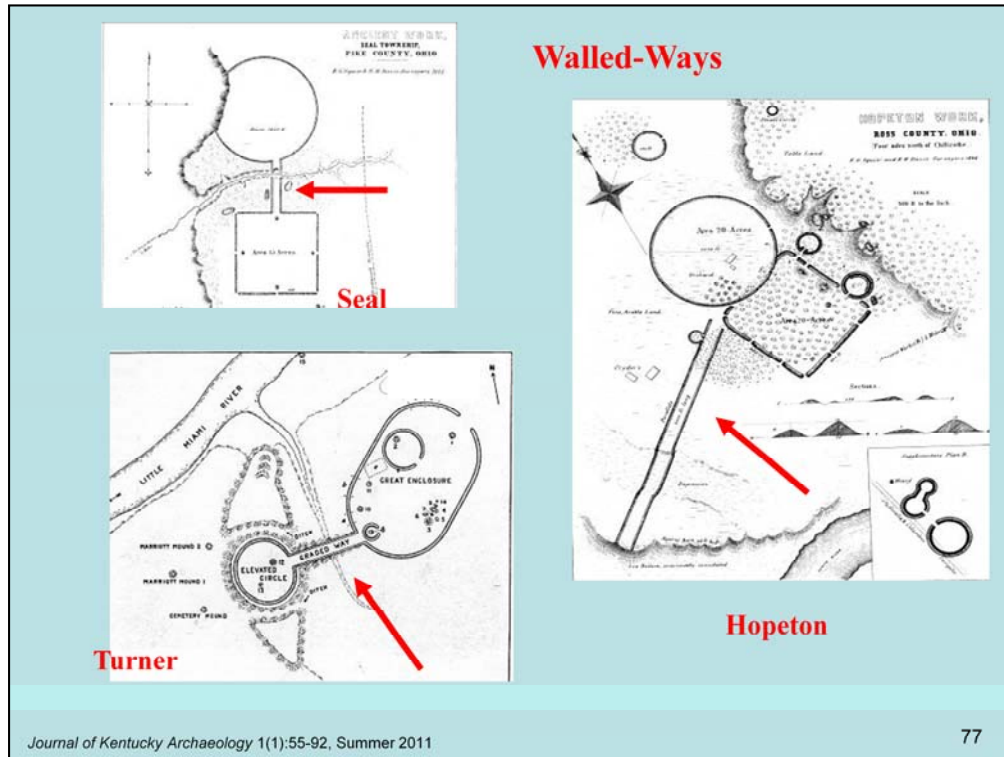
For example, similarities exist between the Illinois Hopewell mound structure noted by Jane Buikstra and Douglas Charles and that seen in the Coon Mound, basic in Emerson Greenman's definition of “Adena” (Buikstra and Charles 1999:Figure 9.6. Reproduced with permission of Wiley-Blackwell; Greenman 1932:Figures 12.1,22. Courtesy of the Ohio Historical Society). Are these accidental, or a reflection of time or style differences between Hopewell in Ohio and Hopewell in Illinois during the six centuries of the Hopewell Era?



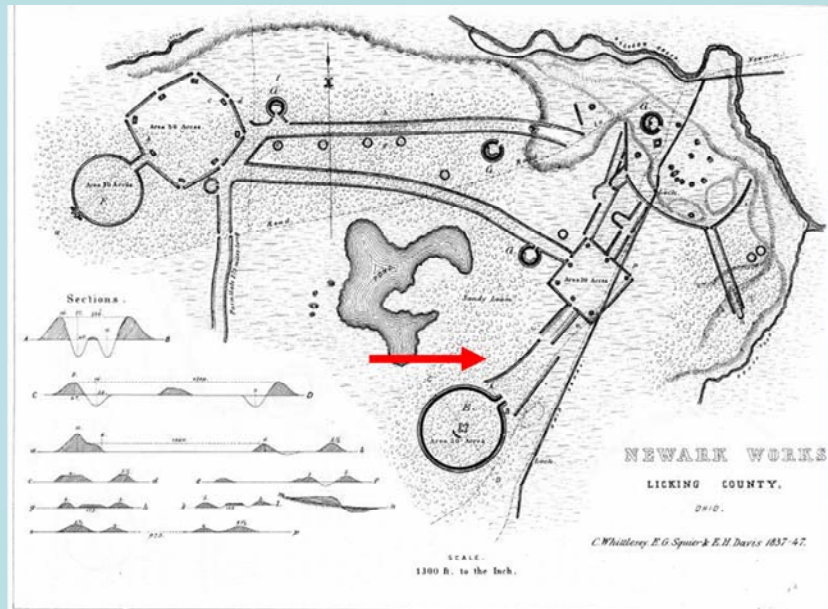
Berle is better able than I am to give the basic details and variations found in Kentucky sites occupied during these centuries (e.g. Clay 1986, 1991). It appears, as in Ohio, variations among sites are due to differences in space and time, as measured in human generations. The geographic spread of the classic "Adena" mounds in Kentucky is similar to that of the Ohio Hopewell. The Robbins Mounds were in Boone County across from the Miami rivers (Webb and Elliot 1942). The well known Wright Mounds and the Fischer Site were some 50 miles away in a different geographic environment (Webb 1940, Webb and Haag 1947). Still farther east the C and O Mounds were in the drainage of the Big Sandy that forms part of the boundary between Kentucky and West Virginia (Webb 1942). More modern field work has added data to the overlap in chronological time and in similarities of ritual cultural materials including classic Hopewell copper ear spools (Richmond and Kerr 2005, Applegate and Mainfort 2005). But, I am limiting my examples of "Hopewell" sites in Kentucky to the one that shares a relatively unique attribute of Ohio Hopewell: extensive enclosures with complex ground plans (Greber and Horn 2010)..

I am assuming the extensive earthworks at Portsmouth that continue into Greenup County Kentucky were at least in part, constructed and actively used during the Middle Woodland Time period. Today they are not mentioned in professional archaeological publications or discussions, or in communications for the general public as frequently as the extensive Newark Earthworks are. Enclosures, mounds, and walled-ways at Portsmouth have not been subjected to the same intensive studies. However, they have been affected by the same types of modern land uses: farming and urban constructions.

The site lies at the confluence of the Scioto and Ohio rivers. It extends for about eight miles along the Ohio. Embankments and mounds occur both north and south of the Ohio River. Tremper Mound and its relatively small enclosure are nearby, northwest and across the Scioto (Holt 1878).



Robert Horn and I have recently tabulated 51 large earthworks in Ohio Hopewell regions enclosing more than ten acres (Greber and Horn 2010). An integral design element in nine is the inclusion of walled-ways in the ground plans. We did not (and for now are not) discussing isolated enclosure of this type. Walled-ways fall into two groups: ones that connect other enclosures in the ground plan as at Turner (Willoughby and Hooton 1922: Plate 1) and Seal (Squier and Davis 1848: Plate XXIV); ones that lead to water or to a terrace edge that is, or was at some past time, close to water, as at Hopeton (Squier and Davis 1948: Plate XVII). A vast range exists in the lengths of walled-ways per site from three thousands or less feet to miles. The Portsmouth Works share with the Newark Earthworks the top of this range.

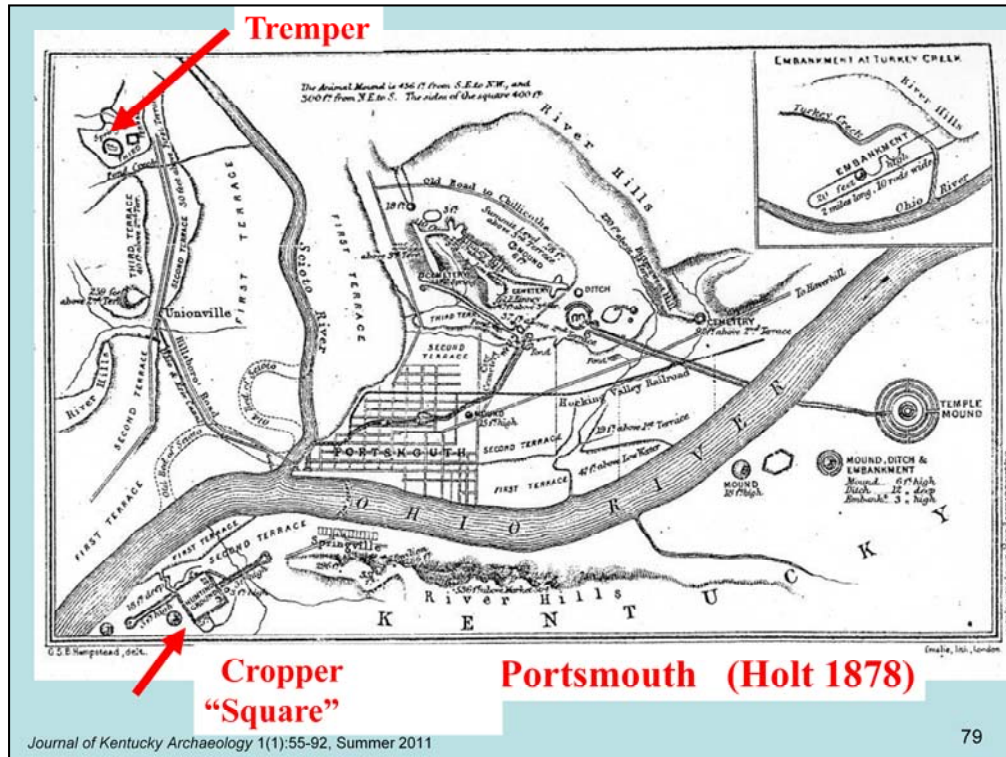


Non-parallel wall segments at Newark Earthworks

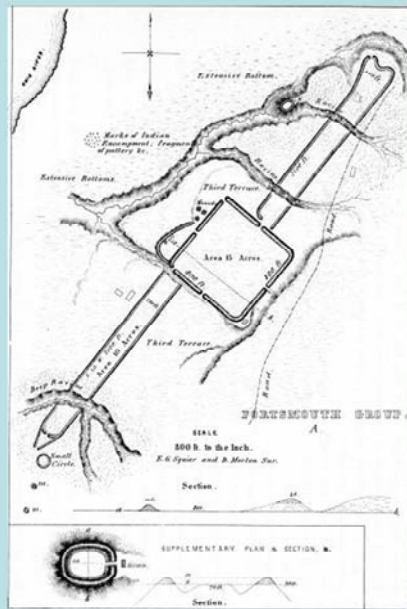
Journal of Kentucky Archaeology 1(1):55-92, Summer 2011

78

As seen here (Squire and Davis 1948: Plate 25) the outward curves of the walled-way approaching Newark Fairground Circle show that walls defining walled-ways are not always parallel. Sections of such curved walled ways were also mapped at Newark by the Salisbury brothers (Salisbury and Salisbury 1862).



Another distinctive attribute of the Portsmouth Earthworks ground plan is the Cropper Square (a.k.a. Old Fort) in Greenup County, Kentucky. Major portions of the Cropper square are on land that has been owned by the Cropper family for many generations.



**Squier and Davis
1848 Plate XXVIII**

Ancestors of the present owners entertained Ephraim Squier in their living room in the 1840s, while he and D. Morton surveyed and produced this map (Squier and Davis 1848: Plate XXVIII). Squier urged them to protect walls on their land and they have. The family allows visitors, including field school students.



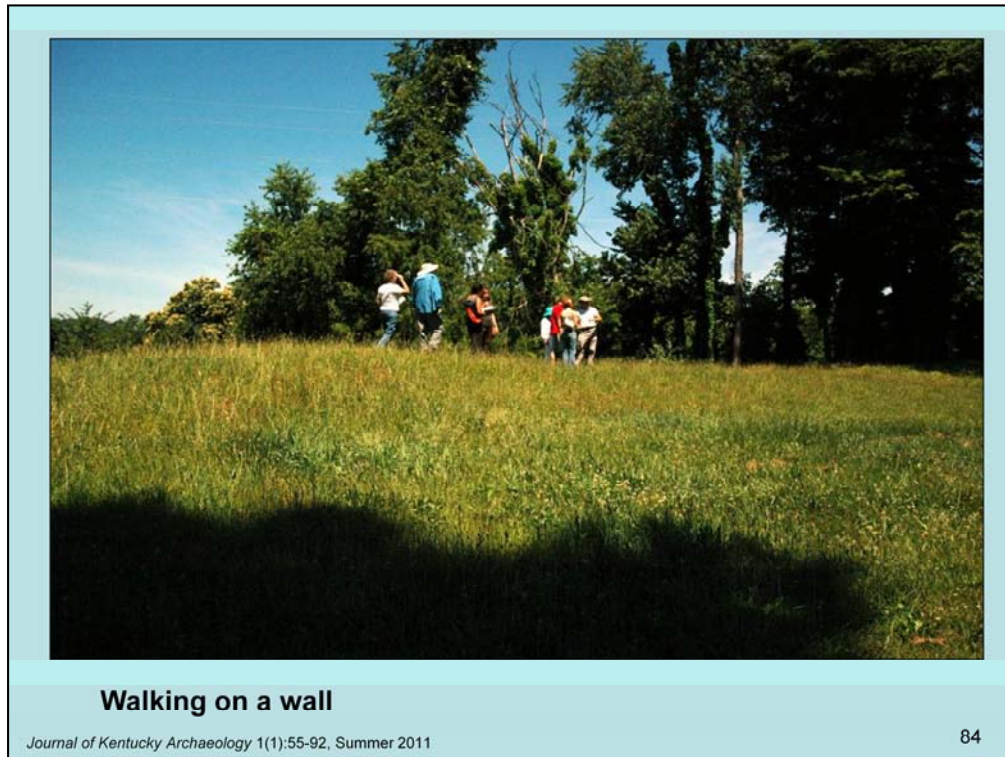
A view on the Cropper farm of ancient walls covered with trees. Such trees are frequently mentioned in 19th century written descriptions of earthworks in Ohio.



The 2006 Earlham College field school students visiting the site.
The Ohio side of the river is in the distance.



Some buildings in the city of Portsmouth on the Ohio side of the river are barely visible over the tree tops.

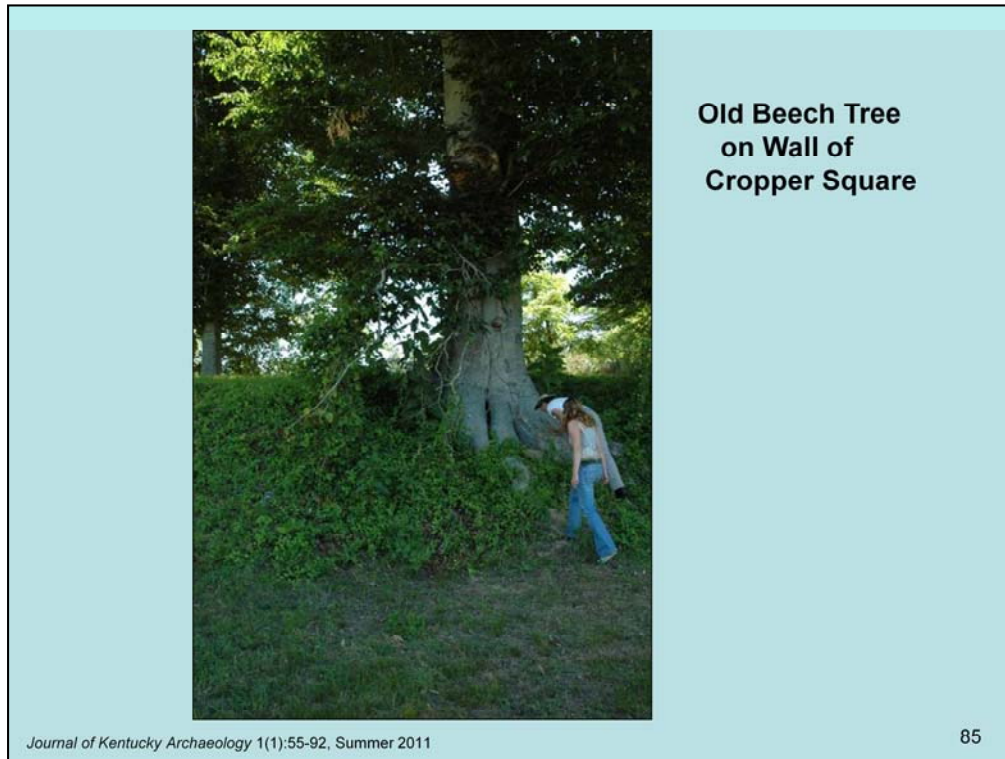


Walking on a wall

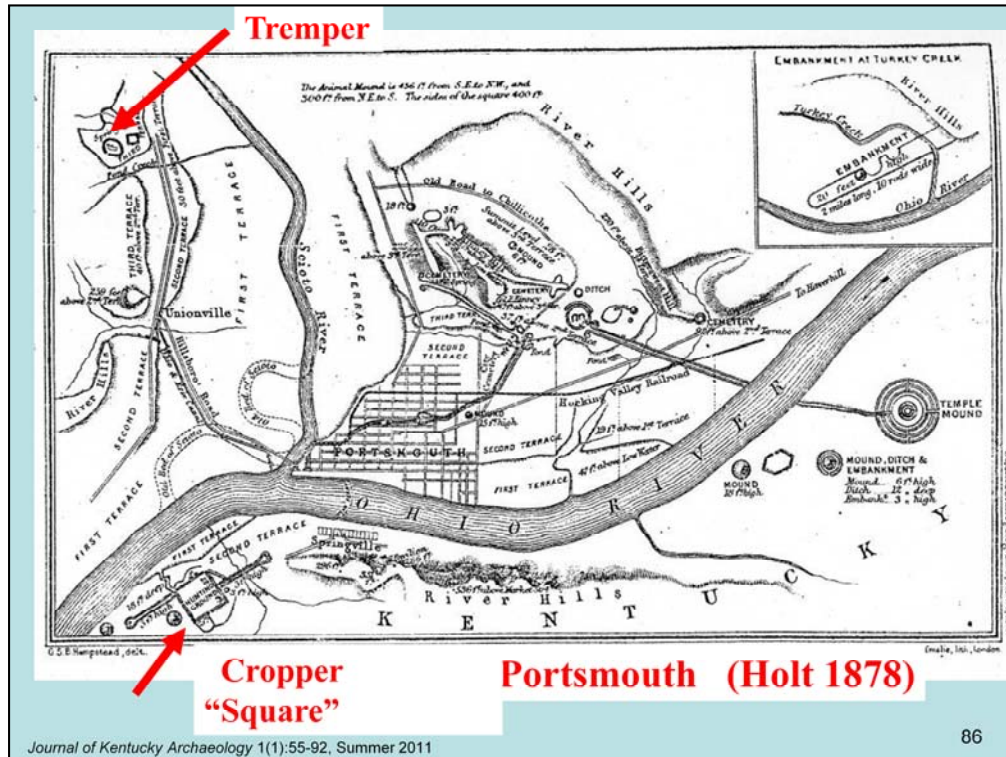
Journal of Kentucky Archaeology 1(1):55-92, Summer 2011

84

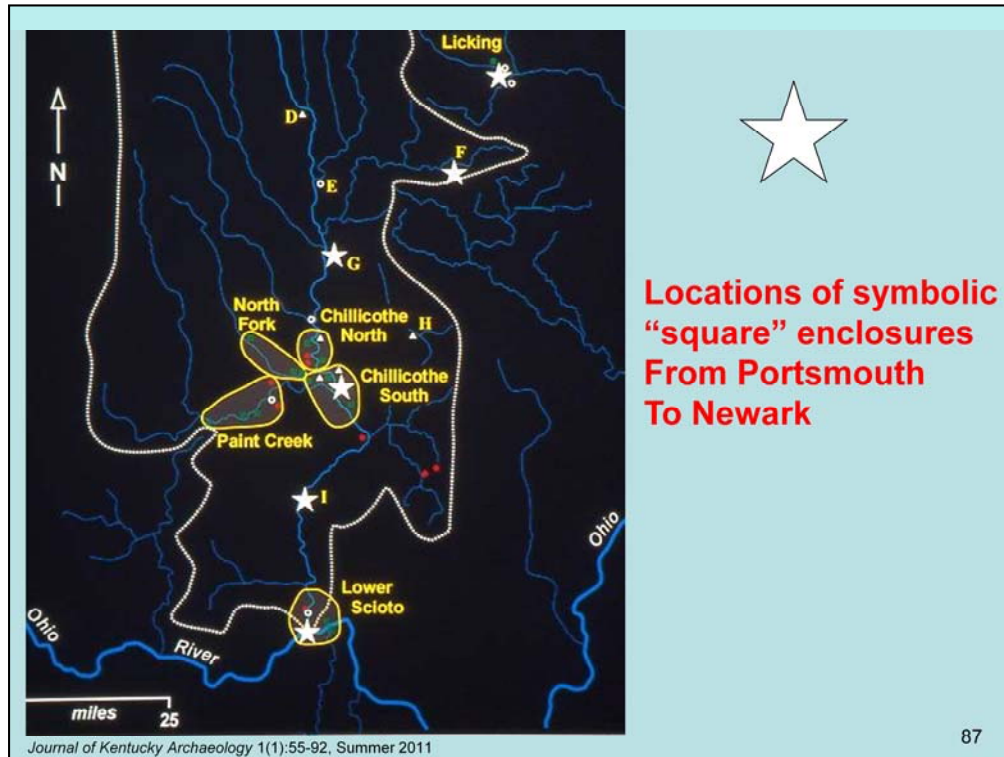
The wall is clearly seen and can be walked on (carefully).



This large beech is quite decayed. The grass is mowed but trees are not readily pulled down to avoid damaging the inner wall strata.



The apparently square shape for enclosure walls is not as common as a more “circular” ground plan. Versions of the “square” shape occur across southern Ohio in the Hopewell valleys. In the Scioto Valley, the distribution of sites that include “square” enclosures from Portsmouth towards Newark, suggests shared design ideas and possible social boundaries. (Greber 1993, 2003, 2006).



Christopher Gist, a frontier guide, in 1751 followed an old trail from the Licking into the Scioto drainage in the vicinity of Rock Mill (Squier and Davis 1848: Plate XXXVI, No.3, F above) through Circleville (Squier and Davis 1848: Figure 10, G above) along the east side of the Scioto through Chillicothe and near Seal (Squier and Davis 1848: Plate XXV, I above) to Portsmouth and beyond. The existence of this trail suggests a likely path that connected the sites in Pre-Columbian times (Greber 2006:103).

As the southern anchor point of the distribution, the Portsmouth Works appear to be of some special significance. Which social groups designed, built, and used the walls and mounds on the north and south banks of the wide river? Where did they live during this process? Were they "Hopewells" in Kentucky or "Adena" relatives in Ohio. Or, perhaps the builders had not yet established state borders. Our interpretations of the extensive Portsmouth Works are severely hindered by a common problem in studies of the earthworks in the Middle Ohio Valley; we do not know the calendar years during which the extensive constructions on both banks of the river took place.



There is a unity in the patterns of the archaeological remains found in the Middle Ohio Valley during the time periods called Early and Middle Woodland (the term “woodland” is used in another confusing set of terms). Berle sees and understands this unity as it changed through time. Perhaps we should call this phenomenon the Clay Complex. I extend fond best wishes to him as he enters a new phase of his career. I look forward to seeing him, with or without a gradiometer, at sites I feel confident I can call Ohio Hopewell. (Photograph by Karen Royce)

Post Script:

From a modal point of view perhaps the name Robbins or Connett might be better than “Adena” to designate the majority of mounds and their contents within the cultural core area. The cultures represented by these mounds, which are found on both sides of the river, did not evolve into the flamboyance of Ohio Hopewell but did share the cultural continuity recognized by all those who have worked with the materials.

A significant anthropological puzzle remains to be solved concerning the differences among these local peoples. What factors brought about the clearly recognizable change called Hopewell in some regions but not in others?

Greber 1991:22

Acknowledgements Support of Field Work

Alva McGraw

Kirtlandia Society, CMNH

Robert Utley Research Fund

National Park Service Matching Grants

Midwest Archaeological Center

Hopewell Culture National Historical Park

Earlham Professional Development Fund

Ford-Earlham Fund

Private donations to Cleveland Museum

Student and local field volunteers

Journal of Kentucky Archaeology 1(1):55-92, Summer 2011

89

Acknowledgements. Field work adds to museum collections and museum collections provide time depth and context for future field work. I thank those who care for the collections that contain “Adena” and “Hopewell” cultural remains and who have always made their collections accessible for study. In particular for materials in this publication I extend my thanks to Bradley Lepper and the staff of the Ohio Historical Society for access to the papers of James Marshall soon after they became part of the Society’s collections. It is there that I first learned of the paper by R.B. Holt. Jonathan Haus and Jamie Kelly of the Field Museum care for a major Ohio Hopewell collection acquired during excavations intended to provide exhibits for the Anthropology Section of the 1893 World’s Columbian Exhibition held in Chicago.. I thank them for their assistance. Thanks to Genevieve Fisher and Jessica Desany of the Harvard Peabody Museum for assistance in obtaining copyright permission for the use of photographs of the copper effigy pipe (76-7-10/8993, copy right 2005 President and Fellows Harvard College) and copper beads (76-7-10/8992, copyright 2011 President and Fellows Harvard College). And thanks to Kit Wesler who answered technical questions as I learned the technical pitfalls of a new presentation format and the perils of the inter-net.

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Journal of Kentucky Archaeology 1(1):55-92, Summer 2011

91

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Editor's note: This paper was accepted after Tier II review (see Author's Guidelines).