

The Third Chillicothe Conference on Hopewell Archaeology

Sponsored by the Ohio Archaeological Council
Christopher Conference Center, Chillicothe, Ohio



Schedule of Presentations

May 13, 2016 Friday Afternoon Session: *The Geographic Extent of Hopewell*

Time	Presenter	Title
1:10	Bret Ruby	INTRODUCTION
1:20	Jerrel Anderson	<i>Earthwork and Settlement Patterns of the Pickaway Plains, Pickaway County, Ohio</i>
1:40	John Rummel	<i>An Examination of Middle Woodland (Hopewellian) Mortuary Sites in Northeastern Ohio and Their Relationship to the Squawkie Hill Phase</i>
2:00	Jonathan Bowen	<i>Hopewellians in North-Central Ohio: From Newark to Esch</i>
2:20	Glenwood Boatman	<i>What is the Extent of Hopewell in North Central Ohio?</i>
2:40	BREAK	
3:00	Jocelyn Connolly	<i>Lower Little Miami Valley Hopewell Community Organization</i>
3:20	Jeff Chivis	<i>Middle Woodland Cultural Dynamics in West Michigan and Northwest Indiana</i>
3:40	Darrin Lowery	<i>Evidence of Hopewell Interaction Along the Middle Atlantic Coast East of the Appalachian Mountains</i>
4:00 to 5:00	POSTER PRESENTATIONS (Posters will remain on exhibit through Saturday afternoon)	
	Sydney Snyder and Claire Johnson	<i>Ohio Hopewell in the Hinterlands: Archaeological Investigations at the Balthaser Home Site</i>
	William Dancey	<i>Early-Middle Woodland Habitation Sites on the North Fork of the Licking River, Licking County, Ohio</i>
	Tessa Horn	<i>Cooking with Rocks the Hopewell Way: Experimenting with Earth Oven Efficiency</i>
	Cailey Mullins	<i>The Mann Site and The Hopewell Interaction Sphere: The Gateway Between East and West</i>
	Tim Schilling	<i>Hopewell Landscapes: An Eastern North American Perspective</i>

May 13, 2016 Friday Evening Program

Time	Presenter	Title
7:00	Anne Lee, President, Ohio Archaeological Council; Dean Alexander, Superintendent, Hopewell Culture National Historical Park	<i>Welcome and Introductory Remarks</i>
7:30	Bradley Lepper	<i>Who Were the Hopewell?, A Public Lecture</i>

May 14, 2016 -Saturday Morning Session: Hopewell Materials, Subsistence, Cosmology, and Symbolism

Time	Presenter	Title
8:00	Brian Redmond	INTRODUCTION
8:10	Richard Yerkes	<i>Cultural Uniformitarianism and the Functions of Large Hopewell Bifaces: Microwear and Technical Analysis of Samples from Mound 25 Hopewell Mound Group, Ross County, Ohio</i>
8:30	Bradley Lepper	<i>Drums Along the Scioto: Interpreting Hopewell Material Culture Through the Lens of Contemporary American Indian Ceremonial Practices</i>
8:50	Kevin Nolan	<i>Scale and Community in Hopewell Networks (SCHoN): Summary of Preliminary Results</i>
9:10	Stephen Mocas	<i>Recovery of a Connestee Vessel in the Middle Ohio River Valley</i>
9:30	Paul Patton	<i>Reconsidering the Question: Were the Hopewell Really Farmers? Evidence from the Periphery, Hocking Valley, Ohio</i>
9:50	DeeAnne Wymer	<i>Yes Virginia – the Hopewell Had Been Food Producers</i>
10:10	BREAK	
10:30	Katharine Ruhl	<i>A Small Deposit of Copper Artifacts at Seip</i>
10:50	Ray Hively	<i>Geometry, Topography, and Astronomy in the Hopewell Core</i>
11:10	Bretton Giles	<i>Genealogical Ties Between Particular Hopewellian and Mississippian Avian Iconographic Motifs and Themes</i>
11:30	Christopher Carr	<i>Scioto Hopewell Concepts of Soul-Like Essences in Humans: Mortuary Evidence in Light of Historic Woodland and Plains Native American Concepts</i>
11:50AM-1:00PM	LUNCH!	

May 14, 2016 -Saturday Afternoon Session: Hopewell Earthworks, Settlements, and Regional Interactions

Time	Presenter	Title
1:20	Jarrold Burks	INTRODUCTION
1:30	Jamie Davis	<i>Going Beyond 256 Shades of Grey: Alternative Imaging Techniques Reveal New Insight into Indiana's Earthworks</i>
1:50	Scot Keith	<i>The Leake Site: Connecting the Southeast with the Hopewell Heartland</i>
2:10	Alice Wright	<i>The Pinson Environment and Archaeology Regional Landscape Project (PEARL): Revisiting Middle Woodland Ceremonialism in the Midsouth</i>
2:30	Jarrold Burks	<i>Recently Discovered Earthwork Sites: Filling in the Central Ohio Landscape</i>
2:50	Rainer Komp	<i>Between the Monuments: Landscape-Scale Geophysical Surveys at Hopewell Mound Group and Seip Earthworks</i>
3:10	Bret Ruby	<i>Ground Truthing the Great Circle and other Grand Anomalies at the Hopewell Mound Group</i>
3:30	Brian Redmond	<i>Hopewellians in a Non-Hopewellian World? Interpreting Hopewellian Cultural Landscapes at the Heckelman Site in Northcentral Ohio</i>
3:50	BREAK	
4:10	Paul Pacheco	<i>Ohio Hopewell Settlements on Brown's Bottom</i>
4:30	Mark Hill	<i>Material Choice and Interaction on Brown's Bottom</i>
4:50	Robert Riordan	<i>At the Heart of Fort Ancient</i>

May 14, 2016 -Saturday Evening Banquet

Time	Presenter	Title
7:30	DINNER	
8:30	Mark Seeman	<i>Twenty-first Century Hopewell: A Keynote Presentation</i>

Earthwork and Settlement Patterns of the Pickaway Plains, Pickaway County, Ohio

Jerrel C. Anderson, *Independent Researcher*

The Pickaway Plains, an Ohio pocket prairie, extended from Circleville, on the north, to the confluence of Deer Creek with the Scioto River on the south. It is rich in prehistoric habitation, mound, and earthwork sites. This area has been surface-surveyed by the author from 1967 to the present, and the information gleaned from this survey will be summarized. The earthworks range from the classic geometric Hopewell Circleville Work on the northern boundary to isolated circles and squares as well as assemblages of works to the east, south and west. A number of new earthworks have been discovered in the last four years. Habitation sites of the Hopewell and Adena are present over the plains and around its edges, but are not numerous. The Late Archaic is heavily represented all across the Plains. The distribution patterns for settlements will be compared with those for the mounds and earthworks.

What is the Extent of Hopewell in North Central Ohio?

Glenwood Boatman, *Western Lake Erie Archaeological Research Program*
and George DeMuth, *Sandusky Bay Chapter, A.S.O.*

Artifacts at the Esch Mounds were seen as proof of a southern Hopewell incursion into Northern Ohio. It was earlier assumed that the pottery at the Esch Mounds site was Hopewellian. Shane and Prufer compared the pottery at Esch Mounds and Heckelman with McGraw Cordmarked pottery. Recent analysis of pottery at the Seaman's Fort, Heckelman, Weilnau, Metz, and Esch Mounds sites has determined that Esch pottery appears at 300 BC at Metz and 250 BC at Seaman's Fort. Esch pottery is indigenous to the Huron River and predates Hopewell. Only two vessels found at Esch Mounds are of Hopewell origin: a Zoned Rocker Stamped vessel and a five footed podial vessel. These two vessels and the copper and silver artifacts are of southern Hopewellian design and could be the result of trade not incursion. Only prismatic bladelets are found in quantity on several sites suggesting they are a trade item. The burial mounds at the Esch site argue for Hopewell incursion. Other site information suggests trade. Excavations are shedding new light on the extent of Hopewell in Northern Ohio.

Hopewellians in North-Central Ohio: From Newark to Esch

Jonathan E. Bowen, *Independent Researcher*

This study examines the Hopewellian remains found within a 7500 square kilometer area which extends from the northern edge of the Newark metro area to the southern shore of Lake Erie, encompassing the North Fork Licking, Walhonding, Huron, Vermilion, and Black River drainages. Hypotheses regarding the land-use patterns of Esch phase Hopewellians to the north, those of Newark-related Hopewell people to the south, and those of others who may have resided in-between, and also regarding the interactions between these groups, are presented.

Recently Discovered Earthwork Sites: Filling in the Central Ohio Landscape

Jarrod Burks, *Ohio Valley Archaeology, Inc.*

Ohio has a wealth of Woodland period earthwork sites—that is, sites with earthen enclosures, primarily of the ditch-and-embankment variety. When William Mills published his *Archaeological Atlas of Ohio* in 1914, it contained 587 enclosure sites. Since the early twentieth century, a good number of these sites have gone missing and many never received Ohio Archaeological Inventory (OAI) numbers. Nevertheless, over the last decade, five new earthwork sites, some with multiple enclosures, have been discovered using a variety of remote sensing data types, including aerial photography, LiDAR, and geophysical survey. In this presentation I briefly explore these new sites, putting them in the larger context of earthwork sites in their regions, and I discuss some of the important implications of these new discoveries. It's a brave new world of remote sensing data and capabilities out there, and we should expect to find quite a few more enclosure sites in the years to come. If nothing else, these new sites show why systematically examining remote sensing data must become a fundamental part of archaeological surveys. They also suggest that we need to rethink our ideas of population density and the scale of Woodland Period monumental construction in the Middle Ohio Valley.

Scioto Hopewell Concepts of Soul-Like Essences in Humans: Mortuary Evidence in Light of Historic Woodland and Plains Native American Concepts

Christopher Carr and Heather Smyth, *Arizona State University*

Ideas about soul-like essences of humans were core to the political, social, economic, religious, and medical aspects of historic Woodland and Plains Indian life, including alliance making, warfare, adoption, hunting ritual, vision questing, death rites, theories of illness, and remedies. Scioto Hopewell conceptions of soul-like essences are evident in the systematic placements of grave goods of particular kinds at the pulse points, joints, and natural openings of corpses, and in light of analogous historic Indian notions. The artifacts include mirrors, cones, smoking pipes, ochre, translucent points, pieces of copper, and other equipment used historically in shaman-like and other ritual activities involving souls, including journeying, communing, divining, healing, and power manipulation. The comparable, historic soul concepts come from 643 cases surveyed from literatures on 43 historic tribes. Analysis of 284 burials from 11 Scioto Hopewell cemeteries indicates a recognition of most likely one “free” journeying soul and multiple “body” souls; their bodily residences, locations of exit upon death, and likely directions taken; the differing functions of different souls; different “medicines” placed with different souls; and three alternative modalities of healing. Also explored are the ways in which soul-like essences of individuals of different ages, sexes, and communities were thought to vary.

Middle Woodland Cultural Dynamics in West Michigan and Northwest Indiana

Jeff Chivis, *Grand Valley State University*

This research examines approximately 500 Middle Woodland (~150 B.C. – A.D. 400) pottery samples from 56 habitation and burial mound sites in west Michigan and northwest Indiana to identify the different types of mechanisms that were associated with the introduction and persistence of Havana Hopewellian information and ceramic technology in the study region. It achieves this by fusing stylistic analyses with compositional (i.e. ceramic petrography) analyses to define the social boundaries of different types of communities on multiple spatial scales. The results have provided insight into the complex and dynamic types of cultural interactions and mobility patterns operating within the study region, the distinct behavioral patterns unique to each individual community, and the assortment of mechanisms responsible for the spread and maintenance of Havana Hopewell. Evidence of other types of cultural dynamics observed in the research include the likely frequent intermarriage between communities, the seasonal use of buffer zones, the likely exchange of food and other material goods, and a shared multi-community mortuary program. The results ultimately suggest that social boundaries on both local and regional spatial scales were open, fluid, and probably unbounded.

Lower Little Miami Valley Hopewell Community Organization

Jocelyn Connolly, *University of Cincinnati*

Intimately understanding the regional context for lower Little Miami River Valley Hopewell within the Woodland period is helpful in teasing out which factors may have led to its rise and decline. Extensive field and archival research was conducted on 100 Woodland period sites in the 76 km² research area. I argue in favor of adopting a view of that microregion as a dynamic sacred landscape, which underwent major social restructuring after the Hopewell florescence. Moving forward, I suggest the importance of collaborative interdisciplinary research regimes in addressing big questions about the Hopewell phenomenon. Lastly, the survival of the remaining lower Little Miami River Valley Woodland sites is incumbent upon active outreach and engagement with landowners, policymakers, and the general public.

Early-Middle Woodland Habitation Sites on the North Fork of the Licking River, Licking County, Ohio

William S. Dancy, *Ohio State University*

Four Early-Middle Woodland habitation sites in Licking County, Ohio were investigated in the late 1980s by Licking County Archaeology and Landmark Society (LCALS) staff and volunteers. Although paleoethnobotanical research has been published on two of the sites, no complete descriptions are in print. This poster is a step in current efforts to make these collections better known. Two of the artifact collections (Parkinson and Stewart) were acquired by grab sampling and the other two (Newark Campus and Nu-Way) through salvage excavation of select cultural features. However, despite low measures of clarity, integrity, and representativeness, they contribute significant information to the reconstruction of prehistoric settlement patterns in the Licking River drainage between 500 BC and AD 400. All are located on the margin of the North Fork valley, one on the east side and three on the west. Their artifact assemblages contain biface and bladelet manufacturing products and by-products (three of the four), ceramic vessels (two of the four),

and mica (one). The poster illustrates select artifacts, cultural features, and site plans from them and pools data from other sites of the period to address questions of the degree of residential stability achieved by Adena-Hopewell Tradition communities.

Going Beyond 256 Shades of Grey: Alternative Imaging Techniques Reveal New Insight into Indiana's Earthworks

Jamie Davis and Jarrod Burks, *Ohio Valley Archaeology, Inc.*

East-central Indiana contains several Middle Woodland earthworks and earthwork complexes that straddle the fringe of what are understood to be Adena and Hopewell. Most of these earthworks, and especially the multi-enclosure complexes, share many common components indicating a close interrelationship. Previous excavations by Ball State University and others have found that these sites contained artifacts that are usually associated with Adena and Hopewell, and radiocarbon dates indicate that the earthworks were constructed during what is thought to be the transitional period between Adena and Hopewell. By using newly acquired LiDAR data and various aerial photographs to image Indiana's earthworks in alternative views, the form of the enclosures can be better understood and their relation to similar earthwork sites in Ohio and other states can be more accurately explored. The alternative views of the earthworks were created through LiDAR point cloud manipulation, raster data spatial analysis, and manipulation and aerial photograph processing. These alternative imaging techniques unveil new insight into Indiana's earthworks and enclosures, revealing that the majority of the enclosures share a surprisingly common form and that Indiana houses the largest known Adena/Hopewell enclosure complex.

Genealogical Ties between Particular Hopewellian and Mississippian Avian Iconographic Motifs and Themes

Bretton T. Giles, *CEMML Colorado State University*

This presentation examines the genealogical connections between Hopewellian and Mississippian avian iconographic motifs and themes. Its focus is the historical continuities and discontinuities between Hopewellian, Late Woodland, and Mississippian representations with avian (eye and mouth) surrounds, including the Birdman theme. Specifically, I discuss the avian surrounds on two Hopewellian animal effigy platform pipes from Tremper and Mound City, as well as two anthropomorphic effigies from Mound City and Liberty. I then compare the use and context of Hopewellian avian surrounds to later forked eye (and mouth) motifs from the Late Woodland and Mississippian periods. I document how the two anthropomorphic effigies from Mound City and Liberty are portrayed with avian surrounds, ceremonial regalia, and coiffures, which appear to have parallels with the Mississippian Birdman theme. These similarities are exemplified by Hopewellian and Mississippian anthropomorphs with avian (eye or mouth) surrounds, who are portrayed wearing earpools, head-plates, occipital hair-buns, and/or world symbols. These continuities suggest that the Mississippian Birdman theme has a complex genealogical relationship with earlier Hopewellian imagery, which hints at the deep historical roots of particular stories, myths, and beliefs in the Midcontinent.

Material Choice and Interaction on Brown's Bottom

Mark A. Hill, Mark F. Seeman, Paul J. Pacheco, Jarrod Burks, Eric Olson, Emily Butcher, and Kevin C. Nolan

We build on the work of Pacheco, Burks, and Wymer through an analysis of the raw material and ceramic production choices at the Brown's Bottom #1 (33Ro1104) and Lady's Run (33Ro1105) locales. These systematically investigated, partially contemporary, habitations provide a unique opportunity to examine interaction and continuity among small farmsteads adjacent to a large ceremonial center, in this case the Liberty or Harness earthworks. We examine the intrasite and intersite distribution of raw material usage and disposal along with distributions of various stylistic attributes. The precision of provenience information allows us to compare primary and secondary deposits to look at the structure of material usage choice and examine difference in activity organization between the two occupations. While generally similar, the two sites show distinctly different uses of lithic raw material, particularly Upper Mercer and Wyandotte cherts. Both sites appear to have used very similar sources of clay for pottery making, with discriminant function reclassifications errors most often mistaking these two sites for each other, rather than any other site in our large SCHoN sample. Our results indicate these two households were engaged in similarly scaled social relations of household production, but with somewhat different, and perhaps independent, access to nonlocal lithic raw material.

Geometry, Topography, and Astronomy in the Hopewell Core

Ray Hively and Robert Horn, *Earlham College*

Current archaeological research has begun to establish a broad cultural framework for the Hopewell tradition in central Ohio. This research has not yet established a secure foundation for understanding the most distinctive and enigmatic feature of that tradition: the construction of monumental, geometrically precise earthworks. Previous work has suggested that the orientation, placement, and design of earthworks at Newark, Ohio can be understood in terms of a concise set of principles. These principles involve geometrical relations between squares and circles built on a grand scale and the simultaneous alignment of earthworks to prominent topographical features and important astronomical rise/set events. We extend this hypothesis further with a new analysis of the geometry of the Newark Earthworks. We then test the hypothesis further by applying it to the five best-documented geometric earthworks in the Ohio Hopewell core near Chillicothe, Ohio. This test shows that the geometrical design, placement, and orientation of these earthworks can be understood in terms of concepts very similar to those proposed for Newark. This Hopewell tradition would provide a precedent for similar practices that have been documented in Chacoan culture and are drawing current attention in studies of Mississippian sites.

Cooking with Rocks the Hopewell Way: Experimenting with Earth Oven Efficiency

Tessa Horn, *SUNY College at Geneseo*

After helping to excavate an earth oven at an Ohio Hopewell habitation site last summer, I wondered what attributes make an earth oven successful and efficient? In this project, I used experimental archaeology to build earth ovens of different sizes, shapes, and depths, using different combinations of sandstone, limestone, and igneous rocks to cook food such as root crops and meat. My expectations were that by recreating earth ovens of varying shapes, sizes, and depths with different combinations of rocks, I would be able to explain how different attributes contribute to earth oven efficiency, helping to explain how these differences are reflected in the archaeological record. Temperatures were monitored with a thermocouple every hour, allowing me to compare the effectiveness of the different ovens. The sizes of the earth ovens in my experiments and the amount of rocks that I used were based on data from Hopewell habitation sites like Balthaser Home, Brown's Bottom #1, and Lady's Run. This poster presents data on temperature over time, amount of fuel used, how long the fire burned, which types of rocks were used, and their weight. In one experiment, I also encased food in broken pottery to see how that affected cooking.

The Leake Site: Connecting the Southeast with the Hopewell Heartland

Scot Keith, *New South Associates*

In this presentation, I discuss research of the Leake site, a Middle Woodland period ceremonial center in northwestern Georgia. Recent investigations of the site indicate that Leake became an interregional interaction center and a gateway community linking the Southeast and the Midwest during the Middle Woodland period. Occupied from 300 B.C. - 650 A.D., the Leake site consists of three mounds and a ditch enclosure on the Etowah River, while across the river on a low mountain were a stone enclosure on the summit, a large cavern on the end, and an elaborate stone burial mound at its base. Investigations of the site have yielded a number of significant discoveries, including a direct artifact connection with the Mann site in southwest Indiana. Ongoing research of this site, as well as into Swift Creek iconography and contexts, is providing significant insight into the expression of Hopewellian religion, identity, community, ritual, and interaction.

Between the Monuments: Landscape-Scale Geophysical Surveys at Hopewell Mound Group and Seip Earthworks

Rainer Komp and Friedrich Lüth, *German Archaeological Institute*

Timothy Darvill, *Bournemouth University*

Bret Ruby, *Hopewell Culture National Historical Park*

Jarrold Burks, *Ohio Valley Archaeology, Inc.*

Hopewellian mounds and earthwork complexes in Ohio are best-known from 19th century maps; plowing has left little on the surface that is visible today. Moreover, archaeological attention has mainly focused on individual mounds, resulting in little information about the vast spaces around the mounds and within and around the enclosures. In spring 2015 a team from the German Archaeological Institute joined the National Park Service to dive in "between the monuments" by performing landscape-scale geophysical surveys at Hopewell Mound Group and Seip Earthworks. Using a vehicle-towed 16-channel magnetometer array with built-in real-time GPS positioning capability, high-resolution magnetic survey data covering nearly 400 acres of the park were

successfully collected, producing the largest archaeomagnetic dataset ever recorded in North America. The new data reveal information about the size, shape, and state of preservation of previously recorded features. There is also new evidence for extensive wooden architecture, ditched enclosures, plazas, and avenues that were entirely unexpected. Furthermore, numerous pit features, including an extensive pit cluster at Seip, indicate the presence of habitation sites that likely span thousands of years. Having agreed to continue for an additional three seasons in 2016-2018, the project will lead to further richly-detailed interpretations and better public appreciation of American Indian heritage preserved within Hopewell Culture National Historical Park, which is currently under consideration for inscription on the World Heritage List.

Drums Along the Scioto: Interpreting Hopewell Material Culture Through the Lens of Contemporary American Indian Ceremonial Practices

Bradley T. Lepper, *Ohio History Connection*

Benjamin J. Barnes, *Shawnee Tribe*

The Seip-Pricer Mound was the third largest mound in the Hopewellian world. Among the many features at its base there was a massive, clay-lined, oval basin known as the "Burnt Offering." This basin contained a large quantity of artifacts that had been subjected to intense burning. Among the remarkable objects recovered from this deposit were five small spheres of black steatite, each of which had been engraved with abstract designs. Shetrone interpreted these objects as marbles. More recently, Carr suggested they were shamanic paraphernalia. We propose an alternative interpretation based on contemporary/traditional Shawnee ceremonial practices. The Shawnee drum includes in its construction spherical stones used to attach the drumhead to the shell. In contemporary practice these stones are not engraved, but similarities between the Shawnee drum stones and the Hopewell steatite spheres, including size, color, and number, suggest the intriguing possibility that the Hopewell spheres actually were parts to a drum. This is the first direct evidence for a drum in the Middle Woodland period and our proposed interpretation is strengthened by the fact that it derives from the ceremonial practices of an indigenous eastern Woodlands tribe that could be among the direct descendants of the Hopewell culture.

Who Were the Hopewell?

Bradley T. Lepper, *Ohio History Connection*

(Friday evening public presentation)

People have wondered about the identity of the Hopewell since before archaeologists applied that name to this extraordinary American Indian culture. In the absence of much reliable information, 19th century enthusiasts came up with a variety of colorful ideas about these mysterious mound-builders. In spite of the accumulation of a considerable amount of information over the past two centuries of archaeological research, some of these quaint ideas persist in popular culture. As it turns out, the Hopewell were not the Lost Tribes of Israel, or giants. They were American Indians participating in an explosion of art, architecture, and ceremony unprecedented in scale, in spatial extent, in the peaceful adoption of its fundamentally religious program, and in the rapidity of its widespread acceptance and subsequent abandonment. Most remarkably, this florescence is not associated with the development of a hierarchical leadership structure that might have imposed these costly cultural innovations on the dispersed, small scale, and otherwise independent societies. How this occurred and why the system was not able to be sustained are still unanswered questions.

Evidence of Hopewell Interaction Along the Middle Atlantic Coast East of the Appalachian Mountains

Darrin L. Lowery, *Smithsonian Institution, Chesapeake Watershed Archaeological Research*

John C. Rummel, *Independent Researcher*

Earlier Middle Atlantic archaeological syntheses have noted a "curious mixture" of both Adena and Hopewell items at several large mortuary sites found on the Delmarva Peninsula and around the Chesapeake Bay. Over the past 25 years, regional surveys and site excavations have documented additional diagnostic Hopewell artifacts (i.e., Flint Ridge bladelets, diagnostic biface forms, decorated Connestee tetrapod vessel fragments) from several contemporaneous Fox Creek-affiliated coastal archaeological sites. Additional evidence for Hopewell interaction along the Middle Atlantic coast is indicated by the presence of several large Knife River flint bifaces. One obsidian biface excavated from a midden feature has been geochemically sourced to outcroppings near American Falls, Idaho. Organic remains associated with this obsidian biface have been AMS-dated to circa 374 ± 27 calAD. Recent isotopic studies have also shown that several Hopewell shell cups excavated from mounds in the Ohio Valley can be sourced to the Atlantic coast. Also, the fossil shark teeth from the Ohio Valley mounds most likely originated from geologic formations and

exposures located around the Chesapeake Bay. The paper will present the collective evidence for Hopewell interaction along the Middle Atlantic coast east of the Appalachian Mountain barrier.

Recovery of a Connestee Vessel in the Middle Ohio River Valley

Stephen T. Mocas, *AMEC Foster Wheeler Environment and Infrastructure Inc.*

A complete simple stamped, tetrapodal vessel was found at the Panther Rock site (15CL58) near the confluence of the Kentucky River with the Ohio River. Petrographic analysis determined that the grit temper is extremely similar to that of two Connestee vessels in east-central Kentucky and a number of Turner Simple Stamped vessels from Hopewellian sites in southcentral Ohio, southern Illinois, and central Illinois. The context of the vessel is unusual, because it was found in a refuse pit on a site with minimal evidence of Woodland occupation, whereas the majority of the other Connestee vessels in the region have been recovered from Hopewellian earthwork or mortuary sites. The location of the site provides additional insights about possible trade routes into the Ohio Valley.

The Mann Site and the Hopewell Interaction Sphere: The Gateway Between East and West

Cailey Mullins, *University of North Carolina at Chapel Hill*

The Hopewell Interaction Sphere has long been a topic of debate in Hopewell archaeology. This paper looks to the Mann Site in Posey County, Indiana as a lynch pin in this ideological and material exchange system. The site's prime location on the confluence of the Wabash and Ohio Rivers makes it an ideal spot for Hopewell interaction on a large scale. The goods recovered from years of surface collecting at the site reflect that convenient position from the sheer number of exotic goods and materials within the collection. Given this unique amount of exotica – specifically obsidian – it seems that the Mann Site had regional significance in the Hopewell Interaction Sphere, perhaps, as this paper will argue, as a gateway community linking the western edge of the Hopewell Interaction Sphere in Indiana and Illinois to the central trade locale in south-central Ohio. Whatever the Mann Site's role in this large interaction sphere, it is clear that obsidian was a highly valued commodity – and one with great social and ceremonial importance. It is the author's hope to move one step closer to understanding just what those socio-ceremonial aspects of obsidian were in order to better understand the Hopewell phenomenon.

Scale and Community in Hopewell Networks (SCHoN): Summary of Preliminary Results

Kevin C. Nolan, Mark A. Hill, Mark F. Seeman, Eric Olson, Emily Butcher, Sneha Chavali,
Nora Hillard, and Laure Dussubieux

Over the last two years we have systematically analyzed samples of three material types from 32 Scioto Valley Middle Woodland sites to investigate multiple levels of social and economic interactions. Copper, lithic, and ceramic material types were subjected to source identification (geological and/or chemical sourcing), and the ceramics were the subject of an extensive attribute analysis. The materials and variables were selected to reveal details about multiple different scales of communities and networks operating during the Middle Woodland period in the Scioto Valley. Here we present a preliminary summary of this new systematically collected database. Our findings reveal unexpected and multifaceted variability and ubiquity. Specifically, we have revealed that there are clusters of copper chemical sources within sites, but differences among sites in geological provenance. While there are general tendencies in lithic source use, ties to southeastern sources serves to discriminate either changing or variable relations to the south. The ceramic chemical sources substantially overlap, with in some case more than 45% of a site's assemblage matching the chemical signature of another site. Future analyses and data generation will refine these understandings and shed new light on the structure of relations among Hopewell societies over time and space.

Ohio Hopewell Settlements on Brown's Bottom

Paul J. Pacheco, *SUNY College at Geneseo*
Jarrod Burks, *Ohio Valley Archaeology, Inc.*
DeeAnne Wymer, *Bloomsburg University*

From 2005-2011, SUNY Geneseo, OVAI, and Bloomsburg University collaborated on the Brown's Bottom project located on the archaeologically famous Harness Farm, south of Chillicothe, Ohio. Not knowing what our excavations would reveal, we utilized a systematic multi-stage approach, documenting site structure and assemblage variability within a cluster of Scioto floodplain

occupations. Here our goal is to provide an overview of our archaeological investigations at the Brown's Bottom #1 (33Ro1104) and Lady's Run (33Ro1105) locales focusing on site structure, feature variation, chronology, and assemblage composition. Evidence is also presented for seasonality based on deer remains from features at BB#1, and domestic refuse from a buried paleochannel at Lady's Run. In combination with the recently published structural engineering analysis of the three timber framed houses we uncovered at these locales, we set the record straight on what we conclude is the presence of substantial, extended-family domestic occupations at these important Ohio Hopewell settlements. This conclusion is supported by a vast literature covering the study of domestic occupations, seasonality, and occupation permanence.

Reconsidering the Question: *Were the Hopewell Really Farmers?* Evidence from the Periphery, Hocking Valley, Ohio

Paul E. Patton, *Ohio University*

Theoretical models aimed at explaining Middle Woodland settlement and subsistence can be divided into two general approaches: 1) the dispersed sedentary food producers model and 2) the complex foragers model. The construction of both models has relied heavily on data from south and central Ohio, particularly the Licking and Scioto Valleys, and has emphasized the concept of sedentism. The neighboring Hocking Valley has received limited attention with respect to answering many of the questions concerning the lifeways of Middle Woodland populations despite its proximity to these watersheds and its early contributions to establishing the Eastern Woodlands region as an independent center of plant domestication. This paper provides a summary of recent archaeobotanical and architectural data from the Hocking Valley indicating that Middle Woodland populations were residentially stable food producing communities.

Hopewellians in a Non-Hopewellian World? Interpreting Hopewellian Cultural Landscapes at the Heckelman Site in Northcentral Ohio

Brian G. Redmond, *Cleveland Museum of Natural History*

Until recently, Middle Woodland complexes of the southeastern Lake Erie drainage basin have generally been perceived as *non-Hopewellian*. Only a few isolated mound sites such as Esch were believed to have actively participated in the Hopewell Interaction Sphere of Ohio. More recent work, however, has identified additional localities which provide classic Interaction Sphere artifacts of copper, Flint Ridge chert, and mica. Some of these are mound sites but many more appear to lack earthen constructions and may instead represent places of domestic rather than mortuary activity. Unfortunately, most of these non-mound localities remain unexcavated. Recent intensive investigations of the Heckelman site in the Huron River valley of north-central Ohio reveal significant evidence of domestic occupation in the form of pit clusters, post mold configurations, and a midden-filled ditch. Such remains in one sense equate well with features of the sedentary hamlet model of Hopewell settlement proposed for the Core. A closer examination, however, indicates that Heckelman may more accurately be perceived as a place of non-mortuary ceremonial or ceremonial-support activities within the context of a short-term, but recurrent, domestic, but non-household, occupation. That is, a ceremonial landscape of the kind best characterized by Byers as a cult-sodality center.

At the Heart of Fort Ancient

Robert V. Riordan, *Dayton Society of Natural History*

Circular arrangements of standing wooden posts that were erected in dug postholes have now been found to have been constructed at several Ohio Hopewell earthworks, including Hopewell, Stubbs, and Fort Ancient. Among them, only the Moorehead Circle, located in Fort Ancient's North Fort, is known to have possessed a complex set of internal features that point to the enactment there of an elaborate ceremonialism. Excavations, which began in 2006, have provided data that permit some tentative conclusions to be offered concerning the sequence of its construction and the nature of the features at its center. These include a pit filled with red soil, around which broken pottery vessels were placed, and what now appear to have been three iterations of an adjacent structure.

Ground Truthing the Great Circle and other Grand Anomalies at the Hopewell Mound Group

Bret J. Ruby, *Hopewell Culture National Historical Park*

The monumental mounds and earthworks at Hopewell Mound Group have attracted attention since the dawn of American archaeology. By the early 20th century, the site's imposing earthworks, exotic raw materials, and exquisitely crafted artifacts were widely recognized as the most flamboyant expression of a newly defined "Hopewell culture." Yet attention was focused narrowly on mounds and mortuary contexts, ignoring the vast spaces in between. Agricultural plowing steadily eroded the above-grade features. Today, most visitors experience the site as a featureless plain. However, recent large-scale geomagnetic surveys successfully documented the subsurface integrity of many plowed-down mounds and earthworks and revealed a host of anomalies both large and small filling the spaces between the monuments. This presentation describes the results of two seasons of targeted excavations intended to ground truth several intriguing anomalies. One focused on the "Great Circle," a circular earthwork nearly 120 meters in diameter thought to have been entirely obliterated by plowing before 1891. Our excavations revealed a deep encircling ditch flanked on the interior by a row of deep pits that likely supported huge wooden posts – an enormous Hopewell "woodhenge." The second season revealed a gigantic but enigmatic pit feature with an estimated volume approaching 15 cubic meters.

A Small Deposit of Copper Artifacts at Seip

Katharine C. Ruhl, *Cleveland Museum of Natural History*

In 1980, N'omi Greber's field work at the Seip earthworks in Ross County included excavations in the area designated as location 23, where an activity floor had been covered with a layer of sand and gravel. A shallow pit feature in this covering layer contained a collection of copper artifacts in the form of strips of copper sheet. They are pointed and bent on each end, evidently allowing them to be fastened like staples into a substrate. During a decommissioning process, the copper had been forcibly wrenched from the mounting causing considerable deformation. Forty one artifacts were recovered, although copper fragments in the upper part of the feature indicated plow damage to more. Examination of the strips suggests a slight variation in style between two groups, possibly indicating two different metalsmith's interpretation of the form. However, the effect of shining copper bands decorating a surface would have been similar. The author is unaware of comparable ornaments at this or other Hopewell sites, but the splendid deposit of copper cutout shapes from the Hopewell site itself are also evidently elements of a decommissioned decorative composition.

An Examination of Hopewellian Mortuary Sites in northeastern Ohio and Their Relationship to the Squawkie Hill Phase

John C. Rummel, *Independent Researcher*

Studies of the Hopewell phenomenon in Ohio have been mainly derived from excavations and surveys conducted in the lower half of the State; primarily, in the Licking, Paint Creek, Scioto, and Miami River valleys. Conversely, very little has been reported or studied in the North where Hopewell mortuary sites also exist, and, in fact, display a number of traits that differ from those to the South. The presence of exotic materials also appears at nearly all of the mortuary sites, which demonstrates a participation in the Hopewell exchange, but the question is, by whom are they influenced? Through the aid of newspaper accounts, field notes, and collections, this paper will examine some of the known Hopewell mortuary sites in the northeastern part of the state and discuss funerary and artifact traits that potentially place them more to the Squawkie Hill phase in the East than the Scioto Tradition to the South. Radiometric dates will also be given on some sites, including dates recently obtained on the North Benton mound (33Mh1), that will show where they lay in the Hopewellian timeframe.

Hopewell Landscapes: An Eastern North American Perspective

Tim Schilling, *National Park Service-Midwest Archeological Center*

Hopewell people created an astonishing variety of built landscapes. Emphasizing the mounds and embankments found scattered across southern Ohio, archeologists have long studied these places focusing on both their scale and complexity when compared to other Hopewellian constructions. Yet, Hopewell construction did not exist in a vacuum; it was a component of a larger Native American pattern of building special places from earth and modifying large patches of ground for sacred reasons. Here, I compare Hopewellian landscape practices with other mound builders from ancient North America. Places like Poverty Point and Cahokia compare favorably to Hopewell sacred places. Typically, Hopewellian societies are seen as a stepping stone in the development of complex societies in Eastern North America. Comparative study suggests that the degree of planning and control

needed to build a Hopewell ceremonial center was on par with what was needed for earlier and later ceremonial centers. Building on this scale indicates that Native Americans had, at times, the ability to create centralized planning and control structures in the absence of regularized social hierarchies. These structures were probably temporary and relevant to a specific project or goal.

Ohio Hopewell in the Hinterlands: Archaeological Investigations at the Balthaser Home Site

Sydney Snyder and Claire Johnson, *SUNY College at Geneseo*

In 2014 – 2015, SUNY Geneseo, OVAI, and Bloomsburg University took their archaeological research collaborative north to eastern Pickaway County, Ohio. Multi-stage investigations were conducted on the Balthaser farm, which is located in the upper branches of the Little Walnut Creek drainage. While there are a series of Ohio Hopewell locales on the farm, we focused on a portion called the Balthaser Home Site, which was identified by the land owner Donald Balthaser through years of surface collecting. This poster presents the excavation results of two field seasons, which were guided by geophysical survey including magnetometry and magnetic susceptibility. In particular, we present the distributions and results of the feature excavations and analyses of the lithic and ceramic artifacts in the assemblage. Ceramic analyses included typology and identification of the minimum number of vessels included in the collection. Distribution maps were plotted for lithic artifacts and an analysis of the Ohio Hopewell bladelets in the assemblage was conducted. In addition, the poster will show unique artifacts of bone and mica which were recovered from feature contexts.

Yes Virginia—the Hopewell Had Been Food Producers

DeeAnne Wymer, *Bloomsburg University of Pennsylvania*

At the first OAC Hopewell conference years ago, I gave a current summation of the paleoethnobotanical record for Ohio Hopewell as well as my interpretation of the meaning and importance of the data. In the intervening years since that earlier conference that database has expanded greatly – predominantly based upon the focused excavations conducted by Pacheco, Burks, and myself on a series of Hopewell sites in southcentral Ohio since 2005. Thus, my paper will update the known paleoethnobotanical record and information gained from samples procured from the Brown's Bottom 1, Lady's Run, and Datum H (Hopewell Mound Group), as well as recent research at the Balthaser and Snake Den Mound Group sites. This research, along with other site results, provides an unequivocal baseline from which to explore similarities and distinctions between domestic and ceremonial localities for the Ohio Hopewell. By exploring microcontextual analysis of sample location, plant and artifactual contents of feature fill, and intersite comparisons, I believe I can speak to a nuanced understanding of the subsistence and human-land interaction for this population. In addition, several exceptional preservation environments for a number of unique samples offer a rare glimpse of the importance and nature of the cultigens utilized by the Hopewell.

The Pinson Environment and Archaeology Regional Landscape Project (PEARL): Revisiting Middle Woodland Ceremonialism in the Midsouth

Stephen Yerka, *University of Tennessee*; Alice P. Wright, *Appalachian State University*; Christopher Van de Ven, *Sewanee University of the South*; Sarah C. Sherwood, *Sewanee University of the South*; William L. Lawrence, *Tennessee Department of Environment & Conservation*; Edward Henry, *Washington University in St. Louis*; Stephen B. Carmody, *Sewanee University of the South*; and Casey Barrier, *Bryn Mawr College*

Located in West Tennessee, Pinson is the largest and most complex Middle Woodland earthwork site in the Southeast. Previous research at the site has concentrated on several mounds, producing artifact assemblages and mortuary features indicative of participation in the Hopewell Interaction Sphere. We initiated the Pinson Environment and Archaeology Regional Landscape Project (PEARL) in 2014 to contextualize this Middle Woodland record in its broader cultural and natural landscape. To date, we have focused on the little known Johnston site, a 30-hectacre complex with multiple earthen mounds located 5 kilometers downstream from Pinson along the South Fork of the Forked Deer River. Here, we report on two seasons of extensive, multi-method geophysical survey at Johnston and our ongoing efforts to ground truth these results. Our findings thus far indicate that the Johnston site has been a place of prehistoric significance since the Middle Archaic, and that off-mound features have the potential to situate the site's Middle Woodland mounds in both space and time. By comparing our findings to contemporaneous Hopewell earthwork sites in Ohio, the PEARL project aims to identify how Middle Woodland social organization economy and ceremonial practice varied across the central Eastern Woodlands and the wider Hopewellian world.

Cultural Uniformitarianism and the Functions of Large Hopewell Bifaces: Microwear and Technical Analysis of Samples from Mound 25, Hopewell Mound Group, Ross County, Ohio

Richard W. Yerkes, *Ohio State University*

Ariane Pépin, *Université du Québec à Chicoutimi*

Jay Toth, *Seneca Nation of Indians*

Robert Hall's principle of *cultural uniformitarianism*: prehistoric ritual and ideology conform to historic Native American customs and practices, is applied in a study of large Hopewell bifaces from Mound 25, Hopewell Mound Group, Ohio (33Ro27). Since 1897 it was asserted that large thin flint and obsidian ceremonial bifaces were made by master flintknappers from materials obtained by travelling over 4827 km (3,000 miles) to Yellowstone Park and North Dakota. Microwear and technological analysis confirmed that a biface from Burial 22 in Mound 25 was made of Knife River Flint, while eight obsidian bifaces from a deposit on "Altar 2" at the base of Mound 25 came from Yellowstone sources. Intense fires reaching 1000°C on the altar fractured the obsidian bifaces. The *Hopewellian Great Tradition* and *Hopewellian Interaction Sphere* described by Robert L. Hall and Joseph R. Caldwell would have allowed safe travel to these distant sources by members of Ohio Hopewell tribes and exchange of materials and ideas with other groups. To appreciate the symbolism of the large "exotic" prehistoric bifaces, and understand how they may have been used before they were discarded in Mound 25, historic and contemporary rituals of the Seneca Nation and other Native Americans are examined.