

May 2020

## **A Collection Divided: an Analysis of Accession 16082, the Ohio Hopewell Site Collection at the Milwaukee Public Museum**

Katrina N. Schmitz  
*University of Wisconsin-Milwaukee*

Follow this and additional works at: <https://dc.uwm.edu/etd>



Part of the [Archaeological Anthropology Commons](#), and the [Library and Information Science Commons](#)

---

### **Recommended Citation**

Schmitz, Katrina N., "A Collection Divided: an Analysis of Accession 16082, the Ohio Hopewell Site Collection at the Milwaukee Public Museum" (2020). *Theses and Dissertations*. 2419.  
<https://dc.uwm.edu/etd/2419>

This Thesis is brought to you for free and open access by UWM Digital Commons. It has been accepted for inclusion in Theses and Dissertations by an authorized administrator of UWM Digital Commons. For more information, please contact [open-access@uwm.edu](mailto:open-access@uwm.edu).

**A COLLECTION DIVIDED: AN ANALYSIS OF ACCESSION 16082,  
THE OHIO HOPEWELL SITE COLLECTION AT  
THE MILWAUKEE PUBLIC MUSEUM**

by  
Katrina N. Schmitz

A Thesis Submitted in  
Partial Fulfillment of the  
Requirements for the Degree of

Master of Science  
in Anthropology

at  
The University of Wisconsin-Milwaukee  
May 2020

## ABSTRACT

### A COLLECTION DIVIDED: AN ANALYSIS OF ACCESSION 16082, THE OHIO HOPEWELL SITE COLLECTION AT THE MILWAUKEE PUBLIC MUSEUM

by

By Katrina N. Schmitz

The University of Wisconsin-Milwaukee, 2020  
Under the Direction of Dr. Patricia B. Richards

This thesis investigates and documents sixty-one Ohio Hopewellian objects that form a collection currently housed at the Milwaukee Public Museum (MPM). The objects were excavated from the Hopewell site of Ross County, Ohio which lends its name to a renowned and geographically expansive archaeological cultural horizon. The meaning and interpretation of these MPM objects, and the site itself have evolved over time through decisions made by Native peoples, archaeologists, and museum curators. The MPM's collection can be used as a conduit enabling discussion of the evolution of interpretations for the entire Hopewell site and the extraordinary number of artifacts which have been removed from it. Further, this collection is a mechanism for understanding decisions and practices in the nineteenth and twentieth century fields of archaeology and museology.

To fill displays at the Chicago World's Colombian Exposition of 1893, Warren K. Moorehead excavated mounds at the Hopewell Mound Group in Ohio from 1891 to 1892. Thousands of objects removed from the site were transported to Chicago, later becoming one of the founding collections for the Field Museum (FM). Objects from the Hopewell site were used as a representative specimen type collection for identification of other Hopewellian sites

throughout the Eastern Woodlands of the United States. On April 6<sup>th</sup>, 1945, the Milwaukee Public Museum received 61 objects from the Hopewell site in an exchange with the FM.

This thesis contains two components: a review of decisions made by varying constituents which affected and currently affect the objects and a descriptive analysis of the Hopewell collection at the MPM. First, the review focuses on the transition of these Hopewellian objects' meaning over time through the decisions of Native peoples, archaeologists, and museum professionals. This begins with a history of the Hopewell site and archaeological practices associated with the site. Next, an object biography is presented, following the MPM Hopewell site collection artifacts journey from southern Ohio to Milwaukee, Wisconsin. The final portion of the review discusses the transition of Hopewellian objects' interpretation over time in museums and National Parks. The second component of this thesis, includes examination and photography of the physical objects, assessment of provenience information, and a comparison to the larger Hopewell collection at the FM.

The goals of this thesis are to gather information and associate a largely unresearched collection at the MPM to an important archaeological site, connect to an expansive archaeological cultural horizon, and explore the related professional practices of the previous era. Data collected for this thesis will be provided to the MPM and submitted to the FM for potential incorporation into their "Ohio Hopewell" digital project. By including this information in the digital project, this small collection at the Milwaukee Public Museum will be linked to other Hopewellian objects now spread throughout the world, and as a result, will be more accessible for future research.

## TABLE OF CONTENTS

Abstract.....	ii
List of Figures.....	vi
List of Tables.....	viii
List of Abbreviations.....	ix
Acknowledgements.....	x
Chapter 1: Introduction.....	1
The Hopewell Cultural Horizon.....	1
A Brief History of the Hopewell Site Collection at the MPM.....	4
Archaeological Approaches.....	6
Museum Approaches.....	8
Theoretical Orientation.....	11
Project Description and Key Questions.....	12
Methods.....	13
Expected Results and Significance.....	14
Thesis Organization.....	15
Chapter 2: A Context for the Hopewell Site.....	18
Hopewell Site Investigations.....	18
Atwater, Squier, Davis, and the Myth of the Mound Builder.....	18
Moorehead and Beyond.....	24
Archaeological Practices.....	29
Hopewellian Studies.....	30
Hopewell Interaction Sphere.....	32
Hopewell Habitation and Subsistence.....	34
Chapter 3: The Social Life of the Hopewell Site Collection.....	36
Birth and Ancient Beginnings.....	38
Historic Period and Excavation.....	42
Life Post-Excavation: Nineteenth Century.....	48
Life Post-Excavation: Twentieth and Twenty-first Centuries.....	60
Chapter 4: Material Analysis.....	69
Analysis of Collection by Material Type.....	71
Lithics.....	71
Metals.....	75
Faunal.....	78
Mica.....	82
Human Remains.....	83

EDX-Ray Fluorescence of Three Obsidian Artifacts.....	86
Discussion of Collection Analysis: Findings and What is Missing .....	90
Comparison to Other Field Museum Exchanges.....	93
Conclusion.....	99
Chapter 5: Transformation of Interpretation.....	101
Interpretations at Museums .....	102
Field Museum.....	102
Milwaukee Public Museum.....	109
Interpretations at National Parks .....	116
Mound City Group .....	117
The Hopewell Site Today.....	120
Future of the Hopewell Mound Group.....	130
Chapter 6: Conclusions.....	135
Summary .....	136
Evaluation of Theoretical Orientation and Key Questions .....	138
Future Direction .....	140
References Cited.....	142
Appendix A: Object Biographical Sheets.....	152
Appendix B: Field Museum External Exchanges and Sales.....	270
Appendix C: MPM Ceramic Vessels Exchanged in Accession 16082.....	280
Appendix D: Obsidian XRF Testing.....	284

## LIST OF FIGURES

Figure 1. Ancient Works on the North Fork of Paint Creek Near Chillicothe: Ohio map .....	19
Figure 2. North Fork Works, Ross County Ohio map .....	22
Figure 3. Group photo at the Hopewell site, including W.K. Moorehead .....	45
Figure 4. Plan of the Hopewell Works, Ross County Ohio .....	46
Figure 5. Anthropology Building Interior, World’s Columbian Exposition.....	50
Figure 6. Hopewell Serpent Mound model or miniature diorama. Anthropology Building, World’s Columbian Exposition .....	51
Figure 7. World's Columbian Exposition of 1893 reconstructed stone grave from southern Ohio.....	53
Figure 8: Hopewell Flint Disc Recreation on left side, 1/1/1898 .....	60
Figure 9. Trace Element Concentration (PPM) in Obsidian from Selected Minnesota Sites (after Hughes 2007) .....	89
Figure 10. Comparison of the Four Largest Exchanges .....	98
Figure 11. FM <i>Burial Ceremonies</i> Exhibit, Hall 4, Case 15 west, 1944 .....	104
Figure 12. FM <i>Women’s Work</i> Exhibit, Hall 4, Case 22 west, 1943 .....	104
Figure 13. FM <i>Many Hopewell Goods Came From Far Away</i> case, taken 7/26/2019 .....	106
Figure 14. FM <i>Monumental Mounds and the Mark of Leaders</i> diorama, taken 7/26/2019 .....	106
Figure 15. FM <i>Many Clues Help Reconstruct Hopewell Life</i> case, taken 7/26/2019 .....	107
Figure 16. FM <i>Imagine</i> exhibit panel, taken 7/26/2019.....	108
Figure 17. MPM <i>Hopewell Indian</i> Case. Pearl Necklace A49108 circled in red .....	110
Figure 18. MPM <i>Prehistoric Trade</i> Case. Blade A49071 circled in red .....	111

Figure 19. MPM exhibit case titled <i>The Hopewell Indians</i> , date unknown.....	113
Figure 20. Photograph of exhibit <i>Wisconsin Archaeology: Pieces of the Puzzle</i> Mica sheet A 49078 circled in red. Taken 12/16/2019 .....	114
Figure 21. MPM <i>Weapons as Art</i> Exhibit, in <i>Weapons: Beyond the Blade</i> . Crystal Blade A 49072 circled in red .....	115
Figure 22. Photograph of Hopewell Culture NHP Museum earthworks section taken 7/13/2019 .....	119
Figure 23. Photograph of Hopewell Culture NHP museum ceremonial section taken 7/13/2019 .....	120
Figure 24. View from first overlook facing west across Hopewell site. taken 8/12/2019 .....	121
Figures 25. View from second overlook facing southwest, with fence, interpretive panel, and bench. Taken 8/12/2019 .....	122
Figure 26. View from second overlook facing southwest. Taken 8/12/2019 .....	122
Figure 27. Map of Hopewell Site.....	123
Figure 28. Photo of the southern half of the Great Circle showing bisecting Adena Recreational Trail and a power line tower. Taken 8/12/2019.....	124
Figure 29. Photograph of late eighteenth or early nineteenth century barn associated with Hopewell Farmstead. Taken 8/12/2019 .....	125
Figure 30. Property Record Card, Data for Parcel 370920129000, Ross County Auditor’s Property Records Site .....	126
Figure 31. Photograph looking at Mound 25 facing southwest, Private property’s buildings present on the right side. Taken 8/12/2019 .....	128
Figure 32. Photograph of Hopewell Site from southwestern edge of walking trail, facing north east. Taken 8/12/2019.....	129
Figure 33. Photograph of tractor with hay rake attachment parked within the Great Enclosure. Hopewell barn seen in background. Taken 8/12/2019 .....	130

## LIST OF TABLES

Table 1. Lithics .....	75
Table 2. Metals.....	78
Table 3. Faunal.....	82
Table 4. Mica .....	82
Table 5. Human Remains.....	85
Table 6. Trace Element Concentrations (PPM) in Obsidian Artifacts from the Hopewell Site .....	88
Table 7. Field Museum Exchanges with Institutions.....	96

## LIST OF ABBREVIATIONS

CDRH—Center for Digital Research in the Humanities

FM—Field Museum

HCE—Hopewell Ceremonial Earthworks (proposed World Heritage Site park group)

MPM—Milwaukee Public Museum

MNA— Museo Nacional de Antropología, Mexico City, Mexico

NAGPRA—The Native American Graves Protection and Repatriation Act

NHP—National Historical Park

NPS-- National Park Service

OHC—Ohio History Connection (formerly Ohio Historical Society and Museum)

TAC—The Archaeological Conservancy

USDI—United States Department of the Interior

UNESCO—United National Educational, Scientific, and Cultural Organization

UW—University of Wisconsin

XRF- X-Ray Fluorescence

WCE- World's Columbian Exhibition of 1893 in Chicago, Illinois

## ACKNOWLEDGEMENTS

This thesis would not have been possible without the continued support, guidance, and encouragement from my friends, family, and mentors. Foremost, I would like to thank my advisor Dr. Patricia Richards for her direction, support, and revisions during this project. I would also like to thank my committee members Dawn Scher Thomae and Dr. John Richards. Dawn, thank you for being the one to first introduce me to this collection, allowing me access to it and MPM documentation, and proposing the research direction of this thesis. Dr. John, thank you for your expertise and enthusiasm for X-ray fluorescence (XRF). I am grateful for the opportunity to collaborate with you to test obsidian pieces within this collection.

I would also like to extend a large thank you to the many people who provided answers to my questions, directed me to further sources, or allowed me to access institutional information. This includes Jamie Kelly and Jamie Lewis of the Field Museum, Susan Knisley of the National Park Service, Dr. Jean Hudson of the University of Wisconsin-Milwaukee, Carrie Eaton of the University of Wisconsin Geology Museum, Elizabeth Leith of the University of Wisconsin, and Marlin Hawley of the Wisconsin Historical Society. Thank you all for your time and willingness to help.

Finally, a special thank you is given to my family for their continued love, support, and words of encouragement. This especially applies to my husband David. David, thank you for your emotional and financial support of my graduate degree and this thesis. I am fortunate to have someone to tag along with me for trips to Chicago and Chillicothe, Ohio.

## **CHAPTER 1: INTRODUCTION**

Within the collections housed at the Milwaukee Public Museum (MPM) is a small group of objects from southern Ohio. The objects were excavated from the Hopewell site of Ross County, which lends its name to a renowned and geographically expansive archaeological cultural horizon. Many of these objects were crafted with exotic materials by ancient Native Americans and were intentionally laid within earthen mounds enclosing ritual and mortuary spaces. Later, these objects were sought by archaeologists and museum professionals for scientific inquiry, and public exhibition. The meaning, use, and interpretation of these objects have evolved over time through decisions made by Native peoples, archaeologists, and museum curators. The Hopewell collection housed at the MPM is a conduit enabling discussion of the evolution of interpretations for the entire Hopewell site and the extraordinary number of artifacts which have been removed from it. Further, this collection is a mechanism for understanding decisions and practices in the nineteenth and twentieth century fields of archaeology and museology.

### **The Hopewell Cultural Horizon**

Today in archaeology, Hopewell, or Hopewellian tradition refers to a, "...major artistic horizon of religious, political, social, and artistic activity in Pre-Columbian Native America" (Emerson et al. 2013:48). Archaeologists identified and named the Hopewell Cultural Horizon as a distinct cultural period for ancient Native American groups in the Eastern Woodlands and Plains of North America. The Hopewellian Cultural Horizon occurred during the Middle Woodland Period from 100 BC to AD 500. Archaeologists have identified through excavation

and radiocarbon dating that southern Ohio was also the home of an earlier Native group referred to as the Adena. The Adena culture flourished in the Early Woodland period, and likely stretched into the Middle Woodland period. Many archaeologists believe that the Adena were ancestors to the Hopewell, who chose to elaborate many of their cultural practices during the Middle Woodland period (Lynott 2014:34-35).

Hopewellian objects and influence have been identified archaeologically stretching across a large portion of the continental United States. In Ohio, Illinois, and Indiana large concentrations of Hopewell sites including earthworks have been discovered. Smaller sites attributed to the Hopewell culture, have been identified from New York to Wisconsin, and from Kansas to Florida (Lynott 2014: 39). The Hopewell tradition can be identified through the construction of earthworks of monumental size, complexity in mortuary or religious practices, and artifact types. Archaeologists believe that the Ohio Scioto River Valley and the Illinois River Valley represent two distinct centers of Hopewellian traditions: Scioto (Ohio) and Havana (Illinois).

Monumental earthworks are argued to be the most visible and distinctive feature for Hopewell group identification. Hopewellian earthwork types encompass mounds, walls, ditches, and sometimes ponds (Lynott 2014: 1). Mounds are an easily identifiable feature of Hopewell groups, but their form can vary by location. In Illinois, twelve or more clustered, conically shaped mounds are the most common earthwork form. Construction of these mounds was typically on top of burials covered either by logs or stone that formed crypts for interred individuals. Havana Hopewell village sites have also been discovered near mound groups (Lynott 2014: 40, Charles 1992: 177). In contrast, Ohio sites have both mounds and earthen enclosures, with no indication of habitation sites or village debris near the mounds. Additionally,

Scioto Hopewell mounds were seemingly built on the remains of deconstructed building floors under which laid burials (Lynott 2014: 40). Some mounds in Ohio contained caches of hundreds to thousands of “killed” objects that were broken, often burned, and buried as ceremonial offerings (Greber and Ruhl 1989; Moorehead 1922; Shetrone 1930).

Scioto and Havana Hopewell sites contain a diverse assemblage of artifacts ranging from local to exotic, in common to elaborate forms. Artifact material types found at Hopewell sites are copper, pipestone, mica, lithic materials, shell, ceramic sherds, wood, leather, fabric fibers, bone, antlers and teeth from bears, sharks, alligators, and mountain lions (Lynott 2014, Greber and Ruhl 1989, Seeman 1979). One proposed hallmark for the Hopewell ideology was the desire and movement of exotic materials over much of the North American continent (Emerson et al. 2013, Lynott 2014). Long distance movement of exotic goods to southern Ohio included obsidian from Wyoming, and Gulf Coast shells and shark teeth (Emerson et al. 2013: 49). Other notable Hopewellian ceremonial objects have been made of Rocky Mountain Grizzly Bear teeth, quartz from the Appalachian highlands, copper and silver from Great Lakes region, and alligator teeth from Florida’s Gulf Coast (Lynott 2014: 200).

In the Ohio River Valley, the height of the Hopewell Cultural Horizon had ended by 400 AD. Hopewellian earthwork construction ceased, although some later burials were added to preexisting mounds in the Late Woodland period. Although the Hopewell culture as defined by archaeologists did not continue beyond 500 AD, ancient Native populations remained in the Eastern Woodlands. During the Late Woodland period, another archaeologically defined cultural horizon known as the Fort Ancient culture emerged in the Ohio River Valley. The relationship between Hopewellian and Fort Ancient cultures is still debated (Lynott 2014; Trigger 2006). It is important to note that the Fort Ancient Earthworks site in southern Ohio has been identified

through radiocarbon dating as a Hopewellian period site and is not associated with the later Fort Ancient cultural period (Lynott 2014: 34).

### **A Brief History of the Hopewell Site Collection at the MPM**

The objects forming the Hopewell site collection housed at the MPM were excavated from 1891 to 1892 by Warren K. Moorehead. Moorehead had been hired by Frederic Ward Putnam of the Peabody Museum of Harvard to excavate Fort Ancient and the Hopewell Mound Group site, gathering artifacts from Ohio. Putnam had been appointed Chief of the Anthropology department for the World's Columbian Exposition of 1893 (WCE) in Chicago, Illinois. Objects from Fort Ancient and the Hopewell site were sent to Chicago, with the goal of filling display cases at the WCE.

In the nineteenth century, European explorers and archaeologists referred to what is now known as the Hopewell site (33RO27) by its location near the North Fork of Paint Creek or by the property owner's name Clark. Moorehead's excavations coincided with a new landowner, Mr. Cloud Hopewell, and the site was renamed after him (Moorehead 1892a). This site contained numerous earthworks with interments of human remains and artifact caches. Thousands of objects were excavated from the Hopewell site by Moorehead and moved to Chicago for the WCE. Winning awards at the exposition, the collection display was given the name Hopewell (Greber and Ruhl 1989: 2). After the exposition in 1893, these objects became one of the first collections of the newly established Field Museum (FM) and began to be used to identify other sites showing Hopewellian traits.

The Hopewell site collection was first curated by Charles Clark Willoughby from 1892 to 1894. Willoughby created inventories of several artifact categories, analyzed many specimens in detail, maintained notations on his findings, and devised experimental tests. For his experiments, Willoughby attempted to recreate Hopewellian type objects utilizing tools that would have been present in the Eastern Woodlands prior to European contact. These experiments proved that pre-contact groups would have been able to create Hopewellian objects. This helped to disprove the myth of the “Mound Builder” (Greber and Ruhl 1989: 4-8). Willoughby was an important figure in the history of the Hopewell site collection because his inventories, notes, and experiments led to the creation of a manuscript on the Hopewell site. Willoughby’s manuscript was given to Moorehead, undoubtedly influencing Moorehead’s publication on the Hopewell site 30 years after his excavations (Greber and Ruhl 1989: xxiv). Willoughby’s crucial work for Hopewell and two other sites was described by Greber and Ruhl as “foundation stones” for our understanding of the archaeology of Ohio (1989: xxiv).

In 1945, Towne Luther Miller, Acting Curator of Anthropology at the Milwaukee Public Museum (MPM), submitted a request for an object exchange to the Museum’s Board of Directors. The request was to trade four reconstructed Woodland vessels for a small portion of the FM’s Hopewell site collection. In total, 61 objects from the Hopewell site Moorehead excavations were accessioned into the MPM’s collection on April 6<sup>th</sup>, 1945 (MPM Accession 16082). These items were made from copper, bone, teeth, obsidian, mica, amber, iron, and stone. Today, 57 objects from this collection are housed at the MPM; 56 are in storage, and one piece of mica is on display within a case titled *Wisconsin Archaeology: Pieces of the Puzzle* (2E16) in the *Woodland Indian* exhibit. Three Hopewellian objects from accession 16082 have not been found within collections, and one object was removed for destructive testing.

Today, objects researched in this thesis from the Hopewell site accession 16082 nearly fill one of two Ohio Archaeology drawers in the MPM's collection. Also sharing the drawer are six Hopewellian pipe casts from the Tremper Mound Group of Ohio. The other Ohio Archaeology drawer contains materials from a variety of locations and periods in Ohio. In the wider MPM Archaeology collections is a larger grouping of objects affiliated with the Hopewell Cultural Horizon, from sites in Ohio, Wisconsin, North Dakota, Missouri, and Illinois.

This collection was chosen because little research had been conducted on these specific objects, as they are physically detached from other Hopewell site materials. Additionally, I chose this collection due to its connection to the Hopewell site an important earthwork site which informed our understanding of the ancient Native American culture and people referred to as the Hopewell. As the Hopewell site has been excavated multiple times and its materials have been sent around the world, I narrowed my research scope to the Moorehead excavations of 1891-1892. Unfortunately, documentation of all Moorehead excavated Hopewell site materials is beyond the ability of this thesis due to the hundreds of thousands of objects collected, and the spreading of these materials to multiple museums and individuals. For these reasons I narrowed my research to the Hopewell site collection housed at the MPM, mentioning its links to the Moorehead excavations and collections, the physical Hopewell site and all materials removed from it, and the extensive Hopewell Cultural Horizon.

### **Archaeological Approaches**

Archaeological interpretations of Hopewell sites, objects, cultural horizon, and peoples have evolved through time. Early in the nineteenth century, racial prejudices and ignorance

pushed some academics and avocational archaeologists to argue that large mound group complexes, advanced metalworks, and eye-catching artwork were created by an ancient “Mound Builder” group with no relation to modern Native American groups. Several unique, outrageous, and ultimately unprovable proposals were put forth to determine the provenance of the mound site and its related items. Some attributed the mounds to the Lost Tribes of Israel or even mythical groups from Atlantis (Lynott 2014: 13-14). In 1848, Ephraim Squier and Edwin Davis proposed migrant groups from Mexico as potential builders of the mounds.

By the end of the nineteenth century Willoughby’s experiments and Smithsonian Institution funded reports on Native groups helped to disprove the myth of the Mound Builder, rightfully attributing the mounds to ancestors of Eastern Woodland Native American groups (Greber and Ruhl 1989: 8). Archaeologists studied and differentiated ancient Native groups by chronology and cultural changes. It was common to use archaeological site names to define past groups, societies, or cultures. The term “Hopewell” began to be used professionally in 1902 to name the Ohio mound group where Moorehead excavated. Soon after, the name became synonymous with the cultural group of people who had built similar sites across much of the Eastern Woodlands (United States Department of the Interior, National Park Service [USDI, NPS] 2000).

For this thesis involving material culture, I have utilized the archaeological paradigm of object agency to describe the collection and individual artifacts. Many archaeological collections like the Hopewell collection have become divorced from their original context: removed from their origin, separated across multiple locations, some disjointed from their provenience, and all reinterpreted for academia and public consumption. One way to restore context to these collections, is by providing objects with agency. Objects are not isolated, inert, and are not held

to the temporality of humans (Hodder 2012). Instead, archaeologists can view objects as possessing their own power, identity, and abilities to affect the world around them including other objects and humans. Ian Hodder (2012) described this as an entanglement caused by dependency and co-dependency of humans and things. Taking agency one step further, objects have their own story as individual pieces and as related groups.

In *the Social Life of Things*, authors Arjun Appadurai and Igor Kopytoff allow objects to possess biographies and histories similar to humans (1986). Kopytoff used a biographical approach to describe the ways in which meaning, and states of objects could change many times during their life (Kopytoff 1986). Similarly, Appadurai's social history of objects expressed their changing nature (1986). Returning the agency to objects through their social histories and biographies allows recontextualizations, deeper understanding, and innovative viewpoints for the study and understanding of objects now housed in museums.

## **Museum Approaches**

There exists a large body of literature directed towards understanding the history of museums, which is crucial to this thesis' discussion of how the Hopewell collection has been curated, exchanged, and interpreted across museums. Peter Vergo defined museology as, "... the study of museums, their history and underlying philosophy, the various ways in which they have, in the course of time, been established and developed, their avowed or unspoken aims and politics, their educative or political or social role" (1989:1). Museums can trace their origin to the private collections of wealthy individuals, and various shelves of curiosities located in homes, universities, churches, palaces, and office spaces. By the mid-1800s in the United States and Europe, these collections had been given to or grown into institutions where the collections

were accessible to the public, owned by more than one person for public good, displayed in a manner to promote their study, and were purposeful and systematically arranged (Smith 1989: 8).

By the mid-nineteenth century museums and their efforts to grow collections had dramatically taken hold of Victorian society in America. Samuel J. Redman identified the late nineteenth to early twentieth centuries as not only a time of growing museum collections, but the heyday for the collecting human remains to aid in scientific research of the human race (2016). It was during this period that Moorehead excavated at the Hopewell site, directing efforts at burial mounds to gather human remains, funerary objects, and ritual offerings from these spaces. Moorehead's actions were not unique, as all excavations of the Hopewell site and others with mounds from the nineteenth to mid-twentieth centuries focused their energies on uncovering burials. After the remains and objects were excavated whether professionally or through avocational methods, they were often ushered into museums, where they encountered museum staff such as Carl Akeley.

Carl Akeley was a famed taxidermist who created exhibits and dioramas for the American Museum of Natural History in New York City in the early twentieth century. Akeley had gotten his start in 1886 at the MPM, where he created the first diorama, *The Muskrat Group*, which is still on display today. Akeley created exhibit mounts for the WCE, and by 1896 had joined the new Field Columbian Museum. Although Akeley did not handle human remains or archaeological artifacts, he was viewed by Donna Haraway as a biographer of America and American scientific understanding during the late nineteenth to early twentieth century. The nature dioramas Akeley created were shaped by his understanding of race, gender, and class (Haraway 1984: 21). Haraway used Akeley's story to, "...tell a tale of the commerce of power

and knowledge in white and male supremacist monopoly capitalism, fondly named *Teddy Bear Patriarchy*” (Haraway 1984: 21).

In a similar manner the collecting of objects, research, and exhibits created for the Hopewell collection excavated by Moorehead reveal scientific understandings, American stereotypes, and beliefs held by the archaeologists and museum staff who oversaw them. Like “*Teddy Bear Patriarchy*”, this thesis is contextualizing museum practices of the twentieth to early twenty-first century through a single story: the biography of a collection of objects from the Hopewell site. This story presented in Chapter 3 of this thesis will allow a better understanding of decisions that affected the Hopewell collection from interpretation and display, to exchanging objects between museums. Additionally, Chapter 5 examines evolving interpretations of the Hopewell site, people, and artifacts within museums and the National Parks.

The study of the museum field and its history in the United States has allowed for a critical examination which sheds light on historical injustices in order to acknowledge past missteps, fix current problems, and make suggestions for the future. One common thread is post-colonial theory, defined as either a temporal ending of colonial rule or an ideological transition away from colonial mentalities, possibly by contesting colonial domination and legacies (Loomba 1998: 12). Ania Loomba called for continued critiques of colonialist and imperialist history to bring awareness to modern inequities, opening possibilities for change in the future (Loomba 1998: 258). Following suit, Janet Marstine argued for museums to become places of discussion to analyze explicit and implicit information being presented within interpretations and exhibits (2005). The Hopewell site and its ancient peoples have been subjected to colonial conquest, one dramatic example being the destruction of ancient Native cultural landscapes by

European settlers plowing and bulldozing. Today, the result is a nearly flat landscape where decolonizing efforts to interpret, and preserve may help to rehabilitate the site.

### **Theoretical Orientation**

In this thesis, I created an object biography of the collection following the example of Arjun Appadurai and Igor Kopytoff. Following Appadurai's *Social Life of Objects* (1986) and Kopytoff's *Cultural Biographies* (1986), I can return some agency to these artifacts in this collection by creating a biography for them similar to that of a human life history. My goal is to recontextualize archaeological objects that were removed from their interment, transported across state lines, presented in display cases at the WCE and in museums, and transferred between institutions. This shuffling about has caused the loss of object contextualization, confusion on provenience for some objects, and the misplacement of three objects from the MPM's collection. By attempting to research the background of these objects to restore context and discuss their agency, I hope they will be better understood and reconnected to Hopewellian objects at other institutions and Hopewellian sites across the United States.

The social life and biography theories are limited however, as they commonly have been utilized to tell a life story for a single object or multiple objects within a singular material type. The collection I have chosen for this thesis contains objects from multiple material types, materials that originated from a variety of locations, materials likely crafted at different periods of the Hopewell Cultural Horizon, and materials discovered within different portions of the same site. While there is no single biography of these objects prior to their creation and burial by Hopewellian peoples at the Hopewell site, their social lives became intertwined once removed

from the ground by nineteenth century archaeologists. For this reason, a biographical approach was undertaken when describing the social lives of the collection from the nineteenth century to today.

### **Project Description and Key Questions**

The goals of this thesis are to gather information and associate a largely un-researched collection at the MPM with an important archaeological site, connect them to an expansive archaeological cultural horizon, and explore the related professional and avocational practices of the previous era. Also, this thesis will focus on the transition of meaning and evolving interpretation for the objects and site over time. Decisions were made by a variety of constituents which affected these objects and the site from the individuals who buried the objects in the mounds, to the people conducting excavations of these materials, to the museum professionals who curated them. I argue that the Hopewell site collection at the MPM can be used as a mechanism for discussion of the wider Hopewell collection's experiences, and the practices of archaeologists and museum professionals which have affected these artifacts and similar collections.

This thesis contains two components: a review of decisions made by varying constituents which affected and currently affect the objects and a descriptive analysis of the Hopewell collection at the MPM. First, the review focuses on the transition of these Hopewellian objects' meaning over time through the decisions of Native peoples, archaeologists, and museum professionals. This begins with a history of the Hopewell site and archaeological practices associated with the site. Next, an object biography of the MPM Hopewell site collection objects

is presented. It starts with a brief mention of the creation of these objects, then follows them in greater detail from their excavation to today. The final portion of the review discusses the transition of these Hopewellian objects' interpretation over time in museums and National Parks. The second component of this thesis includes examination and photography of the physical objects, assessment of provenience information, and a comparisons to the larger Hopewell collection at the FM and other FM Hopewellian material exchanges.

There are two overarching questions that guide this research project:

1. How does the MPM's Hopewell collection compare/contrast to the larger Hopewell collection excavated by Moorehead, housed at the Field Museum and smaller collections at the *Museo Nacional de Antropología* in Mexico City (MNA), the Ohio History Connection (OHC), and the University of Michigan? Does the MPM's collection overrepresent or exclude any artifact types when compared to the larger collection excavated by Moorehead at the FM? How does this collection compare to its counterpart at the MNA, and other locations?
2. How has the meaning and interpretation of these objects evolved over time and in different museums?

## **Methods**

For this thesis, I began by reviewing literature written about excavations of the Hopewell site by Moorehead, later expanding to all excavations conducted at this site. Next, museum collection data, archival documents, and online sources were vital to gather information on the

Hopewell site collection at the Milwaukee Public Museum and the Field Museum. Additional facts about the World's Columbian Exposition, Charles Willoughby, Frederic Putnam, and the Hopewell Culture National Historical Park were found in literature, museum archives, on site visits, or online. All these sources helped to form my understanding of nineteenth to twenty-first century practices affecting the Hopewell collection at the MPM and helped to track the journey of these objects over time. The goal of the historical review was to place the excavation, collecting, exhibition, and trading of these objects within a broader historical context.

The descriptive analysis of the collection included an examination of the physical objects: photographing, measuring, and evaluating their composite material. This information was recorded on Object Biographical sheets. Next, I assessed the provenience information of the objects across documentation from the FM, MPM Catalog Books, MPM accession cards, and field notes from Moorehead. This information was presented in the Object Biographical sheets, with explanations of any inconsistencies. After examination and assessment, I utilized FM documentation on the collection overall, and various object exchange files to statistically compare the MPM's collection to that of the FM, and those held at the MNA, OHC, and the University of Michigan.

### **Expected Results and Significance**

It is expected that this research will provide a greater understanding of the Hopewell site and Hopewellian objects, focusing on movement and interpretation through time. The object biography chapter of this thesis is an expansion of Appadurai and Kopytoff's theories, demonstrating a way to tell a single story for multiple objects in a collection. It is expected that

the Hopewell collection at the MPM can be a lens to view archaeological and museum practices of the last two centuries. Within this context, it is hoped that proposals for future interpretation and usage of the artifacts and site will be grounded in ethical, decolonizing, inclusive, and modern practices.

The Hopewell site is significant as it is the archaeological type site of the Hopewell Cultural Horizon, lasting 400 years, and expanding through much of the Eastern Woodlands of the United States. This culture created numerous earthwork sites of monumental proportions, and expanded movement of materials in prehistory across much of the United States. The Hopewell site itself is the most elaborate earthwork complex of this culture, including the largest mound (USDOI, NPS 2016: Section 1: 14). The FM's Hopewell collection was a foundational collection for the Museum, was the subject of many research projects, was divided and traded to a variety of institutions and individuals, and was the formation for our understanding of the Hopewell culture. The small portion of this larger collection that reached the MPM has mostly rested in storage since its arrival. Few objects have been studied or interpreted on exhibit. Therefore, this thesis provides the first detailed study of these artifacts, physically and historically, linking this collection to the larger site and numerous collections of artifacts removed from it. This thesis will be submitted to both the MPM and FM, allowing these institutions to decide how this information can be utilized to supplement collection records, online databases, and aid future research of the collection.

## **Thesis Organization**

At the close of this introductory chapter, five additional chapters follow. For each chapter, a short summary and ending remarks are present. The second chapter of this thesis is a literature review, beginning with an overview of the exploration and excavation history of the Hopewell site. Next, this chapter presents information on past anthropological practices and theories related to the Hopewell site, Hopewell site materials, and the broader Hopewellian culture.

Chapter 3 is the Social Life of the Hopewell Collection. Within this chapter, the theories of life histories and cultural biographies are used to create an account of the Hopewell site objects. Although both theories tend to be utilized for analyzing one object or one object type, the Hopewell collection housed at the MPM has many diverse material types. Therefore, the beginning of Chapter 3 will quickly describe the origin of these materials, and the inferred diverse reasonings why they were included in mounds by the Native peoples in ancient times. A discussion of the Hopewell site in the later periods until excavations follows. More time will be spent describing the story of the objects once they were excavated by Moorehead, establishing them as a connected unit with some shared past and meaning. Their story continues with sections in the nineteenth century post excavation up to the present.

The fourth chapter is Material Analysis in which the study of objects from the Hopewell collection at the MPM will be described, with data provided from the inventory of the collection. First, steps were taken to examine the physical objects and are recounted along with reference to the Object Biographical sheets for each object present within Appendix A. Next, the collection is divided by material type into the categories of lithic, metals, faunal, mica, and human remains. This section concludes with a general discussion of how the collection resembles the larger FM

Hopewell collection, and what material types it lacks. Finishing this chapter is a comparison of the MPM collection with collections at the FM and other institutions, all with objects collected from the same Moorehead excavations at the turn the of twentieth century.

Chapter 5 explores the evolution of various interpretations for the Hopewell site, culture, and artifacts over time. First, it focuses on interpretations present within the FM and MPM from when the collection arrived to present displays and future plans. Next, this chapter will turn to the physical location of the Hopewell site and describe the presentation of the Hopewell culture at National Parks in Ross County, Ohio. Due to the Hopewell site's short history as a National Park, another example of a nearby ancient site is discussed. The Mound City Group was the original park of the interconnected group of ancient sites now known as the Hopewell Culture National Historical Park. Interpretations of the Mound City group and its creators have evolved over time. The chapter ends with a description of the Hopewell site as I experienced it in August of 2019 and includes a discussion of the future for this site and others in the Hopewell Culture National Historical Park.

The final chapter of this thesis contains the conclusion. Also, in this chapter is an evaluation of the two key questions from the above Project Description. Last is a proposal for future research directions and recommendations for Hopewellian collections, and the Hopewell site.

## CHAPTER 2: A CONTEXT FOR THE HOPEWELL SITE

### Hopewell Site Investigations

#### *Atwater, Squier, Davis, and the Myth of the Mound Builder*

The first generalized study of ancient earthworks in Ohio was written by amateur archaeologist Caleb Atwater of Circleville, Ohio. Gordon R. Willey and Jeremy A. Sabloff described Atwater as, "...the most important figure of the Speculative Period [of archaeology, next to Thomas Jefferson]" (1980: 30). Atwater mapped and provided descriptions of the expanding earthworks found in the Northeast as remnants of "...forts, cemeteries, temples, altars, camps, towns, villages, race grounds, and other places of amusement, habitation of chieftains, videttes, watch towers, monuments, &c [and so forth]" (1820: 121). Within his 1820 publication, Atwater reported on a site on the North Fork of Paint Creek in Ross County Ohio, owned by a Mr. Ashley and Col. Evans. This grouping of multiple earthworks was situated on the second bottom (or terrace) of the Paint Creek. Atwater told of an earthen enclosure of a hundred and ten acres, measuring twelve feet tall and twenty-foot-wide, with a twenty-foot-wide ditch (1820: 183). Within this enclosure were two circular enclosures, the larger containing six conical mounds. Additionally, to the east was a small square enclosure of similar height and width. In Figure 1, Atwater's map shows a total of sixteen mounds at this site (1820: 182). Atwater concluded from the labor-heavy earthworks and numerous burials, that the North Fork of Paint Creek Ancient Works must have been the location of a vast ancient population (1820). More than seventy years later this location would be renamed the Hopewell site.

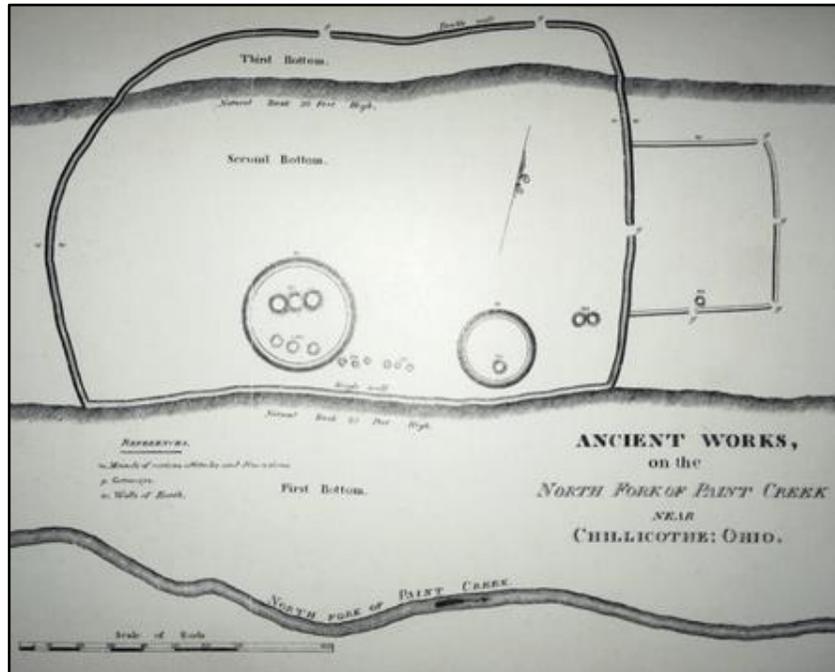


Figure 1. Ancient Works on the North Fork of Paint Creek Near Chillicothe: Ohio map, Plate VI (Atwater 1820: 182).

Atwater’s detailed account of Ohio earthworks provided maps of site locations, descriptions of earthworks, and information from informants on removed artifacts. In addition to mapping, Atwater reported excavation accounts of others and provided comparisons to the ancient tumuli (conical mounds) of Europe and the Asia (1820). Atwater’s cartographic and literary analysis paved the way for future scientific studies of the mounds. However, his work is now viewed as antiquated due to imprecise measurements and Atwater’s incorrect hypothesis of a distinct Mound Builder group.

The “Myth of the Mound Builders” was popular in academia and public spheres from the sixteenth century until the late nineteenth century. Although some academics have always argued Native American ancestors constructed the earthworks, prejudices, ignorance, mistaken ethnohistories, and/ or racist views against Native American groups led to counter theories (Greber and Ruhl 1989; Shetrone 1930; Silverberg 1968). These counterclaims hypothesized that

ancestral Native peoples would not have enough skill or technological knowledge to construct massive earthworks or create the ornate artifacts found within those earthworks. Therefore, it was believed, another group was responsible for the creation of earthworks in southern Ohio and throughout North America. The “Mound Builders” were speculated to be Polynesians, Egyptians, Greeks, Atlanteans, Romans, Israelites, Vikings, Welsh, Scots, and Chinese groups (Greber and Ruhl 1989; Lynott 2009, 2014; Shetrone 1930; Silverberg 1968; Willey and Sabloff 1980). Within Henry Shetrone’s *The Mound Builders*, it is stated that nearly every cultural group on earth (and some mythical groups) were proposed at one point to be the Mound Builders (1930: 7). Atwater argued, based on a single ceramic vessel, that the Mound Builders were Hindu populations who later traveled to Mesoamerica (Atwater 1820; Trigger 2006). In 1848 after widespread fieldwork, archaeologists Ephraim Squier and Edwin Davis concluded the Mound Builders were from Mexico, Central America, or Peru (1848: 301).

Squier and Davis’ 1848 publication is held by many to be highly important to the evolving field of American archaeology. Mark Lynott (2009) noted Squier and Davis’ *Ancient Monuments of the Mississippi Valley* (1848) was a landmark work because it was the first publication of the Smithsonian Institution of Washington D.C., a museum administered by the United States government. The book demonstrated governmental interest in and commitment to American archaeological studies. Another important aspect of the book was its timing since it was released prior to an increase in agricultural and developmental destruction of these sites during the late nineteenth and early twentieth centuries (Lynott 2009). Squier and Davis’ 1848 publication was aided by the Joseph Henry, Secretary of the Smithsonian Institution who edited the work from a scientist’s perspective, removing their unsubstantiated speculations about the Moundbuilders (Trigger 2006: 162, Willey and Sabloff 1980). Willey and Sabloff called this

publication, "...the best descriptive study published until then, and its intellectual orientation typified the new trends that emerged during the Classificatory-Descriptive Period [of archaeology]" (1980: 35).

Squier and Davis' fieldwork near the Scioto River Valley in southern Ohio began in 1845. When describing their excavation procedures, Squier and Davis explained their attempt to record scientific, accurate, and detailed notations and measurements. They noted,

[c]are was exercised to note down, on the spot, every fact which it was thought might be of value, in the solution of the problems of the origin and purpose of the remains under notice; and particular attention was bestowed in observing the dependencies of the positions, structure, and contents of the various works in respect to each other and the general features of the country. Indeed, no exertion was spared to ensure entire accuracy, and the compass, line, and rule alone relied upon, in all matters where an approximate estimate might lead to erroneous conclusions (1848, xxxiv).

Although they were unsure which facts might be beneficial for later research, the authors required precise measurements of distance and direction, and attempted to take meticulous notes of their archaeological excavations and recovered artifacts. For these specifications and attempts at scientific research, Lynott advocated for Squier and Davis to be labeled the first professional American archaeologists (2009).

Squier and Davis investigated the same site referred to by Atwater as the North Fort of the Paint Creek Ancient Works (later the Hopewell site). They named this site Clark's Works after the landowner Mr. W. C. Clark (1848). They categorized the site as a defensive fort, yet noted some smaller circular enclosures likely served religious

purposes. They concluded Clark's Works served multiple purposes and was likely a fortified town (1848). In a map (Figure 2), Squier and Davis recorded a large parallelogram shape enclosing one hundred and eleven acres. The enclosure measured six feet high, with a base measuring thirty-five feet, and a thirty-five feet wide ditch. Within the parallelogram were two smaller enclosures: a circle and a much larger semi-circle. Within the two-thousand feet circumference semi-circle was seven conical mounds, three of which were attached to one another. This trio of mounds measured thirty feet high, five hundred feet long, and the base was one hundred and eighty feet broad (1848: 27).

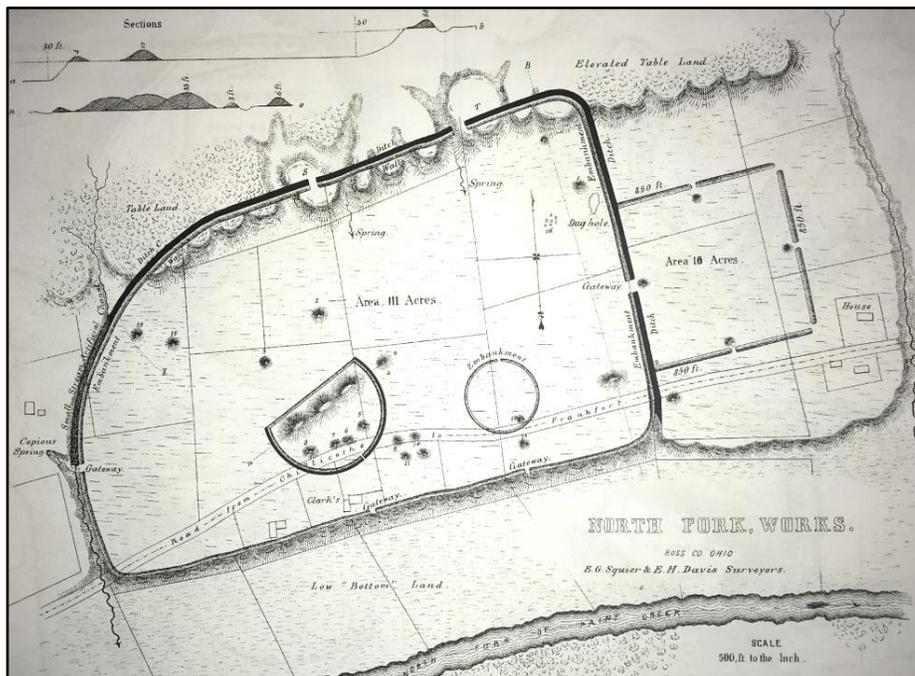


Figure 2. North Fork Works, Ross County Ohio map, Plate X (Squier and Davis 1948:26).

Finally, Squier and Davis noted a square enclosure to the east of the site, and over twenty mounds scattered within the parallelogram and square enclosures. Squier and Davis recorded excavations consisting of at least four mounds that revealed altars with

sacrificial materials. This supported their hypothesis of the mounds being ritual spaces utilized by a large population (1848:27). *Ancient Monuments of the Mississippi Valley* has been regarded as highly significant for the archaeology of Hopewell and other ancient groups. Despite its high regard, Squier and Davis' work did contain inaccuracies. They incorrectly concluded that the Hopewell peoples were related to Mexico, Central American, or Peruvian Native cultures. This reinforced the prejudicial Mound Builder myth popular during their era. Also, Squier and Davis' mapping was skewed in a north to south direction, and their theories about Hopewell site population size and settlement patterns have been disproven by subsequent research (Pederson Weinberger 2009).

During the early to mid-nineteenth century, American archaeological study focused on architectural remains such as earthwork sites: collecting funerary objects (and human remains) for museum shelves, theorizing on mortuary behaviors, and discovering the origin of these ancient populations. Atwater, Squier, and Davis' investigations of the Hopewell site followed this pattern, attributing mound construction to non-Native American groups. The first institutionally supported conclusion on Mound Builder origins came from the Bureau of American Ethnology of the Smithsonian Institution. Director Dr. Cyrus Thomas wrote in the Bureau's twelfth annual report (1890-1891) that the earthworks were constructed by ancestors of modern Native American groups (Shetrone 1930: 25). Although some individuals still suggested Mound Builder myths, most American academics agreed with the data and conclusions published by the Smithsonian and began proposing other research questions.

### *Moorehead and Beyond*

From 1891 to 1893 four dozen field assistants were employed to conduct excavations in the pursuit of museum worthy objects. Their employer was Fredric Ward Putnam, Chief of the Anthropology Department for the World's Columbian Exposition of 1893 (WCE) in Chicago, Illinois (Greber and Ruhl 1989). In *A History of American Archaeology*, Willey and Sabloff state that, "Putnam was one of the leading figures of the Classificatory-Descriptive Period, both as an excavator, or excavator sponsor, and as an administrator or founding father of museums and departments of anthropology" (1980: 43). Putnam is attributed with raising the Peabody Museum of Harvard to a predominate position in the field of anthropology, advocating for the creation of the Field Columbian Museum, and founding anthropology departments at the University of California-Berkeley, and the American Museum of Natural History, New York (Willey and Sabloff 1980:45).

One field assistant working under Putnam was Warren K. Moorehead. Prior to working for Putnam, Moorehead had attended Denison University and conducted some independent fieldwork in Ohio (Snead 2016:288). In the early 1890s Putnam hired Moorehead to excavate in southern Ohio at the Clark's Works (later Hopewell) site and the Fort Ancient site for the WCE (1890). Moorehead would attempt to continue excavations for the WCE at the Aztec Ruin site in New Mexico, however that expedition failed due to some bad weather, financial constraints, and a failed dealing with *Sports Illustrated* of which Putnam had not been initially informed (Snead 2016: 290). Before the start of the exposition, Moorehead traveled to Chicago to aid Putnam in exhibit creation. After the exposition, Moorehead would go on to publish two volumes of *The Stone Age of North America* and serve as Director of the Department of American Archaeology at the Phillis Academy in Massachusetts (Willey and Sabloff 1980: 52-53).

For his WCE excavations in southern Ohio, Moorehead utilized Squier and Davis' 1848 publication as a "field guide": influenced by terminologies, labels, and general stylization of the report (Greber and Ruhl 1989). At the Clark's Works site Moorehead utilized Squier and Davis' publication by continuing the numbering system established in the earlier publication.

Moorehead renamed the Clarks Works site or North Fort of the Paint Creek Ancient Works in 1891 after the landowner, Captain Mordecai Cloud Hopewell (Greber and Ruhl 1989; Shetrone 1930; United States Department of the Interior, National Park Service [USDI, NPS] 2000). Further information on Moorehead's excavations and conclusions for the Hopewell Site are covered in Chapters 3 and 4 of this thesis.

Materials collected by Moorehead for the WCE have been distinguished, "...from public and professional viewpoints, [as] one of the most spectacular collections recovered from an archaeological site in the Eastern Woodlands" (Greber and Ruhl 1989: 4). However, Moorehead's publication on the site came thirty years after his fieldwork. During those three decades, notes were lost, objects were distributed across North America, and the site was continually plowed for farming. A large portion of research and writing on Hopewellian objects collected by Moorehead came from Charles Clark Willoughby, an assistant within the Anthropology Department of the WCE. After the exposition, Willoughby traveled with the collection to Harvard's Peabody Museum where he inventoried the collection, analyzed many of the artifacts, conducted experiments, and wrote a three-hundred page manuscript on the Hopewell Site. Greber and Ruhl argued that Willoughby's work was highly beneficial for Moorehead's later site report, compiling and saving data that may have otherwise been lost over three decades (1989).

In 1922, excavations at the Hopewell site recommenced under the leadership of Ohio State Museum's Curator of Archaeology Henry C. Shetrone. From 1922 until 1925 Shetrone oversaw summer field work at the Hopewell site including excavations of un-researched mounds, and reexamination of mounds previously excavated (Greber and Ruhl 1989; Shetrone 1930). These excavations were hosted by the Ohio State Museum, and artifacts collected during these excavations were to stay within the state museum in Columbus. In his 1930 publication *The Myth of the Mound Builders*, Shetrone adapted archaeological data collected from the Hopewell site and others to create a book geared towards public consumption. The book's goal was to examine the Mound Builder myth and refute it with current scientific knowledge (1930).

Shetrone's detailed descriptions of the Hopewell site incorporated history, geography, accounts of archaeological data, and theories utilizing that data. He took time within the publication to discuss the unique landscape surrounding the Hopewell site: a glacial moraine and unglaciated hills boarding Paint Creek (Shetrone 1930: 200). The site itself was characterized as a rectangular enclosure surrounding one hundred and ten acres with a conjoined square and 38 mounds present (Greber and Ruhl 1989; Shetrone 1930). Shetrone invested much effort in describing the excavation of these mounds and discussing theories on their purpose. He saw mounds of earth and stone as nearly world-wide phenomena that were constructed as memorials to the dead. Mounds themselves could serve the purpose of being a burial ground, a representation of something (effigy) or a domiciliary where ritual or chiefly living space was created by a flattened top. Earthen enclosures were theorized by Shetrone to be utilized for defense, ceremonies, or would fall in an anomalous category (Shetrone 1930: 28-34). Shetrone viewed the Hopewell site as largely a memorial and ceremonial space.

Although Shetrone's publication was satisfactory in its discussion and refutation of the Myth of the Mound Builder, his views of the Hopewell group are problematic in their mystification of Hopewellian peoples over other ancient or historic groups. Shetrone stated there was no proof connecting the Hopewell peoples to any known historic or modern tribe (1930: 478). While this was true at the time, he continued by stating that the Hopewellian groups,

...simply are distinctive, unique, and peculiar to themselves, representing in certain essential respects the highest aboriginal development north of Mexico. They came into their various regions, perfected their distinctive culture, and disappeared from the scene so mysteriously as to make them one of the major puzzles of American archaeology (Shetrone 1930: 479).

Shetrone's description of Hopewell is problematic because it mystifies them as unique from any other cultural group. His statement bordered on perpetuating a portion of the Mound Builder myth; that the ancient Hopewell were an anomaly divorced from everyone who came before and after their achievements. Shetrone's description fell in line with an early twentieth century theory that the Hopewell culture was the final florescence of the Woodland culture, a theory disproven with further Mississippian excavations and the invention of radiocarbon dating. An additional flaw of Shetrone's work was his decision to renumber the Hopewell site mounds. By utilizing a new numbering system, Shetrone initiated headaches for future scholars seeking to describe mounds at the site now identified by two separate numbering systems ranging from one to thirty-eight (Greber and Ruhl 1989).

From the 1920s until the 1980s no professionally conducted large-scale archaeological excavations were conducted at the Hopewell Site. During the early to mid-twentieth century agricultural innovations intensified the depth at which fields could be plowed, resulting in greater

damage to the earthworks not protected through state or national park designation. The Hopewell site fell victim during this period to erosion, extensive excavations without mound reconstruction, and agricultural plowing by more powerful tractors (Lynott 2009). In the 1980s, Mark Seeman of Kent State University in Ohio led aerial photography and surface surveys of the Hopewell site to relocate its earthworks. Unfortunately, the only intact portions of the Hopewell site remaining were the northern side of the rectangular (or Great) enclosure and nearby ditch (USDI, NPS 2019b).

In 1992 the United States Congress passed Public Law 102-294 which expanded the Mound City Group National Monument of Chillicothe, Ohio. The expansion incorporated three more sites into the National Park System: Hopewell, High Bank Works, and Seip sites. Also obtained were additional acres of land which surrounded the Hopeton Earthworks. This legislation changed the name of the park system near Chillicothe to be the Hopewell Culture National Historical Park (NHP). Ending this legislation was a section on further appropriations to fund archaeological investigation of the Hopewell Culture NHP and other Hopewellian sites near Chillicothe. (Lynott 2009; United States Congress 1992).

Advancements in archaeological geophysical techniques sparked new investigations of the Hopewell Site and others in the early 2000s (Burks and Cook 2011). The National Park Service and The Ohio State University of Columbus conducted near-surface remote sensing to identify subsurface disturbances at the site. Unlike all earlier investigations of the mounds or enclosures at the site, from 2001 to 2003 archaeologists concentrated on non-mound spaces within the enclosure (USDI, NSP 2019b). The goal of this research was to determine if the Hopewell site contained areas where people lived during the Middle Woodland period. The geophysical survey resulted in one hundred and one anomalies deemed worthy of archaeological

investigation (Pederson Weinberger 2009). Ultimately, the survey and excavations revealed the Hopewell site was not a Middle Woodland habitation site, but possibly was utilized by later groups. Additionally, the geophysical survey discovered a large circular earthwork previously unidentified at the site (Pederson Weinberger 2009; USDI, NPS 2019b).

## **Archaeological Practices**

The beginnings of the field of archaeology in North America can be characterized as Eurocentric in views, theories, and practices. It was common for archaeologists in America to excavate entire Native American burial mounds with little thought and overwhelmingly no communication with Native groups regarding ownership of the materials or the human remains (Redman 2016). Archaeologists ignored Native voices and desires in the pursuit of knowledge and collections. While many early archaeologists' excavations were conducted within a framework of academic research, field projects often served as entertainment for onlookers as well.

Additionally, excavations were commonly designed to gather collectable objects such as human remains and funerary items. These relics were stripped of their contexts as they were removed from the earth. It was typical that little to no information was recorded regarding the direct location where an object was recovered, or what surrounded archaeological artifacts (Prufer 1965). Also, it was common for less desirable objects to be left behind at the excavation site while prized objects of stone, ceramic, and bone were removed. When archaeological objects were taken to public or private collections, they were further decontextualized. Often less desirable pieces such as ceramic sherds were disposed of, duplicate objects were transferred to other institutions or sold to interested individuals, and displays interpreted the objects to

represent a multitude of meanings (Prufer 1965). This is largely the case for the Hopewell site and the Hopewellian objects collected by Moorehead.

Professional and ethical standards began to enter the field of American archaeology as practices became more rigorous in scientific methods during the last quarter of the nineteenth century. By the end of the century professional anthropological organizations were established and scholarly journals were being published. As described above, Squier and Davis have been viewed as the first professional archaeologists due to their efforts to collect accurate and precise data for their 1847 publication (Lynott 2009). During the twentieth century archaeological field methods became standardized, and archaeological theory building became more rigorous. From the Nuremburg Code to Civil Rights and legal precedents, the twentieth century also shaped archaeological practices to include minority voices, consideration of descendant group wishes, respect of human remains, and more concentration on ethical considerations for the field.

### *Hopewellian Studies*

Early studies of the Hopewell site and its creators focused heavily on the mounds and earthworks. The earliest of excavators, hobbyists, and looters would target known locations of burials, such as mounds. It was believed that these areas would contain the most valuable and easiest to obtain artifacts or relics. By the mid-1800s archaeologists at the Hopewell site and others investigated the mounds not only for the objects, but in order to collect controlled data to understand rituals and mortuary behaviors connected to the earthworks (Squier and Davis, Moorehead, Shetrone). These early archaeologists also proposed limited theories on who the mound builders were, the density of their populations, and how they constructed the sites.

Moorehead and Willoughby's work with Hopewell Site materials led to the identification of an archaeological cultural horizon given the designation Hopewell.

The Hopewell culture or Hopewellian tradition refers to a, "...major artistic horizon of religious, political, social, and artistic activity in Pre-Columbian Native America" (Emerson et al. 2013:48). Sites attributed to the Hopewell culture or in relation to Hopewellian ideas have been identified from New York to Southern Wisconsin, with larger sites in Ohio, Illinois, and Indiana (Lynott 2014). In the late 1950s and 1960s, radiocarbon dating placed the Hopewellian tradition between 100 BC and AD 500: establishing a chronology for archaeological cultures in southern Ohio (Brose and Greber 1979; Lynott 2014; Trigger 2006). The Hopewell tradition can be identified through the construction of earthworks of monumental size, complexity in mortuary or religious practices, and artifact types. Southern Ohio is known for having the most elaborate and largest Hopewell sites (Lynott 2014).

One proposed hallmark of Hopewell culture or ideology is the apparent movement of exotic materials across much of North America (Emerson et al. 2013; Lynott 2014). Long distance movement of exotic goods to southern Ohio included obsidian from 2,900 km away in Wyoming, and Gulf Coast shells and shark teeth that traveled 900 km (Emerson et al. 2013: 49). Other notable Hopewellian ceremonial objects have been made of Rocky Mountain Grizzly Bear teeth, quartz from the Appalachian highlands, and copper from the Great Lakes region (Lynott 2014: 200). All material types listed above are found within the Hopewell collection housed at the MPM.

## *Hopewell Interaction Sphere*

Researching Hopewellian object origins and disbursement led to the creation of the Hopewell Interaction Sphere (HIS). In 1964 Joseph Caldwell defined the HIS as a special form of cultural interaction where distant societies were connected only by mortuary-religious objects and treatment, explaining how materials and ideas traveled across North America. Within this model, daily and secular objects could demonstrate regional or local styles. Meanwhile, mortuary-religious objects would maintain characteristics of the larger culture (Caldwell 1964: 137-138). A later Struever-Houart Model focused the HIS on economics and the communication of status and prestige through exotic items (Seeman 1979; Struever and Houart 1972). Some archaeologists have tried to refine the Struever-Houart Model with more recent research and data. Mark Seeman argued that the HIS object distributions should be characterized as one-sided systems, not a dynamic interaction sphere (1979). Seeman's research discovered the most complex, valuable, and ornate objects were maintained in southern Ohio. Little to no resources seen in the archaeological record were being traded in the opposite direction. Studies of individual artifact types such as pipes and bladelets reinforces this notion, by demonstrating that raw material and manufactured products were obtained directly from their source by travel or an explicit trade connection (Emerson et al. 2013; Jeske and Brown 2017). Seeman proposed this distribution was possibly the result of payments or pilgrimages to sites in the Ohio River Valley (1979).

More recently, archaeologists have utilized the HIS model to look at individualized movement of objects across landscapes. Katherine Spielmann suggested the exotic materials may have been purposefully procured from important and distant locations significant within Hopewellian ideology (2009). Spielmann stated that Ohio Hopewellian groups seemed to travel

the furthest and obtained the greatest amounts of exotic materials. She argued that the quests to source locations might have been equally important as the actual gathering of these materials. Spielmann believed that Hopewellian peoples would have journeyed to source locations themselves, possibly obtaining societal prestige by enduring dangerous or unknown elements, traveling great distances, witnessing significant sites, and bringing home highly valued materials (2009). Another archeologist, Bradley Lepper (1995) has mapped large constructed roadways in Newark, Ohio, which he argued, served as pilgrimage routes to Hopewell religious centers. Lepper believed that these travelers may have brought exotic materials and finished products as offerings and aided with construction of earthworks (1995). It is possible that both quests by Hopewell locals and pilgrimage offerings contributed to the exotic array of materials and objects found at these sites (Lynott 2014).

In line with the movement of materials and cultural ideas across the Eastern Woodlands, more recent research has extracted DNA to compare Hopewellian peoples to other ancient populations in Ohio, and to modern Native tribal groups. A mitochondrial DNA study in 2003 demonstrated relatedness between individuals buried at the Hopewell site, and the historic Native groups of the Chippewa/ Ojibwa and Kickapoo from the Great Lakes region (Mills 2003). It was also discovered that a smaller sample of individuals at the Hopewell site had genetic links to more widespread modern groups such as the Apache, Iowa, Micmac, Pawnee, Pima, Seri, Southwest Sioux, and Yakima (Mills 2003). A later study by Bolnick and Smith confirmed the transmission of genetic traits between the Ohio Hopewell center and the Illinois Havana Hopewell region (Bolnick and Smith 2007). At the very least the genetic studies support the notion of widespread interaction during Middle Woodland times.

## *Hopewell Habitation and Subsistence*

In addition to the movement of exotic material across the landscape, contextualization of the Hopewell site and collection requires an understanding of how the Hopewellian peoples utilized, lived, and interacted with said landscape. Early investigations of the Hopewell site concluded that it was a great location for a village. Squier, Davis, and Moorehead believed a large, and likely sedentary, village population would have been required to create the giant earthworks. Further support for this theory was based on the presence of a freshwater spring within the earthen enclosure, and the array of local natural resources (Moorehead 1922; Pederson Weinberger 2009; Squier and Davis 1848). In the 1930s, Shetrone's excavation of the site confirmed that a small area (labeled 16) contained some habitation debris. However, Shetrone did not find further data to confirm large-scale or long-term habitation at the Hopewell site (Pederson Weinberger 2009; Shetrone 1930).

In the 1960s, Olaf Prufer began to investigate the settlement pattern, or lack of village sites at Hopewellian sites (1965). Prufer explored the McGraw Site in Ross County Ohio. The site was situated along the floodplain making it a desirable location for agriculture. Prufer hypothesized from corn discovered at the Turner site and Harness Mound, that Hopewell groups possessed some agriculture. It was theorized that a stable agricultural economy would have allowed the creation of immense earthworks and ornate objects. Prufer argued that the earthworks were ceremonial centers for groups living nearby in small hamlets or farmsteads along the agriculturally beneficial floodplain (Lynott 2009; Prufer 1965).

Following Prufer's lead, many archaeologists of the late twentieth and early twenty-first century have researched Hopewellian communities including subsistence strategies in addition to studying earthworks (Charles and Buikstra 2006; Lynott 2009; Seaman 1979). In 1997 Paul

Pacheco and William Dancey proposed a dispersed sedentary community model building on Prufer's research. Although Pacheco and Dancy disagree with the characterization of Hopewellian groups as farmers or agriculturalists, they saw evidence of some domesticated seeds within Hopewellian sites. They classify Hopewellian groups of Ohio as a domesticatory society, one possessing domesticated plants but not reliant or restricted to these plants in diet or mobility (Pacheco and Dancy 2006). Pacheco and Dancy argue that Hopewellian groups lived in smaller dispersed sedentary households located near the ritual-mortuary earthwork centers. The dispersed households were established in areas better suited for cultivating small gardens. These households maintained large-scale communal ties through participating in rituals, burials, and other activities at corporate earthwork centers (Pacheco and Dancy 2006).

### Chapter 3: The Social Life of the Hopewell Site Collection

In *the Social Life of Things*, authors Arjun Appadurai (1986) and Igor Kopytoff (1986) described theories that give objects attributes similar to humans such as *cultural biography* and *social history*. Kopytoff considered objects as having lives like humans, which could be investigated and described through a biographical approach. Cultural biographies could describe the ways in which meaning, and states of objects could change many times during their life (Kopytoff 1986). Similarly, Appadurai denied objects were static, instead, seeing objects as possessing social lives that could express their changing nature. The natural state was for objects to change with time, including the general deterioration of object materials which museums actively fight against through conservation techniques (1986; 2006). He stated that "...cultural biographies are part of larger social lives which span long periods of time and large geographical distances, and reflect complex circuits of knowledge, trade and connoisseurship" (2017: 402). Cultural biographies were homogenous to the social lives of objects, only forming a smaller portion of the larger story an object could tell.

Within discussions of object biographies and social histories it is important to understand that objects can be commodities, whose value was determined through political processes. Appadurai suggested that the best example of commodities (objects) being diverted from their original nexus (origin location) was in Western archaeological or cultural displays and collections. It has been the act of archaeologists in the past to strip some (if not all) of the context away from objects to preserve, study, display, and grow collections. This was a form of commoditization where these items were sought for their perceived value once removed from their original location and brought into the realms of academia or exhibition.

Appadurai argued that objects in ethnographic collections at museums are often stripped of their context and social life to present a specific narrative which the museum wishes to tell its audience. He contends that museum labels often minimize or leave out information on an object's journey to make a compact and concise narrative. This information often could have provided greater context to the objects. Appadurai labeled many ethnographic objects as refugees, forcibly removed from their home and separated from their histories. (2017: 403). This line of argument can be extended to archaeological objects in museums, when their social lives have not been sufficiently expressed in their interpretation or research. Returning the agency to objects through their social histories and biographies allows recontextualizations, deeper understanding, and innovative viewpoints for the study and understanding of objects now housed in museums.

The following chapter presents the social life of the Milwaukee Public Museum's Hopewell site collection. Following the lead of Kopytoff and Appadurai, a biographical approach has been utilized to tell the story, journey, and changing state of these objects. Although much research has been conducted on the Hopewell site and Hopewellian objects, biographical approaches are not commonly conducted on these materials. Additionally, the MPM's Accession 16082, as a whole, was not yet researched until this project. By using the theories of Kopytoff and Appadurai, my goal is to present information on what the objects have experienced over time, presenting a more holistic understanding of the collection's provenience, and the evolving utilization, meaning, commodification, and interpretation of these objects.

Few object biographies or social life analyses have been conducted on multiple objects. One example is Victoria Pagel's study on the social life of a single object type: Woodland brooches in the MPM's collections (2018). Unlike Pagel's study, the following chapter will

describe the social life of a collection of objects that differ widely in type, and material, but all originally located within the Hopewell site. In addition, all of the objects were part of a larger collection excavated by Moorehead. In 1945, these particular objects were divided into a smaller 61 object collection exchanged between the FM and the MPM. There are many similarities to the story of these objects after their excavation. However, it is important to state that these objects have a wide array of origins which will be only briefly described. Details such as material types, material sources, object shapes, and descriptions will be covered in the material analysis chapter of this thesis.

### **Birth and Ancient Beginnings**

The beginnings of the Hopewell cultural horizon occurred around 200 BCE, spreading through the Eastern Woodlands. In the Ohio River Valley Region, Native peoples who already lived in the area (referred to as the Adena or Early Woodland groups) chose to expand interactions, intensify earthwork construction, elaborate craftworks, and participate in new activities. These changes included the construction of earthworks in specific geometric designs, the creation of new designs and object types, and the use of non-local materials on a much larger scale. These exotic materials may have reached Ohio in the hands of locals partaking in long journeys, through trading, or by non-local individuals on pilgrimages to the Hopewell site.

Hopewellian sites across the Eastern Woodlands commonly have exotic material sourced from similar locations as the materials within the MPM's collection. Obsidian, an important volcanic glass was believed by archaeologists to have been from Yellowstone National Park in Wyoming (2,900 km away). More recent studies have confirmed this but determined a smaller

percentage of obsidian was from Idaho, an even further distance from the site (Hughes 2007; Lynott 2014). Quartz and mica were recovered from the Appalachian Mountains (Greber and Ruhl 1989: 258; Lynott 2014: 200). Copper was obtained from the Great Lakes region, and galena may have been procured from sources in the modern states of Illinois or Missouri (Lynott 2014: 200; Moorehead 1922:129). Amber was likely sourced from what is now New Jersey, and meteoric iron likely came from crash sites in Kansas (Greber and Ruhl 1989; Kimberlin and Wasson 1976).

Some lithic materials could have been gathered from local sources by individuals living near the Hopewell site. For example, Ohio sources include 18 different types of chert or flint, and Hopewellian groups were known to have used half of these types. Just over seventy miles northeast of the Hopewell site is Flint Ridge State Park of Ohio. The Park harbors numerous Native American mines where ancient peoples obtained brightly colored and multi-colored Ohio cherts (Lynott 2014: 235). Another material, cannel coal, may have come from Flint Ridge, Ohio or was possibly brought from West Virginia (Moorehead 1922:139). Finally, sandstone from the Hopewell site was likely obtained locally, as there are many natural deposits of this rock in the eastern half of the state.

Animals played a significant symbolical role in Hopewell ideology serving as raw material for artifacts and appearing as shapes cut into various objects. In the Milwaukee Public Museum's Hopewell site collection, marine animal materials include freshwater pearls from the Ohio, Mississippi, or Illinois Rivers (Ohio History Connection) and a shark tooth from either the Gulf Coast or the Northeastern coastline (Emerson et al. 2013: 49; Lowery Godfrey and Eshelman 2011). Other animal components in the MPM collection are bird bones, unidentified mammal bone fragments, and bear teeth. There are four examples of bear canine teeth within this

collection. There were two possible bear species used by Hopewellian groups: local American Black Bear (*Ursus americanus*) and Plains to Rocky Mountain region Grizzly Bear (*Ursus arctos*). Unfortunately, differentiation between the two species' canine teeth with non-destructive analyses is inconclusive as they are similar in shape and overlap in size (Elbroch 2006).

The vast majority of these materials types were modified in some way by humans drilling holes, etching, cutting or pounding them into shapes. Natural objects such as a piece of galena and coal were unmodified physically, but they were removed from their source location and brought to the Hopewell site. For a time, objects such as the bear claws, beads, and copper earspools may have been a part of everyday adornment for this ancient culture. We know that 49 objects in the collection were used as part of Hopewell mortuary rituals. They were interred within mounds at the Hopewell site, some as ritual offerings of buried objects (caches or altars), others as funerary offerings accompanying human burials. Their placement within the mounds demonstrates that these objects possessed symbolically important meanings to Hopewellian peoples as they occupied a place within the constructed cultural landscapes and became the final possessions of deceased members of their society.

One striking example of Hopewellian peoples' interaction with objects now part of the MPM's collection are the flint or chert discs from Mound 2. A local chert was gathered from an area two miles northwest of the Hopewell site. Next the piece was bifacially flaked with stone or bone tools to create large flint discs that were ovate in shape (Moorehead 1892a:190; 1892b: 66-68). It is believed that thousands of completed discs were gathered in armloads by individuals (about 15-20 discs) then carried to Mound 2. The individual loads were then deposited on the pre-mound surface and covered in a layer of sand before a second load was added, forming a cache of discs over 570 square feet in size, over which Mound 2 was built. While Moorehead

(1892a; 1892b) described these actions as preparing stockpiles of materials for use by the community, the actions appear more in line with a large ritual offering. While some of the discs were less worked than others, their central location within a ceremonial complex and the fact that they were covered in layers of soil, suggests a ritual or mortuary related interpretation.

The Hopewell cultural horizon declined around 400 CE and the rise of other cultural ideas and groups in the Late Woodland period likely resulted in different interactions with the cultural landscape of the Hopewell site. Construction of new mounds ceased, ritual activities decreased over time, and the site likely became overgrown with new plant life. If the site had been a destination for pilgrimages as proposed by Mark Seaman (1979), these trips would have become less frequent as new cultural ideas, landscapes, and beliefs grew in popularity. In the Late Woodland period interments of deceased individuals were occasionally added to the previously built mounds. The mortuary practices associated with the burials varied from the earlier Hopewellian practices. These changes demonstrate differing ideas about death, funerary practices, and religious-ritual beliefs. It is likely that the way in which the Hopewell site was viewed by pre-contact Native populations shifted with time.

The arrival of Europeans to the Americas dramatically altered the way of life of many Native American groups, including those living in the Great Lakes and Eastern Woodlands. It is known from Native oral histories and historical documents that many tribal groups were present near the Hopewell site around the time of contact with Europeans, in what would later become the state of Ohio. They were of the Iroquois and Algonquian language groups: Wyandotte, Mingo, Shawnee, Delaware, Miami, and Ottawa (Northeastern Educational Television of Ohio 2008). These groups were over a thousand years removed from the decline of the Hopewell cultural tradition. Although they lived in the same areas, historical documents show their

interpretation of the Hopewell site and the world differed from the ancient Hopewellian peoples (Lepper 2014).

Bradley Lepper (2014) surveyed historic accounts of Native American explanations of the earthworks in the Eastern half of North America. Out of 39 written accounts (documents written by pioneers, soldiers, scholars, and missionaries who were overwhelmingly non-Native), he recorded 36% indicating no knowledge of who constructed the earthworks, and 28% identifying them as their ancestors (Lepper 2014). Of the 39 accounts, a majority saw the earthworks as military fortifications. Although some other near-by sites may have been constructed to aid in defensive protection, archaeologists today identify the Hopewell site as a ritual/ ceremonial and mortuary space for Hopewellian groups, and not as a habitation site or fortified site. Lepper (2014) noted that that Moorehead, in a 1908 publication on Fort Ancient, reported a third-hand account of Shawnee tribes in southern Ohio visiting the earthworks in Chillicothe and paying homage to their builders, although the Indians were unsure who had constructed the mounds. From these accounts, it appears that some local Native groups were aware of the earthworks and did identify them as ancestral spaces or monuments.

### **Historic Period and Excavation**

With the arrival of European settlers in the Ohio River Valley, use and interpretation of the site drastically changed. Upon entering the area, settlers cleared some of the forest area to gather wood and create space for houses, farms, and later, towns. It is known that by the mid-1800s the site had been repurposed as farmland (Squier and Davis 1848). This resulted in

attempts to flatten the earthworks by plow. The site's usage had shifted from being a ritual and mortuary landscape to cultivated and residential land.

Additionally, the interpretation of the site was altered with the arrival of Europeans. Some accounts of the site did not consider Native groups as the creators of the earthworks, especially after finely crafted artifacts were dug from the mounds. With time, the "Myth of the Moundbuilders" formed, suggesting a wide array of cultural groups as the creators of the mounds such as the Lost Tribes of Israel, the Aztecs, and even Atlanteans (Greber and Ruhl 1989; Lynott 2009: 2014; Silverberg 1968; Shetrone 1930). These accounts written by European settlers and explorers argued that Native peoples currently living in the Eastern Woodlands did not possess the technical skills, or knowledge to create the earthworks and craft the items recovered from the mounds. These ideas justified the continued encroachment and stealing of Native lands, as settlers claimed it was their destiny to civilize these areas. These Europeans felt justified in taking lands from Native groups, as it was believed Native groups had overtaken the area in the past from another group such as the Lost Tribes of Israel (Shetrone 1930).

Before 1820, destruction of the mound group (later named the Hopewell site) had already begun. Caleb Atwater documented that the earthworks had been dug into to produce level farmlands, for exploration, and to recover human remains and artifacts (Atwater 1820). Although he only mapped the site, Atwater included drawn images of artifacts that had been pulled from the site's mounds. In 1848 Squier and Davis journeyed to Ross County where they conducted the first scientific excavations of the site (Lynott 2009) and named it Clark's Works. It was from their work that some of the mortuary and ritual practices that had occurred at the site were recorded. Although Atwater and Squier and Davis did not credit the construction of the mounds to Native groups in the continental United States, their documentation helped to guide future

research at the site. Of note was their information about the size and shape of the earthworks which were later devastated by continued plowing and natural erosion.

On September 1<sup>st</sup>, 1891 Warren K. Moorehead began excavations at the previously named North Fork of Paint Creek (Atwater 1820) or Clark's Works mounds (Squier and Davis 1848). Figure 3 shows Moorehead at the age of 26, standing central with a dark shirt and light-colored hat surrounded by his crew. In the five decades since Squier and Davis' investigations, ownership had transferred to Mr. Cloud Hopewell. Moorehead wrote that Mr. Hopewell had, "...kindly allowed the [1891] survey to carry on explorations to an unlimited extent" (Moorehead 1892a: vii). Under Moorehead's directions, larger mound investigations began with the establishment of multiple excavation trenches along a north to south axis. One trench was excavated at a time, with scrapers and shovels to four or five feet above the base (or unmodified ground level) of the mound. Testing had shown few to no burials in these layers, thus for time and ease the dirt above was removed with rough and less precise techniques. From about five feet above the base of the mound to the bottom of the trench excavation, the remaining work was conducted by hand troweling (Moorehead 1922: 90).

Twenty-four mounds were identified by Moorehead and his excavation team. He numbered four or five mounds on the third terrace to the north, and two additional mounds northeast of the large internal circle which were not included on the 1845 Squier and Davis surveys (1892:185; see map of site in Figure 4). Moorehead's survey did not follow numerical order but was guided by the discretion and convenience of the excavators (Moorehead 1922: 90). The beginning of September saw the opening of Mound 1, which was continuously hand troweled for six weeks by a local veteran seeking work with Moorehead's crew. Ten faunal bone fragments excavated from this mound, many with incised markings, now reside in the MPM's Hopewell collection. Also, in

early September other crew members began work on Mound 17. From this mound bone needles and beads were recovered, and now also in the MPM's collection. Additionally, it is likely that the shark's tooth, piece of galena and stone celt in the MPM collection were also recovered from this mound (Center for Digital Research in the Humanities [CDRH] 2015; Moorehead 1922).



Figure 3. Group photo at the Hopewell site, including Moorehead standing center, with dark shirt and suspenders. Dated 7/24/1898 but from excavations in 1891-1892. © The Field Museum, A111398, Photographer Ohio Historical Society.

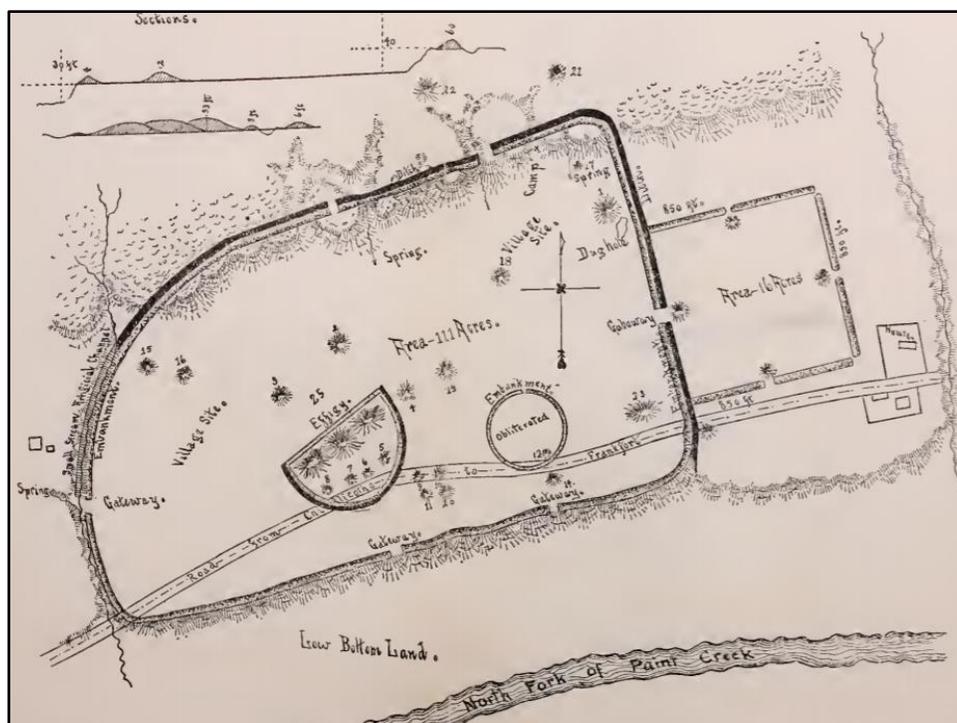


Figure 4. Plan of the Hopewell Works, Ross County Ohio (Moorehead 1922)

Mound 18 was opened on September 9<sup>th</sup>, and various artifacts were noted as being discovered on the following day. This included the incised human maxillary fragment now part of the MPM’s Hopewell collection. From September 17<sup>th</sup> to 21<sup>st</sup> excavation crews worked in Mound 2, known to contain numerous flint discs (bifacial chert lithics). Moorehead’s crew removed 7,232 discs from the mound, and Moorehead had knowledge of 953 additional discs from this mound from Squier and Davis, bringing the total known for this mound to 8,185 discs. Two of these objects are in the MPM’s collection. In mid-October, Mound 23 was opened for excavations. To quickly move through the upper layers towards the burials below, workers broke apart large boulders and layers of gravel in Moorehead’s short absence from the site. Upon return, Moorehead noted that some of the remaining boulders might have been in animal shapes, named “boulder mosaics” (1892b: 92; 1922: 103-108). In his absence, these “boulder mosaics”

and intentional layers of gravel were destroyed with little remaining for him to examine. Within the mound, multiple stone pipes were found. It is likely that both pipes within the MPM's collection were removed from burial 209 of Mound 23. This reasoning is discussed in greater detail in Chapter 4.

The largest mound at the Hopewell site had been numbered 25 by Squier and Davis. The 1848 publication had described this as a trio of mounds, later connected to make one single large effigy. Unlike Squier and Davis, Moorehead concluded it was a single mound in the shape of a human torso (1892b:185). Excavations of Mound 25 began in late October of 1891, leading Moorehead to conclude it was constructed in two phases, beginning with a hard-baked clay and gravel floor, then a layer (less than ten feet) of soil. Afterwards a second layer of boulders and soil had been added to the center of this mound (Moorehead 1892b; 1922). The mound contained 102 interred individuals, demonstrating an array of mortuary practices. Both cremations and extended burials were present, either being placed in the subfloor, elevated on gravel layers, lying on wood timbers or mats, or under wooden structures that had collapsed. Alongside many of these burials were funerary offerings, such as the two bear teeth, beads of pearl and copper, copper breast plate, copper button, copper adze, and iron fragment now in the MPM's Hopewell site collection.

In addition, Mound 25 contained multiple areas with ritual offerings not directly associated with human burials. Two clay basins were discovered, filled with ceremonial object offerings which had evidence of being burnt (Greber and Rulh 1989). Following Squier and Davis, Moorehead referred to these clay basins as altars. The MPM's collection has a quartz blade, copper adze, stone tablet, stone knives, iron beads, cut mica, piece of amber, and an obsidian point from Mound 25's two altars. Near burial 275, there was an ash pit containing

artifacts collected by Moorehead. In the MPM's collection two pieces of cut mica and a piece of cannel coal are from this location. Finally, Mound 25 had a deposit of copper symbols grouped together and buried, represented in the MPM collection by a copper bracelet and four copper ornaments of various shapes.

In the Hopewell material now housed at the MPM, there are twenty-five catalog numbers associated with objects and fragments from the site which contain no further provenience. They are similar to other artifacts recovered from the site and were always part of the large Hopewell site collection, but the specific location at which they were discovered has been lost with time. These objects are: three obsidian blades, an obsidian core, six copper ear spools, nine bone fragments, a copper ornament, a copper tube, a stone pipe, an iron chisel, one lot of quartz crystals, a cut bear tooth, and one lot of copper fragments.

### **Life Post-Excavation: Nineteenth Century**

At the end of Moorehead's fieldwork at the Hopewell site he directed the shipping of the recovered artifacts which numbered in the hundreds of thousands (including estimates for individual beads, ceramic sherds, etc.). The collection's first stop was Cambridge, Massachusetts in preparation for the World's Columbian Exposition of 1893 in Chicago (WCE) (W. Moorehead to F. Skiff, letter, 11 January 1895, Accession 208 File, Field Museum Anthropology Archives, Chicago). It is likely that the objects were received at Cambridge by Frederic Putnam who was the Curator at the Peabody Museum of Archaeology and Ethnology at Harvard University (Peabody) in Cambridge. Putnam was also the Director for the WCE Ethnology Department which oversaw the excavations conducted by Moorehead in Ohio. It is unknown what experiences the collection had after arriving in Cambridge around early 1892. It is possible that

Putnam and others reviewed pieces of the collection for further documentation, and perhaps worked on designing the layout of exhibit cases for the WCE. Prior to the exposition's opening date on May 1<sup>st</sup>, 1893, most of the artifacts were shipped to Chicago. It is likely that some Hopewellian objects remained in Cambridge for Putnam's assistant Charles Willoughby to study during the run of the WCE, but the number of objects is unknown.

After Cambridge, Moorehead wrote in a letter that the objects were shipped to Chicago, first stopping at the Dairy Building of the WCE (W. Moorehead to F. Skiff, letter, 11 January 1895, Field Museum Anthropology Archives, Chicago). The Dairy building was in the southeastern portion of the WCE grounds (present day Jackson Park, Chicago). A description of the building's plans in 1892 describes it as adjoining the Forestry Building, measuring 100 by 200 feet. The overall cost of the building was estimated at \$30,000 with 600,000 feet of lumber needed for its construction. The Dairy Building was designed to house dairy tests, butter-making demonstrations, and dairy machinery for the public to witness (World Columbian Exposition, Department Publicity and Promotion [WCE, DPP]: 1892).

South of the Dairy Building was a building over four times its size. This was the Anthropological Building of the WCE. It is interesting to note that the 1892 *Official Guide to the Grounds and Buildings of the World's Columbian Exposition During Construction* does not contain a description of the Anthropological Building and this building is not included on the 1892 map of the grounds (WCE, DPP: 1892). The Anthropological Building was the final building erected for the WCE, as the Manufactures and Liberal Arts Building was too small to house the ethnographic department's collections (W. B. Conkey Company 1893F: 89). Due to the late construction of the Anthropological Building, the Dairy Building served as a temporary storage location for the Hopewell objects. After construction of the Anthropological Building

ceased, the Hopewell site objects experienced their third move, this time the short distance between the Dairy Building and the Anthropological Building next door.

When finished, the Anthropological Building had 105,430 square feet on the ground floor, and an additional 52,804 square feet in the second floor galleries. Due to delayed construction, the building was not open to the public until July 4th, 1893, two months and three days after the initial opening of the exposition (Hinsley 2016: 50). The ground floor contained the Bureau of Charities and Corrections, the Bureau of Sanitation and Hygiene, Archaeological Exhibits, Ethnological Exhibits, and a laboratory of Physical Anthropology (Palmer et al. 1893: 104-105). Figure 5 shows the interior of the Anthropological Building. The Hopewell site collection presented by Moorehead and Putnam was located on the first floor, near collections from other Ohio precontact or ancient sites, including a diorama of Serpent Mound (Figure 6).



Figure 5. Interior of the Anthropology Building (Wittmann 1893: 33)



Figure 6. Hopewell Serpent Mound model or miniature diorama. Anthropology Building, World's Columbian Exposition, C.D. Arnold, 1/1/1893.  
© The Field Museum, GN83493\_N, Photographer C.D. Arnold.

Countess of Aberdeen Mrs. Potter Palmer and others wrote in an exposition guidebook that the building contained American collections amassed by Putnam and additional collections on loan from State boards, historical societies, and museums (Palmer et al. 1893: 105). The Hopewell objects would have been prepared for exhibit, probably unpacked from crates, examined, organized, possibly cleaned, then placed into exhibit cases. The prepared exhibit and Hopewell site collection remained available for public viewing from July 4<sup>th</sup> until October 30<sup>th</sup>, 1893.

In a February 1895 letter to Mr. F. J. V. Skiff, Moorehead described from memory the size of the Hopewell collection in storage and on display for the WCE. Within WCE storage Moorehead remembered 122 trays of human skeletons and other items belonging to the Hopewell collection. On display, Moorehead stated that the anthropology building held eight double-width cases full of Hopewell site objects, one stone grave reconstruction with human burial, and one case containing a pile of discs (W. Moorehead to F. Skiff, letter, February 1895, Field Museum Anthropology Archives, Chicago). Figure 7 is a photograph taken during the WCE by an assistant to Putnam, Harlan Smith. This image in the Peabody Museum Collections Online is described as the reconstructed grave from southern Ohio (Peabody number: 47-41-10/99955.1.1). It is likely that this is the stone grave reconstruction mentioned by Moorehead. Greber and Ruhl identify this image as the Turner site grave reconstructed by Harlan, with Hopewell site material cases shown in the background of the photograph (1989: 3-4).

Within his 1922 publication on the Hopewell site, Moorehead reminisces that, “[t]he [Hopewell] exhibits of copper, obsidian, shell, bone, and clay artifacts attracted the attention of thousands of visitors at the Exposition” (1922:80). There are notations that the Hopewell exhibit won several awards at the WCE (Alderman 2005; Greber and Ruhl 1989), but specific names or listing of these awards has not been uncovered. Over the six months in operation, the WCE welcomed over 25 million visitors (Field Museum 2014).



Figure 7. World's Columbian Exposition of 1893 reconstructed stone grave from Southern Ohio (Peabody Museum Collections Online, Peabody number: 47-41-10/99955.1.1. [www.peabody.harvard.edu](http://www.peabody.harvard.edu))

At the close of the WCE, there were many uncertainties. Putnam had proposed in 1890 that the collections amassed for the Exposition should remain in Chicago in public view, forming a new museum (Field Museum 2014). It is possible that Putnam desired a position within this new museum after the years of work he had poured into the WCE, however it is known he deeply loved his work at the Peabody museum (Hinsley 2016: 48). Regardless of Putnam's desires, he was not offered a job at this new institution. The directorship was bestowed upon Frederick V.J. Skiff by Harlow N. Higinbotham of the Marshall Field Company. Higinbotham served as the Chicago Exposition Company President and was a major donor to the exposition and the new museum project. Higinbotham would go on to be the first chair of the Field Columbian Museum's Board of Directors, and later President of the museum (Harlow 2016: 86).

Specimens and artifacts amassed for the WCE would become the first collections of this new Chicago museum. This did not include the exhibits loaned to the WCE from states, historical societies, museums, and other institutions. More than 50,000 objects were donated or purchased at the end of the exposition for the Field Columbian Museum, including the Hopewell site objects. Some WCE directors and organizers (such as Skiff and Higinbotham) filled positions at the museum, becoming the first board members and curators (Field Museum 2014). In less than two years the site of the WCE would become the new home of a Chicago museum created to commemorate the exposition. The Field Columbian Museum opened to the public on June 2, 1894, housed in the Palace of Fine Arts constructed for the WCE. However, at the new museum opening, the Hopewell collection-based exhibit had dramatically shrunk in size.

Through the exposition and into 1894, Willoughby of the Peabody worked with a select number of objects from the Hopewell site that likely were not taken to Chicago. Additionally, a large number of Hopewell artifacts from the WCE were shipped back to Cambridge sometime in the fall of 1893 to June 1894. Moorehead mentioned noticing Hopewell objects had begun to disappear from exhibit shelves during the last days of the exposition. Moorehead asked Putnam where the objects had gone, Putnam replying that he had begun to pack some away in his office fearing they would become broken or stolen (W. Moorehead to F. Skiff, letter, January 1895, Field Museum Anthropology Archives, Chicago). In a letter to Director Skiff, Putnam explained he had taken Hopewell site specimens from the Anthropological Building of the WCE back to Cambridge for further study. Putnam stated he wanted some objects for reference while he wrote his final report to the Director General, and additionally would have illustrations drawn of the objects. In the letter Putnam proposes that the drawings should be completed around July of

1894, and that he would ship the objects back to Chicago once he finished writing descriptions (F. Putnam to F. Skiff, letter, June 1894, Field Museum Anthropology Archives, Chicago).

On February 29th, 1895 Moorehead expressed concern in a letter, that the Field Columbian Museum only possessed two single cases on display and nine trays in storage now mixed with one case of Fort Ancient, Ohio materials. This was a shockingly low amount of materials as Moorehead had witnessed eight double width cases, two dioramas, and 122 trays in storage during the WCE. The estimated Hopewellian bead count alone demonstrated the enormous lack of Hopewell materials at the Field Columbian Museum. Moorehead stated 590,000 beads were shipped from Chillicothe, Ohio in 1891 (to Cambridge), yet by February 1895 only 25,000 beads were present in Chicago (W. Moorehead to F. Skiff, letter, February 1895, Field Museum Anthropology Archives, Chicago).

Certainly, Moorehead knew that Putnam and Willoughby were working to analyze some of the Hopewell site materials back in Cambridge. However, the Hopewell site collection had been promised to the Field Columbian Museum, and Putnam's 1894 correspondence to Director Skiff did not mention a seven month delay returning the objects. Tensions mounted, and in truth, Moorehead and Putnam's relationship had not been the easiest. Greber and Ruhl described their relationship as strained by Moorehead's enthusiasm to share findings with the public, and his tendency to overlook details (1989: 2). For his part, Moorehead did not seem to trust Putnam. In the same February 1895 letter describing his concern about the missing pieces, Moorehead recalls that a Dr. Hilborn T. Cresson, a former assistant to Putnam, had been caught trying to steal copper and stone objects from Moorehead's camp at the Hopewell site, and was promptly fired. Later, in May of 1895, Moorehead had visited the University of Pennsylvania Museum where he found Hopewellian materials within their collection: one flint disc, two humeri, and a

few human bones. A curator, Mr. Culin, said the objects had been sent by H. T. Cressen in 1891 from the Hopewell site (Field Museum 2019c: Correspondences: W. Moorehead to H. Higinbotham: May 9, 1895). Within the January 1895 letter Moorehead remembered that he feared trouble in submitting his field report to Putnam in 1892, making a carbon copy of the report to maintain within his own records (W. Moorehead to F. Skiff, letter, January 1895, Field Museum Anthropology Archives, Chicago).

Part of Moorehead's distrust of Putnam was likely deserved. At the close of his excavations, Moorehead turned over his records to Putnam who was "...expected to write the report [on the site] but failed to do so..." (Moorehead 1922: 81). While Putnam was unable to dedicate time to this large undertaking, Willoughby analyzed and organized the collection, documentations, and even ran experimental tests focusing on Hopewellian objects. Moorehead gave Willoughby a kind mention and thanks for his work on the Hopewell site, describing Willoughby's 300 pages of notes and drawings being unselfishly provided for his (Moorehead's) later publication on the site. Nevertheless, there are many items that Moorehead had given to Willoughby and Putnam in 1892, but were missing by the 1920s: ground plans, drawings, and the original notebook (Moorehead 1922: 81). It is important to note that Moorehead's publication on the Hopewell site was in 1922, thirty years removed from the excavations. This time lapse only increased the risk of missing documentation, likely providing unclear memories of the details of the excavations and the site itself.

The letters mentioned above from Moorehead to Director Skiff of the Field Columbian Museum describe a moment of apprehension and contestation over the Hopewell collection. These objects were highly valuable as they were the largest collection from this site remaining in the United States (Squier and Davis' earlier collection had been sent to England). They held

enormous research potential, they could easily be turned into a popular exhibit, and some pieces were rarities with high value both academically and financially. Within the preliminary list of missing objects Moorehead provided, he noted a missing piece described as, “Duck-on-fish pipe. This is of graphite slate and is considered the most artistic precontact sculpture found in the Mississippi Valley. To give an idea of its value, a man offered me \$200.00 for it” (W. Moorehead to F. Skiff, letter, February 1895, Field Museum Anthropology Archives, Chicago). Today, this amount would be the equivalent of nearly \$6,000. According to Moorehead, other missing objects included pieces that were “very elaborately carved, very magnificent, rare, and as fine as any brought from Mexico” (W. Moorehead to F. Skiff, letter, February 1895, Field Museum Anthropology Archives, Chicago). As they had been promised the Hopewell collection excavated by Moorehead, it is understandable that the Field Museum would desire all objects to be returned to Chicago. (W. Moorehead to F. Skiff, letter, April 1895, Field Museum Anthropology Archives, Chicago).

By April 23<sup>rd</sup> of 1895, Moorehead had journeyed to Cambridge, upon the invitation of Putnam, to aid in the review of Hopewell site objects. For this visit, Moorehead was also acting as an advocate for the Field Columbian Museum, attempting to secure the collection in its entirety for a speedy return to Chicago. Moorehead and Putnam’s relationship seemed to reach a breaking point during this trip, once Putnam understood Moorehead’s role was to verify the count on the Hopewell collection and secure its return. Moorehead reported to Director Skiff that Putnam said harsh things about the Field Columbian Museum and was very sore and felt Moorehead’s presence was “an insult to his honesty” (Field Museum 2019c: Correspondences: W. Moorehead to F. Skiff: April 23, 1895). In this same letter (April 23, 1895) Moorehead

described the anger and displeasure he experienced with Putnam by stating, “I must confess that it was with great difficulty that I kept my temper during the interview”.

From April 23<sup>rd</sup> until May 1<sup>st</sup> Moorehead conducted an inventory of the collection and prepared it for shipment from Cambridge to Chicago. From this inventory, Moorehead noted in multiple letters to Director Skiff that there was a discrepancy in object count from when the collection had been sent from Chillicothe, Ohio. However, this discrepancy seemed to be with the smaller objects, and objects described as “...generally termed unimportant things” (Field Museum 2019c: Correspondences: W. Moorehead to F. Skiff: April 26, 1895). These unimportant or less valued objects included pearl beads, pipes, and skulls, which Moorehead believed Putnam took under the assumption that would not be noticed as missing (Field Museum 2019c: Correspondences: W. Moorehead to F. Skiff: April 23, 1895). In preparation for shipment, Moorehead wrapped objects in paper, placed them on trays, and packaged them into large wooden crates. Also, during his time in Massachusetts, he negotiated with Putnam for the release of Hopewell site excavation documents, notes, and illustrations to the Field Columbian Museum. Some of these documents were sent along with the collection.

On May 1<sup>st</sup>, 1895 Moorehead had the collection shipped by Adams Express to the Field Columbian Museum. The collection was insured for \$200 through this company. He explained in a letter to the Museum’s President H. N. Higinbotham that, “[n]o insurance company would list it, for they claimed that these things had no real commercial value and were considered as bad risk” (Field Museum 2019c: Correspondences: W. Moorehead to H. Higinbotham: May 2, 1895). Clearly the objects held a large amount of value for the archaeologists and museum professionals involved, be it research potential, estimated monetary worth, or the prestige of possessing a collection from such an important ancient site. Luckily for the safety of the collections

Moorehead was seemingly adamant that they be shipped with insurance. He even provided a document containing instructions for the unpacking of the objects to ensure against damages or lost provenience for the objects he had sorted and packaged.

The collection reached the Field Columbian Museum on May 4<sup>th</sup>, 1895 and was given a new accession number: 208. This new number was different from the original accession of the Moorehead excavated Hopewell material: 31. Upon reaching the museum, the objects were unpacked, likely inspected for damage, and organized into storage or exhibit cases. One known exhibit case of Hopewell materials dating to this time was the recreation of the enormous pile of lithic bifacial discs. Figure 8 shows the East Court of the Archaeology and Ethnology of North America Alcove 83 of the Field Columbian Museum in 1898. In the background of the photograph on the left side is an exhibit case filled with a pile of round objects. This is the recreation of the Hopewell site flint disc pile, likely very similar in appearance to the one presented at the WCE.



Figure 8. Hopewell Flint Disc Recreation on left side, 1/1/1898.  
© The Field Museum, CSA1188, Photographer unknown.

### **Life Post-Excavation: Twentieth and Twenty-first Centuries**

At the turn of the twentieth century the Hopewell site collection (now excluding any pieces missing since the original shipment from Chillicothe) was housed together. The Field Columbian Museum had begun to transition its mission away from commemorating the WCE, to becoming a natural history museum. The Museum renamed itself in 1905 to honor its first major benefactor Marshall Field and reflect the new institutional goals. The new name was the Field Museum of Natural History (Field Museum 2019a). While the Museum had a new name and new mission, the Museum's building (The WCE's Palace of Fine Arts) was beginning to feel old and

restricting in size. The Museum's collections were swelling in size, and quickly expanding past the dimensions of the building's storage spaces. In 1915 construction began on a new museum, located about six miles north near Grant Park, Chicago (Field Museum 2019a).

On March 20<sup>th</sup>, 1920, transportation of the collections of the Field Museum of Natural History to the new facility began. Around this time the Hopewell collection experienced the effects of this move. It was recounted that, “[s]pecimens were loaded into crates and transported by rail and horse-drawn carriage” to the new location (Field Museum 2019a). This new building opened to the public on May 2<sup>nd</sup>, 1921, with some Hopewellian objects exhibited in new displays. The Palace of Fine Arts remained closed to the public until 1933 when a new Museum of Science and Industry opened. Today the Museum of Science and Industry still occupies the Palace of Fine Arts; it is the last remaining building from the 1893 WCE still on the original grounds of the Exposition (Museum of Science and Industry Chicago 2019).

Over the next four decades, some objects from the larger Hopewell collection of the Field Museum of Natural History were given in object exchanges to other museums, universities, or individuals. In these exchanges Hopewellian objects became commodified as reciprocal gifts or trade items of similarly perceived value. Received objects included many archaeological specimens from diverse locations and periods, and a small group of ethnographic materials from the Aleutian Islands of Alaska (Accession 2325). From 1926 until 1962 Hopewellian materials from the Field Museum of Natural History were exchanged with twelve different institutions or individuals. Additionally, a single Hopewellian object, a copper celt, was sold to Paul Warner in 1940. As the Hopewell collection has become highly dispersed, the remainder of this chapter will specifically follow the 61 objects which traveled from Chicago to the Milwaukee Public

Museum in 1945. More information about the object exchanges can be found in Chapter Four, and Appendix B of this thesis.

The MPM opened as a public natural history museum in May of 1884, prior to Moorehead Hopewell site excavations, WCE, and founding of the FM. By the early twentieth century, the MPM housed vast archaeology, botany, geology, ethnographic and historic collections. On March 15<sup>th</sup>, 1945 a group of Hopewell site objects was shipped by express mail from Chicago to Milwaukee, about a 95 mile journey. The prepaid value of the objects was listed at \$200 (Memo No. 1142, March 15, 1945, Accession 2354, Anthropology Department Archive, Field Museum, Chicago). It is interesting to note that the Field Museum of Natural History listed only 46 objects as being part of the exchange, while the MPM listed the number as 61 objects received. Each museum used different criteria when determining how to number smaller groups of objects such as pearl beads, broken earspools, and fragments of bone. While the FM tended to give a box of bone fragments a single lot number, the MPM decided to number these bones individually.

In exchange for the Hopewell objects, the Field Museum of Natural History received four reconstructed pottery vessels from the Woodland period of North America, which would be immediately placed on exhibit in a new American Archaeology hall (O. Goodson to W. McKern, letter, March 9, 1945, Accession 2354 File, Archaeology Department Archives, Field Museum, Chicago). These vessels were from different Wisconsin locations: “Cliffton” of Outagamie County, the Moundville Campsite of Marquette County, near the Dartt Residence in Montello of Marquette County, and the John Harmel Farm in Marquette township of Green Lake County. Three of the four vessels are known from the MPM accession 16082 file to have been reconstructed during the Works Progress Administration (later Works Project Administration) in

the mid 1930s to the early 1940s. Vessels A 38281/10432, A42984/11740, and A 48325/15061 were reconstructed, measured, and described by Barnes, likely a Works Progress Administration employee working at the MPM. Further information on the four vessels exchanged can be found in Appendix C of this thesis.

On the same day, March 15<sup>th</sup>, 1945, the Hopewellian objects arrived at the MPM, and were given accession number 16082 to identify them as a distinct collection of objects within the MPM's archaeology collections. These collections fell under the MPM's Department of Anthropology, which in 1945 was under the direction of Acting Curator Towne Luther Miller. Within the MPM's Annual Report for March 1944 to March 1945, the exchange of objects with the Field Museum was noted. The report reads, "[t]hrough an exchange with the Department of Anthropology, Chicago Natural History Museum an outstanding collection of archaeological specimens illustrating the famous Hopewell mound culture of Ohio were secured. Eventually this will make a fine exhibit" (Milwaukee Public Museum 1945). This collection was desirable by the MPM for its direct connect to the Hopewell site and culture and was further complemented as being "outstanding". Additionally, the Anthropology Department justified their acquisition by proposing that these were pieces that would make a fine exhibit, meaning the pieces were presentable and intriguing enough to the public to warrant a new exhibit.

While the justification to exchange the pieces had been to eventually put them on exhibit, only a few pieces of this collection are known to have been placed on display. In January of 1964 a new building opened for the Milwaukee Public Museum, just a block north of its former home (currently the city's central library branch). For the new building with expanded exhibit space, new exhibits and dioramas were planned. Included was the *Prehistoric Indians of Wisconsin* exhibit on the western half of the first floor. Within this exhibit, two Hopewell site objects were

on display. Within a small *Prehistoric Trade* circular case an obsidian blade (A49108) was shown to demonstrate a link between Great Lakes precontact sites, and obsidian sources in Wyoming. A larger case in the exhibit was labeled *Hopewell Indians* and contained more than eighty artifacts from many different Hopewellian sites. One of these artifacts was a string of pearl beads (A49108) from the Hopewell site. The *Wisconsin Archaeology* exhibit closed on December 1976, and the two Hopewell site objects were reunited with their counterparts in storage with one exception.

Within collections documentation at the MPM, it is noted that an obsidian core (A 49123) was removed from the collection. Records indicate that the object was formally removed from the MPM's collections and given to the University of Wisconsin-Madison on May 20<sup>th</sup>, 1954. In the *Archaeology Disposition Book*, page 16 it notes that the piece was sent to be destroyed for dating analysis. In discussions with Senior Curator in Anthropology Elizabeth Leith of the University of Wisconsin-Madison Department of Anthropology, dating at the University was done by the Archaeology Chemistry Lab. However, the Archaeology Chemistry Lab was not established until 1974, and many dating techniques were created in the late 1950s. Unfortunately, no information on this piece has been found in the collections of the UW-Madison Archaeology Department, UW-Madison Geology Museum, or the Wisconsin Historical Society in Madison. At the MPM there is no record that the piece or data from this testing was ever returned.

In more recent years the collection has experienced more attention. With the passage of the Native American Graves Protection and Repatriation Act (NAGPRA) in 1990, the collection was inventoried and information on the collection was prepared and submitted in compliance with the law. During the inventory process, provenience information was crucial for understanding if an object was an associated funerary object, an unassociated funerary object, or

human remains. Collections documentation shows that an osteological review of the collection was conducted. In particular, the cut human maxillary bone was examined, and a report was written in May of 1998. The Object Biographical sheets, included in Appendix A of this thesis, reflect object classifications made during the NAGPRA inventory of this collection. Within museums the passing of NAGPRA resulted in sacred objects and human remains being removed from exhibit in accordance with the wishes of Native American communities. This did not affect the Hopewell collection since it was already largely in storage.

In 1996, Cheryl Johnson, a PH.D. candidate from The Ohio State University submitted a loan request to study the single human remain within the MPM's Hopewell collection (A 49121). Specifically, the request was to borrow and analyze the maxilla fragment, and to extract a DNA sample from the pulp chambers of one or more teeth. The MPM agreed to loan the human remain to the Ohio State Historical Society (now Ohio History Center) for the period of one year, during which the analysis and sampling was allowed. Upon return of the human remain in 1997, MPM Conservator Christine DelRe supervised the creation of a mold of the bone fragment. The mold was made with alginate, a seaweed derivative mixed with water, and at least two casts were created from this mold of the bone fragment (Accession File 16082, Anthropology Department, Milwaukee Public Museum, Milwaukee, WI).

In Johnston's (2002) dissertation, the MPM's human remains is described as a culturally modified human remain. She determined that most of the artifact modifications were the result of intentional grinding against stone and identified the bone as a maxilla not a mandible (further discussion of this is present in Chapter 4 of this thesis). (Johnston 2002: 82). Currently, two plaster casts and the human mandible are present together in the collection. The mandible does appear to have some alginate still present on roughened surfaces and in the exposed cancellous (spongy)

bone. Johnston's dissertation does not describe any DNA testing, instead comparing through visual analyses multiple culturally modified human remains from the Hopewell site (Johnston 2002). Another external researcher, George Colvin requested a photograph of the MPM's Hopewell collection shark tooth (A 49127). From the photograph Colvin made a species determination for the object and described its modifications within an article about the Hopewellian group's use of shark teeth (Colvin 2011).

There have been two UW-Milwaukee Museum Studies projects that have been conducted on two objects within the Hopewell site collection. First, Jamie Kelly (2000) (now Head Curator of Anthropology Collections at the Field Museum) was assigned an incised fragment of bone (A 19101/ 16082). Based on discussions with curators, Kelly concluded that the bone was not human. He did raise concerns with the housing of the object in a box likely non-archival quality with multiple other bone pieces (Kelly 2000). Second, Paul Moriarity was assigned the platform pipe (A 49105/ 16082) (2017). Moriarity identified the pipe material as limestone, possibly Maxville Limestone which can be found in Muskingum County, Ohio (Moriarity 2017). Within his condition report, Moriarity described damage (scraping) in the pipe's bowl, and chipping on the pipe's lip and side. Additionally, Moriarity examined the pipe, finding four catalog numbers written on it, which he called excessive. He explained that the MPM accession number was incorrectly written on the pipe. It appeared that after identification of this problem, someone had scraped a line through this incorrect number and added the correct accession number to the object. Moriarity described this action as inappropriate as this caused physical damage to the pipe and resulted in additional numbers permanently written on the object (2017:5).

From October 2017 to January 2018, an object from the Hopewell collection was on display within the temporary exhibit *Weapons: Beyond the Blade*. The quartz crystal blade (A

49072) was chosen for an exhibit case interpreting weapons as artwork. Interestingly, the case juxtaposed the Hopewellian blade beside more modern weapons from Indonesia, Ghana, and Turkey. Further descriptions of this exhibit can be found in Chapter 5. At the close of this exhibit, the blade was returned to storage (Weapons: Beyond the Blade File, Temporary Exhibits, Anthropology Department, Milwaukee Public Museum, Milwaukee, WI).

Currently, there is one piece from the Hopewell site collection on display at the Milwaukee Public Museum. In an updated *Wisconsin Archaeology* exhibit, a piece of cut mica (A 49078) is present. The object is part of a timeline, within which the Hopewell cultural horizon is explained, and emphasis is placed on the exotic materials (such as mica) that were obtained from places outside of Wisconsin.

Finally, it should be noted that the history of the collection has been impacted due to this thesis project. I have been working with the MPM's Hopewell site collection since January of 2019. This work has involved my direct handling of these objects, research into their history, and interpretation of them through various analyses presented in Chapter 4. I have measured, photographed, and documented provenience information for every object in this collection, which was used to create Object Biographical sheets located in Appendix A. In the spring of 2019 I aided Dr. Ralph Kugler, a research associate at the MPM, in the 3-D photogrammetry imaging of five objects within this collection using Agisoft/ Metashape software. In May of 2019 Dr. Kugler taught a one-day workshop at the Society for the Preservation of Natural History Collections (SPNHC) conference in Chicago. In December of 2019 Dr Kugler was invited to give a lecture at the College of Earth Sciences for Jilin University in Changchun, China. At both presentations he used images and 3-D models of these Hopewell objects as examples.

In November of 2019 I presented a poster entitled, “The Journey of a Hopewell Site Artifact: Bear Canine with Pearl” at the Wisconsin Federation of Museums conference. This poster displaying information, photographs, and 3-D images from this thesis project was a co-winner of the Wisconsin Federation of Museum’s Student Poster Award. Finally, I have submitted an article describing the object biography of an object from this collection, the bear canine with inlaid pearl (A 49107), to *Field Notes: A Journal of Collegiate Anthropology*, published by the Anthropology Student Union at the University of Wisconsin-Milwaukee.

## Chapter 4: Material Analysis

This chapter begins with a discussion of the material analysis of the Hopewell site collection housed at the Milwaukee Public Museum (MPM). This included a collections inventory, physical analysis, and creation of Object Biographical sheets for every object within this collection. The subsequent portion of this chapter describes the collection by material type: lithic, metal, faunal, mica, and human remains. Within these subsections, the material type will be defined archaeologically and objects falling into these categories will be listed with a brief description. The division of materials types follows the example of Moorehead, Shetrone, and Willoughby's discussions of the Hopewell site materials separating lithics, metals, and faunal elements, and further isolating mica and human remains for discussion. Also, present is a section on the X-ray Fluorescence (XRF) testing conducted on three of the obsidian artifacts. Ending the analysis by material types is a short consideration of how differential or preferential treatment of material types has affected this collection. The final portion of this chapter is a comparison of the Milwaukee Public Museum's Hopewell collection received in a 1945 object exchange with the Field Museum (FM), and other exchanges or sales of Hopewellian objects made by the FM.

For my analysis of the Hopewell site collection at the MPM, I began with an inventory of the collection, determining what pieces were present and verifying the numbers associated between the physical object and collection documentation. After discovering 56 of the original 61 accessioned specimens were present, I compiled a list of objects not immediately found in the Ohio Archaeology Drawers in the MPM's collection storage. One object (mica leaf A 49078) was determined to be on exhibit within the MPM's second floor Woodland Indian section titled *Wisconsin Archaeology: Pieces of the Puzzle* (exhibit case 2E16).

Additionally, collection documentation revealed that one obsidian core from this collection was removed from the MPM for destructive testing at the University of Wisconsin-Madison on May 20<sup>th</sup>, 1954 (Archaeology Disposition Book, Milwaukee Public Museum, Milwaukee, Wisconsin). Attempting to track down the object or the test results, I exchanged emails with Elizabeth Leith, the Senior Curator of Anthropology for UW-Madison's Department of Anthropology. Adding to the mystery of this object, Leith stated that dating methods involving destruction of obsidian objects did not come into existence until the late 1950s, and the Archaeology Chemistry Lab at UW-Madison was established twenty years after the sample was sent, in 1974. It is possible that testing other than obsidian hydration dating was being conducted on this object, but no information on the object was discovered.

After contacting the Anthropology Department, I also reached out to the UW-Madison Geology Museum to ask if the obsidian core may have been submitted to them or to the Geology Department for testing. Museum Curator Carrie Eaton responded that there were no records of the object, and that human artifacts were atypical for their collections. The MPM's Geology Department was also contacted about this object, but they did not have it in their collections. Finally, I contacted the Wisconsin Historical Society, also located in Madison. Marlin F. Hawley of the Museum Archaeology Program for the historical society responded that they did not have the object. No further reference to this object or any testing on this object were found post its removal from the MPM's collections.

Lastly, there are three objects currently not found in collections: an obsidian blade (A 49069), a broken stone pipe (A 49104), and a mica leaf (A 49122). A physical search was conducted at the MPM in all Ohio Archaeology drawers for these objects. I also searched MPM collection documentation: Catalog Cards, Catalog Books, Collection Files, Prehistoric Woodland

Exhibit Files, Disposition Books, and Educational Loan Files. No information was found leading to their discovery, so these three objects are still considered “Not Found” within the MPM collections.

After completing an inventory of this collection, I conducted a physical analysis of each present object including writing a description, weighing, measuring, photographing, and recording provenience information from both MPM and FM documentation. This information was used to create Object Biographical sheets for each individual object within the collection. For the four objects not found within the MPM I created more limited Object Biographical sheets that reflected descriptions from collection documentation within the MPM and FM. As the physical objects were missing, I was unable to complete my personal description, weighing, measuring, or photography of these objects. The 61 Object Biographical sheet for this collection can be found within Appendix A of this thesis.

## **Analysis of Collection by Material Type**

### ***Lithics***

From the 1945 exchange with the FM, the MPM received 18 lithic objects. Lithics are commonly defined as stone or rocks. As one of the most common material type found at the Hopewell site, Moorehead and Willoughby devoted entire chapters to describing lithic artifact varieties (Greber and Ruhl 1989; Moorehead 1922). Lithic material represents 29.5% of the MPM’s Hopewell site collection. It is crucial to note that none of the lithic objects within this collection are soil samples, nor are they simply rocks excavated from their natural source. Three of the lithic objects do not exhibit heavy modification by humans. They are the piece of galena

(A 49087), the piece of coal (A 49080), and a quartz crystal (A 49120). Although they do not demonstrate modifications like the remaining lithics, they are considered cultural material due to their recovery from an archaeological context where they were intentionally placed. Moreover, the galena was intentionally gathered from areas now known as Illinois or Missouri and brought to Ohio.

Lithic artifacts are most commonly modified by either flaking away of small pieces or through the grinding down of a surface. Flaked stone tools within the collection include the unifacial or one-sided specialized flakes referred to as microblades (Sutton and Arkush 2014). There is one grouping (or lot) of five microblades (A 49119a-e) within the collection. Additionally, this collection contains bifacial or two-sided flaked stone tools. There is one obsidian core (A 49123) which was removed from the collection, and two bifacial flint discs (A 49089, A 49090) which are ovate in shape. Although the obsidian core was unavailable for analysis, it was likely similar to the discs' rough flaking, which can be described as early-stage (Sutton and Arkush 2014). The discs exhibit large and rough flaking scars that are more akin to bifacial cores than to later-stage tools such as projectile points.

Later-stage flaked stone tools in this collection include three obsidian "blades" (A 49069, A 49070, A 49071), one obsidian projectile point (A 49106), and one restored quartz crystal blade (A 49072). Although one obsidian blade is missing (A 49069), it was likely similarly fashioned as the other blades, and with more precise late-stage flaking. Measurements for this blade were recorded in 1945 as 11 inches (27.94 cm) in length. The two obsidian blades present within the collection are shorter, measuring 18.9 cm and 18.8 cm in length. They have a triangular body shape expanding from the tip then maintaining a gradual broadening to the base.

At the flare of their bases there are two distinct corners that form the widest width of the blade, and are connected by a convex base.

The obsidian projectile point is much smaller in size than the other flaked stone tools present for analysis, measuring only 9.2 cm in length. It can be described as triangular in body shape, with corner notches, barb ears, expanding stem, and a convex base. Next, the quartz crystal blade measuring 14.6 cm in length has been nearly two-thirds recreated with plastics. The blade was restored prior to the exchange between the FM and MPM. Moorehead mentioned that C. L. Owen of Field Museum had restored many of the obsidian blades and knives in the collection, so it is possible that he or someone else at the turn of the twentieth century restored this blade as well (1922: 132). The original portion of the object contains part of the blade edge, a side-notch, an ear, and a portion of the stem, allowing accurate description of the blade's shape if it was consistent on each side. From the original piece the blade can be described as triangular in body shape, with a straight base, corner-notching, slightly expanding stem, and straight edge.

There are six objects within this collection that were created through the polishing and grinding down of their surface, classifying them as ground stone artifacts. These include two stone tablets (A 49102, A 49103), a rounded piece of amber with one smoothed surface (A 49128), two stone pipes (A 49104 which is missing, and A 49105), and a stone celt (A 49088). The first tablet (A 49102) is square in shape, with its longest side measuring 7.4 cm. On the MPM's Native American Graves Protection and Repatriation Act (NAGPRA) Inventory sheet it is described as possibly made of sandstone. The second tablet (A 49103) is 5.6 cm in length and is in a triangular shape that is described as "celt-like" in the MPM Catalog Book and Catalog Card. The piece of amber is round, with one flattened and smoothed side. The entire piece may have been rounded and polished, yet only one side seems finished with a smooth, and shiny

surface. It is important to note that amber is not listed as a common artifact collected from the Hopewell site or general Hopewellian cultural sites, making this object particularly unique. Within the FM “Ohio Digital Project” collections excel sheet (Center for Digital Research in the Humanities [CDRH] 2015) there was only one additional object made entirely of “resin” or amber, still housed at the FM (FM number: 56543).

The pipe that is not found in collections (A 49104) was described simply as a broken stone pipe from Burial 209 of Mound 23. The pipe that was present for my analysis (A 49105) is likely made of limestone and is T-shaped. A research project on this pipe was conducted by Paul Moriarity, who noted there was a contradiction between FM and MPM documented provenience. The FM “Ohio Digital Project” collections excel sheet (CDRH 2015) and FM catalog cards list the pipe being found in Mound 23, Burial 209. The MPM documentation lists the pipe as from Mound 18, Burial 181. Publications by Moorehead (1922), and Greber and Ruhl (1989) do not record a pipe within Mound 18’s Burial 181. In Mound 18 they record a broken pipe with a crack in the bowl present in Burial 170. This is confirmed by a September 10<sup>th</sup>, 1981 site map drawing of Mound 18 (Field Museum 2019c: Site Maps 1891: 30). The pipe found in Mound 18 is not a descriptive match to the collection object. As for the FM provenience, Charles Willoughby drew the pipe from Mound 23, Burial 209 in his notes later published by N’omi Greber and Katherine Ruhl. This drawing is a visual match to the pipe within the MPM’s collection, confirming the FM provenience of this object as Mound 23, Burial 209 (Greber and Ruhl 1989: 216, Figure 6.33).

The final lithic in the collection is a ground stone celt (A 49088) which can be further classified as a tool. Although there is little evidence of wear on the edges of the object, its shape is consistent with large stone pounding tools such as celts (axe-like tools) or pestles (Sutton and

Arkush 2014: 40-44). The object is very smooth, with a cylindrical body expanding to one end that is slightly flatter, with an opposite smaller end that is more rounded. There are apparent fracture lines through the object: one transects the middle of the object, and another occurs at the wider end of the object. Both fractures were repaired at some point.

**Table 1. Lithics**

<b>Type</b>	<b>Object (MPM Catalog #)</b>
Chipped Stone	Quartz “Blade” (A 49072) Obsidian “Blades” (A 49069-A 49071) Obsidian Projectile Point (A 49106) Stone Microblades (A 49119a-e) Chert Bifacial Discs (A49089-A 49090) Obsidian Core (A 49123)
Ground Stone	Stone Tablets (A 49102- A49103) Piece of Amber (A 49128) Stone Pipes (A 49104 -A 49105) Stone Celt (A 49088)
Other	Piece of Galena (A 49087) Piece of Coal (A 49080) Quartz Crystal (A 49120)

***Metals***

From the 1945 exchange with the FM, the MPM received 22 metal objects accounting for 36% of the collection. Not included within this count is one composite piece, (A 49091) mostly of faunal bones but containing a copper bead, which has been included within the faunal count. Metals are created from rock-based ores that when processed, have the characteristics of durability, strength, and shininess prior to corroding from exposure and age (LaGue 2015). At the Hopewell site, metal objects originated from natural sources that were very malleable. Metal objects within the MPM Hopewell collection include 19 cataloged copper objects, and 3

cataloged meteoric iron objects. It should be noted that the counting of these objects can be complicated, as some catalog numbers refer to lots of multiple small objects or grouping of fused objects. One example of this is object A 49081a-c which includes at least 13 portions of earspools that bonded over centuries interred, eventually breaking into three portions now labeled “a-c”. For simplicity, A 49081a-c has been counted as a single cataloged copper object.

Natural metals were gathered, and skillfully crafted by Native Americans into a variety of objects. This crafting included hammering, cutting outline shapes, excising cuts, embossing, engraving, layering of sheets of metal to increase thickness, and molding around another object (Greber and Ruhl 1989: 89-140; Shetrone 1930: 114). Copper was overwhelmingly the most common metal recovered at the Hopewell site; Moorehead estimated he had recovered around five thousand copper objects (1922: 116).

More recent studies of Hopewellian copper artifacts have described copper as, “...by far the most important metal to ancient Hopewell groups (based on amount recovered) and was used for the widest range of purposes” (Seeman, Nolan and Hill 2019: 1095). Copper was used to create a range of objects, from thin ornamental sheets to robust tools such as adzes. The most common copper form were earspools. Moorehead estimated 4,000 earspools were likely buried in the Hopewell site mounds, many unrecovered as they had fused with clay or other artifacts (Greber and Ruhl 1989: 149; Moorehead 1922). Testing of copper excavated from the Hopewell site suggests multiple source locations, including the Lake Superior region to the north and the Appalachian Mountains to the east (Hill, Seeman, Nolan and Dussubieux 2018). Lake Superior copper can be traced to Michipicoten Island, Ontario, Canada and Isle Royale, Michigan. It is interesting to note that copper objects found near Burials 260 and 261 within Mound 25 were representational of both Appalachian and Michipicoten sources (Seeman, Nolan and Hill 2019).

Copper objects from the MPM's Hopewell collection have not been tested at this time; however, it is likely that they are from either Appalachian or Lake Superior natural copper deposits as are other objects from the site.

Although much smaller in number, iron objects from the Hopewell site are interesting as they come from meteorite crashes on the earth surface which produced iron alloys that were harvestable and malleable by early Native populations prior to the knowledge of smelting. Moorehead had noted that although uncommon, around 30 fragments of meteoric iron had been found at the Hopewell site which was far more than other southern Ohio sites (1922: 130). It is possible that the beads A 49109 were misidentified as iron and are instead made of copper as they show some green oxidation. Testing of meteoric iron samples from the Hopewell site showed they and samples from the nearby Turner Mound group were identical in composition. These samples most closely matched the Brenham, Kansas pallasitic (stony-iron) meteorite located near Haviland, Kansas (Wasson and Sedwick 1969). These results were later confirmed by further testing with a neutron activation technique in 1976 (Seeman, Nolan and Hill 2019). Although the pieces of meteoric iron within the MPM's collection have not been tested, it is plausible that their origin would match the findings of other pieces from the same and nearby sites. This likelihood is further supported by the fact that only one source was determined for these two sites, the Brenham, Kansas meteorite.

**Table 2. Metals**

Type	Object (MPM Catalog #)
Native Copper	Breast plate (A 49073) Adze (A 49074-49075) Bracelet (A 49076) Earspools (A 49081a- 49086) Copper Bead and Bone Needles (A 49091)* Lot of 16 Beads and 8 Pearl Beads (A 49110) Tube Fragment (A 49111) Ornaments (A 49112- 49116) Button (A 49117) Plate Fragment (A 49129)
Meteoric Iron	Fragment with Textile imprint (A 49077) Lot of 19 Beads (A 49109) Chisel Fragments, 3 (A 49118)

\* A 49091 also contains multiple bone needle fragments that are discussed and counted in “Faunal”

***Faunal***

Faunal remains are specimens of animals found in archaeological contexts, categorized as either invertebrate or vertebrate remains (Sutton and Arkush 2014: 205). Invertebrate remains excavated from the Hopewell site include mollusk shells and pearls. Although pearls were never animals themselves, they are the byproduct of mollusks and therefore classified as faunal remains. When Greber and Ruhl evaluated artifacts within human burials in Mound 25 of the Hopewell site, they found that pearl beads were the most commonly occurring funerary object type, ranging from a single bead to thousands being present in burials (1989: 60). A much larger variety of vertebrate faunal elements were collected from the Hopewell site: a barracuda jaw, bird bones, small mammal bones, and large predatory animal elements such as bear teeth. It should be noted that no record of insect, amphibians, or reptile remains were collected by Moorehead. Also, the faunal remains from this site are mostly modified funerary offerings,

showing elements that were desired by Hopewellian peoples for mortuary contexts but not accurately representing their diet (CDRH 2015).

Present in the MPM Hopewell collection are 17 cataloged faunal elements, representing 27.8% of the collection. There are two lots of pearl beads, representing the only invertebrate objects in the collection (A 49108 and A 49110). Both catalog numbers represent lots of multiple beads given a single catalog number. In total 112 whole or fragmented pearl beads are in this collection. These pearls all appear to be from freshwater mollusks as they are dull, irregularly shaped, and inconsistent in color. The pearls would have been collected from the Ohio, Illinois, or Mississippi Rivers, then modified with drilling tools, allowing the pearls to be strung or suspended as beads (Ohio History Connection 2019).

The remaining 16 catalog numbers of faunal remains are from vertebrate animals. One marine animal element is present, a fossilized tooth from *Carcharodon carcharias* (or Great White shark) (A 49127). George Colvin's publication of shark teeth from Ohio archaeological sites included an analysis of this tooth from a provided photograph, along with descriptions of 36 other sharks teeth found at the Hopewell site across multiple excavations (2011). Colvin identified this tooth as from the species of *C. carcharias*, with a common type of perforated hole, tip wear, and reduction in the size of the saw-like serrated edges. Another interesting conclusion made by Colvin was that Hopewellian shark teeth were most likely collected from southwestern Florida due to coloration, preservation, and percentage of teeth from identified shark species (2011). Additionally, there was a discrepancy in documentation of this tooth's provenience between the FM and MPM. The MPM's NAGPRA inventory sheet placed the object within Burial 169 of Mound 25. Countering this, the catalog report for the FM Hopewell Collection listed the object as coming from Mound 17 (CDRH 2015). There is a similar looking perforated

shark tooth drawing within Moorehead's 1922 publication labeled "from Mound 17" (1922: 145: Figure 41, *b*). As Burial 169 is found within Mound 17, and no documentation could be found of shark's teeth within Mound 25, it can be concluded that object was most likely discovered in Mound 17, possibly in Burial 169 near an altar (Greber and Ruhl 1989; Moorehead 1922).

Bear teeth are another faunal category in the MPM's collection; four are present (A 49107, 49124- 49126). Moorehead estimated that, "[a]bout five hundred cut and perforated bear incisors were originally placed in the various mounds of the Hopewell group" (1922: 150). The bear canine teeth are either from local American Black Bears (*Ursus americanus*) or more distant Grizzly Bears (*Ursus arctos*). Unfortunately, differentiation between the two species' canine teeth is not possible barring destructive analyses as they are both similar in shape with overlapping sizes (Elbroch 2006). All four of the bear teeth have been modified by the drilling of holes likely to suspend the tooth for wearing or to aid in securing inlaid pearls. Other modifications to these teeth are incised circular designs, inlaying of a pearl, cutting or splitting, grinding to smooth edges, and the plugging of holes. Two teeth (A 49124 and A 49125) have a distinct green coloration to one side, likely an unintentional effect of the teeth being interred in Burial 248 of Mound 25. Within this burial were numerous copper plates and objects which the teeth likely were in contact with over centuries, resulting in a green coloration leaching into the teeth.

The final grouping of vertebrate faunal elements within the collection are the eleven cataloged incised bone fragments, and bone needle objects (A 49091- 49101). A grouping of bone needles and one copper bead (A 49091) is distinctive from the remaining specimens, as the bone needles are much smaller in size, thinner, smoother, and do not have any incised markings. Moorehead stated that a large number of slender pointed bone tools, unable to be classified as

bone awls, were found during his excavations (1922: 149-150). Although DNA analysis would be needed to confirm any of these specimen's taxon, it is likely that the bone needles were made from bird bones due to their thinness (Sutton and Arkush 2014). This is also supported by the FM catalog report which describes the complete lot as bird bone needles and awls divided between the FM and MPM (CDRH 2015: FM number 56025).

The final faunal remains are the incised bone fragments (A 49092- 49101). All the bones show modification in the form of incised designs. These design elements include geometric shapes, curving patterns, outlines, and layered effects created through crosshatching or repetitive uniform linear lines. All the bones are cut or broken, with some darkened from burning. Moorhead said that, “[t]he number of effigies and bone tracings found leads us to conclude that the Hopewell people possessed many of these artistically carved objects [showing damage from breaking and burning]” (1922:158). Due to their incomplete and small nature, the species from which these elements came is unknown without DNA testing. It is important to note that at the time of the NAGPRA inventory it was determined that none of these were human bones. The provenience of these specimens within the MPM record is complex, as on the NAGPRA inventory sheets they are listed as either being formerly FM number 56012 or 56733. From catalog records and a research project by Jamie Kelly, of the FM, it is likely that objects A 49092- 49099 and A 49101 are from a FM lot of over 500 bone fragments cataloged as FM number 56012 with the provenience of Mound 1 (CDRH 2015; Jamie Kelly 2000). Only one bone fragment from a separate lot is known to have been given to the MPM, FM number 56733D, which is written on MPM object A 49100.

**Table 3. Faunal**

Type	Object (MPM Catalog #)
Invertebrate Byproduct	Lot of 104 Pearl Beads (A 49108) Lot of 8 Pearl Beads, and 16 Copper Beads (A 49110)*
Vertebrate, Cartilaginous Fish	Shark Tooth (A 49127)
Vertebrate, Bird or Mammal	Bear Tooth with Pearl (A 49107) Bear Canine Teeth (A 49124- 49126) Bird Bone Needles and a Copper Bead (A 49091) Incised Bone Fragments (A 49092- 49101)

\* A 490110 also contains 16 copper beads discussed and counted in “Metal”

### ***Mica***

Bruce Trigger stated Hopewellian earthworks, “...often contained elaborate artifacts made of pottery, shell, mica, and native copper” (2006:159). Mica was a common Hopewellian artifacts and was recovered in larger amounts from the Hopewell site of Ohio. By distribution across the Hopewell site, mica was determined to be one of the major imported materials recovered (Greber and Ruhl 1989: 255). Mica is a type of silicate mineral which forms in layers or sheets that are light, soft, and flexible in nature (Minerals Education Coalition 2020). Multiple Hopewell site mounds had large quantities of mica as crafted funerary objects, and ritual offerings in altars. Mound 17 contained the largest amount of mica, thousands of unprocessed sheets layering 40 square meters of the mound floor. Due to recovered tools, textile remains, and the unprocessed nature of the mica in Mound 17, it is believed this area may have been designated for the processing of mica and fabrics (Greber and Ruhl 1989: 255-258).

Moorehead states Mound 17 excavations recovered enough mica to fill two large barrels full of the mineral sheets (1922: 142). The large size of the mica pieces led to the Appalachian Mountains being identified as the source location (Greber and Ruhl 1989; Lynott 2014; Moorehead 1922). In addition to the vast amount recovered and exotic origin, many mica pieces

are cut into forms demonstrating Hopewellian artistry. Willoughby’s study of mica artifacts noted that mica would have been easy to cut with obsidian or flint knives. Although the cutting was easy, Willoughby wrote that the designs show a “high degree of perfection” in free-hand drawn shapes and demonstrated that knowledgeable artists use guides for other shapes to make straight edges and flawless circles (Greber and Ruhl 1989: 255).

The MPM’s Hopewell collection has three pieces of mica leaf (A 49078, A 49079, and A 49122), forming just under 5% of the collection. One (A 49122) is currently not found within MPM collections, but documentation describes it as a mica leaf found in altar 1 of Mound 25. The other two objects (A 49078 and A 49079) are labeled as cut mica. Visual analysis of these pieces revealed irregular edges, flaking, and areas of loss, likely resulting from time in the ground, or excavation, packing, transport and handling the objects. Both pieces of mica are from ashpit 3 in Mound 25, and measure over 20 cm in length. One sheet (A 49078) is the only Hopewell site object on permanent display at the MPM, located in the exhibit *Wisconsin Archaeology: Pieces of the Puzzle* (2E16).

**Table 4. Mica**

Type	Object (MPM Catalog #)
Mica	Cut Piece (A 49078, 49079) Leaf (A 49122)

***Human Remains***

From the National NAGPRA Database it is known that in 2010 the FM housed the human remains of a minimum number of 212 individuals from the Hopewell site (FM Accession #: 31, 359, 562, and 4072) (United States Department of the Interior National Park Service [USDI, NPS] 2019a). A majority are remains of individuals buried as part of mortuary practices.

A smaller percentage were human remains in the form of singular bones, some modified, present within altars or in another individual's burial. Modifications of these bones include charring, incised designs, cutting or shaping, polishing, drilled holes, and grinding. Moorehead (1922) noted that these incomplete human remains included jaw, arm, and leg bones. Later works have also noted the presence of cranial elements (Johnston 2002; Shetrone 1930). Within Moorehead's publication (1922) it is explained that human superior and inferior maxillary bones were occasionally found at the site. Three different mounds (3, 18, and 23) contained at least one burial with an additional maxillary bone placed near the left humerus of a buried individual, interpreted as an object of ornamentation (Moorehead 1922: 91-94).

Within the MPM's Hopewell collection, a single specimen, consisting of a fragment of jaw including three teeth, has been identified as human remains (A 49121). Field Museum records indicated that the item was recovered from Mound 18, Burial 181. When Burial 181 was removed from the Hopewell site, it was cataloged as FM number 41618. An MPM Osteology Collection report from May eighteenth, 1998 identified A 49121 as both an item of human remains, and an associated funerary object to Burial 181 of the Hopewell site (FM# 41618). This report further described it as a left mandible fragment, with a straight cut bottom edge, from a young adult aged 16-25 years. This report and the NAGPRA inventory were conducted under the direction of the former Curator of North American Collections for the MPM, Dr. Ann McMullen, and osteological identification and verification was conducted by Christine Ruth, at the time a PH.D candidate at the University of Wisconsin-Milwaukee (A 49121, Hopewell Site Ohio Folder, NAGPRA Inventories, Anthropology Department, Milwaukee Public Museum, Milwaukee, Wisconsin).

From September 1996 until September of 1997, the human remains were loaned to the Ohio State Historical Society for study by Cheryl Johnston, a Ph.D. student from The Ohio State University,. Johnston’s dissertation characterized the remain as, “[a] heavily modified fragment of the alveolar process of a right human maxilla... [aged] between twenty and twenty-five years as estimated via seriation of the [maxillary] dentition” (Johnston 2002: 82). The sex of the individual was labeled as unknown. Johnston called it culturally modified because the jaw exhibited grinding on an edge below the teeth roots (Johnston 2002: 82).

Comparing the osteology report by the MPM and Johnston’s dissertation, there are two differences. First, the age estimation by Johnston falls within the original estimations but is narrowed to a six-year window of age. Second, Johnston identifies the specimen as a right maxilla (upper jaw), while early reports stated it was a left mandible (lower jaw). As the curve and tooth placement of the right mandible and left maxilla would be the same, it is easy to understand possible misidentification. From my visual inspection of the item, I classified it as a right maxillary fragment, in line with Johnston’s identification. The portion behind the empty third molar crypt is flat to decreasing in mass which is unlike the mandible’s increasing mass/angle after the third molar as it extends into the ramus. Additionally, the beveled medial and inferior portion of the fragment near its cut or ground edge is not smooth like a mandible, but instead appears consistent with the palatine process of the maxilla.

**Table 5. Human Remains**

Type	Object (MPM Catalog #)
Human Remain	Cut Maxillary Fragment (A 49121)

### ***EDX-Ray Fluorescence of Three Obsidian Artifacts***

X-ray fluorescence (XRF) is a method of testing materials with x-rays to calculate the amount of various trace elements present within the tested materials. Different types of XRF devices are available, however they all follow the same general process. A machine emits a short wavelength of energy (x-ray) towards a material. At the atomic level, the energy entering the material interacts with atoms composing the material. The energy causes inner shell electrons to be expelled from the atoms. This causes outer shell electrons to fill the newly created voids in the inner shell. The energy produced from the electrons moving results in a secondary x-ray being emitted from the atoms. XRF machines capture the secondary x-rays which are characteristic of the atoms creating specific elements. These x-rays are then examined for energies captured from the protons or to isolate the emitted wavelengths. This results in a determination of which elements are present and what their levels are within the material (Wirth and Barth 2020).

XRF can be used on many different material types, however some are better suited to this testing than others. One of the easiest substances to test is obsidian due to its glass-like and highly homogenous nature. XRF testing of obsidian is non-destructive and the element trace results can be compared to known element levels in obsidian source locations for North America and other locations. Obsidian from the Hopewell site of Ohio has been studied for many years, starting with early dating techniques and attempts to find obsidian sources (Hatch et al. 1990). Shetrone's excavations in Hopewell Site Mound 11 revealed the largest archaeological cache of obsidian in the eastern United States, ranging from small pieces of debitage to large formal blades (Hatch et al. 1990). Testing of obsidian from this cache and other places have been used to interpret Hopewellian exchange systems of exotic materials proving it was multi-generational and gathered from multiple sources, although Obsidian Cliff, Wyoming was the most prevalent

origin (Hatch et al. 1990; Stevenson, Abdelrehim and Novak 2004). Richard Hughes (2006) argued that obsidian sources were treated differently, and possibly given different value by Hopewellian peoples in Ohio.

In February of 2020, I was able to aid Dr. John Richards in XRF testing of three obsidian objects from the Hopewell Site collection at the MPM. Although five obsidian pieces were originally part of the collection, one object (A 49123) was removed from the collection in 1945, and a second piece (A 49069) is currently not found in the museum's collections. The three pieces we tested were bifacial blades A 49070 and A 49071, and the projectile point A 49106 (see Appendix A for their Object Biographical sheets). It is important to note is that blade A 49070 had two tests conducted on it: its' broken tip was tested in addition to the remaining portion of the blade. Both the broken tip and body were tested for this blade to ensure proper calibration of the machine and results, as their chemical analysis should be extremely similar.

The three MPM Hopewell collection artifacts were analyzed using a Bruker Tracer IIIv+ handheld X-ray fluorescence analyzer. Readings were taken at 40Kv, 50  $\mu$ A using Bruker's 12 mil Al, 1 mil Ti, 6 mil Cu (green) filter at normal atmosphere. Two readings of 200 second duration were collected from each sample. Net intensities for the  $K\alpha$  peaks of Mn, Fe, Zn, Rb, Sr, Y, Zr, Nb were converted to parts-per-million (ppm) using Bruker's factory installed calibration for obsidian. Results are shown in Table 6.

Values obtained for the MPM artifacts were compared to data reported by Hughes from an analysis of obsidian from selected Minnesota sites (Hughes 2007). Elemental concentrations for three of the four samples (A 49070, A 49070a, and A 49071) compare favorably to values reported for obsidian deposits from Obsidian Cliff, Wyoming (Hughes 2007). The fourth sample (A 49106) compares favorably to the Bear Gulch, Idaho source reported by Hughes and Nelson

(1987) and Hughes (2007; Figure 9). Graphs of individualized XRF readings and comparisons of the MPM obsidians can be found in Appendix D.

**Table 6. Elemental Concentrations (PPM) in Obsidian Artifacts from the Hopewell Site**

Sample	RbKa1	SrKa1	Y Ka1	ZrKa1	NbKa1	MnKa1	FeKa1	Comment
MPM_A 49070-001	212	2	75	161	43	205	8188	Ross Blade, Obsidian Cliff, WY
MPM_A 49070-002	216	2	72	159	42	188	8136	
MPM_A 49070a-001	233	1	75	169	45	251	9453	Tip of 49070, Obsidian Cliff, WY
MPM_A 49070a-002	235	3	77	168	46	208	9202	
<b>AVG</b>	<b>224</b>	<b>2</b>	<b>75</b>	<b>164</b>	<b>44</b>	<b>213</b>	<b>8745</b>	
<b>SD</b>	<b>11.8</b>	<b>0.6</b>	<b>2.1</b>	<b>5.1</b>	<b>2.0</b>	<b>27.1</b>	<b>681.3</b>	
<b>%RSD</b>	<b>5%</b>	<b>30%</b>	<b>3%</b>	<b>3%</b>	<b>5%</b>	<b>13%</b>	<b>8%</b>	
MPM_A 49071-001	207	2	64	143	38	245	8174	Ross Blade, Obsidian Cliff, WY
MPM_A 49071-002	203	2	63	141	39	200	7944	
<b>AVG</b>	<b>205</b>	<b>2</b>	<b>63</b>	<b>142</b>	<b>39</b>	<b>223</b>	<b>8059</b>	
<b>SD</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>32</b>	<b>163</b>	
<b>%RSD</b>	<b>1%</b>	<b>1%</b>	<b>0%</b>	<b>1%</b>	<b>3%</b>	<b>14%</b>	<b>2%</b>	
MPM_A 49106-001	168	39	42	285	54	376	11507	Projectile Point, Bear Gulch, ID
MPM_A 49106-002	161	41	42	278	51	346	11514	
<b>AVG</b>	<b>165</b>	<b>40</b>	<b>42</b>	<b>281</b>	<b>53</b>	<b>361</b>	<b>11511</b>	
<b>SD</b>	<b>5</b>	<b>2</b>	<b>0</b>	<b>5</b>	<b>2</b>	<b>22</b>	<b>5</b>	
<b>%RSD</b>	<b>3%</b>	<b>4%</b>	<b>0.1%</b>	<b>2%</b>	<b>4%</b>	<b>6%</b>	<b>0%</b>	

The two large Ross blades have only a site-wide provenience, but Obsidian Cliff material is widely considered to comprise the bulk of Hopewellian obsidian artifacts at the Hopewell site (Gordus, Wright and Griffin 1969). Although no inter-site provenance was maintained, Moorehead only noted obsidian formal tools in his excavations of Mound 25, mentioning that Squier and Davis had also collected obsidian from Mound 9 of the site. Moorehead inferred that over five hundred obsidian implements had been placed within Altar 2 of Mound 25, but many were fragmented from burning activity (1922: 131-133). As the caches in Mound 11 were discovered after Moorehead (Shetrone 1930), it is possible that the obsidian within the MPM's Hopewell collection was recovered from Altar 2 of Mound 25. Hughes's (2006) analysis of one

hundred-seventy obsidian artifacts from the Hopewell site determined that over 90% of the analyzed sample could be sourced to Obsidian Cliff, Wyoming. However, about 9% of the obsidian represented Bear Gulch, Idaho sources (Hughes 2006:367). The MPM projectile point (A 49106) resembles points from the Hopewell site illustrated by Hughes (see Figure 20.3, E-G) and follows the pattern observed by Hughes wherein all Bear Gulch samples were represented by formal tools, while all debitage samples conformed to the Obsidian Cliff chemical composition. The presence of the two most common sources of obsidian at the Hopewell site within the MPM’s collection demonstrates this collection’s representative nature for the site.

Sample	RbKa1	SrKa1	Y Ka1	ZrKa1	NbKa1	MnKa1	FeKa1	Comment
05-373,	168	49	44	297	53			Bear Gulch, ID
21-AK-7,	160	46	42	291	54			Bear Gulch, ID
21-ML-1,	166	48	41	300	55			Bear Gulch, ID
<b>AVG</b>	<b>165</b>	<b>48</b>	<b>42</b>	<b>296</b>	<b>54</b>			
<b>SD</b>	<b>4</b>	<b>2</b>	<b>2</b>	<b>5</b>	<b>1</b>			
<b>%RSD</b>	<b>3%</b>	<b>3%</b>	<b>4%</b>	<b>2%</b>	<b>2%</b>			
21-BW-24,	124	75	32	89	15			Malad, ID
21-DL-2,	118	72	33	84	14			Malad, ID
<b>AVG</b>	<b>121</b>	<b>74</b>	<b>33</b>	<b>87</b>	<b>15</b>			
<b>SD</b>	<b>4</b>	<b>2</b>	<b>1</b>	<b>4</b>	<b>1</b>			
<b>%RSD</b>	<b>4%</b>	<b>3%</b>	<b>2%</b>	<b>4%</b>	<b>5%</b>			
21-AN-2,	242	4	77	169	44			Obsidian Cliff, WY
21-BL-37,	224	5	69	157	10			Obsidian Cliff, WY
21-BL-37,	250	5	77	164	41			Obsidian Cliff, WY
21-CA-586,	249	7	76	163	39			Obsidian Cliff, WY
21-DL-101,	245	6	79	175	43			Obsidian Cliff, WY
21-ME-1,	231	6	79	168	44			Obsidian Cliff, WY
21-ML-1,	218	6	74	160	40			Obsidian Cliff, WY
21-NI-44,	241	7	81	170	44			Obsidian Cliff, WY
21-SL-1,	223	5	72	162	42			Obsidian Cliff, WY
21-SL-785,	250	6	81	172	45			Obsidian Cliff, WY
Roosevelt Lake	255	3	86	179	46			Obsidian Cliff, WY
<b>AVG</b>	<b>239</b>	<b>5</b>	<b>77</b>	<b>167</b>	<b>40</b>			
<b>SD</b>	<b>13</b>	<b>1</b>	<b>5</b>	<b>7</b>	<b>10</b>			
<b>%RSD</b>	<b>5%</b>	<b>22%</b>	<b>6%</b>	<b>4%</b>	<b>25%</b>			
21-AN-108,	188	21	70	228	52			Powder River, WY
21-AN-108,	190	16	71	236	53			Powder River, WY
<b>AVG</b>	<b>189</b>	<b>19</b>	<b>71</b>	<b>232</b>	<b>53</b>			
<b>SD</b>	<b>1</b>	<b>4</b>	<b>1</b>	<b>6</b>	<b>1</b>			
<b>%RSD</b>	<b>1%</b>	<b>19%</b>	<b>1%</b>	<b>2%</b>	<b>1%</b>			

Figure 9. Trace Element Concentrations (PPM) in Obsidian Artifacts from Selected Minnesota Sites (after Hughes 2007\*)

\*Malad, Idaho and Power River, Wyoming concentrations were used within Hughes 2007, and are included as comparisons for Bear Gulch, Idaho and Obsidian Cliff, Wyoming.

### ***Discussion of Collection Analysis: Findings and What is Missing***

From the above descriptions of the MPM's collection by artifact type, it should be clear that a variety of materials are present, the most numerous being metals, followed by lithics, then faunal. Also, there are small amounts of mica, and one set of human remains present in the collection. The wide array of materials, object types, and shapes are representational of a large cross-section of materials recovered from the Hopewell site. It is known from archival documents that these materials were duplicates of other specimens already in the FM Hopewell collection. It is also known that the MPM was eager for the exchange, writing in an MPM Annual Report that, "an outstanding collection of archaeological specimens illustrating the famous Hopewell mound culture of Ohio were secured" (MPM 1945). The Hopewell site materials formed an exemplary collection, acting as a specimen type collection which could identify other Hopewellian materials and represent the famous archaeological site for research and exhibition endeavors.

Although the MPM's collection contains a variety of Hopewellian objects, there are specific artifact types that were present and collected from the Hopewell site, but were not part of the exchange between the FM and MPM. A major artifact type that is not represented in the MPM collection is ceramic artifacts or pottery. The FM Catalog lists 27 catalog numbers representing pottery pieces and groupings of sherds. Further demonstrating the importance of ceramics, this artifact type was described within individualized sections in both Willoughby's (Greber and Ruhl 1989) and Moorehead's (1922) writings on the Hopewell site and collection. It should be noted that another exchange between the FM and the Museo Nacional de Antropología in Mexico City (MNA) in 1934 contained 48 ceramic artifacts. Additionally, a large amount of

Hopewell site ceramics was exchanged with the University of Michigan in 1943, two years prior to the MPM exchange.

Another missing artifact type from the MPM's collection is botanical specimens. Remains of plant materials including wood, seeds, reeds, and plant fiber textiles were recovered from the Hopewell site in smaller numbers and are still present in the FM collection. The FM catalog lists seven catalog numbers of textiles, three of bark or wood, one of reed, one of seeds, and one of nutshell. Although they are present in the larger FM collection, it is likely that the FM decided to maintain possession of these botanicals and plant textiles because, so little was collected. Prior to early twentieth century excavation advancements, such as screening and flotation, botanicals were often overlooked and under-collected in archaeological contexts. The fact that Moorehead collected some of these materials (including another 50 plus seeds in the Peabody collection; Greber and Ruhl 1989: 301) and gathered soil and rock samples (FM number 56041, 56534, and 56756 A-E) demonstrates the scientific grounding of his investigations.

In his publication on the site, Moorehead records the presence of bark within multiple burials within Mound 25 (Burials 247, 249-259, 260-261, and 270), and with a group of objects (Moorehead 1922). Bark was described as forming layers over or between objects, which Moorehead recognized as aiding in the preservation of remains and artifacts (1922: 119). He mentions that bark pieces were exceedingly fragile in nature, "...notwithstanding our efforts to preserve fragments" (1922: 109). Although the bark made preservation difficult, two cataloged bark objects are noted within the FM Hopewell collection (FM number 56373 and 56603). Moorehead further lamented that, "[w]e are placed at a disadvantage since our studies of prehistoric artifacts are confined to those of metal, stone, clay or bone, including few shells...

Many fine examples of primitive wood carving doubtless existed” (Moorehead 1922: 170).

Moorehead understood that the archaeological record of the Hopewell site was skewed toward materials that would survive underground for centuries. He believed that plant materials such as wood were far more commonly used by Hopewellian peoples than the amounts represented in the archaeological record. Clearly botanicals were an important material used by Hopewellian peoples, but poor preservation, and the small quantities collected are likely reasons why this material type was not exchanged with the MPM. There are no recorded cataloged botanicals within the FM collection that have left the museum in exchanges or sales.

There are two concluding points of examination for the analysis of the materials within the MPM’s collection. First, there were some differences in the treatment of material types. As discussed above the lack of ceramics and botanicals in the MPM’s collection may have been the result of the FM’s unwillingness to part with these materials as few were collected in the field by Moorehead and his team. Also, the MPM’s measurements of objects upon entry into the museum differed by object type. The only recorded measurements within the Archaeology Catalog Book were of the blades and adzes made of obsidian, copper, and crystal (A 49069-49072 and A 49074-49075). It could be concluded that the individual entering the information in the catalog in 1945 decided to stop recording measurements after the first seven artifacts due to the size of the accession. However, object A 49073, a copper breastplate, was the fifth object accessioned in the collection, yet its measurements were not recorded. This may indicate some preference to measure only the objects falling in the category of large tools or weapons, while other material types received much less descriptive attention.

Second, before expanding this discussion to include other exchanges of Hopewellian materials it is crucial to understand that the MPM and the FM viewed the collection in differing

ways. A variety of criteria is utilized across institutions when determining if objects should have unique catalog numbers, and for determining object counts. It is not uncommon to find numerous small and similar objects placed within a lot or group of objects which receive a single catalog number. Field Museum documentation for objects within the 1945 MPM exchange lists only 47 cataloged objects. When the collection reached the MPM, it was decided that some FM catalog numbers representing lots of similar objects would be counted as more than one MPM catalog number. An example of this is a single FM cataloged mass of copper earspools and pieces (FM 56704). Within the MPM documentation for this same exchange, there are 6 individual catalog numbers for copper earspools (49081-49086), with 49081 containing parts a-c and 49082 containing parts a and b. Overall, the MPM counted the five additional copper earspools, eight individual decorated faunal bones, and one further bear tooth; bringing the total of specimens from the FM's 47 to the MPM's 61.

### **Comparison to Other Field Museum Exchanges**

After May 4<sup>th</sup> of 1895 all known Hopewell site materials collected by Warren K. Moorehead (aside from a small amount of materials he maintained, and pieces shipped by Cresson to the University of Pennsylvania Museum) had been returned to Chicago and were accessioned into the newly established Field Museum. It is understood from FM collection documentation, that twelve exchanges of Hopewell site materials occurred from 1925 until 1962. Object exchanges were a common method for museums to diversify their collections, make space for new acquisitions, and negotiate for new objects. These exchanges were with four other museums, three individuals likely representing museums or publicly held collections, the University of Michigan, and two private individuals. The two private individuals were a 1932

exchange with Byron Knoblock of Illinois and a 1933 exchange with Warren K. Moorehead (Moorehead was associated with multiple museums and universities over his life, but also maintained some of the Hopewell materials privately). As part of these interactions, the FM received a variety of materials from reconstructed Woodland vessels from the MPM, to artifacts and human remains shipped from Australia. Alongside these exchanges, in July of 1940, the museum removed one item from its collection, a celt (FM 56266) for sale to Paul J. Warner who was an amateur ethnologist employed by the FM. This was the only known sale of a Hopewell artifact by the FM. Further information on these exchanges can be found in Appendix B of this thesis.

In order to make comparisons, I have chosen to discuss five of the twelve FM exchanges in further depth. The five exchanges I have chosen are directly between the Field Museum and museums or universities, in which more than fifteen Hopewell site objects were exchanged. These parameters will allow me to focus on interactions that are similar to the MPM exchange, by eliminating from this discussion smaller exchanges that occurred. Table 7 contains the FM counts of objects exchanged with the Milwaukee Public Museum in 1945, the Museo Nacional de Antropología in Mexico City in 1934 and again in 1951, the Ohio State Archaeological and Historical Society in 1925, and the University of Michigan in 1943. It is important to know that in June of 1931 the FM exchanged with the Museo Nacional de Arqueología, Historia, y Etnología in Mexico City. By December of 1951 the museum had changed its name to the Museo Nacional de Antropología.

Critically, due to lack of precise archival documentation, I have not incorporated the 1931 exchange with Donald O. Boudeman of the Kalamazoo Public Museum for the comparison discussion. This exchange contained 90 objects, some from the Hopewell site and some from

Wisconsin and Michigan. The objects were described as chiefly copper and without catalog numbers (Memo Number 462, 21 May 1931, Accession 31 File, Field Museum Anthropology Archives, Chicago). There were no archival documents found at the FM that listed the exact number of objects from the Hopewell site given in this exchange. The catalog report does list ten specimens from the Hopewell site; however, it is possible that more objects were given in the 1931 exchange that did not have associated catalog numbers (CDRH 2015). In 1999 the FM received over one hundred objects from the Kalamazoo Public Museum some from the Hopewell period and some with FM numbers, however lack of province information has continued to create difficulties in identifying objects exchanged in 1931. For these reasons this exchange is not discussed here, but is included within Appendix B.

From Table 7, it can be determined that some exchanges were quite different from the MPM's exchange. The most drastically different was the 17 ceramics given to the University of Michigan. The University of Michigan is known to have large ceramic collections within their North American Archaeology collection, and possibly made a request to the FM for ceramic objects. Unlike the MPM exchange, the University of Michigan received only one material type, while the MPM received five. Further distancing these two exchanges, the MPM did not receive any ceramics in its exchange. Only the University of Michigan and the 1934 exchange with the Museo Nacional de Antropología (MNA) contained ceramics objects.

Two other material types are not well represented within Table 7. Mica was only given in small amounts (3 and 6 pieces) for the MPM and the 1951 MNA exchanges. The final category demonstrating a difference is that of human remains. Only one known set of human remains is known to have been part of an exchange. This is the human jaw fragment in the MPM's collection. There is no other documentation from FM exchanges identifying human remains. In

the Ohio State Archaeological and Historical Society 1925 exchange, a bone awl and a composite piece with a bone handle were listed; however, neither piece was described as human. No inventory of Culturally Unidentified Human Remains excavated from the Hopewell site by Moorehead was published by the now named Ohio History Connection (USDI, NPS 2019a). Also, 18 bones are listed within the 1934 MNA exchange documentation. There are no further descriptions of these bones, and as an international museum, the MNA would not have completed inventories of human remains under the Native American Graves Protection and Repatriation Act. These 18 bones were included within the faunal count of the table (Table 7), but it is unknown if any were human.

**Table 7. Field Museum Exchanges with Institutions (With More Than 15 Objects)**

<b>Recipient</b>	<b># Lithic</b>	<b># Metal</b>	<b># Ceramic</b>	<b># Faunal</b>	<b># Mica</b>	<b># Human*</b>	<b># Replicas</b>	<b>Totals</b>
Milwaukee Public Museum	18	17		8	3	1		47
Museo Nacional de Antropología (1934)	56	3	48	47				154
Museo Nacional de Antropología (1951)	16	16		6	6		4	48
Ohio State Archaeological and Historical Society	38 + 4 boxes of discs	46		3			15	102 + 4 boxes of discs
University of Michigan			17					17

\*Human count is only known for MPM. Objects labeled “bones” in documentation were counted as faunal, but they possibly could have been human.

The object counts recorded in Table 7 do not always match what is reflected within the catalog report (CDRH 2015). Numbers recorded closer to the time of the exchange were chosen as more accurate representations of what occurred, as the database was created nearly a century after these exchanges took place. It should be noted that I was provided by FM staff with printed lists of exchanged objects between the FM and the MPM, MNA, Ohio History Connection (OHC, formerly Ohio State Archaeological and Historical Society), University of Michigan, and Donald Boudeman. Upon comparison of these lists to older archival documents, I found that the older documents revealed higher object counts for all exchanges. For this reason, I chose to utilize the older Anthropology Department Archival documents to record the number and type of objects given in these exchanges. Photocopies of the archival documentation used can be found in Appendix B.

Additionally, the counts reflected in Table 7 are only from the FM, and the exact number of objects exchanged is difficult to determine. As explained in the “Discussion of Collection Analysis: Findings and What is Missing” section above, each institution has its own way of determining how objects are cataloged. Four similar objects can be labeled by one institution as a group (lot) represented by one number. A second institution may place alphabetical extensions after a shared catalog number to demonstrate there are four related objects. Finally, a third institution may bestow each object with its own individualized number. From the examination of the MPM’s exchange, it is known that the FM often gave a single number to groups of multiple objects, often not including the exact counts of these multiple objects within their early twentieth century documentation. Determining exact object counts is a complex effort. The numbers recorded in Table 7 provide evidence of the quantity and type of objects exchanged with other institutions. The exact numbers recorded should be taken with a grain of salt, as they were likely

altered upon accession into other museums, and most likely are not exact counts of each physical piece.

To promote comparisons of FM exchanges, I created a bar graph depicting four museum exchanges and the material types given (Figure 10). The graph does not include the University of Michigan exchange, as it contained the smallest number of objects of a single material type.

Figure 10 below shows the four largest exchanges from Table 7: MPM, MNA 1934, MNA 1951, and OHC. In this graph, the 1934 MNA exchange stands apart as the most diverse. It contains the only ceramic objects, it has the smallest amount of metals, and it contains the largest quantities of lithics and faunal materials present. The OHC exchange is the second most unique, representing only three material types, and containing the largest amount of metals and second largest amount of lithic materials exchanged.

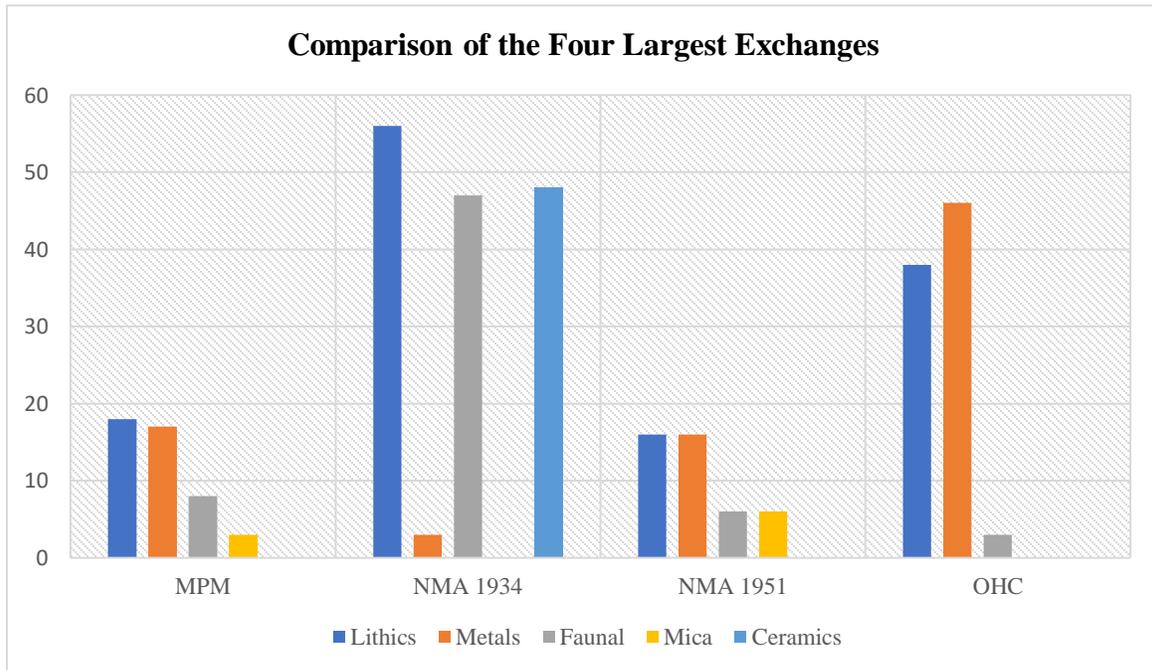


Figure 10. Comparison of the four largest exchanges

Figure 10 shows that two exchanges are strikingly similar in nature. Both the MPM and the MNA 1951 exchanges contain lithics, metals, faunal, and mica types. Further, the amounts of materials given from each category are extremely close. It is intriguing that these two exchanges would be the most similar, as the MPM's 1945 exchange occurred between the two MNA exchanges in 1934 and 1951. The first MNA exchange in 1934 was extremely different in amount and material types comparatively to the MPM. Yet six years after the MPM's exchange, in 1951 the FM again traded with the MNA. This later exchange seemed to mirror the 1945 MPM exchange in material types chosen and quantities of objects given from the Hopewell site.

However similar these two exchanges may be, there is one major difference between them. The MNA 1951 exchange included 652 FM specimens from nearly every corner of North America and numerous Oceania locations. Hopewell materials were only a small portion of this larger exchange, unlike the MPM exchange of only Hopewellian materials. From 1935 until 1964, Paul Sidney Martin served as Chief Curator of Anthropology for the FM (Field Museum 2019b). Both exchanges occurred during his tenure, so it is possible that Martin used the MPM exchange as a template of what to give during the 1951 MNA exchange, while the curators were amassing hundreds of other objects from the collection to be shipped to Mexico.

## **Conclusion**

In conclusion, the 1945 exchange between the Field Museum and Milwaukee Public Museum can be quantified as either 47 artifacts (FM documentation) or 61 artifacts (MPM documentation) arising from differing numbering methods between the institutions. Within this exchange objects made of stone, metal, animal remains or byproducts, mica, and one human remain were given to the MPM. The diverse range of material types, and objects were duplicates

from the FM collection that illustrated the Hopewell culture of Ohio as a specimen type collection. Some of the materials were analyzed more than others during the original accession, and in later research projects. Although the MPM collection contains six different material types, no ceramics or botanicals from the Hopewell site were received from the FM.

The MPM exchange was one of twelve exchanges of Hopewell site materials (with one additional sale) that the FM participated in from 1925 until 1962. Object exchanges were a common method for museums to diversify their collections, make space for new acquisitions, and negotiate for new objects. The MPM's exchange was the fourth largest exchange of Hopewell site objects and was extremely similar in Hopewell material type and counts as an exchange between the FM and the Museo Nacional de Antropología, Mexico City in 1951. It is possible that the 1951 exchange mirrored the 1945 MPM exchange purposefully for Hopewell site materials.

## **Chapter 5: Transformation of Interpretations**

This chapter aims to describe the evolving nature of interpretations for the Hopewell site and its related artifacts. The historiography of the museums and archaeology as discussed in previous chapters, demonstrated that the Colonialist history of museums has impacted collection, research, preservation, interpretation, and exhibition. In both of these fields interpretation has become a trending topic. For museums in particular, Janet Marstine advocated discussions on explicit and implicit information being presented to museum audiences within museum spaces (2005: 5). The objects gathered, the information written on labels, and the narration chosen to weave exhibits together are subjective choices made by individuals in museums. To visitors, museum interpretations are perceived as factual and authentic due to the esteemed nature of museums (Marstine 2005). The public may never question what biases, experiences, or worldviews have shaped the collections and interpretations within museums. Therefore, interpretation of collections and locations such as those associated with the Hopewell Cultural Horizon should be critically analyzed to draw conclusions of how interpretations should evolve for a more inclusive and ethical future.

Prior chapters of this thesis have provided the ancient background of the site, described nineteenth to 20<sup>th</sup> century archaeological excavations, presented archaeological theories on the Hopewell Culture over time, and have described the life journeys of a collection of Hopewell site objects. This chapter will concentrate on the interpretation of the Hopewell peoples and sites within two museums and two National Parks. First described are Field Museum (FM) exhibits on the Hopewell site; from the opening of the museum to today, and a brief note about a new exhibit in the works for 2021. Next, the discussion turns to the Milwaukee Public Museum (MPM) which received 61 objects from the Hopewell site in 1945. As the MPM Hopewellian displays

focus on Wisconsin sites and not those of southern Ohio, the discussion will follow usage and presentation of Ohio Hopewell site objects in exhibition. The second section of this chapter evaluates interpretations at the National Parks in Ross County, Ohio. First, the history of interpretations at the Hopewell site is presented. A second example of transforming interpretations will be provided by the Mound City Group, including a brief mention of the visitor center which provides connections across all earthworks in the Hopewell Culture National Historical Park (NHP). The chapter will close by discussing the Hopewell Mound Group currently (as I experienced in August of 2019), and future proposals for the site.

## **Interpretations at Museums**

### ***Field Museum***

The earliest interpretation of the Hopewell collection excavated by Moorehead would have occurred at the World's Columbian Exposition (WCE). The exposition was filled with cabinets of curiosity, presenting numerous objects with few to no labels in glass cases and shelves. Also, a small number of new diorama-style exhibits were presented at the WCE (see Figure 7). At its close, a museum was created to commemorate the WCE. The FM followed the WCE presentation styles as it acquired many of the exposition's displays, specimens, and objects. One photograph from 1898 shows hundreds of Hopewellian flint discs in a glass case piled high with few labels (see Figure 8). Although the case may have been a simulation of caches from the Hopewell site, the cabinet did not depict with accuracy the way these objects were buried within the mounds.

By 1921 the FM had changed its name, moved to a bigger building, and shifted its mission from commemoration of the WCE to becoming a predominant natural history museum. From 1942 to 1944 exhibits were created in Hall 4 of the Museum to display objects from Native groups in North America. Although none of the objects later exchanged with the MPM were on display, ten exhibit cases were created to display many objects from the larger Hopewell site collections and to interpret the Hopewell Indians of Ohio. From a discussion I had with FM Collections Managers Jamie Lewis and Jamie Kelly (Kelly is also the Head of Anthropology Collections), the 1940s interpretation of the Hopewell site was simple with few sentences of information. The exhibits focused on presenting the objects as part of burials from the archaeologically defined “classic burial mound stage” of prehistory (Figure 11). Very little information was presented for individual objects, and some displays exhibited the objects as pieces of art without interpretation. Human remains were also on display, a practice that was common before the Native American Graves Protection and Repatriation Act (NAGPRA) was passed in 1990 (Figure 11).

Additionally, daily life for Hopewellian peoples was presented in two separated gendered cases. The *Woman's Work* case contained sewing, preparing food, weaving, and planting while the *Man's Work* had fighting, fishing, hunting, and carpentry (Figure 12). This differentiation of activities, following stereotypical gender roles in America, was not supported with any explanation or evidence supporting this interpretation. Across all cases, the exhibit graphics chose to mimic Hopewellian human effigies in the exhibit's depictions of humans in paintings and manikins (see Figure 12). Unfortunately, the stylized facial features were distracting, cartoonish in appearance, and distanced visitors from the human element of the presentation.



Figure 11. FM *Burial Ceremonies Exhibit*, Hall 4, Case 15 west, 1944. ©Field Museum of Natural History. CC-BY-NC. 85718781-4a16-4ac5-a5c5-4402a76a41ca. <https://fm-digital-assets.fieldmuseum.org/81/772/A91200c.jpg> (accessed on 2020/1/15).



Figure 12. FM *Women's Work Exhibit*, Hall 4, Case 22 west, 1943. ©Field Museum of Natural History. CC-BY-NC. 71622185-ab51-4d1c-a5b6-f7886acd450f. <https://fm-digital-assets.fieldmuseum.org/81/509/A91027c.jpg> (accessed on 2020/1/15).

In 2007, a new exhibit *The Ancient Americas* opened at the FM, which replaced former exhibits. Still open at the time this thesis was written, the exhibit interprets artifacts and ancient cultures of the Americas from an archaeologists' perspective. Lewis and Kelly explained there was an attempt made to incorporate Native American voices later in the exhibit creation; however, their input did not affect direct interpretations of artifacts. Instead, decisions on object presentation were handled by museum professionals, archaeologists, and anthropologists in a processual manner. Thematically the exhibit examines social stratification (or shared solutions) in each presented culture over a vast period of time.

The Hopewell culture is presented within the *Powerful Leaders: A Few Make Decisions for All* section of the exhibit hall. In this exhibit, the achievements of the Hopewellian peoples across the Eastern Woodlands are argued to be the result of influential leaders. Hopewellian societies are compared to others with influential leaders in ancient Egypt, Mexico, and Cahokia. In one exhibit case, many artifacts exotic to Ohio are presented in artistic groupings that circle descriptive labels (Figure 13). Each object on display is numbered with corresponding identification and provenience information located at the bottom of every case. Next is a diorama of the Hopewell site, with reconstructed earthworks and an educational video playing (Figure 14). Information on the site's history and mention of other Hopewell earthworks is found below the diorama on a panel titled "The Hopewell Mound Group Provided a Treasure- and a Name". I find the reference to "treasure" disrespectful as the majority of Moorehead's collection at the FM (most of the exhibit objects) were removed from burial contexts alongside human remains as funerary objects and ritual offerings. The word "treasure" reflects a Colonial mindset in which artifacts are simply tokens of wealth or prizes for museums.



Figure 13. FM *Many Hopewell Goods Came from Far Away* case, taken 7/26/2019

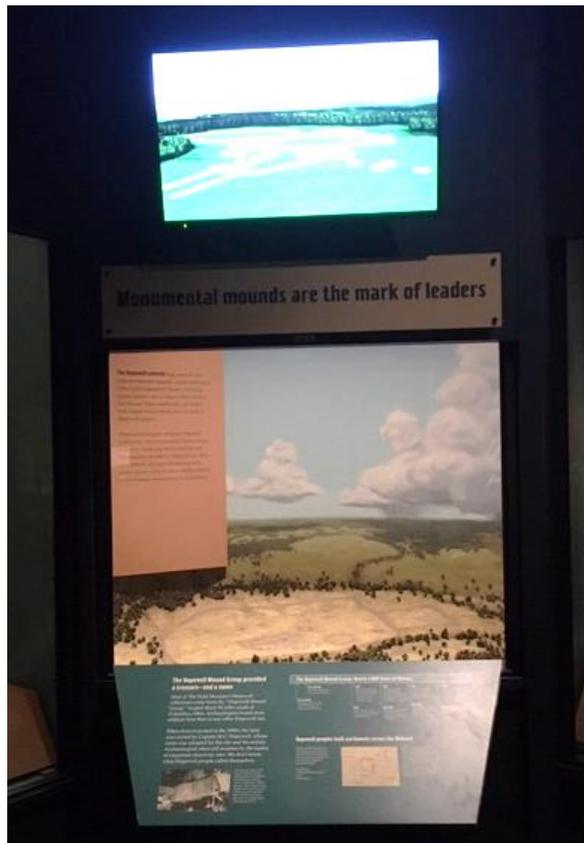


Figure 14. FM *Monumental Mounds are the Mark of Leaders* diorama, taken 7/26/2019

The final two cases present objects in a similar manner to the first case, with individual object labels, visually appealing design, and interpretive text. They cover the topic of craft specialization and our understanding, from archaeological contexts, of daily life for Hopewellian peoples (Figure 15). The last panel of the Hopewell exhibit is the best de-colonizing use of archaeological interpretations. A life-sized image of a child is in the foreground, while a scene and description of daily life are presented in the background. The panel calls visitors to imagine they are in the child's place, living within a Hopewellian society. The panel tells a story about family life, containing dialogue and actions that are both relatable and informative to visitors (Figure 16).



Figure 15. FM *Many Clues Help Reconstruct Hopewell Life* case, taken 7/26/2019



Figure 16. FM *Imagine* exhibit panel, taken 7/26/2019

Briefly, it should be stated that a new Native North Americans exhibit hall is scheduled to open in Fall of 2021. A panel for this new exhibit in the FM described it as “fresh and more inclusive perspectives on Native American cultures”. To create this exhibit, the FM partnered with a committee of Native American scholars and community leaders. This partnership is a great example of how museums can build community ties and incorporate diverse perspectives in a manner that de-colonizes museums. It will be interesting to see how ancient Native Americans will be represented and interpreted in this future exhibit.

## *Milwaukee Public Museum*

In 1945, a portion of the Hopewell collection was sent from the FM to the MPM as part of an objects exchange. The MPM's Annual Report references this exchange and states, “[e]ventually this will make a fine exhibit” (MPM 1945). This statement reveals a justification for this exchange: that an exhibit would be made, and the objects would be placed on display for the public. However, an exhibit solely for the Ohio Hopewell site collection was never created, and very few objects from the site have spent time on public display at the MPM. At most, two objects from the Ohio Hopewell collection were placed on display at the same time. This occurred from 1964 until 1976 within the hall of *Wisconsin Archaeology*.

Within this hall, *The Prehistoric Indians of Wisconsin* exhibit contained fifteen cases, many interconnected along the wall in a “u” shape (see Figures 17 and 18). By following the cases along the wall, visitors were exposed to a timeline of ancient artifacts and cultures. It started with Paleo-Indians of 8,000 BC and moved through seven archaeologically defined periods before transitioning to another exhibit on the historic period. One exhibit case was dedicated to *Hopewellian Indians* (Figure 17). The case's subtitle read, “entered Wisconsin about 100 AD spreading from a center in Ohio and settling mainly along the Mississippi River. Most of our knowledge of them is derived from the excavation of their large burial mounds”. This introduction is followed by an image of an excavated burial, and a much smaller image of an earthen mound to the side. The case holds over eighty artifacts from different archaeological sites in Wisconsin and other states. Most of these artifacts are placed on the ground of this exhibit, organized by associated activity type with brief subtitles. There are numerous examples presented, making the case feel busy with little space between groupings. The interpretation chose to highlight quantity and range of objects. There were two longer labels associated with

clay funerary masks and the Illinois Knight figurines. The walls of this exhibit have more space between objects and incorporate plants within the corners that heighten and liven the exhibit. The only object from the Ohio Hopewell site collection is a pearl necklace (A 49108) placed flat on the ground in a subsection of ornaments. No further information is provided for the pearls.



Figure 17. MPM *Hopewell Indian* case (MPM Negative No. X477F).  
Pearl Necklace A49108 circled in red.

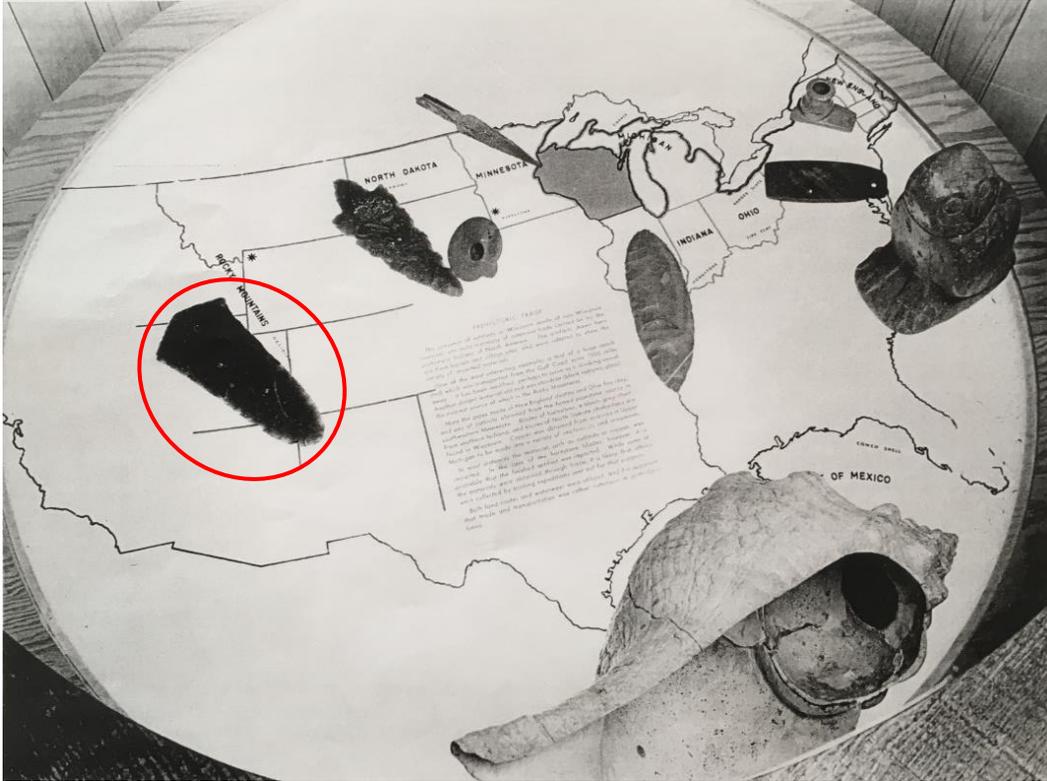


Figure 18. MPM *Prehistoric Trade* case (MPM Negative No. X\_481-13E).  
Blade A49071 circled in red.

The second object from the Hopewell site presented was an obsidian blade (A 49071) within a *Prehistoric Trade* circular exhibit case (Figure 18). This case was located near the middle of the exhibit floor, in line with two other circular cases: *Disease and Injury* and *Mystery Objects*. These small cases present information and objects which refer to multiple (if not all) archaeological periods in the exhibit, and spotlight ideas that may have been difficult to add to bigger exhibit cases. *Prehistoric Trade* has nine objects placed on a background map of the United States showing source areas for the different material types. A long label is present on the map, circled by the display objects. This label stated the artifacts were chosen to reflect the variety of imported materials to Wisconsin in prehistoric times. For the Hopewell blade it reads, “[a]nother distant material utilized was obsidian (black volcanic glass), the nearest source of

which is the Rocky Mountains”. The presentations of the obsidian blade and pearl necklace are interesting at the MPM, as they do not reference their provenience of the Ohio Hopewell site within the exhibit cases. Instead they are displayed with artifacts from Wisconsin, the outlined Wisconsin state shape, and labels interpreting the ancient peoples who lived in Wisconsin. Further, the *Prehistoric Trade* case does not mention the Hopewell Culture having characteristically more expansive movement of exotic materials than other periods. Instead, the case simply described the furthest sources as representational of all ancient trade in Wisconsin.

Here I will make a brief mention of an undated exhibit case, most likely by the MPM, which may have contained additional Hopewellian materials from Ohio and other states (Figure 19). A slide of this photograph was scanned in 2013 by the MPM’s curator of Anthropology Collections, Dawn Scher Thomae, and sent to me on March 1<sup>st</sup>, 2020. There was no information associated to this photograph, however it bears a striking resemblance to the 1964-1976 MPM *Hopewell Indian* case (Figure 17, MPM Negative No. X477F). Both cases utilized the same photograph of a mound, similar text, some of the same objects, and both have matching pedestals with multiple figurines. It is possible comparing the two exhibit cases that the Hopewell site pearl necklace A49108 was also on exhibit in this undated case. No negative or copy of this unknown case image was found in the MPM’s Photography Department. However, similar font and exhibit styles were found in a 1959 *Woodland Indian* display located in the old museum-library building’s first floor (MPM Negative No. 80714). Unfortunately, I was unable to continue research on this unknown case due to the COVID-19 national health emergency which temporarily closed the MPM in the spring of 2020.

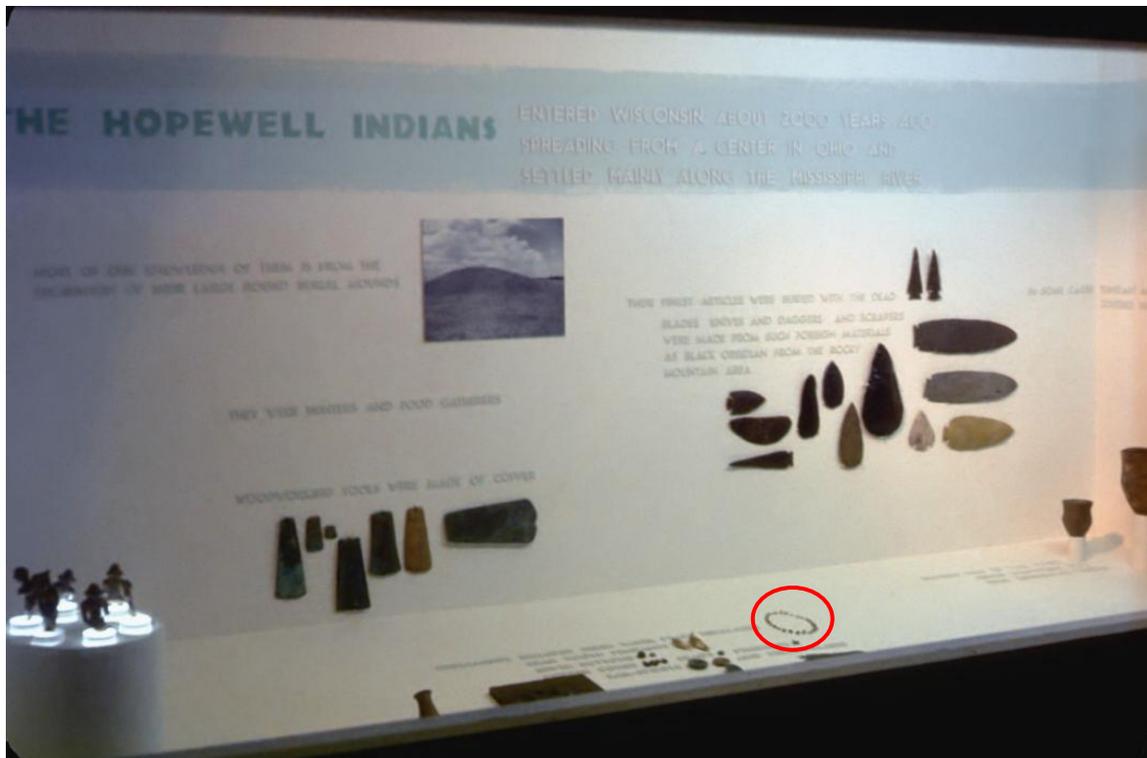


Figure 19. MPM exhibit case titled *The Hopewell Indians*, date unknown. Pearl necklace in case circled in red, possibly A49108.

More recently, two exhibits at the MPM have each featured a single object from the Ohio Hopewell site collection. In 2008 the MPM redesigned an exhibit case within the *Woodland Indians* hall of the second floor. Archaeologists Dr. Patricia Richards, Dr. Lynne Goldstein, and Dr. David Overstreet and the Wisconsin Archaeological Society supported and were consulted during the creation of this case, titled *Wisconsin Archaeology: Pieces of the Puzzle*, still present at the museum today (Figure 20). The introductory label says that it was “[d]esigned in response to questions most frequently asked of the museum staff, this exhibit highlights both the unique and common aspects of Wisconsin’s rich heritage”. The case presents Wisconsin prehistory from Paleo-Indian groups to Archaic and Woodland groups, ending with a single subsection on archaeological finds from European settlers. Also displayed is the Aztalan site of Wisconsin, and a map of effigy mounds found in the state. Near the bottom of the case, a mica sheet from the

Hopewell site is on display, lifted by an angled mount for easier viewing (A 49078). The mica is under the subsection “How Did American Indian Groups Interact With Each Other?” which describes the Middle Woodland Hopewell Exchange network as one of the greatest in Wisconsin’s past. The label describes the mica as “...from the Appalachians being found in Wisconsin archaeological sites”. While the interpretation still is using an Ohio Hopewell site piece to represent Wisconsin archaeological finds, the case does well in describing the Hopewell network as more than simple trade occurring throughout ancient times. For the MPM, this case serves as the main interpretation of ancient Native American groups of Wisconsin, much different from the 1960s and 70s fifteen-case exhibit.



Figure 20. Photograph of exhibit *Wisconsin Archaeology: Pieces of the Puzzle* (case 2E16). Mica sheet A 49078 circled in red. Taken 12/16/2019.

The final object from the Hopewell site placed on display was the quartz crystal blade (A 49072). This blade was chosen for a temporary exhibit *Weapons: Beyond the Blade* developed by the MPM's Curator of Anthropology Collections, Dawn Scher Thomae. Open from October 7<sup>th</sup>, 2017 to January 1<sup>st</sup>, 2018, the exhibition explored the various meanings of personal weapons, including and beyond their role as objects of hostility. It delved into the many layered meanings that weapons have, especially to the countries and people who created and/or used them. The exhibit conveyed personal weaponry as an integral part of human history, as creations influenced and inspired by our environment, and as achievements of beauty, ingenuity, and technological and scientific processes and principles. The blade was in a section of the exhibit exploring the deeper meanings of weapons, specifically in a case titled *Weapons as Art* (Figure 21).



Figure 21. MPM *Weapons as Art* exhibit, in *Weapons: Beyond the Bade*. Crystal Blade A 49072 circled in red (Weapons Exhibit File, Anthropology Department, Milwaukee Public Museum, Milwaukee, Wisconsin)

Within this case every artifact received a number corresponding to a label panel located beside the case. The labels mirroring the descriptive labels of art museums. The objects' label titled "Transparent Beauty" read,

Crystal quartz blade, Ross County, Ohio, Hopewell Culture (200 BCE- 400CE).

In 1892, archaeologists unearthed this rare blade fragment from a mound. Chosen for its singular beauty, it was worked into a symbolic weapon and buried with individuals of high rank. After excavation, the remainder of the blade was reconstructed; the lower left part of the blade is the original section (Weapons: Beyond the Blade File, Temporary Exhibits, Anthropology Department, Milwaukee Public Museum, Milwaukee).

This label directly tells the story of this object, including its provenience. This interpretation allows visitors to briefly learn about the creation and symbolic usage of the object by Hopewellian peoples, and the actions of excavation and restoration by archaeologists. This exhibits' interpretation is the most unique of those described in this thesis, as the crystal blade is presented alongside three varied weapon types of the eighteenth and nineteenth centuries, from Indonesia, Ghana, and Turkey. The exhibition of the crystal blade as a symbolic art piece within an exhibit of weapons over time demonstrates the range of interpretative approaches available for objects such as those in the Hopewell site collection.

### **Interpretations at National Parks**

As stated in Chapter 2 of this thesis, interpretations of the Hopewell site have ranged in archaeological literature from a fort, to a habitation site with ritual mounds, to a monumental

complex providing details of lifeways and interactions in ancient times. Outside of literature and museum displays, the physical Hopewell Mound Group site was not an official place of interpretation for the general public until after 1980 when the property was first purchased for preservation. Until this point the site had remained privately owned, with the public only learning from occasional archaeological excavations and publications. Buildings were first reported on the site at the time of Squier and Davis' excavations in 1845 (United States Department of the Interior, National Park Service [USDI, NPS] 2016: 2:27). The site was subjected to 150 years of plowing for farming and residential development. In 1974 the site was listed on the National Register of Historic Places, although it was still private property used as agricultural fields (USDI, NPS 2016: 1:15). As late as the 1970s it was reported that private owners were altering the ancient earthen walls using a bulldozer (USDI, NPS 2016). In the late 1970s, The Archaeological Conservancy (TAC) discovered the Hopewell site lands were slated for subdivision into parcels for expanded residential development (TAC 2015). The Archaeological Conservancy purchased the site in 1980 to preserve it, and the conservancy worked with the NPS to draft legislation that led to the creation of the Hopewell Culture NHP in 1992. When this legislation passed, it placed ownership of the Hopewell site into the hands of the NPS and allowed for other sites to be acquired and/ or studied. In total, the Hopewell Culture NHP contains six parks and a visitor center housing a small museum.

### ***Mound City Group***

Although the Hopewell site's history as an interpreted park may be short, the nearby Mound City Group has been a National Park for nearly one hundred years and is exemplary of how interpretations and usage of archaeological sites evolve. During World War I, the known

archeological site of the Mound City Group was altered to create Camp Sherman for military training. During the post-war deconstruction of Camp Sherman, archaeologists were allowed to excavate the site, and reconstruct the earthworks. In 1923 the Mound City earthworks was established as a National Monument through legislation. The legislative goal was to simply preserve the mounds due to their great historic and scientific interest (USDI, NPS 2016: 2:27).

NPS Park Ranger Susan Knisley shared in personal communications that the National Park Service took full control of the park in 1946, although the focus at the time was on recreation and picnicking. Over the decades, interpretation of the site shifted to the funerary objects found at the site and archaeological interpretation. The early 1960s saw the construction of a visitor center on the site, the planting of many trees to reforest the site back to its 1840s appearance, and the creation of ethnobotanical trails (USDI, NPS 2016: 2:57). In 1964 the Mica Grave exhibit was built at Mound 13 to portray in-situ ashes from four burial pits. This exhibit was later removed at the request of the American Indian community in 1996, after the passing of NAGPRA in 1990 (USDI, NPS 2016: 2:59). In 1992 the National Park was renamed as the Hopewell Culture NHP, to better demonstrate the interconnectedness between the Mound City Group and newly acquired sites like the Hopewell Mound Group. Knisley stated that after NAGPRA and the additions to the Park's roster of sites, the interpretive focus has been on the earthwork construction as a monumental achievement of the Hopewellian peoples.

Today, the Mound City Group is also home to the only visitor center for the Hopewell Culture NHP. Inside the visitor center is a front desk, gift shop, auditorium where the film *Mysteries of the Ancient Architects* plays, and a small museum. Both the museum and film serve to interpret the multiple earthworks of the NHP. The following discussion of the museum will remain brief as it interprets all the NHP sites and largely contains artifacts from 1920s

excavations at the Mound City Group. The presentation focuses on the achievements of the Hopewellian people through artwork, crafting of objects, and the monumental earthwork construction. Thematically important to both the film and museum are similarities between the earthworks of the NHP sites: enormous geometric shapes, repeatedly precise shape sizes, and astronomical alignments across the sites. Although small, the museum provides interactive activities such as earthwork building blocks and a touch screen (Figure 22), exhibits artifacts, and provides artistic renderings of everyday life and ritual activities (Figure 23).

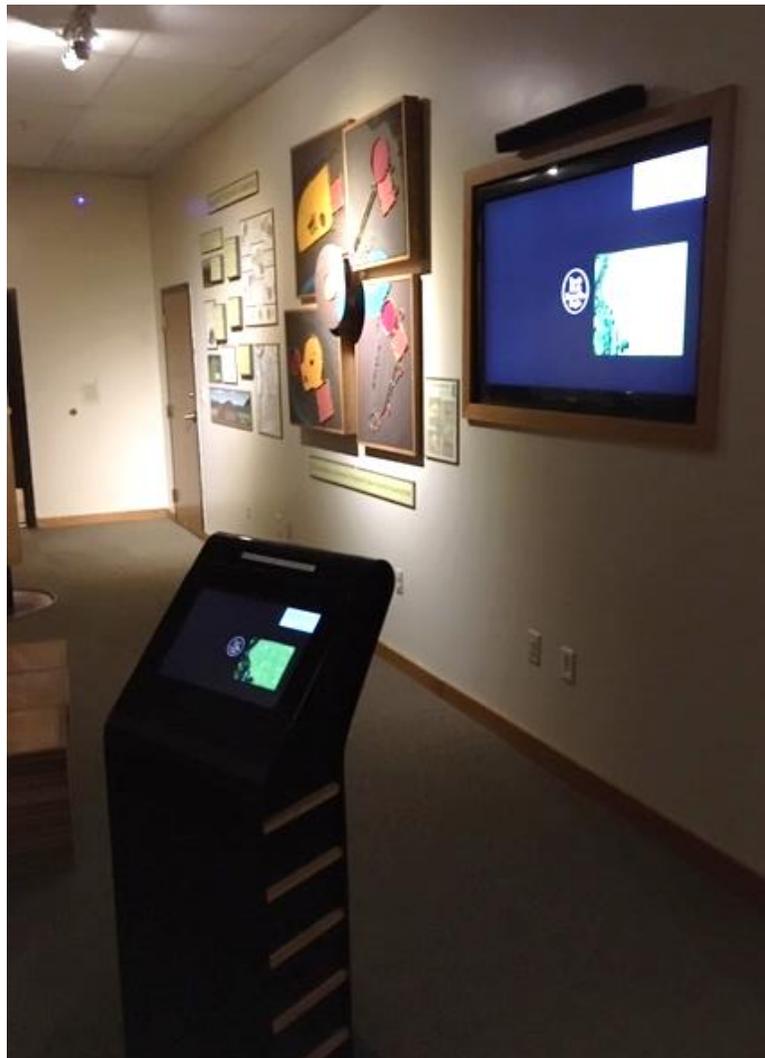


Figure 22. Photograph of Hopewell Culture NHP Museum earthworks section, taken 7/13/2019



Figure 23. Photograph of Hopewell Culture NHP museum ceremonial section, taken 7/13/2019

### ***The Hopewell Site Today***

Presently, the Hopewell Mound Group is a 315-acre park, located six miles west of the Hopewell Culture NHP Visitor Center at the Mound City Group. The park contains a parking lot, picnic shelter, bathrooms, trashcans, park benches, a 2 ¼ mile trail with interpretive panels, stairs, and bridges (USDI, NPS 2016: 3:85-3:87). Two overlooks allow views across most of the site. The first is a smaller opening in the tree-line on the eastern boarder of the Square Enclosure, which looks westward over the site (Figure 24). This opening is along the walking trail, at a similar elevation to the remainder of the site. The larger and higher of these two overlooks is near the northwestern corner of the Great Enclosure, providing the best vantage point for the site

(Figures 25-26). This view is created by the removal of vegetation for powerlines running SW to NE across the Great Enclosure. Although the removal of vegetation is likely to be continuously monitored here for security of the lines, these metal towers and power lines detract from the site and the available view (USDI, NPS 2016: 3:85-3:87) (see Figure 27 for orientation of features).



Figure 24. View from first overlook facing west across Hopewell site. Taken 8/12/2019



Figures 25. View from second overlook facing southwest, with fence, interpretive panel, and bench. Taken 8/12/2019



Figure 26. View from second overlook facing southwest. Taken 8/12/2019



In addition to its beneficial amenities the site contains features that are negatively impacting the site. Running across the Great Enclosure and bisecting the Great Circle are power lines and metal utility towers, Sulphur Lick Road, and a paved recreation trail (formerly railroad lines) (Figure 27). Although the recreational trail benefits visitors to the site, it's location limits future rehabilitation of the earthworks it bisects (Figure 28). Also, detracting from the site are farming and residential structures. Associated to the late eighteenth or early nineteenth century Cloud M. Hopewell Farmstead is a barn, and later built corn crib, and remnants of a cow shed. The barn and corn crib are located at the southwestern edge of the Great Enclosure, while the cow shed is on the northwestern slope of the Great Enclosure. All are in poor condition, yet only the barn is recommended for preservation due to its historic value, although it needs immediate stabilization (USDI, NPS 2016: 3:109). As of August 2019, the barn appeared unapproachable to visitors as it seemed near to collapse (Figure 29). The construction of all these features negatively impacted preservation of the site and made identification of earthworks more difficult. The continued use of the road by large trucks and the powerlines put the site in danger of further damage. Most of these intrusions negatively affect the site's viewshed with modern elements detracting from the ancient works.



Figure 28. Photo of the southern half of the Great Circle showing bisecting Adena Recreational Trail and a power line tower. Taken 8/12/2019.



Figure 29. Photograph of late eighteenth or early nineteenth century barn associated with Hopewell Farmstead. Taken 8/12/2019

Finally, it is vital to explain that the entirety of the Hopewell site is not owned by the US National Park Service. There is a one-acre private property still present within the Great Enclosure, along the southern edge of the site. From its location, the property intersects with earthen walls of the Great Enclosure and the “D” shaped enclosure surrounding Mound 25 (the largest mound) (USDI, NPS 2016: 3:115: Illustration 3-4). It is also highly likely that more earthworks and archaeological features were present where the private property now stands. On this property is a house built in 1989, a framed garage built in 2010, and an in-ground pool constructed in 2011. The sale of this property has occurred as recently as 2003 (Figure 30; Digital Data Technologies 2020). As this property has continued to be developed in the past decade, it poses a continuing threat to that portion of the site, and limits where the NPS can place interpretive panels, visitor amenities, and future reconstructions of the earthworks.

Figure 30. Property Record Card Pages 1-2, Data for Parcel 370920129000, Ross County Auditor's Property Records Site ©2020 Digital Data Technologies, Inc. <http://rossoh-auditor.ddti.net/>

Ross County, Ohio - Property Record Card, Page 1  
Parcel: 370920129000

---

**GENERAL PARCEL INFORMATION**  
 Owner: RAY, RICK AKA RICKY ALAN RAY  
 Property Address: 4120 SULPHUR LICK RD  
 Mailing Address: 4120 SULPHUR LICK RD  
 CHILLICOTHE, OHIO 45601  
 Land Use/Class: 511 - SINGLE FAMILY DWELLING ON (ACREAGE 0 TO 9.99)  
 Tax District: UNION - UNION SCIOTO LSD  
 Legal Description: 4120 SULPHUR LICK RD RES 1.08AC 9-20-129 0239/0260

---

**VALUATION**

	Appraised	Assessed
Land Value	\$13,000.00	\$4,550.00
Improvements Value	\$170,430.00	\$59,650.00
Total Value	\$183,430.00	\$64,200.00
CAUV Value	\$0.00	\$0.00
Taxable Value		\$64,200.00

---

**LAND**

Description	Acres/FrontalEffective	Depth	Depth Factor	Actual Value
*NV ROADS-DITCH	0.07	0	0	0
HOMESITE	1	0	0	13000

---

**SALES**

Sale Number	Sale Date	Sale Price	Sale Type	Buyer
0000000	4/11/2003	0	EX	RAY, RICK AKA RICKY

---

**TAX**

Gross Charge	\$3,898.54
Reduction Factor	(\$1,169.54)
10% Rollback	(\$236.76)
2.5% Homestead Rollback	(\$59.18)
Homestead Reduction	\$0.00
Penalties And Adjustments	\$0.00
Net Annual Tax	\$2,431.46

---

**MAP**  


---

**AGRICULTURAL** Limited to 8 items. For complete list, see the Land tab in the property pages.  
 Soil Code: Acreage

---

Property Record Card generated: 1/28/2020 3:16:12 PM for Ross County, Ohio

Ross County, Ohio - Property Record Card, Page 2  
Parcel: 370920129000  
Card: 0

---

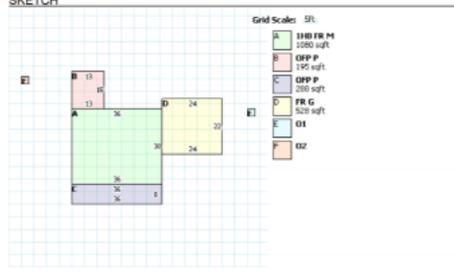
**GENERAL PARCEL INFORMATION**  
 Owner: RAY, RICK AKA RICKY ALAN RAY  
 Property Address: 4120 SULPHUR LICK RD  
 Mailing Address: 4120 SULPHUR LICK RD  
 CHILLICOTHE, OHIO 45601  
 Land Use/Class: 511 - SINGLE FAMILY DWELLING ON (ACREAGE 0 TO 9.99)  
 Tax District: UNION - UNION SCIOTO LSD  
 Legal Description: 4120 SULPHUR LICK RD RES 1.08AC 9-20-129 0239/0260

---

**VALUATION**

	Appraised	Assessed
Land Value	\$13,000.00	\$4,550.00
Improvements Value	\$170,430.00	\$59,650.00
Total Value	\$183,430.00	\$64,200.00
CAUV Value	\$0.00	\$0.00
Taxable Value		\$64,200.00

---

**SKETCH**  


---

**IMPROVEMENTS**

Building Type	SHB	Area	Rate	Grade	Year Built	Value
DWELLING	2 B FR	1080	0	C	1989	\$144,450.00
GARAGE	POLE24X32	768	0		2010	\$11,330.00
POOL	V 20X40	800	0		2011	\$14,280.00

---

**RESIDENTIAL DETAIL**

Area (F/U/n)	Basement	First Fl	Partial Upper Fl	Full Upper Fl	Attic
Value	\$7,600.00	\$137,400.00	\$53,800.00	\$0.00	\$0.00
Plaster/Drywall		X			
Paneling			X		
Fiberboard					
Unfinished	X				
Wood Joist	X				
Fire-Resist					
Fire-Proof					
Hardwood					
Fine		X	X		
Carpet		X	X		
Concrete	X				
Tile/Linoleum					
Rooms	0	3	0	0	0
Bedrooms	0	2	0	0	0
Family Rooms	0	0	0	0	0
Dining Rooms	0	0	0	0	0
Insulation	0	0	0	0	0
Central Air	A				
Heat Pump	A				
Central Heat					
Plumbing					

---

**RESIDENTIAL**

Year Built	
Number of Stories	2100
Total Living Area	3
Total Rooms	2
Total Bedrooms	0
Total Baths	0
Total Family Rooms	0

---

Property Record Card generated: 1/28/2020 3:16:12 PM for Ross County, Ohio

Unlike the Mound City Group, the Hopewell Mound Group's earthworks have not been reconstructed. Employees of The Archaeological Conservancy, who revisited the site in 2015, stated that, "[s]adly the Hopewell site bears the marks of over 150 years of plowing, so its walls and mounds are generally difficult to discern" (TAC 2015). The NPS describes the archaeological features as in "fair condition", as it is believed many of the subterranean features of the site are still present based on magnetic surveys (USDI, NPS 2016: 3:85-3:87). Previously, it was feared that plowing, erosion, excavation, and development of the site had destroyed most of the archaeological record. Although features below ground are still present, from the ground level the site appears flat, with only a small rise visible at the former location of Mound 25 (Figure 31), and some mowed circles or pathways demonstrating the location of a small number of the earthworks.

My personal reaction was dismay upon visiting the site in August of 2019. While the visitor amenities and interpretive panels along the trail were convenient and in great condition, the site itself was greatly disappointing in the lack of easily identifiable earthworks. Its general appearance was cultivated fields and scattered through the Great Enclosure were over one hundred large hay bales. A tractor with a 14-wheel hay rake was parked in the middle of the Great Enclosure by Mounds 24 and 3 (Figure 32 and 33). My visit had coincided with the bailing of native grasses by farmers who have agricultural leases with the NPS. In personal correspondences with Park Ranger Susan Knisley, I was informed that mowing was a common practice that protected the earthworks and encouraged native wildlife.



Figure 31: Photograph looking at Mound 25 facing Southwest, Private Property's buildings present on the right side. Taken 8/12/2019

Knisley stated there are three reasons the site is mowed. First, mowing encourages early grassland successional species like native grasses to grow over the more dominant flowering plants known as forbs. Maintaining strong native grasses helps to prevent frost heave which causes soil erosion that would be detrimental to the earthworks. Secondly the site is mowed, and woody plant species are sprayed with herbicide before the first frost to discourage growth of trees and other woody plants on the site. This method is effective and will not cause damage to the site like other restricted methods such as fire or use of machinery to dig into soils. Third, Ohio requires the control of noxious weed populations. This area has large populations of noxious weeds that are controlled through mowing prior to the plant's production of seeds. These justifications for mowing of the Hopewell site are reasonable and benefit the longevity of the earthworks. However, I found no notices at the site, nor on the website informing visitors of the

mowing practices and justifications. At first it had appeared disrespectful to see agricultural equipment parked in the middle of an earthwork site that had been subjected to destructive agricultural practices for over a century. I believe it would be beneficial for the Hopewell Culture NHP to have information present explaining mowing practices at this site and others.



Figure 32. Photograph of Hopewell Site from southwestern edge of walking trail, facing northeast. Taken 8/12/2019



Figure 33. Photograph of tractor with hay rake attachment parked within the Great Enclosure. Hopewell barn seen in background. Taken 8/12/2019

### **Future of the Hopewell Mound Group**

Since 2008 the Hopewell Mound Group and larger Hopewell Culture NHP have received a new level of attention as part of the Hopewell Ceremonial Earthworks (HCE). HCE consists of the Hopewell Culture National Historic Park, the Newark Earthworks State Park, and Fort Ancient State Memorial. The HCE was created through a United National Educational, Scientific and Cultural Organization (UNESCO) World Heritage Site proposal in order to preserve, “...pre-eminent examples, and the largest concentration in the world, of prehistoric monumental landscape architecture” (World Heritage Ohio 2020). In 2008 the HCE was placed on the United States’ World Heritage Tentative List. Each dues paying member nation of UNESCO can submit one yearly nomination from their tentative lists. These nominees are voted upon, and a single World Heritage Site is selected annually from the organization (World Heritage Ohio 2020).

In 2018, a draft was started for the US nomination of the HCE to UNESCO. Currently the Ohio History Connection (OHC), NPS, University Newark Earthworks Center, and the University of Cincinnati's Center for the Electronic Reconstruction of Historical and Archaeological Sites are working to prepare the nomination documents and are seeking funding support for their endeavors (OHC 2020). OHC's World Heritage Director, Jennifer Aultman, stated that she hoped the HCE would be nominated and a decision would be made by 2023 (Hendrix 2019). One complication to this process has been a legal battle over use and public access of the Octagon Mounds, part of the Newark Earthworks. The battle is between the OHC and the Moundbuilders Country Club which through a lease with the OHC, runs a golf course on the site. Ohio lower courts and the Ohio Fifth District Court of Appeals have agreed the OHC can use eminent domain to appropriate the lease for the Octagon Mounds from the Moundbuilders Country Club (Hendrix 2019; Mallett 2020). At the time of this thesis, it is uncertain if the country club will attempt additional appeals, and no further actions by the OHC have been released to the public.

A second complication arose in January of 2019, when the United States of America officially withdrew from UNESCO. Submissions of World Heritage Site nominations are only taken from UNESCO dues paying members. It is unlikely that the US will be able to submit further nominations while it is withdrawn from UNESCO membership, including nominations for the HCE. Although in limbo, the HCE nomination efforts clearly demonstrate high regard for and a desire to protect these sites.

In 2010, Keely Rennie-Tucker's Master's thesis evaluated the collections of objects and human remains held by the Hopewell Culture National Historical Park. While a majority of the collection was from 1920s and 1960s excavations at the Mound City Group, Rennie-Tucker

mentioned 136 inhumations, 46 cremations, and 34 skeletons removed from the Hopewell site. She argued that repatriation legislation and practices decolonize archaeology, granting power to Native groups being studied, and allowing multiple perspective of the past to be heard (2010: 22). She expressed that museum practices with Native human remains should reflect cultural values and beliefs held by Native peoples, including the removal of human remains and sacred objects from public exhibition (2010: 66).

Rennie-Tucker stated that,

...no conclusive archaeological or historical information, points to a definitive linear cultural affiliation between the Shawnee and the Ohio Hopewell. However, a strong geographical connection can be made. Given this information, the three Shawnee tribes residing in Oklahoma would seem to be able to make the strongest claim for repatriation as outlined in 43 CFR 10.11[ the 2010 ruling on culturally unidentifiable human remains] (Rennie-Tucker 2010, 46).

With geographical evidence of Shawnee tribes having pre-contact populations in the Ohio Valley, Rennie-Tucker proposed that three Shawnee tribes now in Oklahoma would have the strongest claim for disposition of unidentifiable human remains, and potentially associated funerary objects, within the Hopewell Culture National Historical Park's collection.

In addition to Rennie-Tuckers geographical evidence for the Shawnee, Mill's 2003 mitochondrial DNA analysis demonstrated relatedness between individuals buried at the Hopewell site, and the historic Native groups of the Chippewa/ Ojibwa and Kickapoo from the Great Lakes region. Additional genetic links were found to more widespread modern groups such as the Apache, Iowa, Micmac, Pawnee, Pima, Seri, Southwest Sioux, and Yakima (Mills 2003). Currently, no tribal groups have been affiliated to the Hopewell Site. In 2016 the NPS

published a Cultural Landscape Report and Environmental Assessment for the Hopewell Culture NHP. During the creation of this report, consultation letters were sent to the Absentee-Shawnee Tribe of Indians of Oklahoma, Delaware Nation, Delaware Tribe of Indians, Eastern Shawnee Tribe of Oklahoma, Miami Tribe of Oklahoma, Ottawa Tribe of Oklahoma, Seneca-Cayuga Tribe of Oklahoma, Shawnee Tribe, Wyandotte Nation. I would suggest that future NAGPRA consultations and communication regarding collection, exhibition, and interpretive updates be directed to all of the above-mentioned groups.

Future interpretation for the Hopewell site and others within the Hopewell Culture NHP can best be surmised from the USDI, NPS 2016 Cultural Landscape Report and Environmental Assessment. This report recommended an action plan that was more proactive in nature, geared towards the removal or relocation of non-beneficial features such as the Hopewell site's modern buildings, Sulphur Lick Road, and utility towers and lines. This plan also advocated for the rehabilitation of earthworks through vegetation and non-permeant markings, the addition of more visitor trails, and establishment of ownership for all archaeological site lands and adjacent properties. The NPS proposed plan,

...emphasizes the Hopewell Culture, revealing the grand scale and monumentality of the Hopewellian constructions, and interpretation of their unique lifestyle. The archeological landscape will be rehabilitated to depict the story of earthwork creation and lifeways of the Hopewell people within their geological and ecosystem context. The treatment plan protects the archeological resources, provides a rich visitor experience, and fosters continued archeological research and investigations (USDI, NPS 2016: 6:1).

The proposed rehabilitation plan demonstrates how interpretation of the Hopewell Culture NHP has expanded from the original interest in mortuary practices, human remains, and artifacts. The new direction for these sites is to interpret the lives of Hopewellian peoples, their interactions with the environment, and the uniqueness of their monumental earthworks.

## Chapter 6: Conclusions

The Hopewell site in Ross County, Ohio was the most elaborate ancient earthwork complex constructed during the Hopewell period, in the United States. The people who created these earthworks also participated in networks which carried cultural and religious/ceremonial ideas through much of the Eastern Woodlands and beyond. These social networks moved exotic materials from to Ohio from the Gulf Coast, Rocky Mountains, and Atlantic coastlines. Today, the Hopewell site serves as the namesake for this archaeologically defined cultural horizon. Although it has experienced much destruction and several excavations over the past two centuries, the site has largely become a preserved National Park. Demonstrating its significance, the Hopewell site is one of nine sites comprising the Hopewell Ceremonial Earthworks, a grouping of ancient sites that are pending nomination by the United States as a UNESCO World Heritage Site.

The Hopewell site collection housed at the MPM is a small grouping of artifacts from the renowned monumental earthworks. Since their arrival in the 1940s, the majority of the collection has remained in storage (excluding the 1990s NAGPRA inventory conducted on all ethnographic and archaeological collections from Native American groups). Significantly, this thesis project has been the first time that the MPM Hopewell site collection has been researched as a whole, including material analyses, a biographical approach describing the collection's experiences, and discussion of evolving interpretations of the Hopewell culture and the collection at the MPM and FM. For this project I have photographed and measured all objects from the collection, rectified problems and recorded discrepancies in collection documentation and provenience information. All of this data was used to create Object Biography sheets which will be provided to the MPM and FM. For the MPM my images of collection objects will be linked to the MPM KEmu

database. Also, I worked with Dr. John Richards to source three obsidian objects in the collection through X-Ray Fluorescence testing and aided Dr. Ralph Kugler in a 3-D imaging project utilizing five Hopewell site collection objects.

Additionally, this thesis has discussed the history of the Hopewell site, summarized some of the numerous archaeological theories surrounding the site, and presented the transitioning interpretations of the site at the FM and the Hopewell Culture National Historical Park over time. This thesis has demonstrated how the Hopewell collection at the MPM can be a mechanism for understanding archaeological and museological decisions made in the nineteenth and twentieth centuries.

## **Summary**

Beginning in Chapter 1, I introduced this thesis with a brief history of the Hopewell Cultural Horizon and presented MPM accession 16082, the Hopewell Site collection as the focus of this project. This presentation included mention of the excavation of these objects by Moorehead, their involvement at the World's Columbian Excavation of 1893 in Chicago, their role as a founding collection of the Field Columbian Museum, and their move to Milwaukee due to a museum object trade between the FM and MPM in 1945. This introductory chapter also contained sections on relevant archaeological and museum theories, the theoretical orientation of this project, key questions, significance of the project and an overview of the thesis.

The second chapter was a literature review, beginning the exploration and excavation history of the Hopewell site. This included Atwater, Squier, Davis, Moorehead, Shetrone, and twenty-first century work at the site. This chapter also presented past anthropological practices

and theories related to the Hopewell site, Hopewell site materials, and the broader Hopewellian culture such as the myth of the “Mound Builder” and the Hopewell Interaction Sphere.

Chapter three was the Social Life of the Hopewell Collection, where life history and cultural biography theories were used to create an account of these objects. Their story began in ancient times with the creation of the objects by Hopewellian peoples, and their interment within the Hopewell site earthworks. Next, Moorhead’s 1891 to 1892 excavations of the site were described in greater detail. The remainder of the chapter followed the objects’ journey to the World’s Columbian Exposition of 1893, the Harvard Peabody Museum, the Field Columbian Museum, and to the MPM.

The fourth chapter presented the material analysis of this project, starting with a discussion of my work with the collection and the creation of Object Biographical sheets (found in Appendix A). The collection was discussed by material types of lithic, metals, faunal, mica, and human remains. Also present was the X-Ray Fluorescence testing of three obsidian objects from this location, sourcing two to Obsidian Cliff, Wyoming, and one to Bear Gulch, Idaho. The end of this chapter discussed that the MPM collection resembled the larger FM Hopewell collection, except that the MPM was missing Hopewell site ceramics and botanical materials. When compared to other Hopewell site objects exchanged from the FM, the MPMs collection was one of the four largest exchanges. It was also noted that the MPM’s collection was extremely similar to a 1954 exchange with the Museo Nacional de Antropología, in Mexico City, Mexico.

Chapter five explored the evolution of various interpretations for the Hopewell site, culture, and artifacts over time. Interpretations at the FM, MPM, Mound City Group, and Hopewell site were discussed. Additional focus was given to describing the Hopewell site of

August 2019 from a visitor's perspective, and future plans for the site proposed by the National Park Service including its likely future nomination as a UNESCO World Heritage Site.

### **Evaluation of Theoretical Approach and Key Questions**

The theoretical approach guiding this research was object agency, specifically the construction of a *cultural biography* or *social history*. The biographical approach undertaken for Chapter 3 of this thesis returned some degree of agency to the artifacts in the collection and allowed for a holistic investigation of their journey through time. One drawback of this approach was the difficulty in telling a single story for a collection of artifacts that were diverse in their material, source, utilization, and provenience. This hardship was apparent in discussing the objects prior to their excavation, before they shared a concise history as a curated collection. However, after their excavation, the artifacts shared very similar experiences that were easily discussed with the biographical approach.

There were two overarching questions presented in Chapter 1 of this thesis. The first question was, how does the MPM's Hopewell collection compare/contrast to the larger Hopewell collection excavated by Moorehead, housed at the Field Museum and smaller collections at the *Museo Nacional de Antropología* in Mexico City (MNA), the Ohio History Connection (OHC), and the University of Michigan? Does the MPM's collection overrepresent or exclude any artifact types when compared to the larger collection excavated by Moorehead at the FM? How does this collection compare to its counterpart at the MNA, and other locations? Chapter 4 contained a material analysis which grouped objects in the MPM collection by material type: lithic, metals, faunal, mica, and human remains. All subtypes are present in large numbers within

the Field Museum's Hopewell collection excavated by Moorehead. However, there were two material types present at the FM, but excluded from the exchange with the MPM. These were ceramic pieces and a small number of botanical materials which remain at the FM.

The second half of the chapter described comparisons to other Hopewellian materials exchanged from the FM. Due to differing counting, cataloging, and numbering methods between institutions, data for these comparisons were taken from the FM Anthropology Department archives. Unfortunately, much of this documentation lacked precise details, and object counts were missing for the 1931 exchange with Boudeman of the Kalamazoo Public Museum. For these reasons the Boudeman Exchange was excluded from the discussion, and photocopies of archival documents for the five compared exchanges were included in Appendix B. There were more than ten documented exchanges of Hopewell materials from the FM, however only five of these contained more than 15 artifacts. As one of these five exchanges, the MPM received an extremely similar collection compared to a 1951 exchange with the Museo Nacional de Antropología. Interestingly, this museum had already been part of an exchange in 1934 in which it received ceramics but did not receive mica or human remains as had the MPM. The most dissimilar exchange to the MPM's was with the University of Michigan, which received seventeen catalog numbers of ceramic artifacts.

At the beginning of this thesis I asked, how has the meaning and interpretation of these objects evolved over time and in different museums? Chapter 5 strived to answer this question by following changes in Hopewell exhibits at museums and National Parks over time. Generally, all locations follow the trends of museological display practices. In the early twentieth century, displays were growing from simple cabinets of curiosities to include some less detailed and labeled dioramas. At the Mound City Group, the earliest focus was not on interpreting the site,

but providing it as a location of recreation for visitors. By the mid-1900s displays turned interpretive focus on the burials and ritual practices of the Hopewell period and ancient North America in general. This included displays of human remains, depictions of burials within earthworks, and a description of funerary objects.

With the passing of NAGPRA in the 1990s, museum displays, and site interpretations removed Native human remains from public view. Since this time, museums have attempted to approach interpretations of the Hopewell site and artifacts as demonstrations of the accomplishments of an ancient group. This has included shifting from burial descriptions to explanations of the elaborate earthworks and depictions of daily and ceremonial life for the Hopewellian peoples. Lastly, although there are still some problems with twenty-first century interpretations, the physical Hopewell site is largely protected, exhibits are working to include Native voices (future 2021 FM exhibit), and Hopewellian objects are being presented in diverse ways (MPM's *Weapons: Beyond the Blade* exhibit).

### **Future Directions**

For the future, I would propose continued efforts to include Native American voices and perspectives in interpretations at museums and National Parks associated with the Hopewell Cultural Horizon. Due to the site's significance, I advocate for future studies of Hopewell site materials now spread throughout the world. Although some work has been done to create a digital location for collection data on the Hopewell site (Center for Digital Research in the Humanities 2015), much more research can be done to reconnect these dispersed materials and house their data from multiple institutions in one digital location. Further analyses of the individual material types could be conducted, including attempting to source materials such as

amber or chert and species identification of faunal materials. Finally, I strongly advocate for the National Park Service to follow through with the 2016 proposed rehabilitation and preservation plans for the physical Hopewell site. At a minimum, no portion of this site should be private property, and the active roadway and trail bisecting earthworks of the site should be removed for its continued preservation.

## REFERENCES CITED

- Alderman, Tristan T.  
2005 The Hopewell Site Collection at the Field Museum: A Finding Aid to the Objects and Related Records. Unpublished, Hopewell Digital Archives.  
[http://hopewell.unl.edu/finding\\_aids/12-28\\_Hopewell\\_Collection\\_FA.pdf](http://hopewell.unl.edu/finding_aids/12-28_Hopewell_Collection_FA.pdf), accessed 10/20/2019.
- Appadurai, Arjun  
1986 Introduction: commodities and the politics of value. In *The Social Life of Things: Commodities in Cultural Perspective*, edited by Arjun Appaduria, pp. 3-63. Cambridge University Press, Cambridge.  
  
2006 The Thing Itself. In *Public Culture* (18)1. Duke University Press.  
  
2017 Museum Objects as Accidental Refugees. *Historische Anthropologie*, 25(3), pp. 401-408.
- Atwater, Caleb  
1820 Descriptions of Antiquities Discovered in the State of Ohio and Other Western States. In *Transactions and Collections of the American Antiquarian Society* 1:105-267.
- Brose, David S. and Nomi B. Greber  
1979 *Hopewell Archaeology: The Chillicothe Conference*, edited by David S. Brose, and Nomi B. Greber. Kent State University Press, Ohio.
- Burks, Jarrod and Robert A Cook  
2011 Beyond Squier and Davis: Rediscovering Ohio's Earthworks Using Geophysical Remote Sensing. *American Antiquity* 76(4):667-689. DOI: 10.7183/0002-7316.76.4.667, accessed March 25, 2020.
- Caldwell, Joseph R.  
1964 Interaction Spheres in Prehistory. *Hopewellian Studies, Scientific Papers* 12(6): 133-143. Authority of the State of Illinois. Springfield, Illinois.
- Center for Digital Research in the Humanities  
2015 Catalog Report Excel Document: Hopewell Collection Condensed. *Ohio Hopewell: Crossroads of the American Midwest*.  
[http://hopewell.unl.edu/catalog\\_report.html](http://hopewell.unl.edu/catalog_report.html), accessed January 12, 2019.
- Charles, Douglas K.  
1993 Woodland Demographic and Social Dynamics in the American Midwest: Analysis of a Burial Mound Survey. *World Archaeology* 24 (2):175-197.  
<https://doi.org/10.1080/00438243.1992.9980202>, accessed March 29, 2020.

- Charles, Douglas K. and Jane E. Buikstra  
 2006 *Recreating Hopewell*, edited by Douglas Charles and Jane Buikstra. University of Florida Press, Gainesville, Florida.
- Colvin, George H.  
 2011 The Presence, Source and Use of Fossil Shark Teeth from Ohio Archaeological Sites. *Ohio Archaeologist* 61(4): 26-46.
- Digital Data Technologies  
 2020 Property Record Card in Data for Parcel 370920129000, *Ross County Auditor's Property Records Site*, Electronic Document. <http://rossoh-auditor.ddti.net/>, accessed January 15, 2020.
- Elbroch M.  
 2006 *Animal Skulls: A Guide to North American Species*. Stackpole Books Mechanicsburg, Pennsylvania, pp. 392.
- Emerson, Thomas E., Kenneth B. Farnsworth, Sarah U. Wisseman, and Randall E. Hughes  
 2013 The Allure of the Exotic: Reexamining the Use of Local and Distant Pipestone Quarries in Ohio Hopewell Pipe Caches. *American Antiquity* 78(1):48-67.
- Field Museum  
 2014 *Opening the Vaults: Wonders of the 1893 World's Fair*. Electronic Website, Special exhibit from 2013-2014 by the Field Museum. <http://worldsfair.fieldmuseum.org/>, accessed October 10, 2019.
- 2019a Field Museum History, About/History. Electronic Document. <https://www.fieldmuseum.org/about/history>, accessed October 10, 2019.
- 2019b Paul S. Martin Collection, Research and Collections. Electronic Document. <https://www.fieldmuseum.org/node/4971>, accessed December 19, 2019.
- 2019c World's Columbian Expedition to Southern Ohio in Field Museum Library Digital Collections. <http://cdm17032.contentdm.oclc.org/cdm/landingpage/collection/p17032coll2>, accessed April 1, 2019.
- Florida Museum  
 2018 Lithic Terminology. *Florida Archaeology and Bioarchaeology*. Electronic Document. <https://www.floridamuseum.ufl.edu/flarch/collections/bullen/terminology/>, accessed December 5, 2019.
- Greber, N'omi and Katherine C. Ruhl  
 1989 *The Hopewell Site: A Contemporary Analysis Based on the Work of Charles C. Willoughby*. West View Press, Boulder Colorado.

- Gordus, Adon A., Gary A. Wright and James B. Griffin  
 1969 Obsidian Sources Characterized by Neutron-Activation Analysis. *Science* 3839: 382-384. DOI: 10.1126/science.161.3839.382
- Haraway, Donna  
 1984 Teddy Bear Patriarchy: Taxidermy in the Garden of Eden, New York City, 1908-1936. *Social Text* No.11, pp. 20-64. <https://www.jstor.org/stable/466593>, accessed September 25, 2019.
- Hatch, James A., Joseph W. Michels, Christopher M. Stevenson, Barry E. Scheetz and Richard A. Geidel  
 2009 Hopewell Obsidian Studies: Behavioral Implications of Recent Sourcing and Dating Research. *American Antiquity* 55 (3): 461-479. <https://www.jstor.org/stable/281278>, accessed February 6, 2020.
- Hendrix, Sheridan  
 2019 Hopewell Earthworks Next Up On World Heritage List, *The Columbus Dispatch* 29 July. <https://www.dispatch.com/news/20190729/hopewell-earthworks-next-up-on-world-heritage-list>, accessed January 28, 2020.
- Hill, Mark A., Mark F. Seeman, Kevin C. Nolan, and Laure Dussubieux.  
 2018 An Empirical Evaluation of Copper Procurement and Distribution: Elemental Analysis of Scioto Valley Hopewell Copper. *Archaeological and Anthropological Sciences* (10), pp 1193–1205. <https://doi.org/10.1007/s12520-017-0540-3>.
- Hinsley, Charles M.  
 2016 Anthropology as Education and Entertainment: Frederic Ward Putnam at the World's Fair. In *Coming of Age in Chicago: The 1893 World's Fair and the Coalescence of American Anthropology*, edited by Curtis M. Hinsley, and David R. Wilcox. University of Nebraska Press, Nebraska. <http://ebookcentral.proquest.com/lib/uwm/detail.action?docID=4337951>, accessed March 20, 2020.
- Hodder, Ian  
 2012 *Entangled: An Archaeology of the Relationships between Humans and Things*. John Wiley & Sons, Chichester, United Kingdom. DOI:10.1002/9781118241912, accessed January 15, 2020.
- Hughes, Richard E  
 2007 The Geologic Sources of Obsidian Artifacts from Minnesota Archaeological Sites. *The Minnesota Archaeologist* 66: 53-68. [http://www.geochemicalresearch.com/grlv2/pdfs/Minnesota\\_obsidian.pdf](http://www.geochemicalresearch.com/grlv2/pdfs/Minnesota_obsidian.pdf), accessed January 7, 2020.
- 2006 The Sources of Hopewell Obsidian: Forty Years After Griffin. In *Recreating Hopewell*, edited by D. K. Charles and J. E. Buikstra. University Press of Florida, Gainesville. pp 361-375.

- Hughes, Richard E and Fred W Nelson  
 1987 New Findings on Obsidian Source Utilization in Iowa. *Plains Anthropologist* 32(117):313-316.
- Jeske, Robert J., and James A. Brown  
 2017 Lithic Analysis. In *Mound City National Monument: The Archaeology of a Renowned Ohio Hopewell Mound Center*, edited by James A. Brown, pp. 251-303. National Park Service, Washington, D.C.
- Johnston, Cheryl  
 2002 *Culturally Modified Human Remains from the Hopewell Mound Group*. Electronic Dissertation, The Ohio State University. (305501517).  
<https://search-roquestcom.ezproxy.lib.uwm.edu/docview/305501517?accounted=15078>, accessed November 15, 2019.
- Kelly, Jamie  
 2000 *Milwaukee Public Museum Artifact Project: An Incised Bone Fragment from the Hopewell Site in Ross County, Ohio*. Manuscript on file from Museum Studies Course 721 Administration and Organization of Museums, Milwaukee Public Museum, Anthropology Department, Milwaukee, Wisconsin.
- Kopytoff, Igor  
 1986 The Cultural Biography of Things: Commodities and the Politics of Value. In *The Social Life of Things: Commodities in Cultural Perspective*, edited by Arjun Appadurai, pp. 3-63. Cambridge University Press, Cambridge.
- LaGue, Mary D.  
 2015 Chapter Eight: Metals. In *Basic Condition Reporting A Handbook*, edited by Deborah Van Horn, Heather Culligan, Corinne Midgett. Rowman and Littlefield, Lanhan, Maryland. pp 63-67.
- Lepper, Bradley T.  
 1995 Tracking Ohio's Great Hopewell Road. *Archaeology* 48:52-6.
- 2014 Early Historic American Indian Testimony Concerning the American Earthworks of Eastern North America. *Journal of Ohio Archaeology* 3:1-11  
[http://www.ohioarchaeology.org/joomla/index.php?option=com\\_content&task=section&id=10&Itemid=54](http://www.ohioarchaeology.org/joomla/index.php?option=com_content&task=section&id=10&Itemid=54). accessed December 27, 2019.
- Loomba, Ania  
 1998 *Colonialism-Postcolonialism*. Routledge, London.
- Lowery Godfrey and Eshelman  
 2011 Integrated Geology, Paleontology, and Archaeology: Native American Use of Fossil Shark Teeth in the Chesapeake Bay Region. *Archaeology of Eastern North America* 39: 93-108.

Lynott, Mark J.

- 2009 In the Footprints of Squier and Davis: Archeological Fieldwork in Ross County, Ohio. In *In the Footprints of Squier and Davis: Archeological Fieldwork in Ross County, Ohio*, Special Report No. 5, edited by Mark J. Lynott, pp. 1-12. United States Department of the Interior, National Park Service, Midwest Archaeological Center, Nebraska.
- 2014 *Hopewell Ceremonial Landscapes of Ohio: More than Mounds and Geometric Earthworks*. Oxbow Books, London.

Mallett, Kent

- 2020 Moundbuilders Loses Appeal in Effort to Keep Golf Course. *Newark Advocate*, January 30, 2020. <https://www.newarkadvocate.com/story/news/2020/01/30/moundbuilders-loses-appeal-effort-keep-golf-course-property/4619998002/>, accessed March 15, 2020.

Marstine, Janet

- 2006 *New Museum Theory and Practice: An Introduction*. Blackwell Pub., Malden, Massachusetts.

Mills, Lisa Ann

- 2003 *Mitochondrial DNA analysis of the Ohio Hopewell of the Hopewell Mound Group*. Electronic Dissertation. Ohio State University. Ohio LINK Electronic Theses and Dissertations Center. [http://rave.ohiolink.edu/etdc/view?acc\\_num=osu1054605467](http://rave.ohiolink.edu/etdc/view?acc_num=osu1054605467), accessed October 5, 2019.

Milwaukee Public Museum

- 1945 *Annual Report for March 1944 to March 1945*. Milwaukee Public Museum Archive, Milwaukee, Wisconsin.

Minerals Education Coalition

- 2020 Mica. In *Mining and Minerals Information: Minerals Database*. <https://mineralseducationcoalition.org/minerals-database/mica/>, accessed January 4, 2020.

Moorehead, Warren King

- 1890 *Fort Ancient: The Great Prehistoric Earthwork*. Robert Clarke & Co., Cincinnati, Ohio.
- 1892a *Primitive Man in Ohio*. G.P Putnam's Sons, New York City.
- 1892b *A Report Upon the Work Done in Southern Ohio*. Electronic Document. <http://cdm17032.contentdm.oclc.org/cdm/compoundobject/collection/p17032coll2/id/792>, accessed April 1, 2019.

1922 *The Hopewell Mound Group of Ohio*. Field Museum of Natural History Publication 211, Anthropological series (5)6. Field Museum of Natural History, Chicago. <http://scienceviews.com/ebooks/pdf/TheHopewellmoundgroupofOhio.pdf>

Moriarity, Paul

2017 *Object Project: Pipe A49105/ 16082*. Manuscript on file from Museum Studies Course 723 Collections and Curation, Milwaukee Public Museum, Anthropology Department, Milwaukee, Wisconsin.

Museum of Science and Industry Chicago

2019 Museum Facts, About Us, Explore. Electronic Document. <https://www.msichicago.org/explore/about-us/museum-facts/>, accessed October 10, 2019.

Northeastern Educational Television of Ohio

2008 *One State-Many Nations: Native Americans of Ohio*. Public Broadcasting Station Western Reserve, <https://westernreservepublicmedia.org/onestate/overview.htm>, accessed December 5, 2019.

Ohio History Connection.

2019 5b.37 Hopewell Trade. Virtual First Ohioans. [http://ohsweb.ohiohistory.org/gallery2/main.php?g2\\_itemId=668](http://ohsweb.ohiohistory.org/gallery2/main.php?g2_itemId=668), accessed October 10, 2019.

2020 World Heritage Site Nomination. *Ohio History Connect Home, Give*. Electronic Document. <https://www.ohiohistory.org/give/world-heritage-site-nomination>, accessed January 28, 2020.

Pacheco, Paul J. and William S. Dancy

2006 Integrating Mortuary and Settlement Data on Ohio Hopewell Society. In *Recreating Hopewell*, edited by Douglas Charles and Jane Buikstra, pp. 3-25. University of Florida Press, Gainesville, Florida.

Palmer, Potter Mrs., Mrs. Schuyler Van Rensselaer, D.H. Burnham, W.E. Curtis, Alder Messrs, Sullivan Messrs, S.S. Beman, W.W. Boyington, Henry Ives Cobb, W.J. Edbrooke, Frank W.

Grogan, Sophia G. Hayden, Jarvis Hunt, W.L. B. Jenney, Henry Van Brunt, Francis Whitehouse

1893 *A Week at the Fair: Illustrating the Exhibits and Wonders of the World's Columbian Exposition*, pp. 104-105. Rand, McNally and Company, Chicago. Living History of Illinois and Chicago. [https://livinghistoryofillinois.com/pdf\\_files/Conkeys%20Complete%20Guide%20to%20the%20Worlds%20Columbian%20Exposition.pdf](https://livinghistoryofillinois.com/pdf_files/Conkeys%20Complete%20Guide%20to%20the%20Worlds%20Columbian%20Exposition.pdf), accessed October 15, 2019.

Pagel, Victoria

- 2018 *Fluid Functionality: An Examination of Shifting Identities Using North American Indian German Silver Brooches at the Milwaukee Public Museum as a Case Study*. Electronic Thesis, The University of Wisconsin - Milwaukee, Wisconsin. <https://ezproxy.lib.uwm.edu/login?url=https://search-proquestcom.ezproxy.lib.uwm.edu/docview/2055351410?accountid=15078>, accessed September 1, 2018.

Peabody Museum

- 2020 Peabody Museum Collections Online, Electronic Repository. <https://pmem.unix.fas.harvard.edu:8443/peabody/>, accessed October 10<sup>th</sup>, 2019

Pederson Weinberger, Jennifer

- 2009 In Non-mound Space at the Hopewell Mound Group. In *In the Footprints of Squier and Davis: Archeological Fieldwork in Ross County, Ohio*, Special Report No. 5, edited by Mark J. Lynott, pp. 13-19. United States Department of the Interior, National Park Service, Midwest Archaeological Center, Nebraska.

Prufer, Olaf H.

- 1965 *The McGraw Site: A Study in Hopewellian Dynamics*. Scientific Publications of The Cleveland Museum of Natural History, Ohio. New Series 3: (1).

Rennie-Tucker, Keely A.

- 2010 *Spirit of the Law: A Case Study in the Application of NAGPRA to Collections from Hopewell Culture National Historical Park, a Unit of the National Park Service*. Electronic Thesis, University of Nebraska- Lincoln. <http://digitalcommons.unl.edu/anthrotheses/10>, accessed March 25, 2020.

Redman, Samuel J.

- 2016 *Bone Rooms: From Scientific Racism to Human Prehistory in Museums*. Harvard University Press, Cambridge, Massachusetts.

Seeman, Mark F.

- 1979 *The Hopewell Interaction Sphere: The Evidence for Inter-Regional Trade and Structural Complexity*. Prehistory Research Series 5, Indiana Historical Society, Indianapolis.

Seeman, Mark F., Kevin C. Nolan, and Mark A. Hill

- 2019 Copper as an Essential and Exotic Hopewell Metal. *Journal of Archaeological Science: Reports* 24: pp 1095-1101. <https://doi.org/10.1016/j.jasrep.2018.12.019>, accessed October 15, 2019.

Shetrone, Henry Clyde

- 1930 *The Mound Builders*. D. Appleton and Company, New York City and London.

- Silverberg, Robert  
 1968 *Mound Builders of Ancient America: The Archaeology of a Myth*. New York Graphic Society LTD, Greenwich, Connecticut.
- Smith, Charles Saumaraz  
 1989 Museum Artefacts and Meaning. In *The New Museology*, edited by Peter Vergo, pp. 6-21. Reaktion Books Ltd., London.
- Snead, James E.  
 2016 Relic Hunters in the White City: Artifacts, Authority, and Ambition at the World's Columbian Exposition. In *Coming of Age in Chicago: The 1893 World's Fair and the Coalescence of American Anthropology*, edited by Curtis M. Hinsley, and David R. Wilcox. University of Nebraska Press, Nebraska. <http://ebookcentral.proquest.com/lib/uwm/detail.action?docID=4337951>, accessed March 20, 2020.
- Spielmann, Katherine A.  
 2009 "Ohio Hopewell Ritual Craft Production". In *In the Footprints of Squier and Davis: Archeological Fieldwork in Ross County, Ohio*, Special Report No. 5, edited by Mark J. Lynott, pp. 179-188. United States Department of the Interior, National Park Service, Midwest Archaeological Center, Nebraska.
- Squier, Ephraim George and Edwin Hamilton Davis  
 1848 *Ancient Monuments of the Mississippi Valley: Comprising the Results of Extensive Original Survey and Explorations*. Contributions to Knowledge I. Smithsonian Institution, Washington D.C.
- Stevenson, Christopher M., Ihab Abdelrehim and Steven W. Novak  
 2004 High Precision Measurement of Obsidian Hydration Layers on Artifacts from the Hopewell Site Using Secondary Ion Mass Spectrometry. *American Antiquity* 69(3): 555-567. <https://www.jstor.org/stable/4128406>, accessed February 6, 2020.
- Struever, Stewart and Gail L. Houart  
 1972 Analysis of the Hopewell Interaction Sphere. In *Social Exchange and Interaction*, edited by Edwin N. Wilmsen, pp. 47-147. University of Michigan Museum of Anthropology Anthropological Papers, Ann Arbor, Michigan.
- Sutton, Mark Q., and Brooke S. Arkush  
 2014 *Archaeological Laboratory Methods: An Introduction*. Kendall Hunt Publishing Company, Dubuque Iowa.

The Archaeological Conservancy

- 2015 MW Update: Visiting the Sites of our Earliest Successes. *Updates from the Archaeological Conservancy* 15 August.  
<https://www.archaeologicalconservancy.org/conservancy-visits-sites-earliest-successes/>, accessed January 28, 2020.

Trigger, Bruce

- 2006 *A History of Archaeological Thought*. Second Ed. Cambridge University Press, Cambridge, UK.

United States Congress

- 1992 Public Law 102-294 Statute 106. 102<sup>nd</sup> Congress, Enacted May 27, 1992.  
<https://www.govinfo.gov/content/pkg/STATUTE06/pdf/STATUTE-106-Pg185.pdf>, accessed September 28, 2019.

United States Department of the Interior, National Park Service.

- 2000 *Hopewell Culture Administrative History*, Published online.  
[https://www.nps.gov/parkhistory/online\\_books/hocu/adhi/adhit.htm#approval](https://www.nps.gov/parkhistory/online_books/hocu/adhi/adhit.htm#approval)
- 2016 *Hopewell Culture National Historical Park Cultural Landscape Report and Environmental Assessment, Public Review Draft*. Electronic Document.  
<https://www.nps.gov/hocu/learn/historyculture/upload/draft-hocu-clr-ea-complete-version.pdf>, accessed January 15, 2020.
- 2019a *Culturally Unidentified Human Remains Inventory Database*,  
[https://grantsdev.cr.nps.gov/Nagpra/CUI/generate\\_Institution\\_report.cfm](https://grantsdev.cr.nps.gov/Nagpra/CUI/generate_Institution_report.cfm),  
accessed January 20, 2020.
- 2019b Hopewell Mound Group. *Hopewell Culture National Historical Park*,  
Electronic Document,  
<https://www.nps.gov/hocu/learn/historyculture/hopewell-mound-group.htm>,  
accessed August 30, 2019.

Vergo, Peter

- 1989 Introduction. In *The New Museology*, edited by Peter Vergo, pp. 1-5. Reaktion Books Ltd., London.

W. B. Conkey Company

- 1893 *Conkey's Complete Guide to the World's Columbian Exposition*. W. B. Conkey Company, Chicago. Living History of Illinois and Chicago.  
[https://livinghistoryofillinois.com/pdf\\_files/Conkeys%20Complete%20Guide%20to%20the%20Worlds%20Columbian%20Exposition.pdf](https://livinghistoryofillinois.com/pdf_files/Conkeys%20Complete%20Guide%20to%20the%20Worlds%20Columbian%20Exposition.pdf), accessed October 15, 2019.

- Wasson, J. T. and S. P. Sedwick  
1969 Possible Sources of Meteoritic Material from Hopewell Indian Burial Mounds. *Nature* (222): April 5, 1969.
- Willey, Gordon R. and Jeremy A. Sabloff  
1980 *A History of American Archaeology*. Second Edition. W.H. Freeman and Company, San Francisco.
- Wirth, Karl and Andy Barth  
2020 Geochemical Instrumentation and Analysis: X-Ray Fluorescence. *The Science Education Resource Center at Carleton College*.  
[https://serc.carleton.edu/research\\_education/geochemsheets/techniques/XRF.html](https://serc.carleton.edu/research_education/geochemsheets/techniques/XRF.html), accessed February 10, 2020.
- Wittemann, A.  
1893 *Souvenir of the World's Columbian Exposition*. Albertype Company, New York. Living History of Illinois and Chicago.  
[http://livinghistoryofillinois.com/pdf\\_files/Souvenir%20of%20the%20Worlds%20Columbian%20Exposition%20in%20Photo-Gravure.pdf](http://livinghistoryofillinois.com/pdf_files/Souvenir%20of%20the%20Worlds%20Columbian%20Exposition%20in%20Photo-Gravure.pdf), accessed October 15, 2019.
- World Columbian Exposition, Department of Publicity and Promotion  
1892 *Official Guide to the Grounds and Buildings of the World's Columbian Exposition During Construction*. Rand, McNally & Co., Chicago. Living History of Illinois and Chicago. [http://livinghistoryofillinois.com/pdf\\_files/Official%20Guide%20to%20the%20Grounds%20and%20Buildings%20of%20the%20Worlds%20Columbian%20Exposition%20During%20Construction.pdf](http://livinghistoryofillinois.com/pdf_files/Official%20Guide%20to%20the%20Grounds%20and%20Buildings%20of%20the%20Worlds%20Columbian%20Exposition%20During%20Construction.pdf), accessed October 15, 2019.
- World Heritage Ohio  
2020 Hopewell Ceremonial Earthworks. *World Heritage Ohio Nominations*. Electronic Document. <http://worldheritageohio.org/hopewell-ceremonial-earthworks/>, accessed January 28, 2020.

## **Appendix A: Object Biographical Sheet**

### **Hopewell Site Collection at the Milwaukee Public Museum**

The Milwaukee Public Museum has a collection of 61 objects from the Hopewell Site of Ohio that reside within their Anthropology department. The objects were excavated in 1891-1892 by Warren K. Moorehead from the Hopewell Site of Ross County, Ohio to be displayed during the Chicago World's Columbian Exposition of 1893. After the exposition, these objects along with thousands of others from the site became part of the Field Museum collections. In 1945, a selection of objects from the site were exchanged from the Field Museum to the MPM for four reconstructed Woodland ceramic vessels from Wisconsin (A 12493/2439, A 38281/10432, A 42984/11740, and A 48325/15061).

The following 61 bio sheets are from accession 16082, received by the MPM on April 6<sup>th</sup>, 1945. Information on these objects was obtained from the Field Museum's "Ohio Hopewell" Digital Project and the Milwaukee Public Museum's Anthropology Department catalog books and NAGPRA Inventory sheets. Fifty-seven objects have photographs and details including catalog numbers, descriptions, provenance, measurements, and locations. Objects measurements are of the longest length and widest width unless otherwise specified. The objects are listed in order of ascending MPM catalog numbers. There are four objects either not found in collections or marked as removed from the collection: A49069, A49104, A49122, and A49123. These four objects have an Object Biographical sheet created with known information; however they are missing sections of description, measurements, and photographs as the objects themselves were unavailable for analysis.

**MPM Number: A 49069 /16082**

**Object Description:** Large Obsidian Blade- mended

**Provenance:** Unknown from The Hopewell Site, Ross County, Ohio

**Measurements:**

Length: 11 inches= 27.94 cm

Width: 4.5 inches= 11.43 cm

**Author's Description:** Object not present for analysis

**Location:** Not Found in Collections

**Additional Notes:** FM Number 56804

Measurements were recorded on April 6<sup>th</sup>, 1945 in inches. I have included the original measurements and the converted amount in centimeters.

**MPM Number: A 49070 /16082**

**Object Description:** Medium Obsidian Blade

**Provenance:** Unknown. The Hopewell Site, Ross County, Ohio

**Measurements:**

Length: 18.9 cm

Width of Base: 9.8 cm

Width of Break: 4.1 cm

Weight: 169.9 g

Central Diameter: 7 mm tip, 10 mm base

**Author's Description:** Obsidian Blade broken in two pieces. Glossy black with brown speckles near base. Object has multiple fracture lines which appear glued together. Late stage bifacial flaking, with triangular body shape and a convex base.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 56804

FM collections excel sheet "exchanged with P. Knoblock in 1931"

XRF testing in 2019 with Dr. John Richards and Katrina Schmitz found the body piece and its broken tip compared favorably to values reported of obsidian deposits in Obsidian Cliff, Wyoming.

MPM Number: A 49070 /16082

Continuation of Photographs



**MPM Number: A 49071 /16082**

**Object Description:** Medium Obsidian Blade

**Provenance:** Unknown. The Hopewell Site, Ross County, Ohio

**Measurements:**

Length: 18.8 cm

Width of base: 8.0 cm

Weight: 159.4 g

Central Diameter: 7 mm tip, 11 mm base

**Author's Description:** Obsidian Blade, whole but contains fractur lines, appears glued. Glossy black, with speckles of brown throughout and stripe of red and some blue to green spots. Late stage bifacial flaking, with triangular body shape and a convex base.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 56816

A 49071 was on display from 1964 to 1976 in *Prehistoric Trade* case in *The Prehistoric Indians of Wisconsin* exhibit in the first-floor west of the new building (Negative No. X\_481-13E).

XRF testing in 2019 with Dr. John Richards and Katrina Schmitz found this piece compared favorably to values reported of obsidian deposits in Obsidian Cliff, Wyoming.

MPM Number: A 49071 /16082

Continuation of Photographs



**MPM Number: A 49072 /16082**

**Object Description:** Restored Quartz Crystal Blade

**Provenance:** Altar 1, Mound 25, The Hopewell Site, Ross County, Ohio

**Measurements:**

Length: 14.6 cm	Length of original piece: 5.9 cm
Width of base: 5.7 cm	Width of original piece: 3.9 cm
Weight: 34.4 g	Greatest Diameter: 10 mm

**Author's Description:** Restored quartz crystal blade contains an original quartz piece that is transparent. More than half of the object is made of reconstructed plastic. Museum numbers written on reconstructed portion. Triangular body shape, with straight base, corner-notching, slightly expanding stem, and straight edge.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

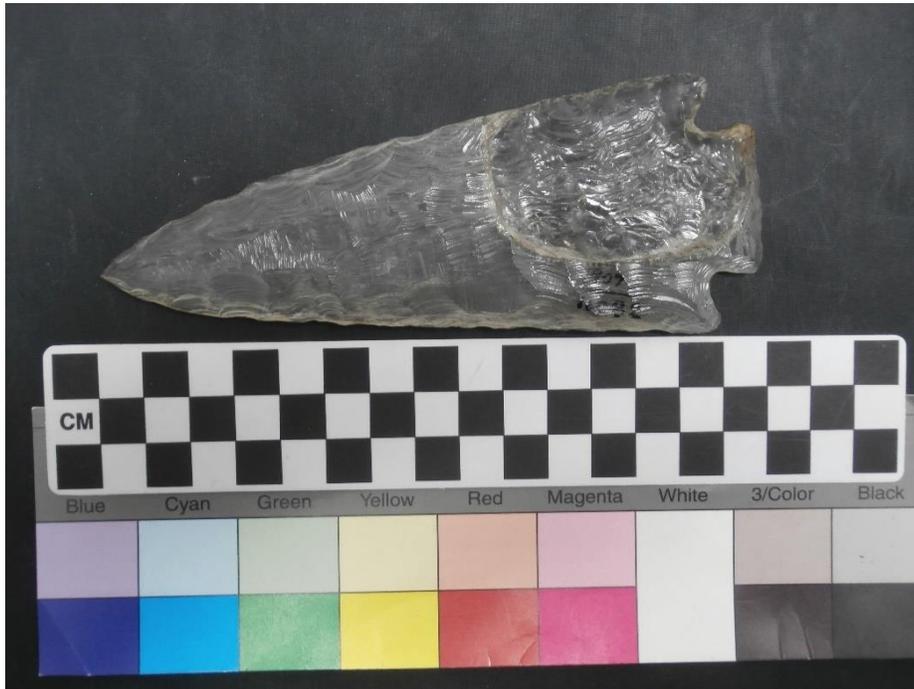
**Additional Notes:** FM Number 56560

FM collection excel sheet has "Mound 25, Altar 1?"

A 49072 was on display in 2018 for the *Weapons: Beyond the Blade* temporary exhibit in the case *Weapons as Art*.

MPM Number: A 49072 /16082

Continuation of Photographs



**MPM Number: A 49073 /16082**

**Object Description:** Copper Breast Plate

**Provenance:** Burial 249, Mound 25, The Hopewell Site, Ross County, Ohio

**Measurements:**

Length: 22.6 cm

Width: 11.6 cm

Weight: 123.9 g

Diameter: 3 mm

**Author's Description:** Copper plate, rectangular shape with rounded or missing corners. Multiple shades of green to brown with white speckles. Two small holes are present, placed 7.4 cm apart and linear to edges of object.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 56081

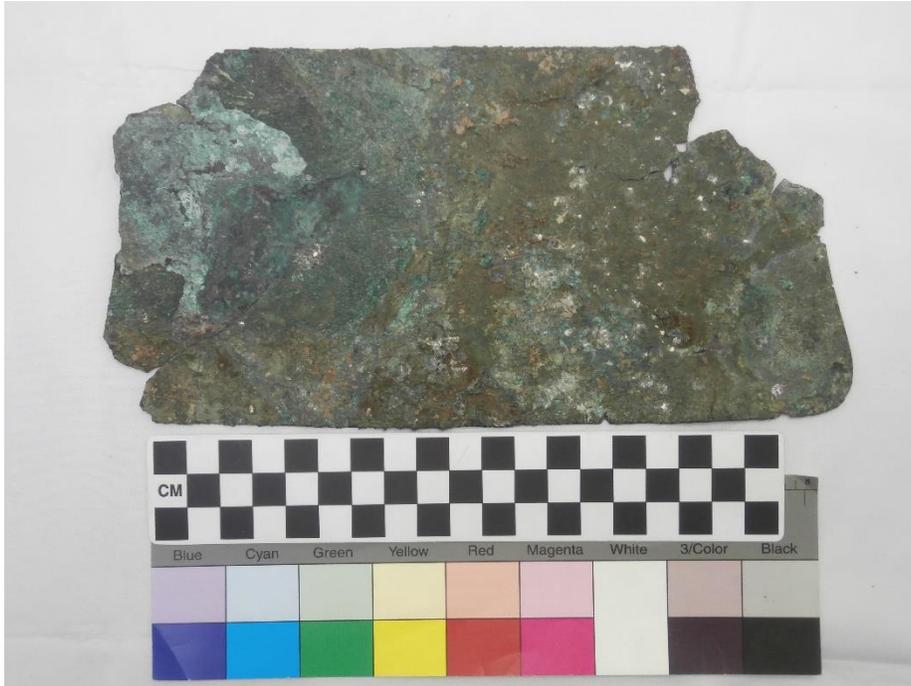
FM collection excel sheet has "Copper Plaque, Mound 25, Burial 248"

MPM NAGPRA Inventory sheet has "Mound 25, King Burial Associated Funerary Object"



**MPM Number: A 49073 /16082**

**Continuation of Photographs**



**MPM Number: A 49074 /16082**

**Object Description:** Copper Adze

**Provenance:** Mound 25, The Hopewell Site, Ross County, Ohio

**Measurements:**

Length: 15 cm

Width of larger end: 8.8 cm

Width of smaller end: 5.7 cm

Weight: 558.7 g

Greatest Diameter: 15 mm

**Author's Description:** Rectangular shaped copper adze with one larger edge and rounded corners.

Multiple shades of green to brown. Side with numbers is very rough texture. Non-numbered side's surface is smoother with larger spots of orange coloration.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 56239

FM collection excel sheet has "Copper celt, Mound 25, Copper Deposit" but the catalog cards from FM has "Mound 25, Skeletons 260-261". In photos deposit and burials were adjacent.

MPM NAGPRA Inventory sheet has "M. 25, Burial 260-261 Associated Funerary Object"

MPM Number: A 49074 /16082

Continuation of Photographs



**MPM Number: A 49075 /16082**

**Object Description:** Copper Adze

**Provenance:** Burial 260-261, Mound 25, The Hopewell Site, Ross County, Ohio

**Measurements:**

Length: 6.3 cm

Width of larger end: 3.6 cm

Width of smaller end: 2.5 cm

Weight: 39.9 g

Greatest Diameter: 8 mm

**Author's Description:** Rectangular small copper adze with one large end and rounded corners.

Multiple shades of green with some brown speckles. Slight concavity on side without museum numbers.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 56257

MPM Number: A 49075 /16082

Continuation of Photographs



**MPM Number: A 49076 /16082**

**Object Description:** Copper “Bracelet”

**Provenance:** Copper Deposit, Mound 25, The Hopewell Site, Ross County, Ohio

**Measurements:**

Greatest Diameter: 9.5 cm

Smallest Diameter: 8.8cm

Greatest Thickness: 13 mm

Smallest Thickness: 6 mm

Weight: 94.3 g

**Author’s Description:** Tubular piece of copper formed into a circular shape with two end thinning then meeting together. Multiple shades of green and brown with some red spots. Side without museum numbers is much lighter and browner in coloration.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 56136



**MPM Number: A 49076 /16082**

**Continuation of Photographs**



**MPM Number: A 49077 /16082**

**Object Description:** Iron Fragment (Textile Imprint)

**Provenance:** Burial 260-261, Mound 25, The Hopewell Site, Ross County, Ohio

**Measurements:**

Length: 8.2 cm

Width: 4.1 cm

Weight: 26.8 g

Diameter: 5-6 mm

**Author's Description:** Piece of orange to red-brown colored iron. Side without numbers has imprint likely from a textile. Side with numbers has white and yellow substances on the corners.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 56268a

FM collections excel sheet has "copper celt"

MPM NAGPRA Inventory has "Mound 25, Burial 260-261 Associated Funerary Object"

MPM Number: A 49077 /16082

Continuation of Photographs



**MPM Number: A 49078 /16082**

**Object Description:** Piece of Cut Mica

**Provenance:** Ashpit 3, Mound 25, The Hopewell Site, Ross County, Ohio

**Measurements:**

Length: 23 cm

Width: 22.5 cm

**Author's Description:** Piece of cut mica, circular in shape, coloration includes silvers to browns.

Some portions are smooth and glossy silver while others are rough and dull brown

**Location:** MPM Building-Floor 2- Woodland Indian-*Wisconsin Archaeology: Pieces of the Puzzle*  
2E16

**Additional Notes:** FM Number 56398-3

MPM NAGPRA Inventory sheet has “thick sheet, brown hue, transparent with rough cut edges and some areas of lifting layers”. Measurements taken from MPM NAGPRA Inventory Sheet as object is on display.



**MPM Number:** A 49079 /16082

**Object Description:** Piece of Cut Mica

**Provenance:** Ashpit 3, Mound 25, The Hopewell Site, Ross County, Ohio

**Measurements:**

Length: 21.6 cm

Width: 13.7 cm

Weight: 10.4 g

**Author's Description:** Thin piece of cut mica coloration includes silvers to browns. Some portions are smooth and glossy silver while others are rough and dull brown.

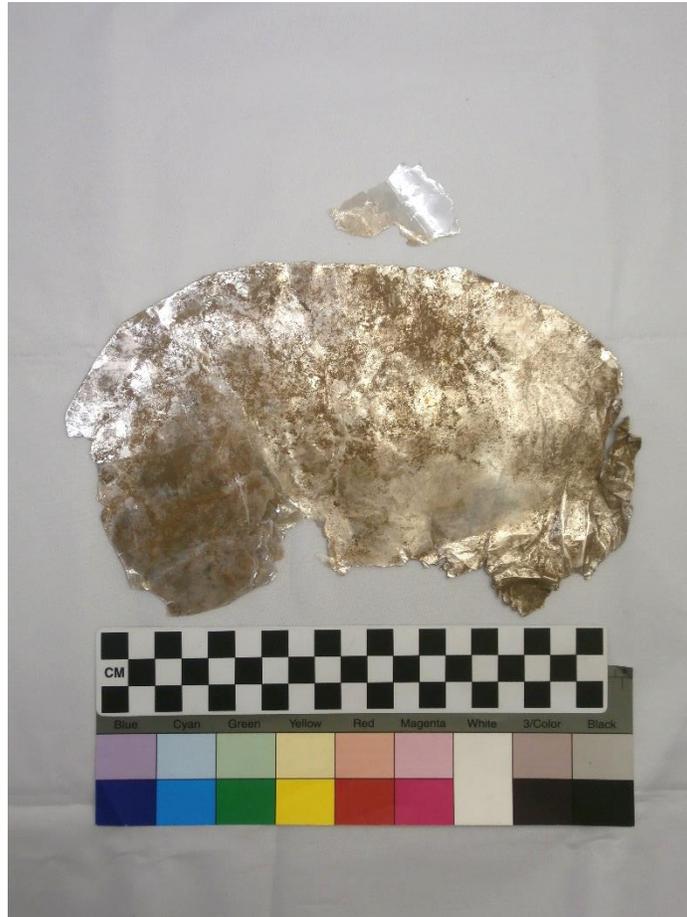
**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 56398-1



**MPM Number: A 49079 /16082**

**Continuation of Photographs**



**MPM Number:** A 49080 /16082

**Object Description:** Fragment of Coal

**Provenance:** Mound 25, Ashpit 3, The Hopewell Site, Ross County, Ohio

**Measurements:**

Length: 7.9 cm

Width: 5.2 cm

Greatest Diameter: 19 mm

Smallest Diameter: 15 mm

Weight: *Unrecorded*

**Author's Description:** Piece of natural coal, coloration black with a small amount of speckling in light to dark brown. Object does not appear modified, only one possible flake scare was identified, shape likely due to flaking (debitage) of interior structure.

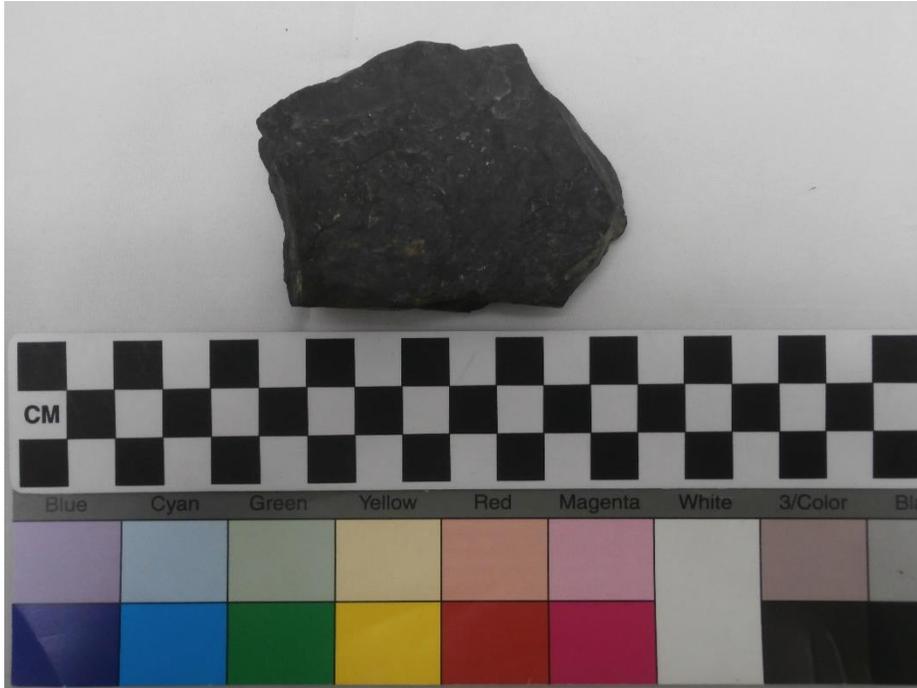
**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 56397-2



MPM Number: A 49080 /16082

Continuation of Photographs



**MPM Number: A 49081 a-c /16082**

**Object Description:** Copper Ear Spool

**Provenance:** Unknown. The Hopewell Site, Ross County, Ohio

**Measurements:**

Length of a: 12.1 cm	Length of b: 9.1 cm	Length of c: 3.8 cm
Width of a: 5.3 cm	Width of b: 5.4 cm	Width of c: 2.9 cm
Depth of a: 4.9 cm	Depth of b: 3.8 cm	Depth of c: 0.6 cm
Weight of a: 230.2 g	Weight of b: 128.9g	Weight of c: 6.2 g

**Author's Description:** Lot of Copper ear spools (plugs) that have fused together ranging from complete earspools to single copper discs. Multiple shades of green and brown with orange coloration present. "a" is the largest with eight complete or broken earspools fused together. "b" is the second largest with 2 mostly complete earspools, a third compacted earspool, and two broken copper discs fused together. "c" is a single broken copper disc.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 56704

FM collection excel sheet "mass of ear plugs, unknown".

MPM Number: A 49081 a-c /16082

Continuation of Photographs



**MPM Number: A 49082 a-b /16082**

**Object Description:** Copper Ear Spools

**Provenance:** Unknown. The Hopewell Site, Ross County, Ohio

**Measurements:**

Diameter of a: 3.8 cm

Diameter of b: 4.1 cm

Width of a: 1.1 cm

Width of b: 1.6 cm

Weight of a: 16.0 g

Weight of b: 23.3 g

**Author's Description:** Two separate copper discs, once part of an earspool. Object b has more of the inner plates and rivets present. Multiple shades of green with orange- brown colorations.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 56704

FM collection excel sheet has "mass of ear plugs, unknown".

MPM Number: A 49082 a-b /16082

Continuation of Photographs



**MPM Number: A 49083 /16082**

**Object Description:** Copper Ear Spool

**Provenance:** Unknown. The Hopewell Site, Ross County, Ohio

**Measurements:**

Diameter of larger disc: 4.2 cm

Width: 2.3 cm

Weight: 34.3 g

**Author's Description:** Single copper ear spool, coloration on larger disc is orange to brown with speckles of green. Coloration on smaller side is greener with sections of brown and speckles of orange.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 56704

FM collection excel sheet "mass of ear plugs, unknown".

Tag on object is incorrect, accession number is 16082 not 16083

MPM Number: A 49083 /16082

Continuation of Photographs



**MPM Number: A 49084 /16082**

**Object Description:** Copper Ear Spool

**Provenance:** Unknown. The Hopewell Site, Ross County, Ohio

**Measurements:**

Diameter of larger disc: 4.2 cm

Width: 1.9 cm

Weight: 28.5 g

**Author's Description:** Single copper earspool, multiple shades of green with sections of brown to orange.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 56704

FM collection excel sheet "mass of ear plugs, unknown".

Tag on object is incorrect, accession number is 16082 not 16083

MPM Number: A 49084 /16082

Continuation of Photographs



**MPM Number: A 49085 /16082**

**Object Description:** Copper Ear Spool

**Provenance:** Unknown. The Hopewell Site, Ross County, Ohio

**Measurements:**

Diameter of disc with fused copper pieces: 4.4 cm

Width: 2.0 cm

Weight: 31.2 g

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Author's Description:** Single copper disc with some additional copper pieces fused to one disc.

Multiple shades of green, with spots of brown to orange.

**Additional Notes:** FM Number 56704

FM collection excel sheet "mass of ear plugs, unknown".

Tag on object is incorrect, accession number is 16082 not 16083

MPM Number: A 49085 /16082

Continuation of Photographs



**MPM Number: A 49086 /16082**

**Object Description:** Copper Ear Spool

**Provenance:** Unknown. The Hopewell Site, Ross County, Ohio

**Measurements:**

Diameter of disc: 4.6 cm

Width: 1.8 cm

Weight: 22.6 g

**Author's Description:** Single copper earspool with one complete disc, rivets, and mostly complete inner plates. Second copper disc is missing. Coloration in green with speckling of red to orange and tan to brown.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 56704

FM collection excel sheet "mass of ear plugs, unknown".

Tag on object is incorrect, accession number is 16082 not 16083

MPM Number: A 49086 /16082

Continuation of Photographs



**MPM Number: A 49087 /16082**

**Object Description:** Piece of Galena

**Provenance:** Mound 17, The Hopewell Site, Ross County, Ohio

**Measurements:**

Length: 5.2 cm

Width: 5.1 cm

Diameter: 3.1-3.6 cm

Weight: 203.9 g

**Author's Description:** Piece of lithic identified in catalog as galena. Coloration included shades of dark brown with speckling of light orange to lighter brown. Few crystal structures, flat on one side, possibly from grinding.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 110148-4

FM collection excel sheet has "Shertone Mound 17"

MPM Number: A 49087 /16082

Continuation of Photographs



**MPM Number: A 49088 /16082**

**Object Description:** Stone Celt

**Provenance:** Mound 17, The Hopewell Site, Ross County, Ohio

**Measurements:**

Length: 24.4 cm

Greatest Width: 6.1 cm

Smallest Width: 2.8 cm

Diameter: 3.4- 3.7 cm

Weight: 1107.9 g

**Author's Description:** Cylindrical lithic with one larger side that ends in a larger flatter edge.

Smaller end is rounded. Object has visible fracture lines, one of which appears glued and transects the object. Color ranges from browns to greys with spots of orange to red.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 110143

FM collection excel sheet has "Shertone Mound 17"



**MPM Number: A 49088 /16082**

**Continuation of Photographs**



**MPM Number: A 49089 /16082**

**Object Description:** Chert Biface

**Provenance:** Mound 2, The Hopewell Site, Ross County, Ohio

**Measurements:**

Length: 12.9 cm

Greatest Width: 10.9 cm      Smallest Width: 2.1 cm

Greatest Diameter: 2.6 cm

Weight: 389.8 g

**Author's Description:** Ovate lithic identified as chert, bifacially reductions/ modifications.

Coloration is a greyish brown with speckles of tan to dark brown.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 56771-E

FM collection excel sheet has "flint disks, mound 2, cache of 8,000"

MPM Catalog book describe as "chipped flint from cache"

MPM Number: A 49089 /16082

Continuation of Photographs



**MPM Number: A 49090 /16082**

**Object Description:** Chert Biface

**Provenance:** Mound 2, The Hopewell Site, Ross County, Ohio

**Measurements:**

Length: 12.0 cm

Greatest Width: 10.1 cm

Smallest Width: 0.7 cm

Greatest Diameter: 2.8 cm

Weight: 364.9 g

**Author's Description:** Ovate lithic with one smaller, more pointed edge. Identified as chert, bifacially reductions/ modifications. Coloration is a brown with speckles of tan to dark grey.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 56771-E

FM collection excel sheet has "flint disks, mound 2, cache of 8,000"

MPM Catalog book describe as "chipped flint from cache"

MPM Number: A 49090 /16082

Continuation of Photographs



**MPM Number: A 49091 /16082**

**Object Description:** Bone needle fragments and a copper bead

**Provenance:** Burial 169, Mound 17, The Hopewell Site, Ross County, Ohio

**Measurements:**

Length of Longest bone shaft: 2.6 cm      Length of Smallest bone (end): 0.9 cm

Width of Longest bone shaft: 3 mm      Width of Smallest bone (end): 1-2 mm

Length of copper piece: 1.6 cm      Width of copper piece: 0.4- 0.3 cm

Weight: 1.3 g

**Author's Description:** 6 pieces: five of bone and one made of copper. Bone pieces are four bone shafts and one rounded end, all tubular in shape with grey, brown, and black coloration. Described as "bone needles or bone awls". Piece of possible copper is green to brown in color, and is partially hollow, likely referred to as the "bead".

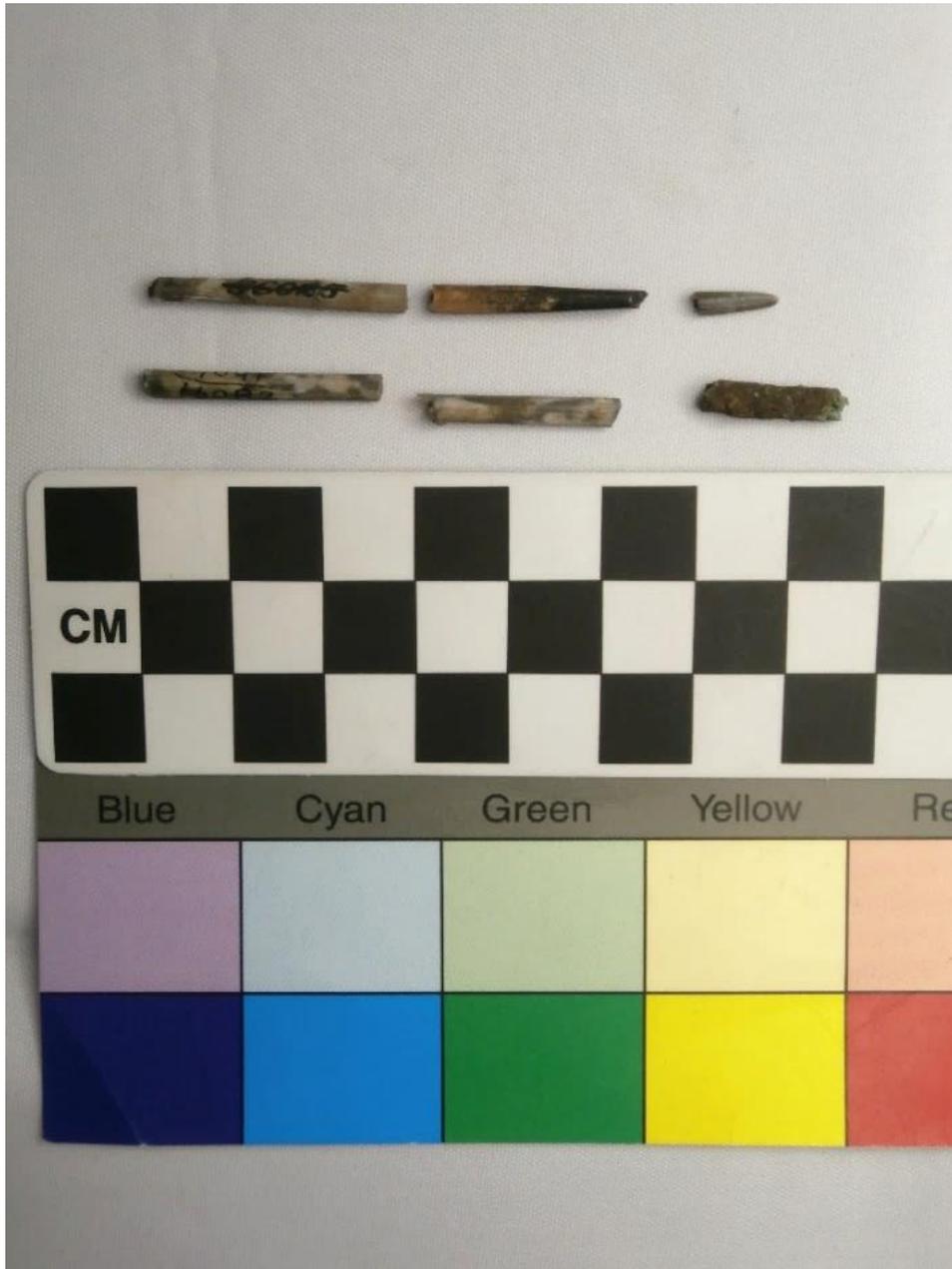
**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 56025

FM collection excel sheet has "bird bone needle or awl- Mound 17, burial 169, 34 at FM"

MPM Number: A 49091 /16082

Continuation of Photographs



**MPM Number: A 49092 /16082**

**Object Description:** Bone Fragment (incised)

**Provenance:** Unknown. The Hopewell Site, Ross County, Ohio

**Measurements:**

Length: 6.8 cm

Width: 3.6 cm

Weight: 8.4 g

Diameter: 1-2 mm

**Author's Description:** Fragment of bone that contains incised ornate designs on side without museum numbers. Coloration is white to brown with speckling of orange. Fracture lines present, object appears to have been three pieces glued together.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 56012 or 56733D

FM catalog number unknown. 56012 relates to Mound 1, 56733D is unknown

MPM Number: A 49092 /16082

Continuation of Photographs



**MPM Number: A 49093 /16082**

**Object Description:** Bone Fragments (incised)

**Provenance:** Unknown. The Hopewell Site, Ross County, Ohio

**Measurements:**

Length: 4.1 cm

Width: 2.1 cm

Weight: 1.8 g

Diameter: 3 mm

**Author's Description:** Two pieces of bone with curved edge, incised markings on side without museum numbers. Coloration is browns to black, possibly burned. Fracture lines present, object was likely glued together at one point.

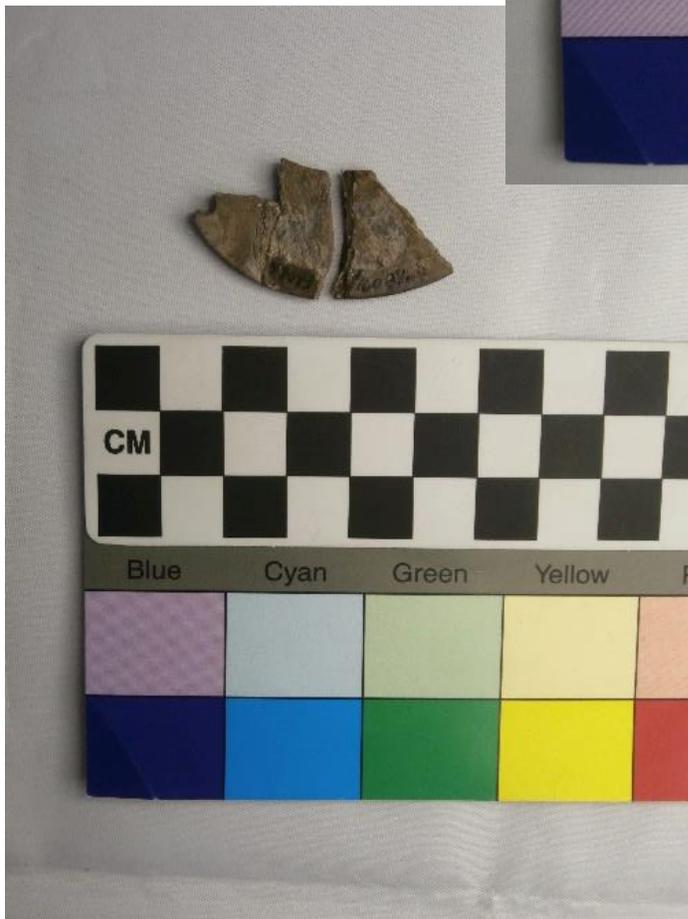
**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 56012 or 56733D

FM catalog number unknown. 56012 relates to Mound 1, 56733D is unknown

MPM Number: A 49093 /16082

Continuation of Photographs



**MPM Number: A 49094 /16082**

**Object Description:** Bone Fragments (incised)

**Provenance:** Unknown. The Hopewell Site, Ross County, Ohio

**Measurements:**

Length: 2.4 cm

Width: 1.2 cm

Weight: 1.5 g

Diameter: 3 mm

**Author's Description:** Fragment of bone shaft with incised designs on external portion of bone.

Coloration is white with spots and lines of brown.

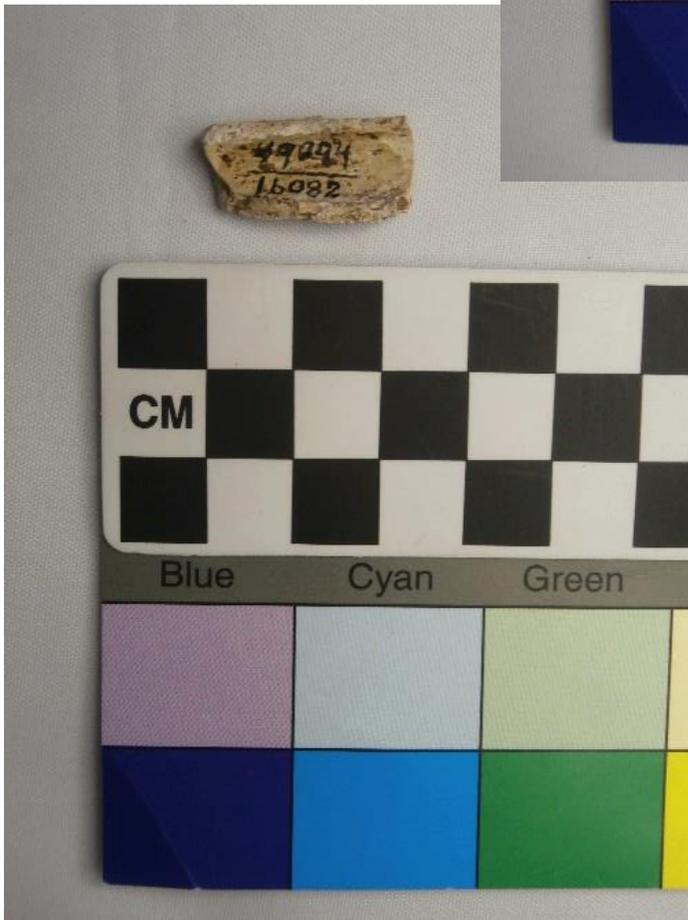
**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 56012 or 56733D

FM catalog number unknown. 56012 relates to Mound 1, 56733D is unknown

MPM Number: A 49094 /16082

Continuation of Photographs



**MPM Number: A 49095 /16082**

**Object Description:** Bone Fragments (incised)

**Provenance:** Unknown. The Hopewell Site, Ross County, Ohio

**Measurements:**

Length: 2.2 cm

Width: 0.9 cm

Weight: 3.8 g

Diameter: 10 mm

**Author's Description:** Fragment of bone shaft, cylindrical in shape, non-hollow, with incised designs externally. Coloration white to tan with speckling of brown.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 56012 or 56733D

FM catalog number unknown. 56012 relates to Mound 1, 56733D is unknown

MPM Number: A 49095/16082

Continuation of Photographs



**MPM Number: A 49096 /16082**

**Object Description:** Bone Fragments (incised)

**Provenance:** Unknown. The Hopewell Site, Ross County, Ohio

**Measurements:**

Length: 2.1 cm

Width: 1.4 cm

Weight: 2.0 g

Diameter: 4 mm

**Author's Description:** Fragment of bone shaft with incised linear and triangular designs on external portion. Coloration is white to tan with lines of brown.

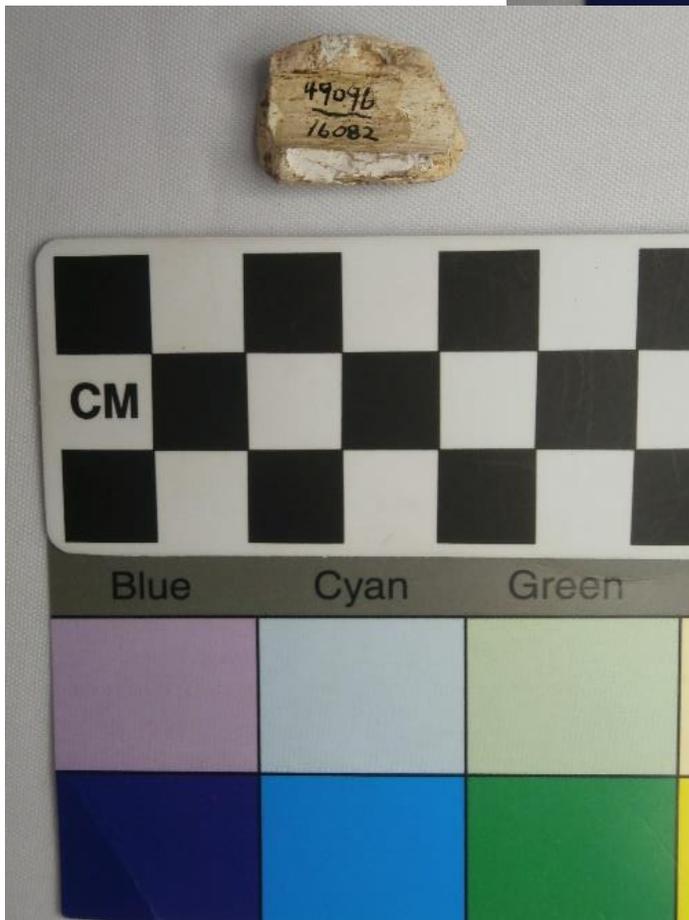
**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 56012 or 56733D

FM catalog number unknown. 56012 relates to Mound 1, 56733D is unknown

MPM Number: A 49096/16082

Continuation of Photographs



**MPM Number: A 49097 /16082**

**Object Description:** Bone Fragments (incised)

**Provenance:** Unknown. The Hopewell Site, Ross County, Ohio

**Measurements:**

Length: 2.4 cm

Width: 0.8 cm

Weight: 3.6 g

Diameter: 9 mm

**Author's Description:** Fragment of bone shaft, cylindrical in shape, non-hollow, with incised designs externally. Coloration white to tan with specks and lines of brown.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 56012 or 56733D

FM catalog number unknown. 56012 relates to Mound 1, 56733D is unknown

MPM Number: A 49097/16082

Continuation of Photographs



**MPM Number: A 49098 /16082**

**Object Description:** Bone Fragments (incised)

**Provenance:** Unknown. The Hopewell Site, Ross County, Ohio

**Measurements:**

Length: 1.9 cm

Width: 1.3 cm

Weight: 0.9 g

Diameter: 3 mm

**Author's Description:** Fragment of bone shaft, triangular in shape with incised designs on external portion. Coloration is white to tan with lines of brown.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 56012 or 56733D

FM catalog number unknown. 56012 relates to Mound 1, 56733D is unknown

MPM Number: A 49098/16082

Continuation of Photographs



**MPM Number: A 49099 /16082**

**Object Description:** Bone Fragments (incised)

**Provenance:** Mound 1, The Hopewell Site, Ross County, Ohio

**Measurements:**

Length: 4.1 cm

Width: 1.9 cm

Weight: 3.1 g

Diameter: 2-3 mm

**Author's Description:** Fragment of bone shaft with incised linear and curving triangular designs on external portion. One indented circle is present along with design. Coloration is white to tan with lines of brown.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 56012

MPM Number: A 49099/16082

Continuation of Photographs



**MPM Number: A 49100 /16082**

**Object Description:** Bone Fragments (incised)

**Provenance:** Unknown. The Hopewell Site, Ross County, Ohio

**Measurements:**

Length of larger piece: 5.1 cm

Length of smaller piece: 1.9 cm

Width of larger piece: 1.6 cm

Width of smaller piece: 0.5 cm

Weight Together: 3.5 g

Greatest Diameter of larger piece: 5mm

**Author's Description:** Two fragmented pieces of bone, dark brown to black in coloration, burned.

Incised designs present on larger piece's external side, it is part of a diaphysis (shaft).

Smaller piece is from thinner, less well preserve bone. It has unknown material present internally.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM 56733D

Smaller piece is unlabeled, only one bone mentioned in descriptions. It is possible that the smaller piece is unrelated to the larger piece and catalog number.

MPM Number: A 49100 /16082

Continuation of Photographs



**MPM Number: A 49101 /16082**

**Object Description:** Bone Fragments (incised)

**Provenance:** Unknown. The Hopewell Site, Ross County, Ohio

**Measurements:**

Length: 10.1 cm

Greatest Width: 3.3 cm

Smallest Width: 0.8 cm

Weight: 8.2 g

Diameter: 2-3 mm

**Author's Description:** Bone fragment with ornate designs present on external side of bone.

Fracture lines present, likely was in four pieces then glued together. Incised designs include circles, linear lines, curving shapes, and crosshatching. Multiple shapes are engraved, and coloration included white-grey and brown-orange. Possible that object was burned.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 56012 or 56733D

FM catalog number unknown. 56012 relates to Mound 1, 56733D is unknown

MPM Number: A 49101 /16082

Continuation of Photographs



**MPM Number: A 49102 /16082**

**Object Description:** Small Stone Tablet

**Provenance:** Altar 1, Mound 25, The Hopewell Site, Ross County, Ohio

**Measurements:**

Length: 7.4 cm

Width: 6.7 cm

Weight: 121.0 g

Diameter: 11-14 mm

**Author's Description:** Rectangular stone tablet that is dark brown to black with speckling of tan to orange. Fracture from broken corner across object appears glued together. Side without museum number has a shiny dark black streak and a circular indentation.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 56495

MPM NAGPRA Inventory sheet has “(sandstone?)”

MPM Number: A 49102 /16082

Continuation of Photographs



**MPM Number: A 49103 /16082**

**Object Description:** Small Stone Tablet

**Provenance:** Altar 1, Mound 25, The Hopewell Site, Ross County, Ohio

**Measurements:**

Length: 5.6 cm

Width of base: 2.5 cm

Width of tip: 0.6 cm

Weight: 11.2 g

Greatest Diameter: 6 mm

**Author's Description:** Rounded triangular shaped stone tablet, dark brown with spots of black to light brown. Surfaced smoothed and sloping to edges.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 56483

MPM catalog card and book have "celt-shaped"

MPM Number: A 49103 /16082

Continuation of Photographs



**MPM Number: A 49104 /16082**

**Object Description:** Broken Stone Pipe

**Provenance:** Burial 209, Mound 23, The Hopewell Site, Ross County, Ohio

**Measurements:** Unknown

**Author's Description:** Object not present for analysis

**Location:** Not Found in Collections

**Additional Notes:** FM Number 56047

FM collection excel sheet has as "Steatite?"

**MPM Number: A 49105 /16082**

**Object Description:** Stone Platform Pipe

**Provenance:** Burial 209, Mound 23, The Hopewell Site, Ross County, Ohio

**Measurements:**

Length of Base: 8.4 cm

Diameter of Bowl Rim: 4.0 cm

Width of Base: 2.9 cm

Greatest Width of Bowl: 3.3 cm

Height of Pipe: 4.8 cm

Weight: 135.5 g

**Author's Description:** Stone platform pipe, T-shaped with rimmed bowl and rounded edges.

Coloration is tan with speckling of brown to light orange. One dark brown spot at bottom of base.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 56046

FM collection excel sheet has "Mound 23, Burial 209 (steatite?)"

MPM NAGPRA Inventory sheet has "Mound 18, Burial 181 Associated Funerary Object"

Greber (1989, 216) has matching drawing and description of pipe from M. 23, Burial 209.

MPM Number: A 49105 /16082

Continuation of Photographs 1 of 2



MPM Number: A 49105 /16082

Continuation of Photographs 2 of 2



**MPM Number: A 49106 /16082**

**Object Description:** Obsidian Point (broken tip)

**Provenance:** Altar 1 or 2, Mound 25, The Hopewell Site, Ross County, Ohio

**Measurements:**

Length: 9.2 cm

Greatest Width: 4.8 cm

Width at broken tip: 1.8 cm

Weight: 19.9g

Central Diameter: 5 mm tip, 6 mm base

**Author's Description:** Black obsidian projectile point with broken tip. Heavy speckling of tan to brown on non-museum number side. Triangular body shape, with corner-notching, expanding stem, convex base, and incurvated edge. Tip or point is broken and missing.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 56773-D

XRF testing in 2019 with Dr. John Richards and Katrina Schmitz found this piece compared favorably to values reported of obsidian deposits in Bear Gulch, Idaho.

MPM Number: A 49106 /16082

Continuation of Photographs



**MPM Number: A 49107 /16082**

**Object Description:** Bear Tooth with inlaid pearl

**Provenance:** Burial 278, Mound 25, The Hopewell Site, Ross County, Ohio

**Measurements:**

Length: 9.4 cm

Width: 2.6 cm

Width of pearl: 1 cm

Weight: 37.2 g

Greatest Diameter of tooth: 17 mm

**Author's Description:** Canine tooth of bear, tan to brown coloration. Two lines of small engraved holes at root or internal end of tooth. One large hole filled with natural pearl. 3 additional holes and one partial hole are on opposite side of pearl, near museum numbers.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 56402-2

MPM NAGPRA Inventory sheet has "Unassociated Funerary Object". Object listed as from Burial 278, but no human remains were collected with this number, likely due to poor preservation.

MPM Number: A 49107 /16082

Continuation of Photographs



**MPM Number: A 49108 /16082**

**Object Description:** Pearl Beads

**Provenance:** Burial 243, Mound 25, The Hopewell Site, Ross County, Ohio

**Measurements:**

Length of Largest bead on wire: 1.1 cm      Width of Largest bead on wire: 0.8 cm

Length of Largest bead 2nd bag: 1.4 cm      Width of largest bead 2nd bag: 1.1 cm

Weight of first bag including wire: 17.1 g      Weight of second bag: 6.8 g

**Author's Description:** Two bags of natural pearl beads. One bag has 82 beads on a wire, with 2 additional loose beads. Second bag has 20 whole or fragmentary beads with more flacking, cracking, dull/ dark spots. Color ranges white to tan, and shiny to dull.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 56098

MPM NAGPRA Inventory sheet has "Unassociated Funerary Object". Object from Burial 243, but no human remains collected with this number, likely due to poor preservation. Described as a lot of 21 beads, however 84 whole beads and many more fragments present.

A 49108 was on display from 1964 to 1976 in *Hopewell Indians* case in *The Prehistoric Indians of Wisconsin* exhibit in the first-floor west of the new building (Negative No. X477F).

MPM Number: A 49108 /16082

Continuation of Photographs



**MPM Number:** A 49109 /16082

**Object Description:** Iron Beads (19)

**Provenance:** Altar 1, Mound 25, The Hopewell Site, Ross County, Ohio

**Measurements:**

Length of longest bead: 2.7 cm      Width of longest bead: 1.4 cm

Length of smallest bead: 0.9 cm      Width of smallest bead: 0.4 cm

Weight: 22.7 g

**Author's Description:** 19 beads ranging from fragmentary to complete, to multiple beads fused together. Coloration includes greens to brown-red and orange, possibly demonstrating these objects are copper and not iron. Most beads are cylindrical in shape.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 56433



**MPM Number: A 49110 /16082**

**Object Description:** Copper and Pearl Beads (23)

**Provenance:** Burial 281, Mound 25, The Hopewell Site, Ross County, Ohio

**Measurements:**

Length Longest Copper Bead: 1 cm

Width Widest Copper bead: 1.1 cm

Length Longest Pearl Bead: 0.7 cm

Widest Pearl Bead: 0.7 cm

Weight copper beads on wire: 3.1 g

Weight all pearl beads and wire: 2.0 cm

**Author's Description:** One wire with 8 pearl beads, one separate pearl bead. Second wire with 16 copper beads.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 56409

MPM NAGPRA Inventory sheet has "Unassociated Funerary Object"

MPM Number: A 49110 /16082

Continuation of Photographs



**MPM Number: A 49111 /16082**

**Object Description:** Copper Tube Fragment

**Provenance:** Unknown. The Hopewell Site, Ross County, Ohio

**Measurements:**

Length: 2.8-3.8 cm

Width: 1.9-2.3 cm

Weight: 7.0 g

Diameter: 2-12 mm

**Author's Description:** Piece of broken copper, internally hollow in tube or cylindrical shape.

Internal profile shape is tear-drop with one rounded end and another end extending to a point. Copper is multiple shades of green with tan and orange spots. Appears to be a single piece of copper wrapped externally around inner tube, with ends pinched together are one side.

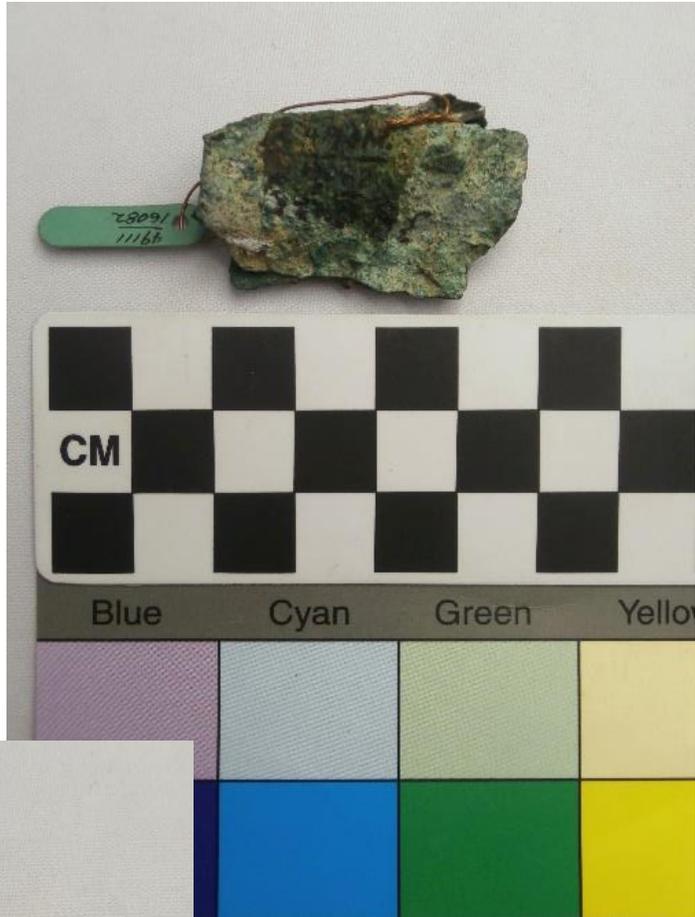
**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 56601

MPM Catalog Book has "fragment of copper tube (panpipe)"

MPM Number: A 49111 /16082

Continuation of Photographs



**MPM Number: A 49112 /16082**

**Object Description:** Copper Ornament

**Provenance:** Copper Deposit, Mound 25, The Hopewell Site, Ross County, Ohio

**Measurements:**

Length: 4.6 cm

Widest Width: 2.5 cm      Width at broken tip: 0.5-0.8 cm

Weight: 4.1 g      Diameter: 1 mm

**Author's Description:** Tear-drop shaped piece of thin copper, with broken tip and rounded piece missing from larger end. Object is arched/ concaved. Coloration is multiple shades of green and spots of brown, red, and blue.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 56234

MPM Number: A 49112 /16082

Continuation of Photographs



**MPM Number: A 49113 /16082**

**Object Description:** Copper Disc Ornament

**Provenance:** Copper Deposit, Mound 25, The Hopewell Site, Ross County, Ohio

**Measurements:**

Diameter of Object: 3.2-3.3 cm

Internal hole diameter: 1.1 cm

Weight: 2.3 g

Thickness: 1 mm

**Author's Description:** Thin circular copper disc with circular hole in center. Some missing portions of external edge. One side is dark green with brown spots, while second side is bright orange with spots of black and non-regular incised lines.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 56170

MPM Number: A 49113 /16082

Continuation of Photographs



**MPM Number: A 49114 /16082**

**Object Description:** Copper Disc Ornament

**Provenance:** Copper Deposit, Mound 25, The Hopewell Site, Ross County, Ohio

**Measurements:**

Diameter of Circular Object: 3.1-3.2 cm

Internal Hole diameter: 1.2 cm

Weight: 2.3 g

Thickness: 1 mm

**Author's Description:** Thin circular copper disc with circular hole in center. Small portion of external edge missing, one small oval shaped hole present. One side is dark green with red-brown spots, while second side is bright orange with spots of black and non-regular incised lines.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 56125

MPM Number: A 49114 /16082

Continuation of Photographs



**MPM Number: A 49115 /16082**

**Object Description:** Copper Ornament (leaf-like)

**Provenance:** Copper Deposit, Mound 25, The Hopewell Site, Ross County, Ohio

**Measurements:**

Length: 4.4 cm

Width: 1.9 cm

Weight: 1.3 g

Thickness: 1 mm

**Author's Description:** Flat, thin copper piece that is cut in a leaf-like shape. Larger end is missing some portions, and smaller end has multiple irregular shaped holes present. One side is dark green with spots of brown, while other side is bright, shiny orange with spots of black and some irregular incised lines.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 56125

MPM Number: A 49115 /16082

Continuation of Photographs



**MPM Number: A 49116 /16082**

**Object Description:** Copper Ornament (semi-circular)

**Provenance:** Unknown. The Hopewell Site, Ross County, Ohio

**Measurements:**

Length: 4.9 cm

Largest Width: 1.1 cm

Smallest Width: 0.6 cm

Weight: 3.1 g

Diameter: 4 mm

**Author's Description:** Copper piece shaped into flattened tube bent in a semi-circle. Fracture lines present, appears to have been four fragments glued together with added stabilizing material. Dark green to dark brown in coloration, one end is flattened and rounded, while the other is smaller, less flat with opening to interior.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 56755

FM collection excel sheet has "Copper canine teeth"

MPM Number: A 49116 /16082

Continuation of Photographs



**MPM Number: A 49117 /16082**

**Object Description:** Copper Button

**Provenance:** Burial 248, Mound 25, The Hopewell Site, Ross County, Ohio

**Measurements:**

Diameter of Circular object: 2 cm

Thickness: 0.9 cm

Weight: 3.8 g

**Author's Description:** Half-Sphere copper ornament or button, coloration is multiple shards of green with brown and white speckling. Flat base has two connected holes, possibly for suspension of object.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number: 56088-4

FM and MPM catalog card have "copper or silver button"

MPM NAGPRA Inventory sheet has "copper button"

MPM Number: A 49117 /16082

Continuation of Photographs



**MPM Number: A 49118 /16082**

**Object Description:** Iron Chisel Fragments (3)

**Provenance:** Unknown. The Hopewell Site, Ross County, Ohio

**Measurements:**

Length of Longest Piece: 8.5 cm

Width of Longest Piece: 1.0 cm

Length of Middle Piece: 4.7 cm

Width of Middle Piece Flat edge: 1.1 cm

Length of Shortest Piece: 1.6 cm

Width of Shortest Piece: 0.8 cm

Weight of 3 pieces: 18.7 g

Greatest Diameter of Longest Piece: 11 mm

**Author's Description:** Three pieces of iron, all dark brown with red colorations. Longest piece is curved. Second longest piece has one flattened edge.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 56767-4

FM collections excel sheet has "Adze fragments, altar 1"

MPM Number: A 49118 /16082

Continuation of Photographs



**MPM Number: A 49119 a-e /16082**

**Object Description:** Stone Knives (5)

**Provenance:** Altar 1, Mound 25, The Hopewell Site, Ross County, Ohio

**Measurements:**

Length of a: 3.9 cm    Width of a: 1.0 cm    Weight of a: 1.5 g    Mid Diameter a: 4 mm

Length of b: 4.2 cm    Width of b: 0.8 cm    Weight of b: 0.6 g    Mid Diameter b: 2 mm

Length of c: 4.8 cm    Width of c: 1.2 cm    Weight of c: 1.7 g    Mid Diameter c: 2 mm

Length of d: 4.0 cm    Width of d: 0.8 cm    Weight of d: 0.6 g    Mid Diameter d: 1 mm

Length of e: 4.1 cm    Width of e: 0.8 cm    Weight of e: 0.6 g    Mid Diameter e: 2 mm

**Author's Description:** Five small stone knives or microblades, long rectangular in shape, labeled a-e. Knives c and e are in two pieces. Knives b-e are black to grey coloration while knife a is red-orange with spots of milky white, blue, and brown.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 56546

MPM Number: A 49119 a-e /16082

Continuation of Photographs



**MPM Number:** A 49120 /16082

**Object Description:** Quartz Crystal

**Provenance:** Unknown. The Hopewell Site, Ross County, Ohio

**Measurements:**

Length: 3.0 cm

Width: 0.9 cm

Depth: 0.9 cm

Weight: 4.1 g

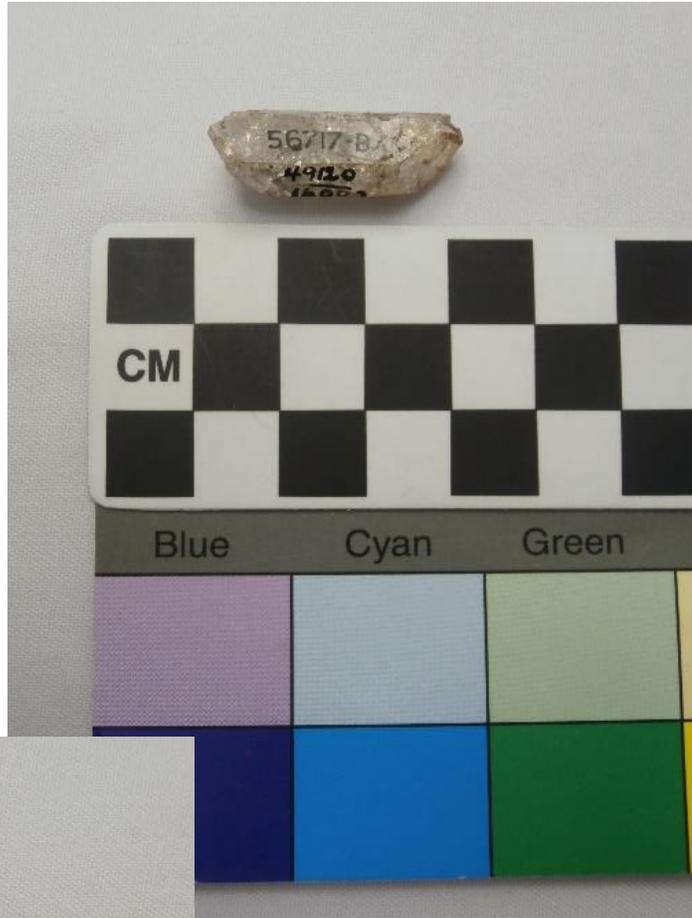
**Author's Description:** Quartz crystal, clear to white in color with spots of brown. Cylindrical shape with 6 flattened sides.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number 56717

MPM Number: A 49120 /16082

Continuation of Photographs



**MPM Number: A 49121 /16082**

**Object Description:** Human jaw fragment, cut

**Provenance:** Burial 181, Mound 18, The Hopewell Site, Ross County, Ohio

**Measurements:**

Length: 4.9 cm

Width: 1.8 cm

Height: 2 cm

Weight: 0.025g

**Author's Description:** Right side of human maxilla, with two molars, and one premolar present

**Location:** MPM Building-Basement-BE 06- Column C- Tray 4 (Ohio)

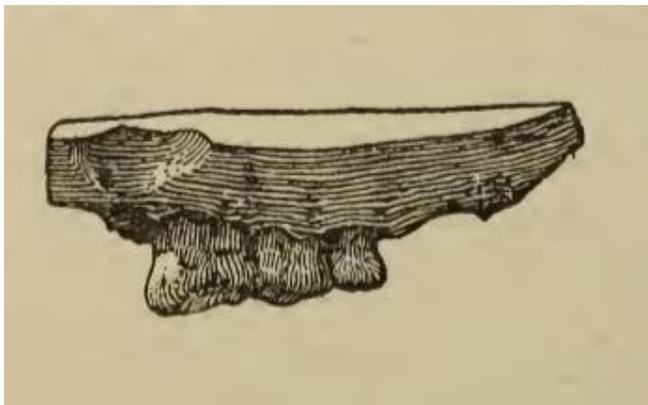
**Additional Notes:** FM Number 56034-3

Object loaned to Ohio State Historical Society in Sept. 1996, returned in Sept. 1997.

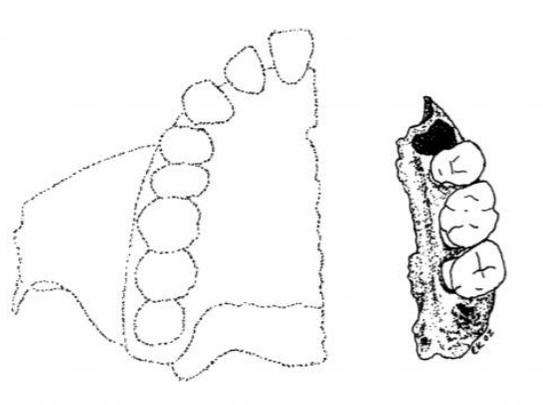
MPM NAGPRA Inventory Sheet has "left side, mandible" aged 16-25.

Cheryl Johnston's dissertation has, "[a] heavily modified fragment of the alveolar process of a right human maxilla is present... (age) between twenty and twenty-five years as estimated via seriation of the (maxillary) dentition. The sex of the person is unknown" (Johnston 2002, 82).

Moorehead 1922, Figure 10



Johnstone 2002, Figure 3



**MPM Number:** A 49122 /16082

**Object Description:** Mica Leaf

**Provenance:** Altar 1, Mound 25, The Hopewell Site, Ross County, Ohio

**Measurements:** Unknown

**Author's Description:** Object not present for analysis

**Location:** Not Found in Collections

**Additional Notes:** FM Number 56438

**MPM Number: A 49123 /16082**

**Object Description:** Obsidian Core- Polyhedral

**Provenance:** Unknown. The Hopewell Site, Ross County, Ohio

**Measurements:** Unknown

**Author's Description:** Object not present for analysis

**Location:** Removed from Collections

**Additional Notes:** FM Number 56554-5

MPM Disposed Book page 16 has given to UW-Madison for destructive dating tests  
5/20/1954.

Object not found, and no records present for object or testing in the Anthropology  
Department of the University of Wisconsin-Madison.

**MPM Number: A 49124 /16082**

**Object Description:** Bear tooth (copperized)

**Provenance:** Burial 248, Mound 25, The Hopewell Site, Ross County, Ohio

**Measurements:**

Length: 7.6 cm

Width: 2.5

Weight: 29.9 g                      Diameter: 14 mm

**Author's Description:** Bear canine tooth, one side is green in color, likely was in contact with copper within mound. Four holes are present, two are larger and deeper. Internally the two smaller holes connect to the two larger holes, and fibrous material can be seen within hole.

Both ends are broken but possible drilled holes are present at the ends.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number: 56084

MPM Number: A 49124 /16082

Continuation of Photographs



**MPM Number: A 49125 /16082**

**Object Description:** Bear Tooth (copperized)

**Provenance:** Burial 248, Mound 25, The Hopewell Site, Ross County, Ohio

**Measurements:**

Length: 8.1 cm

Width: 2.1 cm

Weight: 10.3 g

Diameter: 6 mm

**Author's Description:** Bear canine tooth, parallel split so that half is present. Internal side of tooth is smooth and brown in coloration, external side has brown to tan colorations with a spot of green where object likely was in contact with copper in the mound. Two circular holes are present, and a third partial hole can be seen at root end of tooth.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number: 56084

MPM Catalog Book has "pendant?"

MPM Number: A 49125 /16082

Continuation of Photographs



**MPM Number: A 49126 /16082**

**Object Description:** Bear Tooth (cut)

**Provenance:** Unknown. The Hopewell Site, Ross County, Ohio

**Measurements:**

Length: 3.1 cm

Width: 3.0 cm

Weight: 10.7 g

Diameter: 15 mm

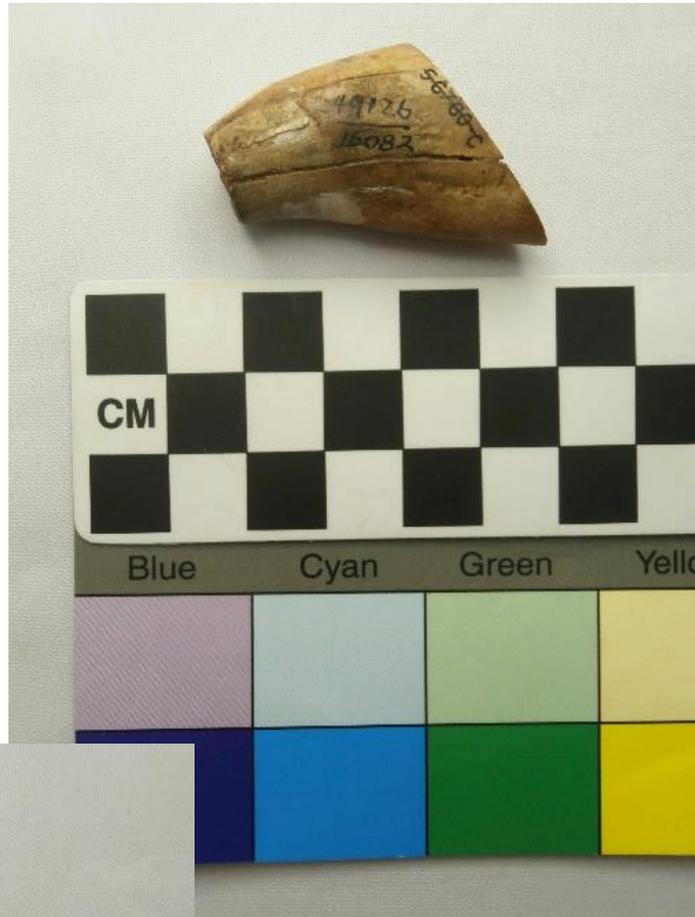
**Author's Description:** Piece of bear canine tooth, partial enamel and partial root present. Enamel is cream to white, root is tan to brown, both with dark brown to grey areas. Enamel end there is a hole extending into the tooth. Root end the hole expands in width, and caramel colored material is plugging the hole. Tool use likely as hole has striations and edges appear cut and smoothed. Fracture lines present, one engraved half-circle and one half-circle hole at the root end.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number: 56760-C

MPM Number: A 49126 /16082

Continuation of Photographs 1 of 2



MPM Number: A 49126 /16082

Continuation of Photographs 2 of 2



**MPM Number: A 49127 /16082**

**Object Description:** Shark Tooth

**Provenance:** Mound 17, The Hopewell Site, Ross County, Ohio

**Measurements:**

Length: 4.4 cm

Width of root: 3.0 cm

Width of Hole: 0.8 cm

Weight: 3.5 g

Diameter: 5 mm

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Author's Description:** Shark tooth with perforated hole present near the root. One fracture line extends from hole to root edge of tooth. Root coloration is dull tan to brown. Enamel coloration is semi-shiny cream near point, and dark greyish-blue near root with brown speckling throughout. One small section of enamel is missing on side without museum numbers, near to the root edge. Identified as fossilized *Carcharodon carcharias* (Great White) species with tip wear and reduction in serration size (Colvin 2011).

**Additional Notes:** FM Number: 56029-14

FM collection excel sheet, and Moorehead 1922, Figure 41 *b* recorded as "Mound 17"

MPM NAGPRA sheet has "Mound 25, Burial 169 Associated Funerary Object"

MPM Number: A 49127 /16082

Continuation of Photographs



**MPM Number: A 49128 /16082**

**Object Description:** Round piece of Amber

**Provenance:** Altar 1, Mound 25, The Hopewell Site, Ross County, Ohio

**Measurements:**

Length: 2.2 cm

Width: 2.1 cm

Weight: 4.3 g

Diameter: 15 mm

**Author's Description:** Rounded piece of amber, dark orange in coloration. Nothing is suspended internally. One side of ball is flatter, and there are three areas where the surface is roughened, one of which is more yellow in coloration, one dark red in coloration, and one is black in coloration. Possible striking patterns from human modification present.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number: 5654302

FM collection excel sheet has "Resin lumps" 1 associated piece at FM

MPM Number: A 49128 /16082

Continuation of Photographs



**MPM Number: A 49129 /16082**

**Object Description:** Copper Plate Fragments (10)

**Provenance:** Unknown. The Hopewell Site, Ross County, Ohio

**Measurements:**

Length of Largest Piece: 16 cm      Width of Largest Piece: 6.5 cm

Weight of Largest Piece: 99.3 g

Weight of all pieces: 238.2 g

**Author's Description:** 10 pieces of copper: four small fragments, three curved medium sized pieces, two flat medium pieces, and one large piece that is very curved and comes to point. All pieces are shades of green with speckled areas of brown, orange, gray and white. Some pieces appear to have charcoal, lithics, shell or mica, and bone fused to the surface. The largest piece has a hole drilled near the middle of its flat edge.

**Location:** MPM Building-Basement-BE 06- Ohio Archaeology- D3-34-10.2

**Additional Notes:** FM Number: 56601

MPM NAGPRA Inventory sheet has 8 pieces listed, likely that some have fractured

MPM catalog card and catalog book have "lot of fragments of copper head plate"

MPM Number: A 49129 /16082

Continuation of Photographs



## **Appendix B: Field Museum External Exchanges and Sales of Hopewell Site Materials**

**May 1925-** Ohio State Archaeological and Historical Society (now Ohio History Connection)  
102 Hopewell collection objects (15 being replicas) exchanged for 369 Fort Ancient  
objects (19 being replicas) (FM Accession: 1579).

**April 1930-** A. Stephen Kenyon of Melbourn, Australia (V. P. Field Naturalist Club of Victoria)  
3 Hopewell collection flint discs alongside 27 other objects given in exchange for 38  
Australian Stone and wood objects, and skulls (FM Accession: 1819).

**May 1931-** Donald O. Boudeman of Kalamazoo Public Museum, Michigan.  
90 objects given from FM Accession 31 (Hopewell site) and Wisconsin/Michigan objects  
from FM Accession 97. No count of objects from each accession, described as chiefly  
copper without catalog numbers. Received 171 Michigan archaeological specimens (FM  
Accession: 1928).

In 1999, over one hundred objects were received from the Kalamazoo Public Museum in  
FM Accession 4071. In this, 131 objects from the Hopewell period were present, 45  
known to be formerly in the FM collection, but unable to identify objects given in 1931.

**November 1931-** B. Knoblock of Illinois.

12 Hopewell collection objects (4 copper celts, 8 obsidian blades) out of 67 total  
exchanged for 29 objects (FM Accession: 1950).

**November 1932-** B. Knoblock of Illinois.

5 Hopewell collection objects as part of a larger exchange of 12 objects. Received 1  
Denmark celt, 1 human skull from Illinois, and 3 Folsom points (FM Accession: 1950).

**October 1933-** Warren K. Moorehead

45 Hopewell collection objects (40 pearls) exchanged for 12 stone implements  
(FM Accession: 2028).

**June 1934-** Museo Nacional de Arqueología, Historia, y Etnología

(later Museo Nacional de Antropología)

154 Hopewell collection objects given in exchange for a variety of 139 objects from Peru, Panama, Columbia, Ecuador, and Chile (FM Accession: 2071).

**July 1940-** Paul Warner

Hopewell collection Copper celt (FM 56266) sold.

**August 1943-** University of Michigan

17 Hopewell collection cataloged ceramics exchanged for Aleut specimens

(FM Accession: 2325).

**March 1945-** Milwaukee Public Museum

47 Hopewell collection objects (FM count) exchanged for 4 reconstructed Wisconsin

Woodland ceramic vessels (FM Accession: 2354).

**July 1947-** Dr. D. S. Bullock of Michigan Agricultural College Museum

(now Michigan State University)

2 Hopewell collection flint scrapers (FM 56015) as part of a larger exchange of 6 objects.

Received 6 perforated stones from Chile (FM Accession: 2396).

**December 1951-** Museo Nacional de Antropología, Mexico City

48 Hopewell collection objects as part of a larger exchange of 652 FM specimens.

Received 1,126 Mexican antiquities (FM Accession: 2475).

**Oct 1962-** Florida State Museum

2 Hopewell collection copper earspools given for unknown number of beads (FM

Accession: 2870).

**Hopewell Site Material Types Transferred from FM, Counts from FM Documentation**

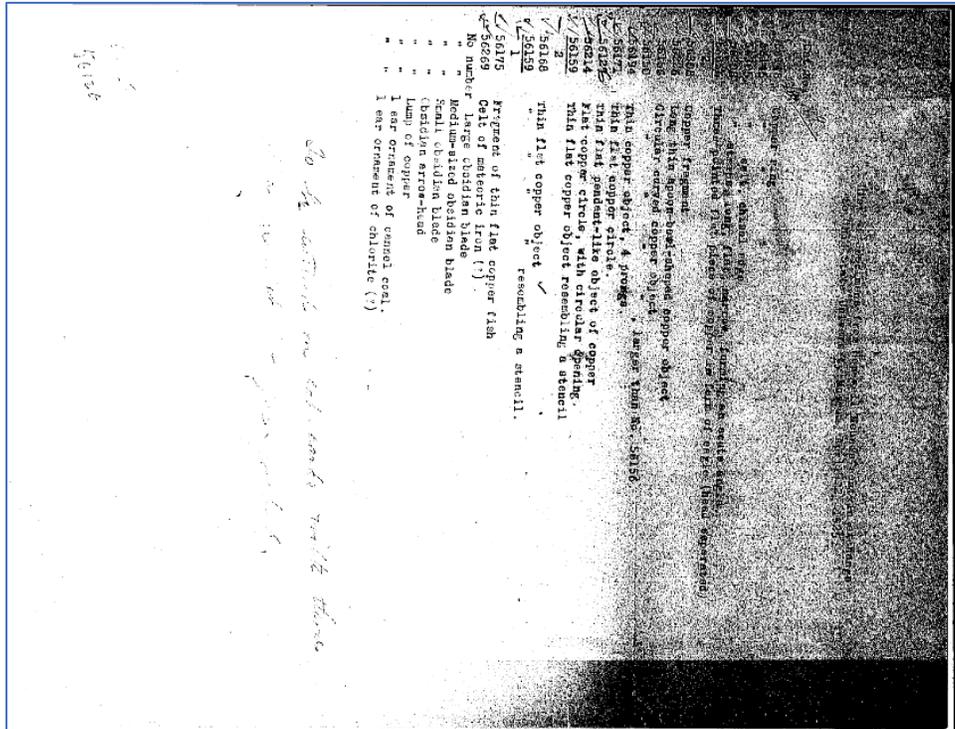
<b>Recipient</b>	<b># Lithics</b>	<b># Metal</b>	<b># Ceramic</b>	<b># Faunal</b>	<b># Mica</b>	<b># Human</b>	<b># Replicas</b>	<b>Total</b>
Australia 1930	3							3
Boudeman 1931	1	6			3			10 known
Bullock 1947	2							2
Florida State Museum 1962		2						2
Knoblock, B. 1931	8	4						12
Knoblock, B. 1932		2		3				5
Milwaukee Public Museum 1945	18	17		8	3	1		47
Moorehead 1933	1	3		40 pearls, 1 tooth				45
Museo Nacional de Antropología 1934	56	3	48	28 shell, 18 bone, 1 tooth				154
Museo Nacional de Antropología 1951	16	16		6	6		4	48
Ohio State Archaeological and Historical Society 1925	38 + 4 boxes of discs	46		3			15	87 + 4 boxes of discs
Univ. of Michigan 1943			17					17
Warner, Paul 1940		1						1

# 1925 Ohio State Archaeological and Historical Society

Associated to Memo 1579, within Accessional File 31, Anthropology Department, Field Museum, Chicago

Material from Hopewell Mounds Selected for Exchange with  
Museum of Ohio State Archaeological and Historical Society,  
April 22, 1925. *of Acc. 1579*

Acc.No.	Cat.No.	
--	--	16 large obsidian blades (2 unbroken)
31	56258	6 obsidian arrow points or knives, all broken
"	56301	1 small copper axe
"	56305	1 medium sized copper axe
"	56295	1 large copper axe
"	56356	1 copper eagle effigy, fragmentary
"	56175	1 " fish " "
"	56150	1 " disk, concave
"	56156	1 " " "
"	56194	1 " bear paw effigy
"	56126	1 " pendant, small, perforated
"	56171	1 " washer-shaped disk
"	56214	1 " " "
"	56226	1 " pendant, spoon-shaped
"	56208	1 " forked figure
"	56186	1 " scroll
"	56159	1 " stencil, broken
"	56197	1 " saw-toothed strip
"	56145	1 " bracelet
"	56149	1 " " "
--	--	1 " pendant, bird foot design, broken
31	56308 and	3 " nuggets (raw material)
"	56320 )	
--	--	2 stone ear ornaments, broken
31	56269	1 iron celt
--	--	1 " chisel, bone haft, fragmentary
--	--	1 silver fragment, hammered
--	--	1 stone bead, copper covered
--	--	1 piece of gelena, small, used for paint
31	56560	1 fragment of spear, crystal
--	--	1 boneawl, incised design, fragmentary
31	56100	1 copper cover for bead, oval
"	56504	1 obsidian core and 2 flakes, small.
"	56029	2 shark teeth
"	56480	1 small sandstone tablet
"	56486	1 " " "
"	56496	1 " " "
"	56526	1 " " "
--	--	4 boxes flint disks (part of cache of 8000 in 32 boxes)
--	--	15 casts of pipes, effigies, etc.
Total number original specimens, exclusive of disks, -		62



**Transcription of second page**

Cat. No.

[unreadable]	copper ring	56127	Thin flat pendant-like object of copper
55145	copper ring		
56265	copper celt chisel [unreadable]	56214	Flat-copper circle, this circular opening
56300	Copper [unreadable] long, flat, narrow, forming an acute angle	<u>56159</u>	Thin flat copper object resembling a stencil
<u>[unreadable]</u>	Three pointed flat piece of copper	2	
2	fort of eagles (head separated)	56168	Thin flat copper object
		<u>56159</u>	Thin flat copper object, resembling a stencil
		1	
56308	Copper fragment	56175	Fragment of thin flat copper fish
56226	Long thin spoon-bowl shaped copper object	56269	Celt of meteoric iron
		No Number	Large obsidian blade
56156	Circular curved copper object	No Number	Medium-sized obsidian blade
56150	Circular curved copper object, larger than no. 56156	No Number	Small obsidian blade
56194	Thin copper object, 4 prongs	No Number	Obsidian arrow-head
56171	Thin flat copper disc	No Number	Lump of copper
		No Number	1 ear ornament of canal coal

1934 Museo Nacional de Arqueologia, Historia, y Etnologia Exchange

Memo 640, Accessional File 31, Anthropology Department, Field Museum, Chicago

MEMO. No. 640  
Department. A  
Field Museum of Natural History

---

From \_\_\_\_\_  
To Museo Nacional  
Address Mexico, D.F.

---

FOR EXAMINATION, FOR DETERMINATION, EXCHANGE  
From Collection \_\_\_\_\_  
Original Accession Number \_\_\_\_\_

---

Description of Objects  
48 pieces of pottery  
56 " stone  
28 " shell  
18 " bone  
3 " metal  
1 " tooth  
Total 154 objects

Sent in exchange for material  
in acc. 7071.

---

Date received \_\_\_\_\_  
Signature \_\_\_\_\_  
Date forwarded June 14, 1934  
Signature Lampson

---

Accession No. \_\_\_\_\_ Transportation No. 6550

---

Remarks Ship by freight collect  
Value \$ 10000 for insurance  
purpose

## 1945 Milwaukee Public Museum Exchange

Associated to Memo 1142, within Accessional File 31, Anthropology Department, Field Museum, Chicago (page 1 of 2)

Memo 1142

EXCHANGE BETWEEN MILWAUKEE PUBLIC MUSEUM AND  
THE CHICAGO NATURAL HISTORY MUSEUM

Archaeological Material from Hopewell Mounds, Ohio  
Excavated by Moorehead in 1892  
Acc. 31 & 1579

Large obsidian blade	56804
Medium obsidian blade	56816
Medium obsidian blade	56827
Restored blade of quartz crystal	56560
Copper breastplate	56081
Large copper adz	56239
Small copper adz	56257
Copper bracelet	56136
Fragment of iron with textile imprint	56268-A
Cut mica	56398-3
Cut mica	56398-1
Fragment of coal	56397-2
Cluster and no. of loose earspools	56704
Galena	110148-4
Stone celt	110143
Cache flints	56771-F-E
Bone needle fragments	56025
Fragments of decorated bone	56012
Fragments of decorated bone	56733-D
Stone tablet	56495

Associated to Memo 1142, within Accessional File 31, Anthropology Department, Field Museum, Chicago (page 2 of 2)

Small tablet celt-shaped	56483
Stone pipe broken	56047
Stone pipe	56046
Obsidian point	56773-D
Bear tooth with pearl	56402-2
Pearl beads	56098
Iron beads	56433
Copper beads	56409
Fragment of copper tube (panpipe)	56601
Copper ornaments	56234, 56170, 56215, 56125, 56755
Copper or silver button	56088-4
Iron chisel	56767-4
5 Flake knives	56546
Quartz crystal	56717-B
Cut human jaw	56034-3
Mica leaf	56438
Obsidian core polytudral	56554-5
Cut bear teeth	56084, 56760-C
Shark tooth	56029-14
Amber	56543-2
Fragment of copper head-plate	56601

## 1951 Museo Nacional de Antropología, Mexico City Exchange

List of Specimens Selected for Exchange with National Museum of Mexico (page 3 of 4)

Associated to Memo 1376, within Accessional File 31, Anthropology Department, Field Museum, Chicago

	3
<del>59089</del> 68068 ✓	Copper knife with tang
<del>58891</del> 52821 ✓	Copperstemmed spear point
<u>HOPEWELL (Ohio Valley)</u>	
✓ 54992 ✓	Shell dipper
✓ 110126 ✓	Mica:claw (original)
✓ no # ✓	Mica silhouette of a hand (replica)
✓ no # ✓	Mica silhouette of a headless human figure (replica)
✓ 56581-1 ✓	Large slab of a mica mirror
✓ 56434 ✓	Two fragments of mica with copper stain
✓ no # ✓	Fragment of mica
✓ no # ✓	Fragment of Galesa stone (used as funeral offering material)
<del>56393-1</del> 56396-1 ✓	Large copper breastplate
✓ 56361 ✓	Fragment of a copper helmet
✓ 56704 ✓	Large cluster of cremated copper earspools
✓ 56203 ✓	Complete earspool of copper
✓ no # ✓	Complete earspool of copper
✓ 56272-2 ✓	Half of a copper earspool with silver incrustation
✓ 56102 ✓	Half of a copper earspool

List of Specimens Selected for Exchange with National Museum of Mexico (page 4 of 4)  
Associated to Memo 1376, within Accessional File 31, Anthropology Department, Field  
Museum, Chicago

- 4
- ✓ no # ✓ 3 halves of copper earspools
  - ✓ 56294 ✓ Copper celt
  - ✓ 56244 ✓ Copper celt
  - ✓ 56409 ✓ String of small copper beads
  - ✓ 56755B ✓ Claw of copper (?) with heavy green patina
  - ✓ 56172 ✓ Small disk of copper
  - ✓ 56120 ✓ Small copper ornament (polished on one side)
  - ✓ 56588 ✓ Copper band of a pumpe
  - ✓ 56367 ✓ Part of a meteoric iron plaque
  - ✓ 56045-B ✓ Grizzly bear tooth with large pearl (green patina)
  - ✓ 56751-B ✓ Fragment of a finger (?) of coal set with pearl
  - ✓ 56029-12 ✓ Fossil shark tooth
  - ✓ 56848 ✓ Carved bone with design, black patina
  - ✓ no # ✓ Fragment of carved bone
  - ✓ no # ✓ 14 very small fragments of carved bones
  - ✓ 82653 ✓ Red stone pipe in the shape of a bird from Illinois (original)
  - ✓ 110107 ✓ 4 casts of effigy pipes
  - ✓ 110114 ✓
  - ~~110115~~ 110105 ✓
  - ✓ 110122 ✓

## Appendix C: MPM Ceramic Vessels Exchanged in Accession 16082

The following data concerning four Woodland Ceramic Vessels given from the MPM to the FM in 1945 as part of an object exchange, was collected from MPM Accession 16082 File, the MPM Archaeology Catalog Books, and MPM Archaeology Catalog Cards.

MILWAUKEE PUBLIC MUSEUM  
DISPOSITION RECORD

Check here when removed from record books.

Department of Anthropology  
(Archeology)  
Specimens bearing the following catalog numbers  
have been exchanged with Chicago  
Natural History Museum  
(See Accession Card #16082)

Date April 6, 1945 APR 6 - 1945  
Curator *Pro. tem. Eldon G. Loeff*

Cat. No.	4.00	15.00	2.00
12493, 38281, 42984, 48325.			
Org # 354	Acc # 10432	Acc # 11740	Acc # 15061

Acc # 3500  
DISPOSED PAGE 15  
+ SPECIMENS - VALUE \$21.00

*Authorized by Board  
3/20/45  
H. P. Anderson*

This card must be deposited with the Director previous to the removal of specimens from the building.  
File by Department and Dates.

### A 12493/2439

*Archaeology Catalog Book*: "Accessioned December 22, 1910. One large pot, broken, 18 cm. Found in Clifton, Outagamie County, Wisconsin. Collected in 1885. Received from Mr. Weise, through Mr. Richton as a gift, valued at \$4. Shows striae such as might be produced by serrated edged shell. Disposition page 15."

*Archaeology Catalog Card*: "Out of Clifton, Archaeology Vessel Jar Lake Michigan Pottery, purchased"

A 38281/10432

Archaeology Catalog Book: "Accessioned October 3<sup>rd</sup>, 1931. One large potsherd of reddish brown, grit tempered ware. From Moundville Campsite, American Indian, Marquette County, Wisconsin. From George L. Pasco as a gift, valued at \$50. Restored. Disposed Page 15"

Archaeology Catalog Card: "Restored pot Marq. Moundville Campsite, Archaeology Vessel Potsherd (restored pot) pottery, gift".

#38281/10432

WISCONSIN POTTERY

Check No. \_\_\_\_\_  
Collection \_\_\_\_\_

Culture name \_\_\_\_\_  
Owned by, M.P.M. Date, \_\_\_\_\_  
 Found by, Geo Pasco Date, \_\_\_\_\_  
 County, Marquette Sec., \_\_\_\_\_ Property, Moundville campsite  
 From mound, \_\_\_\_\_ surface, (?) burial, \_\_\_\_\_ refuse pit, \_\_\_\_\_ other, campsite  
 Was found intact, \_\_\_\_\_ Sherds,  Restored by, WPA

TRAITS

BODY: ovoid,  globose, \_\_\_\_\_ beaker, \_\_\_\_\_ bowl, \_\_\_\_\_  
ladle, \_\_\_\_\_ plate, \_\_\_\_\_ miscel, \_\_\_\_\_ shouldered, \_\_\_\_\_  
effigy, \_\_\_\_\_

SURFACE: rough, \_\_\_\_\_ smooth, \_\_\_\_\_ polished, \_\_\_\_\_ cord-padded,   
stamp-padded, \_\_\_\_\_ net-imprinted, \_\_\_\_\_ cloth-imprinted, \_\_\_\_\_

RIM: straight,  flaring, \_\_\_\_\_ contracted, \_\_\_\_\_ folded, \_\_\_\_\_  
thickened, \_\_\_\_\_ thinned, \_\_\_\_\_ pointed, \_\_\_\_\_

LIP: squared,  rounded, \_\_\_\_\_ edged, \_\_\_\_\_ in-slant, \_\_\_\_\_ out-slant, \_\_\_\_\_

NECK: present, \_\_\_\_\_ short, \_\_\_\_\_ long, \_\_\_\_\_ broad, \_\_\_\_\_ narrow, \_\_\_\_\_

BASE: rounded, \_\_\_\_\_ concidal,  flat, \_\_\_\_\_

HANDLE: present, \_\_\_\_\_ number, \_\_\_\_\_ loop, \_\_\_\_\_ strap, \_\_\_\_\_ rounded, \_\_\_\_\_  
lug, \_\_\_\_\_ perforation, \_\_\_\_\_ effigy, \_\_\_\_\_ grip, \_\_\_\_\_

TEMPER: shell, \_\_\_\_\_ stone,  sand, \_\_\_\_\_ limestone, \_\_\_\_\_ none, \_\_\_\_\_ other, \_\_\_\_\_

DECORATION: present, \_\_\_\_\_ body, \_\_\_\_\_ in-rim, \_\_\_\_\_ out-rim, \_\_\_\_\_ lip, \_\_\_\_\_  
cord-imprint, \_\_\_\_\_ rocked indenting, \_\_\_\_\_ indented dots, \_\_\_\_\_  
embossed nodes and ridges, \_\_\_\_\_ trailing, \_\_\_\_\_ incising, \_\_\_\_\_  
stamping, \_\_\_\_\_ finger and fingernail imprinting, \_\_\_\_\_  
painting, \_\_\_\_\_ slip application, \_\_\_\_\_ other, \_\_\_\_\_

COLOR: Reddish brown

SIZE: outside diameter at rim, 8 1/4" neck, \_\_\_\_\_ shoulder, 10"  
height, 11"

REMARKS:  
LABEL:

Information by \_\_\_\_\_ Photograph MPM-# 425819  
Address \_\_\_\_\_ By Barnes  
Date \_\_\_\_\_

P-2

A42984/11740

*Archaeology Catalog Book*: Accessioned October 2<sup>nd</sup>, 1935. One pottery vessel, grit tempered, cord paddle marked, lip notched with corded lines, patterns of narrow parallel corded lines. American Indian, Green Lake County, Wisconsin. From George Pasco and Walt Densmore as a gift, valued at \$15. These 6 pots were found in one mound on the John Harmel farm, S 1/2 of N 1/2, Sec. 32, Range 11E, Marquette twp., Green Lake County, Wisconsin (S. shore of Lake Puckaway). In this mound was found 3 kinds of pottery. March 1945 this pot was found restored, probably WPA. Disposed page 15, Chicago Natural History Museum”.

*Archaeology Catalog Card*: “Pasco of Ripon, Wisconsin. Densmore of Markson, Wisconsin. Pottery Vessel, Native American, United States, Wisconsin, Great Lakes. Archaeology Vessel Pot Grand River Type Pottery”.

# 42984 / 11740  
WISCONSIN POTTERY

Check No. \_\_\_\_\_  
Collection \_\_\_\_\_

Culture name \_\_\_\_\_ Date \_\_\_\_\_  
Owned by \_\_\_\_\_ Date \_\_\_\_\_  
X Found by Geo. Pasco + Walt Densmore Date \_\_\_\_\_  
X County Green Lake Twp. Marquette Sec. S 1/2 of N 1/2 Sec. 32 Property John Harmel  
X From mound, X surface, \_\_\_\_\_ burial, \_\_\_\_\_ refuse pit, \_\_\_\_\_ other, \_\_\_\_\_  
Was found intact, \_\_\_\_\_ Sherds, X Restored by, WPA

TRAITS

BODY: ovoid, \_\_\_\_\_ globose, ~~beaker~~ beaker, \_\_\_\_\_ bowl, \_\_\_\_\_  
ladle, \_\_\_\_\_ plate, \_\_\_\_\_ miscel, \_\_\_\_\_ shouldered, \_\_\_\_\_  
effigy, \_\_\_\_\_

SURFACE: rough, \_\_\_\_\_ smooth, \_\_\_\_\_ polished, \_\_\_\_\_ cord-paddled, X  
stamp-paddled, \_\_\_\_\_ net-imprinted, \_\_\_\_\_ cloth-imprinted, \_\_\_\_\_

RIM: straight, \_\_\_\_\_ flaring, \_\_\_\_\_ contracted, \_\_\_\_\_ folded, \_\_\_\_\_  
thickened, \_\_\_\_\_ thinned, \_\_\_\_\_ pointed, \_\_\_\_\_

LIP: squared, \_\_\_\_\_ rounded, \_\_\_\_\_ edged, \_\_\_\_\_ in-slant, \_\_\_\_\_ out-slant, \_\_\_\_\_

NECK: present, \_\_\_\_\_ short, \_\_\_\_\_ long, \_\_\_\_\_ broad, \_\_\_\_\_ narrow, \_\_\_\_\_

BASE: rounded, \_\_\_\_\_ concoidal, \_\_\_\_\_ flat, \_\_\_\_\_

HANDLE: present, \_\_\_\_\_ number, \_\_\_\_\_ loop, \_\_\_\_\_ strap, \_\_\_\_\_ rounded, \_\_\_\_\_  
lug, \_\_\_\_\_ perforation, \_\_\_\_\_ effigy, \_\_\_\_\_ grip, \_\_\_\_\_

TEMPER: shell, \_\_\_\_\_ stone, X sand, \_\_\_\_\_ limestone, \_\_\_\_\_ none, \_\_\_\_\_ other, \_\_\_\_\_

DECORATION: present, X body, \_\_\_\_\_ in-rim, \_\_\_\_\_ out-rim, X lip, Notched  
cord-imprint, X rocked indenting, \_\_\_\_\_ indented dots, \_\_\_\_\_  
embossed nodes and ridges, \_\_\_\_\_ trailing, \_\_\_\_\_ incising, \_\_\_\_\_  
stamping, \_\_\_\_\_ finger and fingernail imprinting, \_\_\_\_\_  
painting, \_\_\_\_\_ slip application, \_\_\_\_\_ other, X

COLOR: Reddish brown

SIZE: outside diameter at rim, 7 1/4" neck, 7" shoulder, 8 5/8"  
height, 8 1/2"

REMARKS:  
LABEL:

Information by \_\_\_\_\_ Photograph MPM - #425220  
Address \_\_\_\_\_ By Barnes  
Date \_\_\_\_\_

P-2

A 48325/15061

Archaeology Catalog Book: "Accessioned March 3, 1942. One restored pot, American Indian, Marquette County, Wisconsin. Near Dartt Res., From L.J. Dartt of Montello, Wisconsin as a gift, valued at \$2. Disposed page 15".

Archaeology Catalog Card: "Native American Marquette County, Wisconsin. One restored pot".

48325/15061

WISCONSIN POTTERY

Check No. \_\_\_\_\_  
Collection \_\_\_\_\_

Culture name \_\_\_\_\_  
Owned by, \_\_\_\_\_ Date, \_\_\_\_\_  
X Found by, L. J. Dartt, Montello, Wis. Date, \_\_\_\_\_  
X County, Marquette Twp., \_\_\_\_\_ Sec., \_\_\_\_\_ Property, Near Dartt res.  
X From mound, \_\_\_\_\_ surface, \_\_\_\_\_ burial, \_\_\_\_\_ refuse pit, \_\_\_\_\_ other, \_\_\_\_\_  
Was found intact, \_\_\_\_\_ Sherds, X Restored by, WPA

TRAITS

BODY: ovoid,  globose, \_\_\_\_\_ beaker, \_\_\_\_\_ bowl, \_\_\_\_\_  
ladle, \_\_\_\_\_ plate, \_\_\_\_\_ miscel, \_\_\_\_\_ shouldered, \_\_\_\_\_  
effigy, \_\_\_\_\_

SURFACE: rough,  smooth, \_\_\_\_\_ polished, \_\_\_\_\_ cord-paddled, \_\_\_\_\_  
stamp-paddled, \_\_\_\_\_ net-imprinted, \_\_\_\_\_ cloth-imprinted, \_\_\_\_\_

RIM: straight, \_\_\_\_\_ flaring,  contracted, \_\_\_\_\_ folded, \_\_\_\_\_  
thickened, \_\_\_\_\_ thinned, \_\_\_\_\_ pointed, \_\_\_\_\_

LIP: squared,  rounded, \_\_\_\_\_ edged, \_\_\_\_\_ in-slant, \_\_\_\_\_ out-slant, \_\_\_\_\_

NECK: present,  short, \_\_\_\_\_ long,  broad, \_\_\_\_\_ narrow, \_\_\_\_\_

BASE: rounded, \_\_\_\_\_ concidal,  flat, \_\_\_\_\_

HANDLE: present, \_\_\_\_\_ number, \_\_\_\_\_ loop, \_\_\_\_\_ strap, \_\_\_\_\_ rounded, \_\_\_\_\_  
lug, \_\_\_\_\_ perforation, \_\_\_\_\_ effigy, \_\_\_\_\_ grip, \_\_\_\_\_

TEMPER: shell, \_\_\_\_\_ stone,  sand, \_\_\_\_\_ limestone, \_\_\_\_\_ none, \_\_\_\_\_ other, \_\_\_\_\_

DECORATION: present,  body, \_\_\_\_\_ in-rim, \_\_\_\_\_ out-rim, \_\_\_\_\_ lip, \_\_\_\_\_  
cord-imprint, \_\_\_\_\_ rocked indenting,  indented dots, \_\_\_\_\_  
embossed nodes and ridges, \_\_\_\_\_ trailing, \_\_\_\_\_ incising, \_\_\_\_\_  
stamping, \_\_\_\_\_ finger and fingernail imprinting, \_\_\_\_\_  
painting, \_\_\_\_\_ slip application, \_\_\_\_\_ other, \_\_\_\_\_

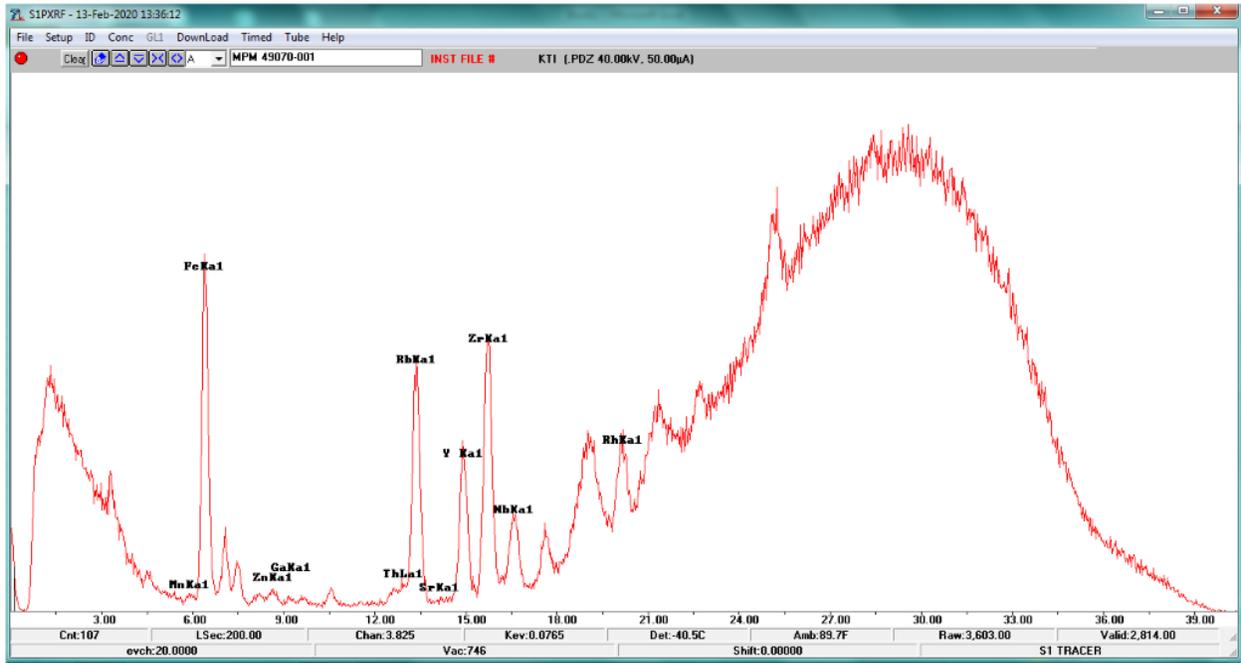
COLOR: Reddish brown

SIZE: outside diameter at rim, 7 1/2" neck, 6 3/8" shoulder, 7 3/8"  
height, 9 3/8"

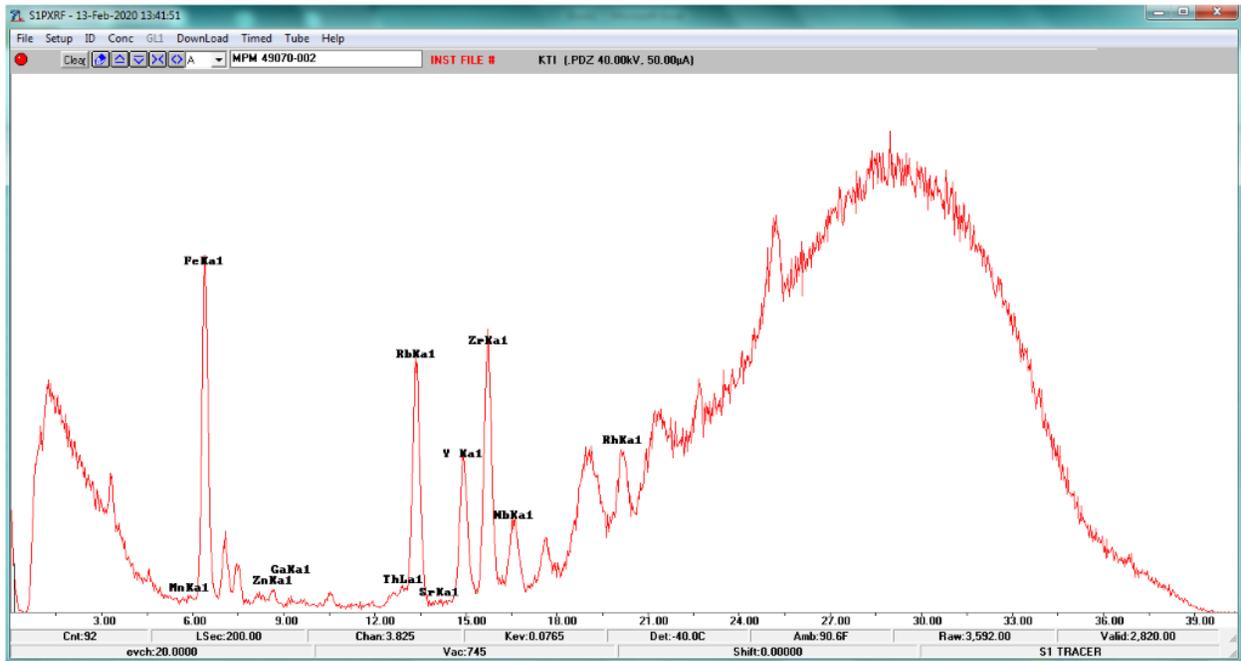
REMARKS:  
LABEL:

Information by \_\_\_\_\_ Photograph MPM-#125821  
Address \_\_\_\_\_ By Barnes  
Date \_\_\_\_\_  
Disp. page 15

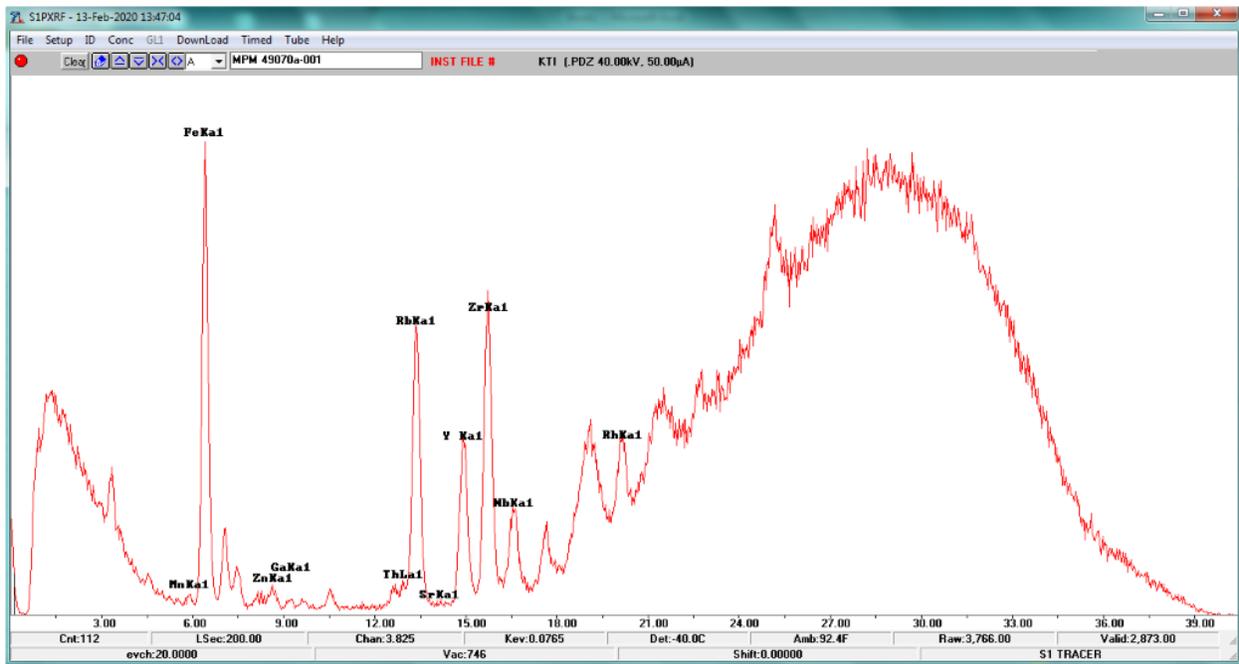
# Appendix D: Obsidian XRF Testing



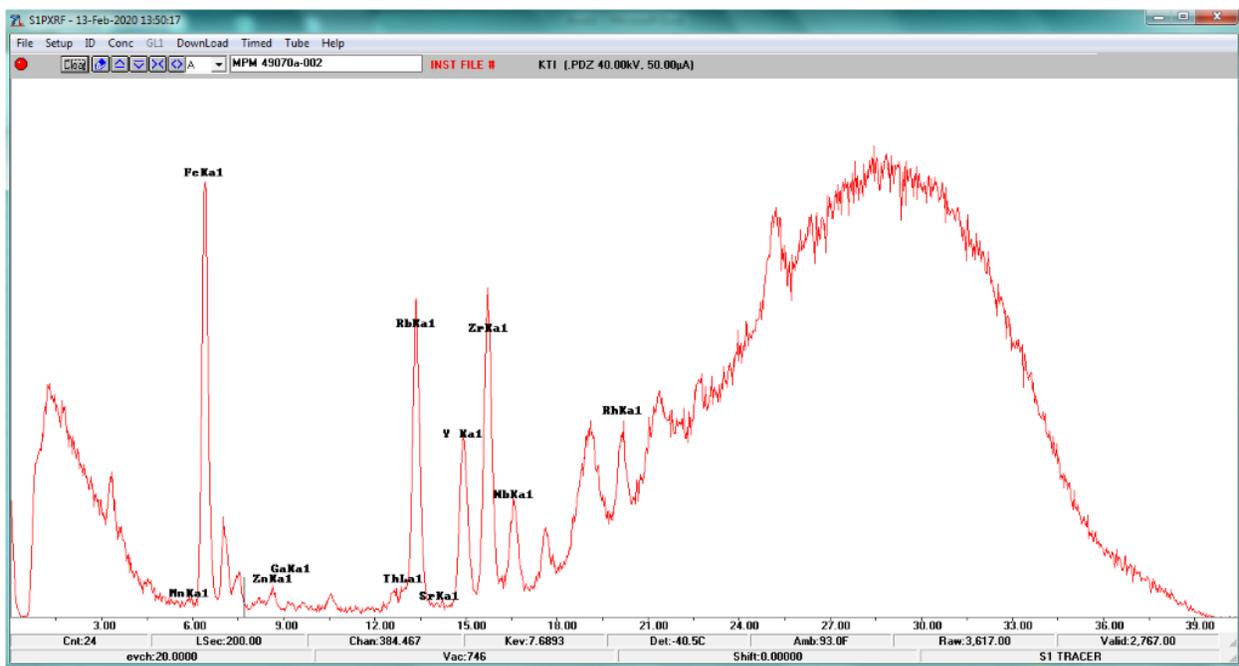
MPM A 49070-001



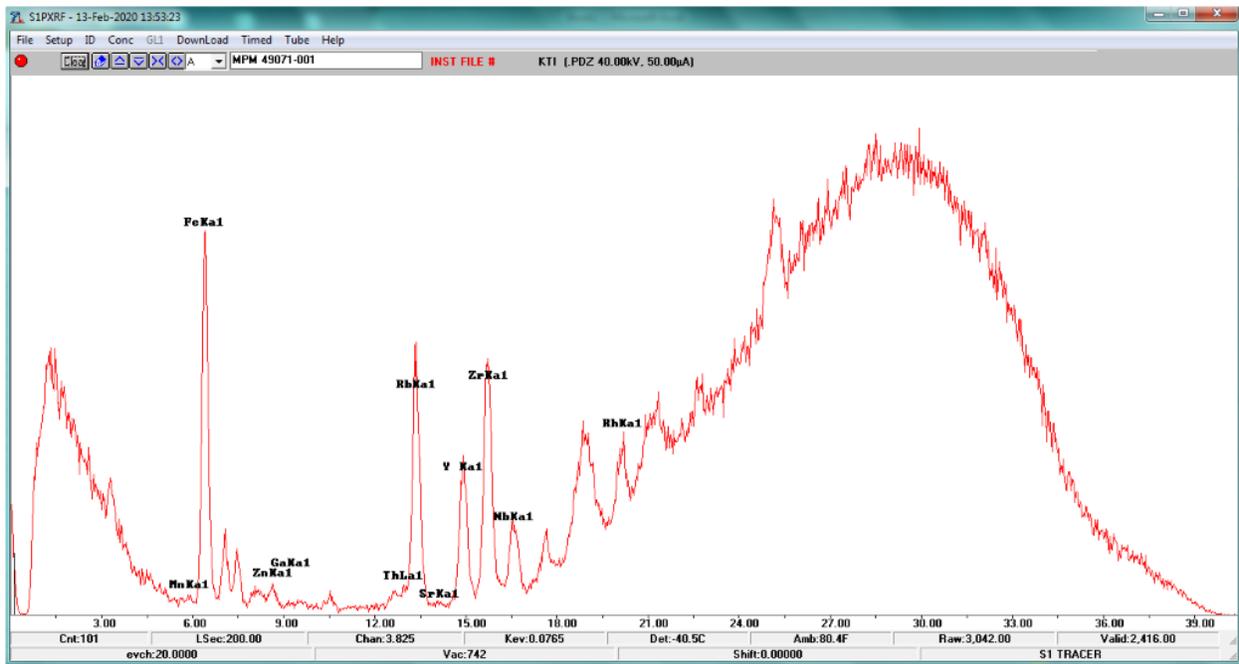
MPM A 49070-002



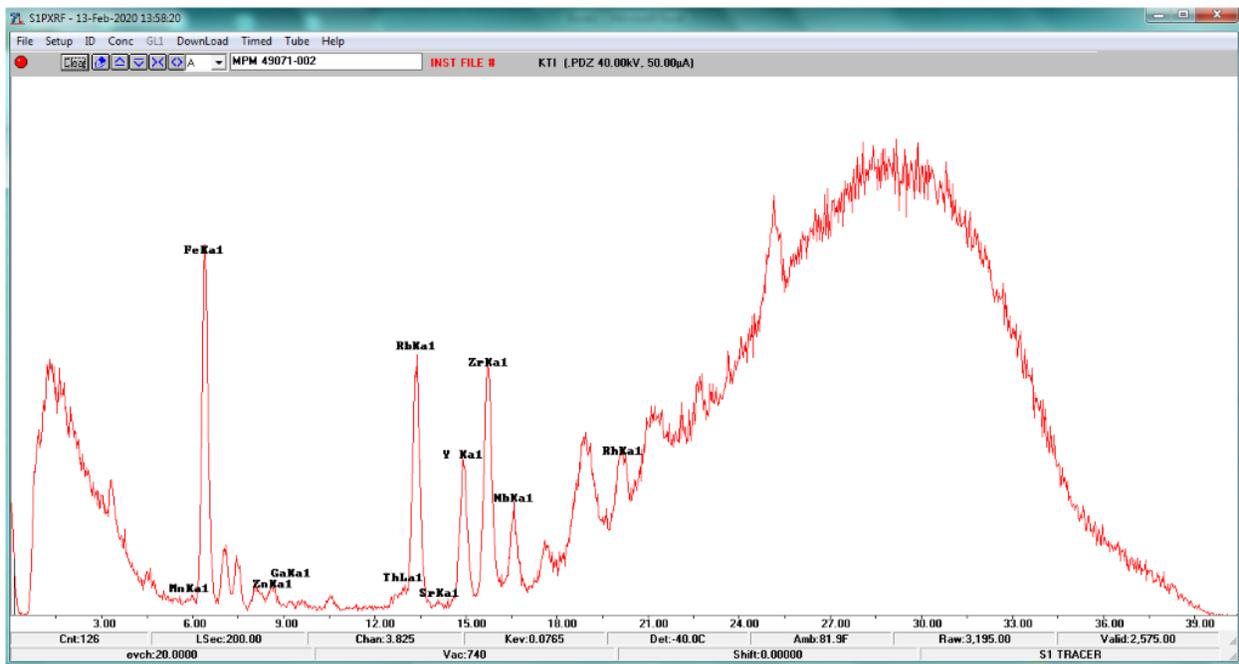
MPM A 49070a-001



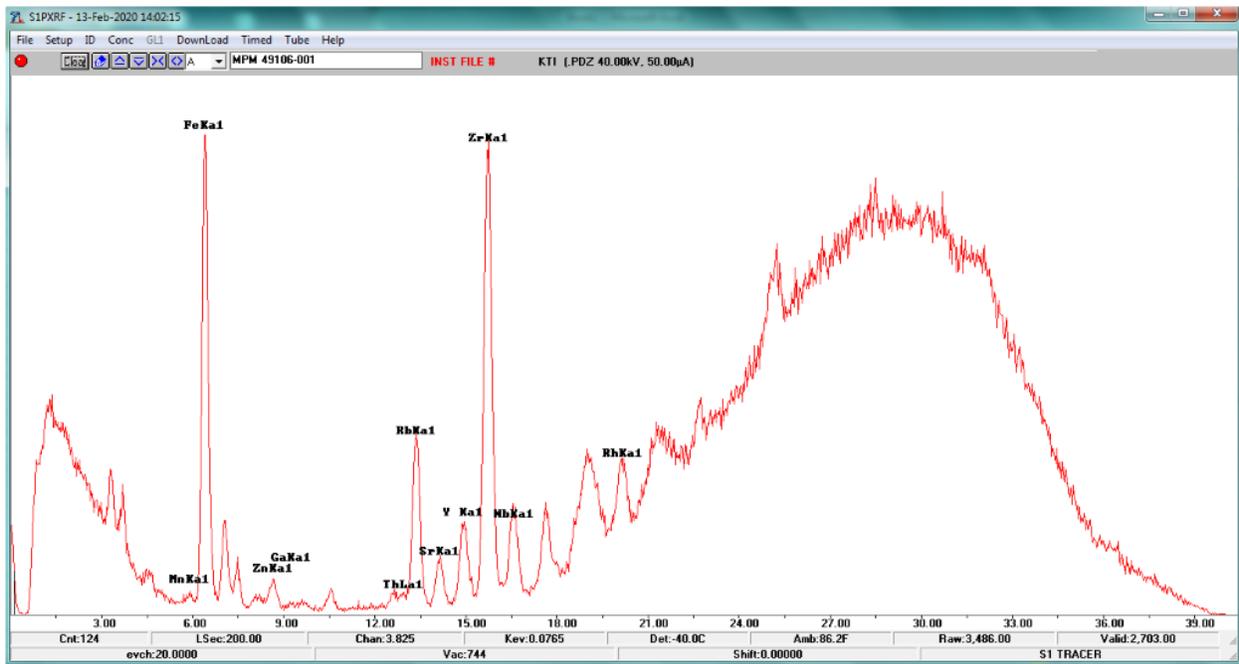
MPM A 49070a-002



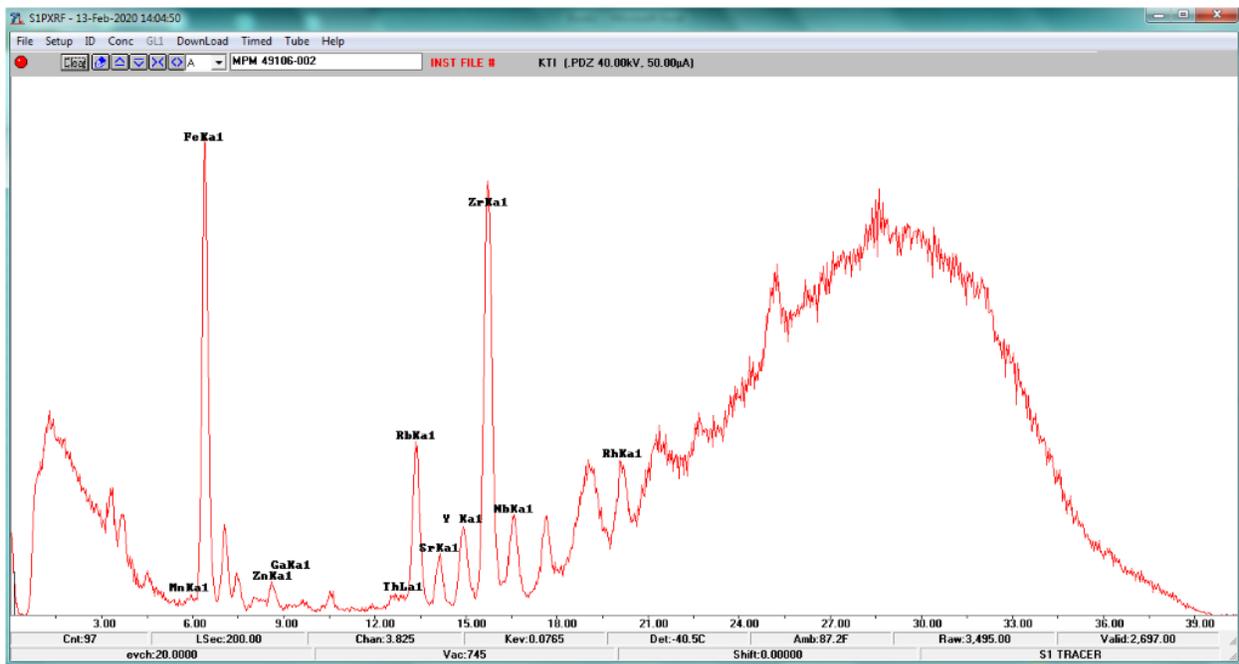
MPM A 49071-001



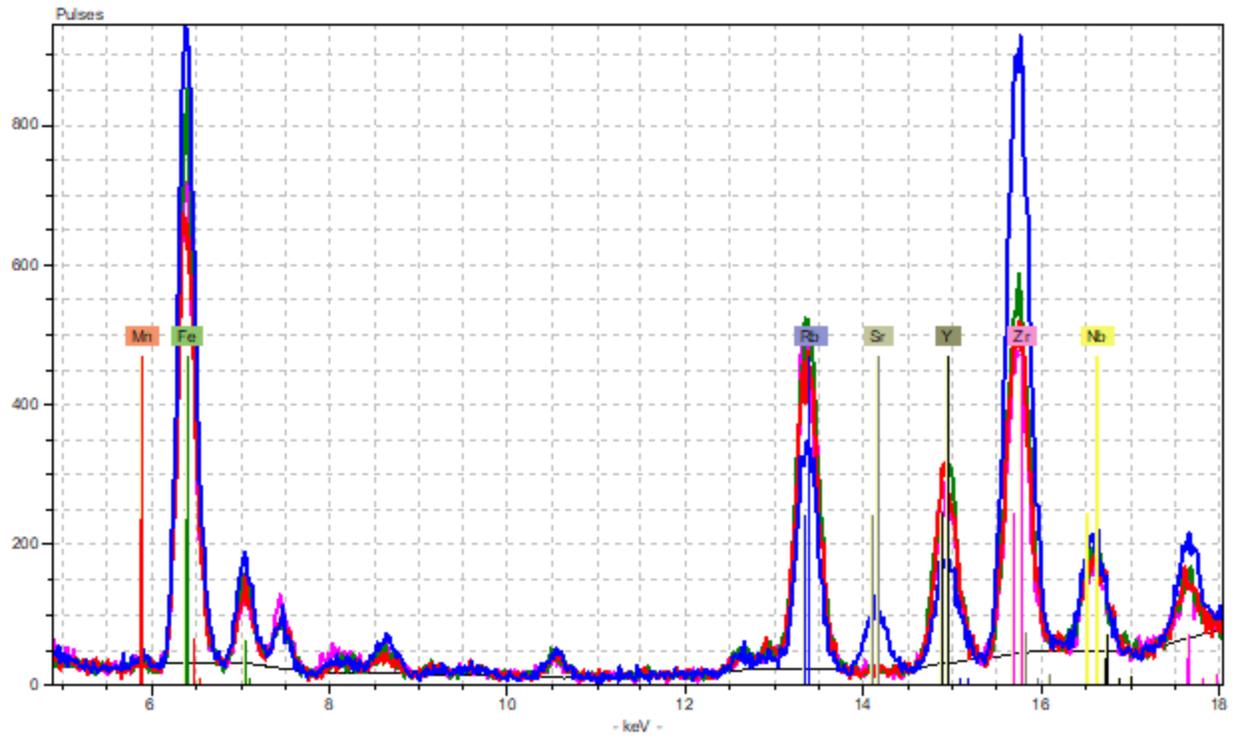
MPM A 49071-002



MPM A 49106-001



MPM A 49106-002



MPM obsidian spectra normalized to Compton peak; Blue-A 49106, Red A 49070, Green A 49070a, Pink A 49071